



Information Society
Technologies

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Digital Preservation Policy Tool

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Introduction and scope

This tool examines policies in use or in project for preserving and maintaining digital materials and ensuring their availability for current and future use; in particular, it dwells upon some specific aspects such as costs, requirements, roles, responsibilities, monitoring and review.

A policy forms the pillar of a programme for digital preservation. It gives general direction for the whole of an organization, and as such it remains on a reasonably high level. Actual steps in implementing a preservation programme have to be in accordance with the policy in order to guarantee their coherence. From an external point of view, a written policy is a sign that the organization takes the responsibility to preserve digital material.

At the present time, the policies for ensuring long-term storage, maintenance, migration and access to digital materials, whether at the local or national level, are not frequently present both in the private and in the public sectors. Moreover, the policies publicly available via web are mainly developed by cultural heritage institutions and have been elaborated very recently.

Frequently, the confusion about the most appropriate practices and methods, the lack of a consensus, the difficulty in engaging the interest for these themes and the shortage of good models for digital preservation can be some of the difficulties that institutions meet in developing their policies, even if the need for defining policies is increasing at the same degree of the growth of the digital heritage.

The primary aims of a policy are to provide guidance and authorization on the preservation of digital materials and to ensure the authenticity, reliability and long-term accessibility of them. Moreover, a policy should explain how digital preservation can serve major needs of an institution and state some principles and rules on specific aspects which then lay the basis of implementation.

This tool sets out to identify and describe the reasons that have induced an institution to develop its policy for digital preservation, the advantages of having it, the definite areas that are included in it, the most important problems discussed and other specific and relevant aspects, as those above-mentioned.

General principles

Some general principles should be followed for qualifying this activity:

- a policy needs to convey the very philosophy of an organization concerning digital preservation; it should induce a common understanding of the objectives, of whether each collection item should be preserved with maximum effort possibly applying multiple preservation paths, or whether a certain pragmatism should be pursued;
- a digital policy should facilitate the sustainability of an institution's present and future digital holdings;
- a digital preservation policy has to demonstrate its benefits, its effectiveness;
- a digital policy should be connected and integrated with a risk assessment document;
- every policy should be practicable, not definitive, capable of being put into practice by institutions with varying resources and needs, and, especially, flexible to adapt itself to changing administrative and technological circumstances;
- any policy should be characterized by clarity, adequacy, transparency, efficiently, effectiveness and logical organization of contents;
- a digital preservation policy should be written in a simple and suitable language, without redundancies and, at the same time, without lowering the level of quality contained in its contents;

- once a digital preservation policy is operative, it should be re-thought, reviewed or newly conceived on a regular basis to take into account changes in the organizational, legal and technical environment and to make rules and guidelines more precise and explicit where there is any ambiguity about implementation;
- a digital policy should offer achievable solutions, provide for the management training and, finally, be maintained through time.

TOOL: Table – Digital Preservation Policy: BENEFITS

BENEFITS	To develop a digital preservation strategy
	To plan coherent digital preservation programmes
	To ensure and reinforce accountability
	To demonstrate that such funds can and will be used responsibly and consistently
	To ensure digital materials available for current and future use
	To define the significant properties that need to be preserved for particular classes resources
	To assist agencies in designing digitisation programmes
	To provide a comprehensive statement on the digital preservation
	To provide security measures that ensure the protection of digital materials during use

A digital preservation policy could guarantee many benefits at each institutional level, such as ensuring digital materials available for current and future use, providing a comprehensive statement on this theme and planning coherent digital preservation programmes. Besides, the formulation of a policy allows to deal with difficult subjects as the short-lasting life span and small capacities of digital materials, the obsolescence of the hardware required to access them, the obsolescence of software for reading the data and file formats and, finally, the structural and technical heterogeneity of the different types of digital materials.

TOOL: Digital Preservation Policy: SCOPE AND OBJECTIVES

In according to an institution’s achievable resources, the main scope of a digital preservation policy is to achieve the following objectives:

- preserving and providing continued access to digital material, both born digital and digitised material;
- ensuring that preserved digital materials are authentic;
- preserving damage and deterioration of the physical media by ensuring an environmental control;

- reversing damage, if it's possible;
- changing the format of digital materials to preserve their intellectual content, if it's necessary.

