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A Situational Analysis of Information Management in Selected Government Ministries in the Context of *Kenya Vision 2030*

Evans Munge, Daniel C. Rotich

and

Justus Wamukoya
School of Information Sciences,
Moi University
Eldoret, Kenya
mungemwangi@yahoo.co.uk
drotich@hotmail.com
jwamukoya1@yahoo.com

Abstract

Information is the fuel that drives government programmes and services. For Government ministries in Kenya therefore, effectively managing information is key to provision of service delivery, development and growth of the country, especially in successfully implementing strategies articulated in the Kenya Vision 2030, the country's long-term socio-economic development blue-print whose aim is to create a globally competitive and prosperous country with a high quality of life by the year 2030. Unfortunately, the role of information and by extension that of information management (IM), as an essential foundation upon which to base this growth strategy is not articulated. Yet, there is urgent need to ensure that line ministries focus on effectively managing information as a driver for the socio-economic transformation envisaged in the Kenya Vision 2030. This article presents findings of an investigation into the state of IM in selected Government ministries as a prerequisite to the successful implementation of strategies outlined in the Kenya Vision 2030. In carrying out this study, three broad objectives were pursued, that is to: establish the extent to which IM is implemented in Government ministries in order to support the realisation of the Kenya Vision 2030; investigate the issues that the ministries face with respect to their ability to effectively manage information within the Vision 2030 framework; and suggest measures that can be taken to ensure that IM is successfully integrated in Government ministries in support of the Kenya Vision 2030 implementation.

Qualitative research methods, including in-depth interviews with 60 respondents drawn from six line ministries that have crucial projects to be implemented in six foundation areas of the Kenya Vision 2030, document and literature analysis, were used to build an understanding of the extent to which IM has been implemented in Government ministries. The data was analysed and interpreted qualitatively. The findings show that IM infrastructure is inadequate.

Keywords:
Information, Information Management, Kenya,Policy implementation, Vision 2030, Public Service Delivery

Background

There were grave concerns about Kenya's economic performance when a new National Coalition Government took office in the year 2003. This resulted in the design of a socio-economic blueprint, Economic Recovery Strategy for Wealth and Employment Creation (ERS) covering the period 2003-2007. ERS was largely credited for the country's economic recovery and as its lifespan came to an end there was need to develop a new development strategy to build on the successes achieved under the ERS. In 2005, the Government accepted a recommendation by the National Economic and Social Council (NESC) to prepare a long-term vision to guide Kenya's development up to the year 2030. NESC is an advisory body that was appointed by President Mwai Kibaki of Kenya in September 2004 to advise on important development matters across the sectors. The advisory body is composed of representatives of the government, the private sector

and the international community.

The result was the unveiling of the *Kenya Vision 2030*, Kenya's long-term national socio-economic planning strategy, whose aim is to create a globally competitive and prosperous country with a high quality of life by the year 2030. The *Vision* is anchored on three key pillars: economic, social, and political (Republic of Kenya, 2007) which are, in turn, firmly anchored on the following six foundations: infrastructure, science, technology and innovation, land reform, human resource development, security, and public service reform. The *Vision* is being implemented in five year medium-term plans, the first one covering the period 2008-2012. Simultaneously, the *Vision* aspires to meet the millennium development goals (MDGs) for Kenya by the year 2015.

The realisation of this vision will impact government ministries in a big way. Government ministries are the main source that citizens can turn to for information regarding policies, strategies and the requirements for the realisation of the *Vision*. Information is an essential component of effective management and service delivery in all organisations, in both the private and the public sectors. In particular, information generated and held by government ministries is important to the development of a country because it concerns many issues relevant to the quality of citizens' lives, including public health, environmental problems, education, water supply, sanitation, housing, roads and demographic and employment trends. In other words, information should be the fuel that drives government programmes and services. Wilson (2006) points out that:

> All of the services that [government] provides to citizens, businesses, and to internal clients are about information in one way or another. The provision of information is often the service itself.

