NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

RESEARCH, TECHNOLOGY AND INNOVATION POLICY AND GUIDELINES



RESEARCH, TECHNOLOGY AND INNOVATION POLICY & GUIDELINES

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	• *National Intellectual Property (IP) Policy (2019) and Strategy (2019-2024)*	• *NUST Statutes*
		• *NUST Strategic Plan*
		• *NUST Intellectual Property Policy*
		• *NUST Research Ethics Policy*
		• *NUST Human Resources Code*
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TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS ---------- 1
DEFINITIONS ---------- 3
1. PREAMBLE ---------- 7
2. SCOPE OF APPLICATION ---------- 7
3. POLICY STATEMENT ---------- 7
4. LEGAL FRAMEWORK ---------- 7
5. GUIDING PRINCIPLES ---------- 8
6. RESEARCH CONDUCT AND INTEGRITY ---------- 8
7. DATA MANAGEMENT ---------- 9
8. RESEARCH LEADERSHIP, MENTORSHIP AND CAPACITY DEVELOPMENT ---------- 10
9. RESEARCH, TECHNOLOGY AND INNOVATION INCENTIVES ---------- 10
10. COMMUNICATION ---------- 10
11. INTELLECTUAL PROPERTY OWNERSHIP ---------- 10
12. COLLABORATION ---------- 11
13. RESEARCH, TECHNOLOGY AND INNOVATION RELATED CONTRACT RESEARCH ---------- 11
14. EXTERNAL FUNDING MANAGEMENT FRAMEWORK ---------- 11
15. RESEARCH, TECHNOLOGY AND INNOVATION ENTITY ESTABLISHMENT ---------- 12
16. IMPLEMENTATION ---------- 12
17. REVIEW ---------- 12

ABBREVIATIONS AND ACRONYMS

Abbreviations	Meaning
FRPC	Faculty Research and Publication Committee
IP	Intellectual Property
IRPC	Institutional Research and Publication Committee
NDA	Non-Disclosure Agreements
RDM	*Research Data Management*

Acronyms	Meaning
NUST	Namibia University of Science and Technology

DEFINITIONS

Term	Meaning
Affiliate	Refers to any individual who is not a paid member of the University but is appointed or engaged by the University to perform duties or functions; and/or recognised for their contribution at the University.
Awards	Refer to monetary or non-monetary forms of recognition given to students or staff for excellence in work completed or achievements attained.
Collaboration	In the academic research and innovation landscape refers to partnership between institutions or entities pursuing mutually interesting and beneficial research and innovation efforts in furtherance of envisaged research outputs and outcomes.
Consultancy services	Refer to the application of existing knowledge, expertise and skills in a creative manner, which may include problem solving, and is regulated by the terms of a paid-for services rendered contract.
Contract research	Refers to services commissioned by an external client/organisation or University staff and/or students who are actively involved and new knowledge is created.
Custodian of data	Refers to the entity responsible for the safe storage of research data.
Data lifecycle	Refers to the creation, initial storage, use and long-term preservation, as well as the eventual destruction thereof.
Data management	Includes all the aspects of creating, collecting, organising, storing, delivering, maintaining, archiving of data and managing access to it.
Data management plan	Describes the data that are collected or generated in the course of your work and what happens to these data during their lifecycle, i.e.: storage, publication, citation, long-term availability, anonymity, deletion.
Data quality	Refers to the condition of data based on factors such as accuracy, completeness, consistency, reliability and reusability.
Department	Refers to a sub-unit of a faculty which offers academic programmes to students and comprises staff who engage in some form of research.
Development	Refers to the innovative and creative adaptation of information and knowledge for a new purpose, thereby creating new information.
Direct costs	Refer to all costs directly ascribed to the activity.
Extraneous work or private work	Refers to work undertaken by staff members outside the scope and totally unrelated to the employment at the University for remuneration outside the scope of consultancy services**.**
Entrepreneurship	Refers to research, science or technology-related outputs, services, processes or methods translating into taking financial risks in the hope of profit, enterprise and the introduction and utilisation of new products, practices and services that create value in the economy.
Faculty	Refers to a major division in the University setting comprising of at least two academic departments.
Faculty Research and Publication Committee (FRPC)	Refers the body of a faculty responsible for assisting the Institutional Research and Publication Committee (IRPC) in implementing the Research Policy.
Full cost budgeting and recovery	Refers to total cost of all resources used, including direct and indirect costs.
Grants	Refer to monetary allocations received/administered or given (for example, internally funded projects) based on a research proposal and utilised for specific research and research-related activities.
Indirect costs	(Alternatively known as overhead or administrative fees) refer to costs incurred by the institution and is essential to support, manage and deliver the project.
In-kind contributions	Refer to non-monetary contributions of materials, goods, services, facilities and time used for specific research, and research-related activities.

Innovation	Refers to the process of producing new or significantly improved goods, services, processes, marketing methods, organisational methods or the like; or translating an idea or invention into valuable goods, services, processes, marketing methods, organisational methods or the like, and includes social innovation.
Institutional Research and Publication Committee (IRPC)	Refers to the University committee responsible for implementing the Research Policy.
Intellectual Property (IP)	Refers to all output of creations of the mind such as inventions, literary or artistic works, designs, and symbols, names and images used in commerce that are capable of being protected by law from use by any other person.
Inter-disciplinary research	Refers to a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialised knowledge.
Material Transfer Agreement	Refers to a contact that governs the transfer of tangible research materials between the University and its research collaborators/sponsors, whereby the recipient intends to use these for his or her own research purposes.
Metadata	Refers to documentation that describes data. It is structured or schematised information about the attributes of an item or collection that enables that item or collection to be identified, retrieved and managed over time, for example, descriptions, origin, ownership, structure or any other information that could aid comprehension and re-use.
Multi-disciplinary research	Refers to research involving experts from diverse disciplines working together on a common theme within the limits of their own discipline.
NUST Research and Innovation Strategy	Identifies the strategic research goals, and the resources and actions required to achieve the stated goals.
Peer-reviewed articles	Refer to articles are written by experts and are reviewed by several other experts in the field before publication in the journal or conference proceeding in order to ensure the article's quality.
Policy	Refers to a document which provides strategic intent and direction, and serves as a source of reference for actors regarding a specific endeavour
Principal Investigators	A Principal Investigator is the primary individual responsible for the preparation, conduct, and administration of a research grant, cooperative agreement, training or public service project, contract, or other sponsored project in compliance with applicable laws and regulations aligned to that of the University.
Private consultancy services	Refer to staff engaging with an external client (which may include the University) to provide the Consultancy Services in her/his own time in a personal and private capacity.

Research	Refers to the systematic investigation into and study of materials and sources to establish facts and reach new conclusions. In this document it shall be taken to include development and innovation. In this regard, the following three types of research are noted: • ***Fundamental research*** refers to either pure basic research or strategic basic research. Pure basic research is experimental and theoretical work undertaken to acquire new knowledge without looking for long-term benefits other than the advancement of knowledge. Strategic basic research is experimental and theoretical work undertaken to acquire new knowledge directed into specified broad areas in the expectation of useful discoveries. It provides the broad base of knowledge necessary for the solution of recognised practical problems. • ***Applied research*** refers to original work undertaken primarily to acquire new knowledge with a specific application in mind. It is undertaken either to determine possible use for the findings of basic research, or to determine new ways of achieving some specific and predetermined objectives. • ***Experimental development*** *refers* to systematic work using existing knowledge gained from research or practical experience that is directed to producing new materials, products or devices, to installing new processes, systems and services, or to substantially improving those already produced or installed.
Research active academics	In the University refers to researchers that carry out original, high-level research that generates new knowledge and progresses current understanding, and may be broadly placed into one of the following categories as defined under the University Researcher Development Framework**:** • **Research assistant** is a researcher employed for the purposes of assisting in academic research**.** • **Junior researcher** is engaged in research but is not active enough at a level to generate measurable output in the form of peer-reviewed publications and research projects. • **Researcher** active researcher who publishes sporadically in a period of five years. Participate in more than 2 research grants as Principal Investigator (PIs). • **Post-Doctoral researcher** is expected to be at an early stage of their research career within four (4) years after completing their doctoral degree. • **Senior researcher** has good track record of accessing research grants and consistently produces peer reviewed publications each year. The researcher receives research grants on a regular basis. It is estimated that 35% of their research funds are non-state grants. Participate in more than 4 research grants as Principal Investigators (PIs) and are mentoring at least 4 staff as PIs. • **Associate Professor** has good track record of accessing research grants and consistently produces peer reviewed publications each year. The researcher receives research grants on a regular basis. It is estimated that 55% of their research funds are non-state grants. Participate in more than 8 research grants as Principal Investigators (PIs) and are mentoring at least 8 staff as PIs. • **Professor** is an established researcher with a good track record and wide networks, especially in related industry. He/she leads a team of researchers and more than 70% of their research funds are from funding agencies other than the state. The volume of output in the form of peer-reviewed publications is consistently high. Where applicable

	they can be awarded the position of fully funded Professorial/Industrial Research Chair.
Research data	Refers to factual records (numerical scores, textual records, images and sounds) used as primary sources for scientific research, and that are commonly accepted in the scientific community as necessary to validate research findings.
Research incentive	Refers to any form of compensation awarded to a staff member or student in recognition of their time and effort in research and innovation.
Research innovation	Refers to the process of creating new ideas/knowledge and/or transforming existing knowledge into improved products, services and processes.
Research integrity	Includes pro-actively maintaining rigour and accountability, upholding recognised standards of good scholarship.
Research niche areas	Are specialised areas of science, engineering and humanities with substantial potential to conduct research and create significant and valuable new knowledge for substantial period such as a decade.
Research outputs	Refer to a particular dissemination, publication, presentation, communication or pathway in which research is made available to people other than the author.
Research partner	Refers to internal or external research collaborators.
Research records	Refer to any document or source of information compiled, recorded or stored in any form, and which is maintained as evidence or information by an organisation or person, for use in their research work. This may include grant applications, ethics protocols, data management plans, laboratory or clinical protocols, etc.
Research sponsored agreement	Refers to a contract between the University and a sponsor for the purpose of funding and conducting research at the University.
Staff	Refers to persons employed by the University and includes the academic, non-academic, and technical staff on permanent, fixed, part-time and visiting terms of service or outcomes.
Stakeholder/partner	Refers to an entity or individual with vested interests in a collaborative agreement.
Students	Refer to persons registered at the University to undertake studies towards an undergraduate or postgraduate degree, irrespective of the mode of study (full-time, part-time or distance mode).
Technology	Refers to the study, knowledge and application of scientific principles and discoveries in the design, production and utilisation of goods and services, in the organisation of human activities, and to meet the goals for sustainable development.
Transdisciplinary research	Refers to efforts conducted by investigators from different disciplines working jointly to create new conceptual, theoretical, methodological, and translational innovations that integrate and move beyond discipline-specific approaches to address a common problem.