TOOL: Table – Digital Preservation Policy: REQUIREMENTS

REQUIREMENTS	Legal requirements		
	Financial requirements		
	Business requirements		
	Technical requirements	Maintenance procedures	
		Preservation strategies	
		Technology forecasting	
Historical value			

The reasons behind the positioning of policy development for digital preservation within institutions are several and can vary according to the specific juridical and institutional contexts; in many cases, the political context in which a policy is formed weights heavily as well as the legal environment. Moreover, there are other relevant factors, such as the substantial financial requirements, the business requirements to take evidence of decisions and activities and ensure the historical value of digital materials. Technical requirements constitute another important reason for developing a policy, specifically as far as it concerns the definition of technology forecasting, maintenance procedures and, especially, preservation strategies, or rather the precise guidelines for reformatting, refreshing, migrating, emulating and bundling data to newer technological platforms.

TOOL: Digital Preservation Policy: ROLES AND RESPONSIBILITIES

A policy should identify the actors and assign responsibilities for digital preservation, not by giving names but rather by outlining the overall organization and business structure. This may include outsourcing certain functions to external providers, or cooperation with an associated initiative in specific tasks. Furthermore, a policy should state the commitment to training the preservation staff and informing other actors; in particular, it should provide methods for increasing the level of staff expertise with digital preservation, such as local courses in computer or digital technology, training provided by professional organizations or by vendors, independent study or assessment, hire consultants and hire staff with digital knowledge or experience. People who has responsibility in the developing and implementation of a digital preservation policy should carry out the following functions:

- making decisions of retention, use and preservation of digital materials at the acquisition or creation stage, not later;
- establishing maintenance procedures and quality control within monitoring processes and programmes;

- establishing and implementing strategies for digital preservation, such as migration, emulation or technology preservation;
- developing a disaster recovery programme;
- ensuring security of access to digital materials.

TOOL: Digital Preservation Policy: CONTEXT

A digital policy can be part of a national/regional initiative or can be formulated and developed within each institution. In the first case, the policy will must respect and entirely apply all national/regional rules, regulations, standard and guidelines regarding preservation issues for digital materials; in the other case, it will represent the final result of a careful analysis conducted on institution’s own initiative to solve internal problems concerning these themes. Another important question regards the integration of a policy in an existing business structure; it could be difficult and tricky in that digital preservation has a tight interaction with all stages in the information lifecycle and other segments of an organization. Therefore, a digital preservation policy should commit to a smooth integration with other policies and business processes, by identifying and communicating possible interrelations and synergies.

TOOL: Table – Digital Preservation Policy: AREAS OF COVERAGE

AREAS	Authority and responsibility
	Conversion and reformatting
	Appraisal, selection and acquisition
	Storage and maintenance
	Access and dissemination
	Implementation
	Standards
	Procedures
	Quality control, auditing and benchmarking
	Cooperation
	Technical infrastructure

A digital preservation policy should be structured in several specific and distinctive areas, such as those above-mentioned. It should be introduced by two sections, respectively the purpose and the scope of the policy, to better explain, show and clarify all the questions that will be then largely discussed in it; in particular, referring to the purpose, a digital preservation policy should view the mandate of the repository, possible external legal pressures, the value of the digital material and,

finally, the expected use in the future. A special area should be dedicated to the cooperation between institutions in the policy process; usually, the cooperation regards archives, libraries, museums or other repositories, can be local, national or even international and provides that the work and engagement can be distributed equally or in a different way between participant members. Furthermore, standards relevant to preservation are of great value as they facilitate cooperation and hold the knowledge and experience of other initiatives; therefore, a policy should include the intention to adhere to relevant standards. Another important section concerns the responsibilities involved specifically with reference to the implementation and the related human resources and tools, such as management, employees, special task force, external advice, resources or models; in some cases, results of internal analyses, first of all risk analysis, are the main actors in the drawing up of the policy. Really, an accurate list of risks inherent in systems that preserve digital materials can help to formulate a more comprehensive policy on these themes; therefore, it is necessary to emphasize that a digital preservation policy should aim to minimize the risks associated with technological changes and allow for other changes. In this way, materials in digital form can be preserved and always remain comprehensible even if, for example, the organizational structure changes. Another area should be dedicated to benchmarking, in particular referring to measures of the access of the policy and audit.

