



Digital Preservation Policy

1. Introduction

The University's core mission, as stated in the University Strategic Plan 2012-2016, is the "creation, dissemination and curation of knowledge". Digital preservation ensures the long term curation of electronic knowledge and it is the University's legislative and cultural responsibility to address this in relation to its own archive. To help deliver this responsibility, Library and University Collections (L&UC) has been given a remit to preserve, promote and provide access to the University's corporate memory, historic and cultural collections in digital format (alongside its responsibility to preserve the printed and written record). By doing so L&UC can provide resources suitable for a diverse community of disciplines to support teaching, learning, research and engagement activities of the University.

Such resources are increasingly being created in digital form and have a high risk of becoming obsolete, lost, corrupt and unreadable if not properly managed and preserved. In order to counter these risks it is necessary for the University to be proactive in the management of its digital assets. This policy should be read in conjunction with the Collections Management Policy, which was approved in June 2015 by University Court.

2. Purpose

This policy outlines how the University intends to manage, preserve and make accessible digital records selected for long-term preservation because of their enduring cultural, historical, informational or evidential value in a manner that retains the records' authenticity, integrity, usability and reliability. The aim is to do this within a Digital Strong Room (DSR).

3. Scope

3.1. Digital records are typically either:

- 'Born digital', where the record was created using software and hardware, and saved in digital format.
- 'Made digital', where the record was created in a physical, tangible form and has subsequently been recreated, through scanning or photographic techniques, as a digital object.

3.2. The preservation process spans the full lifecycle of a digital record, from the point of creation through ongoing custodianship within the DSR. This policy specifically covers digital records, which are within the scope of section 2, appendix G of the Collections Management Policy, and which will be preserved within the DSR:

- Born-digital records created in the course of the University conducting its business, which hold corporate memory and have been selected for long term preservation.



- Born-digital and made-digital records, created outside the University and accessioned into L&UC via external acquisition, such as donation or purchase.
- Made-digital surrogates, of physical objects, created by the University for the purposes of:
 - Preservation, where the physical original is subject to decay or technological obsolescence.
 - Access, to broaden its audience and widen research potential.
 - Outreach/Advocacy, to promote the University and its heritage collections.

3.3. Digital formats and media

- The University will accept digital records in most file formats (such as text, graphic, image, video, audio, database, website and email) and will apply standard archival appraisal criteria, codes of practice and best practice to determine suitability for preservation.
- The policy does not apply to the content or subject matter of a record or collection of records. The Library Collection Management Policy, Retention Schedules, Appraisal Criteria and standard codes of practice will be referred to when determining if the collection complements the University's existing holdings.
- The University will accept digital records held on physical media (such as CD Rom, floppy disc, external Hard Disc Drive, USB flash drives), but, depending on condition and age, cannot guarantee that their contents can be fully extracted. (*See Selection and Appraisal, section 6.1*)

3.4. Out of scope

- Records produced in the course of university that are ephemeral in nature and content, and which have not been assigned an 'archive' retention status by either Records Management or the person within the school/unit responsible for the management of their university records.
- Non-archival research records, which are not required to be retained longer than the prescribed preservation term by a funding body, or that which do not satisfy requirements for long term preservation as covered within the scope of section 2, appendix G of the Collections Management Policy.

3.5. Ascertainment of the archival nature of digital records can be sought through advice and guidance from the Archive team within the Centre for Research Collections.

4. Context

This policy links with other related policies and strategies within the University of Edinburgh.

- Research Data Management policy (<http://edin.ac/10jtRmV>)
- Research Publications policy (<http://edin.ac/1BqDzqB>)
- Records Management policy framework (<http://edin.ac/1xKPdub>)
- Information Security policy (<http://edin.ac/1xKPgpO>)
- Data Protection policy (<http://edin.ac/1hh5POo>)



- University Library Collections policy (<http://edin.ac/1BqDN19>)
- University Collection Management policy (<http://edin.ac/1PK7MZ6>)
- Preservation policy (DataShare) (<http://edin.ac/1bSBELo>)

Related policies and strategies:

- Library and University Collections – Visions, Values, Strategic Goals and Key Performance Areas, 2013-2017
- University Collections Strategic Plan 2009 – 2015
- Equality and Diversity strategy