1. PREAMBLE

1.1 Whereas the Namibia University of Science and Technology (NUST), hereafter referred to as "the University," values research activities and recognises research, technology, and innovation as important core functions of the University.

1.2 And whereas the University further values the exploitation of such knowledge and innovative ideas in the development of outputs beneficial to society.

1.3 Therefore, the purpose of this policy is to:

1.3.1 Provide a framework for the governance of research and development.

1.3.2 Create an enabling environment to promote research, including establishing infrastructure.

1.3.3 Encourage, promote and support the research culture and activities within the University to refine, generate, and increase both the quality and quantity of the research outputs.

1.3.4 Recognise and value both internationally recognised research and research that benefits the country and will strive for excellence in both; and

1.3.5 Guide research focus towards diversely identified research niche area(s).

2. SCOPE OF APPLICATION

2.1 The Research, Technology and Innovation (RTI) Policy shall apply to all staff and students of the University.

2.2 The University shall invest in and give emphasis to all types of RTI efforts and outputs in terms of available resources and time allocated.

3. POLICY STATEMENT

The objectives of this policy are to define the principles that will:

3.1 Support and entrench RTI culture and excellence at the University.

3.1.1 lead to the broadening and development of the RTI capacity of the University across all disciplines for national, regional, and international competitiveness.

3.1.2 strengthen technological and innovation-based knowledge within the University for meaningful contribution to the RTI agenda of Namibia.

3.1.3 encourage and empower staff members to conduct, manage, disseminate, and report RTI outcomes responsibly.

3.1.4 Encourage the research-teaching nexus.

3.1.5 improve the quality of RTI outputs, including their impact, level of accountability, and timeliness of reporting.

3.1.6 Provide a structure for the continual improvement of RTI and development.

3.1.7 enable the commercialisation of research outputs for the benefit of the University and the wider community.

4. LEGAL FRAMEWORK

The research and innovation activities will aim to fulfil the NUST Vision, Mission and Values, the national research and innovation agenda, and the imperatives of the country, including Namibia's Vision 2030 and the National Development Plans (NDPs), aligned with the NUST Research Strategy and Strategic Plan.

5. GUIDING PRINCIPLES

5.1 In accordance with the University's Mission Statement, RTI complements and invigorates teaching, collectively supporting the preservation, dissemination and advancement of knowledge for the betterment of the society.

5.2 The University strives to encourage and support basic, applied, contract, strategic, and action RTI in a wide range of disciplines.

5.3 The University supports RTI in various disciplines, and staff and students are encouraged to pursue different styles and approaches to research.

5.4 All staff and students, as applicable, are expected to generate RTI outputs.

5.5 The University strives for the just distribution and responsible use of resources and the benefits of its RTI in the interests of the Namibian society and the human and environmental conditions.

5.6 The University and its staff and students will engage in RTI activities aligned to the NUST Vision, Mission and Values, as well as the national research and innovation agenda, and imperatives of the country, to ensure that the University contributes to key national development priorities.

5.7 The University aims to do research:

5.7.1 With scholarly integrity and excellence.

5.7.2 With social and environmental sensitivity and responsibility.

5.7.3 With respect for the dignity and self-esteem of the individual, and for basic human rights and the environment.

5.7.4 With reference to clearly specified standards of conduct and procedures, ensuring proper accountability.

5.8 The University reserves the right to engage in RTI-related activities provided it is in furtherance of the research objectives, irrespective of the research outcome.

6. RESEARCH CONDUCT AND INTEGRITY

6.1 RTI outputs must comply with all constitutional provisions, legislative frameworks, and policies that govern ethical considerations and the protection of human and animal rights.

6.2 Staff and students are expected to strictly adhere to all ethical requirements as contained in the NUST Research Ethics Policy. Non-adherence will constitute research misconduct and will be subject to appropriate action in terms of the NUST HR Code.

6.3 Staff and students are expected to be honest in respect of their actions in research, and in their responses to the actions of other staff and students. This applies to the full spectrum of research, including the design of projects or experiments, generating and analysing data, applying for funding and grants, and publishing results.

6.4 Staff and students are expected to always uphold research integrity. Specifically, staff and students shall acknowledge the direct and indirect contributions of colleagues, research collaborators, and others, in their work and publications at all times.

6.5 Staff and students, as applicable, should actively strive to:

6.5.1 Emphasise high quality research.

6.5.2 Undertake appropriate research supervision.

6.5.3 Maintain accurate and detailed research activity records and results.

6.5.4 Be ethical about the objectives of their research.

6.5.5 Be open and cooperative with fellow staff, students and others.

6.5.6 Be committed to the publication and further development or commercialisation of research findings.

6.5.7 Retain all research activity records like surveys, questionnaires and data gathered.

6.5.8 Be accountable to society, their professions, the communities and to the sponsors where the research is taking place.
Staff and students should, as far as possible, avoid a conflict of interest. Should it not be possible to avoid a conflict of interest such conflict should be disclosed. Areas of real or potential conflict of interests include instances where:

6.5.8.1 Staff or students have an existing or potential financial interest in the outcome of the research.
6.5.8.2 Staff or students are likely to gain private benefit that is dependent on the research outcome.
6.5.8.3 A staff member's professional or personal gain arising from the research outcome may be more than usual or normal in a specific research undertaking.
6.5.8.4 Research is potentially contravening national and governmental development interests and trends.

7. DATA MANAGEMENT

7.1 The University recognises the importance of accurate research and innovation data management through organising, structuring, storing and maintaining data generated during the research and innovation lifecycle.

7.2 Staff and students shall adhere to University and donor requirements, while applying good research practice, ensuring that:

7.2.1 Research and innovation data is collected, stored, preserved and managed according to discipline-specific standards as outlined in the guidelines and procedures.
7.2.2 Data management plans are provided when required, in compliance with the donor and/or outlined in the guidelines and procedures.
7.2.3 The metadata provided enables the discovery, evaluation and re-use of research and innovation data.
7.2.4 training is provided to staff and students in support of sustainable research and innovation data management.
7.2.5 Secure data and associated metadata repositories are established at the University for maintenance, preservation, publication and/or re-use, subject to copyright, Non-Disclosure Agreements (NDA) and intellectual property restrictions.

7.3 The management of research data will be implemented to:

7.3.1 Protect intellectual property.
7.3.2 Preserve research and innovation data for integrity and re-use.
7.3.3 Provide and manage access to research and innovation data.

7.4 The data shall be preserved for a minimum period of ten (10) years, or in accordance with contractual requirements, where applicable.

7.5 All primary research and innovation materials and data created, collected and/or generated by staff and students and affiliates of the University, belong to the University and must be stored in accordance with the preservation period provided for in this policy, in line with the Data Management Plan, as outlined in the guidelines and procedures.

7.6 Access to data may be restricted or embargoed due to ethical or legal reasons. Ongoing research should be stored in a secure environment and not be compromised by premature data release.

8. RESEARCH LEADERSHIP, MENTORSHIP AND CAPACITY DEVELOPMENT

8.1 Leaders and mentors in research are expected to:

8.1.1 Ensure that the University's research and innovation activities enhance the experience of staff and students by building partnerships in relevant and important sectors.

8.1.2 Ensure helpful, timely, constructive and supportive feedback to assist developing/emerging staff and students in their research activities.

8.1.3 Create opportunities for emerging/developing staff students to publish their research findings.

8.1.4 Senior staff and students are encouraged to build capacity in the University during their research endeavours by capacitating junior staff and/or post-graduate students within their departments or under their tutelage.

9. RESEARCH, TECHNOLOGY AND INNOVATION INCENTIVES

9.1 The University shall recognise research excellence and make provision for relevant incentives to award staff and students for their contribution to knowledge creation through RTI.

9.2 The recognition shall be acknowledged and rewarded in various ways following approved criteria, benefit-sharing structures and indicators, as outlined in the guidelines and procedures.

10. COMMUNICATION

10.1 Staff and students are expected to disseminate RTI outputs aligned to the requirements of the University and/or donors in recognised scholarly works.

10.2 Within disciplinary communities, staff and students may advance the University's reputation through seminars or workshops, guest lecturing, keynote/plenary addresses at conferences/ workshops, or service to professional forums or learned societies, for example, developing national, regional or international capacity within the research/teaching field.

10.3 The use of e-learning is encouraged to complement the impact of applications and research.

11. INTELLECTUAL PROPERTY OWNERSHIP

11.1 All research outputs shall be subject to the University's Intellectual Property Policy.

11.2 The ownership of intellectual property based on University-funded research rests jointly with staff and students and the University, in line with the generally accepted view that institutions retain certain rights of intellectual property ownership over all research undertaken under its auspices.

11.3 In cases of commercial research, ownership of intellectual property generally rests with the commissioning sponsor but may also allow for shared intellectual property ownership between the commercial sponsor, the University, staff and/or students, depending on the investment type and costs incurred.

12. COLLABORATION

12.1 The pursuit of RTI collaboration aims to pool synergies in terms of strategic resources and expertise to enhance the capacity and pedigree of the University in conjunction with mutually beneficial partners and stakeholders.

12.2 Faculties, departments and research units/institutes/centres shall play pivotal roles in sourcing, signing and implementing collaborative agreements, research-related agreements such as research sponsored and collaborative agreements, Confidentiality/Non-Disclosure agreements (CDA/NDA), in-kind contribution agreements, Material Transfer Agreements (MTA) and Data Use Agreements (DUA), in furtherance of broader institutional goals or targets.

12.3 All parties involved in collaboration must uphold ethical research standards, as well as all relevant University or national rules and regulations, irrespective of funding sources.

12.4 Research collaboration may occur over the long, medium or short-term as defined in the policy guideline and procedures.

