



InterPARES Trust Project  
Research Report

Study Name	Enterprise digital records management in Kenya
Team and Study Number	AF05
Research Domain	
Document Title	Literature Review
Status	Public
Version	4
Date submitted	July 2018
Last reviewed	6 June 2018
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## Document Control

Version history			
Version	Date	By	Version notes
1	June 1, 2016	M Penney	Ver. 1
2	June 30, 2016	M Penney	Ver. 2
3	August 11, 2016	M Penney	Ver. 3
3	December 1, 2017	Kenya team	Ver. 4
4	May 22, 2018	S Katuu	Ver. 5 copy editing
5	July 15, 2018	S Katuu	Ver. 6 final edits

## ABBREVIATIONS

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AIIM - Association for Information and Image Management  
ARIS - Academic Records Information System  
ARM – Archives & Records Management  
ASYCUDA - Automated System for Customs Data and Management  
CMS - Case Management System  
COMESA - Common Market of East and Southern Africa  
CPIS - Consumer Price Information System  
EAC – East African Community  
EASSy - East African Submarine Fibre Optic Cable System  
ECM – Enterprise Content Management  
EDRMS – Electronic Document & Records Management System  
ERMS – Electronic Records Management System  
ESARBICA – Eastern and Southern Africa Regional Branch of the International Council on Archives  
FMIS - Financial Management Information System  
FOI – Freedom of Information  
HRIS - Human Resource Information System  
ICT – Information and Communications Technologies  
IFMIS - Integrated Financial Information System  
JHD – Judicial Help Desk  
JICT - Judiciary Information Communication Technology  
KARI - Kenya Agricultural Research Institute  
KCB – KCB Bank Kenya Limited  
KETRACO - Kenya Electricity Transmissions Company  
KNADS - Kenya National Archive and Documentation Service  
KPA - Kenya Ports Authority  
LIS – Library Information System  
MDG – Millennium Development Goals  
MoHEST - Ministry of Higher Education, Science, and Technology  
NPD - Kenya’s National Development Plan  
NQF – National Qualification Framework  
REPSS - Regional Payments and Settlement System  
SAQA – South African Qualifications Framework.  
USAID – United States Agency for International Development

# **1. Introduction: Kenya's Public Service and Enterprise Content Management**

Digital recordkeeping is becoming increasingly important to countries as they shift their public-service infrastructures to computer-based systems. Kenya, a major East African nation of 45 million people, is no exception. The challenges that Kenya faces in managing its records resemble those of many other African nations. Common to these countries are two broad themes—increasing interest in government public services supported by a digital infrastructure, or 'e-government'; and increasing use of Information Communications Technologies (ICTs) as components of e-government systems. The basis of this literature review is the intersection of recordkeeping with e-government and ICTs, specifically in terms of how enterprise content management (ECM), either as a broad system or as a dedicated application, affects recordkeeping.

The goal of this review is to understand:

- The management of digital records in Kenyan public institutions;
- The legal and regulatory context of digital records;
- The current technological framework within public-sector institutions for digital records; and
- The technological environments for generating records.

This review particularly attempts to discern whether Kenya uses ECM applications or other enterprise-wide systems. ECM applications are defined as:

The strategies, methods and tools used to capture, manage, store, preserve and deliver content and documents related to organizational processes. ECM tools and strategies allow the management of an organization's unstructured information, wherever that information exists. (AIIM, 2010)

ECMs are distinct from tools like Electronic Records Management (ERM) and Electronic Document & Records Management (EDRM) systems, in that the content housed in ECMs may or may not constitute records. An ECM may include a records-management component like an ERMS or EDRMS, but it also may require more robust intervention to capture content that constitutes a record.

This review draws on a bibliography of over 50 published articles to examine the state of ECM applications and other enterprise-wide systems in the Kenyan public service; determine their relationship (if any) to existing archives and records-management (ARM) practices; and contextualize these systems from the perspective of acknowledged ARM challenges in Kenya and Africa.

## **1.1 Historical Context**

The historical experience of Kenya informs some of the issues this paper examines. Unstable political environments in many African countries have made ARM a difficult professional practice (Stephens, 1993). However, in Kenya's case, the political environment has been relatively stable since independence, and ARM practice has recently been the subject of scrutiny.

