

# **Digital preservation policy**

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## 1. Title

Digital preservation policy

## 2. Introduction

The National Museum of Australia (the Museum) is a major cultural institution charged with researching, collecting, preserving and exhibiting historical material of the Australian nation. The Museum focuses on the 3 interrelated areas of First Nations history and culture, Australia's history and society since European settlement in 1788, and the interaction of people with the environment.

Established in 1980, the Museum is a publicly funded institution governed as a statutory authority in the Commonwealth Arts portfolio. The Museum's building on Acton Peninsula, Canberra opened in March 2001.

## 3. Scope

This policy applies to all items that are born digital or digitised, referred to as digital material in this document, and are either:

- in the Museum's National Historical, Archive or Museum collections
- collection-related digital material considered by the Museum to be significant and worthy of long-term preservation.

### 3.1 Purpose

This policy outlines the Museum's strategy and principles which inform the decisions, procedures and workflows required to maintain the long-term accessibility, integrity and usability of digital materials over time.

### 3.2 Rationale

The Museum recognises the inherent vulnerabilities and evolving nature of digital materials. These items are susceptible to loss and degradation due to issues such as:

- Hardware or storage media failures and/or media becoming outdated.
- Inaccessibility of digital materials due to software obsolescence.
- Accidental or intentional alterations that may compromise the integrity of the content, including human error, improper handling, loss of physical media or inadequate backup procedures.
- Environmental factors including exposure to heat, humidity or magnetic interference affecting storage devices.
- Inadequate metadata or documentation, making it difficult to locate or verify the authenticity of digital content.

The Museum acknowledges the risks and challenges inherent in managing digital materials and maintaining their integrity and ongoing access over time. The Museum identifies and anticipates the following challenges:

- Software and platform obsolescence which may affect the capacity to view and/or retrieve digital materials in their original and intended form.
- File formats and characteristics at risk of physical degradation and data loss before or during transfer.
- Resourcing required to digitise and preserve a high volume of at-risk formats/materials.
- Limitations and capacities of digital storage solutions, repositories and platforms.

## 4. Principles

### 4.1 Preservation

The Museum will apply the Open Archival Information System (OAIS) Reference Model to guide its approach to digital preservation. The Museum also acknowledges and upholds the following digital preservation principles:

- Digital preservation is a cyclical process encompassing a range of interconnected activities that require specialist skills, collaborative frameworks and dedicated systems. The Museum is committed to embedding and maintaining these processes and systems while seeking innovative techniques to advance and future-proof them.
- Fixity – investment in bit-level preservation of digital materials and other system needs for digital asset management and preservation and advocating to include these in ongoing systems and infrastructure planning.
- Integrity – periodic monitoring and evaluation of digital storage systems and platforms is required to ensure the integrity and accessibility of digital materials. Auditing and monitoring processes for staff, vendors and vendor systems to regularly review systems and standards and ensure compliance.
- Format characteristics – in determining long-term preservation formats, the Museum will endeavour to use formats that are unrestricted, widely adopted, well-documented, stable, platform-independent, uncompressed or lossless, supported and metadata-friendly.
- Risk and assurances – ongoing management of risks and undertaking digital preservation activities mitigates losses of digital materials.
- Creation of multiple copies – limit redundant copies of digital material through controlled replication, backup and verification processes. Predetermined periodic verification and restore of all copies to ensure data integrity will be undertaken.
- That a range of tools are necessary to conduct digital preservation processes. Where possible and appropriate, the Museum will use open-source, non-proprietary and/or well-supported tools and or methodologies.
- The Museum will reference international standards to establish benchmarks for assessing outcomes and ensure ongoing support by participating in communities of practice.
- Preservation files are designated by the Museum as the authoritative representations of born-digital or digitised materials coming into the archive. As such, they hold long-term value and must be securely managed and preserved following best practice collection management standards.

The Museum recognises that the preservation of digital materials requires management beyond existing methodologies, processes, tools, software, technical infrastructure and systems and that:

- Adoption of any tool or software will be assessed on inclusion of reliable and tested exit strategies.
- Metadata is critical to digital preservation, ensuring that digital materials are discoverable, authentic, and usable over time by providing essential context, provenance and technical details for proper management and future access.
- Consistent metadata standards enhance searchability across systems by linking related digital materials and supporting interoperability to ensure discoverability.
- Consistent standards will be adopted to ensure interoperability between current and future tools, software and systems.

