

# **An Assessment of Government Efforts Toward the Implementation of an Integrated Electronic Records Management System in the Zambian Public Service**

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## **ABSTRACT**

*This paper assessed government efforts towards the implementation of an integrated electronic records management system (IERMS) in public service in Zambia. The study adopted a qualitative methodology, and a purposive sampling method was employed to draw a sample size of 11 key informants from key government ministries and units. Primary data was collected using semi-structured interviews and it was thematically analysed. The findings revealed that an IERMS has not been implemented, but the Government through the Smart Zambia Institute has begun to develop an IERMS. Further, the Government has provided a legal framework and server ICT infrastructure to support e-records management in public service in Zambia. However, no standards have been adopted to facilitate the implementation of an IERMS. The study has also identified challenges which include lack of funding, change management strategy, ICT skills among records officers, and end-user involvement in the project. Based on the findings above, the study recommends that the Government of Zambia expedite the development of an IERMS; adopt standards; train staff in e-records management; develop a change management strategy; and improve end-user ICT infrastructure.*

**Keywords:** e-records, e-government, electronic records management systems, public service, Zambia

## **1. INTRODUCTION**

In many countries, government services and transactions are conducted online in what is called electronic government (e-government). E-Government seeks to facilitate interactive, vertical, collaboration and participation of citizens, businesses, and other governments and reduce the cost-of-service delivery (Bwalya, 2011). To successfully implement e-governance, governments ought to automate information systems which include the record management subsector (Bwalya, 2019). Records are a vital source of evidence and are relied upon to ensure accountability and transparency in the governance processes of a country (Smallwood, 2013). Therefore, many governments have implemented electronic records management systems (ERMS) to ensure quicker access to required information (Mutimba, 2014).

In 2012, the Zambian Government launched a Public Service Records Management Policy with the overall objective of implementing an effective and efficient records management system to ensure the provision of quality services (The Republic of Zambia. Public Service Management Division, 2012). One of the objectives was to implement an integrated e-records management system based on international standards. This study, therefore, sought to assess the efforts that have been made by the Government of Zambia toward the implementation of an integrated electronic record management system (IERMS) in public service.

### **1.1 Problem Statement**

As indicated in the introduction, the Zambian government in 2012 launched a public service records management policy in 2012 in which it envisioned establishing an e-based reliable records management system across public service in line with international standards and best practices (The Republic of Zambia. Public Service Management Division, 2012). Ten years down the line, not much is known as regards the measures and steps taken by the Government to implement an IERMS. This

study, therefore, sought to assess what is being done towards the implementation an IERMS in the public service.

## **1.2 Study Objectives**

The main objective of this study was to assess government efforts towards the implementation of an IERMS in public service in Zambia. In this regard, the study sought to:

- i) establish whether an IERMS has been acquired,
- ii) assess the availability of information and communication technology infrastructure to support an IERMS,
- iii) establish if the Government has developed a legal framework, policies, and standards to guide the use of an IERMS,
- iv) assess change management strategy put in place to ensure smooth deployment of an IERMS,
- v) establish the possible challenges of implementing an IERMS.

## **1.3 Study Rationale**

Automating the records sub-sector in public service in Zambia will help the country achieve its e-governance dream thus improving efficiency in the public sector. This study therefore uncovers progress made towards the implementation of an IERMS and its recommendations could help to expedite the automation of records in public service. Further, the study contributes to the existing body of knowledge on e-records management.

## **2. LITERATURE REVIEW**

Deployment of an ERMS is cardinal in ensuring effective compliance with Freedom of Information legislation; compliance with the Data Protection Act, and protection of the organization against legal disputes by finding and providing information that can be used as evidence; provision of a centralized repository for all things 'Electronic Records'; provision of auditing and reporting ability; and a productive workplace with easier access to information and quick decision-making (National Health Services, 2016).

### **2.1 The Concept of Electronic Records Management**

Records management is the efficient and systematic control of the creation, receipt, maintenance, use, and disposition of records, including the processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records (Lukičić & Sruck, 2009). Computer systems are now deployed in the management of records management in what is termed electronic records management (ERM). Smallwood (2013) defines ERM as the management of electronic and non-electronic records by software, including maintaining disposition schedules for book keeping records for specified retention periods, archiving, or destruction. An ERMS is a software application used to manage born-digital information (word-processed documents, spreadsheets, images, and datasets); digitalised or scanned documents; and physical information such as paper records and physical objects (National Archives of Australia, 2023). The benefits of e-records include improved retrieval of records; cost-effectiveness and efficiency in the management of records; space and supplies savings; simultaneous access to records and prevention of wear and tear of records; and preservation of corporate memory (Smallwood, 2013).