Following the achievement of independence from Britain in the 1960s, the Kenya National Archive and Documentation Service (KNADS) took on several responsibilities that some have considered to be nontraditional (Mnjama, 2003). These included "the retrieval of migrated archives, collection of oral traditions, the

preservation of the freedom trees, establishment of a documentation centre, a programme for the preservation of sites and monuments, and the establishment of audio-visual archives” (p. 91). Mnjama feels that although these activities kept KNADS from being able to “assist in the development of records management programmes...within the government,” they also helped to expand archival access (p. 92). He also describes how the Kenya Public Archives and Documentation Service Act of 1965 has become increasingly problematic since the advent of computer-generated digital records. Mnjama shows that “electronic records form part of the public records” according to the act, but “no countrywide survey has been undertaken to establish how records created electronically are being managed,” leaving Kenya without key sources of information. He particularly identifies legal admissibility, alteration, and hardware and software issues (p. 98). Finally, he also notes that the act assigns responsibility for public records to KNADS’ director, without specifying at what point the director becomes responsible for them (p. 93). This helps to explain some of the difficulties KNADS faces in addressing ARM challenges in the public service.

In the 1990s and 2000s, African governments, including Kenya’s, undertook a wave of public-service reforms. These created opportunities for improved ARM practice, but ARM professionals did not capitalize on them (Mazikana, 2009, p. 51). A relevant example is Kenya’s National Development Plan (NPD), which included no ARM content (Venson, Ngoepe and Ngulube, 2014). Kemoni and Ngulube (2008) explored the issue of land repossession in Kenya in the years following, a policy initiative that was part of the Millennium Development Goals (MDGs), but which poor recordkeeping hampered. After a major public outcry that did not omit the role of KNADS in the scandal, in 2003 the government established a task force on poor recordkeeping, the ‘Task Force to improve the performance of registries in government ministries/departments.’ This reveals that the Kenyan government was aware of the benefits of good records-management practice and attempted to ameliorate some of the problems it faced regarding its ARM practices. This follows Thurston, who argued that there was increasing interest across Africa in good ARM during the period in which he wrote, which seems to have continued (Thurston, 1996).

In Kenya, the awareness that Thurston describes led to concrete action. The Office of the President issued circulars that specifically dealt with poor recordkeeping practices (Kemoni and Ngulube, 2008). Outcry regarding these problems led to the establishment of the recordkeeping task force “to improve the performance of registries in government ministries/departments” (pp. 298, 305). No clear evidence of this task force’s results appeared, but this event provides important contextualization for current records-management thought and practice in the Kenyan public sector, showing that records-management improvement has been on the agenda at a high level

## 1.2 Records Management Challenges Facing Kenya

Kenya faces several challenges to improving its ARM practices. Described broadly, these are legislative issues, staffing issues, organizational issues, policy issues, and practice issues.

- Legislative issues:
  - The inability of KNADS to affect public-service ARM practices; and
  - Inadequate, restrictive, and outdated legislation.
- Staffing issues:
  - Inadequate training and lack of trained staff;
  - Lack of ARM professionals in ARM positions and staff-retention problems; and
  - Problems regarding professional collaborations.
- Decentralization of ARM within institutions.
- Policy issues:
  - Lack of policies; and
  - A focus on ICT implementations in place of ARM policy.
- Lack of digital records management.

Many of these challenges are common across Africa and within the Eastern and Southern Africa Regional Branch of the International Council on Archives (ESARBICA) region, to which Kenya belongs. Previous authors including Kemoni have identified poor policy, infrastructure, legislation, and training as issues across ESARBICA (Kemoni, 2009). Similarly, Keakopa identified training, staff retention, preservation of digital records, and legislative issues as challenges across ESARBICA (Keakopa, 2010).

### 1.3 Goals of ECM Implementation in Kenya

According to Kemoni, Ngulube, and Stilwell (2007), good records management can:

- Reduce poverty;
- Increase accountability;
- Aid in effective management of state resources;
- Aid rights protection;
- Aid in anticorruption strategies; and
- Help improve services to citizens. (p. 16)

Kenya likely is attempting to achieve many of these through its ICT-supported e-governance initiatives. However, Lemieux argues that ICT implementations in particular create more ARM problems than they solve by exacerbating “previous weaknesses in recordkeeping systems” (Lemieux, 2016, p. 12). Mnjama and Wamukoya explicitly connect good paper-based records systems and “success or failure of automation projects,” or ICTs, arguing that if manual RM is in disarray, ICT implementations are likely to fail (Mnjama and Wamukoya, 2007, p. 280).

