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# **Proactivity postponed? ‘Capturing’ records created in the context of e-government – a literary warrant analysis of the plans for a national e-archive service in Sweden**

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**Abstract.** Proactive records management is often described as a prerequisite for a well-functioning public administration that is efficient, legally secure and democratic. In the context of e-government, official information is seen as a valuable asset, which is why technical solutions are developed to improve accessibility and reusability. Yet how to ‘capture’ and preserve the information is still unclear, and adaptations of routines which have originated in a paper based administration to practices suitable for managing digital records are often lacking. This risks impeding on the work of public agencies, their services toward citizens, and the goals of e-government. This paper uses current plans for developing a national e-archive service in Sweden as a case, applying literary warrant and the records continuum model to discuss how archives management can support the goals of e-government and facilitate proactivity. A special focus is placed on ‘capture’ as a vital part of holistic recordkeeping. The result shows that despite regulations and ambitions supporting proactivity, ‘capture’ is not emphasized as a necessity for using, sharing and preserving official information. This could create archives that are incomplete, and risk contributing to a decline in governmental transparency and openness.

**Keywords:** Archives, E-government, Literary Warrant, Records Continuum Model, Records Management

## **1 Introduction**

Managing official records correctly is crucial from a democratic perspective. To ‘capture’ and preserve public records facilitates access, traceability, and reuse – today as well as in the long term. Yet measures for proactive records management are often perceived as being outside core business [1] and too resource demanding [2], which can be the reasons why these measures are often postponed to the future. Existing routines developed to ensure appropriate official archives management are largely based on a paper administration, where records are ‘captured’ using manual strategies such as stamps with the date of arrival, registration in a records management system, and preservation in filing cabinets. In recent years scanning has been used to facilitate access, usability and preservation. However, e-government introduces unique possibilities and challenges: it is not enough to ‘digitize’ documents and present information in formats which resemble A4 sheets.

E-government is defined by the EU as “the use of information and communication technologies in public administrations combined with organizational change and new

skills in order to improve public services and democratic processes and strengthen support to public policies” [3]. The goals of e-government are generally thought to be of concern for the state administration as a whole, to be realized through collaboration and coordination, rather than addressed by single agencies and departments on their own [4]. This requires a holistic approach to information management. ‘Capturing’ records created in e-services needs to be developed, where registration ideally should be performed automatically, and archives management needs to be adapted to suit the current conditions. Digital information has the potential to become a valuable asset for citizens as well as other actors and agencies external to the public administration.

This paper aims to contribute to international research on archives in the context of e-government by highlighting the importance of proactivity. The aim is also to inspire others to conduct research in the area of electronic records management within e-government by showing that this is a highly relevant and interesting topic. The case studied is the current plan to develop a national e-archive service in Sweden. This context is used as an example to discuss how archives management can support the goals of e-government and facilitate proactivity. A special focus is ‘capture’, since according to the records continuum model this is a vital part of holistic recordkeeping. A literary warrant [5] study of national regulations is used, and therefore relevant legal, administrative, and archival conditions are explained briefly to make the paper comprehensible to readers unfamiliar with Sweden. Similar studies could be made in other contexts to gain insight on the relationships between existing legal frameworks and planned technical and administrative solutions.

*The holistic concept of the archive*, as used in this paper, implies that rather than being seen as going through different linear phases (‘active’, ‘semi active’ and ‘archival’), records are viewed as existing in a continuous flow, which may ‘begin’ with the archives creation at the public agency and ‘continue’ to the long term preservation at an archival authority [6], yet may also ‘start’ at the archival authority and ‘continue’ on through use and re-use to administrative, cultural or personal uses [7].

## **2 Research problem**

American archivist David Bearman described ‘capture’ as one of two major problems in relation to records management: “(...) two of the greatest moments of risk, at capture and access, are outside the scope of many “archival preservation” models” [8]. E-government poses new challenges and possibilities for managing and preserving official records, thus increased knowledge is needed about how current technical and organizational developments affect recordkeeping, archives management and e-government.

