



University of British Columbia Library - Archives Digital Preservation Policy Framework

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Digital Preservation Policy Framework

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Overview

In October 2020, the Digital Preservation Working Group (DPWG) was formed to research, determine, and recommend strategies supporting best practices in digital preservation. The Digital Preservation Policy Framework (the Framework) aims to align with existing digital preservation policies and actions already taking place within the library. The Framework's goal is to extend the library's commitment to long-term digital preservation. Furthermore, it contributes to the University's vision and values in pursuing excellence in research, learning and engagement. The Framework has been written to reflect the digital preservation priorities of two units within the library: Rare Books and Special Collections and UBC Archives. Other units such as UBC Okanagan Special Collections and Archives may be included at a future date.

UBC Archives

Operating under Board of Governors Policy GA5 the University of British Columbia Archives (UA) is empowered to acquire, preserve, and make available records reflecting the history of the institution, the UBC community, faculty, staff, and alumni "regardless of physical form or characteristics"¹ The Records Management Office (RMO) plays a key role in supporting the UA's mandate. The Board of Governors policy GA4 authorizes the RMO with establishing retention schedules, ensuring proper administration of university records, including identifying, managing, and preserving the University's records of permanent value.

Rare Books and Special Collections (RBSC)

RBSC houses significant collections of rare books, archival materials, historic maps, photographs, broadsides, and pamphlets. RBSC supports primary research by scholars at UBC and from around the world, with resources also used extensively by members of the general public. The principal focus of the archival collection is British Columbia: history, exploration, settlement, business, politics, ethnicity, and labour. These subjects are covered in considerable depth. Other collections cover Canadian history, Canadian literature, English literature, early children's books, the history of science and medicine, and books on the history of cartography. To facilitate primary research, Rare Books and Special Collections (RBSC) acquires archival materials in all media, including digital.

UBC Okanagan Special Collections and Archives

[To be determined]

Note: The terms "Archives" or "UBC Library-Archives" refers to the RBSC Archives and UBC Vancouver Archives collectively.

¹ Board of Governors Policy GA5.

1. OAIS Compliance Statement

In achieving long-term digital preservation objectives, the Archives will comply with the prevailing standards and practices within the digital preservation community. Specifically, the UBC Library-Archives will adhere to the Open Archival Information System (ISO 14721) also known as the Consultative Committee for Space Data Systems (CCSDS) 650.0 M2. The digital preservation implementation plan (to come) will outline the specifics of OAIS compliance.

2. Administrative Responsibility

The Archives intend to align policy, procedures, and practices with the Trustworthy Repositories Audit and Certification (TRAC) standard ISO 16363 (also known as CCSDS 652.0-M-1). This self-assessment demonstrates an organization's conformance as a trusted digital repository to its Designated Community (see [section 3.5](#)). Furthermore, the following outlines the minimum "mandatory responsibilities" defined in OAIS 3.1.

- i. Negotiate and accept appropriate information from information producers, i.e., obtain sufficient descriptive and contextual information.
- ii. Obtain sufficient control of information to ensure Long Term Preservation, i.e., that it is a legally valid transfer and includes information on any intellectual property.
- iii. Determine the Designated Community (please see [section 3.5](#)).
- iv. Ensure that any information preserved is independently understandable to the Designated Community.
- v. Policies and procedures on creating and deleting Archival Information Packages (AIPs) will be developed and followed.
- vi. Make preserved information available to the Designated Community.

2.1. Purpose

Creating this Framework guides the future development of policies and procedures required to ensure an OAIS compliant digital preservation system and a storage repository that aims to be certified as a Trusted Digital Repository. In addition, developing a digital preservation program ensures that we meet our institutional mandate to preserve and make available records of permanent value regardless of format. This Framework addresses the seven attributes of a Trusted Digital Repository:

1. OAIS Compliance
2. Administrative Responsibility
3. Organizational Viability
4. Financial Sustainability
5. Technological and Procedural suitability
6. System Security
7. Procedural Accountability

One other section has been included:

8. Triggers for Document Review

This framework reflects [UBC Library's strategic directions, vision and values](#). Specifically, in relation to UBC Libraries Strategic Directions to:

- “Invest in collections and technologies that enhance research and learning”
- “Preserve the University’s institutional memory”
- “Enhance the online experience”
- “Manage, plan, and invest in people and technology to support research, teaching and learning”

The stakeholders and audience for this document include the staff at UBC Library-Archives, Records Management Office, and the Designated Community of users and donors.