The consequence of all this should be the continued focus on improving the management of information by government through its various ministries and other public sector organisations, driven by a range of factors, including a need to improve the efficiency of business processes and the desire to deliver new and/or improved services to internal, as well as external clients. It cannot be gainsaid, therefore, that for government ministries, effective management of information is key to development and growth of the country. In the Kenyan context, this is crucial, especially in shepherding the nation through the socio-economic transformation envisaged by the *Kenya Vision 2030*, and particularly in successfully implementing strategies articulated in that *Vision*.

Sadly, the role of information and by extension that of information management (IM), as an essential foundation upon which to base the growth strategy provided for in the *Vision* is not articulated. Indeed, Kenya has a poor track record of successfully implementing policy directives articulated in such visions or roadmaps. Good examples that come to mind include:

- *Sessional Paper No.1 of 1994 on Recovery and Sustainable Development to the Year 2010* which made some reference to the need to improve agricultural information flows, and hence the need for investment in agricultural information systems, production of appropriate literature and development of libraries at district and sub-district levels (Republic of Kenya, 1994).
- *Sessional paper No.2 of 1996 on industrialisation to the year 2020* which aimed to map a strategy for Kenya's industrialisation policy and to lay the foundation for the structural transformation required to enable Kenya become industrialised by the year 2020. It mentioned the need to put in place "a well defined means of transferring technology and information to entrepreneurs…" (Republic of Kenya, 1996). There was no policy on how ministries were to integrate IM in the industrialisation strategy implementation matrix.

It is evident that there has only been the occasional reference to the role of information (and thus IM) or even adequate integration of information-related issues in these policy documents. This state of affairs may be attributed to various reasons, but arguably, the biggest shortcoming has been failure to anchor them on a sound IM strategy. Similarly, an analysis of the *Kenya Vision 2030* reveals the same

situation. The *Vision* contains some mention of how information and communication technologies (ICTs) will be utilised to accomplish a few strategies in some of the growth areas but it does not assure a "whole-of-government" approach to IM, especially in the ministries. It is difficult to envisage how the *Vision* is to be implemented successfully without incorporating information in its implementation strategy.

Consequently, an investigation into the state of IM in Government ministries is therefore more important today than at any other time in Kenya's history; it could be the start of a journey towards developing an overall IM strategy for successful implementation of *Kenya Vision 2030*, and any other related government initiatives. For the purpose of this study, the following six line ministries, namely: Energy (MoE); Higher Education, Science and Technology (MHEST); Lands (MoL); Public Service (MoPS), Provincial Administration and Internal Security (MPAIS); and Planning, National Development and Vision 2030 (MPND), were investigated. These ministries provided a "whole-of-government" IM perspective.

Statement of the Problem

Information is a critical resource in driving government programmes and services. For Government ministries in Kenya therefore, effectively managing information is key to provision of service delivery as well as to development and growth of the country, especially in successfully implementing strategies articulated in the *Kenya Vision 2030*, the country's long-term socio-economic development blueprint whose aim is to create a globally competitive and prosperous country with a high quality of life by the year 2030. Unfortunately, the role of information and by extension that of information management (IM), as an essential foundation upon which to base this growth strategy is not articulated. Indeed, apart from the occasional reference to the intention to use information and communication technologies in a few areas, the *Vision* has not targeted an overall IM strategy within government ministries.

In particular, it is postulated that the IM framework existing in government ministries is impeded by a number of weaknesses, including: poor planning for IM issues with the consequence that resources allocated for IM are inadequate; low regard for IM by managers and staff; and the information needs of public sector players are not adequately met. Consequently, an investigation into the state of IM in the public sector is deemed important, as a prerequisite to developing an overall IM strategy for successful implementation of *Kenya Vision 2030*, and any other related government initiatives.

Aim and Objectives

The aim of the study was to investigate the state of IM in selected Government ministries as a prerequisite to the successful implementation of strategies outlined in the *Kenya Vision 2030*. In carrying out the study, three broad objectives were pursued, that is to: establish the extent to which IM is implemented in Government ministries in order to support the realisation of the *Kenya Vision 2030*; investigate the issues that the ministries face with respect to their ability to effectively manage information within the *Vision 2030* framework; and, suggest measures that can be taken to ensure that IM is successfully integrated in Government ministries in support of the *Kenya Vision 2030* implementation.

