1. Preamble

This policy sets out the principles and responsibilities associated with the provision of long term digital preservation of the contents of UNSWorks.

1.1 Purpose

This policy outlines the University’s approach to the long term preservation of digital contents of UNSWorks, and the associated information used to effectively manage these resources.

1.2 Background

Ensuring accessibility and continuing use of digital resources require software applications, which over time are replaced by newer applications that often lack backward compatibility. This presents the potential risk of digital materials, such as the contents of UNSWorks, becoming inaccessible and unusable over the long term.

Although the UNSWorks policy and guidelines support preservation actions, it does not sufficiently address strategies for the long term preservation of digital resources. Furthermore, there is currently no digital preservation policy applied across the university.

2. Scope

This policy applies to the following types of digital content held within UNSWorks:
- Research materials including PhD and Masters by research theses, scholarly publications and associated research data;
- Supporting files to research materials including software;
- Rights documentation attached to digital content deposited within UNSWorks, and
- Metadata describing UNSWorks digital content.

The digital resource types supported by this policy are outlined in Appendix B.
3. Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital resource</td>
<td>Refers to objects submitted for deposit in UNSWorks. Used interchangeably with &quot;research materials&quot; and &quot;digital contents&quot;</td>
</tr>
<tr>
<td>GDA23</td>
<td>The General Retention and Disposal Authority - University Records, specified by the State Records Authority of NSW.</td>
</tr>
<tr>
<td>Metadata</td>
<td>Structured information that describes, explains, locates or enables the retrieval, use and management of a digital resource.</td>
</tr>
<tr>
<td>Preservation copy</td>
<td>Digital content targeted for preservation that is considered the master version of the content of any digital resource deposited in UNSWorks.</td>
</tr>
<tr>
<td>Research materials</td>
<td>A general term describing the contents of the UNSWorks institutional repository</td>
</tr>
<tr>
<td>UNSWorks</td>
<td>The name of the UNSW institutional repository of UNSW research output</td>
</tr>
</tbody>
</table>

4. Policy Statement

4.1 Statement of purpose

A digital preservation strategy is necessary to ensure that UNSW research output remains discoverable and accessible over the long term. The Library will adequately (see 4.2) preserve the authenticity, accessibility and usability of the digital resources stored in UNSWorks.

4.2 Adequacy of Preservation

The adequacy of the preservation solution provided by the Library is defined by the following requirements to be fulfilled. These requirements represent an optimum balance between the technical capabilities of the Library and the related expectations of both internal and external stakeholders.

4.2.1 Access and rights: by preserving the accessibility of the contents of UNSWorks, the Library will maintain:

- information regarding rights and permissions governing access;
- the ability to locate the digital resource reliably;
- the means of accessing an acceptable presentation of the digital resource.

4.2.2 Retention periods: Retention periods for content held within UNSWorks will comply with the minimum standards set out by the General Retention and Disposal Authority - University Records (GDA23) and the Australian Code for the Responsible Conduct of Research (ACRCR). UNSWorks preservation levels and retention periods are detailed in the UNSWorks Digital Preservation Procedure.
4.3 Preservation strategy

The UNSWorks preservation strategy is to preserve a copy of each deposited item in the format in which it was deposited, with as much preservation metadata as possible to provide access in the future. Periodical assessment of technological stability, fixity and integrity checks will be carried out to ensure preservation copies do not deteriorate or become corrupted. Although access to the preservation copy will be restricted; derivative copies will be created for general access.

4.3.1 Retrospective works: Preservation actions for digital resources currently held within UNSWorks (deposited prior to 2013) will be prioritised according to availability of adequate resources.

4.3.2 Metadata and standards: Metadata is fundamental to preserving the digital resources deposited in UNSWorks. Preservation metadata establishes an informational frame of reference around a preserved digital object that remains attached to that object over time. This encompasses:

- **Provenance** – information on the custodial history of the object, validation of the object’s authenticity;
- **Preservation actions** – such as fixity and integrity checks, format migration;
- **Rights** – intellectual property rights that may impact the Library’s powers to preserve the object or provide access to it;
- **Environment** – information about the technical aspects needed to access and render the digital resource, and also semantic information that provides necessary context for using the preserved digital resource.

The Open Archival Information System (OAIS) Reference Model (2012) will be used to frame the Library’s digital preservation work.

Preservation metadata will be captured using an adaptation of the PREMIS Data Dictionary for Preservation Metadata v2.2 for UNSWorks digital resources.

4.3.3 Risk management: The operational context and related technology will be proactively monitored to identify, assess and, if necessary, address key threats against the digital contents of UNSWorks. The risk management process will be aligned where possible with the ISO Standard for Trusted Digital Repositories (ISO 16363) that outlines the key preservation threats to be addressed by a trusted digital repository.

4.3.4 Guarantees: Security of digital resources is important in providing a trustworthy repository of authentic digital resources. All preservation copies will be secured to prevent unauthorised changes.

4.3.5 Costs and resources: Enduring preservation of digital resources requires substantial and ongoing resource management over time. This policy maintains that storage technologies must be seen as chronically obsolescent and subject to migration to more strategically suitable options over time.