- New tools such as artificial intelligence, machine learning and other developing technologies may provide new opportunities and will require responsible development in accordance with emerging government frameworks and policies.
- All staff require regular training in digital preservation.
- Staff directly responsible for digital preservation need to be supported in developing and updating the skills required for their roles.
- Regular updating of procedural, system and workflow documentation will be required.

#### 4.2 Collaboration

The Museum collaborates with other collecting agencies including community organisations and research programs to share knowledge and develop sustainable approaches to digital preservation which can be supported over time. As such:

- The Museum will ensure ongoing communication and advocacy to maintain development of, and avoid replication of its digital preservation, digitisation and ongoing storage programs in alignment with the standards of this policy.
- Where appropriate, the Museum will adopt joint standards, platforms and approaches with the wider digital preservation community.

#### 4.3 Acquiring and creating digital materials

The Museum acknowledges that the moment of creation or acquisition of digital materials provides the opportunity to preserve the digital material at its highest quality for long-term preservation and access. The Museum therefore recognises:

- Digital materials, like physical materials, are acquired in the National Historical, Archive and Museum collections and are significant objects that require long-term collection care in alignment with the *National Museum of Australia Act 1980* and related acquisition policies.
- Acquisition processes and procedures to bring digital material into the Museum's collections will incorporate additional considerations to ensure alignment with the digital preservation principles as outlined in this policy.
- There is a need to continue assessing the Museum's collecting philosophy over time, adapting it to accommodate the rapidly evolving nature of digital materials.
- Assessment standards must be in place to evaluate newly created, acquired or commissioned digital materials to determine their significance for long-term retention and re-use.
- Archival workflows and standards are applied to meet digital preservation requirements whenever the Museum creates, acquires or commissions new digital materials intended for long-term retention and re-use.

#### 4.4 Custodianship and access to digital materials

The Museum is committed to fostering collaborative pathways towards Indigenous data sovereignty and will incorporate and reflect First Nations cultural requirements in digital preservation activities.

The Museum recognises that ongoing access to digital materials is integral to facilitating creator and community engagement, enhancement, research and continued collection care.

The Museum acknowledges that public and/or online access to digital materials may not always be appropriate or practical and will make digital materials available onsite or with restricted access when required.

Procedures will be put in place to ensure digital materials are accessed, preserved and stored in a respectful and culturally appropriate manner.

Any access to digital materials will be facilitated in alignment with the Museum's relevant policies such as Research and Scholarship, Intellectual property and First Nations cultural rights and engagement.

#### **4.5 Metadata**

The Museum acknowledges that metadata is critical to ensure ongoing preservation and access to digital material. The Museum will endeavour to align metadata schemas with international metadata standards. The PREMIS Data Dictionary for Preservation Metadata will guide the Museum's preservation metadata creation.

The Museum will also promote consistency and interoperability for accessing and enhancing digital materials through:

- The collection of descriptive, technical and administrative metadata to document any transcoding processes, format specifications and decision-making for digital material management.
- Addressing First Nations metadata needs and ensuring incorporation of Indigenous Cultural and Intellectual Property (ICIP) rights information to enhance findability and ensure appropriate access controls.
- Museum-wide standards for file naming and persistent identifiers which support the identification and management of digital materials.
- Metadata schemas and naming conventions for digital materials will be adhered to, including information about intellectual property, ICIP, cultural rights, copyright, moral rights and permissions for use, with regular audit/quality assurance monitoring.

#### **4.6 Storage**

The Museum aims to securely store digital materials in several geographically separate locations within Australia to protect them long-term as well as:

- Embedding regular verification checks to ensure data accuracy.
- Consolidating digital material into a managed storage environment across separate locations.
- Documenting where digital materials are stored to enable their retrieval and preservation.
- Implementing a trusted digital repository for the long-term preservation of digital materials.
- Implementing methods for ensuring that digital materials are not inadvertently accessed, deleted or changed by non-authorised staff.
- Ensuring any Australian Government approved storage solutions put in place for digital preservation are also in line with the Museum's Information security policy.

#### **4.7 Sustainability**

The Museum aims to ensure environmental sustainability by addressing the ecological impacts associated with the long-term management, storage and preservation of digital materials. This involves evaluating and minimising energy consumption, carbon footprint and resource use linked to data storage and digital preservation systems, while maintaining the ongoing accessibility and integrity of digital materials.

## 5. Definition of terms

### **Bit-level preservation**

Basic preservation of a digital file in its original state. One step in the digital preservation process.