2.2. Mandate

The Digital Preservation Policy Framework identifies the need to fulfill UBC Library-Archives mandate to preserve digital-born records as defined in each unit’s collection policy. This mandate is also communicated in the UBC Board of Governors policy commitments including [Records Management Policy GA4](#) and [Archives Policy GA5](#).

2.3. Objectives

The primary objective of this work is to ensure preservation and access to permanently valuable digital-born records that fall within our collection policies. These records include digital records of Canadian cultural heritage and the institutional records of UBC.

3. Organizational Viability

Digital preservation is already well integrated into the operations and planning of UBC Library. Our goal is to align and add to this existing program to improve viability for our specific Designated Community’s needs.

3.1. Scope

- i. UBC Library-Archives will accept responsibility for private or institutional digital records deemed to have archival value under its [collection policy](#) / [mission statement](#) for long-term digital preservation.

3.2. Operating Principles

- i. Acquire records under our current collection policies. The archives will maintain all accession records to ensure that the repository has the rights and authorizations agreements for digital materials that it manages, preserves, and provides access.
- ii. Establish procedures to meet requirements pertaining to provenance, the chain of custody, authenticity, and integrity checks.
- iii. Establish principles of transparency to donors on what long-term digital preservation means.
- iv. Develop a scalable, reliable, and sustainable digital preservation repository and ensure that it is OAIS compliant and aims to meet a Trusted Digital Repository standard.
- v. Reserve the right to transform a digital object prioritizing preservation of its intellectual content rather than its presentation style.
- vi. Determine the appropriate level of contextual, intellectual and preservation metadata required for each Archival Information Package (AIP).
- vii. Ensure that access to materials is available in compliance with the Freedom of Information and Protection of Privacy Act, Canadian Copyright Act, intellectual property rights, donor agreements, and applicable research agreements.
- viii. Regularly review policy, procedures and workflows and update them as the repository grows, and as technology and community practice evolve. However, all legacy preservation policy documents will be retained.
- ix. Ensure that any backup storage and disaster recovery requirements are met, and appropriate succession plans are in place.

3.3. Roles and Responsibilities

This section clarifies that digital preservation is a shared responsibility amongst participants within and beyond our organization. It recognizes that a chain of preservation, as defined by [InterPares 2](#), is required to ensure that digital records survive transfer and storage uncorrupted.

Creators: Ideally, the preservation of digital records begins before creation. Institutional creators have a responsibility to ensure the long-term preservation of digital records. Part of this responsibility includes selecting software and file formats that offer the best hope for long-term accessibility.

Records Management Office: In collaboration with faculties, schools, departments and other UBC units, the RMO creates retention schedules aiding the management of records across their life-cycle. The records schedule identify what institutional records are of interest to the University Archives.

University Archives and Rare Books and Special Collections: appraise and acquire records deemed to have an enduring value that falls within their collection policy or mission statement. Advise donors on the best measures to ensure their transfer to the archives in an appropriate fashion.

UBC Library: Provides approval and ongoing budget for the digital preservation program.

Designated Communities: Ideally, the Designated Community (see 3.5) will provide feedback to the archives on any issues and ways to improve access.

3.4. Selection and Acquisition

The acquisition of digital-born records will be made based on the same criteria as physical records. Any records that do not fall within the archives collection policy or mission statement will not be acquired. Any institutional records that are to be destroyed under retention schedules will not be accepted.

3.5. Designated Community

The [UBC Library Vision](#) reads: “We are a globally influential research library, leading and partnering with the University and communities in the creation, stewardship, exploration and discovery of knowledge.” Our purpose is to ensure long-term preservation and access to information of interest to our Designated Community.

