## Context and objectives

Most administrative structures are nowadays confronted with a hybrid document environment. Organisations use, access, share, save and store documents in a variety of formats: on paper, scanned, born in electronic format, or printed. In the absence of a clear policy for managing and preserving such heterogeneous documents, the result is a great deal of confusion, loss or redundancy of information, waste of valuable resources and legal uncertainty which hampers the efficiency of public services.

In this context, the HECTOR research project aimed to model the transformation, organisation and preservation of hybrid documents in the Belgian federal administrations, in order to facilitate the transition to a trustful, secure and efficient e-government.

To this end, the project aimed to develop document and file digitisation processes that preserve the authenticity of the document (traceability and integrity) and ensure its efficient use (quality of the result, accessibility and exploitation of the content). In addition to these processes, the research aimed at adopting post-digitisation appraisal and disposal policies that take into account legal constraints and the administrative, organisational and heritage value of the documents. Legal or organisational constraints may lead to the need for joint management of hybrid documents, combining paper and digital media.

The identification of concrete instruments accompanying these digital or hybrid preservation policies was also one of the objectives of the research: metadata schemes and classification plans integrating the aspects of authenticity, traceability, retention and accessibility of digitised documents and files.

Finally, the research project aimed to propose policies for the efficient management of access to digitised documents, taking into account the legal obligations of transparency (linked to the access to public sector information) and confidentiality (linked to the protection of personal data).

## Methodology

The HECTOR project was conducted using an interdisciplinary approach involving law (for the legal constraints) and information sciences: Records Management and Archival Sciences (for aspects related to records and information management). The integration of archival sciences was intended at an early stage in the development of hybrid records management strategies, rather than confining archivists to a depository and preservation role. This "integrated archival" approach is strongly encouraged in order to anticipate the long-term preservation of records.

A bottom-up approach has also been implemented. The research, initially theoretical and based on a state of the art assessment, was nourished by field analyses on the basis of selected case studies. The cases selected offered a potential for generalisation to other actors in the public sector, or even to the administration as a whole. Information from the field was gathered through meetings and interviews. Two types of complementary questionnaires were sent to the interviewees: one focusing on the analysis of the general context of the administrative entity studied and its strategy in terms of records management, and the other focusing on the management of specific digital/digitised documents. The aim was to arrive at a comparison between the theoretical ambition in terms of records management and the reality of practice at the level of the creators and users of documents.

The aim of the exercise was to lead to a transverse functional modelling for hybrid document management.

## Results

The digitalisation of the public sector should make it more efficient and accessible. It is important that the law should not be an unjustified obstacle to this transformation. An analysis of the applicable legal rules has led to the conclusion that recent amendments to several of these rules were intended to promote the digital transition. As an example, the European e-IDAS regulation, by guaranteeing the principle of functional equivalence, paves the way for this transition even if two concerns remain: there are still not enough "qualified" services in terms of this regulation, which prevents all documents from being digitised and paper from being eliminated; moreover, in too many cases still, legal formalities impose paper support and therefore hinder the switchover to digital.

Data protection legislation has proved to be very close to the rules and good practices in Records Management. The GDPR imposes a series of rules impacting data management (purpose principle, minimisation principle...), imposing the use of certain tools (such as the data processing register), obliging to adopt appropriate security measures and making those who process personal data accountable (accountability principle). All these legal principles are in fact also found in the rules of good document management advocated by the discipline of records management (filing plan...). There is a welcome complementarity between both disciplines.

It should be noted that the GDPR invites each EU Member State to adopt a specific regime for the processing of personal data for archiving purposes in the public interest. The GDPR must therefore be read in conjunction with the Data Protection Act of 30 July 2018.

Other legislation also affects the digital transformation of the administration (laws on archives, on the re-use of public sector data, on access to administrative documents...). They were all analysed in the course of the HECTOR research.

The case studies carried out during the project revealed obstacles to the management of hybrid documents in the Belgian federal administrations, thus impacting the transition towards a fully completed, reliable, secure and efficient e-government. The reasons for these difficulties include budgetary restrictions but also deep-rooted resistance to change, difficult inter-organisational relations between public administrations, legal uncertainties resulting from a constantly changing digital environment, and fragmented decision-making between different public entities making choices independently rather than as part of a commonly thought-out and collaborative policy. As a result, the substantial differences between public administrations lead to a lack of interoperability not only at the technical level but also at the organisational level.

However, some of the examples analysed are models of remarkable success in managing digital transformation. They may be instructive for other administrations. For example, a project of administrative processes automation, such as the project for electronic records (e-PV) developed by the FPS Employment, is exemplary because its success is linked to two factors:

- in terms of records management, standardisation through the development of a uniform document model and an online application to automate the procedure has made it possible to strengthen not only the authenticity of files and documents but also their usability and reliability.
- a critical change has been made in legislation, leading to the recognition of the same probative value of e-PVs signed with an electronic signature as a handwritten signature (by the application of the "principle of assimilation").

The findings of this case study have highlighted conditions for successful digital transformation: rigorous and homogenous document editing rules and secure electronic access to applications and databases. These keys to success can be found in other cases studied, particularly in the case of the integrated management of

statements of offence in Quebec City.

It should be added that automating certain document management processes, such as classification or deletion, reduces the impact of human error and workload, improves the quality of document management practices and facilitates their adoption by users.

The HECTOR project has produced a set of tools to inform public administrations involved in a digital transformation project: digitisation decision-making scheme, comparison of the advantages and disadvantages of removing paper, table of digitisation steps, metadata tables, and diagram of the document processing chain in hybrid management.

**Keywords**

Public administration, archiving, document management, e-government, digitisation, GDPR, e-IDAS

GENERAL RECOMMENDATION

It might be interesting to consider, in the framework of BELSPO-funded research contracts, a sustainable availability of results and information resources on a public website (logically linked to BELSPO) which would guarantee the maintenance of the publication of the resources over time. This site should also benefit from visibility as a reference place where the results of BELSPO-funded research are available. This would avoid the dispersion of results over a variety of sites, either academic or of federal scientific institutions, which would be unfavourable to effective access to research results.