

E-GOVERNMENT AND E-RECORDS: CHALLENGES AND PROSPECTS FOR AFRICAN RECORDS MANAGERS AND ARCHIVISTS

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Abstract

This article discusses the challenges and prospects of e-government and e-records for African records managers and archivists. It defines the concepts of e-government and e-records. Further, the article provides an overview of the current situation of e-records management and e-government as a result of the new ICTs development. Perspectives of e-government and its link with e-records will also be explored. Further, advantages and disadvantages of e-records and e-government implementation will be squarely analyzed. Both previous and current literatures on e-records and e-government will be presented.

Keywords: Archivists, E-government, E-records, Records managers

Introduction

Increasingly governments all over the world are adopting information communication technologies (ICT) to carry out their activities and operations, resulting in what is commonly known as e-government (World Bank 2004). E-government is a way for governments to use new technologies to provide citizens with convenient access to government-held information and services and provides opportunities for citizens to participate in democratic institutions and processes where electronic means of interaction between the government and citizens is encouraged to improve transparency and efficiency. "Across the world, public organisations are beginning a journey by publishing

static information to the internet and establishing an online presence, in the hopes that they too will experience increases in efficiency, effectiveness, and organizational performance” Melitski (2001) in Fang (2002). It is now common practice for governments to use e-mail systems, database management systems, office systems, web technology systems and smart systems in the delivery of services. E-records on the other hand is the byproduct of e-government where information is represented in digital form be it text, graphics, data, audio, pictorial etc. Information generated in electronic form provides crucial improvements in efficiency and effectiveness of service provision because citizens can interact with government agencies online without necessarily visiting offices physically.

E-government initiatives in Africa are faced by a lot of challenges when it comes to management of e-records. Unlike paper based records, many archivists and records managers are not conversant enough with issues concerning the creation, preservation, security, access and dissemination of e-records. In many African countries, there are no clear policies, procedures and guidelines for the smooth implementation of e-government and management of e-records. Poor electronic system infrastructures and incompetent records personnel are some of the challenges facing both e-government and e-records. Moreover, it is common practice in many African countries for e-government programmes to be launched without any consultations with archivists and records managers, and yet e-records constitute records that need to be managed appropriately as part of an organization's resources.

This article seeks to identify the challenges faced by African archivists and records managers in their pursuit to manage e-records. It seeks to determine some of the current measures African governments have put in place to preserve electronic records. Moreover the article will make recommendations on how e-records which are increasingly forming part of the corporate memory of organizations may be managed within the context of African governments.

The meaning of e-government

E-government can be defined as a way for governments to use the most innovative information and communication technologies, web-

based, internet applications in particular. It is all about the use of information technologies such as web-based networks, the internet, and mobile computing that have the ability to transform relations with citizens, business, and other arms of government. The technology allows citizens and organizations to improve the quality of services and to provide greater opportunities for public participation in democratic processes in governments (Fang 2002). E-government is further meant to bring about cost-effective services as well as to facilitate for a better relationship between citizens and their governments.

However, Fang (2002) contends that, to understand e-government in Africa, one should understand the administrative development of and reform in government in general. Fang further argues that e-government initiatives are complex as governments have a dynamic mixture of goals, structures and functions. It is from this fact that governments need to make efforts to accommodate and use the new emerging technologies to support transformation in the operation and effectiveness of governments in service delivery. Generally, e-government implies that government activities take place over electronic communications among and between all levels of government, citizens, and the business community. In e-government services such as acquiring and providing products as well as obtaining information or completing financial transactions are expected to be done electronically.

On the other hand, Gartner (2000) as cited in Fang (2002) rightly defines e-government as the continuous optimization of service delivery, constituency participation and governance by transforming internal and external relationships through technology, the internet and new media. This includes Government to Citizens, Government to Employee, Government to Business, and Government to Government. It is the ability to obtain government services through non-traditional electronic means, enabling access to government information and to completion of government information and to completion of government transactions anywhere, any time and any day as the government makes itself present online throughout.

