

Rethinking the archival function in the digital era

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Abstract

This paper will discuss the archival function in the modern digital era in which we live and explore the extent to which archival institutions should rethink their role, specifically in the realm of current records. The points raised are mainly based on the case of the National Archives of the Netherlands.

Introduction¹

It has been stated many times over the last two decades that archives have to change in order to keep up with and meet the challenges of the digital age. Given the direction in which technology and society is heading this conclusion has never been more true as it has been in today's context.

Social media, open data, 'big' data, and information management issues such as freedom of information, privacy, open government, and security are reflective of the enormous trends that are shaping new views about records, their value, their role, and their management through time. The impact of technology is transforming not only the nature of the record but also the way in which people and organizations in society behave, communicate, and carry out their business. The very nature and role of the (archival) record and the archival institution is coming into question!

The need to address this question is urgent. Records in digital form have become valued assets to any organization concerned about the exploitation of its digital information holdings through time. Organizations beyond archives have recognized the value of these assets and, similar to archives, are raising questions about what it means to support the 'archival/recordkeeping function' (as distinct from the functions of an archives) for their digital information holdings. Selecting, organizing, describing and preserving such holdings have become just as much the purview of these organizations as they are for traditional archival institutions. What are the implications for archival institutions? Are these organizations potential partners or competitors? How should archives position themselves in this rapidly evolving digital world?

The role of a National Archives

From their establishment (national) archival institutions have a mandate to take care of archival records of government, that is, records that are appraised and identified as having archival value. Based on that responsibility archives have always had a special relationship with record creating organizations. The processes of appraisal and disposal/disposition were and still are common processes to achieve the selection of archival records. Usually this objective is supported by an archives act or regulations and the inherent assignment of respective responsibilities. In

¹ I like to thank Martin Berendse, Charles Jeurgens and John McDonald for their valuable and insightful contributions.

that position national archives often also took up an advising role, helping government agencies in properly organizing their records management. In a physical, paper-based environment this situation was more or less working, though an archives is very much dependent on what the record creating agencies produced. Although the mandate may differ in different jurisdictions, this is basically the situation around the world. The real question here is whether archives are doing this merely to support their archival mission, or, in carrying out this role do they also recognize and act on their role in facilitating the management of current records for the purpose of good government? National Archives for instance in Australia, Canada, and the UK support this broader role. The Dutch National Archives sees a role for itself as responsible for information of public interest (both government information and from private sector), thus adopting an even broader scope.²

The changing environment

With the advent of 'the information society' things have drastically changed. Although laws and regulations regarding records and recordkeeping may still be the same, information technology has an enormous impact on the way organizations and people communicate and carry out their business and as a consequence on how they document their activities. Records are no longer physical, but virtual entities, that can be accessed everywhere regardless of where they reside. As a result the processes for managing records have to change as well, and this in turn will have an impact on how archives, as one of the parties, should behave or act. They can no longer 'sit and wait' (if they ever did that) until the moment of transfer of archival records, but have to be involved already at the planning stage to ensure that adequate controls and that measures are taken and in place so records will be still usable and authentic at the moment of transfer.³

This will require archives to focus their efforts at the planning and design stages and ultimately, at every stage of the systems development life cycle including post-implementation evaluation. A more risk-based approach that adopts a business perspective will be necessary.. Such an approach implies for instance evaluating the meaning of information for business processes, not only identifying critical business processes and requirements for business continuity, but also the implications for good governance, political accountability, and the public interest. Together they will determine in the end what information needs to be maintained and preserved and for how long. This knowledge will help to organize the management of records over time and to identify the consequences and requirements for recordkeeping, including, if applicable, the long term perspective.

The risks related to digital records are quite different from those associated with paper records. It is crucial that records are created properly right from the beginning, both conceptually with proper metadata describing the context, content, structure, appearance (and if applicable behavior), and technically (e.g. file format). To redress any shortcomings retrospectively will be very costly if possible at all. From another perspective, however, archives should recognize that

² Similar views/approaches can be seen in other countries such as the UK, Canada, Australia, USA. Unfortunately, limitation of space does not allow me to elaborate on this.