5. Principles

- The University Archive and Records Management will maintain a close relationship and work together on providing consistent and relevant guidance to record creators on short term and long term preservation of digital records created in the course of university business.
- Record creators, both internal to the University and external, are encouraged to be mindful of the preservation of digital content at the point of its creation. This is to ensure that records, deemed sufficient in value to be preserved for the long term, are created in a manner that will facilitate their preservation.
 - For staff, advice and guidance on best practice for the creation, management and disposition of current and semi current records is provided by the Records Management team.
 - For external donors, advice and guidance on best practice for submission of digital archives can be sought from the Archive team, within the Centre for Research Collections.
- The University will take all reasonable measures to ensure digital objects managed and preserved within the DSR are, and remain, trustworthy and accessible.
 - **Authenticity**
The University will carry out regular audits to ensure that digital records within the DSR have not been subjected to unauthorised or accidental alteration, corruption or loss.
 - **Integrity**
The University will maintain a thorough audit trail of actions and activities that have been carried out through the lifecycle of a digital record.
 - **Provenance**
The University will ensure that ‘chain of custody’ for the records held within the DSR is maintained through the capture and preservation of appropriate descriptive metadata.
 - **Reliability**
All archival processes and procedures undertaken to preserve digital records will be fully documented and subject to external audit, in line with current international standards and best practice, to ensure the University can establish and communicate to its users the trustworthiness of the DSR.
 - **Usability**
The University will preserve digital records held within the DSR in line with best



practice and provide sufficient metadata to allow the records to be located, retrieved and interpreted.

- The University will provide public access to its digital collections, unless subject to restrictions imposed by legislation, contractual obligations imposed by a donor/depositor or technological issues that limit accessibility. (*See Rights Management, section 6.5*)
- The University will follow international standards and established best practice in all its Digital Preservation actions and activities. (*See Standards, section 7*)
- All preservation processes will be transparent and auditable.
- The University recognises that the preservation of digital content is an active process that requires sustainable management and resources.

6. Policy requirements

6.1. Selection and appraisal

Selection of digital records to be managed and preserved within the DSR will be carried out in line with section 2, *Themes and priorities for future collecting*, appendix G of the Collections Management policy. Appraisal of digital records, in line with section 3, *Themes and priorities for appraisal and disposal*, appendix G of the Collections Management policy, will be carried out through adopting best practice procedures and the use of industry standard applications.

6.2. Accessioning

At the point of accession it is important that digital records are properly screened and documented to ensure the 'chain of custody' is maintained, the records retain their authenticity and the preservation process begins with good quality data and metadata. To achieve this objective the University will:

- quarantine records prior to accession into the DSR and conduct thorough anti-virus checks to ensure they pose no threat to the integrity of other records within the DSR or the university network.
- identify, characterise and validate file formats.
- gather appropriate descriptive, administrative and preservation metadata.
- conduct fixity checks to ensure the authenticity of accessioned records.
- generate a 'preservation' and 'access' copy of the original.

6.3. Preservation strategy

With reference to the Collections Care and Conservation Policy, policy 2 of the Collections Management Policy, the University will adopt the most appropriate strategy deemed suitable for the preservation of its digital records. In all cases the University will preserve the original bitstream as well as any other manifestations created as a bi-product of the preservation process. In order to adopt such strategies L&UC will develop appropriate workflows for preservation planning and a technological infrastructure to manage the ingest, preservation process, storage, back up and accessibility of its digital collections.

6.3.1. Preservation planning

Preservation planning is at the core of content preservation. Its role is to monitor the technological, financial, legislative and institutional environment and mitigate the risks of



change to the accessibility of digital records. The University will carry out preservation planning under the following areas:

- **Risk assessment**
The L&UC will perform regular risk analysis on the digital records it holds to determine the type and level of preservation action required.
- **Technology watch**
The University will continually monitor the technological landscape both internally and externally to identify where changes or developments may impact upon its digital records, the type and level of impact and recommend appropriate actions.
- **Impact assessment**
In response to outcomes from the risk assessment and technology watch the University will prioritise actions it needs to take and implement changes accordingly.

6.4. Access and use

With reference to the Collections Access and Loans Policy, policy 3 of the Collections Management Policy, the online archive catalogue will be the entry point for access to digital records held within the DSR. The catalogue will be open to the public, without requirements for user authentication.

- 6.4.1. **Open access** – Where access can be granted fully to digital records the user will be able to view them online, through a browser, via the archive catalogue provided the user either has access to an internet connection or access to the university network.
- 6.4.2. **University staff only** – There may be a requirement, in some cases, to restrict access to some digital records to internal users only. In this instance only users with the appropriate level of access will be able to view those digital records.
- 6.4.3. **Partially closed access** - Some digital records described within the catalogue may be subject to rights management restrictions (*see Rights Management section 6.5*) and may therefore have limited access. Access to such records will be purely onsite, within the Centre for Research Collections.
- 6.4.4. **Closed** – Where digital records have to remain closed for reasons described within the Rights Management section 6.5 there will be no access (either online or onsite) to both the catalogue record and the accompanying digital record.

6.5. Rights management

With reference to the Collections Access and Loans Policy, policy 3 of the Collections Management Policy, it is likely that certain rights and access conditions will apply to digital records held in the DSR. The university will adopt open metadata standards, such as PREMIS, METS and Dublin Core, to express the rights status of a record or collection within the catalogue record. This may result in restrictions to the accessibility of some records. Such restrictions typically relate to:

- The presence of sensitive or personal data, which restricts access under Data Protection legislation.
- Where the records are subject to Copyright legislation.