Additionally, Fang (2002) asserts that a country's e-government progress should be identified by examining: emerging web presence,

enhanced web presence, interactive web presence where formal exchange between user and a government service provider takes place e.g. forms can be downloaded, application and payment can be submitted online. Further, a transactional web presence can be a good indicator of e-government where the public can access services prioritized by their needs and formal transactions such as paying taxes, registration fees etc. are possible and are easily conducted online. Similarly, one would expect to see a fully integrated web presence in an e-government where there should be a complete integration of all online government services through a one-stop-shop portal. It should also be noted that before any government establishes and implements e-governance, it should first develop an e-government strategy which would set out plans that can help the government deliver the targets in its national-wise strategic framework.

Perspectives of e-government

According to Reynolds and Regio, (2001), there are three perspectives which need to be considered to develop an effective e-government. These include citizens, businesses and government. The paragraphs below discuss these perspectives in detail.

Citizen perspective

It is an expectation of citizens that governments should provide them with convenient access to public services, 24 hours a day, 7 days a week. They actually want to access services from home, work or any other geographical location without necessarily visiting the government offices. They further want the government to provide services such as computers, Web TV, mobile phones or wireless device without any limitations. Likewise, citizens are not interested in knowing which public official is responsible for a certain public service of their interest but rather they are interested in having such services easily and quickly. To fulfill such needs, the government should make reasonable efforts to make all information and services available from a single integrated source from which citizens can participate and interact with their government and access public information, official document and administrative proceedings. This means that citizens who cannot attend public meetings and debates because of time,

distance, transportation or physical inability, can do so through emails or online discussion forums accessible all the time.

Business perspective

In order to lower costs and improve efficiency and control, business companies worldwide are conducting business-to-business transactions through online means. The online business transactions with government reduce bureaucracy, simplify regulatory processes and help business to become competitive. Further, it becomes easier to apply for business permits or pay tax over the internet. As such, it helps companies to conduct online transactions as well as speeding up connections to create new business opportunities where governments can become partners.

Government Perspective

Governments can win public trust and confidence over the citizens by improving the quality of public service through improvement initiatives like e-government. It is the aim of any government to rebuild the customer relationship with citizens by providing services without long queues and cumbersome processes and procedures. This however calls for governments to insure that their employees acquire some knowledge and skills which support the development and implementation of e-government.

Benefits of e-government

Though governments can differ on the speed and standard of implementing e-government, the following are agreed as some of the benefits in developing a successful e-government (Reynolds and Regio 2001):

- Deliver electronic and integrated public services. With e-government in place, governments can provide value-added and integrated services. Instead of physically visiting several different offices to seek for services, citizens can complete their transactions from a single point of access online, any time during 24 hours, in all 7 days a week.
- Rebuild government-customer relationship. Effective e-government enables the government to use new technologies to treat

citizens as individuals and provide personalised services rather than providing services in a uniform way to all citizens.

- Create a more participative form of government. E-government can lead to a direct democracy. Citizens at all levels can participate on the online debates, discussion forums and online voting, hence contributing to the decision making processes on matters surrounding them.
- Foster economic development. Effective e-government can help business to be conducted online. As such, businesses come close to customers and instead of being local; businesses can grow and expand their markets worldwide. Online tools can also help to develop local skills and increase employment prospects in turn.
- Achieve lifelong learning. Governments with e-government in place can prove right the concept that says education has no end to its people who finish school. This can be realised through the widespread use of e-learning. The society will continue to access current sophisticated education online and improve their production and service delivery.
- Bridge the digital divide. E-government can make it possible for governments to access new technologies available to the less fortunate members of the society and provide computer literacy education to those in need.
- E-government is advantageous as it improves delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. As a result, e-government can bring about less corruption, increased transparency, revenue growth and cost reduction (Fang 2002).