³ Transfer in this context means the transfer of archival records to an archives from a juridical perspective (Archives Act). It may be questioned whether the records should be transferred to an archives at all as has been discussed for the last 15 years. Though different storage models may be possible, the archives still have a responsibility and may be the last resort to take up 'abandoned archives'.

technology also offers new options and solutions. If designed properly systems may be designed such that recordkeeping can happen more or less automatically for instance.

Apart from the recordkeeping implications of information technology and the issues around the information object itself, at a higher level the new, still evolving network society also has a substantial impact on the records creating context and inherently on recordkeeping.

These developments are for instance:

- increasing interconnectivity e.g. between business processes, but also between information resources
- blurring of boundaries between organizations as well between the public and private domains. Government for instance is becoming less a 'collection' of organizations as it is an 'institute' with different 'faces'. Citizens are interested to get things done and usually see government as 'one organization', especially from the perspective of the internet environment.
- the shift of focus from organizational structures to business functions and processes. This will also have an impact on the traditional organizational structures in the archival domain. Are these still valid or should they be re-considered based on a stronger relationship between government functions/processes, instead of government layers, and archival responsibilities?
- the emergence of 'open data' and its impact on archives
- developments with respect to transparency, accountability, and freedom of information
- new ideas about the role of government as it shifts to become smaller, smarter and more efficient
- the ongoing financial crisis and the inherent budget cuts. The latter, however, does not necessarily have a negative impact, but could also have positive effects. It forces change and demands new and innovative ways to be found to do things.

All these developments need further elaboration and exploration to understand what they are and what they may mean. They all raise questions about what the best strategies are for archives to follow? In rethinking and identifying the role and inherent position of the Dutch National Archives the following questions need to be answered:

- How should the National Archives position itself such that it continues to be relevant in the context of government information?
 - What does that mean in a virtual environment where boundaries hardly seem to exist and where networks and communities are very volatile?
 - What should be the underlying concept and the basic principles that should guide such a position?
 - Should there be a different division of responsibilities between the players active in the overall recordkeeping function? If so, what would that mean for the National Archives?

- Traditionally the National Archives is active both in the area of government administration and the cultural heritage arena. To what extent will the new developments have an impact on this playing field? What view or approach from a records continuum perspective would be preferable?⁴
- What would be the consequences of the transformation of government for recordkeeping practices and processes and how should the National Archives be dealing with them?
 - What will be the impact on records authenticity, reliability, sustainability (e.g. digital preservation) and on archival functions such as appraisal (e.g. government, private sector), custody (e.g. central, distributed or mixed?), access (e.g. privacy, freedom of information, rights, open data).

From where have we come? Some background

In their seminal article 'Reinventing archives for electronic records' David Bearman and Margaret Hedstrom as early as 1993 identified one of the main challenges of archival institutions: In the light of emerging electronic records in those early days, the inability to cope with the volume of records they are responsible for. *"It reflects a fundamental gap between the task that archivists have assumed for themselves -- ensuring adequate documentation of our society -- and the resources at our disposal to accomplish this task. In many cases several orders of magnitude separate the responsibilities of archivists from their current capacity to achieve them."*⁵ Their suggestion for a new approach under the slogan 'steering, not rowing', elevated the role of archives from an operational role to a higher level where they would be more effective by defining policies and outcomes. Similarly, in 1997 the *ICA Committee on Electronic Records* also identified new approaches and strategies that should be followed in order to address the challenges of electronic recordkeeping.⁶