The University will commit adequate funds to the Library in order to carry out the preservation strategy.
5. **Legal & Policy Framework**

Intellectual property rights relating to the creation and production of content will be dealt with in accordance with the *Intellectual Property (IP) Policy* and the related procedure and guidelines.

Dissemination of research materials will be managed as described in the *Research Code of Conduct*.

UNSW academic staff should adhere to the *Recordkeeping Policy* and *Electronic Recordkeeping Policy* where appropriate.

The *UNSWorks Digital Preservation Procedure* must be followed in relation to this policy.

Additionally, this policy complies with the following UNSW policies and procedures:
- Digital Media Policy
- Procedure for Handling Research Material & Data
- UNSWorks Policy and Guidelines
- IT Security Policy
- Electronic Recordkeeping Policy
- Recordkeeping Policy

6. **Implementation**

This policy will be implemented by the development of associated procedures and guidelines.

6.1 **Roles & Responsibilities**

The Library is responsible for ensuring that the digital preservation strategy follows best practice guidelines and adheres to relevant digital preservation standards. The University Librarian will ensure that appropriate systems and procedures are in place to support this policy.

This policy gives authority to the University Librarian to establish procedures to implement digital preservation strategies for UNSWorks. It also provides guidance to Library staff engaged in making decisions and undertaking other activities that may have an impact on UNSWorks.

The Library will report annually to the Academic Board’s Committee on Research. These reports will monitor and review the digital preservation policy, and establish a set of criteria against which the policy implementation is periodically evaluated to ensure validity and effectiveness.

6.2 **Support & Advice**

Ongoing support and advice on the application of this policy may be sought from the Director, Digital Library Services.

6.3 **Communication**

This policy will be communicated via the standard policy communication strategy, as well as to targeted managers across the University.

7. **Review**

This policy will be reviewed three years from the effective date by the University Librarian.
8. Acknowledgements

This policy was developed in consultation with the following resources:


Appendix A: History

<table>
<thead>
<tr>
<th>Version</th>
<th>Authorised by</th>
<th>Approval Date</th>
<th>Effective Date</th>
<th>Sections modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>President and Vice-Chancellor</td>
<td>29 November 2013</td>
<td>1 January 2014</td>
<td>This is a new policy</td>
</tr>
<tr>
<td>2.0</td>
<td>President and Vice-Chancellor</td>
<td>18 May 2015</td>
<td>18 May 2015</td>
<td>Scope amended to exclude standalone research data, domain specific files and software or working files</td>
</tr>
</tbody>
</table>
## Appendix B: UNSWorks research materials

The following types of research material are included in UNSWorks, as specified by the UNSWorks guidelines:

<table>
<thead>
<tr>
<th>UNSWorks research material types</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD and Masters by research theses</td>
<td>• PhD and Masters by Research theses, as already collected in Australian Digital Theses</td>
</tr>
<tr>
<td>Research reports</td>
<td>• Project reports</td>
</tr>
<tr>
<td></td>
<td>• Technical reports</td>
</tr>
<tr>
<td></td>
<td>• Working papers</td>
</tr>
<tr>
<td>Open Access research publications</td>
<td>• Books or book chapters</td>
</tr>
<tr>
<td></td>
<td>• Conference papers and posters</td>
</tr>
<tr>
<td></td>
<td>• Journal articles</td>
</tr>
<tr>
<td></td>
<td>• Research papers</td>
</tr>
<tr>
<td>Supporting files for Masters by research, PhD theses, and research publications and reports</td>
<td>• Audio visual objects</td>
</tr>
<tr>
<td></td>
<td>• Images used for research</td>
</tr>
<tr>
<td></td>
<td>• Interactive media</td>
</tr>
<tr>
<td></td>
<td>• Multimedia materials</td>
</tr>
<tr>
<td>Research data</td>
<td>• Small-sized datasets accompanying PhD/Masters by research theses or Open Access research publications</td>
</tr>
<tr>
<td>Domain specific files and software (as supporting files for theses or research data)</td>
<td>• Computer programs or applications developed by research presented in PhD/Masters by research theses or Open Access research publications</td>
</tr>
</tbody>
</table>

The following types of research publications or collections are not included in UNSWorks:

- material intended for commercialisation
- material containing confidential or proprietary material
- material that should not be made publicly accessible for reasons of cultural or commercial sensitivity
- material that contains offensive, defamatory or unlawful content
- research publications or collections which, if disseminated by UNSWorks, would infringe a legal obligation of the University of New South Wales and/or the author(s) or creator(s), or the legal rights of the third party
- honours theses and undergraduate essays
- draft papers or draft versions of papers released for discussion
- pre-prints of journal articles, except in cases where permission is granted for pre-print only (A pre-print is not peer-reviewed. It is the version of an academic paper which is submitted by an author for peer review. There may be cases where post-prints are not allowed but pre-docs are.)

Other types of material not suitable for inclusion in UNSWorks are:

- material intended for teaching and learning (e.g. course notes, reading material.)
- administrative documents and records, including those associated with research projects.