The meaning of e-records

An electronic record is a record created, housed or transmitted by electronic rather than physical means, and which satisfies the definition of a record. A record can consist of one or more objects, e.g. web page, file, e-mail or document (Smith 2007). E-records are the by-products of e-government where ICT has become part and parcel of the daily government operations. E-records are created through the use of office automation tools such word processing,

spreadsheets, electronic mail and database management software (Mnjama and Wamukoya 2006). As such, the application of electronic means of interaction between organizations and their stakeholders provides a great opportunity to improve business activities in terms of efficiency and effectiveness in business transactions at individual and government level, hence adding value to the administration of governments and organizations.

Similarly, information and communication technology (ICT) can be defined as any communication device or application including: computer network hardware and software, satellite systems, radio, television, cellular phones, as well as services associated with them such as video conferencing and distance learning. In this regard, electronic information, ICT and electronic records will be used interchangeably as they bear a related if not the same meaning (TechTarget 2009).

The significance of e-records in the implementation of e-government

The emergence and implementation of e-government in the world has necessitated the emergence of electronic records. In most cases e-government uses e-mail systems, databases, word processors, LANs etc in its daily business transactions. This format of information needs a system like that of manual records from their creation to their disposition. This section aims at discussing the importance of electronic records in fulfilling e-government.

Public records in e-government should provide a source of public accountability of how elected officials and the bureaucracy have carried out their public trust and the mandate of citizenry (Lowell 1987). But it is through information that accountability can be attained. Day and Klein (1987:243) argue that "information is the life blood of accountability". It is further argued that the use of ICTs in government as an advanced communication means facilitates speedy, transparent, accountable, efficient and effective interaction with the public, citizens, business and other agencies. However, electronic information in any media should be readily available, understandable and reliable in such a way that it can be used to support decision making programs, accountability and transparency to the public all of

which together make what we call e-governance. This entails that properly managed electronic records lead to accountability and transparency as the public can use such records to hold the government and its leaders accountable. This however depends on how one can prove beyond reasonable doubt that the information one uses as evidence is trustworthy and reliable.

In addition, Bekkers (1998) contends that the use of ICTs improves accountability in governments because the technology increases the transparency of organizations. People can access information about a particular organization through internet where they do not necessarily need to physically visit the organisation to seek whatever information they want. In so doing they can also make some contributions necessary for improvement in governmental processes and decision making.

Meijer (2000) observed that properly managed and accessible electronic records can provide data to reduce uncertainties in government. The records of government captured electronically are a crucial source of information for accountability processes. It has also been observed that electronic records can always be used as evidence of what happened in the past so long as they contain important meta-data including the sender, recipient, date, time etc. It has also been noted that, even if one deletes some electronic information for the purpose of distorting evidence, computer experts can always recover such information. This however can only be possible whenever there is an effective and efficient computer system in place. A good example is in the case of Armstrong against the former USA President George Bush in which his administration was alleged to have failed to archive millions of e-mail messages which were believed to have been deleted during his term. However, the missing e-mails were later restored.

Moreover, it can be argued that the use of e-mails as one of the electronic information communication systems used by many governments helps to capture more records for accountability. E-mails have proved to effectively replace the previous telephone conversation out of which records were not captured. According to Smith (2007), estimates of up to 80% of corporate decisions are communicated through e-mail. This means that with e-mail communication systems,

records which were not captured can now be captured and hence increase the amount of records to rely on for accountability.

Good information leads to good decisions by management with integrity. The use of office systems provides opportunities for easier and faster access to records. This is true as compared to paper based records where their retrieval may become cumbersome especially if the classification system is haphazard. With electronic systems, record managers can simply click on a specific code to reveal the required information. Thus good record keeping is fundamental to government accountability in a democratic society. Record keeping provides evidence of what an organization has done how it does its business and why it took certain actions and made certain decisions (Swan, Cunningham and Robertson 2002). However, it can be argued that accountability for record keeping is concerned with the quality of the records in terms of their accuracy, reliability and integrity so that they can serve current and future social and organizational purposes as well as providing individuals with accurate documentation of their entitlements and responsibilities (Lacovino 1998).