Almost twenty years later, how much progress have we made? It seems the statement of Bearman and Hedstrom is still very valid, perhaps even more so than at that time. Although we have had time to try to resolve this issue, as far as I can see we have not yet succeeded **to resolve the issue** from the perspective of archives, especially national archives. To a large extent we still seem to be living in a paper world, **while new approaches are required**. This is especially true with respect to **being involved in** the planning and design stages of the systems development life cycle. It turns out that it hardly happens, certainly not systematically. Though we may have improved the situation a little since then, there is still much that needs to be done. What reasons lie behind this? It will take too much to discuss this in full here, but some of the possible reasons may be touched upon. A crucial reason may be the fact that the existing approaches are and always have been too much at the operational and less at the strategic level. The need to move to

⁴ In the context of records continuum records are characterized by their 'ongoing participation in social, business, and other processes, broadly defined, i.e. by their transactional and contextual nature'. See for instance, Frank Upward and Sue McKemish, 'In search of the Lost Tiger by way of Saint-Beuve: Reconstructing the Possibilities in 'Evidence of me...''; in: *Archives and Manuscripts*, 29, no.1, 2001, pp.22-43.

⁵ David Bearman, Margaret Hedstrom, *Reinventing archives for electronic records. Alternative Service Delivery Options*, in: *Electronic Records Management Programs Strategies*, ed. Margaret Hedstrom, Pittsburg 1993. See http://www.archimuse.com/publishing/elec_prgmstr/elec_prgmstr_Bearman.pdf.

⁶ ICA Committee on Electronic Records, *Guide for managing electronic records from an archival perspective*, (Studies nr. 8), 1997.

the strategic level and to a level that is more in line with contemporary business management and governance, is becoming much more urgent in a digital environment.

The archival / recordkeeping function

In this context institutions like national archives will need to develop a view on how to position themselves and how to focus their activities most effectively. Such a view should be based on identified principles and will help to contextualize and interpret the ongoing developments in society and the underlying ever-changing technologies being used and subsequently to develop appropriate strategies. However, what is it that this concept should encompass? One of its basic components is the archival function. In 1997 the *ICA Committee on Electronic Records* defined an 'archival function' as a

'...group of related activities contributing to, and necessary for accomplishing the goals of, identifying, safeguarding and preserving archival records, and ensuring that such records are accessible and understandable'.⁷

These activities may be seen as a subset of a broader 'recordkeeping function', that includes all records no matter how long they need to be maintained and managed. Traditionally, the archival function has been carried out by various actors, including records creators, registrars, records managers and archivists, but, as stated before, in a digital environment those activities are not sufficient to create proper records that are sustainable over time. Having a theoretical concept of an archival function is useful, but it cannot be singled out in practice from the more comprehensive recordkeeping function. If they weren't active in this domain already as facilitator or advisor, then they definitely do need to get involved now.

Recordkeeping activities need to be embedded and integrated in the infrastructure that supports business processes, otherwise they will not be effective or may not happen at all.

Two fundamental guiding principles have been identified during the last two decades that have to be applied in order to enable successful recordkeeping practices. They are:

- recordkeeping processes have to be integrated in the business process in order to ensure that proper records are created
- recordkeeping rules and requirements have to be included in the planning and design stages of the systems development life cycle .

This means that it is important for archives to talk to the right people at the right level. In practice these will be business people and program managers, as well as system architects and information specialists, and perhaps less records managers, especially if they are continuing to adopt paper-based approaches. Whereas in the traditional, paper-based context everybody played their own role more or less successively, in a digital context new players have emerged. All of these players, both traditional and new, need to 'meet' each other at the planning and design stages. Not only does this bring different disciplines to the table (which means that all have to have a good understanding of each others views, needs, and requirements), it also requires that connections be made to (business) management and the

⁷ ICA Committee on Electronic Records, *Guide for managing electronic records from an archival perspective*, 1997, p.25.

strategic level. In this context a national archives needs to become a partner in orchestrating and facilitating government recordkeeping within the broader information management environment.

