Transforming public administrations and challenges of information management

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This article describes the transformation that is taking place in two public municipalities and the information management challenges they are faced with as they engage in e-government developments. In order to enhance transparency, accountability and effective service delivery, the municipalities have invested in citizen-centric websites and hence made information accessible to the wider community. Municipal-level public administrations are slowly transforming from rigid organisations to organisations that are embracing change in order to cope with the increasing demand for high-

quality service from citizens. They are also moving away from the 'silo way' of doing things and promoting collaboration among the municipal units and beyond. Information and its management have become crucial to e-government developments since it is looked upon as a national resource.

However, transforming public administrations is complex and threatens to disregard recordkeeping principles because of the way information systems meant to support new services are being conceptualised. The municipalities have invested in information systems to facilitate the capture and use of information, the automation of work processes and to improve efficiency. The ongoing e-service developments will require strong recordkeeping regimes that will sustain the open structures of governance, promote information access, protect citizenry rights and enable the municipalities to achieve their ultimate goal of effective service delivery. In the public sector, records management continues to play an indispensable role regarding the management of authentic, reliable and trustworthy records. However, enterprise content management (ECM) is also being promoted as a panacea to the management of the proliferating information resources. The findings and analysis in this article will be of interest to information management leaders and practitioners in local or municipal governments who are investigating new business processes and platforms for managing the growth of e-services.

Key words: enterprise content management, e-government, information systems, records management

Introduction and background

This article describes the transformation that is taking place in two municipalities referred to by the researcher as A and B, and the information management challenges that they are faced with. The effective management of information increases efficiency and leads to better service delivery.[1] Feldman and Villars posit 'Information has become the fuel that drives today's organisations'.[2] The requirement to control government spending has meant that public administrations have to deliver high-quality service on reduced budgets.[3] They are therefore being encouraged to improve performance through the effective management of information.[4] The Swedish government has made investments in e-government developments and encourages municipalities to develop e-services to facilitate service delivery

to the public. This results in a transformation in the ways these two municipalities work. Norththrup and Thorson argued in 2003 that e-government developments are leading to fundamental reorganisations of the way in which democratic governments function.[5]

There are 290 municipalities in Sweden with a mandate to manage a substantial part of public affairs. Municipalities are entitled to financial resources which they freely manage within the framework of their powers. Their decision-making process is exercised through the democratic election of representatives of the local population.[6] The municipalities provide services such as primary and secondary school education, child care, care of the elderly, health care, individual welfare services, cultural and recreational services, housing, technical infrastructure and provision, local roads, water and sewerage, gas and electricity, local and regional transport and waste disposal, physical planning and environmental planning.[7] Municipalities are therefore involved in a complex web of operations that has required the implementation of information systems that are meant to improve efficiency, cut costs, allow integration, promote information and knowledge sharing, and foster collaboration and effective management of public information.

They are also engaged in e-government projects and have made information and e-services available to the public. They are working with the integration of their information systems in order to facilitate information management and sharing.[8] Networked technologies have facilitated communication between public administrations and citizens and, therefore, unrestricted communication is taking place regardless of geographical space and time.[9] E-government is seen as a form of business development that enables public authorities to continuously develop their operations using information technology.[10] In Sweden, the development of e-government is a national issue and is not regarded as an internal affair of public authorities. In this development, the citizens are supposed to be regarded as customers at the centre of the process.[11] E-services ought to be looked upon as a common resource that can be used by other stakeholders and that can bring benefits for the wider community. One example is the re-use of public information for commercial purposes. Another example is that citizens want their

cases handled efficiently so that they do not have to deal with several authorities.[12] The efficient treatment of the information they submit is one way of promoting efficiency and information sharing among public authorities. Therefore, the ability to optimise information flows is crucial to the success of e-service delivery.

E-services generate information that has to be managed in a manner that will lead to improved efficiency and increased accountability. Records generated by public administrations in Sweden are considered public as soon as they are received by a public authority. The right to access public information is enshrined in the Swedish Constitution.[13] To achieve efficiency and a return on investment, information has to be shared beyond departmental boundaries. Hence, information systems ought to be integrated where business processes involve more than one department in order to deliver information in a timely manner and to avoid information silos.[14] The requirement to share information and processes is transforming the 'silo way' of operating and is encouraging municipalities to look at information as a common resource and to analyse organisational needs instead of focusing on departmental needs.

