Research Data and Primary Materials Management Procedure

1 Purpose

To establish the responsibilities and processes for the management of Research Data and Primary Materials at the University.

2 Scope

This Procedure applies to all Researchers.

3 Procedure overview

This Procedure outlines the responsibilities and processes for the management of Research Data and Primary Materials. It aligns with the principles of the Australian Code for the Responsible Conduct of Research, as detailed in the University's Research Code of Conduct Policy.

This Procedure closely aligns with the Australian Code for the Responsible Conduct of Research supplementary guides *Management of Data and Information in Research* and *Publication and dissemination of research*.

4 Procedures

Research Data and Primary Materials management is a mutual responsibility. The University works in partnership with Researchers, institutes, centres, schools and relevant Research support providers to implement best practice. The University has a responsibility to provide a framework that:

- supports Researchers through the provision of appropriate information, resources and training; and
- ensures Researchers can meet their responsibilities in relation to safe and secure storage (e.g., storage facilities are supported and available to access).

The University offers a dedicated Research information management system to support the appropriate storage and management of Research Data and digitised Primary Materials. Utilisation of this system is a shared responsibility across the University, requiring active engagement from leaders across the schools, institutes and centres.

In accordance with the Australian Code for the Responsible Conduct of Research supplementary guides *Management of Data and Information in Research* and *Publication and dissemination of research*, Researchers are responsible for the appropriate management of Research Data and Primary Materials using methods suitable to the discipline and applicable standards (e.g., ethics guidelines, legislation, policies, and/or funding agency requirements).

4.1 Ownership, stewardship and control

Ownership is determined in accordance with the University's Intellectual Property Policy and subordinate Procedures. Conflicts of Interest should be managed according to the University's Conflict of Interest Policy and subordinate Procedures.

Researchers should ensure agreements around ownership and management are in place, particularly in cases of collaborations across multiple institutions. Agreements should consider the location of the data or information and materials (in Australia or overseas, virtual or physical), and movement or departures of staff.

Ordinarily Research Data and Primary Materials retained at the end of the project will be the property of the University or may be held at another institution with an interest in the Research or a central repository. For collaborative Research projects that span more than one institution, agreement should be formally documented between collaborators.

Overall responsibility for Research Data and Primary Materials Management resides with the Chief Investigator of a Research project. In the case of a Student Research project, the Higher Degree by Research (HDR) Supervisor has overarching responsibility for Research Data and Primary Materials management.

Researchers should appropriately consult with Indigenous owners regarding decisions about future access to or reuse of data or information used in, or generated by, Research involving Aboriginal and Torres Strait Islander peoples and communities.

The University supports Indigenous data sovereignty and governance principles. Data or information involving Aboriginal and Torres Strait Islander peoples and communities should be in accordance with the CARE (Collective Benefit, Authority to Control, Responsibility, Ethics) Principles. Researchers should refer to the University's Research Data Management and Indigenous Data Governance Schedule for further information about the CARE Principles.

4.2 Management plans

Management plans should be developed for all Research projects and activities. In some cases, management plans are required to be established and maintained to comply with funding or ethical obligations.

Early and continued planning assists Researchers to identify key needs and requirements, including:

- adequate technological resources (e.g., storage space, support staff time);
- expert advice (e.g., Intellectual Property experts relating to ownership, patenting and knowledge transfer, Metadata experts on data description and curation, copyright experts on attributions and sharing, and/or repository experts on retention);
- any Research project-specific conditions that require management protocols above the University's requirements;
- legal and ethical requirements; and
- potential for sharing.

4.2.1 Research Data Management Plan

The University provides a dedicated Research information management system to guide Researchers in developing a Research Data Management Plan. Researchers may include details of Primary Materials in the University's Research Data Management Plan template or develop discipline-specific Primary Materials plans at the start of their project.

A Research Data Management Plan includes, but is not limited to, details regarding:

- what Research Data will be created;
- what legislation, regulations, codes, policies and standards, (funding, institutional, ethical, and legal, etc.) will apply to the Research Data;
- ownership, access and protection of Intellectual Property;
- training for members of the project team and others, as appropriate;
- how the Research Data will be described and possibly shared and/or reused;
- what Research Data management practices (backups, access control, preservation and archiving) will be used;
- what facilities and equipment (hard-disk space, backup server, repository) will be required; and
- who will be responsible for each of these activities.

