

Digital preservation policy of the UOC institutional repository, O2

UOC

**Universitat Oberta
de Catalunya**

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1. Principles

The general principles governing the digital preservation of the institutional repository of the **Universitat Oberta de Catalunya** (hereinafter, the "UOC", "University" or "institution"), called the **UOC O2**, are as follows:

1. **To generate awareness regarding the risks and threats that may jeopardize the collection.**
2. **To avoid any situation that may pose a risk to the scientific, technical and academic production contained in the UOC O2 by ensuring the complete long-term preservation of all the documents it contains**, with no exceptions or exclusions.
3. **To assure and maintain the authenticity, integrity and traceability** of all of the digital resources and, when necessary, their non-repudiation.
4. **To avoid technological obsolescence** by means of (i) **periodic revision of the different formats and metadata** and (ii) **execution of the necessary migrations**.
5. **To invest the financial resources** arising from the preservation of the repository.
6. **To guarantee compliance with the strategic and legal framework** while respecting the rights, licences and permits for access to the repository documents in accordance with current regulations on data protection, intellectual property and protection of honour, privacy and personal image (among other things) that are duly listed in Appendix 3 to this policy.

2. Purpose

Since 2010, the UOC has had an open-access institutional repository: the O2. The repository is the open-access portal that brings together, disseminates and preserves the digital publications created by UOC members as part of their research, teaching and institutional activities, for the purpose of making them freely available and thus raising their visibility and impact.

The UOC O2 has the following **objectives**:

- To bring together all the knowledge generated by the UOC community.
- To preserve digital documentation and guarantee its future accessibility.
- To act as a portal for the dissemination of the knowledge produced by the UOC community in order to increase its visibility and impact in Catalonia, Spain and abroad.

- To foster open access to all its content.

For the scientific and academic communities, although also for society in general, publishing in a digital repository such as the UOC O2 offers the following **benefits**:

- It allows the content published to be easily recoverable.
- It raises the visibility of the content.
- It increases the impact of publications.
- It improves the corporate visibility of the UOC and its community.
- It guarantees permanent accessibility to resources.
- It ensures compliance with the legal requirements in terms of university research and teaching.

The UOC, which participates in cooperative initiatives in relation to preservation in the university setting, designs and approves its own digital preservation policy with the objective of **protecting the resources deposited in the repository from the risks related to technological obsolescence, damage to hardware, and data alteration or breaches**.

3. Scope

By means of this Policy, the UOC assumes responsibility for **digital preservation** and acknowledges it to be a key tool in guaranteeing long-term access to its digital information resources. This represents a strategic commitment to digital preservation on the part of the institution,

a commitment that extends to both the **FUOC** and the other companies in the UOC Group (hereinafter, the "**Group**" or "**business group**"). In any case, from now on, the name "**UOC**" will encompass all of the UOC Group companies as a whole.

It must also be noted that the Policy applies to **all managers and workers**, regardless of their type of employment or service contract, their hierarchical position within the institution, or the centre – whether it be a teaching, research, administrative or support centre – in which they work.

4. Assignment of roles and responsibilities

The responsibilities of each of the UOC departments involved in this Policy are as follows:

a. Library and Learning Resources

1. **Coordinate the strategy** that affects the digital preservation of the UOC O2 in accordance with international standards, acting with responsibility to guarantee sustainability.
2. **Gather and disseminate all the knowledge produced by the UOC community.** Take charge of creating, revising, maintaining and conserving the bibliographic records, ensuring the quality of the files and metadata.
3. Together with the other areas involved, **set out the policies, procedures and practices** to be followed in regards to digital preservation.
4. **Ensure permanent personal access to documents** by means of unique identifiers.
5. If necessary, **change the format of the digital materials** so as to preserve their intellectual content.

b. Office of the General Manager

1. Via the Document Management and Archive Service, **help to define the standards for digital preservation.**
2. Together with the other departments involved, **set out the policies, procedures and practices** to be followed in regards to digital preservation.

c. Technology

1. Ensure the **medium- and long-term sustainability of the repository's technological infrastructure**, guaranteeing technical maintenance and monitoring of equipment.
2. Ensure the **medium- and long-term sustainability of the repository software** and that it is correctly installed and maintained, and monitor the software and hardware.

d. Office of the Deputy General Manager of Operations

1. Ensure that the **platform is updated** and **interoperable** with other university systems in Catalonia, Spain and abroad.

e. All departments and faculties

1. **Be familiar with and comply with the content of the Policy**, and ensure it is applied correctly within the UOC.
2. **Act in accordance with the digital preservation model (Appendix 4)** to ensure the digital preservation of the content held in the UOC O2.