### **2.2 Requirements for the Implementation of Electronic Records Management Systems**

The deployment of an ERMS or documents and records management system (EDRMS) requires supporting infrastructure, legal and legislative framework, and policies as well as training of staff (Newa & Mwantimwa, 2019). E-governance infrastructure consists of both hardware and software components (Abu-Shanab & Bataineh, 2016). The ICT infrastructure forms the base upon which all e-governance projects such as the implementation of are anchored. Therefore, it is vital to have reliable internet connectivity and adequate computer hardware and software to facilitate the storage and sharing of information (Abu-Shanab & Bataineh, 2016).

Policies and regulatory frameworks are also cardinal in e-records management. The commitment of the government to e-records readiness can be assessed by the availability of records management policies and procedures (Abdulkareem, Isah, Mnjama, & Sebina, 2020). At the national level, there is a

need to have a legislative and regulatory framework that supports the keeping of records in electronic format and a set of standards for systems to use in the management of e-records. Further, guidelines and standards need to be developed or adopted based on international standards such as the International Standards for Records Management (ISO 15489) and the Department of Defence (DoD 5015.2-ST to guide the general management of e-records (Newa & Mwantimwa, 2019).

Other important factors in ERMS implementation are staff training and change management strategy. Training goes hand in hand with communication and change management, as well as coping with new technology (Apleni & Smuts, 2020). In this regard, there is a need to prepare both staff and other stakeholders for the shift from traditional paper-based records management systems to ERMS. This calls for equipping staff with new skills on how to manage e-records (Newa & Mwantimwa, 2019).

Government commitment is also vital to any e-government initiatives. This is demonstrated through the provision of adequate funding to initiate and maintain e-government projects (Apleni & Smuts, 2020). Funding ensures the provision of adequate ICT infrastructure and training. Further, government commitment ensures regulatory and legislative frameworks are put in place to support e-governance initiatives. In all countries where e-governance projects such as EDRMS implementation have been implemented, government commitment plays a pivotal role (Nengomasha & Chikomba, 2018).

### **2.3 Implementation of Electronic Records Management Systems in Selected Countries**

Many countries in Africa have attempted to implement an ERMS to automate records management. In Namibia and Zimbabwe, the implementation of EDRMS to manage records was done in 2008 and 2000, respectively (Nengomasha & Chikomba, 2018). The implementation of EDRMS in Namibia's public service was first piloted in the Office of the Prime Minister (OPM) and Office of the President. Later, seven government ministries and departments were automated. In Zimbabwe, individual government departments implemented their separate systems and at the time of the study of Nengomasha and Chikomba, only three public service institutions had implemented EDRMS. In Namibia IT infrastructure, legal and policy frameworks, and end-user training were provided before EDRMS deployment (Nengomasha & Chikomba, 2018). Further, there was support from senior government officials.

In Ghana, some government departments have deployed EDRMS which include the Ghana Immigration Service (GIS). The GIS adopted EDRMS in 2008 (Nyampong, 2015). The research conducted by Nyampong reveals that GIS was not adequately ready for the adoption of EDRMS as both the technology and processes were not put in place (Nyampong, 2015). In Kenya, Ambira, Kemoni, and Ngulube (2019) observed that efforts were being made to improve the management of electronic records in government ministries to support the online delivery of government services. These included the digitalisation of paper records in some ministries, the installation of systems for managing electronic records, and policy directions from government agencies such as the ICT Authority. However, there is inadequate ICT infrastructure, a lack of policy framework, and human resource capacity vital for the successful implementation of e-governance solutions (Ambira, Kemoni, & Ngulube, 2019). In Tanzania, the Government in 2002 amended the National Records and Archives Management Act to incorporate the management of e-records (Newa & Mwantimwa, 2019). A study by Newa and Mwantimwa (2019) discovered that the ICT infrastructure, policies, and legal framework in Tanzania were not adequate to support e-records management. Further, there were no standards, and staff lacked skills in the management of e-records.

In Malaysia, e-records management is mandatory for government agencies (Yaacob & Sabai, 2011). Yaacob and Sabai (2011) argue that underlying infrastructure and national guidelines and frameworks on the management of e-records are available but the deployment of ERMS in many organisations is not based on national policy and guidelines on e-records management (Yaacob & Sabai, 2011). In Austria, the adoption of ERMS in the public sector is widespread and by 2010, more than 53% of Austria's municipalities have adopted ERMS. Further, all government ministries have adopted ERMS in Austria (Krabina & Stoeckler, 2010). Policies, laws, and standards exist in the management of e-

records. Furthermore, adequate infrastructural support (IT) and better-trained personnel to effectively e-records management are available in Austria.