Literature Review

There are many ways to conceptualise what information management (IM) is. This is reflected by the many definitions of IM found in the professional literature. However, the scope of any such conceptualisation must be viewed in the context of the environment in which information itself will operate. For example, according to the *International Encyclopaedia of Information and Library Science (quoted in* Kahn and Blair, 2004), IM may be understood to deal with the value, quality, ownership, use, and security of information in the context of organisational performance. According to Ocholla (2011:27), citing Wikipedia, IM is the collection and management of information from one or more sources and distribution of that information to one or more audience. Information therefore would refer to all types of information of value, whether having their origin inside or outside the organisation, including data resources, such as production data, records and files related, for example, to the personnel

function, market research data and competitive intelligence from a wide range of sources (Williams, 2004).

Onyancha and Ocholla, Skyme, and Gu as cited by Ocholla (2011) understand IM from the point of view of information processes that involve information technology (IT). This view does not include all information processes; and unfortunately, it is the view that has been shared for a long time by many chief executives, who more commonly limit the information officers' (whatever their designation may be) portfolio to IT processes. From these and other different approaches, it may be argued that in practical terms, IM consists of a wealth of actions that can be taken to achieve business objectives, and whose possible uses and relationships can be better understood through the lens of IM processes, which include: information planning, creating/collecting, evaluating, organising/storing, analysing, using/ disseminating, reviewing, maintaining, and disposing information.

These processes compare very well with the stages of the information life cycle management framework, and a combination of these two (IM processes and IM life cycle management) may therefore be used to conceptualise a simplified framework of IM that can be applied in any organisation, including Government ministries in Kenya, as shown in figure 1 below.

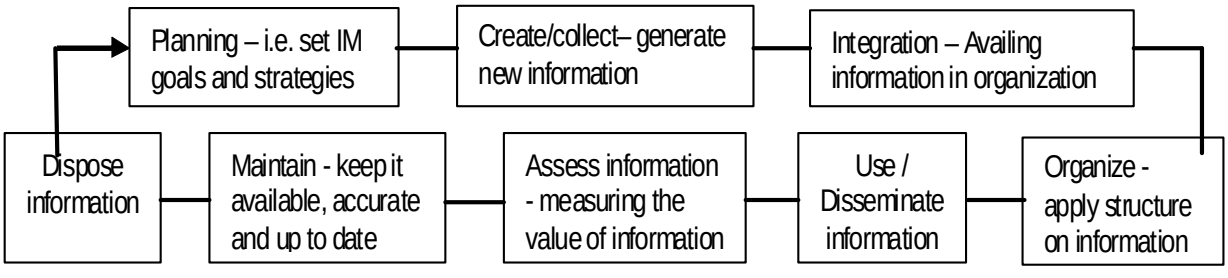

Figure 1: A Simplified Conceptual Framework for Information Management

This conceptual framework was adopted in this study as a basis on which to discuss the extent of IM integration in the business processes within Government ministries. It also provides us with a working definition of IM within the context of this study, that is: the means by which Government ministries plan for, identify, create, collect, organise, govern, secure, control, use and disseminate, preserve and dispose of all types and formats of information from a wide range of internal or external sources, as well as any means through which the value of that information is identified and exploited to its fullest extent. The focus of IM is to ensure that the right information is available to the right person, in the right format and medium, at the right time.

Impact of Information Management on Government Performance

Government is the largest producer of information. It cannot, therefore, be gainsaid that information is government's most critical resource for managing national resources, executing national functions, measuring performance and delivering services (Ngulube, 2001). When such information (often existing in a variety of formats) is properly managed, it becomes the fuel that drives government and public sector programmes and services, which are often in the form of information itself. Thus, it is incumbent upon government to manage its information in such a way that it is easily accessible and usable by the policy makers and the public in general.