In order to act effectively in this changing context archives not only have to adapt their policies and strategies, but they also need to ensure that their staff has adequate competencies, skills and knowledge. In effect they are playing chess on two boards at the same time both In the government context and within the national archives. This is a complicated situation which requires careful management to keep the right balance between changing internally and staying on top of ongoing changes in government agencies and their potential impact on recordkeeping, while still being effective. In a time of major budget cuts and reductions in staff and ongoing financial uncertainty around the world, this can present an enormous challenge. However, such a situation also presents major opportunities.

How does all of this translate into moving forward? What instruments are there that would enable an archives to act according to its mandate and achieve its objectives as well as to influence recordkeeping practices in government agencies?

Some suggestions include:

- enhancing knowledge about recordkeeping through the provision of advice, support, and guidance
- providing services such as digital repository and records management functionality. Currently, there is a plan to develop shared services for managing records as an extension of the digital repository. It will allow government agencies to manage their records themselves by using these services or to 'outsource' their management to the National Archives .
- Developing and applying specific instruments, such as an appraisal methodology, recordkeeping metadata application profiles, etc.
- Adopting and implementing standards and being involved in standards development processes such as those led by ISO TC46/SC11, ICA or at a European level through MoReq2010,
- Developing and issuing regulations, guidelines, best practices
- and last but not least taking advantage of the existing possibilities offered by the juridical context, such as elevating the advisory role of the National Archivist on freedom of information issues from a bureaucratic procedure to a more strategic and governance level.

Apart from that it is important to be connected to the right communities and people. Being part of networks is a means of being aware of the latest developments, such as recordkeeping practices, digital preservation, metadata approaches and schemas, architectural frameworks like TOGAF⁸, standardization, e-government, interoperability frameworks, to name just a few.

The case of the Dutch National Archives

⁸ The Open Group Architecture Framework (see: <http://www.opengroup.org/togaf/>)

Like any other national archives the Dutch National Archives is trying to address the challenges of a rapidly changing environment and at the same time trying to prepare and adapt itself to these new circumstances.⁹ It may not be a surprise that this parallel effort is very difficult and progresses slowly and with a lot of trial and error. In spite of having to experience reorganizations roughly every 3-4 years, mostly due to budget cuts, efforts have been made to bring staff up to date with the latest developments. A training programme was developed and carried out in the period 2009-2011 which was mandatory for all staff including those at the management level. Although it is definitely not sufficient for achieving an adequate level of knowledge it was a first step in raising awareness and provided some insight into the changing environment of the National Archives and the possible impact it was having on its role and activities. In addition, this series of special workshops has been held in different departments of the organization again to make people aware of the digital issues and recordkeeping implications as well as to enhance understanding of what this may mean for the work people are doing. How useful all of this has been is a question. In some respects it is 'just a drop in the ocean' and far too little in terms of what is really required to prepare people for performing the tasks required in a digital environment.

An alternative or additional approach is to learn by doing, or training on the job, but that is easier said than done. It requires for instance a basic understanding of the recordkeeping principles and concepts and the ability to translate them into a new environment, which, by its nature, is digital and virtual and no longer physical. This is in addition to the larger issues associated with the organizational and cultural changes that are occurring. Having knowledge regarding recordkeeping is therefore not sufficient. It also requires a thorough understanding of the nature and impact of the information technologies and the internet and the possible implications from a recordkeeping perspective.

Fundamental, however, is having the capacity to be able to communicate at a strategic level, such as with program and business managers, and CIO's and to initiate and organize the necessary discussion. It requires the right combination of skills and competencies to maneuver, negotiate and act at the different levels (from strategic to operational and back).

