

THE ROLE OF RECORDS MANAGERS IN THE DIGITAL AGE: THE ZAMBIAN EXPERIENCE

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ABSTRACT

In the information society, records are generated in many forms including paper and electronic forms. In addition, technology is consistently being used to convert paper records into electronic format presenting a change in a way records have to be managed. In the quest to increase efficiency in business processes in organisations, the management of electronic records is critical. However, the ascendancy of digital records poses a number of challenges in their management including those related to storage and preservation, aspects which fosters easy accessibility and retrieval for posterity. Records managers are challenged to possess specialised skills in handling digital records. They are also faced with the challenge of ensuring knowledge gaps do not exist as a result of poor storage and preservation approaches. One of the problems also confronting records managers in the digital age relates to security of information held in an electronic media and the privacy of records. This paper reviews the role of records managers in the era of Information and Communication Technologies (ICTs), with a specific focus on Zambia. It discusses theories and methodologies that have been developed to ensure the reliability, security, accuracy, authenticity and long term accessibility of digital records. In addition, it highlights the impact of new technologies on records management practices and examines the skills records managers should possess to effectively handle the new technologies as well as digital records. It concludes by recommending that records managers in Zambia should consider adopting contemporary records management practices in order to effectively manage organisational records in various forms.

Keywords: Records managers, records management, Zambia, e-governance, electronic records, Accountability, Transparency, ICTs, Digital age

1.0 INTRODUCTION

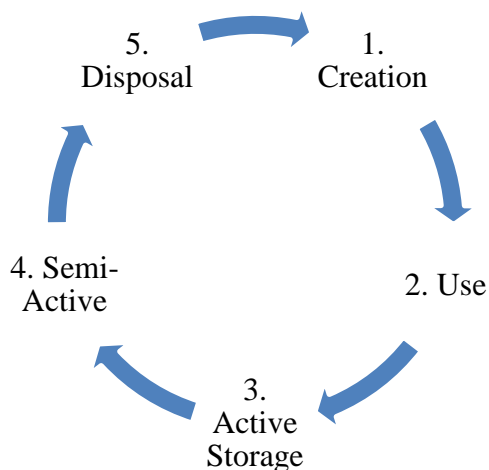
Over the past decades, society has experienced constant change in every human activity. This change has to a large extent been the function of technology. Records management is one activity that has been greatly affected by the development of one major change agent - *Information and Communication Technologies (ICTs)*. ICTs include various technologies which are used in the creation, acquisition, storage, dissemination, retrieval, manipulation and transmission of information (United Nations ICT Task Force, 2003). In general, ICTs include computers, the various telecommunications devices and media, and publishing in its entirety including broadcasting, the press, micrographics, audiovisuals to mention but a few. Like in other developing countries, ICTs in Zambia have affected the way individuals and organisations conduct business. They have resulted in a transition from paper-based business records to a predominantly electronic record (e-record) environment. Newer media have emerged for recording business and other information. Organisations are increasingly

conducting business using e-mail and Internet thereby creating and storing records electronically. Additionally, technology is consistently being used to convert paper records into electronic format presenting a change in a way records have to be managed. It has been widely acknowledged that just like paper records, e-records increases the efficiency and effectiveness in business processes in organizations. They are an indispensable element of transparency and accountability both within and outside the organisation. They are also essential to demonstrate legislative and regulatory compliance in an organisation. Organizations that are facing litigation have realised that courts in most countries admit electronic records in the litigation processes (Katuu, 2006). In addition to that, Wamukoya and Mutula (2005) observed that accurate and reliable records form the documentary evidence needed to provide a foundation for all development strategies. It is in this regard that the need to manage this information accurately and securely and to preserve it over time as the basis for transparency and accountability has arisen as a crucial issue (Wamukoya and Mutula, 2005).

However, e-records are vulnerable to loss and destruction as they are stored on fragile media that deteriorate rapidly and can fail suddenly. The loss of control of records and information systems, particularly in electronic environments, is very much a crucial problem globally. Consequently, records managers among other things are faced with challenges pertaining to storage, preservation, security, reliability, authenticity and privacy of information held in an electronic as well as long term accessibility of digital records. They are required to be versatile in performing records management tasks. They are also expected to be dynamic and competent to deal with e-records. Thus, records managers should have strong skills foundation for the management of electronic records to enhance accountability, transparency, democratic governance, poverty eradication, elimination of corruption and efficient use of donor-funded resources (Wamukoya and Mutula, 2005).