Compliance can link ECM benefits to ARM where “good records management . . . protect[s] the enterprise from harmful damage” (Salamntu and Seymour, 2014). If we consider ECMs and similar systems as examples of ICTs, then it follows that a successful ECM or enterprise-wide system must incorporate an ARM component, and will more likely succeed if implemented in an organisation that already has strong records management.

By exploring the challenges that public-sector records management in Kenya faces, we can pinpoint those areas that may require scrutiny or change to help Kenya’s current and future ECM applications and systems succeed.

## 2. Legislation

Legislation that supports good records management is an issue both within Kenya and throughout Africa. ARM legislation forms the basis upon which all other concerns rest, as it governs the powers and abilities of officers and employees within a country's ARM programs and initiatives. Across the ESARBICA region, legislation does not allow archives to actively perform ARM in their own governments (Ngulube and Tafor, 2006, pp. 58, 60–61).

### 2.1 Inability of KNADS to Affect Public-Sector RM

As discussed earlier, the Kenya Public Archives and Documentation Service Act itself makes it difficult for KNADS to affect public-sector recordkeeping. There are several recent examples of KNADS's failure to insert itself into public-sector ARM. Although KNADS helped to draft a national ICT policy, it was ultimately dissatisfied with the result as it pertained to ARM (Abankwah, 2010, p. 173). KNADS cannot enforce compliance with any records schedules (Wamukoya and Lowry, 2013 p. 72). Attempting to partially ameliorate the problem, Lowry argues for an oversight body to harmonise Kenyan government records management with Freedom-of-Information (FOI) legislation (Lowry, 2013b, p. 26).

### 2.2 Inadequate, Restrictive, and Outdated Legislation

Kenya lacks a national regulatory framework for records (Lowry, 2013a, p. 59). Furthermore, recent FOI legislation in Kenya caused disorganization (Lowry 2013b). Lowry has proposed a solution whereby KNADS should receive new powers through legislation to set standards and guidelines for ARM (Lowry, 2013b p. 26). The wave of public-sector reforms across sub-Saharan Africa discussed earlier in this paper did not improve ARM, partly because ARM professionals did not participate (Mazikana, 2009, p. 46). As noted earlier, Mnjama (2003) argues that the Kenya Public Archives and Documentation Service Act does not provide an explicit time for KNADS's director to take control of public records (p. 93). Kenya's colonial-based archival legislation (specifically its Official Secrets Act) hampers public archival access and gives the government powers it is loath to give up (Mnjama, 2008, pp. 65-66). This could explain the lack of any new dedicated digital RM legislation. Countries across Africa require modernization of laws for digital RM (Keakopa, 2002, p. 46). The entire ESARBICA region faced outdated legislation (Keakopa, 2010, pp. 62-64). Indeed, outdated archival legislation was a problem well before the advent of earnest of digital records in Africa (Mnjama, 1993 p. 85).

## 3. Staffing

Staffing is one of the major problems identified by many researchers investigating archival and records-management practices in Kenya and other sub-Saharan African countries. Researchers have identified three key parts of this problem:

- Poor or nonexistent training related to digital records management;
- A lack of ARM professionals in public and private institutions, along with difficulties in retaining qualified staff in the public sector; and
- A lack of collaboration between ARM professionals and other specialists.

### 3.1 Training

In a survey of Kenyan judiciary professionals, Maseh (2015b) found that 95% of respondents felt that the primary problem affecting RM in the judiciary was staffing (p. 139). More specifically, a survey of employees of Kenya Ports Authority (KPA)