In the public sector, the systematic management of records-based archives and information science principles continues to play an indispensable role in the management of information and the promotion of accountability and transparency.[15] Although records management has been used both in the private and public sector, enterprise content management (ECM), a technology-oriented strategy, is currently being promoted as an effective information management construct that will help organisations to deal with both structured and unstructured information.[16] Examples of unstructured information include project spaces, shared disk drives, and desktops. The information contained in these spaces is often in duplicate, which makes 'findability' almost impossible and complicates the accuracy of the information since it is difficult to differentiate recent versions from superseded ones. It also creates content silos. Structured information contains highly organised data that is used by organisational applications and may include lists of employees, customers, products, orders, inventory and purchases. Structured data can be stored in a relational database with a defined structure.[17] Information is

therefore looked on as a resource that can improve the performance of organisations and give them a competitive edge.[18] The re-use of government information is further emphasised at the European level through the European Directive on Public Sector Information.[19]

This paper describes the transformation that is taking place in the municipalities and the information management challenges they are faced with. It outlines the research methodology, defines records management (RM) and enterprise content management (ECM), presents research findings, and offers an analysis and a conclusion. Although this paper is part of a wider research study, it is not in its scope to explore in detail different models of municipal government and how they influence the structure of ECM and RM platforms.

Methodology

This article draws on an earlier qualitative study that the researcher conducted together with a fellow doctoral student in September-October 2009 in municipalities A and B located in Västernorrland in Sweden, and a study that the researcher undertook in the same municipalities in May-June 2010. The 2010 study concentrated on ECM as a concept and aimed at establishing whether the information management strategies that the two municipalities were engaged in were similar or the same as ECM. Interview guides were sent to all the administrative managers of the two municipalities. Qualitative case studies were chosen as the research strategy because they enhance an understanding of the dynamics within a single setting or multiple settings.[20] The questions on the interview guide were aimed at administrative managers because they have the power to make decisions and can therefore bring about change. It was outside the scope of this study to interview all the roles involved in ECM and RM, but other studies relating to the transformation of municipal government captured perspectives of other roles in more detail.[21] In two cases where the administrative managers could not commit to interviews, the researcher was referred to information officers or information technology strategists. For the sake of anonymity, the interview participants have been allocated a letter (A through to I), which will enable the reader to differentiate between who said what. A total of 18

interview guides were sent out to the administrative managers and 17 responses were received. The interviews were between 45 and 60 minutes in duration and were audiotaped.

Case studies use data collection methods such as interviews, questionnaires and observations.[22] The primary data collection method for this study was interviews, which generate texts that can be interpreted using hermeneutics. This method is primarily concerned with the meaning of a text or text-analogue, which the researcher comes to understand through oral or written text. Hermeneutics therefore casts a light over the interview texts which are based on the dialogue that creates them.[23] The researcher transcribed the interviews, read the data, then aggregated, analysed and extracted the statements relevant to the objectives of the study. Qualitative data analysis involves the detection and tasks of defining, categorising, theorising, explaining, exploiting and mapping.[24] The data from the interviews was analysed and then organised into categories. Relevant statements were identified and a list was compiled. Statements common to both municipalities were grouped into gradually emerging patterns and more refined categories. The development of categories is an intuitive process that is influenced by the overall purpose of the study, the researcher's scientific background and the interviewees' abilities to share their thoughts. This process enables the search for regularities and recurrent phenomena.[25] The risk of bias that case studies can cause was minimised by the in-depth insight that was generated during the interviews with administrative managers, information officers/information technology (IT) strategists and the review of other sources.[26] Since earlier studies were conducted in the same municipalities in September–October 2009 and in May–June 2010, the researcher had a great opportunity to check and confirm statements.