This paper uses Sweden as a case study to discuss the universal problem of ‘capturing’ records created in the context of e-government. ‘Capture’ is to some extent regulated in Sweden through demands on registration, and cannot be described as entirely left out of the archival preservation model, but despite its recognized importance there is no designated government authority with mandates and responsibilities for registration issues. In 2006 the report *To preserve digital documents: Proposal for future orientation* emphasized that it was fundamental to develop models, methods and routines for preparing digital information for long term preservation already at the point of creation [9], yet nine years later there is still a long way to go before official records are regularly created in formats suitable for long term preservation. Similar situations can also be found in other countries around the globe. According to Mnjama and Wamukoya many public sector organizations in Africa lack procedures for managing electronic records, which may lead to the loss of valuable information resources [10]. Jaeger and Bertot have studied the information dissemination of the Obama administration and concluded that long-term access to information is an important part of transparency, but that the use of internet-enabled technologies, such as social media, can make preservation difficult [11]. In a study based on the Canadian government, Park

et al. found that with the current e-government development comes a need to further systematize the capture of information using metadata architectures and standards [12].

The solutions which governments develop and employ to address the problems of capturing and preserving records created in the context of e-government will affect future transparency and access to information. The research question addressed in the paper is:

*Do the current plans for developing a national e-archive service support the goals of e-government and facilitate existing legal demands on proactivity?*

### **3 Material and method**

Managing material used in the study is primarily 1) the government's decision on how to implement a national e-archive [13], and 2) an interim report authored by the responsible agencies [14]. Press releases and information from the website of the State Service Center are used as complement. The material was chosen as a suitable base for the study because it represents recent plans and discussions relevant for understanding how current developments may affect official recordkeeping and archives management. The material was analyzed using literary warrant found in existing legal framework, mainly the Freedom of the Press Act [15]; the Archives Act [16]; the Archival Ordinance [17]; and the Public Access to Information and Secrecy Act [18]. Literary warrant means to use authoritative sources such as laws, standards, codes of ethics, and professional best practices as theoretical frameworks of reference [5, 19]. This method has previously been used by the University of Pittsburgh Electronic Recordkeeping Project to study the professional and societal endorsement of the concept of the recordkeeping functional requirements. An important result of the project was Wendy Duff's compendium of statements describing the requirements for records or recordkeeping systems [20]. Literary warrant defines the requirements for capturing, maintaining, and using records over time [21].

This paper followed the literary warrant method with a specific focus on Swedish laws as the framework of reference, in particular the Archives Act, the Freedom of the Press Act, the Public Access to Information and Secrecy Act and the Archive Ordinance because these include instructions about 'capture' and proactive management of public records. These laws are also an expression of the holistic concept of the archive as it is implemented in Sweden.

While the legal principles, for example regarding transparency, preservation, and privacy protection, remain the same in the context of e-government, the practical implementations may need to change to achieve the wanted results. It is therefore important to study current changes in relation to their legal and administrative context. The paper focuses especially on 'capturing' official records, which is why the second dimension of the records continuum model is used as a theoretical lens. According to the records continuum model, 'capture' is a crucial dimension of holistic recordkeeping [7], thus this dimension is useful for understanding current developments in the light of a holistic concept of the archive.

### **4 Related research**

Researchers in the field of e-government have argued: "Records constitute an important corner stone of governance. As more governments are introducing e-government solutions, digital preservation turns into an important challenge" [22]. However, as recently as 2013 a survey by Scholl, said electronic records management is an area "of special interest and only appeal to a small sub-group of the EGR [Electronic Government Research] community" [23]. This paper argues that the area of

recordkeeping is an important part of EGR since e-government is based on the access to trustworthy information. Sound recordkeeping and archives management are prerequisites for open government and transparency, which are two of the areas of interest that Scholl's study shows to be popular EGR topics [23].

Archiving and recordkeeping have been described as bothersome, unnecessary and bureaucratic, despite their actual importance for business [24]. Researchers in the field of archival science and information systems have even said that archiving can be seen as a 'necessary evil' [1]. According to Canadian archivist Terry Eastwood who has studied the significance of archives in society, there is often little political will to invest resources in archives and records management. Eastwood also argues that it often is a challenge to explain the role of archives and archivists to political and administrative decision makers [2] and Maria Kallberg's recent doctoral thesis indicated that there is currently a lack of awareness as regards the need of proactive recordkeeping [25]. Transactions registered with the help of e-services can be seen as records created in a 'grey zone', since it is unclear who is responsible for archiving records created in an integrated e-service, therefore a proactive approach and regulation of responsibilities by clear agreements before an e-service is designed has been recommended [1]. Informatics researchers have argued that more research is needed about systems development in the context of e-government [26].