found that 61.5% of respondents said a lack of skilled RM professionals was a problem (Mzerah, 2013 p. 87). Several authors support this view by identifying staffing, and particularly training, as a problem. From a general perspective, inadequate ICT skills are a barrier to widespread adoption of digital records management (Asogwa, 2012, p. 202). Employees competent to perform digital RM are uncommon in Africa (Mnjama and Wamukoya, 2007, p. 281), and trained staff are in short supply in sub-Saharan archives (Ngulube, 2004, p. 148). Poor training in the ESARBICA region is also a problem (Ngulube and Tafor, 2006 p. 64). Within Kenya, a lack of trained staff is an impediment to public-service delivery (Abuki, 2014, p. 60). However, the same study did reveal that some staff had been trained in digital RM, and the literature reports several examples. KCB Bank Kenya Limited (KCB) ARM staff lacked formal training (Ambira and Kemoni, 2011, p. 6). In a survey of Kenyan government registry employees, Kemoni (2007) found that they lacked necessary computer skills (p. 249). Four percent of employees who responded to a survey at the Kenya Electricity Transmissions Company (KETRACO) had received digital records training (Dwoya, 2014, p. 55). Only 10.6% of Moi University registry employees had any RM training at all (Nasieku, Kemoni and Otike, 2011, p. 200). In the archival field, archivists are incapable of managing digital records because of poor training, among several other reasons (Mazikana, 2009, p. 43–44). Although KNADS staff are highly educated, one study found them unprepared to do digital RM (Wamukoya and Lowry, 2013, p. 72). In a case study of an EDRMS implementation in Kenya's Ministry of Higher Education, Science, and Technology (MoHEST), good training and some level of pre-existing technical knowledge from employees was found to be key to a successful implementation; unfortunately, MoHEST's implementation was not successful (Mutimba, 2014, pp. 52-53).

### 3.2 Lack of RM Professionals and Staff-Retention Problems

Besides training for RM professionals, some authors also identify the problem of placing employees who were not RM specialists in RM roles. In Namibia, many RM professionals are political appointees with no training (Barata, Kutzner and Wamukoya, 2001, p. 38). Within Kenya, judiciary RM staff are self-trained (Maseh 2015a, p. 82). KETRACO registries employed secretaries instead of RM professionals (Dwoya 2014, p. 56).

Another major problem for the Kenyan public service with regard to staffing is the retention of competent employees. Staff retention is a broad problem of the last 50 years across sub-Saharan Africa (Tough 2009, p. 190). Trained staff in the Kenyan public service regularly leave for better-paying positions, and these transitions lead to loss of records (Barata, Kutzner and Wamukoya, 2001, pp. 38–39). In short, Kenyans with digital RM skills regularly leave the public sector for the private sector (Mnjama, 2003, p. 99).

### 3.3 Professional Collaborations

Collaborations between ARM professionals and other specialists are crucial in increasingly complex and technological organisations. At a high level, African ARM professionals need better relations with their own professional associations, the public, legislators, and ARM professionals in other countries (Mnjama, 2005, p. 469).



Similarly, ARM professionals in Africa are professionally isolated and need increased interdisciplinary collaboration (Ngoepe, Maluleka and Onyancha, 2014, p. 133). Within Kenya, records-management staff at the KCB were not providing key information, such as designating vital records or requesting access controls to prevent all bank staff from modifying records (Ambira 2010, pp. 128, 130). Emphasizing this point strongly is an article by Moturi, Mburu, and Ngaruiya (2016), who argue for the creation of a judicial data warehouse. However, the authors are not ARM professionals, and their proposal, which would likely have effects on RM in the Kenyan judiciary, lacks the participation of any ARM professionals, as well as any identifiable ARM theory. In some cases, collaboration may need to take a very specific form, such as Ambira's conclusion that RM should be a part of the KCB's Risk Management Division (Ambira, 2010, p. 139). Using a more egalitarian approach, Erima and Wamukoya (2013) argued that the Moi University registry should collaborate with its ICT department on digital RM.

### 3.4 Conclusion

Staffing is a major problem for Kenyan ARM and one that deserves focused attention. It is also a problem that goes beyond Kenya's borders. Several authors have attempted to show how these issues might be addressed. Although formal ARM education in Africa is increasing, it is not necessarily translating into improved professional practice, something that could be ameliorated by more experiential learning (Nengomasha 2013, pp. 7–8). Standardisation of training across Africa using the South Africa Qualifications Authority (SAQA) as a model is another possibility (Ngulube, 2001a). Kenya is well placed to standardise its training because it participated in the broader process that resulted in the National Qualifications Framework (NQF) that South Africa used to produce SAQA. Thus, Kenya has its own qualification framework enshrined in law (Republic of Kenya 2014). A major focus of ARM education should be preservation skills, as they underlie all other ARM concerns (Ngulube 2007). Active research as part of archival education in sub-Saharan Africa is another ingredient (Onyancha *et al.*, 2015, p. 157). Many professionals may require retraining to conduct digital RM in Africa (Wato 2006, pp. 74–75). Unfortunately, training solutions affect only one aspect of the staffing problem and do nothing to solve the problems of retention or collaboration.