The primary Designated Community consists of:

- UBC faculties, units, and departments
- Faculty
- Staff
- Students
- Affiliated Researchers

The secondary Designated Community consists of:

- General Public
- Alumni
- National and international community of scholars
- Non-human users (bots, algorithms etc.)

3.6. Access and Use

- i. Restrictions will have to be provided on materials in consideration of FIPPA or private donor agreements.
- ii. Researchers will sign applicable research agreements before receiving access.
- iii. Ensure the capture of relevant copyright and that access is given to materials under intellectual property rights.

3.7. Challenges and Risks

Digital records make-up a rapidly growing segment of both private and institutional transfers. The Archives currently has a substantial number of digital records in backlog requiring preservation actions. In addition, the Archives receives regular requests from UBC units to accept digital records. Most recently, UBC Ceremonies and Events held a remote National Forum on Anti-Asian Racism. They have requested the transfer of these records to the University Archives. Being unable to preserve and provide access to critical, significant digital-born records means the erosion of institutional memory that tells UBC stories, communicates our achievements, and celebrates our legacy and identity.

These requests will increase and, as an institution, we have to meet the demand creators are asking of us. Without a digital preservation program specific to the University Archives, these records are at increasing risk. Our inability to preserve permanently valuable records equals a failure to meet our mandate described in the Board of Governors Policies and the UBC Library's Strategic goals. UBC Library has already made a significant investment in digital preservation; this Framework seeks to align and build on that investment, further demonstrating UBC Library's commitment to institutional history, research, teaching and learning.

3.8. Challenges

- i. Planning for the increase in storage requirements and ensuring records are effectively secured and backed up.
- ii. Appropriate skilled human resources
- iii. Taking opportunities for training to increase staff technical skill sets.
- iv. Ongoing financial sustainability.
- v. The fragility of storage media.
- vi. Planning for software, hardware, and operating system obsolescence. Managing proprietary and obsolete formats.
- vii. Capturing intellectual, contextual and preservation metadata.
- viii. Procedures and processes to be made transparent to stakeholders and our Designated Community.
- ix. Further preservation policies and succession plans need to be developed.

3.9. Risks

- i. The risk of losing valuable research materials for our Designated Community.
- ii. The risk to institutional transparency and accountability through the loss of records. The resulting damage to reputation.
- iii. Failure to engage with stakeholders at all levels of the records life-cycle.
- iv. Inadequate staffing and skills to carry out successful digital preservation.
- v. Digital records currently on digital media are incredibly fragile and risk being lost.
- vi. The inability to meet legal and regulatory requirements by retaining digital records over significant retention periods.
- vii. The need to manage and be responsive to changes in technology and preservation practices.

- viii. Failure to update our policies, procedures, and processes.
- ix. Not being able to provide access for our Designated Community. The hardware or software is no longer available.
- x. Ensuring that we comply with FIPPA and donor agreements concerning access.
- xi. Digital preservation technological infrastructure has negative environmental impacts, this in turn threatens the very organization tasked with preserving digital content.²

4. Financial Stability

4.1. Institutional Commitment

- i. Approval from the UBC Library Executive to expand digital preservation funding to include necessary preservation activities within Rare Books and Special Collections and University Archives.
- ii. Core funding for digital preservation will be included as a standard component of the operating budget.

5. Technological and Procedural Suitability

We intend to align our digital-preservation infrastructure with what is already established within UBC Library. The Archivematica software complies with OAIS. It maintains the original format of ingested files to support migrations and emulation strategies. It also normalizes files to preservation and access formats upon ingest. The development of a file format policy will guide us during normalization.

6. System Security

We intend to work with UBC-IT and other library stakeholders to ensure the accuracy, completeness, authenticity, and integrity of any digital records ingested into our digital preservation system. Doing so will safeguard confidence in our preservation program. We intend to:

- i. Ensure checksums are created before ingest.
- ii. That any storage will ensure authenticity through automatic integrity checks.
- iii. That storage and backup requirements are met.
- iv. That a disaster plan is developed.
- v. That we follow best practices in system security and ensure all UBC-IT security policies and procedures are met.