Researchers involved in Research training should encourage the early and continued use of Research Data Management Plans by their Students.

When good management practices are employed by Researchers and enabled by a Research

Data Management Plan, project efficiency is optimised and information loss and duplication is voided.

Good management in Research Data includes:

- Use of stable storage formats and regular backup to a source external to an individual computer.
- Version control and other relevant mechanisms for datasets, algorithms, models and software configuration management.
- Workflow documentation with provenance information (i.e., the origin of the information) for instruments (use and calibration) and software used.
- Adherence to appropriate national and international standards for scientific terminology and information encoding (e.g., EAD - Encoded Archival Description; TEI - Text Encoding Initiative; METS - Metadata Encoding and Transmission Standard).

4.3 Storage, retention and disposal

The storage, retention and disposal of Research Data and Primary Materials should be consistent with the University's Records and Information Management Policy and Procedure and the Queensland University Sector Retention and Disposal Schedule. Researchers should also ensure that any special conditions relating to the Research project and/or type of Research conducted are met. For example, this may include: contractual requirements relating to copyright or licencing; privacy, ethical and publication guidelines; relevant laws, regulations and guidelines; and/or with Research discipline-specific best practices.

Researchers should retain clear, accurate, secure and complete records. This includes all relevant administrative records of Research such as approvals, authorisations, ethics approvals, financial approvals and reporting, receipts and consent forms.

Any inappropriate use of, access to, or loss of, Research Data should be reported.

4.3.1 Storage

When storing Research Data and Primary Materials, Researchers should create and maintain sufficient documentation or Metadata (i.e., structured information about the data) to enable it to be: identified; discovered; associated with its owners and creators; linked to other related data or publications; contextualised in time and space; and to have the quality of the data assessed and Research results validated. Research Data should be Findable, Accessible, Interoperable and Reusable as per the FAIR Principles. Researchers should refer to the University's Research Data Management and Indigenous Data Governance Schedule for further information on how to implement the FAIR Principles. Describing Research Data and Primary Materials appropriately during storage enables:

- sharing of Research Data, helping to raise Research profiles and increase impact and recognition;
- future Research to build on existing knowledge;
- transparency and supports Research integrity;
- recording of Research Data collected at a specific point in time that cannot be repeated;
- validation of findings by others;
- support for the responsible communication of Research results; and
- re-use of the Research Data by Researchers in other fields for different purposes.

Through the course of a Research project all Research Data, regardless of format, should be stored securely and backed up or copied regularly. It is strongly recommended that Researchers keep at least three copies of all Research Data (primary and two secondary) and maintain a plan for regular backups.

Researchers should ensure the security of Research Data by using University systems and storage facilities. To enable the secure storage of Research Data, access to eResearch advice and services to guide Researchers in the selection of appropriate storage is provided.

It is recommended that durable file formats be selected for use during the conduct of Research, considering the following factors:

- endorsed and published by standards agencies such as Standards Australia or the International Organization for Standardization (ISO);
- publicly documented, i.e., complete authoritative specifications are available;
- the product of collaborative development and consultative processes; and
- widely used and accepted as best practice within a discipline or other user communities.

Primary Materials should be digitised wherever possible and appropriate, to minimise the risk of loss, damage and physical storage requirements. Where this is impractical, Researchers must ensure Primary Materials are appropriately stored in accordance with the University's Work, Health and Safety Policies and Procedures, and biological containment requirements (for biological Primary Materials). When storing Primary Materials, Researchers should consider:

- ease of access and identification;

- prevention of loss of unique materials (storage methods appropriate to conserve the scientific and Research value);
- whether the Primary Materials enable accuracy of Research to be tested;
- the continuity of Research work (business continuity planning);
- contractual obligations of external Research funding bodies (if applicable);
- impact on future funding; and
- Intellectual Property and novel scientific Research.

4.3.2 Retention and disposal

Research Data and Primary Materials should be retained, and disposed of, in accordance with the Australian Code for the Responsible Conduct of Research, the Queensland University Sector Retention and Disposal Schedule and the University's Records and Information Management Policy. Researchers should consider the legal requirements and requirements of funders, government bodies and publishers when determining what Research Data and Primary Materials should be retained long-term and made widely accessible.