TOOL: Table – Digital Preservation Policy: COSTS

COSTS	Technical infrastructure	Equipment purchases, maintenance and upgrades
		Software/hardware obsolescence monitoring/review
		Network connectivity
	Financial plan	Strategy and methods
		Commitment to long-term funding
	Staffing infrastructure	Hiring training
		Ongoing training
	Outsourcing	

Costs carry on a primary role in the developing of digital preservation policies; in fact, factors such as outsourcing, financial plan, technical infrastructure and staffing training can weigh heavily on institution’s budget and so an institution is called to undertake a cost-benefit analysis concerning its investment in digital preservation. The resources available can be used to develop specific services related to the preservation function, which has in any case evaluated with reference to its feasibility in terms of reasonable costs, such as technical training, standards and best practices, consultant services, cooperative or shared storage/access/preservation facility and model policies.

A policy review represents an important cost that depend on frequency with which a digital preservation policy is updated. However, it is widely accepted that, although the costs of preserving digital materials might be high, the cost, consequences and implications of not having a digital preservation policy may be higher and in some cases they could affect the feasibility of the preservation.

TOOL: Digital Preservation Policy: MONITORING AND REVIEW

A digital preservation policy should be subjected to reviews to take into account of the technological changes, new standards, etc.; moreover, it should be conducted on a routine basis in response to internal or external stimuli or both.

TOOL: Digital Preservation Policy: IMPLEMENTATION OF THE POLICY

An institution that aims at implementing a digital preservation policy needs to assure financial commitment and to adjust active management of digital materials at each stage of their life-cycle. Therefore, a programme for digital preservation should be included into the workflow of an organization and should be flexible to adjust itself to new technological developments.

Bibliography on Digital Preservation Policy

- **The Association for Information Management Professionals**

The ARMA, the Association of Records Managers and Administrators, Standards Development Committee, SDC, has established a task force to work on the development of this proposed standard. The proposed standard will address fundamental policy, procedural, and technical issues associated with conversion and migration from one records keeping system to another regardless of record format, so that these systems will insure the context, content, and structure of authentic records.

Conversion and Migration Criteria in Records Keeping Systems (Regularly Updated)
<http://www.arma.org//publications/standards/workinprogress.cfm>

- **Beagrie, Neil; Greenstein, Daniel; Pressler, Christopher**

Available in either Microsoft Word or Adobe PDF format, this study presents fourteen recommendations in the areas of long-term digital preservation, standards, the policy framework, and future research. Six case studies highlight some of the real-life considerations concerning digital preservation.

A Strategic Policy Framework for Creating and Preserving Digital Collections (Version 5.0)

Date Created: Jul 2001 (United Kindom)

<http://ahds.ac.uk/strategic.htm>

- **Berkeley Digital Library**

A succinct example of a collections policy developed for a digital library with a defined hierarchy of collection levels for digital library materials.

Berkeley Digital Library's Collection Policy

<<http://sunsite.berkeley.edu/Admin/collection.html>

- **Columbia University Libraries**

Official statement of CUL policy for the preservation of digital resources, including its commitment to digital lifecycle management.

Columbia University Libraries Policy for Preservation of Digital Resources

(Date Created: Jul 2000) (United States of America)

<http://www.columbia.edu/cu/libraries/services/preservation/dlpolicy.html>

- **Committee on Institutional Cooperation University Archivists Group (CIC UAG)**

A policy outlining "a set of institutional requirements for the responsible management of electronic records and information systems" within the twelve member academic consortium, the Committee on Institutional Cooperation (CIC).

Standards for an Electronic Records Policy

(Date Created: Dec 2001) (United States of America)

<http://www-personal.umich.edu/~deromedi/CIC/cic4.htm>

Also available in Word format at: <http://www-personal.umich.edu/~deromedi/CIC/cic4.doc>

- **De la Puente, Fernández**

Providing an overview of the principles for co-ordination of European digitisation efforts, this resource notes the digitisation and preservation issues raised at a meeting of representatives and experts of EU Member States in Lund, Sweden, on April 4, 2001. Links to the Lund principles, Report, draft Action Plan and background documents are also available.

Coordination of National Digitisation Policies & Programmes
(Last Updated: 7 Oct 2002)

<http://www.cordis.lu/ist/ka3/digicult/eeurope-overview.htm>

- **JISC Comms (United Kingdom)**

Outline of JISC's record management policy, including statements regarding electronic records.