Governments empower citizens and place them at the centre of the development process by providing them with access to relevant, accurate, timely and comprehensive information. This is in recognition of information as a key driver of socio-economic development and an essential component for effective management and service delivery, and for informed decision-making. IM can build public confidence in government planning and decision-making, result in the delivery of high-quality services and programmes, and lead to improved efficiencies in government.

Information Management Landscape in Kenya

Information management infrastructure comprises all

the systems, legislation and policies related to information generation, processing, access and use for a variety of purposes by both individuals and organisations. Like most other governments the world over, the Kenyan government and its public service have used paper records to record the decisions of government, the statutes of the nation and correspondence with citizens over the years.

There is evidence of a gradual recognition in recent years of the importance of information for development. Towards this end, there have been developments in the area of information systems growth and policy environment. There are several local initiatives put forward by different groups such as the Building Information Communities in Africa (BICA -Kenya) a collaborative effort between the British Council and key organisations in Kenya working towards providing a strategic direction and leadership on Information Society agenda and on the global knowledge society issues; the African Virtual Library Kenya Chapter (AVL-K) project aims at mobilising mainly academic and public libraries around the country to form an on-line information sharing partnership (Wanyoike, 2005); the Kenya Education Network (KENET) initiative; the Nepad e-initiative for schools – a programme m to connect all primary and secondary schools to the Internet in 10 years (Barasa, 2005), and the DrumNet project, an IDRC-sponsored project that aims to improve the livelihoods of farmers through the provision of information via the Internet (Opala, 2004).

However, the integration of information into the processes that lead to national economic, social, scientific and technological development has been far from satisfactory. Government is in the information business; everything it does is based on information – from briefing notes to senior executives, to cheques issued to citizens, to licences issued to businesses, to statistics provided to researchers and academics, and to information designed to provide the accurate, complete, and relevant context public servants require to make decisions and deliver their programmes (McDonald, 2000). This is true of all governments, whether in developed or developing economies such as Kenya.

Information and its effective management are important at all levels: from the government as a whole, to individual ministries and programmes, to individual civil servants. Yet, at all levels, the ability to create, use and preserve information effectively is being challenged. Getting the right information to the right person or persons, at the right time, in the right form and format, at a reasonable cost is a generally accepted principle that is becoming difficult to operationalise, especially in an electronic environment. This study also raises concerns about the quality and integrity of the Kenya Government ministries' IM infrastructure. These challenges are, of course, not unique to government ministries *per se*. The problems associated with different aspects of IM within the public sector in Kenya have been noted by scholars and practitioners (Wamukoya, 1996; Mnjama, 2003; Kemoni and Ngulube, 2008). These help to illustrate the inadequate way in which the issue of IM has been handled within the government and public sector as a whole. Failure to address these concerns has resulted in a number of challenges, including:

- citizens and public servants are unable to find government information recorded in multiple forms and formats, and access government services;
- the absence of a well articulated IM strategy has increased the risk to government ministries of having to rely upon a poorly designed infrastructure to support decision making, and the delivery of programmes and services, and;
- the absence of an effective accountability framework where public servants can be held to account for their stewardship of government information has resulted in confusion (in terms of roles and responsibilities), and increased costs.

Information Policy Environment

Kenya lacks a comprehensive national information policy. However, there are several sectoral policies in the form of legislation, regulations and guidelines that influence information acquisition, accessibility, dissemination, utilisation and availability. They include public libraries (the KNLS Board Act), archives (the Public Archives and Documentation Services Act), legal-deposit (the Books and Newspaper Act). Other relevant laws include the Copyright Act, the Industrial Property Act, the Science and Technology Act, the

Museums Act, the Universities Acts, and the Education Act. There is also the Sessional Paper No.5 of 1982 dealing with science and technology information, and the District Focus for Rural Development Circular No. 1/86 which dealt with the establishment of the District Information and Documentation Centres (DIDCs).

Kenya has also not formulated integrated national ICT policies. The policy activities in the recent years indicate an eager awareness of the potential of IT in the development of Kenya's economy. The lack of integrated policies is probably due to the political, legal and technical difficulties of formulating and implementing them. The government is optimistic about setting up national frameworks for IT development by using less difficult approaches, and is therefore in the process of formulating and implementing IT sectoral policies, which would evidently bring about increased use of IT in the country.