### **Born digital**

Born digital objects are created in a native digital environment and are not intended to have an analogue equivalent.

### **Digitisation**

The process of converting physical or analogue material into a digital format that can be stored, processed and managed electronically.

### **Digital materials**

Digital materials that have enduring value to the Museum and can range from a simple single digital file to a complex system or networked environment. Digital material can contain a variety of formats such as images, text, audio, video or application software. It can be created in a native digital environment (born digital) or analogue materials converted into a digital form.

### **Digital preservation**

A series of managed activities to ensure continued access to digital materials for as long as necessary. Digital preservation refers to all the actions required to maintain access beyond the limits of media failure or technological and organisational change.

### **Indigenous Data Sovereignty**

In Australia, 'Indigenous data' refers to information or knowledge, in any format or medium, which is about and may affect Indigenous peoples both collectively and individually. 'Indigenous Data Sovereignty' refers to the right of Indigenous peoples to exercise ownership over Indigenous data. Ownership of data can be expressed through the creation, collection, access, analysis, interpretation, management, dissemination and reuse of Indigenous data.

### **Fixity**

The digital file is demonstrably unchanged at the bit configuration level.

### **ICIP**

Indigenous Cultural and Intellectual Property (ICIP) refers to the rights of First Nations peoples to access, control and maintain their cultural heritage, including traditional knowledge, traditional cultural expression and artefacts. It incorporates all aspects of knowledge (sciences, plant and animal knowledge, stories, designs and symbols and ritual knowledge), artefacts (arts, crafts, weapons and tools), performances (ceremonies, dance and song), human remains and includes the secret and sacred.

### **Metadata**

Structured information that helps describe, find, manage, control and preserve a digital file.

### **Preservation file**

The most authoritative, representation of born-digital or digitised materials coming into the archive that are of the highest resolution or quality possible and hold long-term value.

### **Open Archival Information System (OAIS)**

A reference model developed to facilitate a broad, discipline independent consensus on the requirements for an archive or repository to provide long-term preservation of digital information.

### **PREMIS Data Dictionary**

An international standard for metadata to support the preservation of digital materials and ensure their long-term usability.

## **6. Definition of responsibilities**

### **Executive Management Group**

Responsible for ensuring the necessary resources are in place to support digital preservation activities.

### **Deputy Director, Collection and Curatorial**

Responsible for ensuring the implementation of procedures and standards for management of digital materials acquired in the Museum's collections are in line with this policy.

### **Chief Information Officer**

Responsible for implementation and management of the underlying infrastructure and administering any internal storage or external cloud storage required for digital preservation.

### **Head, Collection Platforms**

Responsible for the development and management of Museum procedures and standards to ensure this policy is implemented.

## **7. References**

Collection development policy  
Collection care and preservation policy  
Australian Aboriginal and Torres Strait Islander ancestral human remains management and repatriation policy  
Australian Aboriginal and Torres Strait Islander secret/sacred, sensitive and private material policy  
First Nations cultural rights and engagement policy  
OAIS Reference Model (ISO 14721)  
Preservation Metadata Implementation Strategies (PREMIS)  
Rapid Assessment Model (DPC RAM) (dpconline.org)  
National Digital Stewardship Alliance – Levels of Digital Preservation (ndsa.org)  
Maiam nayri Wingana [Indigenous Data Sovereignty Collective](https://www.maiamnayriwingara.org/)  
(https://www.maiamnayriwingara.org/)

## **8. Implementation**

This policy will be reviewed every 2 years, or when required by changes to relevant legislation, regulation or government policy/framework.

### 8.1 Coverage

This policy applies to all Museum employees and volunteers, and Museum contractors and their employees contracted to undertake digitisation and digital preservation services.

### 8.2 Other related policies

Collection care and preservation policy

Collection development policy

Collections – deaccessioning and disposal policy

Collections – return of cultural objects policy

Intellectual property policy

Research Library collection development policy

First Nations cultural rights and engagement policy

Community Engagement Framework

Australian Aboriginal and Torres Strait Islander secret/sacred, sensitive, and private material policy

### 8.3 Exclusions

This policy does not apply to digital corporate records.

### 8.4 Superseded policies

This policy supersedes:

Former policy/ies title	Version number	Version date	Council approval date
Digital preservation and digitisation policy	2.2	29 August 2012	Originally approved by Council in April 2009, version 2.2 approved by Executive on 21 May 2012

### 8.5 Monitoring

This policy will be reviewed by May 2027.