Records management and enterprise content management

The management of information has become a strategic area of investment which enables organisations to meet with compliance issues, consolidate their business processes and to collaborate on new initiatives.[27] RM principles and practices support the identification of records and aims at preserving their integrity, reliability and

trustworthiness. Records management efficiently and systematically controls the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities in the form of records.[28] It enables the identification of records and their characteristics, and deals with the provenance and context of the records.[29] RM is an established discipline that has broadly been used both in the private and public sector to manage records.[30] Good records management regimes not only enable organisations to capture the evidence of their business transactions but also, as McKemmish states, serve to:

> document the actions of government, organizations and individuals and enable the maintenance of reliable, authentic and useable records of action to function contemporaneously and over time as:
>
> - a means of regulating relationships in society
> - accountability mechanisms – corporate, democratic, social, cultural and historical
> - corporate and collective memory
> - personal and group identity
> - sources of value-added information.[31]

RM therefore not only enables organisations to practise compliance as stated in some ECM literature[32] but also enhances the societal memory through its long-term preservation approach compared with the life-cycle management of information.

ECM is being promoted as the solution to the exponentially growing amounts of unstructured data. ECM is looked on as a strategy or initiative that organisations undertake to promote a culture of information sharing and collaboration, and to consider issues of knowledge management.[33] ECM literature and definitions originate from commercial organisations and advocates for implementation of software applications that are developed and marketed under the name of 'ECM'. Perry and Lancaster argue that ECM is only a segment of the content management space.[34] It is claimed in the literature that RM has been integrated into the ECM strategy to help deal with

compliance issues.[35] Very little scientific research on ECM has so far been carried out, and the research that does exist is being carried out by information technology industry people or information systems researchers. This researcher failed to find any discourse on ECM being pursued by records managers or archivists.

The widely adopted definition of ECM is offered below:

> Enterprise Content Management is the technologies used to capture, manage, store, preserve, and deliver content and documents relation to organizational processes. ECM tools and strategies allow the management of an organization's unstructured information, wherever that information exists.[36]

An ECM strategy aims at reducing costs of content creation and distribution and supporting business needs. This strategy comprises three components: (1) a content management system, (2) reusable content, and (3) collaborative content management processes.[37] Munkvold et al. argue that ECM integrates and extends the existing research areas of information resource management and document management, as well as the repository model of knowledge management.[38] ECM is designed to meet the needs of managing websites and intranets.[39]

According to ECM literature, ECM suites consist of a number of pieces of technology that harmoniously manage the complete lifecycle of electronic documents, including creation, archiving and regulated deletion.[40] The literature claims that ECM software leverages Internet technology to deliver services and focuses on unstructured data which is usually difficult to retrieve. Concerns driving ECM developments include:

- the growing volume of content;
- compliance needs;
- the need to track content for re-use;
- a need to enable users to find all relevant content easily; and
- the mobility of employees and the need to access information wherever they are.[41]

Both RM and ECM as parts of broader information management are meant to help organisations to effectively manage their information resources. ECM claims to focus on unstructured information even though it also takes an enterprise-wide approach to information management. It is a technology oriented information management construct. Records management is a methodology based on archives and information and serves broader societal needs. The fact that ECM proponents claim to have integrated RM into the ECM strategy ought to draw the attention of records managers and archivists. This is because RM risks being narrowly used since its focus in the ECM strategy is on compliance. The research findings will highlight some of the challenges the municipalities are facing in dealing with burgeoning information assets. The two municipalities predominantly use RM as a strategy to manage their information resources, and ECM was not well known.

The research findings

It is not the intent of this article to discuss in detail e-government developments. It does, however, describe the transformation that the two municipalities are undergoing and the impediments to effective information management. Failure to effectively manage information might obstruct the municipalities' objectives of efficient service delivery and compromise the public's right to information access. Further, the article does not claim to present all the challenges relating to information and records management within the two municipalities; it highlights just a few of them. The municipalities are currently transforming from the 'silo way' of operating to collaborative organisations. The researcher chose to focus on the issues discussed below because they present elements of a changing organisation, as opposed to rigid traditional organisations.[42] The changes were also reflected in how the administrative managers looked upon leadership issues. The interviews confirmed that the municipalities have realised that there is a need to integrate information systems to enhance information sharing and re-use. The interviews also revealed the need to include archivists in the management of information and the necessity to discuss long-term preservation strategies. These factors

are perceived by the researcher to be critical to the developments of e-services if the municipalities are to reap the fruits of their investments in information management and also to safeguard the rights of citizens through traceable processes.