The discipline of Archives and Information Science has much knowledge to offer on issues related to electronic records management. According to American archivist and scholar Richard Pearce-Moses there is no clear-cut boundary separating the "paper era" from the "digital era", and therefore there is a point in seeking knowledge in traditional theories: "Much of archival knowledge transfers directly to the digital era, and established principles give us insight into solutions" [27]. This study is based on the assumption that traditional theories and principles of official archives management are transferrable to the context of e-government, but that practical management needs a clear proactive stance to meet the requirements of use, preservation, and access. As Canadian archivist Terry Cook has argued, archivists need to shift their focus from the physical objects to the originating context where records are created, since the archival paradigms of the 'custodial age' are obsolete in the electronic environment [28].

## **5 Holistic recordkeeping and the importance of proactivity**

There are two major established methodologies in the archival world: *the life cycle approach*, which assumes that recordkeeping is the result of objective business activities and follows a predictable timeline, and *the records continuum approach*, which views it as "(...) a continually interacting and evolving set of contingent activities with individual, institutional, and societal aspects" [19]. The holistic approach as represented in the records continuum model corresponds to the goals of e-government: information should be (re)usable also to actors outside the context in which it was originally created. This poses new demands on proactivity: "In today's administration agencies are expected to streamline their information management with the support of automated case processes and e-services. For the agencies, it is important to have tools for information governance that contribute to both efficiency and legally secure handling. Issues of management, preservation and disposal should be addressed already at the stage of planning and defining requirements. A proactive approach should permeate the authorities' information- and records management" [29, my translation].

Bearman has described the dimensions of the records continuum model with the words *event*, *documentation*, *risk* and *societal*. In the first dimension a record is created as the trace of an event. In the second dimension the event is "witnessed" by a system and the transaction becomes evidence. In the third dimension the record is appraised using risk assessment criteria by the organization that created it and is destroyed or preserved. In the fourth dimension society gives meaning to the record by institutionalizing it [30]. The first three dimensions focus on the organizational management of records while

the fourth focuses on reproduction and access. The fourth dimension can be seen as a way of describing the discourse that surrounds the whole process of archiving. Records are always *created* in the first dimension but *exist* in all dimensions simultaneously. Considerations of the different characteristics of the model affect choices of rules, software, and work processes.

A core component of the holistic approach is that records are given a context. This can be ensured through registration, which is a way of ‘capturing’ the information by connecting it to the setting in which it is used. ‘Capture’ implies that a record, by being communicated or connected to other records, becomes part of a chain of events (for example case administration). Through ‘capture’, records can be shared, accessed and understood: “(...) metadata elements needed to make the context of the document known are added and the record is able to be referenced or drawn upon by others” [31]. In other words, the crucial *evidential value* of an official record is obtained in the second dimension. Public agencies are often required to ensure that their transactions are documented, or as Bearman says: “witnessed”. Being able to guarantee the accuracy of official information is crucial for the trustworthiness of the public administration and not least becomes important if a dispute should arise. Ensuring that records belonging to the same case are registered, searchable, and accessible makes it possible to understand how the case has been handled and upon what grounds a certain decision was based. In a digital environment this demands proactive measures. When the Swedish Tax Authority developed their e-archive solution they demanded that it should meet the requirement to first archive cases, and then administer them, thereby emphasizing the importance of proactive recordkeeping. Archiving at the point of creation was seen as a prerequisite to fulfill the legal requirements [32]. This approach is, however, far from usual, and though public agencies’ business systems, e-mail systems and web servers currently hold substantial amounts of official information (Larsson, 2012; Riksarkivet, 2010), it doesn’t automatically mean that the information is ‘captured’ as part of an archive.