13. RESEARCH, TECHNOLOGY AND INNOVATION RELATED CONTRACT RESEARCH

13.1 The University encourages staff and students to engage in the transfer of knowledge and to undertake contract research while fulfilling their obligations of preparing for and carrying out official University duties as their priority.

13.2 Staff and students are expected to adhere to and honour all contractual obligations involving research and innovation activities.

13.3 This Policy and its accompanying guidelines set out the precepts for the approval and management of consultancy services to ensure that:

13.3.1 The reputation of the University is protected, upheld and the associated risks mitigated.

13.3.2 Professional competence of staff and students is maintained and expanded.

13.3.3 Scientific knowledge is shared with the business community and government.

13.3.4 Anticipated benefits to the University, staff and students are realised and declared in accordance with the approved benefit-sharing structure outlined in the guidelines and procedures.

13.3.5 Intellectual property created is safeguarded. Staff members may, therefore, not enter any formal negotiations with clients before the University's position pertaining to potential intellectual property claims have been clarified.

13.3.6 Staff and students are motivated in career development.

13.3.7 Staff and student workload allow for external activities to be performed.

13.3.8 Consultancy services do not interfere with the performance of normal academic duties and are recommended by the respective authorities.

13.3.9 Staff members do not compete with the University.

13.3.10 Consultancy services do not give rise to any conflict of interest for the staff member/s or the University.

13.3.11 staff and students engage in consultancy and contract research services with clear academic outputs in addition to the contracted expectations.

14. EXTERNAL FUNDING MANAGEMENT FRAMEWORK

14.1 The University is committed to supporting RTI activities based on the availability of funds from its own budget as defined in the guidelines and procedures.

14.2 The University recognises the need for additional funds to support RTI development programmes and an expanding research infrastructure, and therefore encourages staff and students to engage in active sourcing of external grants in accordance with the guidelines and procedures.

14.3 The University reserves the right to develop and implement a framework for full cost budgeting and recovery, based on a differential fee structure, guided by direct and indirect costing models, from RTI activities funded from external sources.

15. RESEARCH, TECHNOLOGY AND INNOVATION ENTITY ESTABLISHMENT

15.1 The University may decide to create Research and Innovation Entities in the form of Units, Directorates, Centres, Spin-out Companies or Institutes in critical or specialised applied RTI areas with the aim of improving and strengthening the multidisciplinary, interdisciplinary and transdisciplinary activities and outputs of the University.

15.2 The research and innovation entities will be established to position and promote the University's research and innovation excellence to serve as the conduit of engagements with industries and other stakeholders.

15.3 The establishment of entities is subject to the following criteria, namely that such entities shall:

15.3.1 Be a collaborative activity between a team of high-quality researchers from the University and researchers or research-users in several companies or organisations. Where the nature of research is related to production or improvement of public goods, collaboration may include appropriate public agencies.

15.3.2 Focus on new and emerging technologies and multidisciplinary and transnational research relevant to national development goals.

15.3.3 Be accorded to thematic areas aligned to that of the University's strategic plan.

15.3.4 Conduct training and research for value addition or achieving next levels of research.

15.3.5 romote an RTI culture at the University as evidenced by a significant increase in applications of research outputs, technological development and translation into prototypes/patents/publications, collaborative and sponsored research, publications in reputable national/international journals and conferences, patents, innovations, commercialised products and Masters and PhD enrolments.

15.4 The establishment of entities is subject to approved criteria and conditions as outlined in the guidelines.

15.5 Such entities will have a continuity of existence and will be subjected to a 5 (five) year review cycle or earlier, as required.

15.6 Approval of the establishment, continuation or disestablishment of any research and innovation related entity must be approved by the Vice-Chancellor, Research, Technology and Innovation.

16. IMPLEMENTATION

16.1 The Institutional Research and Publication Committee (IRPC) is established in terms of the Statutes and Regulations of the University for the coordination of high-quality research and innovation-related activities and outputs, and institutional research funds.

16.2 RTI-related activities within Faculties are managed by a Faculty Research and Innovation Committee which reports to the IRPC.

16.3 RTI guidelines and procedures will guide the implementation of this policy to meet the policy objectives.

17. REVIEW

17.1 The policy must be reviewed at least every five years, or as and when the need arises.

GUIDELINES

GUIDELINES
FOR RESEARCH, TECHNOLOGY AND INNOVATION POLICY

Approval Authority	*Senate*
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TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS 1

DEFINITIONS 2

1. PURPOSE 6

2. SCOPE OF APPLICATION 6

3. GUIDELINES 6

3.1 POLICY STATEMENT 6

3.2 LEGAL FRAMEWORK 7

3.3 PRINCIPLES GUIDING PRACTICES AT NUST 7

4. The University's aim of doing research: 7

4.1 RESEARCH, TECHNOLOGY AND INNOVATION CONTRACTUAL OBLIGATIONS 7

4.2 RESEARCH, TECHNOLOGY AND INNOVATION OUTPUTS 7

4.3 RESEARCH CONDUCT AND INTEGRITY 8

4.4 RESEARCH, TECHNOLOGY AND INNOVATION DATA MANAGEMENT 9

4.5 RESEARCH LEADERSHIP, MENTORSHIP AND CAPACITY DEVELOPMENT 10

4.6 ACADEMIC FREEDOM 10

4.7 INTELLECTUAL PROPERTY OWNERSHIP 10

4.8 OPEN ACCESS 11

4.9 RESEARCH, TECHNOLOGY AND INNOVATION COMMUNICATION 12

4.10 RESEARCH, TECHNOLOGY AND INNOVATION COLLABORATION 12

4.11 RESEARCH, TECHNOLOGY AND INNOVATION EXTERNAL FUNDING 12

4.11.1 MANAGEMENT FRAMEWORK 12

4.11.2 REPORTING REQUIREMENTS 12

4.11.3 TIME MANAGEMENT 13

4.11.4 FINANCIAL MANAGEMENT 13

4.11.4.12 PROJECT TRAVELLING 15

4.11.5 PROJECT ADVANCES 16

4.11.6 RESEARCH FUND MANAGEMENT 16

4.11.7 ASSET MANAGEMENT 19

4.11.8 DISPOSITION 20

4.11.9 RISK MANAGEMENT 20

4.11.10 CHANGE MANAGEMENT 20

4.12 COMMUNICATION AND VISIBILITY 20

4.13 RESEARCH, TECHNOLOGY AND INNOVATION INCENTIVES.....20
4.14 RESEARCH, TECHNOLOGY AND INNOVATION ENTITY ESTABLISHMENT 20
4.15 IMPLEMENTATION 21
5. BIBLIOGRAPHY..... 22
6. APPENDICES..... 23
6.1 PROCEDURES FOR RESEARCH DATA MANAGEMENT..... 23
1.1 DATA MANAGEMENT PLAN TEMPLATE 25
1.2 7.2 Asset Acquisition Process..... 26

ABBREVIATIONS AND ACRONYMS

Abbreviations	Meaning
FRPC	Faculty Research and Publication Committee
HR Code	Human Resources Code of Conduct
IP	Intellectual Property
IRPC	Institutional Research and Publication Committee
NDA	Non-Disclosure Agreements
MoU	Memoranda of Understanding
RDM	Research Data Management
RTI	Research, Technology and Innovation

Acronyms	Meaning
DRIP	Directorate of Research, Innovation and Partnerships
NUST	Namibia University of Science and Technology
RIC	Research, Innovation Committee

1

DEFINITIONS

Term	Meaning
Affiliate	Refers to any individual who is not a paid member of the University but is appointed or engaged by the University to perform duties or functions; and/or recognised for their contribution at the University.
Awards	Refer to monetary or non-monetary forms of recognition given to students or staff for excellence in work completed or achievements attained.
Collaboration	In the academic research and innovation landscape refers to partnership between institutions or entities pursuing mutually interesting and beneficial research and innovation efforts in furtherance of envisaged research outputs and outcomes.
Consultancy services	Refer to the application of existing knowledge, expertise and skills in a creative manner, which may include problem solving, and is regulated by the terms of a paid-for services rendered contract.
Contract research	Refers to services commissioned by an external client/organisation or University staff and/or students who are actively involved and new knowledge is created.
Custodian of data	Refers to the entity responsible for the safe storage of research data.
Data lifecycle	Refers to the creation, initial storage, use and long-term preservation, as well as the eventual destruction thereof.
Data management	Includes all the aspects of creating, collecting, organising, storing, delivering, maintaining, archiving of data and managing access to it.
Data management plan	Describes the data that are collected or generated in the course of your work and what happens to these data during their lifecycle, i.e.: storage, publication, citation, long-term availability, anonymity, deletion.
Data quality	Refers to the condition of data based on factors such as accuracy, completeness, consistency, reliability and reusability.
Department	Refers to a sub-unit of a faculty which offers academic programmes to students and comprises staff who engage in some form of research.
Development	Refers to the innovative and creative adaptation of information and knowledge for a new purpose, thereby creating new information.
Direct costs	Refer to all costs directly ascribed to the activity.
Extraneous work or private work	Refers to work undertaken by staff members outside the scope and totally unrelated to the employment at the University for remuneration outside the scope of consultancy services**.**
Entrepreneurship	Refers to research, science or technology-related outputs, services, processes or methods translating into taking financial risks in the hope of profit, enterprise and the introduction and utilisation of new products, practices and services that create value in the economy.
Faculty	Refers to a major division in the University setting comprising of at least two academic departments.
Faculty Research and Publication Committee (FRPC)	Refers the body of a faculty responsible for assisting the Institutional Research and Publication Committee (IRPC) in implementing the Research Policy.
Full cost budgeting and recovery	Refers to total cost of all resources used, including direct and indirect costs.
Grants	Refer to monetary allocations received/administered or given (for example, internally funded projects) based on a research proposal and utilised for specific research and research-related activities.
Indirect costs	(Alternatively known as overhead or administrative fees) refer to costs incurred by the institution and is essential to support, manage and deliver the project.
In-kind contributions	Refer to non-monetary contributions of materials, goods, services, facilities and time used for specific research, and research-related activities.
Innovation	Refers to the process of producing new or significantly improved goods, services, processes, marketing methods, organisational methods or the like; or translating an idea or invention into valuable goods, services, processes,

