

# Digital preservation strategies in Public Administrations (PA): addressing PA needs

The phenomenon of transforming documentary memories is the result of an irreversible process that has changed procedures and instruments for production and communication in different activity sectors. The primary objective of the application of automatic procedures to document management is to rationalise the activity by improving the system of organisational relationships in Public Administrations.

The exploitation of IT opportunities, together with rational organisation, should lead to an improvement in efficiency. One of the main objectives associated with the transformation of the traditional documentary system into a specialised IT-managed information system is the long-term preservation of digital archives.

The long-term preservation of digital resources is a process that aims at using digital archives over time, with the guarantee that each document is accessible, usable (readable and intelligible) and has its integrity and authenticity preserved in the long term.

## Objectives and benefits

The main objective associated with the idea of archiving and preserving digital documents is to reduce the time for the transfer of documents between offices and the physical space required for their preservation, but to keep documents readable and reproducible also on a paper support.

## What archival preservation entails

A permanent preservation system for archival documents aims at preserving over time all the documents that comprise an information system, in order to make them accessible.

Preserving documents and their content entails the preservation of the whole system of relationships and context information that transform a number of documents into an archive.

## What is a digital preservation system?

A digital preservation system is a set of procedures, activities and instruments that help to safeguard digital memory over time. This means to preserve all the documents, both born-digital and converted to digital, in the long term, preserving their content. Together with content, it is essential to preserve the information needed to guarantee the reproducibility of the documents' appearance as well as the connections with all the different components of the information system, the whole digital archive.

Preserving digital content involves two different requirements that are connected and cannot be disregarded. On the one hand, the document has to preserve its intelligibility over time in technological environments that are different from the original ones; on the other hand, its integrity and authenticity must be safeguarded.

The digital preservation cannot be restricted to the preservation of the individual digital document. It is mandatory to preserve all the descriptive and managerial information that can ensure the interpretation of the entire structured system (content, elements, context).

## The digital document

In administrative procedures the document has always been produced according to specific modalities that guarantee its reliability. The immaterial nature of the digital document must not jeopardise its trustworthiness and its role in administrative procedures.

The main characteristic of the digital document is that the information and validation can be separated from its support, whose material existence is lost in favour of the logical entity.

The traditional document is the unique and original evidence of an activity and is easily distinguishable from its copies; the digital document, on the other hand, can be reproduced exactly as it is, bit by bit, so that the original cannot be distinguished from its 'clones'.

## National regulations

The complex framework of national laws includes some standards-related documents regarding the validity of the digital document. These regulations have now been brought together in a consistent way to form a law and executive code, which are different from the rules and technical documents issued by CNIPA.

D.lgs. n. 82 of 7/03/2005 – Codice dell'Amministrazione digitale, updated with the D.Lgs. n. 159 of April 2006.

Resolution CNIPA n.11 of 19/02//2004 – Regole tecniche per la riproduzione e conservazione di documenti su supporto ottico idoneo a garantire la conformità dei documenti agli originali.

Instruction MIT of 21/12/2001 – Linee guida in materia di digitalizzazione dell'Amministrazione.

Del. AIPA n. 42 of 13/12/2001 – Regole tecniche per la riproduzione e conservazione di documenti su supporto ottico idoneo a garantire la conformità dei documenti agli originali (art. 6. Paragraphs 1 and 2 Dpr 445/2000).

Dpr 445 of 28/12/2000 – Testo unico delle disposizioni legislative e regolamentari in materia di documentazione amministrativa.

Del. AIPA n. 51 of 23/11/2000 – Regole tecniche in materia di formazione e conservazione di documenti informatici delle PP.AA.

Dpcm of 08/02/1999 – Regole tecniche per la formazione, la trasmissione, la conservazione, la duplicazione, la riproduzione e la validazione, anche temporale, dei documenti informatici (art. 3, paragraph 1 of Dpr 513/97).

Dpr 513 of 10/11/1997 – Regolamento recante criteri e modalità per la formazione e la trasmissione con strumenti informatici e telematici (art. 15, c. 2 of L 59/97).

## Problems and open issues

Digital preservation, more than traditional preservation, requires continuous updating and maintenance of the systems and, in particular, forces people to work in advance on the activities necessary for long-term preservation, in other words, when the archive is created.

Digital resources are subject to a continuous transformation process and therefore to the risk of information loss.

The proliferation of digital content implies an exponential growth of production formats, which are very often incompatible, and also a diversification of products.

The fragility of supports and the ease of manipulation require significant improvements in the security of the systems.

The digital signature complicates the system and makes it less flexible.

## The model of Regione Toscana

Regione Toscana has developed a preservation system that foresees two distinct modules. The first of these is the so-called 'archive management': its role is to build and safeguard the structure and the internal relationships of the archive. The second has the function of preserving the documents according to national regulations.

This digital preservation and archive management system does not concern itself with the flow of documentation and the entry/exit phases of the document within the organisation. The two systems constitute a real trusted digital repository.

The system for the data management of the archive:

- manages digital documents and analogue documents at the same time, emphasising the relationships and allowing management and searching of the hybrid file;
- allows the distinction between documents that need long-term preservation and documents directed to the appraisal and record schedule;
- receives information from the procedures that manage the document flows;
- guarantees the long-term preservation of the digital documents;
- maintains the authenticity, readability, integrity and reliability of the digital document over time;
- guarantees the separation of data and documents concerning different subjects.

The conservation system, according to law:

- complies with the CNIPA (National Centre for Informatics in Public Administrations) and the regulations for preservation of digital objects;
- has been designed to be updated and meet potential new requirements;
- accepts documents only in particular formats, which guarantee respect for the national rules;
- stores the documents and keeps track of their access and use;
- is accessible by means of web services;
- guarantees access to, and display of, documents.