The transformation

According to the interview participants, changes constantly took place in both municipalities which also transformed the way work was executed and hence the focus on the customer (citizen). These changes led to a new leadership style, consolidation of services and the merging of units. The administrative managers in both municipalities talked about delegation, an inclusive decision-making process, personnel involvement and an inclusive leadership.[43] Administrative manager A of municipality A argued that, although the changes that took place were accepted by employees, the bosses still had to understand the impact this was having on positions of power. The bosses therefore had to institute a new way of working which was to involve all employees in the decision-making processes.[44]

Municipality B had centralised its functions and established general guidelines, and was moving away from the 'silo way' of doing things. It was argued by administrative manager B of municipality B that this required double leadership, that is to say, leaders who can focus on both their units and the entire municipality. The administrative manager further argued that these developments were affecting the old structures and, even though things were moving slowly, definite changes were taking place and would lead to improvements as far the standardisation of municipal operations are concerned.[45]

Administrative manager A stated that they were working with workflows and not 'silos' and that leadership in the municipality was based on the 'lean method'. This is the systematic elimination of waste from all aspects of an organisation's operations, where waste is viewed as any use or loss of resources that does not directly lead to the creation of a product or service a customer wants.[46] The 'lean method'

gives administrative managers the tools to be good leaders and aims at:

- reducing production resource requirements and costs;
- increasing customer responsiveness; and
- improving product quality.

Administrative manager B of municipality B expressed the need to discuss who the municipality was there for and who the 'customer' was.[47] Administrative manager A further informed the researcher that in municipality A, for example, the social services unit had created a 'one-point access' which enabled citizens to have a single point of reference for enquiries. Cases that had before been spread out between different officers are now being handled by a group of professional officers. This also cultivated specialised knowledge.[48] A 'one-point access' approach was being discussed for prospective commercial organisations because, where different permits were to be granted, citizens have had to deal with different instances within the municipality. A 'tjänste declaration' (literally translated as 'service declaration') had been introduced. This was a way to keep track of the progress of citizens' cases. The citizens were informed about how their cases were being handled and the time it would take to deal with them, and how far the process had gone.

On 1 July 2009, municipality A established what it referred to as 'Koncernstabben', which is a steering committee that would undertake a holistic management of the municipality and its daughter companies. 'Koncernstabben' was to effectively work with the 'mål och resurs plan' (literally translated as the 'goal and resource plan'). This led to the consolidation of units, where several functions were put under the same roof and units were physically amalgamated. It was hoped that these changes would lead to improvements in service delivery.[49]

E-government developments

Both municipalities were actively participating in experience-sharing forums to facilitate the development of e-services. Municipality B was involved in a European Union-funded project called Promoting Innovation and Knowledge Economy (PIKE) which highlighted good

examples of public authorities in the European regions that have established better service, democracy and efficiency through the increased use of information technology. The project also facilitated knowledge sharing and financed a study tour to the Republic of Ireland in which both municipalities and a couple of others had participated.[50] The purpose of the tour was to familiarise the participating municipalities with the Irish Donegal Online Planning Services (DOPS) project. The project had developed an e-service which was regarded by the European Union Pike Project as a good example worth spreading to other municipalities. The DOPS e-service allows the citizens of Donegal to fully access up-to-date planning information in a transparent and accessible manner. All information relating to a planning application was published online.[51] Both municipalities also participated in a project called E-Länet (literally translated as 'e-county'). This project was meant to create a conducive environment for new commercial businesses through the delivery of effective services and the implementation of e-services, meeting places, quick expedition of cases, and the facilitation of information on the tendering process within the municipalities.[52]