## 4. Decentralization of Records Management

Although Kenyan public services may have RM programs, the details of these programs often differ between offices and departments. In the KCB, records management across the organization was decentralized—the bank had no overall RM program, while some departments had their own program (Ambira and Kemoni, 2011, pp. 3, 6). One problem was the separation of Risk Management and Records Management (pp. 6–7). Similarly, individual departments of the Kenyan government manage their own records (Asogwa, 2012, p. 201). In KETRACO, the registry is decentralized, resulting in each department essentially performing its own registry work (Dwoya 2014, p. 56). Kenyan Railway Corporation offices each have different records-management practices (Mnjama 1994b, p. 208). Within Kenya Ports Authority departments, information is not shared, which results in records

duplication (Mzerah, 2013 p. 88).

## **5. Policy**

Policy constitutes a major problem for ARM practice in Kenya and more broadly across Africa. Sub-Saharan African countries generally lack records-management policies (Nengomasha, 2013, pp. 3–4). Additionally, many sub-Saharan archives lack preservation policies (Ngulube, 2005, p. 161). Kenya is no exception.

### **5.1 Lack of Policies**

Many institutions in Kenya outright lack any records-management policies. A good example is KETRACO, which possessed no RM policy (Dwoya, 2014, p. 64-65). In Kisii County, a draft RM policy existed but had not yet been implemented (Abuki, 2014, p. 63). Finally, the KCB had no overall RM policy (Ambira and Kemoni, 2011, p. 3).

In cases where Kenyan institutions do possess some RM policies, these policies often do not extend to digital records. Explicit digital RM policies are also rare. The KCB had no strategy for managing digital records, and its RM guidelines (not policies) are piecemeal (Ambira, 2010, p. 109–110). At Moi University, no digital RM policies existed even though the university was automating records, leading to a situation of records capture but no policy on how to treat them (Erima and Wamukoya, 2013, p. 31). The Kenyan judiciary has e-case management implemented, but their policies are strictly for paper records (Maseh 2015a, pp. 79, 81). Indeed, the judiciary possesses no digital RM policy (Maseh 2015b, p. 222). The Kenya Agricultural Research Institute (KARI) had no digital preservation policy (Mwangi and Wamukoya, 2012, p. 108). The KPA also lacked digital RM policies (Mzerah, 2013, p. 89). Moi University possessed no digital RM policy (Nasieuku, 2011, p. 191). In the case of KNADS, no policies for the management of current digital records existed (Wamukoya and Lowry, 2013, p. 74).

### **5.2 Focus on ICT at the Expense of Good RM**

ICTs and computer adoption in the public service are not linked to RM programs in Kenya (Mnjama, 2003, p. 99). The amelioration of the Kenyan judiciary's lost-file problem is something that ICTs may be able to help to achieve (Makau 2014). However, as noted earlier, successful ICT implementations depend on good paper RM systems (Mnjama and Wamukoya, 2007, p. 280). Poor paper RM systems can result in poor ICT integrations. Moturi, Mburu, and Ngaruiya (2016) followed Makau by providing an ICT-based solution for Kenya's slow and erratic judiciary system. However, they did so without considering any records-management principles or how these might help accomplish their goals. Wafula (2012) notes the existence of ICT policy in several places, including the Kenyan president's office, but does not include any information about whether these policies have RM content or input. However, the author does refer to a statement from the Ministry of Finance and Planning that the government aims to "incorporate records management and archival functions into the design, development, and implementation of information systems" (p. 20). So, it seems that the government of Kenya was aware of the need for good RM to support ICT initiatives.

## **6. Lack of Digital Records Management**

Good manual records management and ICT applications are closely connected. As

noted earlier, Mnjama and Wamukoya (2007) connect the state of paper records management to the success of ICT and e-government initiatives (p. 280). Although many institutions in Kenya perform manual records management, they may not link this practice with their digital records generation or manage digital records at all. So, although much of the public sector may be positioned to integrate their RM practice with ICT initiatives, the results of this review point to this step still being in the future in many cases.

The Kenyan judiciary possesses a computerized record retrieval system for paper records, but no digital RM *per se* (Maseh, 2015b, p. 117, 135). Within the Ministry of Lands, Housing and Urban Development, the majority of RM is manual (Moemi, 2015, p. 684). Despite the availability of an EDRMS, MoHEST still performs manual RM (Mutimba, 2014, p. 4). In the Kenyan government broadly, existing digital RM systems have not been incorporated into the existing paper registry system (Mnjama 2003, pp. 98–99). KPA’s RM is paper-based (Mzerah 2013, p. 81).