It is instructive, however, that Kenya does not have a sessional paper or even a long-term strategy that focuses on information policy as a strategic national resource which can become the foundation upon which the socio-economic development process can be anchored.

Methodology

The units of analysis for this study were the Head Office Departments and Units in six line ministries, namely: Energy (MoE); Higher Education, Science and Technology (MHEST); Lands (MoL); Public Service (MoPS), Provincial Administration and Internal Security (MPAIS); and Planning, National Development and Vision 2030 (MPND),

The study adopted a qualitative approach, which was mainly concerned with the participants' perspectives of the topic under study. The units of analysis for this study were the Head Office Departments and Units in six line ministries, namely: Energy (MoE); Higher Education, Science and Technology (MHEST); Lands (MoL); Public Service (MoPS), Provincial Administration and Internal Security (MPAIS); and Planning, National Development and Vision 2030 (MPND), which have flagship projects that are being implemented within the six foundations upon which the *Vision's* three pillars (economic, social and political) are anchored.

Data were obtained through personal interviewing from the collective membership directly responsible for managing information, and those who influence, in one way or another, the implementation of IM in the ministries. Personal interviewing is a preferred method in collecting qualitative data and when researchers seek to obtain data that is both reliable and valid (Silverman, 1993). Each interview lasted 30-40 minutes. Data were collected between July and December , 2011. A total of 60 interviews were conducted as shown in the table below.

Table 1: Sampling Methods and Distribution of Sample Size for the Study

Strata	Sampling Method	MPND (n_1) Sample size	MoE (n_2) Sample size	MHEST (n_3) Sample size	MoL (n_4) Sample size	MoPS (n_5) Sample size	MPAIS (n_6) Sample size	Total
Heads of Information-related Services (Library, Records Management, and ICTs)	Census	3	3	3	3	3	3	18
Other Information-related Services Staff	Systematic	4	3	4	4	5	4	24
Top Administrators	Purposive	2	2	2	2	2	2	12
Project Planning Unit Staff	Purposive	1	1	1	1	1	1	6
Total		10	9	10	11	11	10	60

Presentation of Findings and

sues that were

deemed to hinder effective and efficient delivery of government programmes and services within the *Kenya Vision 2030* context. The most significant of these issues are organised according to the conceptual IM framework identified above.

Information Planning

The study determined that a common understanding of the concept of IM, even among senior ministry staff, was lacking. Additionally, the role of IM in decision making, programme and service delivery, among the middle and low cadres, had yet to be established. There does not exist a Government-wide (nor Ministry-specific) IM policy framework to guide employees in handling and/or managing different types of information within the ministries. It is instructive that though all ministries had strategic plans, none of those recognises or even states clearly the role that information should play in the successful implementation of the strategic plan. As the head of library services at the Ministry of Higher Education candidly observed:

> "Lack of an information policy within the ministry and even within the government as a whole compromises the quality of information services. We submit plans for our units but they are rarely included in the overall ministry strategic plans."

Human Resource for IM

Questions were raised about the extent to which the Government ministries had the right people in place with the requisite knowledge, skills, and abilities to build and maintain an IM infrastructure. Among the concerns expressed were the following:

- A government-wide perspective on the nature of the work required to build and maintain an IM infrastructure has yet to be established.
- A shared view of what ministries need to know about IM and what skills and abilities they need to have yet to be established.
- The roles and responsibilities of ministry employees for managing the information resources they create, use and preserve to support their work have not been reflected in their job descriptions;
- An IM competency framework has yet to be defined and there is no mechanism in place for ensuring that whatever competency profiles are developed can be maintained.
- Existing training, education, and recruitment programmes for ministry staff do not yet reflect IM considerations adequately.
- IM is not part of the performance appraisal process for civil servants.
- Where there is an absence of expertise, standards and practices for IM, users resort to making up their own rules concerning the management of their information.

These issues can be summed up in the following interview response by an employee in the Human Resource Division at the Ministry of Lands:

> "Most job descriptions for common cadres in government are uniform across government or public service, and so the best we can do now is to make recommendations, for example on the issues you are raising about IM, for inclusion in future."