5. Development

The digital collection contained in the UOC O2 is subject to **comprehensive and constant processing from the moment it is incorporated until the time it is disseminated**. The collection contains all types of documents, from scientific and technical articles to presentations, talks, doctoral theses, continuous assessment activities and other open educational resources. As such, it contains digital resources of various types deposited in different sections.

The repository is organized into communities, sub-communities and collections for the purpose of easily indexing and recovering objects.

The fact that the collection is so diverse means that the resources to be preserved must be handled on an almost personalized basis.

The following points describe the repository's four communities and all the types of resource that are covered by this Policy: "Academics", "Institutional", "Research" and "Data".

1. **Academics:** For the purpose of promoting open education and access, the teaching community contains a large volume of open educational resources (**OER**). Some of these resources are deposited via the green route, i.e. through self-archiving by students (mainly in the case of final projects), while others are published by faculty and Library staff (as in the case of the University's own teaching resources and continuous assessment activities).
2. **Institutional:** This repository community is where the UOC's institutional, administrative and informative documents are deposited as well as information

from its departments that is considered of relevance to society (for example, minutes, inaugural lectures, corporate presentations, reports, etc.).

3. **Research:** This community collects the results of scientific activity carried out by UOC researchers, for the purpose of dissemination. Approximately three quarters of the resources are articles. It also contains books and chapters, working papers and conference presentations and minutes. Another main type of resource is doctoral theses.
4. **Data:** This essentially contains research data, also known as *datasets*. These resources are more heterogenous than the others that have been mentioned, although they are also deemed to be important and worthy of preservation.

To comply with the requirements of the technical infrastructure, the UOC O2 is based on the **Open Archival Information System** (OAIS) digital preservation model.

This model, described in Appendix 4 to this Policy, identifies the relevant aspects of the objects and formats, metadata, security and integrity.

Lastly, it should be mentioned that the Policy and related internal regulations must be kept up-to-date with changes in the field of new technologies and open access by means of periodic monitoring that must also include the analysis of any incidents affecting the repository's digital preservation. The Policy must be updated whenever required due to organizational or legislative changes.

6. Approval of the Policy

This Policy has been approved in accordance with the provisions of the Policy concerning roles and responsibilities in the approval of the UOC's internal regulations.

7. Confidentiality

All of the rules, procedures and documents approved internally are the property of the UOC and may not be used for any purpose other than that for which they have been provided, nor may they be conveyed or disclosed to parties outside of the UOC's interests.

Signed:

Appendix 1. Definitions

Authenticity: the guarantee that a digital object is genuine and trustworthy, i.e. that it is what it claims to be, whether it is an original object or a copy of an original.

Dataset: a structured collection of data, normally in tabular form, that are grouped and preserved together based on their provenance.

Format: structured, coded data that can be managed and represented by a computer program. The preservation may be more or less complex depending on the degree of standardisation and popularity, or if it has been created using open or proprietary software.

Indexing: The process of representing content by means of words extracted from the original text, or by means of a language created for this purpose, to expedite retrieval of data.

Ingestion: The process whereby a digital resource is incorporated into the repository by uploading the digital object and the metadata that describe it.

Integrity: the assurance that digital objects are complete and have not been subject to any unauthorized or undocumented alteration.

Metadada: data that provides information about data. Metadata are typically used in the context of libraries to identify and retrieve digital documents.

Migration: the most typical digital preservation strategy, based on converting a digital document created using a certain version of a specific program to an updated version of the program or another program that allows correct access.

OAIS (Open Archival Information System): conceptual model described by UNE-ISO 14721:2015 that provides a roadmap for creating digital preservation systems.

OER (open educational resource): Educational material that is either freely accessible or can be used, adapted and distributed under licence.

Retrieval: searching or browsing to identify, locate and, if necessary, consult or download a resource.

Research data: type of dataset consisting of any information that has been gathered, observed, generated or created to validate a research hypothesis.