In line with the above argument, Mnjama and Wamukoya (2006) observed that e-records and the information they contain is indeed a valuable asset that must be managed and protected. Besides providing essential evidence of organisational activities, transactions and decisions, e-records also support business functions and are critical for the assessment of organisational performance. This implies that without reliable e-records, e-government cannot be effective enough to manage state resources, its revenue or civil service. It cannot deliver services such as education and healthcare because essential information in electronic format will either be misplaced or deleted. Moreover, Mnjama and Wamukoya (2006) argued that, without accurate and reliable e-records and an effective system to manage them, governments cannot be held accountable for their decisions and actions and the rights and obligations of citizens and corporate bodies cannot be upheld. In order for e-government and e-commerce to be successful, governments must have access to information that possesses certain crucial characteristics: accuracy, relevancy, authoritativeness, completeness, authenticity and security. This calls for e-records to continue to be protected and preserved.

Challenges of e-government and e-records to the information profession in African governments

African governments in general and the east and southern Africa region in particular, face major challenges with regard to the management of records and archives in general and e-records in particular (Mutula and Wamukoya 2009). They further noted that, poor records management practices especially with regard to e-records; inadequate skills and awareness about importance of sound records management; lack of FOI legislations; poorly developed IT and telecommunication infrastructure; and limited funding to agencies with statutory responsibility for records conspire to hamper effective records management in east and southern Africa. As such, e-government slogans that are heard throughout Africa tend to bear little fruit. The following discussion covers specific challenges that face records managers and archivists in Africa.

The media on which most electronic records are stored are fragile and inherently unstable; without suitable storage conditions they will deteriorate. Despite the drawbacks of paper-based records, traditionally it has been much easier to preserve manual records as compared to electronic records. According to Wato (2004), high quality paper records can last from 500 to 600 years. This is not the case with e-records stored in compact disks (CD), versatile discs (DVD), optical discs, and magnetic tape and other storage devices. No matter how hard records managers and archivists may try to store these formats, there comes a time when they deteriorate. As observed by Smith (2007: 136), "...these media have been designed for short-term storage of information. After relatively a short period of time it is unlikely that the hardware and software will be available to access the records. In addition the media themselves may physically deteriorate".

Electronic records are machine dependent, requiring specific hardware and software to make them accessible. They depend on the software and hardware of the computer through which logical structures of records are provided rather than physical structures as in the case of paper records. Unlike paper records, electronic records are captured on machine mediums which need to be converted to

human readable form without which no human being can read and understand them. Originally, electronic records use binary digits or symbols of 1's and 0's, a computer magnetic language that needs to be converted into a human readable form before they can be accessed. In such a process, information contained in records can be compromised hence making it difficult to assess who is accountable should anything go wrong somewhere in the business transaction. In other words, records managers and archivists have little or no knowledge and skills in information technology with which to ensure that records remain authentic and reliable all the time. As such, the whole meaning of e-government becomes compromised without essential records.

Moreover, the inevitable obsolescence of the hardware and software necessary to store and retrieve e-records is among the challenges facing information professionals especially in African countries. The mushrooming of individual software for the creation of office documents such as text editors, spreadsheet applications and software for creating slides poses a risk to records. This is because such software enables individual civil servants in their daily work to create their own documents with no proper infrastructure to manage them. Some of this software lacks compatibility with other technology hence hampering long-term access to records. Likewise, failure to access particular information may in one way or the other compromise accountability and trustworthiness. Although upgrading and changing software is often taken as an option to reduce the loss of electronic records, the accessibility and interpretation of information is always at risk. Thus, for many African information managers this is a challenge that endangers the availability of records for their corporate memory because computer hardware and software keep changing every day. This is to say, one can try to preserve the storage device against elements like heat, water, and dust only to be betrayed by technological changes which result in it becoming incompatible with the hardware or software. A good example is the floppy disk which is no longer used in this modern environment. In such instances, vital records which form a base of evidence of business transactions over time may be lost or become inaccessible.