In order to try to mitigate this the idea of an intellectual framework came up, that would at least provide a view of the role of a national archives in the digital context and a basis for developing strategies and a common approach in achieving the goals of the National Archives. In the first instance it aligns and better underpins existing activities and strategies and directs the actions of staff with respect to their contacts with government agencies. Secondly, it provides a basis for rethinking the role and position of the National Archives and developing new strategies and policies. The development of an intellectual framework is just getting underway. However, the following principles have been identified:

1. the business process is leading, information management or recordkeeping is supportive and should be integrated

⁹ An interesting development is the current process of merging the Royal Library and the National Archives. This process should be finalized formally at the end of 2013. It in turn raises all sorts of other questions, but may offer new opportunities as well. Important is what synergetic effect may result from it and what this means for positioning the new institute within the broader scope of e-government and government information more specifically (the function of the National Archives).

2. the National Archives should be involved right from the beginning (e.g. the planning and design of business processes, underlying (information) architectures, and supporting systems
3. focus on all information (or records) of government; comprehensive approach both in scope and in time; not only on archival records. This includes the need to be aware that different types of information exist and that each of them may have a different value for different audiences
4. All connections/linkages of a record (concept of a record) should be accounted for
5. A systematic approach to recordkeeping should be used based on a risk management approach
6. government information is public and freely available, unless... It entails that the National Archives aims to ensure the right on information for the public ('the public interest'), including both government and private sector information while respecting privacy rights, freedom of information, etc.

The framework was adopted very recently, so it still needs to be implemented. However, it will set the scene for the National Archives to play different roles, depending on the situation and the current juridical framework, either each in its own right or in concert:

- an active participatory role in facilitating recordkeeping throughout government and in establishing appropriate governance structures and frameworks
- an advisory role to government organizations with respect to proper recordkeeping
- service delivery to government agencies and the public of government information (records)
- a role in conducting appraisal and selection from a societal perspective (e.g. cultural heritage)
- a custodial role for archival records
- a supportive role in relation to archival legislation and regulations as well as with respect to establishing collaborative structures of archives in the Netherlands.

In the Netherlands a distinction has to be made between the National Archives as an institute, responsible for maintaining and providing access to archival records and the function of the National Archivist who has a role as archival authority within the field of archives in the Netherlands and as an advisor to the Minister of Education, Culture and Science on matters regarding amongst others archival legislation and the administration of archives. Currently, both the function of director of the National Archives and the role of National Archivist are fulfilled by one and the same person.

In performing all these roles the National Archives or its representatives are actively involved in processes for keeping records accessible and sustainable over time and as such are adding meaning and value. This is manifested by helping government agencies to keep information/records meaningful and interpretable as well as by conducting appraisal across government (and private) organizations from a societal perspective. Sustainability is key to this. It is also essential that the National Archives is leading the discussion in this area and thus makes it explicit and clear concerning on what basis choices are made in the process of appraising records for archival value.

The government information context in which the National Archives is working is also still very much evolving. Many government agencies still create and use large volumes of paper records along with digital records and live and work in a hybrid environment. Most of them have tried to move to one digital environment by scanning the paper records, but regardless they are still relying on the paper records for the delivery of the business. Making business processes digital and allowing government officials to perform their tasks digitally is still very much at the beginning stages. The necessary infrastructure is not yet operational, although the planning for such an infrastructure is underway. One of the important developments currently is the goal for the ministries to work digitally by (the end of) 2015. Most civil servants are used to working in their 'personal' domain and often are not aware of the organizational context they are working in and the inherent requirements for organizing their information. Although, measures have been taken to share information more easily and to support collaboration, it will be important to integrate appropriate recordkeeping functionality as well. However, given the situation at most of the ministries all this is very ambitious. The transformation of business processes from paper-oriented to digital is not as much a technical matter, but most of all a cultural as well as an organizational change issue. Nonetheless, a first description of the required information architecture, has been approved. The National Archives was and is involved in its development and in its implementation. In order to make things achievable it has been decided that this infrastructure should first support the creation and use of text-documents. All other types of information (e.g. databases, websites, social media) will for the moment not be included, despite the advice of the National Archives to be more comprehensive. From a recordkeeping perspective this is a very object-oriented approach and denies the fact that the business process should be leading. One of the risks and a matter of great concern is losing the relationships between records in different systems.