## 6 Research context

The Swedish concept of the archive is often described as holistic. It is constructed after the principle of transparency in government businesses: citizens have a constitutional right to access official records from the point of creation or arrival at a public agency, unless the information is confidential due to official secrecy, personal integrity, or other specified reasons [15]. This requires *searchability*, which is why official records should be registered as soon as they arrive or are created [18] and *accessibility*, hence registration should take into account its importance for effective archiving, using materials and methods appropriate to the needs of archival permanence [16]. There is no equivalent to ‘record’ and ‘archive’ in the Swedish language, both are referred to as ‘allmän handling’, a term that can be translated to ‘official record’. The Archives Act stipulates that “the *archives* of an authority are composed of the *official records* created through its activities [16]. Consequently an archive can consist of both ‘active’ records still used by the organization, and ‘inactive’ records that are preserved.

Records created or received by Swedish public agencies are to be preserved, kept in order and handled in ways that ensure: 1. The right of free access to public records; 2. The information requirements of the public jurisdiction and administrations; and 3. Research requirements” [SFS, 1990:782 as translated by 33]. Official records should be assigned metadata explaining : 1) when the record was created or received, 2) registration number or other designation, 3) sender or receiver, and 4) in brief what the record concerns [18]. The traditional way to do this is through a ‘diarium’ or registry, and by manually adding metadata to the records. ‘Diarium’ is not a juridical term in the manner of ‘registry’ or ‘registering’, but is indirectly explained in the Public Access to Information and Secrecy Act [18] as a continuing register of the records which have arrived or are created at a public agency. The basic meaning of

'e-diarium' is 'electronic registry', yet the term increasingly tends to imply integrated solutions for case- and document management where registration is only part of the functionality [34]. There are currently no binding regulations saying that public agencies should incorporate this functionality into their business systems, yet contextualization is required since citizens not only have the right to know *which* information public agencies preserve, but also *how* it has been used [35].

National recommendations for how e-services should be developed do not include considerations of the legal requirements to preserve and provide access to official records. Yet adherence to the close connection between records management and archiving becomes increasingly important in the context of e-government, and it has been discussed several times by different authors that the mandates of archival authorities (for example the National Archives) could include supervising the registration of official documents [36-38]. This is however not the case today.

The Swedish National Archives has a double role, being a cultural heritage institution and at the same time an administrative actor with powers to supervise and advise state public agencies on matters concerning archives management. According to its mandate the National Archives is required to "promote the development of methods for the production, preservation and availability of documents as part of government development" [39, my translation]. It has, however, proved difficult for the archival authority to keep up with technological development. A survey made in 1998 by two Dutch experts showed that existing policies and strategies related to digital preservation were conducted at an operational level, based on issuing constitutions and lacked a coherent vision, leading to confusion and uncertainty of public agencies concerning delivery of digital material [37]. A report written in 2006 said the National Archives strove to cater for archival requirements by assisting public agencies already at the beginning of their system development processes [9]. However, four years later a survey showed that only 5 % of the public agencies had a strategy for taking care of their e-records and although 21% of the authorities had some form of system for preservation, none of these had an export function that enabled transfer to another system or e-archive [38]. At the time of writing, digital archives management, as in many other countries, is still a notable practical problem for public agencies.

When Swedish public agencies started to deliver information from IT systems to the National Archives at the beginning of the 1970s, digital preservation was seen as primarily the concern of archival institutions. The Archives Act of 1991 however emphasized the responsibility of public agencies as part of their statutory archival activities. The Archives Act is a framework law and consequently it is up to each public agency to implement it in practice in such a way that it suits their respective business. However, while the legal framework assumes that each agency keeps and controls their own records, current political goals point to a future where information is shared and used by more than one actor [40].

## **7 Plans for a national e-archive service**

A recent government decision has made the State Service Center (SSC) and the National Archives responsible for developing a national e-archive solution for state public agencies. The State Service Center is a public agency under the Ministry of Finance, established in 2012. It offers services related to payroll administration, financial management and e-commerce to other agencies [41]. A pre study report concluded that implementing a common e-archive would result in considerable cost savings compared to each public agency creating their own [42]. A number of public agencies are nominated to pilot the e-archive service once it is in place.