The Australian Code for the Responsible Conduct of Research supplementary guide *Management of Data and Information in Research* recommends that the following be considered when deciding which Research Data and Primary Materials should be retained:

- uniqueness and non-replicability (i.e., Research would be difficult or impossible to recreate, repeating the experiment would represent an unjustifiable imposition to participants or Animals);
- reliability, integrity, and usability;
- relevance to a known Research initiative or collection (such as methods or results constitute a paradigm shift for the field of inquiry);
- community, cultural or historical value (such as high public interest or contention);
- economic benefit;
- the Research included human participants under 18; and
- the Research will result in notifiable Intellectual Property (e.g., a patent application).

Disposal of Primary Materials should be done with all due consideration to potential biological or environmental risks associated with the materials.

It is important to note that Primary Materials may not always be practical to retain (e.g., biological material/s, ore, questionnaires or recordings). Therefore, durable records derived (e.g., test results, transcripts, laboratory books, field notes) must be retained and accessible.

In addition to the actual Research Data and Primary Materials, Researchers must retain any corporate records related to that data and information generated in Research.

Researchers are responsible for ensuring appropriate arrangements have been made in relation to disposal of Research Data and Primary Materials. Extra care should be taken when dealing with records that contain sensitive information or are subject to privacy legislation.

Master copies of any working data that belongs to the University or to a third party with which the University has an agreement should not be deleted. The University's Intellectual Property Policy and pursuant Procedures set out the responsibilities of Researchers in relation to retaining copies for teaching and Research purposes.

4.4 Safety, security and confidentiality

Researchers should understand their responsibilities in relation to storage, security and access. Any project-specific conditions of consent or confidentiality agreements should be respected.

Where confidentiality agreements and/or restrictions on the use of Research Data and Primary Materials exist, Researchers should ensure they understand, and abide by, the relevant requirements. Research Data and information that may have obligations of confidentiality or sensitivities may include:

- commercial-in-confidence or inherently confidential data or information (e.g., information provided in confidence in a secret and sacred religious or cultural practice, or locations of vulnerable species);
- sensitive data or information subject to privacy legislation (e.g., identifiable human medical/health data); or
- data or information subject to classification regimes and other controls (e.g., national security information, Primary Materials that are regulated goods, software or technology when exported, supplied, brokered or published as per the Defence Trade Controls Act's Defence and Strategic Goods List).

Facilities supporting the storage of Research Data controlled by the University, including information technology, are operated in accordance with privacy requirements and other relevant laws, regulations and guidelines, and Research discipline-specific practices and standards related to safe and secure storage of data and information.

The University recommends that Research Data and, where appropriate, Primary Materials (for example interviews or recordings) are transferred using safe and secure protocols that feature

data encryption. The University provides Researchers with a fast and secure network to enable reliable data transfers. Researchers should use secure protocols such as Secure Shell (SSH) for file transfers.

Preserving Research Data and Primary Materials helps to keep them accessible and usable into the future, despite changes in technology and possible hardware failures. Preservation of Research Data should include the datasets and any related files providing the datasets context; for example, email discussions, methods of analysis, Research parameters.

4.5 Sharing and re-use

Where possible, sharing and re-use of Research Data and Primary Materials is encouraged. This can be facilitated by allowing access where possible and appropriate, and ensuring, where appropriate, that Research Datasets are captured for re-use and that descriptive Metadata (e.g., title, abstract, author, and keywords) is applied to provide contextual understanding of the data.

Sharing Research Data ensures that it can be discovered, accessed and cited in the long term. Sharing of Research Data is often a requirement of funding bodies and publishers. Providing open access to Research Data has the potential to result in significant Research impact and is increasingly considered a major element in the publishing process.

Sharing some or all of the Research Data resulting from Research Activities may not always be possible due to characteristics including, but not limited to: confidentiality and privacy; legal issues; ethics; sensitivity issues; and protecting future publication of results.

Licensing can provide a standardised way for Researchers to share Research Data with others and to govern subsequent use of that data (e.g., Creative Commons Attribution licence).

Researchers may publish Research Data (in accordance with any relevant requirements or permissions) in international, national or discipline-based repositories such as international databanks, in addition to storing the data at the University.

Decisions about sharing Research Data should consider any relevant obligations with regard to Intellectual Property including:

- determining what rights, including copyright, exists in the Research Data produced by the project; and
- consideration of ownership in accordance with the University's Intellectual Property Policy and pursuant Procedures.