E-services were being developed at varying degrees and some of them were partially digital and partially manual, since e-signature had not yet been implemented. Both municipalities were updating their websites with information relevant to the delivery of e-services and with various forms that can be completed and sent to them by ordinary mail. Interview respondents argued that the most developed e-service in both municipalities was being delivered by school administrative units which offer interactive services. The school e-service enabled parents with an e-signature to access information about the attendance and absence of their children, homework, school reports, and minutes of school meetings, photographs and other documents about the school. Information officer/IT strategist G believed that the municipal e-services would have to offer the same possibilities as the Swedish Internet banks.[53] Internet banking services allow customers to view their bank accounts, transfer money and access bank statements, among other services, without physically going to a bank. It is therefore hoped that, via an e-service, citizens would be able to view the different engagements they have with their municipality. Those

who have parents in elderly people's homes or children in day care and at school should be able to log into a system and access information about the type of business they have with their municipality. This would, however, require an integration of systems so that information could be accessed via a common interface and developed to serve the queries that would be posed by citizens. The same interviewee contended that municipalities needed to change the way they viewed information and refocus from a systems management perspective to an information management perspective.[54]

Information officer/IT strategist E believed that technology required further development so that e-services can generate internal and external value to both the municipality and its citizens.[55] There should be a complete chain of information management so that if, for example, a citizen applied for a permit to start a restaurant, the application was directly sent to the case-handling system so that the officer concerned received an automatic signal that there was a case to handle which had automatically been registered. A message ought to be automatically sent to the applicant (the citizen), establishing a twofold communication. There are 290 municipalities with the same type of customers (the citizens) but they all have different companies that deliver different IT solutions to them. The same respondent would like to see a standardisation of the different case-handling systems, for example, and hoped that this would facilitate the development of integrated e-services and integration of systems.

The municipalities' information management approach

The two municipalities used records management to manage their information resources, and in response to the question of whether the respondents knew what ECM was, five of them had heard about ECM and the remaining 12 had not. They were well aware of records management practices and principles, and confirmed the good knowledge that municipal archivists had. The respondents were also aware of the rules and regulations that govern public records.

Challenges of creating one-stop-access to information

A 'one-point access' strategy to information resources requires an information technology infrastructure with integrated systems. However, both municipalities operate disparate systems, some of which served different purposes and therefore could not be integrated.[56] The municipalities had many disparate information systems because of uncoordinated procurement that occurred outside the formal procurement procedure. Sometimes, individual units purchased small systems specific to their activities. The information systems procurement process is supposed to involve representatives from different units to establish whether an information system could serve more than one administrative unit. A respondent in municipality A argued they were instead faced with the problem of multiple integration of systems that are not standardised and had problems with upgrades.[57]

Information officer/IT strategist H of municipality A further argued that there are many specialised systems that are isolated and that created double-handling since employees had to seek information in different systems. They also created 'isolated islands' of information and increased the risk of using wrong and superseded information.[58] Some of the municipal units which delivered services governed by the Secrecy Act did not see the need to integrate their systems with other systems. This was to safeguard the integrity of the citizens. Administrative manager I of municipality B was of the view that if information systems were to be satisfactorily aligned with business processes (given the rapidly evolving technology landscape); the information technology department must acquire competence that matched these developments.[59] Concern was also expressed that the municipal systems suppliers were slow in designing systems that would facilitate the use of information in a standardised manner and that would enable re-use. This respondent considered that the municipalities were further ahead in their thinking regarding the effective use of information and the development of their activities than were their suppliers.[60]

Municipality A had started working with information modelling to establish the need for information use within the municipality and

its standardisation. This was also to promote the repurposing of information.[61] In order to promote a 'one-point access' to information, municipality A implemented a case and document handling system called Public 360. The system was supposed to serve as a common repository for the municipality. Where possible, some of the disparate systems were to be integrated with Public 360.[62] In municipality B, a system called Diabas had been implemented, but so far it only offered the function of registration of incoming and outgoing cases. This investment enabled a centralised registration function in the municipality. There were plans to increase its functionality to a fully-fledged case and document handling system.[63]