Since none of the ministries is starting from scratch it will be necessary to allow a transition period. As a result, several stages have been identified. The first stage is to transform business processes so they can be performed digitally and at the same time to ensure that document management systems or records management systems are in place. One of the issues to be resolved is whether this should be done by the ministries themselves or whether they will make use of a service provider, offering records management services. For managing case files that are closed this could be for instance the National Archives. Certainly files that are appraised as having archival value could be transferred as soon as they are closed. Although, this may be still very much a traditional approach, it is at least a relevant option given the inadequate existing infrastructure and available software applications. Currently, the conditions under which this could take place are negotiated. Also the digital repository that currently is in use at the National Archives has to be expanded with adequate functionality. A second step is to standardize as much as possible the document or records management applications and only allow about three to be used within central government¹⁰. At the same time an exchange format will be developed, that will be based upon existing formats, such as of MoReq2010, CMIS, and other information models. This standard is a prerequisite to ensure the smooth exchange of records between systems, including the digital repository of the National Archives. In the field of metadata an application profile for recordkeeping metadata has been in place since December 2009. That will also govern such an exchange format. Although it is

¹⁰ In other countries similar approach has been taken, such as in Canada (RDIMS, Records/ Documents/ Information Management Shared System), though not mandatory. See for instance <http://louisetestwiki.pbworks.com/f/RDIMS+Best+Practices.pdf>.

applicable for all of central government, each of the ministries or other agencies can adapt it within this framework to their own needs.

Another area where the National Archives tries to assist agencies in their records management is appraisal. One instrument under development is a generic retention schedule for common administrative processes, such as human resources and finance.¹¹ Again, ministries can adapt this to their own needs. In doing so they will help to streamline the appraisal process.

Based on pilot projects over the last couple of years it is also clear that the most effective way to achieve recordkeeping goals is to build close relationships with the program and business managers. If you show them what improvements may be possible if proper recordkeeping is implemented, they can in most cases be easily convinced to take the necessary measures. In this respect communication between the National Archives and government agencies is happening now at a more strategic level. This helps both parties in achieving their respective goals. It also means that the usual communication of National Archives staff with records managers is not sufficient and certainly not effective. It must begin at the strategic (business oriented) level and then proceed down to more operational levels to discuss practical implementation.

In summary

What lessons can be learned so far from these developments? Although the National Archives is still in the middle of a transformation process within the broader context of government, some positive results have already been identified. These may not always be accomplished by the National Archives itself, but be part of a broader process of change in government and more specifically in the field of managing information. Examples are the establishment of CIO's (in 2008) and the assignment of an advisory role to the National Archivist, the creation of a consultation body on recordkeeping and archival issues at a strategic level at each ministry, the involvement of the National Archives in the planning and design of a future information architecture that will enable digital business processes and integrated recordkeeping processes, and the development and issuance of recordkeeping instruments, such as a metadata application profile, and a generic retention schedule. They all have helped to place the National Archives in a good position with respect to the transformation process underway across the central government, especially in the information management field. However, these are bits and pieces, and although relevant in themselves, may not always be in the right order and certainly not always coherent. What has been missing, has been an intellectual framework that can stimulate re-thinking of the mission and vision of the National Archives in a rapidly changing digital world. The framework was established recently, but needs to be elaborated upon. The Dutch National Archives is still in the middle of discussing possible answers to the challenges of the digital environment and the role the National Archives wants to play there. One challenge that may need to be resolved is to find sufficient staff with adequate skills, the capacity to act at the strategic level, and the ability to use a good understanding of the issues to find clever ways to address the issues at the right time at the right place and the right level. Without that it will be a Sisyphean task....

¹¹ Something similar has been developed in Canada as well. See <http://www.collectionscanada.gc.ca/007/002/007002-3100-e.html>.