4.6 Acknowledging the use of others' data

The Australian Code for the Responsible Conduct of Research and its supplementary Authorship Guide require appropriate referencing and citing in the presentation, publication or

sharing of Research. This principle applies to all Research Data and information used as an input to a Research project.

4.7 Training and education

Ongoing training and education in Research Data and Primary Materials management will be offered through the Research and Innovation Division and the Library. It is expected that Researchers engage with the training, education and resources made available at the University.

4.8 Potential breaches

The Research Code of Conduct: Management of Potential Breaches Procedure outlines the process for reviewing potential breaches of the University's Research Code of Conduct Policy and associated Procedures. Examples of a Breach in Research related to the management of data and information in Research include (but are not limited to):

- falsification and/or fabrication of Research Data or Primary Materials;
- failure to retain clear, accurate, secure and complete records of all Research including Research Data and Primary Materials;
- failure to adhere to the conditions of any institutional Policy or project-specific approvals that relate to the retention, sharing or destruction of Research Data or Primary Materials; and
- selective retention of Research Data or Primary Materials so as to hinder the verifiability of a Research Output.

Further examples are detailed in the Australian Code for the Responsible Conduct of Research supplementary guide *Management of Data and Information in Research*.

5 References

Australian Government. (2018). Australian Code for the Responsible Conduct of Research. Canberra, ACT: Australian Government, Retrieved from https://nhmrc.gov.au/about-us/publications/australian-code-responsible-conduct-research-2018.

Australian Government. (2019). Management of Data and Information in Research Guide. Canberra, ACT: Australian Government, Retrieved from: https://nhmrc.gov.au/about-us/publications/australian-code-responsible-conduct-research-2018.

Australian Government. (2020). Publication and Dissemination of Research. Canberra, ACT: Australian Government, Retrieved from: https://nhmrc.gov.au/about-us/publications/australian-

code-responsible-conduct-research-2018.

6 Schedules

This procedure must be read in conjunction with its subordinate schedules as provided in the table below.

7 Procedure Information

Accountable Officer	Deputy Vice-Chancellor (Research and Innovation)
Responsible Officer	Deputy Vice-Chancellor (Research and Innovation)
Policy Type	University Procedure
Policy Suite	Research Code of Conduct Policy
Subordinate Schedules	Research Data Management and Indigenous Data Governance Schedule
Approved Date	30/5/2025
Effective Date	30/5/2025
Review Date	30/5/2030
Relevant Legislation	*Copyright Act 1968* *Defence Trade Controls Act 2012* *Information Privacy Act 2009* *Public Records Act 2023* *Right to Information Act 2009* University Sector Retention and Disposal Schedule
Policy Exceptions	Policy Exceptions Register
Related Policies	Administrative Access Scheme Policy Enterprise Architecture Policy ICT Information Management and Security Policy Intellectual Property Policy Privacy Policy

	Records and Information Management Policy Right to Information Policy
Related Procedures	Administrative Access Scheme Procedure Animal Ethics Committee Procedure Authorship Procedure Biosafety Procedure Commercialisation of Intellectual Property Procedure Engagement of Cloud Computing Services Procedure Human Research Ethics Procedure Information Asset and Security Classification Procedure Intellectual Property Procedure Privacy Procedure Records and Information Management Procedure Right to Information Procedure
Related forms, publications and websites	Australian Code for the Responsible Conduct of Research and supplementary guides Australian code for the care and use of animals for scientific purposes Australian National Data Commons Research Data Management Framework for Institutions Creative Commons Ethical guidelines for research with Aboriginal and Torres Strait Islander Peoples FAIR Principles Guidelines for Ethical Research in Australian Indigenous Studies IMS Global National Archives of Australia National Statement on Ethical Conduct in Human Research

	Metadata standards: • Humanities data - The Text encoding initiative, The Visual Resources Association Core, Dublin Core, Functional Requirements for Bibliographic Records (FRBR) • Geospatial Data - The Content Standard for Digital Geospatial Metadata (CSDGM), ISO Standard for Geographic Information (ISO 19115:2003) • Social Sciences Data - Data Documentation Initiative (DDI) • Scientific Data - CCLRC Scientific Data Model • Multimedia - NISO Z39.87-2002 Technical Metadata for Digital Still Images, MPEG-7 OECD Principles and Guidelines for Access to Research Data from Public Funding Research Data Management Plan Template
Definitions	**Terms defined in the Definitions Dictionary**
	Breach in Research A breach is defined as a failure to meet the principles and responsibilities of the Code, and may refer to a single breach or multiple breaches. Breaches of the University Research Code of Conduct and the Australian Code for the Responsible Conduct of Research occur on a spectrum, from minor (less serious) to major (more serious). Chief Investigator The overall lead researcher for a research project. Data Security The protection of data from unauthorised use, access disclosure and destruction, as well as the prevention of unwanted changes that can affect the integrity of data. Ensuring data security requires paying attention to physical security, network security and security of computer systems and files. Higher Degree by Research (HDR) Supervisor