#### 2.4 Challenges of Implementing Electronic Records Management Systems

Various studies have highlighted challenges as regards the implementation of ERMS or EDRMS. These include inadequate ICT infrastructure; weak regulatory and legal framework, policies, and standards; change management issues; training of human resources and lack of political commitment and support (Ambira, Kemoni, & Nglude, 2019); (Nengomasha & Chikomba, 2018); (Keith, 2005); (Yaacob & Sabai, 2011). The study by Ambira (2019) in Kenya reveals several constraints in the deployment of ERMS which included inadequate ICT infrastructure, weak legislative and regulatory framework, slow adoption of standards and practices, lack of budgeting support, and inadequate skill sets. Keith (2005) discovered in the United Kingdom (UK) that the biggest challenge faced in the implementation of ERM systems was an intellectual challenge. It was observed that people were very conservative and disliked change (deployment of new computer-based systems). In India, it has been established that a lack of political support has been the most crucial driving barrier to implementing e-governance projects (Gupta, Suri, & Singh, 2018).

#### 2.5 Conceptual Framework

The conceptual framework for the study is developed out of the two studies: namely, the status of EDRMS implementation in the public sector in Namibia and Zimbabwe by Nengomasha and Chikomba (2018) and the ERMS adoption readiness framework for higher professional education institutions in Yemen by Mukred, Yusof, Mokhtar, and Manap (2016). Nengomasha and Chikomba (2018) identified seven (7) factors that ensure the successful implementation of an EDRMS project which are change management, management support, user involvement, the composition of project team members, right file plan, end-user training and resources for the ongoing support of the system. Mukred, Yusof, Mokhtar, and Manap (2016) on the other hand identified five factors that constitute that could lead to the successful implementation of e-records management projects in higher institutions in Yemen. These are IT infrastructure, top management support, financial support, training, and policy. From these two studies and the illumination coming from the literature reviewed, successful deployment of any ERMS is dependent on top management support; financial support; adequate ICT infrastructure; legal and regulatory framework, policies, procedures, and standards; training of staff, and change management.

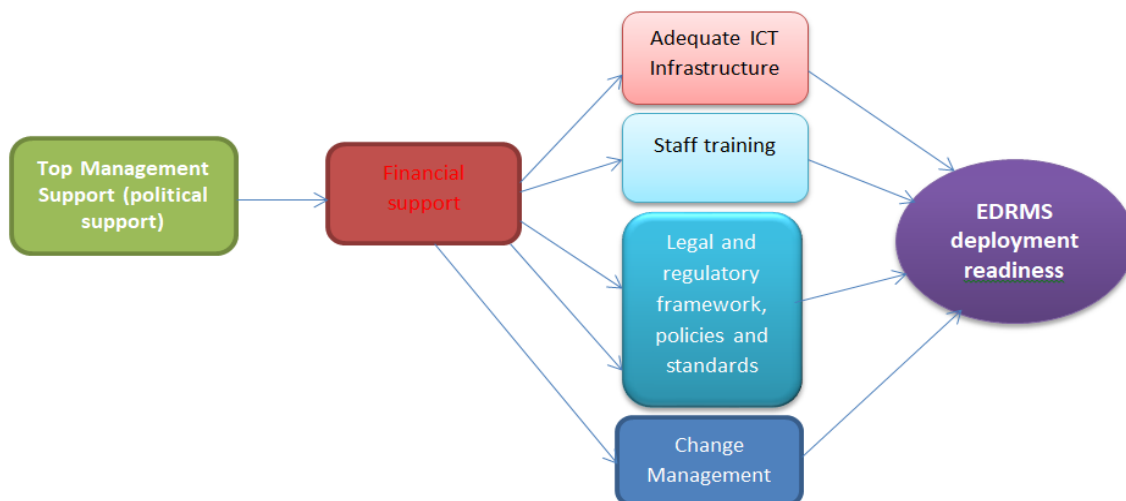


Figure 1: EDRMS deployment factors

As can be seen in Figure 1, top management (political will) is critical as it unlocks financial resources to acquire the needed IT infrastructure, train staff, and develop laws, policies, and standards for e-

records management. Therefore, if the Government of Zambia must successfully implement an IERMS in public service, top management support is cardinal in securing financial resources needed for the procurement of IT infrastructure/equipment, training staff, and developing policies and procedures for e-records management.

### 3. RESEARCH METHODOLOGY

This study adopted a qualitative approach based on semi-structured interviews. The sample comprised 13 officers from the Government Ministries and Divisions captured in Table 1. According to Krejcie and Morgan's sample table, a population of between 10 and 15 should be taken as a sample (Kenpro, 2012). However, data was collected from 11 key informants (table 1). Two key informants from the State House and the National Archives were not available at the time of data collection. It is also important to mention that at the time of data collection in public service in Zambia, there were only 8 Chief Registry Officers.

