



RIGSARKIVET

Digital Archiving Policy



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DIGITAL ARCHIVING POLICY

This policy sets the framework for the Danish National Archives' digital archiving. The policy supports the ability of the archive to respond in a timely, sensible, and consistent manner to any challenges, risks and changes in technology and the public administration.

The policy guides the management of the Danish National Archives and employees in their everyday work. At the same time, the policy addresses our surroundings to make clear our entire purpose for preserving data, which is to ensure that everyone can find and reuse this data.

The Danish National Archives is the digital memory of Denmark. We ensure that data from our society that is valuable for historical, research, or legal reasons are preserved. We also ensure that data are preserved in a form that can be reused and understood in both the short and long term. For many years, we have worked purposefully to preserve digital data, and we have a large and growing collection of data documenting a wide range of society, and which both have an impact on citizens' legal certainty and can be applied in research. In other words, we preserve data to answer the questions which the citizens of today and tomorrow, researchers and other communities ask about the past.

Digital Collections of the Danish National Archives

At the beginning of 2021, the collections of digital records contain:

8,700 information packages with digitally created data from, e.g. databases and other IT-systems as well as research projects. In total, they amount to 271 TB.

The collection of digitised archives amount to 520 TB.



THE PURPOSE OF THE POLICY

This policy communicates the vision and the framework for solutions to how the Danish National Archives will work in the future to archive digitally created data. The policy defines principles that set the direction of our choices in the digital archiving process and determines the areas of action we undertake to achieve the vision.

Digital archiving covers activities in all parts of the data life cycle: from the time data are created and then submitted to archives, where data are preserved and disseminated, to the time the data are reused when needed by the individual citizen, for research or society in general.

Archiving is an extraordinarily complex and important process. We know that data producers consider the requirements for archiving very extensive. Therefore, the purpose of the policy is also to support that we find the simplest ways to complete the task as effectively as possible.

What Should the Policy Address?

The long-term task of preserving data are complex and resource-intensive, and it presents many challenges. The media on which data are stored degrade. The technology necessary to read the media will become obsolete. Also, the formats in which data are available become obsolete simultaneously as the documentation of data needed to understand and interpret data disappear. This means that important knowledge about the interpretation of data and its context may be lost. Therefore, a number of conscious choices must be made in terms of methods, technologies and documentation to preserve data in a form that enables it to be reused in the long term.

Technology is constantly evolving. Therefore, the Danish National Archives must also ensure that our methods and rules for digital archiving are continuously adapted to the current challenges. In this context, we focus on the following:

- The archives must ensure that citizens and society can reuse data more quickly and more effectively.
- The archives must jointly maintain knowledge and tools for digital archiving with key actors and stakeholders.
- The archives must be able to ensure the preservation of all types of data, that are worthy of preservation.
- The archives must be able to handle the growing volumes of data efficiently and safely.

VISION

Our vision for digital archiving is:

The digital archiving of the Danish National Archives must ensure cost-effective preservation of several types of data worthy of preservation in a way that ensures greater reusability for users and enables faster access to data.

The starting point of the vision is that we preserve data in order to use it again. Preserving data is not an end in itself; the aim is to be able to make data accessible when requested. Therefore, our way of collecting and preserving data must reflect society's need to reuse the archived data today and in the future.

PRIMARY PRINCIPLES

It is important for the Danish National Archives to be part of a professional community at the European level. Therefore, the Danish National Archives strives to comply with the principles of digital archiving, as set out in the reference architecture of the European Commission's "building blocks" for digital archiving (eArchiving). The building blocks are standards, specifications and software designed to support the harmonisation of digital archiving across the entire digital single market in Europe. With this starting point, the Danish National Archives has defined eight guiding principles, which will be our compass for the daily work with digital archiving and guide us when making important decisions. We have chosen these principles because they can help us find answers to the challenges facing the Danish National Archives.

The Danish National Archives' Principles for Digital Archiving

1. Reusability

The Danish National Archives preserves data in a way that is intended to maximise reusability for users.

2. Credibility

The Danish National Archives ensures credible archiving of data.

3. Security

The Danish National Archives stores and handles data, including ensuring the confidentiality and integrity of the data, in an unquestionable manner.

4. Flexibility

The Danish National Archives is flexible and pragmatic during the process of archiving.

5. Innovation

The Danish National Archives creates spaces for experiments that can promote innovation and the use of new technologies for digital archiving.

6. Cooperation

The Danish National Archives cooperates with data producers, users and archives and participates in national and international collaborations in the development of digital archiving solutions.

7. Standardisation

The Danish National Archives standardises the archiving of data, including complying with international standards and using common terminology.