Traceability: the ability of a digital document to be compared with other versions of the same document to identify or rule out changes or alterations in its format or content.

Working paper: a preliminary scientific or technical paper created as a first step to an article that may be submitted for publication by academic journals. This term is often used to mean a draft paper.

Appendix 2. Versions table

Version	Date	Change	Reason for the change
01	09/11/2020	The entire Policy	New

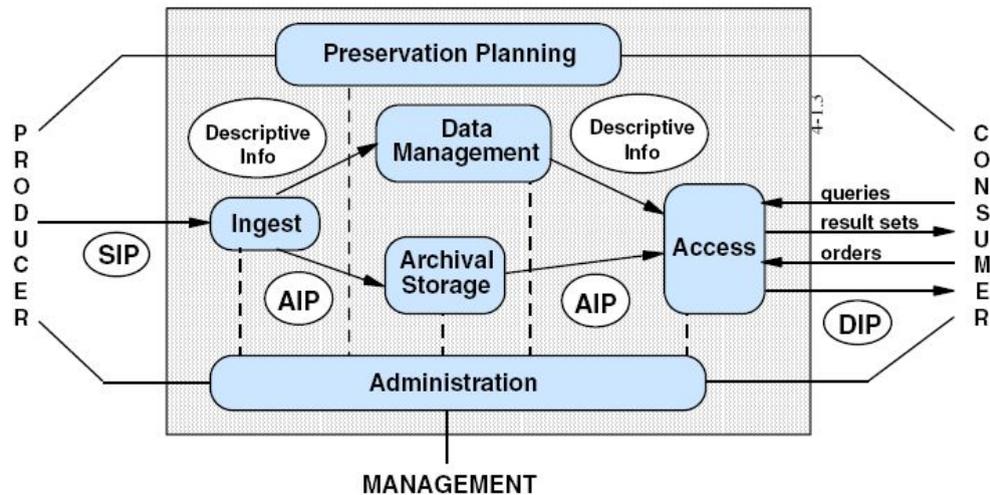
Appendix 3. Legal and regulatory framework

For the purpose of complying with the obligations regarding open access and digital preservation, the legal and strategic framework of this Policy consists mainly of the following directives, organic laws, laws, royal decrees, pacts and internal UOC regulations:

1. [Law 14/2011, of 1 June, on science, technology and innovation.](#)
2. [Royal Decree 99/2011, of 28 January 2011, regulating official doctoral courses.](#)
3. [Directive 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market.](#)
4. [Law 2/2019, of 1 March, modifying the consolidated text of the Intellectual Property Law, approved by Royal Legislative Decree 1/1996, of 12 April, and which transposes to Spanish law Directive 2014/26/EU of the European Parliament and of the Council of 26 February 2014, and Directive \(EU\) 2017/1564 of the European Parliament and of the Council of 13 September 2017.](#)
5. [Organic Law 3/2018, of 5 December 2018, on personal data protection and guarantee of digital rights.](#)
6. [Organic Law 1/1982, of 5 May 1982, on the civil protection of the right to honour, personal and family privacy and self-image.](#)
7. [Catalan Agreement on the Knowledge Society – PN@SC \(Government of Catalonia, 2020\).](#)
8. [Universitat Oberta de Catalunya's Open Access Institutional Policy \(UOC, 2010\).](#)
9. [Open Knowledge Action Plan I: Frame of action \(UOC, 2019\).](#)

Appendix 4. Digital preservation model

As stated in the Policy, the technological structure of the UOC O2 is based on the Open Archival Information System (OAIS) digital preservation model. This model encompasses three aspects that form part of the digital preservation policy: objects and formats, metadata, security and integrity.



Considerations regarding the different aspects:

1. Digital objects:

- Priority is given to preservation of the master file.
- Files are preferably preserved in open format,
- although some widely used proprietary formats may also be preserved.

2. Metadata:

- Descriptive, technical and structural metadata standards are used.
- Access to metadata is open, free and unrestricted, in accordance with metadata reuse policies.
- Metadata interoperability is allowed for as per the corresponding protocols.

3. Security and integrity:

- A protocol is defined to guarantee the integrity of the objects deposited in the repository.
- The backup copy system uses a resource content and format verification procedure.
- A record is kept of the preservation actions carried out, including the migration of obsolete formats.
- The quality of the storage media is accredited.