A member of a Student's HDR Supervisory Team. An HDR Supervisor may hold the position of Principal HDR Supervisor or Associate Supervisor.

Intellectual Property

The result of an individual's intellectual endeavours that is capable of being protected by legal rights. Examples include, but are not limited to: inventions and discoveries in relation to new products and processes that can be protected by a patent; Copyright in Teaching Materials; other works in which Copyright subsists including literary works (including computer programs), dramatic works, musical works, artistic works, films, sound recordings, broadcasts, published editions and certain types of performances; industrial designs, which protect the shape, configuration, pattern or ornamentation of a product, that is, what gives a product a unique appearance; plant breeders' rights, which protect varieties of plants and trees; trademarks, which protect the branding, reputation and goodwill of products and services; circuit layout rights, which protect the layout plans or designs of electronic components in integrated circuits, computer chips, or semi-conductors used in personal computers and computer-reliant equipment; and trade secrets and know-how, that is, knowledge about products, processes, and inventions and discoveries: prior to the time they are incorporated into a publication or become the subject of a patent or design application; or which are never made the subject of an application for Intellectual Property registration.

Metadata

Identifying information collected with the data to enable cataloguing and searching. It can be used to describe physical items as well as digital items. Metadata is a standard machine and human-readable format for representing project and data documentation.

Primary Materials

Physical objects acquired through a process of scholarly investigation from which Research Data may be derived. Includes, but is not limited to, ore, biological material, survey questionnaires, measurements, recordings, artefacts, texts, photographs, and computer results. In some instances, Primary materials may be considered research data, and may be required to be retained to validate the outcomes of research.

Research

Research is the creation of new knowledge and/or the use of existing knowledge in a new and creative way to generate new concepts,

methodologies, inventions and understandings. This could include the synthesis and analysis of previous research to the extent that it is new and creative.

Research Activities

Refers to activities that result in the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies and understandings. This could include synthesis and analysis of previous research to the extent that it leads to new and creative outcomes.

Research Data

Researchers have a responsibility to retain clear, accurate, secure and complete records of research data. It is critical that data includes records necessary for the reconstruction and evaluation of reported results and processes leading to those results. Research data relates to facts, observations, measurements or experiences on which an argument, theory or test is based. Research Data may be numerical, descriptive, visual or tactile. It may be raw, or analysed, experimental or observational and may be held in any format or media. Examples include, but are not limited to: Laboratory notebooks; Field notebooks; Primary Research Data; Questionnaires; Audio and video recordings; Photographs; Films; Test responses, and Any other records that are necessary for the reconstruction and evaluation of the reported results of research. Research Collections may include slides, specimens, samples and artefacts; with related provenance information. Research data (and primary materials) includes evidence supporting findings. For example, in the Creative Arts this may include early drafts and concept documents prior to the final output of the creative work.

Research Data Management Plan

A Research Data Management Plan establishes key elements of research data management including: Ownership of research data Research data processing Storage and backup of research data Retention and disposal of research data Access to research data for sharing and reuse

Research Output

An output is an outcome of research and can take many forms. Research Outputs must meet the definition of Research.

Researcher

Any person/s involved in Research Activities at, or on behalf of the

	University. This includes, but is not limited to Employees, Students, visiting scholars, research partners, research affiliates, holders of Honorary or Adjunct positions. Student A person who is enrolled in a UniSQ Upskill Course or who is admitted to an Award Program or Non-Award Program offered by the University and is: currently enrolled in one or more Courses or study units; or not currently enrolled but is on an approved Leave of Absence or whose admission has not been cancelled. University The term 'University' or 'UniSQ' means the University of Southern Queensland.
	Definitions that relate to this procedure only
Keywords	Research data, primary materials, storage, retention
Record No	15/1985PL