7. Procedural Accountability

We are committed to ongoing self-assessment and improvement that aligns with the Trustworthy Digital Repositories Certificate, ISO 16363, including making all documentation available. Ensuring this will align us with other units within UBC Library that have already

² Pendergrass, Keith L., Walker Sampson, Tim Walsh, and Laura Alagna. 2019. "Toward Environmentally Sustainable Digital Preservation." *The American Archivist* 82 (1): 165–206.



established a TRAC audit and review. We intend to work with these other units to strengthen the UBC Library's procedural accountability.

We are committed to a three-year cycle of self-assessment and a five-year audit cycle to evaluate, measure, and adjust the digital preservation program's policies, procedures, preservation approaches, and practices. All documentation relevant to this program will be made available to all relevant stakeholders.

8. Triggers for Review of this Document

- i. After the first year of implementation, this document will be reviewed and updated.
- ii. As new plans and procedures are developed, this document will be updated to reflect these changes.
- iii. If any new shift in the digital preservation community occurs, this document will be updated to reflect these changes.
- iv. After the initial implementation review after 12 months, this document will be reviewed every three years during our self-assessment cycle.

9. Glossary

Accurate: refers to content that is free from error or defect.

AIP: An Information Package, consisting of the Content Information and the associated Preservation Description Information (PDI), which is preserved within an OAIS. (CCSDS 650.0 M2 2012 p. 1-9).

Authentic Record: is a record that is what it purports to be and that is free from tampering or corruption. ([Glossary InterPARES 2](#))

Best practices: are procedures and guidelines that are widely accepted because experience and research has demonstrated that they are optimal and efficient means to produce a desired result. ([SAA glossary](#))

Chain of Preservation: a system of controls that extends over the entire lifecycle of records in order to ensure their identity and integrity over time.

Designated Community: an identified group of potential Consumers who should be able to understand a particular set of information. The Designated Community may be composed of multiple user communities. A Designated Community is defined by the Archive and this definition may change over time. (CCSDS 650.0 M2 2012 p. 1-11).

Digital Object: is a discrete aggregation of one or more bit streams and the metadata about the properties of the object and, if applicable, methods of performing operations on the object. ([Glossary InterPARES 2](#))

Digital Preservation: is the management and protection of digital information to ensure authenticity, integrity, reliability, and long-term accessibility. In contrast to printed materials, digital materials will not survive through passive preservation, digital materials require ongoing active management. ([SAA glossary](#))

Digital Record: is a record represented through discrete, binary values. In contrast to an analogue record, digital records are records that can only be viewed on a computer screen. ([Glossary InterPARES 2](#))

Digital-born or Born-digital: A record that has been born in a digital environment.

Freedom of Information and Protection of Privacy Act: gives the public access to records and information created and compiled by the public bodies of British Columbia. However, the release of information is exempt where it may cause to harm an individual's personal privacy.

Guidelines: are recommendations suggesting, but not requiring, practices that produce similar, but not identical, results. ([SAA glossary](#))

Institutional Records: In this context institutional records are records created or received by UBC in the course of its activities.

Migration: Migration is similar to normalization in that it involves converting digital objects file formats but is typically done when the format is at risk of obsolescence.

Models: are a simplified representation of something. ([SAA glossary](#))

Normalization: This means converting ingested digital objects into a small number of formats as outlined in the Format Policy Register.

OAIS: an Open Archival Information System is an “Archive”, consisting of an organization, which may be part of a larger organization, of people and systems that has accepted the responsibility to preserve information and make it available for a Designated Community. (CCSDS 650.0 M2 2012 p. 1-11).

Policy Framework: a document that sets out a set of procedures which may be used in negotiation or decision-making to guide a more detailed set of policies.

Procedures: are the manner and steps in which some action is taken.

Standards: can be an international, national, or industry agreement that establishes qualities or practices in order to achieve common goals. ([SAA glossary](#))

Strategy: a plan of action or policy designed to achieve a major or overall aim

Trustworthiness: the accuracy, reliability and authenticity of a record. ([Glossary InterPARES 2](#))

Trustworthy Repositories Audit and Certification (TRAC): criteria used to assess and certify a digital repository is OAIS compliant. ([SAA glossary](#))

UBC Library-Archives: throughout this document the terms “Archives” or “UBC Library-Archives” refers to the RBSC Archives and UBC Vancouver Archives collectively.