2.0 RECORDS MANAGEMENT PRACTICES BEFORE THE ADVENT OF ICTS

Before the introduction of ICTs, traditional records management practices were based on the concept of the records life cycle. A records life cycle essentially passes through three major stages as illustrated on the diagram below.



Source: Gill, S.L. (1981:16)

Stage 1: Record creation/generation

Under Manual Systems, the life of any record begins at its conception and creation. At this stage according to Zulu (1999), the records are in current files and are kept in the offices which created them and are known as *current* or *active* files. The practice in Government ministries and parastatal organisations in Zambia is that current records are kept in registries - i.e., specialised offices for receiving, registration, circulation and administration of current records. Under Manual Systems, Zulu further observed that conception and creation of a record involved two major actors: the *person(s) who composed and drafted the record* (letter, report, memorandum, etc) and *the person(s) who produced the document* (normally typed by a secretary, stenographer, typist, etc). Depending on the purpose of the documentation, *either a single copy or multiple copies of the record was produced*. Zulu point out that the production of multiple copies *required extra effort and time* on the part of the person producing the record (through carbon copying, stencilling, etc). Normally the record was produced in only *one format*.

Stage 2: Use of records

A record is created for a purpose in an organisation: *to support an activity taking place in the organization*. Therefore, after conception and creation, a record is used to support the activities of the organisation.

Stage 3: Active storage retention

In the past, the storage cycle required a lot of resources. These included; various record handlers including the creators and users of records, the producers of records (secretarial staff) and the keepers of records (records managers, filing clerks); involved a lot of records management processes and procedures such as filing and un-filing routines, classification, indexing, etc; and required a lot of space, equipment and storage media, and stationery to house.

Stage 4: Transfer

In traditional records management, when records cease to be actively used in their office of creation, such records are transferred to transitory storage areas such as records centres. This is done for a number of reasons including saving expensive office space and equipment, and to prevent the pre-mature destruction of records before their disposal date.

Stage 5: Disposal

The disposal stage is the final phase in the life of any record. Under traditional paper records management systems, the fate of a record is determined at the *disposal stage*. This is done through a process of *evaluating* a record's value after it has ceased to be actively used. This is called *appraisal*. In traditional records management, this procedure ensured that records of permanent value (i.e. archives) were properly identified, transferred and cared for in an archival institution.

3.0 HOW ICTS HAVE ENHANCED RECORDS MANAGEMENT PRACTICES

ICTs present opportunities for recordkeeping in developing countries such as Zambia. In as far as record creation or generation is concerned, a record can be conceived and created by its initiator under Electronic Systems. It can also be composed on the computer terminal, thereby making the job of typists and stenographers redundant. It is now possible to produce multiple

copies of records at very little extra cost. This can be achieved almost effortlessly. Further, documents created using ICTs can be output in a variety of formats such as paper, microform, or electronic from just one source document. And these extra outputs can be achieved cheaply and with little extra effort.

In terms of use of records, the purpose of a record remains the same even under an ICT environment. The only difference between the old and new information media, as it concerns use of records, is that it results in higher productivity in the sense that *many people* can have access to the same information at the same time. This can be achieved by using electronic communication systems such as electronic mail (or e-mail), photocopying, telefacsimile (fax) technologies, etc. According to Tale and Alefaio (2005), ICTs also enhance retrieval systems and online search facilities. Further, by using ICTs, it is now possible to provide the desired information *selectively* to the user (i.e., a user can be given the actual information that they desire other than being given a bulky file of paper records from where they have to laboriously search for the information they want). Additionally, ICTs can process raw data into usable information at little extra cost in terms of money and effort. To this end, it can be argued that ICTs enhances the use of information produced in an organization.

When it comes to active storage retention, ICTs have drastically cut down on the number of people, records management procedures and other resources required in the storage of records. For instance, it is now possible for a record initiator to create, use, store and retrieve a record on a single computer work-station, thereby eliminating the huge army of secretarial and record keeping staff and the associated requisite records management space, equipment and stationery. Affirming the advantages with space facilities, Tale and Alefaio (2005) observed that ICTs offer opportunities for compact storage through electronic and digital storage devices as they offer an alternative to bulky paper records that need a considerable amount of space for storage.