## **7. ECM and Enterprise-Wide System Implementations**

Following Katuu (2016) and the Association for Information and Image Management (AIIM), ECMs can best be described as:

The strategies, methods and tools used to capture, manage, store, preserve and deliver content and documents related to organizational processes. ECM tools and strategies allow the management of an organization’s unstructured information, wherever that information exists. (AIIM, 2010)

An ECM may or may not include a records-management function or be incorporated into a wider records-management system (Katu 2018). Furthermore, ECMs may contain items that also could be managed as records. Enterprise-wide systems, although not ECMs in name, may perform some or all functions of a dedicated ECM. In Kenya, the records-management challenges described above are likely to impact ECMs and enterprise-wide systems, whether they explicitly manage records or not. ECM and similar implementations described in recent Kenyan records-management literature are discussed below.

Many ECM applications rely on cloud computing for infrastructure; this is particularly attractive to resource-strapped developing nations (Bwalya and Mutula, 2015, p. 7). Part of this review is an attempt to discern whether Kenyan enterprise-wide systems use cloud computing; however, there is no clear evidence that any of the enterprise-wide systems discussed here do so.

### **7.1 Enterprise-Wide Systems Descriptions**

The Kenyan judiciary supplies many examples of enterprise-wide system implementations. The judiciary possesses a case-management system that is only implied to be ICT based, because details about it are vague (Lowry 2013a, pp. 53, 56). It also has had at least one functional ERMS implementation and a plan for an integrated document-management system (Maseh 2015b, pp. 135, 185). Also extant are a Court Management System (CMS), Judicial Help Desk (JHD), and Integrated Financial Management Information System (IFMIS) (Moturi, Mburu and Ngaruiya, 2016, p. 10). Outside of the judiciary, Mutimba (2014) investigated an EDRMS implementation at MoHEST that had middling results. At Moi University, the following systems produced digital records: a “Library Information System (LIS), an

Academic Records Information System (ARIS), a Financial Management Information System (FMIS), and a Human Resource Information System (HRIS),” each a module of the same system (Nasieku, Kemoni and Otike, 2011, p. 180).

Kenya participates in several regional ICT initiatives through its membership in the East African Community (EAC) and the Common Market of East and Southern Africa (COMESA). Some are merely infrastructure, such as the East African Submarine Fibre Optic Cable System (EASSy) (Wafula, 2012, p. 161). However, several others likely constitute enterprise-wide systems. The following are COMESA initiatives: ASYCUDA, an automated system for customs data and management; CPIS, an Internet based platform to ensure “efficiency, transparency, and monitoring of public procurement processes among COMESA member states;” and a Regional Payment and Settlement System (REPSS) (p. 161). Wafula provides a large list of other ICT initiatives that likely constitute enterprise-wide systems, including an e-farming database, an Education Management Information System (EMIS), a Statistical Information System, and an Integrated Multi-sectoral Information System (IMIS) (pp. 217, 219–28).

## 7.2 Context

In this section, each identified enterprise-wide system will be contextualized regarding ARM integration. The identified Kenyan enterprise-wide systems are subject to many of the challenges discussed in this paper. As established earlier, ECMs and other enterprise-wide systems can include records-management functions or require intervention to determine and manage records. These functions and interventions will be noted where they can be determined

### **Judiciary Case-Management System**

The Kenyan judiciary Case-Management System (CMS) identified by Lowry (2013a) was either in the process of being created or only partially implemented at the time of the article’s writing in 2013. It aimed to provide some automated records-management functions. Lowry shows that it was one of the projects of the Judiciary Information Communication Technology (JICT) Committee initiated in 2008. No archives professionals were members of the committee. The committee also had launched a digitisation project that as of 2010 had resulted in 5 million scanned pages of a targeted 30 million. No further information was available. The judiciary had an ICT policy and strategic plan, but it did not have a records policy. Although the Records Disposal Act applies to some judiciary records, it does not apply to Court of Appeal records (pp. 53, 56, 58–59).

The challenges that best describe Lowry’s findings are staffing (collaboration), policy, and legislation. A lack of archives professionals advising the JICT Committee is a clear problem. Similarly, records policies and laws that only apply to some records call into question the ability of a case-management system to be successful. It could partially address the lack of digital RM in the judiciary identified by Maseh (2015b), although not in explicit records-management terms.