Moreover, changes or alterations can potentially be made to electronic records with ease which means that the essential characte-

istics of a record (as defined by the ISO 15489) – authenticity, reliability, integrity and usability can be compromised as well. Nowadays, most government and non-government organizations use web technology for interactions and transactions with their stakeholders. But smart hackers can access and change data from outside and distort useful information needed for an organization. Furthermore, organizations risk loss of information when websites are updated and old information is not preserved. All such instances make it difficult for records managers and archivists to detect if there are no proper systems to safeguard the records' authenticity, reliability, integrity and usability.

Additionally, the preservation of e-records requires new skills and closer co-operation with specialists. Following the implementation and use of ICTs in organizations, it has led to a link of information from within one organisation to other organizations. Organizations can now share information through network technology and the exchange of datasets on websites. This entails that there are no longer boundaries between organizations. This has been similarly been argued by Bekkers (1998) when he asserts that the boundaries between organizations are becoming blurred as a result of World Wide Websites communication throughout the globe. It may become difficult or even impossible for organizations to keep records for accountability because they can't control these records anymore. In other words, with such technological advancement in communication, it sometimes becomes difficult to identify which organization owns what information. Such information entanglement may lead to complications if something in the process of managing records goes wrong. As a result records managers and archivists have difficult times in making sure records are effectively and efficiently maintained and preserved for organizational purposes and for future public access respectively.

Likewise, there are no new organizational structures in place which are essential for supporting electronic records preservation in most African countries (Smith 2007). According to Reffat (2006), for e-government projects to succeed they should not only attract citizens who are already connected to the internet, but must also move people online by developing e-government infrastructures and reach people in their physical world. This was similarly observed by the World Bank and International Records Management Trust (2002) when they

asserted that systems for creating, organizing, and preserving reliable official information have broken down in many countries. As a result, the ability of public sector institutions to be accountable, transparent and provide quality service delivery to citizens has been affected. Despite the widespread use of computers in most public sector organizations in eastern and southern Africa, where electronic applications are being adopted for e-government purposes, the skills and the infrastructure needed to effectively manage them are missing (World Bank and IRMT 2002). Mutiti (2001) observed that the infrastructure for managing e-records in eastern and southern Africa faces various problems. She identified some of the problems which are impediments to the automation of archives and management of electronic records as the lack of policies and guidelines on the management of e-records.

Moreover, there is a lack of skills to accommodate e-records and e-government among many information managers in Africa. It has been noted by IRMT (2003) that, records and information managers and national archivists have insufficient capacity and training to articulate e-records issues with which they could provide guidance and input to policy makers and planners. On the same vein, Mutiti (2001) found out that some archivists were not fully conversant with their role in a national electronic records management programme; they lacked skills in the management of e-records; there was a lack of standards, practices and procedures for e-records management; inability to provide guidance on e-records management to government agencies and e-records created in institutions being mismanaged and overlooked for long-term preservation and in most cases records get lost.

The way forward for managing e-records in African countries

E-records which are the by-product of e-government systems need to be authentic and reliable to contribute to efficiency, good governance and transparency and improve service delivery. There is a need to develop laws, policies and procedures as the basis for their management (Mnjama, Wamukoya and Mutula 2008). Such instruments will help to capture and preserve the corporate memory of e-government. Below is a discussion on some of the strategies for managing e-records.