- Contractual obligations made by the donor/depositor of digital collections at the point of acquisition.
- Where an access copy cannot be made due to current technological limitations.

Where possible the University will adopt the Creative Commons licensing scheme and encourage its donors of digital collections to do likewise to make records more openly accessible to users.

6.6.Storage, duplication and backup

- The University will hold multiple copies of digital records through its routine backup procedures, with one copy located in remote storage geographically dispersed from other backup copies.
- Digital records acquired by the University, which are stored on removable or other physical media, will be transferred from their physical carrier onto secure, server-based storage by archive staff based within the CRC using industry standard applications at the point of accession.

6.7.Security management

- The Digital Strong Room will be managed in accordance with the University's Security Policy in order to protect its assets from unauthorised access and protect the confidentiality and integrity of its digital records.

7. Legal constraints, and professional standards

The University will ensure compliance with all relevant legislation as outlined within the Collections Information Policy, policy 1 of the Collections Management Policy, and will adopt key professional industry standards in its approach to Digital Preservation. Standards enable the University to define its Digital Preservation requirements, processes and workflows and to thereafter benchmark its success against established best practice. The most relevant industry standards applicable are (but not limited to):

- Space data and information transfer systems - Open Archival Information System reference model (ISO 14721:2012)
- Space data and information transfer systems – Producer-Archive Interface Methodology Abstract standard (ISO 20652:2006)
- Information and documentation – Records management – Part 1: General (ISO 15489-1:2001)
- Space data and information transfer systems – Audit and certification of trustworthy digital repositories (ISO 16363:2012)
- International Standard for Archival Description (General) (ISAD(G))
- Preservation Metadata Implementation Strategies (PREMIS)
- Metadata Encoding and Transmission Standard (METS)

8. Roles and responsibilities

The implementation and management of Digital Preservation activities will require expertise from within the university as well as potentially from external sources. The University will endeavour to



ensure that sufficient resources are available to enable the L&UC to carry out its Digital Preservation mandate to the highest industry standard.

Detailed roles and responsibilities will be developed as part of the DSR project.

9. Skills and training

L&UC will ensure its Digital Preservation activities are carried out by trained staff and will provide training opportunities for staff to develop and enhance their Digital Preservation skills.

L&UC will actively raise awareness of Digital Preservation issues and approaches across the University and will provide training, where appropriate.

10. Communication

The policy is intended to inform a wide audience including but not limited to:

- Record creators within the University
- Donors and potential donors of digital records to the university
- Users of the Centre for Research Collections
- The wider archival, library and Digital Preservation community

The policy will be communicated to stakeholders publically via the university website, www.ed.ac.uk, and through other available communication channels, such as internal and external newsletters and publications, and social media platforms.

11. Audit and certification

The University will pursue appropriate accreditation and certification relevant to its Digital Preservation activities in line with other university collections based accreditation, either worked on or achieved. The European Framework for Trusted Digital Repositories, which has a three-tiered, peer reviewed approach to accreditation, will be adopted and followed by the University. By undertaking externally reviewed audits and achieving internationally recognised status as a ‘trusted digital repository’, users can be assured that the University has fully adopted industry standards to manage its digital collections within a trustworthy environment.

12. Policy review

This policy will be reviewed on a periodic basis as circumstances within the University and the Centre for Research Collections changes. This review period will be at least every two years, depending on the rate of technological change and how this impacts on the policy, and will be conducted in conjunction with senior management within the Library and other stakeholders.

13. Glossary

Accessioning	The process of taking custodianship of a digital record or collection of records for the purposes of long term preservation and access.
Bitstream preservation	A preservation strategy that involves management of the original manifestation of a digital record. It ensures that the original retains its



	authenticity and is maintained in a secure environment with appropriate security and back up.
Chain of custody	A system of controls that extends over the lifecycle of the digital record to ensure trustworthiness of its provenance.
Content preservation	A preservation strategy that ensures the continued accessibility of digital objects over their lifetime to mitigate the effect of technological obsolescence. It involves active intervention, and format migration, to ensure accessibility and readability of digital records.
Digital object	An individual digital component that either singly, or collectively with other digital objects, forms a digital record.
Digital record	Information in an electronic format that demonstrates evidence of an action or activity.
File characterisation	The process whereby information about the digital record, such as format and version, is identified and extracted in the form of metadata.
File validation	The process whereby digital records can be checked to establish if their format conforms to standard specifications.
Ingest	The process of moving digital records from the record creator and into a Digital Preservation repository system.
Manifestation	A digital derivative or copy of an original bitstream object.
Metadata	The literal definition is 'data about data', and is classified as either descriptive, administrative or structural and which in some way will enable the continued management, preservation and access to digital records.
Technology watch	The process whereby the technological landscape is monitored to assess the likely impact any changes may have on the preservation and accessibility of digital records.