The formation of a committee to deal with ICTs in the judiciary may constitute an instance of high-level support for good records management, despite its not necessarily addressing true records management. The concern with getting a case-management system implemented shows that at a basic level, records-management

concepts are likely on the minds of high-level authorities within the judiciary. Regarding the RM implications of the Judiciary Case-Management system, Lowry (2013a p. 56) found it “unlikely that full records management functionality is being developed in the system.” In this case, the Judiciary Case-Management system forms an enterprise-wide system, but one that requires intervention to identify and manage records.

### **Judiciary ERMS**

A donation from the United States Agency for International Development (USAID) funded the judiciary ERMS implementation in Eldoret Magistrate court in Ausin Gishu. Furthermore, a magistrate court in Nairobi County had created a computer catalogue of files (Maseh, 2015b, pp. 135–136). Maseh’s survey of judiciary professionals found that 87% worked only with paper records, while 13% worked with digital records (presumably using the ERMS) (p. 135). Ninety-five percent of survey respondents felt that the primary problem related to records management in the judiciary was appropriate staffing, not poor records management itself (p. 139). Staff were confused over whether a digital-records policy existed (p. 141). Finally, the judiciary had five records management plans between 2012 and 2016, all centred on registries (p. 184). Among other things, these plans included an ERMS implementation and an integrated document management system (p. 185). Maseh states that “the system had the potential of managing every aspect of a case including court proceedings which though created manually by a judge or magistrate presiding over a case could be scanned and uploaded onto the system” (p. 135–136). This ERMS seems to be managing items beyond documents or records and may constitute an enterprise-wide system. However, it may also complement the CMS described by Lowry (2013a), in which case it forms the missing-records intervention required for that system.

The challenges relevant to this ERMS implementation are staffing and lack of clear policies. Maseh (2015b) noted the lack of RM policy in the judiciary (p. 222); the implementation of ERMS systems without accompanying digital records policies is an example of a focus on ICT over sound policy, which may lead to poor performance. Although an ERMS is not an ECM per se, this ERMS does seem to address the problem of the lack of digital RM in the judiciary, particularly regarding the lack of records-management functions in the previously mentioned CMS. The connection between the CMS and this ERMS is unclear. Most importantly, the existence of this ERMS provides for the possibility of being integrated with both the CMS described above and the data warehouse described below.

### **Judiciary Court Management System, Judicial Help Desk, and Integrated Financial Management Information System**

Moturi, Mburu, and Ngaruiya (2016) propose a data warehouse for the Kenyan judiciary and identify a CMS, a JHD, and an IFMIS from which information could be pulled for this warehouse (p. 10). They describe its functions thus:

Extract, Transform, and Load (ETL) processes physically integrate data from multiple, heterogeneous sources in a data warehouse. ETL tools are pieces of software responsible for the extraction of data from several sources, cleansing, customization and insertion of the data into a data warehouse. (p. 9)

This management of multiple types of content drawn from several sources makes this data warehouse the clearest example of an enterprise-wide system in the Kenyan judiciary. The data pulled from these systems would form part of a database belonging to the court's registry system, clearly giving this data warehouse a records-management function (p. 10). However, this article does not include any information about the integration of this data warehouse with the existing ERMS described by Maseh, or the CMS described by Lowry. The authors of this piece are computer-science and informatics professionals, and records-management concerns are not present in the article. This shows that the primary problem for this initiative is staffing/collaboration. On the other hand, the progression from case management described by Lowry to Maseh's ERMS and finally Moturi, Mburu, and Ngaruiya's data warehouse shows that recent and continued improvement is happening in the Kenyan judiciary regarding attempts to manage case backlogs and provide more effective records management.

#### **Ministry of Higher Education, Science, and Technology EDRMS**

The EDRMS implementation at MoHEST ultimately failed (Mutimba, 2014, pp. 4, 48). Although the findings of Mutimba's accompanying survey are complicated, they seem to suggest that training was the factor that caused the implementation to fail. Although 83% of respondents stated that they were trained in the use of the EDRMS "to a small extent," 76% of respondents "did not prefer" using the EDRMS (pp. 34, 37). Furthermore, MoHEST's records-management policy was not well known (p. 46). This example clearly shows the necessity for good training to support an EDRMS implementation, and how it can fail on this point alone, even with policies in place.