And also in the following response from the Ministry of Provincial Administration:

> "It is only recently that many information-related staff have began to be motivated enough to upgrade their training from diploma level. Now we are seeing many of them requesting for funding to enable them go for further training."

The above concerns concur with Nzioki, Kariuki and Murigu (2009) in their proposal for training of personnel who intent or are working in the private and public sector to handle land and property related transactions so as to conform to the new National Land Policy in Kenya.

Creating Information

The volume and complexity of information (in both paper and electronic formats) continues to be a major

concern for information managers and users. This is particularly prevalent at the Ministry of Lands where different types and formats of documents are presented from across the country by citizens seeking to solve pressing land issues.

It is obvious that in a complex environment featuring multiple forms of information from paper to electronic, ministry staff lack the criteria for helping them determine what information is needed to be created, received, collected, and so on, to support or document their work. Consequently, although information contained in the documents that is generated by ministries is important for government operations, respondents were clear that their respective ministries did not exercise adequate control in the creation of information and records. Indeed, there were no quality control procedures to ensure the information produced is based on the demonstrated needs of end-users, such as employees and the general public.

Organising Information

An investigation into the adequacy and suitability of some of the resources or factors considered essential in supporting integration of IM into the ministries' business process revealed the following results:

- The number of IM staff (technical, managerial and support staff) was inadequate, and even those available were not suited to handle IM-related tasks because they lacked appropriate training.
- Funding was largely inadequate, with provision being made mostly for staff salaries
- Information-related procedures and guidelines were lacking.
- ICT infrastructure (including computers and accessories, Internet, technical support) were inadequate.
- Office equipment and supplies, as well as storage space and facilities were both inadequate and unsuitable for IM-related work.

Information Use

The following highlights from the interview sessions identify some of the challenges Government ministries face that make it difficult to implement IM in their business processes:

- Information standards have not been established to set out the conditions to be used in accessing government information and services.
- Standards and tools for describing information to facilitate access and retrieval have yet to be established.
- Apart from ministries' websites, there were almost no other automated information systems for sharing information across the ministries. Indeed, although interview responses with the heads of ICTs in all ministries revealed that they maintained websites, evidence showed that the websites provided very little in the way of crucial information and policies to guide both ministry and non-ministry staff on the state of implementation of government projects and plans;
- Mechanisms to support dissemination of published government information to the general public through libraries and documentation centres could be enhanced. In this respect it was only at the MPND where the librarian in-charge gave an elaborate response to the process used in disseminating information materials from the ministry through the District Documentation and Information Centre (DIDCs) which are under the ministry;
- Citizens and government employees confront technology barriers (e.g., software and format incompatibilities) when accessing or exchanging information electronically.
- It is difficult to access and retrieve the information needed to do specific tasks, because much of the information is already fragmented across different locations, paper-based file drawers, and other unique systems and databases.
- There were no mechanisms in place to manage government records generated in electronic formats. This constrained the use of such records.

These results are given credence by the following response from one employee at the Ministry of Energy:

> "Our senior managers do not seem to appreciate the problem we have in managing all the documents in our custody... when we ask for resources to help us manage them better, we are not given."

The above findings correlate those of a survey by the Association for Information Management (AIIM) and reported by Miles (2011) which showed that access to records and information by employees across their businesses is either poor or very poor. This is not a new position. The EIU (2008) Report showed that sharing data across organisations remains difficult where only 43% and 21% of organisations globally can be considered to have 'good' and 'poor' ability respectively to integrate and share information.

Assessing Information

Government has not formulated any tool that can be used to benchmark IM practices across government ministries. This was confirmed by all the 18 heads of information-related services interviewed in the six ministries. Consequently, ministries are unable to determine whether the information they generate and maintain is of benefit to intended users (both internal and external). It is paramount that any information that is generated is targeted to a certain group or groups of clients, and their mode of accessing is determined. It is important also to establish a means that will be used to evaluate occasionally whether the information that is availed has been used and whether it satisfies the needs of those clients.