Unlike under manual systems where records that ceased to be actively used in their office of creation were transferred to transitory storage areas such as records centers to save expensive office space and equipment, and to prevent the pre-mature destruction of records before their disposal date, ICTs have come to distort this transfer cycle due to the elimination of other actors involved in the record cycle (Zulu, 1999). Records are no longer transferred to records centers. Space issue and equipment is not a problem. E-records can be pre-maturely deleted by the initiator at any time. This poses a danger in losing valuable records.

Further, unlike under traditional paper records management systems where the fate of a record is determined at the disposal stage by evaluating its value after it has ceased to be actively used, the introduction of ICTs has greatly undermined this critical activity of records management. This according to Zulu (1999) is due to the concentration of ICTs on the control of a record's whole life cycle into the hands of the initiator(s) and producer(s) of records. A lot of records are lost at the creation stage due to the relatively easy record creation and disposal cycle. Permanently records are hardly retained. For instance, it is very easy to issue a command to a computer to erase a file or to press a button on a tape or video recorder to contents. This can be done at the creation stage. Once lost, such records are almost impossible to recover (Zulu, 1999).

4.0 PROBLEMS ASSOCIATED WITH MANAGING ELECTRONIC INFORMATION

While the use of ICTs has enhanced record creation and use, they have introduced new problems in records management. One of the problems relates to *security and privacy* of sensitive and critical data or information of great value to government, organisations and individuals held in an electronic media. The Zambia Ministry of Communications and Transport (2006) describes the problem of security and privacy as one of the greatest concerns in connected societies. The Ministry further observed that Zambia has already experienced cases of misuse of ICTs especially with respect to corrupting website content. It is very difficult to manage access to and use of records. In fact, the International Records Management Trust (2004) point out that even though many current systems have password controls and audit trails, these controls are widely circumvented. For instance, it is very common for unauthorized persons to access files of information from a remote terminal through harking computer databases by breaking access codes.

There are also significant difficulties in protecting the availability of electronically generated information for future use. Specifically, it is difficult to maintain e- records. This is so because they are dependent upon the computer environment in which they were created. Actually, Katuu (2006) observed that e-records storage media has a shorter lifespan than paper. While a paper record is said to last as long as 200 years, electronic media is said to start deteriorating after the first 5 years. Consequently, making electronic information available for longer periods is problematic. The other problem relates to version control. The constantly changing arena of ICTs has also posed a great challenge to developing countries like Zambia that find it difficult to keep up with regular upgrades in both software and hardware. This leads to situations where organisations are left with older versions of important software that become difficult to use due to compatibility problems.

Further compelling challenges brought by ICTs on records management relates to *legality, reliability, authenticity and originality* of documentation held on such newer ICT-based media. Experts in technology and particularly in the legal and policy sector are struggling to determine how to handle the new world that is permeated by digital information that can be easily modified and whose authenticity, legality, originality and reliability are increasingly difficult to determine (Katuu, 2006). E-records can be duplicated easily. Therefore copies and originals look alike and it is difficult to find out the authentic original. They can also be modified without trace e.g. changing entries in a database. This raises questions of their authenticity and originality. And their legal and evidential values are consequently brought into question.

Additionally, there are no policies and procedures in most countries including Zambia on how to deal with electronic records creation, accessibility and disposal. In fact, Katuu (2004) informs that there is lack of ICT legislation and/or the lack of adequate integration of the legislation with national archival legislation. According to Tale and Alefaio (2005), the absence of policies and procedures to provide guidance to creators and users of e-records poses risks that also cannot be ignored.

Insufficient funding remains a crippling problem in most records offices, more so in government-run ones. Many struggle to meet overhead running costs and thus records managers often sideline ICT-related needs in preference for those that are seen to have a

more direct bearing on the organisation. The cost of making new purchases and maintenance of old equipment is another drawback for most organisations already struggling to stay within budget allocations. Few would have staff with technical know-how required for the maintenance and repair of equipment. Thus organisations that are unable to outsource technical manpower often have a number of their equipment either stored away awaiting repair or not functioning properly (Oladele, 2001; Selinger, 2001; Tunca, 2002).

The findings from Mnjama and Wamukoya (2004) indicate the other challenges faced by records managers in relation to capture and preservation of e-records include: absence of organisational plans for managing records; low awareness of the role of records management in support of organisational efficiency and accountability; lack of stewardship and coordination in handling records; absence of core competencies in records and archives management; absence of budgets dedicated for records management; lack of records retention and disposal policies; and absence of migration strategies for records.

All these challenges result in many e-records being mismanaged and lost.