The archivist and long-term preservation of records

The effective management of information will require engagement of different categories of organisational employees. Collaboration between the information technology unit, systems coordinators or managers, and archivists or records managers is crucial if information is to be handled in a manner that will lead to improvements not only in e-service delivery but also in information access, transparency and accountability. In the survey the researcher conducted with a fellow doctoral student of projects that aimed at improving some of the work processes in both municipalities, none of the projects included an archivist to facilitate the holistic management of information.[64] This particular study proved that the absence of the archivist meant that the long-term preservation perspective of information was not included in the planning of the projects. Rather, the focus was on contemporary information. In both municipalities, records management or the archives function was not integrated with the rest of the core functions but, rather, was looked upon as a place to send records that are no longer active. This meant that information that is to be re-used was kept in information management systems. One of the information officers/IT strategists suggested close collaboration between the records management function and information technology units which would facilitate the management of information.[65] Examples of responses to the question of whether the expertise of the municipal

archivist was used illustrate a range of perceptions by administrative managers, which are summarised in Table 1.

Question	No.	Designation	Responses
Is the expertise of the municipal archivist used?	9	Administrative managers	Yes
	1	Administrative manager	Consulted on bigger projects
	1	Administrative manager	Did not know
	1	Administrative manager	Was unsure
	1	Administrative manager	Thought the archivist was involved late yet possessed a lot of useful knowledge
	1	Administrative manager	Thought there was good communication with the archivist
	3	Information officers/ IT-strategists	All three thought that the archivist's expertise is not used to the full extent and that the organisation does not view the information in the systems as the responsibility of the archivist but of the individual units

Table 1. Examples of perceptions by managers about use of municipal archivists

The interviews revealed that the majority of records are still being preserved on paper. Both municipalities have no e-archives. The different information systems serve as temporary 'digital archives'. Municipality A is also faced with the challenge of maintaining ageing systems because there were no better replacements. Some systems were maintained because integration was difficult or the measures to transfer the information to new platforms were too expensive.[66]

Discussion

E-services developments are transforming the way the two researched municipalities look at their business operations. Though government administrations have been characterised as rigid structures, the municipalities are slowly undertaking change in order to improve their business operations.[67] Veenstra et al., however, argued that transforming public administrations is a challenge because they are autonomous entities engaged in specific tasks. This makes the creation of a service-delivering chain difficult.[68] The municipalities have also adopted a different leadership style and put the citizen at the centre of the improvements. The citizen was being referred to as a 'customer'. This businesslike attitude might have an impact on the way the municipalities see their role as a public body. Haque contends:

> The contemporary businesslike changes in the objectives, structures, functions and norms, and users of public services tend to diminish its publicness in terms of its current trends toward eroding public–private distinction, shrinking socioeconomic role, narrowing composition of service recipients, worsening condition of accountability, and declining level of public trust.[69]

It is therefore important that, despite the quest for efficiency and improved service delivery, the public nature of their operations is maintained.

The effective delivery of e-services requires the municipalities to work in a holistic way and has forced them to focus beyond individual departments. Municipalities have been used to the 'silo way' of operating which hinders information sharing. Based on the interviews,

e-services were looked upon as a facilitating factor in the effective management of citizens' demands. All of the administrative managers and information officers/information technology strategists believed that the information generated as a result of e-service provision will be dealt with under the same legal framework that has governed paper records. However, according to the complexity and integration of e-services, a better developed strategic plan for information management will be required.[70]

The management of information systems is crucial to business operations, and access to accurate and timely information hinges on how well aligned they are with business operations. The real value from information systems, according to Themistocleous, is the integration of disparate applications so that they can support processes across the whole value chain.[71] The design of the processes is as important as any technical solution and it should also incorporate records management.[72]

The effective management of information will also require close collaboration between municipal archivists and information technology units in order to facilitate the procurement of information management systems that will lead to an enterprise-wide management of information and records. This will foster an integrated framework for records, content and archives. Currently, the archives and IT functions are separated, and information management is the responsibility of each individual administrative unit until the records are delivered to the archives as semi-active or historical records. Pedersen argues that recordkeeping specialists oversee the infrastructure of records management and therefore should play an advisory role in organisations regarding the principles, standards, policies, plans, guidelines and technologies used for the information managed.[73] Sprehe also argues that in order for electronic records management systems (ERMS) to function well in an enterprise, records managers and information technology staff have to work together.[74]