10. Bibliography

- Society of American Archivists. (2020, 10 19). *Society of American Archivists Glossary*. Retrieved from Society of American Archivists: <https://dictionary.archivists.org/entry/digital-preservation.html>
- Government of BC. (1996). *Freedom of Information and Protection of Privacy Act*. Retrieved from Government of BC Laws: https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/96165_00
- InterPares 2. (2007, 04 30). *Creator Guidelines: Making and Maintaining Digital Materials: Guidelines for Individuals*. Retrieved from InterPares 2 Project: [http://www.interpares.org/ip2/display_file.cfm?doc=ip2\(pub\)creator_guidelines_booklet.pdf](http://www.interpares.org/ip2/display_file.cfm?doc=ip2(pub)creator_guidelines_booklet.pdf)
- InterPares 2. (2008). *Chain of Preservation Model*. Retrieved from InterPares 2 Project: http://www.interpares.org/ip2/ip2_model_display.cfm?model=cop
- InterPares 2. (2020, 10 21). *InterPares 2 Project Glossary*. Retrieved from InterPares 2: http://www.interpares.org/ip2/display_file.cfm?doc=ip2_glossary.pdf&CFID=22570505&CFTOKEN=18443696
- Library & Archives Canada. (2017, 11 30). *Strategy for a Digital Preservation Program*. Retrieved from Library and Archives Canada: <https://www.bac-lac.gc.ca/eng/about-us/publications/Pages/strategy-digital-preservation-program.aspx>
- Pendergrass et al;. (2018). *Toward Environmentally Sustainable Digital Preservation*. Retrieved from Digital Access to Scholarship at Harvard: <https://dash.harvard.edu/handle/1/40741399>
- Records Management Office. (1996, March). *Board Policies - Records Management Policy GA4*. Retrieved from Office of the University Counsel: https://universitycounsel-2015.sites.olt.ubc.ca/files/2019/08/Records-Management-Policy_GA4.pdf
- Records Management Office. (2021, 03 08). *Retention Schedules*. Retrieved from University Records Management Office (UBC Library): <https://recordsmanagement.ubc.ca/schedules/>
- The Consultative Committee for Space Data System Practices. (2011). AUDIT AND CERTIFICATION OF TRUSTWORTHY DIGITAL REPOSITORIES. *CCSDS 652.0-M-1 or ISO 16363*. CCSDS Secretariat.
- The Consultative Committee for Space Data Systems. (2012). REFERENCE MODEL FOR AN OPEN ARCHIVAL INFORMATION SYSTEM (OAIS) *CCSDS 650.0 M2 or ISO Standard 14721*. CCSDS Secretariat.
- UBC Archives. (1996, March). *Board Policies - Vancouver Archives Policy GA5*. Retrieved from Office of the University Counsel: https://universitycounsel-2015.sites.olt.ubc.ca/files/2019/08/Vancouver-Archives-Policy_GA5.pdf



UBC Archives. (2018, 02 19). *Mission Statement*. Retrieved from About UBC Archives:
<https://archives.library.ubc.ca/about-the-archives/>

UBC Library. (2016, 08 15). *Digital Preservation Access and Use Policy*. Retrieved from UBC Library - Policies, Procedures & Guidelines:
https://wiki.ubc.ca/images/e/e1/Draft_UBCLibraryDigitalPreservationAccessandUsePolicy.pdf

UBC Library. (2016). *TRAC Review: Process and Progress* . Retrieved from UBC Library TRAC:
<https://trac.library.ubc.ca/>

UBC Library. (2019, 06 06). *About - Library Strategic Framework*. Retrieved from University of British Columbia Library: <https://about.library.ubc.ca/about-us/strategic-framework/>

York University Libraries. (2015, 12 15). *Digital Preservation Policy*. Retrieved from York University Libraries: <https://digital.library.yorku.ca/tags/digital-preservation-policy>