8. Transparency

The Danish National Archives bases its archiving on open standards and computer systems as well as ensures a clear and well-documented basis for decisions regarding digital archiving solutions.

FRAMEWORK OF THE POLICY

The Danish Archives Act

The Danish Archives Act sets the overall framework for what the Danish National Archives must, may and can do when we develop solutions for archiving digitally created data. The Archives Act, which is national, applies to public archives such as the Danish National Archives and municipal archives. Therefore, the Danish National Archives is not the only archive receiving public data. The digital archiving policy of the Danish National Archives does not apply to the digital archiving of other public archives, but the Danish National Archives' regulations and supervision affect those archives.

Costs

Archiving data have costs for data producers, archives, and users alike. The Danish National Archives works to ensure that digitally created data are archived in such a way that costs are kept as low as possible for data producers, archives, and archive users without jeopardising the purpose of archiving.

Migration Strategy

The Danish National Archives continues to base digital archiving on the migration strategy. The Danish National Archives' implementation means that, before submission of data, the data producers must migrate data to a few, well-defined standard formats which the Danish National Archives has designated for long-term preservation. This migration is motivated by the need to provide cost-effective digital archiving to society, satisfy the future needs of users and address the degradation of storage media and technological obsolescence. This migration can be quite intrusive for data, and it is an advantage in terms of preservation to ensure that data are migrated as close to the time of creation as possible. This

enables data producers and their suppliers to find the most suitable tools for export and conversion. Also, in the case of early migration, the archive can better test the quality of the archived data by comparing it with the system in which the data was created.

A successful migration strategy requires close interaction with data producers, who play an active role in converting, documenting and submitting data on a regular basis. Frequent submissions are necessary to ensure that data do not become obsolete and that knowledge of the data and systems is not lost.

The Danish National Archives requires that data be documented before they can be submitted. The documentation aims to support data reuse and interpretation in both the short and long term. The documentation must include, among others, technical documentation, information on the origin and context of data, column and table descriptions of the database and explanation of code values.

The migration strategy also means that the archive must make sure to monitor and migrate archived data to new formats and data structures when necessary. Any migration carries a risk of data distortion. Therefore, the migration of our collections must be professionally reasoned and only occur after a careful balancing of, on the one hand, the costs and risks of migrating and, on the other hand, the costs and risks of preserving data in the current format.

The migration strategy is – in addition to being the most realistic to implement – also the cheapest strategy for digital archiving.

System-Independent Preservation

Preservation in open and standard formats means that data can be preserved independently of specific computer systems. In this way, data can be accessed and used by means of standard applications without having access to the computer system where the data were originally created or collected. This is an advantage when data need to be reused, because only a few users can use outdated applications.

Distributed Digital Preservation

The Danish National Archives applies the principles of distributed digital preservation. This means that data are stored in multiple independent copies, at several different locations, and using several different types of technologies. The diversification of risk is necessary to address the risk of data loss.

OAIS

Our digital archiving is based on the international and widely recognised standard Open Archival Information System (abbreviated OAIS) for the description and organisation of an archive.

OAIS does not address external processes such as the data producers' use of the computer system and the archive's data selection process. Therefore, the Danish National Archives has expanded the model and defined necessary activities in these phases of digital archiving.

The use of OAIS and its conceptual apparatus supports the Danish National Archives' cooperation on joint international solutions for digital archiving.

Key Concepts in OAIS

1. Submission Information Package, SIP.

An information package that includes data and metadata sent to an OAIS archive from a data producer. The Danish National Archives has in advance specified the formats and contents of the SIP.

2. Archival Information Package, AIP.

An information package that includes data and metadata transferred from one or more SIPs. It contains the data that the Danish National Archives stores for the long term.

3. Dissemination Information Package, DIP.

An information package that includes data and metadata transferred from one or more SIPs. It contains the data that the Danish National Archives stores for the long term.

Methods Development and Cooperation

Developing methods for digital archiving are not merely performed at the desk. Digital archiving is a specialist competence that requires working practically with data and technologies based on knowledge of digital public administration and/or private organisations' digital solutions. The Danish National Archives strives to attract and retain employees who have and continue to develop competencies within data processing, data management, programming and how public and private data producers create data. In this way, we ensure that the archive's methods and principles can, as far as possible, be rooted in practical experience.

Our continuous accumulation of knowledge internally in the Danish National Archives is a prerequisite for us to be able to contribute to the collaboration on common archiving standards. When we share knowledge both nationally and internationally, we also ensure that our knowledge of digital archiving is strengthened and maintained within a larger circle of stakeholders.



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