Archives management is formed in relation to ideals regarding how society should be organized, what good governance means and how official records should be used. This currently includes the goals of e-government. The Swedish national e-archive service

is meant to make it easier and cheaper for public agencies to preserve and provide access to information about the state administration. It is described as: “(...) a necessary component of the technical infrastructure of e-government, and a prerequisite for a digitally collaborative administration”, which will become part of the state's long-term information management [43, my translation]. An interim report states that “A joint management service for e-archives is part of the necessary infrastructure for a sustainable e-government and a long-term information supply for the state as a whole” [14]. It also aims to facilitate openness. A press release from the Industry Ministry has stated: “Transparency is a cornerstone of our democracy. E-archives can mean greater transparency and better access to information for the general public, journalists and researchers [13, my translation]. The e-archive service will be the first service developed within the government’s *Digital step*, an investment intended to facilitate citizens’ and companies’ contacts with the public administration through public e-services, which will provide digital meetings as a complement to personal meetings, the main principle being: “digitally wherever possible, and personal where needed” [44]. The e-archive is planned to function as a ‘middle archive’, which means a repository where official records are to be preserved in a standardized way before transfer to the final long term preservation at the National Archives [45], in other words it will hold ‘semi active’ records.

An interim report from the State Service Center on the implementation of the e-archive service stated that public agencies have a tendency to postpone the demanded measures to facilitate long term preservation and instead prioritize their daily business. This is described as a problem which each agency needs to address. But despite stating that “waiting to take care of information means more rather than less expenses” [14, my translation], notwithstanding the risk of losing information, the authors argue against developing a national e-registry simultaneously as the national e-archive. Paradoxically it is however concluded that: “In the long run, it would be a great advantage for the civil service as a whole if the SSC was able to offer a comprehensive concept for the authorities’ case and document management where information with the status archived can be directly transferred to the e-archive service” [14, my translation]. Such a comprehensive concept would require the inclusion of an e-registry system.

## 8 Analysis and discussion

Common services such as the national e-archive studied in this paper are often intended to contribute to the goals of e-government and make the public administration more efficient. The Director General of the State Service Center has said in an interview: “Today it is a costly and time-consuming process to deliver records from each agency to the National Archives for final archiving. Economies of scale with an intermediate repository become very large” [46, my translation]. Using the service however demands preparatory work to ensure that records that are not worthy of long-term preservation and should have been destroyed are not delivered into the e-archive [43]. Failing to take control of the entire archives management process risks counteracting the interoperable, collaborative administration which is the goal of e-government. The government’s decision on a national e-archive service says legal obstacles, economic considerations and reuse of information must be taken into account before implementation [47], yet nothing is mentioned about the actions needed before records are transferred to the e-archive, though this will require considerable time and effort on behalf of the consumer agencies [14].

According to the new process-based archival description standard, issued by the National Archives in 2008, and meant to be implemented by 2013, all public agencies should represent their information in a classification scheme, aimed to give an overview of the records and to facilitate management and searchability [48]. A holistic, proactive approach is advocated: “Information management and archives should not be seen as two separate areas. There are advantages with creating common structures for registering, archival representation and, not the least, security classification. Archival



representation should be used as a control instrument in the information management of public agencies" [49, my translation]. However, although e-services are often said to facilitate open government it is far from usual that registration or archiving are included as functions. A case can be administered using several different e-services. The functionality of business systems and the interdependencies between records will not follow into the e-archive [50], thus these must be documented before transfer. Citizens are to be able both to follow a case in real time, and subsequently go back and review a chain of events [17]. In cases where information is continually and automatically updated it becomes even more important to capture the information upon which decisions are based. If not, it can prove impossible to recreate a chain of events.

The records continuum model recognizes the social and political role of archives management, showing how a record can be read and interpreted differently depending on the context [51]. Paper records are often described as physical objects while digital records are seen as intangible and primarily logical, but though there might seem to be profound differences between the 'real' and the 'virtual' world, the two are intertwined. Australian scholar Frank Upward, who created the records continuum model, has said: "Even when they are captured in a medium that can be felt and touched, records as conceptual constructs do not coincide with records as physical objects" [52]. An example is the driver's license which functions as a record and proof of identity because the information it holds can be verified in relation to the archives of the issuing agency and of the national population registers. In the context of e-government such interrelations become increasingly complex.