Maintaining Information

Information maintenance encompasses those activities meant to ensure authentic, reliable, available, usable, and understandable information over time. This is central to serving the information needs of Kenyans and to supporting the successful implementation of strategies outlined in the *Kenya Vision 2030*. Many respondents expressed concern about the capability of Government ministries to maintain information (especially that recorded in electronic form) in an authentic and reliable manner to meet user requirements. This is how the situation was characterised by the head of records (registry) services at the Ministry of Higher Education:

> We are supposed to ensure that our clients, that is, ministry staff, obtain the information they need to make decisions. But often we are handicapped because many of our colleagues in the information profession do not have the capability to know what information they should keep, for how long and what information they are permitted to dispose of and why.

Of particular concern was the long term preservation of electronic information. This can only be addressed effectively if the preservation requirements were identified at the time the information was being created, which is currently not the case.

Conclusion and Recommendations

It is imperative that Kenya builds a sustainable IM infrastructure in order to support the successful implementation of the strategies outlined in the *Kenya Vision* 203*0*. Although such an infrastructure may well take some time to emerge, initiatives leading to its development can, nevertheless, be established in the short-term based on the following principles and characteristics:

- Information is an asset which needs to be managed with the same diligence as any other asset;
- Information in both paper and electronic formats will continue to co-exist for a long time to come and so any IM strategies must take this fact into consideration.
- The requirements of government programmes or services drive the decisions about what information needs to be created, collected, received, etc. and how that information should be used and preserved.

Specifically, however, the following practical

recommendations are made with regard to addressing the IM issues revealed in this article:

(a) Development and implementation of an IM policy framework, which will assist in the following ways:
- Provide a basis at both the ministry and whole-of-Government level to identify and prioritise requirements for IM standards, policies and tools by mapping current policy efforts and identifying gaps or duplications.
- Organise whole-of-Government IM policy, information standards, guidelines and tools, making ministry and other agency requirements in specific areas clearer and related assistance more accessible.
- Develop policies, standards and practices, and technologies for the management of the multiple forms of information.
- Incorporate preservation requirements and requirements for long term access to government information.

(b) Enhance the awareness of government employees about the role and importance of government records, their responsibilities for managing records, and the implications of not managing records properly for decision-making, programme and service delivery, and accountability.

(c) Develop strategies for enhancing records management education and training programmes directed at public servants (senior executives and officers) and records management specialists.

(d) Incorporate IM considerations into:
- the audit and evaluation function of government institutions;
- the performance measurement systems for all government employees;
- the systems development methodologies and related tools used to plan, design, install, test, maintain, and evaluate information systems in all sectors including finance human resource, procurement, among others;

(e) Establish mechanisms for the exchange of information about standards, guides, services, best practices and other matters pertaining to the effective management of information.

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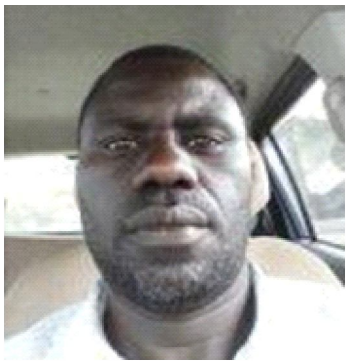
Evans Munge is a doctoral student and a lecturer in the Department of Information Technology at Moi University, Eldoret, Kenya.



Daniel C. Rotich is an Associate Professor of Publishing Studies at Moi University, Department of Publishing and Media Studies, School of Information Sciences, Eldoret, Kenya. He was Head of Department of Publishing and Media Studies and Dean and School of Information Sciences at Moi University. He holds B.Sc in Information Sciences, Moi University, Kenya, M.Phil in Publishing Studies, University of Stirling, (UK) and PhD in Information Management from Thames Valley University – London (University of West London) (UK),

Justus Murunga Wamukoya is Associate Professor of Records and Archives Management in the Department of Library, Records Management and Information Studies, School of Information Sciences, Moi University, Eldoret, Kenya. Prof. Wamukoya has previously served as a senior lecturer in the Department of Library and Information Studies, University of Botswana.