5.0 WHAT ZAMBIAN RECORDS MANAGERS SHOULD DO TO OVERCOME THE CHALLENGES OF ICTS: THE WAY FORWARD

As presented in the paper, records managers in the digital environment need to re-visit their roles. In Zambia, we need skilled e-records managers urgently to effectively manage e-records. Effective e-records management as pointed out by Wamukoya and Mutula (2005) has the potential to improve service delivery and enhance accountability and transparency in organisations only if requisite skills are met. With Zambia having been reclassified as a middle economy, a number of implications that need fulfilling emerge. For example, we need not only more ICTs but also personnel who can manage electronic information effectively.

The need for competent and skilled e-records managers has been necessitated by the fact that the Zambian economy, just like other economies, has become a digital economy. Characteristics of a digital environment include not only the availability of ICT infrastructure but also the availability of e-records managers able to manage information in electronic form. Thus, a number of lessons can be learned and implemented.

1. Embracing ICTs

According to Zulu (1999), ICTs are not a passing fad or a flash in the pan. They have come to stay and will continue to change the concept of the office and the work place fundamentally. Zulu adds on to say:

Records managers can only ignore it at their own peril – Just like the once mighty dinosaur ignored climatic changes at the peril of its own species. What needs to be done is to understand the implications of these technologies and what it entails. We are all aware about the futility of fighting a wave. Those who attempt to fight a wave never live to tell others about its awesome power-- because it drowns them. Smart people, on the other hand, do not fight the wave -- they harness it by riding it.

In the same way, there is need for Zambian records managers to change to fit into the changed work environment to survive this new technological wave we have. To do this, they must understand the new technology and find ways and means of embracing it.

Consequently, records managers need a change in the techniques of records management. They need to review the whole concept of the records cycle and the attendant processes and procedures used to manage the records. Thus, they need to review their techniques of handling records from creation to disposal and also redefine their role in this changed environment. The current practices and orientation were created from the experience of dealing with paper records. At the moment, the records manager is technically excluded from the record cycle.

2. Core skills and competencies for handling e-records

Records managers require core skills and competencies to build sound e-recordkeeping strategies and have the ability to tactfully develop strategies to promote recordkeeping as tools that will enhance good governance in organizations. The findings of Wamukoya and Mutula (2005) established that in East and Southern Africa Regional Branch of the International Council on Archives (ESARBICA) region where Zambia is part, staff competencies, skills and tools needed to manage records in general and e-records in particular, have not been adequately developed. To make matters worse, Wamukoya and Mutula state that at policy level, senior officials and legislators are often unaware of the requirement to manage electronic records over time so that the evidence base of organisation will be secure and accessible when needed by authorized users. Therefore, records management in general and e-records management in particular in the ESARBICA region is severely under resourced resulting in inadequate capacity and skill gaps. In addition, the move to information technology has created new skill requirements that need to be addressed as a matter of urgency to protect and preserve the records as evidence for operations and to protect citizens' rights and entitlements.

Consequently, Wamukoya and Mutula (2005) highlight a number of competencies and skills that records managers ought to have in an e-records environment. Such skills and competencies are diverse but can be categorized at various levels including: records and information management skills, technology skills, managerial skills, and project management skills. Other e-records management skills needs include but are not limited to: skills to create, capture, classify, index, store, retrieve, track, appraise, preserve, archive and dispose of records in an electronic environment. These need to be complemented by knowledge of e-records environment; knowledge of e-records management practices and trends; knowledge of the types of electronic records including web pages; and knowledge of IT applications to records and archives management.

3. Strategies for Managing E-records

The onset of e-records has resulted in the creation of two systems of records in organizations: those that are electronically-based and; the paper records. The challenge for records managers is to ensure that the two systems do not operate in isolation. Records managers must work out strategies for harmonizing the two systems into an effective information delivery. In other words, a records manager should ensure that paper and electronic records will have to co-exist for some time. Records managers have to deal with this new dual role. Further, the various subsystems within the e-record environment have to be co-ordinated to ensure that they work as a unit in the provision and management of information resources in the organization. They should not work in isolation of the other subsystems

In as far as managing active e-records is concerned, Katuu (2006) suggest two basic options: either print the electronic records and manage them like other traditional records, or use software applications to manage them in electronic format. However, some e-records such as

hybrid documents or databases with disparate information sources tend to be difficult to print. Additionally, some paper copies tend to lose some of their features for example in distributed access. Nevertheless, the advantage is that it is cheaper and easier.