Official archives management is affected by business organization and formal relations between creating agencies and archival authorities, both currently undergoing changes. In 2002 the Publicity and Confidentiality Committee suggested a new law on the management of official records, and argued that the National Archives should be given the mandate and responsibility to supervise the whole information management process at public agencies [35]. A later report commented: "(...) the formulations can be considered to give an indication that the archival authority should get a say in the very beginning of the administration process" [36]. Despite similar formulations since then, and clear regulations stating that official records should be registered [18] and connected to case management where applicable, the challenge of preserving context is notably absent from the discussions concerning the national e-archive service. More emphasis is put on issues regarding efficiency and information sharing. The interim report analyzed in this paper refers to the 'life cycle' of e-records which is noteworthy given that the legal framework presumes a holistic concept of the archive.

Archive services have traditionally been seen as more of a support function than as a regulatory function. Digital records require another approach. Caspar Almalander, the project leader of eARD (e-archive and e-diarium), a nationwide project focusing on transfer of information between any and all information systems through developing a set of Common Specifications for Government Agencies (FGS) [53], has stated that archives and e-government are closely connected and requires changes in the way records are managed: "Archives are the engine of e-government. Therefore, we must move from ownership to leadership" [54, my translation]. However, previous research and government reports show that although it is the responsibility of public agencies to manage their official information, many lack knowledge regarding archives management and require advice and guidance. These problems could be tackled with a clear proactive stance from archival authorities and development projects. The current plans for developing and implementing a national e-archive service however seem to lack loyalty to the holistic concept of the archive, according to which 'capture' is a prerequisite for successful archives management. Resources have been allocated to nationwide projects focusing transfer and preservation of official information, but issues regarding registration attract less attention.

The *Pre study report on the future of electronic archives* from the State Treasury said that it should technically be fully possible to complete most existing systems to fulfill

reasonable demands on electronic archiving: "The key is to identify early the electronic archives evolving needs, both short and long term, and to take them into account at the design of new procedures and the specification and procurement of additional IT support" [36, my translation]. Ten years later a similar remark was made in a report from a National Archives-related project: "A consistent registration, with similar structure and metadata, provides conditions for reliable information management, searchability and an easier transmission to the e-archive" [55, my translation]. The same report however also said changes should be implemented as operational systems are developed or replaced with new systems or services: "The harmonization of e-diaria may be seen as a long-term process, as it may cause considerable work with the adaptation of operational systems. But as systems evolve or are replaced there will be opportunities to make demands to get it right from the beginning" [55, my translation].

Official information is often described as a social common resource. Public agencies are requested to increase their publication of open data to the benefit of citizens, companies and organizations. As a consequence, archival management needs to be developed accordingly: "Archives reflect not just technologies (...) but also the changes in culture that accompany changing technology" [56]. Technical solutions and administrative routines should be developed in the light of the existing legal framework and considerations related to costs, legality and efficiency [57], issues which e-government development aims to support.

## 9 Concluding remarks

The research question addressed in this paper was: Do the current plans for developing a national e-archive service support the goals of e-government and facilitate existing legal demands on proactivity?

Despite the literary warrant supporting 'capture' as a crucial part of holistic records management, the national e-archive project has chosen to exclude a national e-diarium (e-registry) from their work. Developing a national e-archive service without simultaneously discussing these issues could be a step away from the holistic concept of the archive toward procedures which are less suitable in the context of e-government and that risks contributing to a decline in adherence to existing legal and theoretical frameworks.

Suggested solutions for implementing a national e-archive service would likely be different if 'capture' of records was emphasized as a prerequisite for using, sharing and preserving official information. If implemented according to the existing plans and suggestions, 'capture' risks taking place at the end of a 'lifecycle' rather than at an early stage as part of holistic recordkeeping. Preparations for e-archiving risk becoming costly without a proactive approach and resulting in archives that fail to contribute to the goals of e-government. Transparency and openness are also at risk if proactive records management continues to be postponed to the future.

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