	marketing methods, organisational methods or the like, and includes social innovation.
Institutional Research and Publication Committee (IRPC)	Refers to the University committee responsible for implementing the Research Policy.
Intellectual Property (IP)	Refers to all output of creations of the mind such as inventions, literary or artistic works, designs, and symbols, names and images used in commerce that are capable of being protected by law from use by any other person.
Inter-disciplinary research	Refers to a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialised knowledge.
Material Transfer Agreement	Refers to a contact that governs the transfer of tangible research materials between the University and its research collaborators/sponsors, whereby the recipient intends to use these for his or her own research purposes.
Metadata	refers to documentation that describes data. It is structured or schematised information about the attributes of an item or collection that enables that item or collection to be identified, retrieved and managed over time, for example, descriptions, origin, ownership, structure or any other information that could aid comprehension and re-use.
Multi-disciplinary research	refers to research involving experts from diverse disciplines working together on a common theme within the limits of their own discipline.
NUST Research and Innovation Strategy	identifies the strategic research goals, and the resources and actions required to achieve the stated goals.
Peer-reviewed articles	Refer to articles are written by experts and are reviewed by several other experts in the field before publication in the journal or conference proceeding to ensure the article's quality.
Policy	refers to a document which provides strategic intent and direction, and serves as a source of reference for actors regarding a specific endeavour
Principal Investigators	A Principal Investigator is the primary individual responsible for the preparation, conduct, and administration of a research grant, cooperative agreement, training or public service project, contract, or other sponsored project in compliance with applicable laws and regulations aligned to that of the University.
Private consultancy services	Refer to staff engaging with an external client (which may include the University) to provide the Consultancy Services in her/his own time in a personal and private capacity.
Research	Refers to the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions. In this document it shall be taken to include development and innovation. In this regard, the following three types of research are noted: • ***Fundamental research*** refers to either pure basic research or strategic basic research. Pure basic research is experimental and theoretical work undertaken to acquire new knowledge without looking for long-term benefits other than the advancement of knowledge. Strategic basic research is experimental and theoretical work undertaken to acquire new knowledge directed into specified broad areas in the expectation of useful discoveries. It provides the broad base of knowledge necessary for the solution of recognised practical problems. • ***Applied research*** refers to original work undertaken primarily to acquire new knowledge with a specific application in mind. It is undertaken either to determine possible use for the findings of basic research, or to determine new ways of achieving some specific and predetermined objectives. • ***Experimental development*** *refers* to systematic work using existing knowledge gained from research or practical experience that is directed to producing new materials, products or devices, to installing new processes, systems and services, or to substantially improving those already produced or installed.

Research active academics	In the University refers to researchers that carry out original, high-level research that generates new knowledge and progresses current understanding, and may be broadly placed into one of the following categories as defined under the University Researcher Development Framework**:** • **Research assistant** is a researcher employed for the purposes of assisting in academic research**.** • **Junior researcher** is engaged in research but is not active enough at a level to generate measurable output in the form of peer-reviewed publications and research projects. • **Researcher** active researcher who publishes sporadically in a period of five years. Participate in more than 2 research grants as Principal Investigator (PIs). • **Post-Doctoral researcher** is expected to be at an early stage of their research career within four (4) years after completing their doctoral degree. • **Senior researcher** has good track record of accessing research grants and consistently produces peer reviewed publications each year. The researcher receives research grants on a regular basis. It is estimated that 35% of their research funds are non-state grants. Participate in more than 4 research grants as Principal Investigators (PIs) and are mentoring at least 4 staff as PIs. • **Associate Professor** has good track record of accessing research grants and consistently produces peer reviewed publications each year. The researcher receives research grants on a regular basis. It is estimated that 55% of their research funds are non-state grants. Participate in more than 8 research grants as Principal Investigators (PIs) and are mentoring at least 8 staff as PIs. • **Professor** is an established researcher with a good track record and wide networks, especially in related industry. He/she leads a team of researchers and more than 70% of their research funds are from funding agencies other than the state. The volume of output in the form of peer-reviewed publications is consistently high. Where applicable they can be awarded the position of fully funded Professorial/Industrial Research Chair.
Research data	Refers to factual records (numerical scores, textual records, images and sounds) used as primary sources for scientific research, and that are commonly accepted in the scientific community as necessary to validate research findings.
Research incentive	Refers to any form of compensation awarded to a staff member or student in recognition of their time and effort in research and innovation.
Research innovation	Refers to the process of creating new ideas/knowledge and/or transforming existing knowledge into improved products, services and processes.
Research integrity	Includes pro-actively maintaining rigour and accountability, upholding recognised standards of good scholarship.
Research niche areas	Are specialised areas of science, engineering and humanities with substantial potential to conduct research and create significant and valuable new knowledge for substantial period such as a decade.
Research outputs	Refer to a particular dissemination, publication, presentation, communication or pathway in which research is made available to people other than the author.
Research partner	Refers to internal or external research collaborators.
Research records	Refer to any document or source of information compiled, recorded or stored in any form, and which is maintained as evidence or information by an organisation or person, for use in their research work. This may include grant applications, ethics protocols, data management plans, laboratory or clinical protocols, etc.
Research sponsored agreement	Refers to a contract between the University and a sponsor for the purpose of funding and conducting research at the University.

Staff	Refers to persons employed by the University and includes the academic, non-academic, and technical staff on permanent, fixed, part-time and visiting terms of service or outcomes.
Stakeholder/partner	refers to an entity or individual with vested interests in a collaborative agreement.
Students	Refer to persons registered at the University to undertake studies towards an undergraduate or postgraduate degree, irrespective of the mode of study (full-time, part-time or distance mode).
Technology	Refers to the study, knowledge and application of scientific principles and discoveries in the design, production and utilisation of goods and services, in the organisation of human activities, and to meet the goals for sustainable development.
Transdisciplinary research	Refers to efforts conducted by investigators from different disciplines working jointly to create new conceptual, theoretical, methodological, and translational innovations that integrate and move beyond discipline-specific approaches to address a common problem.

18. PURPOSE

18.1 The Namibia University of Science and Technology (NUST), hereafter referred to as "the University", values research activities and recognises research, technology, and innovation as important core functions of the University.

18.2 Equally relevant in this context is the application of such knowledge and innovative ideas in the development of outputs beneficial to society.

18.3 The purpose of this guideline is to:

18.3.1 Provide a framework for the governance of research and development.

18.3.2 Create an enabling environment to promote research which includes establishing infrastructure.

18.3.3 Encourage, promote and support the research culture and activities within the University, and in this way, refine, generate, and increase both the quality and quantity of the research outputs.

18.3.4 Recognise and value both internationally recognised research and research that benefits the country and will strive for excellence in both.

18.3.5 Guide research focus toward diversely identified research niche area(s).

19. SCOPE OF APPLICATION

19.1 The Research and Innovation Policy and Guidelines shall apply to all staff and students of the University.

19.2 The University shall invest and place emphasis in terms of the available resources and time allocated to all types of Research, Technology, and Innovation (RTI).

20. GUIDELINES

20.1 POLICY STATEMENT

20.1.1 The objectives of these Guidelines are to define the principles that will:

i. Support and entrench RTI culture and excellence at the University.

ii. Lead to the broadening and development of RTI capacity of the University across all disciplines for national, regional and international competitiveness.

iii. Strengthen technological and innovation-based knowledge within the institution for meaningful contribution to RTI agenda of the country.

iv. Encourage and empower staff members to conduct, manage, disseminate and report RTI outcomes in a responsible manner.

v. Promote the research-innovation-teaching nexus.

vi. Enhance the quality of RTI outputs, including their impact, level of accountability, and timeliness of reporting.

vii. Provide a structure for continual improvement of RTI and development.

viii. Facilitate the commercialisation of research outputs for the benefit of the University and the wider community.

20.2 LEGAL FRAMEWORK

20.2.1 The research and innovation activities will aim to fulfil the NUST Vision, Mission and Values, the national research and innovation agenda, and imperatives of the country, including Namibia's Vision 2030, and the National Development Plans (NDPs) aligned with the NUST Research Strategy and Strategic Plan.

20.3 PRINCIPLES GUIDING PRACTICES AT NUST

20.3.1 In accordance with the University Mission Statement, research, technology, and innovation complement and invigorate teaching, collectively supporting the preservation, dissemination, and advancement of knowledge for the betterment of society.

21. THE UNIVERSITY'S AIM OF DOING RESEARCH

i. With scholarly integrity and excellence.
ii. With social and environmental sensitivity and responsibility.
iii. With respect for the dignity and self-esteem of the individual and for basic human rights and the environment.
iv. With reference to clearly specified standards of conduct and procedures, ensuring proper accountability.

21.1 RESEARCH, TECHNOLOGY AND INNOVATION CONTRACTUAL OBLIGATIONS

i. All staff and students, as applicable, are expected to generate RTI outputs.
ii. Staff and students are expected to adhere to, and honour all, contractual obligations involving research and innovation activities.

21.2 RESEARCH, TECHNOLOGY AND INNOVATION OUTPUTS

21.2.1 The University recognises research-, technology- and innovation-related outputs as per the approved recognised list of journals as managed and maintained through the library aligned to the RTI policy:

i. Main or sole author of articles in peer-reviewed journals.
ii. Co-author of articles in peer-reviewed journals.
iii. Sole author of peer-reviewed books.
iv. Main author of peer-reviewed books.
v. Co-author of peer-reviewed books.
vi. Main or sole author of peer-reviewed book chapters.
vii. Co-author of book peer-reviewed chapters.
viii. Main author of creative writing books.
ix. Co-author of creative writing books.
x. Main or sole author of peer-reviewed conference papers.
xi. Co-author of peer-reviewed conference papers.
xii. Plenary or keynote presentations.
xiii. Peer-reviewed artistic output.
xiv. Scholarly contributions to newspapers.
xv. Successful Doctoral Supervisions.
xvi. Successful Master's (research) supervisions.
xvii. Successful Master's (structured, thesis) supervisions.
xviii. Successful Master's (structured, mini-thesis) supervisions.
xix. Successful Doctoral co-supervisions.

xx. Successful Master's (research) co-supervisions.
xxi. Successful Master's (structured, thesis) co-supervisions.
xxii. Successful Master's (structure, mini-thesis) co-supervisions.
xxiii. Technical reports of commissioned research projects and professional society publications.
xxiv. Publication in NUST-accredited Academic Journals.
xxv. Clarivate Analytics Web of Science Core Collection Indexes:
    a. Science Citation Index Expanded (SCI-Expanded) -- 1900-present.
    b. Social Sciences Citation Index (SSCI) -- 1900-present.
    c. Arts & Humanities Citation Index (A&HCI) -- 1975-present.
    d. Emerging Sources Citation Index (ESCI) -- 2015-present.
xxvi. Scopus.
xxvii. DHET List of Accredited South African Journals.
xxviii. MathSciNet.
xxix. zbMATH.
xxx. Directory of Open Access Journals (DOAJ).
xxxi. SciELO SA (Open Access).