Although an EDRMS can be considered an enterprise-wide system, not enough information was provided in this article to determine this point.

#### **Moi University: Library Information System, Academic Records Information System, Financial Management Information System, and Human Resource Information System**

Moi University had several systems producing digital records—LIS, ARIS, FMIS, and HRIS (Nasieku, Kemoni and Otike, 2011). However, the records themselves were not necessarily managed in digital form or managed well. Staff printed out digital records, used storage media like CDs, or in the case of financial records, performed microfilming (p. 191). There was no digital records-management policy (pp. 192, 195) and only 10.6% of surveyed staff had records-management training (pp. 191–93).

This reveals that Moi University suffers from staffing (training) problems, lack of digital RM, and lack of policy. These problems hamper Moi's ability to utilise the digital records it is already generating.

The LIS, ARIS, FMIS, and HRIS systems noted above may constitute enterprise-wide systems. In this case, records management is performed as an intervention instead of as a component of the system, and very little is done to manage digital records in their native formats. Nasieuku, Kemoni, and Otike specifically note that "the ICTs and resources that were available were not equipped with digital records management functionalities" (p. 201).

#### **Kenya COMESA ICT Initiatives**

Kenya's COMESA ICT initiatives have very little contextualizing information available about their strengths and weaknesses.

ASYCUDA provides trade data, "facilitating regional trade and enables member states to produce accurate, timely and reliable trade data that could then be analysed and used to inform decision and policy makers" (Wafula, 2012, p. 161).

CPIS is a procurement tool that:

Uses a web-based platform over the Internet to promote greater efficiency, transparency and monitoring of public procurement processes among the COMESA member states. Making information available to the public leads to cost savings and transparency for state institutions. CPIS is expected to reduce the discretionary powers of procurement officials, leading to development of a better public service and prompt member states to adopt legislative reforms in public procurement. (p. 161)

REPSS "is intended to improve the flow and settlement of cross border payment transactions among financial institutions for the benefit of importers and exporters" (p. 161).

Other initiatives discussed include an e-farming database and an e-health initiative (p. 220), an EMIS (p. 221), a Statistical Information System (p. 227), and an IMIS (p. 228). No further information was available about these items.

Because the descriptions of these initiatives are simple or vague, it is difficult to discuss them in broad terms. However, as many are international endeavours under the umbrella of COMESA, we should consider the decentralization of records management as the major problem. Since many of the problems identified in the literature about Kenya are broadly applicable to other countries in Africa, who would manage any records resulting from these ECMs, and how? This is a difficult question with no clear answer.

## **8. Conclusions**

Enterprise-wide content-management systems exist in the Kenyan public service. They generally form part of a concerted effort by public-sector institutions to become more responsive to the people they serve. The Kenyan judiciary is in a position where it could integrate or may have already integrated enterprise-wide systems with records-management functions. In other Kenyan public services, the connection between existing enterprise-wide systems and RM is tenuous. In all cases, many of the problems identified by previous authors and within this paper—namely staffing, poor ICT implementations, decentralization, and poor policy and legislation—hamper records-management functions. Broadly, the reality reflects Mnjama's (2003) argument that although digital records are included in the Kenya Public Archives and Documentation Service Act, Kenya has not moved to "establish how records created electronically are being managed" (p. 98). This accounts for the patchy nature of Kenya's enterprise-wide systems and their integration with Kenya's ARM.

It is difficult to discern at this remove if any improvement of integration between enterprise-wide systems and ARM is occurring within the identified organizations. However, the keen awareness of current problems in the professional literature, coupled with recent willingness of the Kenyan government to address poor

recordkeeping issues, suggests ample opportunity to make solid improvement. This provides some hope that future enterprise-wide system implementations will have a stronger connection to ARM. The willingness of Kenya to address ARM challenges places it at the high end among African nations in terms of its digital RM practice and e-governance initiatives; however, the literature is very clear that South Africa is the leader in these areas, according to Abankwah (2010), Asogwa (2012), Bwalya and Mutula (2014), Ngoepe, Maluleka and Onyancha (2014), and Wato (2006). For Kenya, much work remains, but it has clear steps to take.

For Kenyan ECMs to be successful, they must be supported by improvements in the areas identified by previous authors and outlined in this paper. Most importantly, Kenyan ECM applications must be integrated with ARM and built with consideration for ARM. Otherwise, they will continue to be examples of attempted solutions that do not fulfil their intended purpose.



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