Both municipalities are still using records management to manage their information resources and ECM was not a known phenomenon. The discourse on ECM is predominantly pursued by the technology industry and a few academic researchers. The ECM literature from the

industry promises magical solutions, but it was hard for this researcher to confirm these solutions since ECM has not been implemented in the researched municipalities. ECM proponents argue that RM has been integrated into its strategy. This claim needs to be questioned, given the technological emphasis of ECM and the established scientific discipline of records management that goes beyond merely technological solutions. There are clear distinctions between RM and ECM, since RM focuses on records and ECM on content. RM serves broader societal needs whereas ECM focuses on business operations. The use of ECM technology could be embedded in business processes but RM has to be used to enable the municipalities to fulfil their obligations to society. Government administrations' records management practices are meant to promote transparency, accountability and information access.[75]

The Swedish Public Records Act grants citizens access to official documents that are generated by public agencies. The 1776 legislation has contributed to a long tradition of openness of Swedish government institutions. The principle of public access to official records enables the public to scrutinise the operations of public administrations such as municipalities.[76] As the municipalities endeavour to improve their work processes, they always have to bear in mind this legal framework. Asproth et al. wrote about the challenges posed by complex and integrated e-services.[77] They discussed the need to delegate responsibilities for information the e-services will generate. They linked this discussion to the issue of access to information which is enshrined in the Swedish Constitution and guarantees citizens access to public information to promote transparency, traceability and democracy.

In Sweden, because of the right to access official documents on demand, there is no demarcation between current records and records that can be referred to as semi-active or historical records. The interviews revealed that the separation of information management from records management distances archivists from ongoing projects and from being involved in early planning processes of records and information. Dollar states that the long-term access strategy to electronic records requires the maintenance of processible authentic

electronic records and the migration of these records from legacy information systems to new generations of technology.[78] Issues of how electronic records are to be preserved ought to be discussed before the procurement of information systems. The interviews revealed that long-term preservation issues are not always discussed since the focus is on contemporary information. In both municipalities, records are printed out on paper as a strategy for long-term preservation. This compromises the evidential value of the records, since digital records are composed of one or more digital components. The preservation of digital records therefore requires that all digital components are identified, linked and stored in a way that will facilitate retrieval.[79] This endangers information and it is a clear threat to the right to access public information. The municipalities need to develop a strategy for information re-use, plan for the long-term preservation of information when new systems are acquired, and involve all those concerned (including archivists and records managers) during the early stages of information management planning.

Conclusion

This article has described the transformation that the two researched municipalities are undergoing and the challenges of information management. As research-in-progress, this article has presented some preliminary findings and recognises that further conclusions are yet to be drawn. The municipalities are no longer rigid organisations that cannot adapt to change, but are now transforming in order to deal with the increasing demand for quality services from citizens. As they embrace change, their typical characteristic of being public institutions has to be maintained. Information management is crucial to securing rights for citizens.

The municipalities therefore have to confront the challenges of disparate information systems, lack of e-archives (which limits the function of the archives as an integral part of the information resources and hence creates difficulties in re-using information), the exclusion of the archivist who is supposed to facilitate the management of information, long-term preservation planning, standardisation of information, and the procurement procedure.

The information being generated as a result of e-services will require strong records management regimes, especially where information is supposed to be shared with other stakeholders.

ECM is still not known in the two public authorities, but RM is used to capture records. There are, however, certain aspects of ECM that the municipalities have started instituting, such as systems integration and 'one-point access' to information. There is a potential for collaboration – building on scientific knowledge of RM and the technological innovations of ECM. If this collaboration does not eventuate, there is a risk that records management principles could be compromised, subsumed or even dismantled by technologically driven solutions offered by some ECM proponents. E-services are likely to generate complex information which will require a clear strategy for its management and the delegation of responsibility. The design of the business processes should incorporate recordkeeping and ECM technologies could be embedded in core business processes.

Endnotes

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