Laws, policies and procedures

The existence of laws, policies and procedures can provide a good basis for managing e-records (Mnjama, Wamukoya and Mutula 2008). Citing Griffin (2003), Mnjama et al further observed that in many governments, policies and guidance for managing government records are non-existent, and the legislative framework is weak or outdated. Likewise, in some countries the responsibility for managing information which is essential for governments' decisions is not clearly taken care of hence hampering accountability, transparency and good governance. It is important therefore for governments to strive to establish and implement records management legislation, policies and procedures for both paper and electronic records across the public service as part of their e-government strategies. Such instruments should also be integrated with all business transactions hence fostering accountability and good governance (Mnjama, Wamukoya and Mutula 2008).

Infrastructure development

All countries implementing e-government should take reasonable steps to develop projects that are compatible with the nation's telecommunication infrastructure as well as providing communal access to the internet and enable citizens to learn some essential computer skills. This will help to reduce the digital divide.

Resources and training

In order to manage e-records effectively, there should be the availability of trained staff, equipment, basic supplies and money. In most governments, these important elements are lacking or inadequate. Additionally, records management is given low status, and principles and standards required to guide records and information work are never included as part of organizational strategic plans, a situation which keeps on endangering the efficiency of business operations of governments and organizations (Mnjama, Wamukoya and Mutula 2008). Governments must therefore ensure the availability of trained personnel in e-records management as well as facilities and financial resources that could determine e-records readiness. This should go hand in hand with improving staff remuneration especially for trained ICT staff to retain them as they often quit from the public service to go to the private sector in search of better remuneration.

Long term storage and accessibility of e-records

E-records, just like paper records, have to be retained for long periods to serve as evidence of organizations' transactions. Proper procedures and mechanisms should be in place to ensure long-term preservation and accessibility of e-records for effective e-governance. As cited in Mnjama, Wamukoya and Mutula (2008), Kahn Consulting (2004) argues that, capturing, indexing and storing digital content serve little purpose if it is not readily accessible when required. Organisations should develop efficient technical data and metadata which describe how, when and by whom an e-record was created, and how it is formatted ready to be accessed by both the government officials and the general public where freedom of access to information exists. Discussing electronic records management systems at the International Criminal Tribunal for Rwanda (ICTR), Adami (2004) indicates that to manage electronic records generated, the ICTR decided to procure and implement an Electronic Records and Document Management System, namely TRIM. He further reveals that physical records have been scanned and registered into the database to bring about efficiency in sharing and disseminating information within the organization. Further improvements were implemented to allow members of the public to access the judicial database from the internet at the organisation's Website.

Additionally, Mnjama and Wamukoya (2006) insist that the collection, processing and storage can only be guaranteed by the availability of procedures and mechanisms that ensure long-term preservation and accessibility by the members of public who need the records for different purposes. Electronic records can be accumulated naturally as in traditional paper records which also relate to each other if a uniform classification system that is used to control and govern paper records is imported electronically to govern electronic records (Kenosi 2007). The natural accumulation and interrelationship of electronic records can be made possible as records of the same subjects will be filed together under the same folder or file. In the same vein Smith (2007) asserts that, managing e-records like e-mails would normally require a user to identify whether the e-mail is an organizational record first and then capture it into the Electronic Records Management System (ERMS). This will then associate it with other records by placing it in the appropriate folder or sub-folder.

Conclusion

The importance of effective development of e-government has been outlined. However, it has been observed that African countries are faced by a lot of challenges when it comes to management of e-records which are the by-products of e-government. Unlike paper based records, many archivists and records managers are not conversant enough with issues concerning the creation, preservation, security, access and dissemination of e-records. As such, there are no clear policies, procedures and guidelines for the smooth implementation of e-government and management of e-records. Poor electronic system infrastructures and incompetent records personnel are some of the challenges facing both e-government and e-records. Moreover, it is common practice in many African countries for e-government programmes to be launched without any consultations with archivists and records managers. To address such challenges, there is a need to develop laws, policies and procedures as the basis for the management of e-records. This will help to ensure that the corporate memory of e-government is captured and preserved. This should go hand in hand with the availability of trained staff, equipment, basic supplies and money.

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