21.2.2 The University recognises the following as innovation-related outputs:
i. Research–based creative works/exhibitions and artistic performances.
ii. Prototypes.
iii. Patents.
iv. Design/architectural work.
v. Textual works.
vi. Digital works.

21.2.3 The University recognises the following as technology-related outputs:
i. Prototypes.
ii. Patents.
iii. Novel/innovative processes and pathways emanating from research endeavours.
iv. Developing new applications or modes of interactivity.
v. Multi-dimensional models, including creative 3D-models.
vi. Computer programmes and games of commercial quality and offered for sale or distributed as shareware through a recognised publisher or distributor.
vii. System software and application software of commercial quality and offered for sale or distributed as shareware through a recognised publisher or distributor.
viii. Visual/video artworks.
ix. Virtual Reality products.
x. Artificial Intelligence products.

21.2.4 All research, technology and innovation outputs must comply with legislative frameworks, constitutional provisions, and policies that govern ethical considerations and the protection of human and animal rights.

21.3 RESEARCH CONDUCT AND INTEGRITY

21.3.1 All staff and students, as expressed/defined in the Research Guidelines and Procedures, are expected to strictly adhere to all ethical requirements as contained in the University Research Ethics Policy for the preservation of the integrity of the staff and students, the University and the country. Non-adherence will constitute research misconduct and may be referred to the HR Code and Ethics Policy.

21.3.2 All staff and students are expected to be honest in respect of their actions, in research, and in their responses to the actions of other staff and students. This applies to the full spectrum of research, including the design of projects or experiments, generating and analysing data, applying for funding and grants, and publishing results.

21.3.3 Staff and students are expected to always uphold research integrity. Specifically, staff and students shall acknowledge the direct and indirect contributions of colleagues, research collaborators, and others in their work and publications at all times.

21.3.4 All staff and students, where applicable, should actively practice the following:

i. Emphasize high-quality research
ii. Undertake appropriate research supervision
iii. maintain accurate and detailed research activity records and results
iv. Be ethical about the objectives of one's research
v. Be open and cooperative with one's fellow staff, students, and others
vi. Be committed in publishing and further developing or commercialisation of research findings
vii. Keep all research activity records, such as surveys, questionnaires and data gathered
viii. Accountability to society, their professions, the communities, and the sponsors where the research is taking place.

21.3.5 Areas of where real or potential conflict of interests occur, and these may include:

i. Where staff and students have an existing or potential financial interest in the outcome of the research.
ii. Where staff and students are likely to gain any private benefit that is dependent on the research outcome.
iii. Where the staff's professional or personal gain arising from the research outcome may be more than usual or normal in a specific research undertaking.
iv. Where research is potentially contravening national and governmental development interests and trends.

21.4 RESEARCH, TECHNOLOGY AND INNOVATION DATA MANAGEMENT

21.4.1 The University recognises the importance of accurate research and innovation data management through organising, structuring, storing and maintaining data generated during the research and innovation lifecycle. It also acknowledges that the accurate management and retrieval of data are essential components of research integrity.

21.4.2 Staff and students shall adhere to the University and donor requirements, while applying good research practice, ensuring that:

i. Research and innovation data are collected, stored, preserved and managed according to discipline-specific standards as outlined in the guidelines and procedures.
ii. Data management plans are provided when required, in compliance with the donor and/or outlined in the guidelines and procedures.
iii. The metadata provided enables the discovery, evaluation and re-use of research and innovation data.
iv. Training is provided to staff and students in support of sustainable research and innovation data management.
v. Secure data and associated metadata repositories are established at the University for maintenance, preservation, publication and/or re-use subject to copyright, Non-Disclosure Agreements (NDA) and IP restrictions.

21.4.3 The management of research data will be implemented to:

i. Protect intellectual property.

ii. Preserve research and innovation data for reproducibility (integrity) and re-use.
iii. Provide and manage access to research and innovation data.

21.4.4 The data shall be preserved for a minimum period of ten (10) years, or in accordance with contractual requirements, where applicable.

21.4.5 All primary research and innovation materials and data created, collected and/or generated by staff and students and affiliates of the University belong to the University and must be stored in accordance with the preservation period provided for in the RTI Policy, in line with the Data Management Plan as outlined in the guidelines and procedures.

21.4.6 Access to data may be restricted or embargoed due to ethical or legal reasons. Ongoing research should be stored in a secure environment and not be compromised by premature data release.

21.5 RESEARCH LEADERSHIP, MENTORSHIP AND CAPACITY DEVELOPMENT

21.5.1 Pertaining to research, leaders and mentors are expected to:

i. Ensure that the University's research and innovation activities enhance the experience of staff and students by building partnerships in relevant and important sectors.
ii. Ensure helpful, timely, constructive and supportive feedback to assist developing/emerging staff and students in their research activities.
iii. Create opportunities for emerging/developing staff and students to publish their research findings.
iv. Research Capacity Development relates to staff and students. They are encouraged to build capacity in the University during their research endeavours by capacitating junior staff and/or post-graduate students within their departments aligned to the Researcher Development Framework.

21.6 ACADEMIC FREEDOM

21.6.1 In different disciplines in which research and innovation occur in the University, staff, and students are encouraged to pursue different styles and approaches to research.

21.6.2 The University, staff and students will engage in RTI activities aligned to their contractual obligations to ensure that the University contributes to key national, continental and global development priorities.

21.6.3 The University reserves the right to engage in RTI-related activities provided it is in furtherance of the research objectives, irrespective of the research outcome.

21.7 INTELLECTUAL PROPERTY OWNERSHIP

21.7.1 All research outputs shall follow the University Intellectual Property Policy.

21.7.2 The ownership of IP based on Institution-funded research, rests jointly with staff and students and the University, in line with the generally accepted view that institutions retain certain rights of intellectual property ownership over all research undertaken under its auspices.

21.7.3 In cases of commercial research, ownership of IP generally rests with the commissioning sponsor but may also allow for shared IP ownership between commercial sponsor, institution and staff and or students, depending on the investment type and costs incurred.

21.8 OPEN ACCESS

21.8.1 Open Access (OA) adds value to research, to society, and to the economy. Research that has benefited from public funding should in turn be made publicly available to other researchers, as well as users in education, business, charitable and public sectors, as well as the public. OA addresses the limited access to scholarly outputs, usually caused by high journal subscription rates.

21.8.2 OA can be defined as being freely available on the public internet, allowing users to download, copy, distribute, print, search, or link to the full text of items, be crawled for indexing, pass them as data to software, or use them for any lawful purpose, without legal, financial, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraints should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.

21.8.3 Peer-reviewed journal articles and other research outputs resulting in whole or in part from publicly funded research must be deposited into the Ounongo Repository, which is an OA repository and made publicly discoverable, accessible, and re-usable as soon as possible and on an ongoing basis.

21.8.4 Publishers' copyright, licensing and embargo policies must be respected.

21.8.5 Researchers are required to deposit in the institutional repository a digital copy of the full text, as well as the related metadata of all publications (author final manuscript of publisher version) upon acceptance for publication. Researchers are held responsible for the timely deposit of their publications in the institutional repository.

21.8.6 Researchers are required to deposit the abstract of the publication to be made openly accessible in the Ounongo Repository in the case of 'closed' publications with the aim to increase their visibility.

21.8.7 Researchers are encouraged to deposit the research data supporting their publications in the institutional data repository or in any other suitable Open Access Data repository.

21.8.8 Researchers are encouraged to retain ownership of copyright and to cede to publishers only those rights necessary for publication.

21.8.9 Benefits of OA to researchers include:

i. Increased visibility of research and citations.
ii. Increased usage of research.
iii. Increased impact of research.
iv. Obtain a permanent link for each of their research outputs.

21.8.10 Benefits to the institution include:

i. Collects and preserves its scientific output and disseminates it through its repository.
ii. Provides the possibility of indexing and tracking the scientific output of the institution from international search engines on the internet, like google etc.
iii. Monitors the number of visits and use and collects data and indicators that can be used in institutional planning, and search for sources of funding etc.
iv. Provides opportunities for the use and re-use of the institution's output for scientific purposes.
v. Strengthens international communication and collaboration channels and the institution's international profile.

21.9 RESEARCH, TECHNOLOGY AND INNOVATION COMMUNICATION

21.9.1 Staff and students are expected, to disseminate RTI outputs aligned to the requirements of the University and/or donor recognition, in recognised scholarly works as guided through the DRIP and related support services within the University. Further communication and research outreach through appropriate media platforms are promoted and encouraged, especially through NUST media sources adhering to the NUST branding principles.

21.9.2 Within disciplinary communities, staff and students may advance the University's reputation through seminars or workshops, guest lecturing, keynote/plenary addresses at conferences/ workshops, or service to professional forums or learned societies, for example, developing national, regional or international capacity within the research/teaching field.

21.9.3 The usage of e-learning is encouraged to complement the impact of applications and research.

21.10 RESEARCH, TECHNOLOGY AND INNOVATION COLLABORATION

21.10.1 The pursuit of research and innovation collaboration aims to pool synergies in terms of strategic resources and expertise to enhance the capacity and pedigree of the University in conjunction with mutually beneficial partners and stakeholders.

21.10.2 The DRIP is primarily responsible for contract negotiations and management. The PI and related line management shall sign a declaration form, clearly stipulating their understanding of contract terms and conditions and commitment to implement the project aligned to the approved proposal. By signing the declaration form (Template from the Legal Advisor's Office).

21.10.3 the PI and related line management accepts responsibility to allocate the required time to ensure a project is implemented according to plan.

21.10.4 The DRIP accepts accountability and obligation to liaise with donors on behalf of the PI and institution protecting the reputation and integrity of all parties.

21.10.5 The turnaround time for all legal documentation review up to signature should not exceed more than two (2) weeks.

21.10.6 All parties will keep records, with the central records to be kept by the Corporate and Internationalisation Office.