JISC Records Management Policy Statement (Date Created: 28 Feb 2003)

http://www.jisc.ac.uk/index.cfm?name=pres_rmpps

- **Matthews, G, Poulter, A and Blagg, E.**

Preservation of Digital Materials: Policy and Strategy for the UK. JISC/NPO Studies on the Preservation of Electronic Materials. British Library Research and Innovation Centre, 1997. ISBN: 0-7123-3313-4, ISSN: 1366-8218. British Library Research and Innovation Report 41.

- **National Archives of Australia**

A document setting out the National Archives of Australia's policy on the status and management of Commonwealth Government online resources, including websites, as Commonwealth records. It includes Best Practice recommendations plus listings of additional sources to assist Commonwealth agencies in establishing mechanisms for creating, managing and retaining web-based records.

Archiving Web Resources: A policy for keeping records of web-based activity in the Commonwealth Government

(Last Updated: Jan 2001) (Australia)

http://www.naa.gov.au/recordkeeping/er/web_records/policy_contents.html

Also available as .pdf and .rtf file from

http://www.naa.gov.au/recordkeeping/er/web_records/intro.html

- **National Archives of Australia**

The Commonwealth Recordkeeping webpages supersede The Australian Archives Handbook. The pages provide information on the National Archives of Australia's policy and procedures for appraising, sentencing, transferring and disposing of Commonwealth government records. They also give advice on records management procedures, preservation issues, and outsourcing work.

The Commonwealth Recordkeeping webpages

(Last Updated: 2000) (Australia)

http://www.naa.gov.au/recordkeeping/overview/new_approach.html

- **National Library of Australia**

This policy indicates the National Library of Australia's directions in preserving its digital collections and in working with other agencies. It outlines the nature of the Library's digital collections and the challenges associated with keeping them accessible; its broad directions for the digital collections; strategies for managing digital collections; and its areas of focus in research, standards development and both national and international collaboration.

A Digital Preservation Policy for the National Library of Australia

(Date Created: 17 Jul 2001) (Australia)

<http://www.nla.gov.au/policy/digpres.html>

- **National Library of Australia**

The Policy sets out the principles behind the Library's digitisation activities, and identifies the primary purpose of these activities as enhancing access to the Library's collections, while assisting the preservation of rare and fragile items. In addition, the Policy provides details on the criteria the Library will use in selecting items for digitisation, and about access to digitised collections.

National Library of Australia Digitisation Policy 2000-2004

(Date Created: May 2000) (Australia)

<http://www.nla.gov.au/policy/digitisation.html>

- **National Preservation Office** (National Preservation Office)

The Digital Remit of the National Preservation Office, which sets out the NPO's official responsibilities for digital archiving and preservation in the United Kingdom. Featuring amongst the assigned tasks are the assembly of best practice guidelines, the coordination of national digital preservation policy, and the creation of an appropriate comprehensive communication strategy. An important additional responsibility involves the establishment and administration of the Digital Archiving Working Group, to advise the NPO Management Committee.

National Preservation Office Digital Remit

(Date Created: 2001)

<http://www.bl.uk/services/preservation/remit.html>

- **Oxford University**

A useful overview of the introduction of the Hierarchical File Server at Oxford and the digital

archiving policy established for the University.
Oxford University Policy on Computer Archiving Services
<<http://info.ox.ac.uk/oucs/services/archiving/archive-policy.html>

- **Public Record Office** (United Kingdom)

The Public Record Office's official policy for the management of electronic records. As well as detailing standards for handling and access to digital materials, the policy includes a section which examines the preservation of electronic documents in the long-term.

Corporate Policy on Electronic Records (Date Created: Sep 2000)

<http://www.pro.gov.uk/recordsmanagement/eros/RMCorpPol.pdf>

- **State Records NSW** (Australia)

This publication, accessible through the State Records NSW website, forms part of the Government Recordkeeping Manual. Its purpose is to establish a Government-wide policy on the keeping of records in the electronic environment.

Policy on Electronic Recordkeeping (Last Updated: 13 Apr 1999)

<http://www.records.nsw.gov.au/publicsector/erk/polerk/erk-pol.htm>

- **University of Leeds** (United Kingdom)

This report will provide guidance for collection managers on the creation or enhancement of policies to address retention, and preservation of digital materials. For the purposes of this report, collection management is intended to reflect a more demanding concept than simply collection development, to encompass "policies on the housing, preservation, storage, weeding and discard of stock."

CEDARS Guide to Digital Collection Management (Date Created: Mar 2002)

<http://www.leeds.ac.uk/cedars/guideto/collmanagement/>