If an organisation decides to manage active records in electronic format, there will be need to use special software applications for instance, Electronic Document Management System (EDMS) and Electronic Records Management System (ERMS). However, these are very expensive and they need upgrading (newer versions) and face the same risks as the electronic records themselves (Katuu, 2006).

To manage inactive e-records, records managers can either employ distributed Custody or centralize custody approaches. Distributed approach is where each agency is given the responsibility to manage their own e-records. The advantage with this approach is that the agency will possess the IT infrastructure to manage the items and the National Archival unit is not required to acquire Hardware/Software to support this (Katuu, 2006). Proponents of this strategy according to Bantin (2008) identify four arguments to support their position of distributed custody and access:

1. Costs: It would be enormously expensive and a massive waste of resources to attempt to duplicate within the archival setting the technological environments already in place within the creating offices
2. Changes in Technology: Rapid technological change and reluctance of manufacturers to support old hardware make it extremely difficult for a centralized repository to manage an institution's electronic records
3. Skills Required: It would be difficult, if not impossible, for an archives staff to learn the skills and provide the expertise needed to access and preserve the wide variety of technologies and formats in use
4. Loss of Records: Insisting on custody will result in some cases in leaving important records outside the recordkeeping boundary.

The disadvantage is that records of national significance are not available from National Archival units directly and are not directly managed by the Archival repository (Katuu, 2006). In addition, transfer of inactive records to an archival repository may be delayed or deferred for much longer periods than in the past. In some cases, the records may actually remain indefinitely in the custody of the originating office. According to Bantin (2008), the basic premise supporting this position is that in the electronic environment archival institutions can fulfil their responsibilities without assuming physical custody of the records. To achieve these goals, however, archivists must develop new methodologies and techniques for managing records in a distributed custody environment.

Centralized Custody is where each agency is required to transfer electronic records to the National Archival unit in accordance with the agency's records disposition schedule. The advantage is that the archival material is under control and management of National Archival unit. In fact, supporters of the centralized custody model argue that the authenticity over time of inactive records can be ensured only when their custody is entrusted to professional archivists. More specifically, proponents of this position according to Bantin (2008) identify

five reasons inactive records should be transferred to an archival repository and not left in the custody of the record creators:

1. **Mission - Competencies:** It is not part of the mission of the creating agency, nor do their staffs possess the necessary skills to safeguard the authenticity of non-current, archival records.
2. **Ability to Monitor Compliance:** There are not enough trained archivists available to monitor or audit records in a distributed custody environment.
3. **Cost to Monitor Compliance:** Costs to manage records in a distributed environment are as yet unknown and untested, but it may likely be more costly to monitor recordkeeping practices than to assume custody of the records
4. **Changes in Work Environment:** Changes in staffing and in departmental priorities can place records left with creating offices at great risk.
5. **Vested Interests:** Inactive records must be taken from those who have a vested interest in either corrupting or in neglecting the records.

However, Bantin (2008) argue that the primary issue may not be custody, but rather ensuring that a viable and widely accepted system for managing electronic records is in place. This means establishing policies and procedures that ensure that no matter where the records are housed they will be managed according to well-established standards. More specifically, Bantin point out that a distributed strategy for custody necessitates the creation of legally binding agreements with offices, of reliable means of auditing records, of an extensive network of training programs, and of other mechanisms designed to ensure that custodians of records understand their responsibilities and are living up to those expectations.

Katuu further established that to preserve and provide access to ‘authentic’ electronic records in the long term, various strategies can also be used to deal with this including:

- (1) **Emulation:** This is where hardware and software facilities are specially equipped to imitate older or obsolete hardware and software
- (2) **Migration:** This involves the periodic transfer of digital materials from one hardware/software configuration to another or from one generation of computer technology to a subsequent generation.

In all these, according to Katuu, various activities may be undertaken including:

- Transfer records to paper or microfilm
- Transfer to software independent formats
- Retain records in their native format
- Migration of records to a system that is compliant to open systems standard
- Store records in more than one format
- Create surrogates for the original records.

6.0 CONCLUSIONS

As presented in the paper, records managers in Zambia have the potential to be competent professionals in managing records. However, they need to consider adopting contemporary records management practices in order to effectively manage organisational records in

various forms. In addition, for records managers to effectively engage in e-records environment issues, a number of changes such as change in skills sets, mind sets and professional cultures need to be effected. Effective management of e-records will ensure that there is a reduction of information gaps, preservation of valuable information for posterity, easy information retrieval and accessibility in the digital age.

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