21.11 RESEARCH, TECHNOLOGY AND INNOVATION EXTERNAL FUNDING

21.11.1 MANAGEMENT FRAMEWORK

21.11.1.1 This section is intended for grant beneficiaries, particularly the Principal Investigators (PI's) leading grants facilitated by the Directorate of Research, Innovation and Partnerships (DRIP).

21.11.1.2 The University recognises the need for additional funds to support growing research and innovation development programmes and an expanding research infrastructure, and therefore encourages staff and students to engage in active sourcing of external grants and other project funding in accordance with these guidelines and procedures.

21.11.1.3 The University reserves the right to develop and implement a framework for full cost budgeting and recovery, which will be based on a differential fee structure, and guided by direct and indirect costing models, from RTI activities funded from external sources. These grant-related rates will be developed and approved through the procurement committee and will be adjusted to inflationary increases on an annual basis. The rates pertain to subsistence allowances and staff cost rates.

21.11.2 **REPORTING REQUIREMENTS**

21.11.2.1 The staff members from DRIP will ensure that donor requirements are meticulously adhered to (in strict compliance with the approved contract) and that all the PI's have access to all the needed reporting tools and supporting documentation as required by the donor.

21.11.2.2 The PI will be responsible for collecting information from team members and compile the report/s. The report/s will be based on the donor templates provided, and in the absence of such templates, aligned to donor requirements by the DRIP, and forwarded to the PI for final approval before submission to the donor.

21.11.3 **TIME MANAGEMENT**

21.11.3.1 The PI will facilitate the development of the detailed work plan and assign clear and documented responsibilities to all team members and/or Work Package leaders – including making provision for an administrative assistant within the department/faculty who will assist with all administrative matters as part of his/her workload.

21.11.3.2 All team members will keep an accurate record of time spent on the project in a timesheet template provided by the DRIP in accordance with donor requirements. All timesheets should be submitted to the PI monthly – (timesheets of the team members must be approved and signed off by the PI, while the timesheets of the PI must be approved and signed off by his/her Line Manager).

21.11.3.3 Timesheets must be submitted to the DRIP as per dates agreed upon.

21.11.4 **FINANCIAL MANAGEMENT**

21.11.4.1 The appointed Project Administrator supporting PIs in respective departments will assist with the administration of the project at no additional remuneration, as this is deemed part of their job description.

21.11.4.2 They are as such, expected to keep valid, accurate, and detailed records of all expenditure incurred on the project using a standard electronic template. This electronic template will have to be reconciled with ITS, supported by all the physical copies of expenditure incurred. Furthermore, the Project Administrator will ensure that the cost centre of such a project is kept up to date and relevant, and that there are no outstanding commitments or queries at any time. This detailed record should be submitted to the PI monthly for review and approval.

21.11.4.3 The PI will be responsible for the verification of the costs incurred, request for corrections required, and finally sign off the reports monthly. The PI will hereafter the approval, submit the expenditure sheet to the dedicated DRIP staff member for verification and reconciliation on either a monthly or quarterly basis, depending on the terms agreed upon.

21.11.4.4 All research projects are subject to all donor and NUST financial requirements at all times. A Purchase Requisition (RY) must be submitted at least two weeks prior to the event.

21.11.4.5 In cases where the required goods or services exceed the maximum threshold of a RY, submission should be in line with the procurement committee meetings scheduled, and at least four weeks before the event.

21.11.4.6 The project administrator must raise the RY, where after according to the delegation of authority, the purchase requisition will be approved by DRIP at the first approval, and the second approval will be done by the Finance Department.

21.11.4.7 In cases where procurement committee approval will be required, a completed procurement application should be submitted to the designated DRIP staff member

for approval and submission. In such cases, it should be noted that the RY is only raised once the signed off approval is obtained from the procurement committee.

21.11.4.8 Prior to the RY being submitted to the Finance Department for processing, the PI and administrator should ensure that such RY is approved, signed off by the PI, and all the relevant documentation are attached signed.

21.11.4.9 All procurement of services and goods should be done in accordance with the approved supplier database published monthly by the Procurement Department.

21.11.4.10 In the event that the services or goods required are from a supplier not on the approved supplier database, guidance should be obtained from the Procurement Department on the correct procedure to proceed.

21.11.4.11 *The required steps involved in the procurement of goods and services are as listed below:*

Table 1: Financial management

Items	**Required**	**Timeline**
Vendor registration	Download the supplier application form from the staff intranet. Supplier registration form should be sent to supplier	Warning: this process can be cumbersome; thus, advice is to strictly adhere to the approved supplier database, and only if current suppliers can't offer the goods or services required, pursue this option. It can take up to 1 month, depending on the responsiveness of the supplier.
Purchases > N$15 000	Procurement Committee submission is required (template)	Four weeks in advance
Electronic Equipment/Software	DICT approval for NUST equipment. DICT and DRIP databases to be synchronised/registered for electronic equipment acquired through projects. Donations are synchronised through NUST Foundation databases	Four weeks in advance
Payment Requisition (RY)	3 quotes for purchases above N$1 000; 1 quote for purchases below N$1 000	Two weeks in advance
Approvals of RY (2 days maximum) 1st Approval: DRIP staff 2nd Approval: Finance staff	All supporting documents should be attached	Two days after validation by Finance
Purchase Order	Issued by Finance and responsibility of the Project Secretary/Administrator to have this forwarded to the supplier	One week after RY submission/After Procurement Committee Approval
Goods received voucher (GRV)	Project Secretary/Administrator to complete the goods received process on ITS before any invoice or order can be completed. If not done, payment to the supplier will be delayed	As soon as goods are delivered. A copy should be kept as proof that goods were received
Supplier invoice submission	The Project Secretary/Administrator is responsible to request for the supplier invoice. On receipt of this invoice, detailed inspection should be done of the	As soon as goods are delivered, and all discrepancies are

Items	Required	Timeline
	goods or services billed in terms of rates, quantity etc. If in agreement, the PI should sign off the invoice, where after the invoices is forwarded to the Finance Department and DRIP	cleared
Proof of Payment	Proof of payments need to be accurately recorded and documented	Immediately after payment
Flight Tickets and Air Travel	NUST International Travel Authorisation, Invitation letter, Conference/Meeting Programme	Two weeks in advance
Per diems	NUST International Travel Authorisation, Flight Ticket	Two weeks in advance
NUST Transport	The Project Secretary/Administrator is responsible to book any transport services required via the ITS system. A clear indication of the drop-off and pick-up times (flight details) to be communicated and submitted with application. In the case of NUST cars used by researchers for project activities, onus rests upon the researcher to ensure the submission of fuel receipts, and the logbooks are completed in the required detail	Two weeks in advance
Equipment ownership and disposals	Upon acquiring equipment, including IT equipment, should be signed out through DRIP to ensure double entry and record-keeping is adhered to. Upon project completion equipment is returned to NUST or Project inventory to DRIP for benefit of all researchers	Upon acquiring, to be captured with serial numbers in asset register of NUST/Project inventory
Renting and hiring out of research equipment	Equipment should be listed in NUST/Project asset register. Renting and hiring rates and conditions to be determined through Procurement Committee	Renting and hiring is done with DRIP ED written approval and should be approved within 5 working days maximum.

21.11.4.12 PROJECT TRAVELLING

21.11.4.13 Travel of any staff member of NUST, which includes researchers and project staff, is subject to the approval by the respective line supervisor.

21.11.4.14 Travellers are expected to travel Economy Class. Any deviations should be approved by the DVC: RIP.

21.11.4.15 Ensure that contract rules are adhered, and sufficient funds are available before the process is started.

21.11.4.16 A copy of the donor agreement and three quotations, inclusive of travel insurance, from the travel agency must accompany the RY and the approved travel form.

21.11.4.17 All travel bookings need to be done as per the NUST policies and procedures. An official NUST order must be issued.

21.11.4.18 The travel agency will not issue any tickets etc., without a valid order being received.

21.11.4.19 The traveller must ensure all the relevant details on air tickets are correct before the travel agency issues the tickets.

21.11.4.20 Project Travelling Documentation and Recordkeeping Requirements

21.11.4.21 Proof of boarding passes, transfer services and hotel bills should be retained for all donor-funded project-related travel.

21.11.5 **PROJECT ADVANCES**

21.11.5.1 Advances, whether in the form of an electronic payment or foreign exchange or any other form, are issued only in highly exceptional cases, as these advance payments pose proven risks. In order to manage these risks, the following conditions apply when an application is submitted for an advance:

i. An advance form must be completed and authorised by the PI up to N$30 000 with a motivational letter signed by the PI and the HOD to the PI.
ii. Advance above N$30 000, will be approved by the Bursar in writing.
iii. The project administrator must raise a RY with all the documents attached, and once approved, forward to Finance: Accounts Payable for processing of such an advance.
iv. The submission to Finance should be ten working days before the anticipated trip relating to the advance request.
v. The advance settlement form, which is issued with the advance, must be returned to the DRIP staff member responsible for the management of the project, within seven days, along with the necessary documentary evidence.
vi. An indemnity form will have to be signed as commitment from the Project staff member that funds received will be solely applied for the project activities.
vii. NUST retains the right to recover the advance from the recipient's salary should the advance clearance form not be received within seven days, unless there is a valid reason why the necessary documentary evidence cannot be made available within seven days.
viii. The advance will be converted into an allowance which becomes fully taxable in the hands of the recipient of such an advance and will reflect on the PAYE of the employee.
ix. Any unspent amount remaining from an advance received, shall be paid in at the Cashiers against the same cost centre from which the advance was requested.
x. If the advance was in the form of foreign exchange, the unspent amount shall be paid over into the NUST bank account and in the currency as agreed with the Finance Department, which arranged this advance.
xi. In cases where own funds had to be used due to an insufficient advance requested, a reimbursement claim will be submitted together with the necessary documentary evidence should the costs incurred exceed the advance received.
xii. Only costs that meet the requirements of the donor agreement may be incurred from the advance; any expenses incurred that are in breach of donor agreement shall be paid by the person to whom the advance was issued.
xiii. No personal expenditure or remuneration may be paid from an advance.
xiv. No advances will be issued where the previous advances have not been cleared.
xv. The DRIP accountant must clear and reconcile the advances monthly. All documentary evidence shall be produced; if not, the costs shall be borne by the recipient of the advance.
xvi. Project advances will only be issued to NUST employees.

21.11.6 **RESEARCH FUND MANAGEMENT**

21.11.6.1 The NUST Research Fund is dedicated to all research-related activities. In order to promote transparency in the allocation of these funds, the fund will be administered by the Research and Innovation Committee (RIC) which is previously known as Institutional Research and Publication Committee (IRPC).

21.11.6.2 Research Fund Incentives are understood as follows:

i. The University recognises the importance of promoting staff and students to participate in research. In order to promote and encourage a greater effort in securing external research funding, the University has the aim to reward supporting parts of the University conducting research that supports the University's research strategy.
ii. The aim and intended purpose of these incentives include, but are not limited to the following:
    a. The recognition in fairly sharing resources between the various parties involved.
    b. Generating resources to provide for ongoing research activities.
    c. Recognition of the value and time invested in research.

21.11.6.3 The rationale on the distribution of these funds is based on:

i. *Administration fees or indirect costs*: This fee relates to operational administrative University costs, such as rent, utilities, equipment, supplies, insurance, salary benefits, legal and policy guidance, review and approval processes. The full charge is 20% maximum, unless otherwise negotiated with the donor.
ii. *Staff time costs allocations:* The salary time charge of University staff is distributed according to a transparent process, and is calculated through the University's payroll office and is provided on the basis of a signed consent form, followed by compensation report calculated (only by DRIP due to confidential nature) against signed off timesheet from the PI.
iii. *Unspent project funds:* In limited circumstances, research projects remain with unspent funds awarded, which after the closure process are allocated to the University after fully satisfying the donor requirements.
iv. *Contract research*: Predominantly consultancies projects that are based on research to meet the quality threshold (in terms of rigour and originality) to constitute the underpinning research. In addition to the deliverable from the donor, research output should be completed to add to the University research agenda. The impact of the contract must be attributed to the research conducted.

21.11.6.4 Funds available will be distributed according to the below table and supersedes the allocation in HR code of conduct regarding consultancy services related to research, technology and innovation efforts:

Table 2: Funds allocations for third party funding

	Admin Fee/Indirect Costs	Staff Time Costs	Unspent Project Funds	Contract Research[1]
University	40	30	20	30
Faculty/School	40	40	50	20
PI Cost Centre	20	30	30	20
Individual personal Benefit				30

[1] Contract research allocations are only applicable for total contract values above N$80 000 for once-off contracts less than 1 year. Any contract research beyond 1 year should be registered through DRIP and follow due process.

21.11.6.4.1 Allocation of research incentive funds are kept in the Research Fund until all project obligations and final financial audits have been completed.

21.11.6.4.2 The distributions are based on actual project account expenditures in the University's financial management system.

21.11.6.4.3 At the end of the fiscal year, the Finance office will create a report on the indirect cost expenditures for the fiscal year. This report will be used to calculate the distributions.

21.11.6.4.4 Funds to be distributed to multiple PIs, departments, or schools will be divided equally unless other arrangements are negotiated in writing, at the onset of the project implementation.

21.11.6.4.5 The primary PI (first listed on the proposal) should work with co-PIs to determine how and for what uses the Programme Incentive funds should be applied.

21.11.6.4.6 Efforts should be made to ensure that these discretionary funds are distributed equitably. While these funds will benefit the PI and co-PIs, the budget line reflecting this allocation will appear in the budget of the department (academic) or division (non-academic) of the primary PI.

21.11.6.4.7 A one-page (or less) proposal of how the funds will be used will be submitted to the DRIP Executive Director for approval. A request to use the funds in a different manner than suggested above may be made at that time.

21.11.6.4.8 Proposals will budget the full indirect cost rate allowed by the sponsor, unless the following occurs:

i. An institutional indirect cost waiver is granted in writing by the Executive Director of DRIP and approved by the DVC: RIP in consultation with the DVC:FO.

21.11.6.9 The PI's cost centre account will be set up as a restricted account, that is able to roll-over at the end of auditing periods. The funds will remain in the restricted account for as long as the PI is employed at the University. When the PI retires or leaves the university, the unspent funds will be given back to the faculty/office of the PI to be used to support research and scholarly activities.

21.11.6.10 The following guidelines provide the parameters for use of this allocated fund:

i. Programme Incentives may be used for research/training/faculty development-related expenses including student stipends, professional travel for principal investigator(s) or project director(s) and students, and teaching and student-learning enhancement initiatives.

ii. Use of funds is at the discretion of the principal investigator(s) or project director(s). Acceptable uses include the following:

a. Research or teaching equipment and/or laboratory-based materials and supplies.

b. Student stipends or research assistants plus related benefits (in accordance with HR Code and approved rates) to conduct research.

c. Fees for laboratory analysis (e.g., soil chemistry, water chemistry, DNA sequencing).

d. Travel expenses to conduct research (e.g., research library or collection, field site, conferring/working with collaborators).

e. Travel expenses for PI or student presentations at professional meetings.

f. Expenses for a PI to attend a professional conference (e.g., pedagogy, assessment).

g. Equipment purchases and/or maintenance (procurement of new equipment should be coordinated with Facilities Management).

h. Computer hard- and software (procurement must be coordinated with Directorate of Information Technology Services and if applicable Facilities Management).
i. Miscellaneous expenses, including library acquisitions, journal subscriptions, society membership fees, and publication costs, postage, copying.

21.11.6.11 In the event that Research Incentive funds are used for inappropriate purposes, the DRIP ED through the DVC: RIP may revoke the PI(s)'s access to them. In such cases, the allocation will revert to the operating budget of the University.

21.11.7 **ASSET MANAGEMENT**

21.11.7.1 The normal University procurement procedures as per Appendix 1 will be followed in acquiring donor-funded assets unless stated otherwise in the donor agreement.

21.11.7.2 All researchers and project staff will be required to familiarise themselves and comply with the stipulations of the *NUST Equipment Policy, Human Resource Code* and all other related policies.

21.11.7.3 Ensure the security of all assets allocated to them and reporting any theft, loss or damage in accordance with the NUST *Asset Maintenance and Management Procedure*. It is important that adequate controls are in place to ensure that only valid asset acquisitions, as budgeted for, are done and that these acquisitions are recorded accurately and completely in the Project asset register.

21.11.7.4 NUST and donor procurement and asset management rules should be adhered to at all times. The asset register plays an important role in the management of assets.

21.11.7.5 Assets remain the property of the donor and should be used for project purposes, until the end of the project when the donor decides to either retain the assets or donate it to NUST.

21.11.7.6 Once donated, it becomes part of NUST Assets and managed through Assets Management Department.

21.11.7.7 The University agrees to use and maintain all property for the purpose of the award or grant in accordance with the following donor guidelines procedures:

i. The University must use the property for the programme for which it was acquired during the period of the award or grant and must not provide any third party a legal or financial interest in the property (e.g., through a mortgage, lien or a lease) without the approval from the donor.
ii. The University must maintain the property in good condition, have management procedures to protect the property, and maintain an accurate inventory of all property.
iii. Maintenance procedures must include the following:
   a. Accurate description of the assets, including serial number, model number, or other identifying number, acquisition date and cost, location and condition, and data on the disposition of any property (date of disposition, sales prices, method used to determine the current fair market value etc.) as applicable.
   b. A physical inventory of the assets that must be taken, and the results reconciled with the equipment records, at least once every two years during the period of the award.
   c. A control system must be in effect to maintain the assets and ensure adequate safeguards to prevent loss, damage, or theft of the property. The recipient must maintain appropriate insurance equivalent to insurance the recipient maintains to its own property. Any loss, damage, or theft must be investigated and fully documented, and the recipient must promptly notify the Agreement Officer. The

recipient may be liable where insurance is not sufficient to cover losses or damage.

21.11.8 **DISPOSITION**

21.11.8.1 Upon the completion of the project, the University must submit to the donor a property disposition report as per the requirement as stipulated in the signed agreement.

21.11.8.2 The disposition of assets and general asset management will always be guided by the Contract with the Donor.

21.11.9 **RISK MANAGEMENT**

21.11.9.1 Regular monitoring (preferably monthly) of projects will ensure that potential risks identified and mitigated in advance.

21.11.9.2 The DRIP is responsible to identify and provide support for mitigation together with PI, prior to donor intervention.

21.11.10 CHANGE MANAGEMENT

21.11.10.1 A formal request for any budget changes or activity should be initiated by the PI in consultation with the DRIP, who will seek approval from the donor, if needed, and according to contractual requirements.

21.12 COMMUNICATION AND VISIBILITY

21.12.1 Communication and visibility should focus on the achievements, outputs, outcomes and impact of the project.

21.12.2 It is vital for each project to have a communication and visibility plan in line with project management.

21.12.3 Internal (NUST) and external target audience, as defined by the project should be aligned to project activities.

21.12.4 Project branding should be aligned to NUST branding and corporate identity through the Corporate Engagement and Internationalisation Division.

21.13 RESEARCH, TECHNOLOGY AND INNOVATION INCENTIVES

21.13.1 The University shall recognise research excellence and thus makes provision for relevant incentives to reward staff and students for their contribution to knowledge creation through research and innovation.

21.13.2 The recognition is acknowledged and rewarded in various ways, following approved criteria, benefit-sharing structures and indicators as outlined below:

i. Staff recognition awards as determined through respective recognised committees of Senate.
ii. Sabbaticals; and
iii. Reduction of workload as per approved workload formula.

21.14 RESEARCH, TECHNOLOGY AND INNOVATION ENTITY ESTABLISHMENT

21.14.1 The establishment of entities are subject to the following criteria and conditions, to:

i. Be a collaborative activity between a team of high-quality researchers in the institution and researchers or research-users in several companies or organisations.

ii. In the case where the nature of research is related to production or improvement of public goods, collaboration may include appropriate public agencies.
iii. Focus on new and emerging technologies, multidisciplinary and translational research relevant to national development goals.
iv. Be accorded to thematic areas aligned to that of the institutional strategic plan.
v. Conduct training and research for value addition or achieving next levels of research.
vi. Trigger an R&D culture in the institution as evidenced by significant increase in applications of research outputs, technological development and translation into prototypes/patents/publications, collaborative and sponsored research, publications in reputed national/ international journals and conferences, patents, innovations, commercialised products and Master's and PhD enrolments; and
vii. Insuring sustenance through approved business plans to be submitted through DRIP to DVC: RIP.

21.14.2 The entity will have a continuity of existence and will be subjected to a 5 (five) year review cycle or earlier, as required.

21.14.3 Approval of the establishment, continuation or disestablishment of any research- and innovation-related entity must be signed off by the Vice-Chancellor, submitted through DRIP ED and DVC: RIP.

21.15 IMPLEMENTATION

21.15.1 The Research and Innovation Committee (RIC) is established in terms of the Statutes and Regulations of the University for the coordination of high-quality research and innovation-related activities and output and institutional research funds.

21.15.2 RTI-related activities within faculties are managed by a faculty research and innovation committee that reports to the RIC.

21.15.3 RTI guidelines and procedures will guide the implementation of this policy to meet the policy objectives.

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23. APPENDICES

23.1 PROCEDURES FOR RESEARCH DATA MANAGEMENT

1. Roles and Responsibilities

1.1 University

a. Constitute a governance committee with oversight of policy implementation.
b. Enable data management planning and execution of good data management practice.
c. Raise awareness of, and offer training on policies, guidelines and associated data management practice.
d. Support compliance with funder policies.
e. Manage the data in the form for which it was originally collected, before summary, analysis and reporting.
f. Ensure that the data is discoverable by means of persistent, unique and resolvable identifiers.
g. Provide long-term stewardship for data.

1.2 Researcher

a. Define significant data to be produced on the research project.
b. Document data storage and management requirement in a data management plan.
c. Submit the completed data management plan, with the project proposal, to the funder and/or the relevant institutional committee.
d. Retain data during the project lifecycle and for a period specified by the funder and/or the University.
e. Deposit data timeously with the University's repository, domain-specific data infrastructures or trustworthy repository.

1.3 Funder

a. Define standards to facilitate access, use and interpretation of data.
b. Specify retention periods for significant data.
c. Endorse data deposit in existing domain-specific data infrastructure or another trustworthy repository.
d. Review implementation of data management plans.

2. Data Management Plans (DMPs)

a. All research projects must be supported by a DMP, as specified by the University.
b. DMPs must be prepared and tabled for approval at the Faculty Research and Publications Committee (FRPC).
c. DMPs must be updated when the data management needs of the research change from those captured in the current DMP.
d. The Office of the Deputy Vice-Chancellor: Research and Innovation will use the information in the DMPs to inform the development of University infrastructure and research support services.

3. Retention of research data, primary materials and research records

a. Research data, primary materials and research records must be retained in an accessible form in accordance with the provisions of the minimum retention periods set out in the Namibian Archives Act 12 of 1992 and the document retention schedules of the University's document management guidelines.
b. Project leaders and research students (in consultation with their supervisors) should ensure that sufficient data and primary materials are retained to justify and defend the outcomes of research.
c. Research data and primary material will be retained by the project leader or research supervisor in their Faculty, Department, Centre, and Unit, and on university-managed infrastructure.
d. Researchers working with human participants must seek informed consent from all participants to retain and re-use research data and primary materials for research or education purposes.

e. At the end of the retention period, research data, primary materials and research records must be disposed of under the authority of the Associate Dean: Research and Innovation of the Faculty, in accordance with the requirements of this policy.
f. Project leaders or research supervisors may recommend to the Associate Dean: Research and Innovation of the Faculty to retain, archive, re-use, share or destroy research data and primary materials at the end of the mandatory retention period.
g. Project leaders or research supervisors must consult with the University's Head of Central Records and Archiving for advice on the appropriate manner of disposal or destruction of research data, records and materials.
h. Where no project leader, metadata or DMP exist for research data or primary materials retained at the University, the Associate Dean: Research and Innovation will undertake the actions in accordance with 3.e.

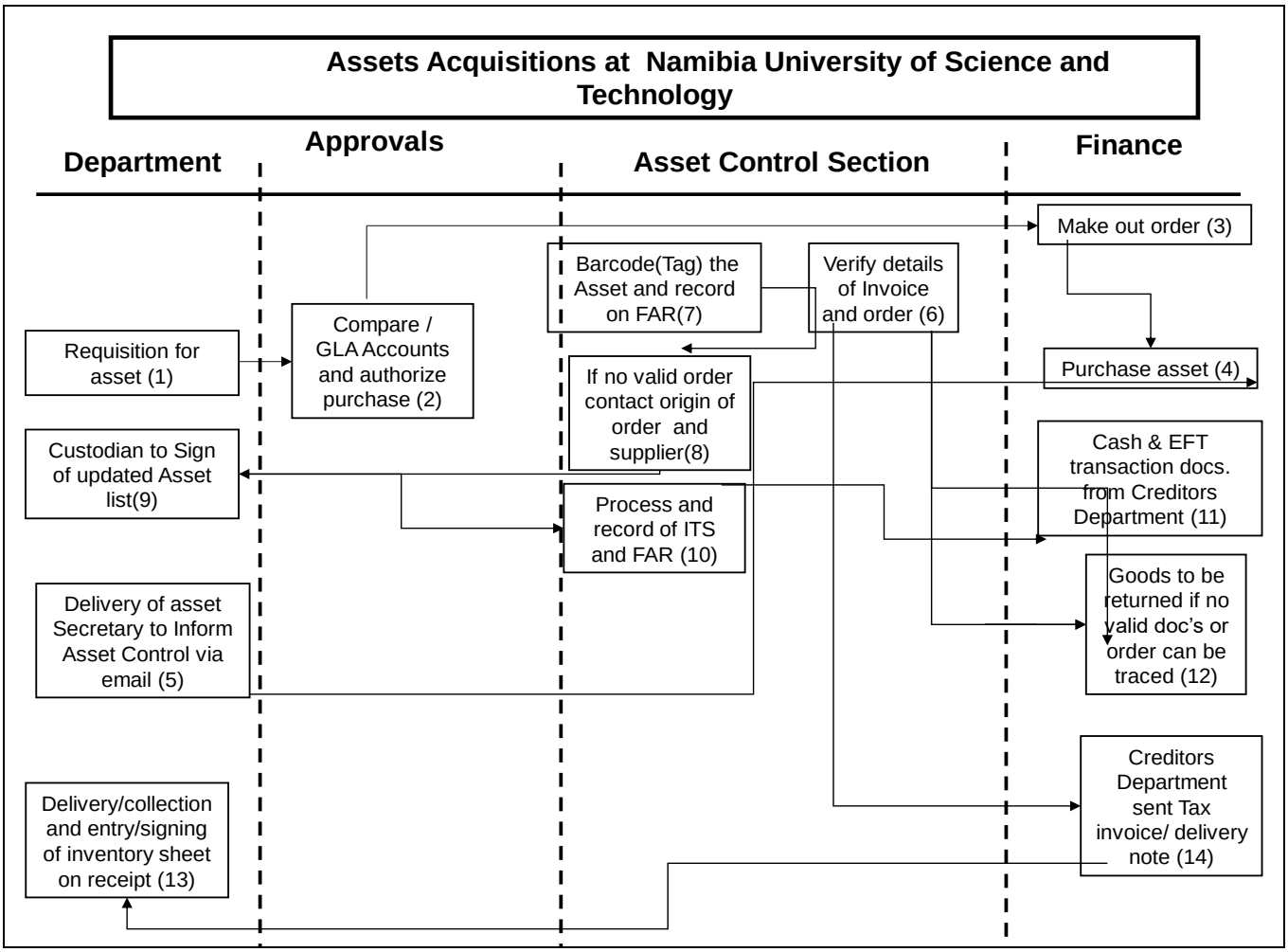
4. Access to research data collections

a. Project leaders or research supervisors should make completed research data sets openly available for re-use by other researchers, unless this is prevented by the requirements of legislation, University policy, or ethical, contractual or confidentiality obligations.
b. When open access to research data sets is not possible, project leaders or research supervisors should make research data metadata openly available.
c. Project leaders should consult with the University Library and Information Services for advice regarding the deposit of research data and/or metadata to the appropriate data storage facility, archive or repository.

1.1 DATA MANAGEMENT PLAN TEMPLATE

1. **Data Collection**
   a. Describe the data type, format and volumes to be used?
   b. Will the chosen formats and software enable sharing and long-term access to data?
   c. Are there existing data that you can use?
   d. What standards or methodologies will you use to collect data?
   e. How will you structure and name your folders and files?
   f. How will you apply version control?
   g. What quality assurance processes will you adopt?
2. **Documentation and Metadata**
   a. Describe the types of documentation that will accompany the data to help secondary users to understand reuse it. Include details that would help to find the data, who created or contributed to the data, the title, date of creation and conditions of access.
   b. Describe the methodology used, analytical and procedural information, definitions of variables, vocabularies, units of measurement, any assumptions made, and the file type of the data.
   c. How will you capture this information and where will it be recorded?
3. **Ethics and Legal Compliance**
   a. Have you gained consent for data preservation and sharing?
   b. How will you protect the identity of participants, if required?
   c. How will sensitive data be handled to ensure it is stored and transferred securely?
4. **Intellectual Property Rights**
   a. Who will own the copyright and intellectual property rights of any data that you will collect or create, including the license(s) for the use and reuse thereof?
   b. Will data sharing be postponed or restricted due to publisher embargos or patent registration?
5. **Storage and Backup**
   a. Do you have sufficient storage?
   b. How will the data be backed up?
   c. Who will be responsible for backup and recovery?
6. **Access and Security**
   a. What are the risks to data security and how will it be managed?
   b. What security measures will you put in place to secure your data?
   c. How will you ensure that collaborators can access your data securely?
7. **Selection and Preservation**
   a. What data must be retained/destroyed for contractual or legal purposes?
   b. How long will the data be retained and preserved?
   c. Are there any additional efforts required to prepare the data for sharing and preservation, such as changing file formats?
   d. In which repository will the data be held?
8. **Data Sharing**
   a. How will potential users find out about your data?
   b. With whom will you share the data, and under what conditions?
   c. For how long do you need exclusive use of the data and why?
   d. Will a data-sharing agreement be required?
9. **Responsibilities and Resources**
   a. Who is responsible for implementing the Data Management Plan and review thereof?
   b. Who will be responsible for each data management activity?
   c. Will this be collaborative research between two or more institutions?
   d. Will data ownership and responsibilities be part of an agreement between the partners?
   e. Is additional special expertise or training of existing staff required?
   f. Do you require hardware or software, additional to existing institutional provision?

1.2 7.2 Asset Acquisition Process





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