*Table 1: Sample for the Study*

SN	Job Title of Respondent	Gender	Government Division	Key Informants Number
1	Deputy Director-Systems Development	Male	Smart Zambia Institute	1
2	Deputy Director-Records Management	Male	Public Service Division, Cabinet Office	1
3	Deputy Director-Systems Support	Male	Public Service Division, Cabinet Office	1
4	Records Systems Development Officer	Female	Public Service Division, Cabinet Office	1
5	Chief Registry Officer	Male	Public Service Division, Cabinet Office	1
6	Chief Registry Officer	Female	Ministry of Agriculture	1
7	Chief Registry Officer	Female	Ministry of Fisheries and Livestock	1
8	Chief Registry Officer	Female	Ministry of Education	1
9	Chief Registry Officer	Male	Ministry of Health	1
10	Chief Registry Officer	Male	Ministry of Finance and National Planning	1
11	Chief Registry Officer	Female	Ministry of Infrastructure	1
<b>Total</b>				<b>11</b>

Interviews were used to collect data and thematically analysed using ATLAS.ti software. To ensure the validity and reliability of the research findings, the interview guide was peer reviewed. Before data collection, permission from the Secretary to the Cabinet and informed consent were sought from all the participants. One of the limitations of the study is that the two key informants from the State House and National Archives did not take part in the study. However, the non-participation of the two informants could not significantly vary the findings of the study.

### 4. PRESENTATION OF THE FINDINGS

Eleven participants took part in this study. Four were females while seven were males. Their ages ranged from 40 to 58 years and work experience ranged from one to twelve years.

#### 4.1 Acquisition of an Integrated Electronic Records Management System in the Public Service

The findings reveal that the government has not purchased an IERMS, but Smart Zambia Institute has started developing an in-house IERMS. The system was being tested at Smart Zambia offices. A key informant from Smart Zambia submitted the following regarding the IERMS implementation in the public service:

“I would say it is a work in progress and I think on the institution side (E-government Division), we have embarked on developing a system. There has been a change of posts; at one time we wanted a third party; but eventually, we said we just do it in-house. As of last year, the department started developing an in-house platform for the public service. We targeted the whole government. First, we start with the institution itself Smart Zambia then, from there we start rolling out to other institutions in phases” [P2ASDSZ].

The key informant when asked to confirm whether the system being developed provides for the application of the records retention and disposal schedule when managing records, the answer was negative as captured below:

“I think those features we haven’t got; thus, there is no retention schedule as of now. We will get those are the things that we need to ensure that we affect them in the system. Like I said it is mainly modular movements of the items from the registry up to the controlling officers just like that. So, in terms of retention, we haven’t done that” [P2ASDSZ].

The findings show that several participants were not aware of the developed IERMS. Therefore, the system is being developed by Smart Zambia Institute with little or no involvement of stakeholders in records management. One of the participants submitted:

“I am not preview to the implementation of the same because I don’t even know the members in that steering inter-ministerial committee so who are the people involved in that we as Chief Registry Officers, have no idea of such a committee. We were not informed” [P8CRO].

#### **4.2 Legal Framework, Policies, and Standards for Electronic Records Management**

The findings revealed that several key informants were not aware of the existence of laws to support e-records management in Zambia. One participant submitted:

“There is no legal framework currently. We have proposed legislation. I don’t know how far it has gone. Proposed legislation to do with public service records but so far, we haven’t had a response on it and I think the details of the legislation cannot be shared at the moment, but there is proposed legislation at the public. This framework will include e-records” [P01DRCAB].

Another one submitted:

“No, no if it’s there am not aware of it. I know it’s there I just haven’t had time to find out what type of law is there, and it can back the records” [P8CRO].

However, two participants indicated that laws exist to support e-records management in Zambia. For example, participants P03DRCAB cited the E-governance Act of 2021 while participant P2ASDSZ cited the Data Protection and Cyber Security Acts.

Results also show that a manual on how to classify records is available in civil service but standards on e-records management have not been developed or adopted. One participant stated that:

“Standards, basically we have a classification plan in place; a filing system in government which we use, and I don’t think it is ISO certified, but it has worked for us before” [P01DRCAB].

Another participant submitted that:

“That one is also not in black and white, but we must abide by certain standards. Going into a system without guidance will create chaos; more chaos than what we have now in place for the physical papers. Am sure as we move those will be put in place” [P5CRO].

#### **4.3 Information and Communication Technology Infrastructure for an Integrated Electronic Records Management System**

The study has established that server IT infrastructure is available for implementation of any system including ERMS at the Smart Zambia Institute. However, most participants reported lacking personal computers, scanners, printers, and, to some degree, internet connectivity. One participant said:

“We don’t have adequate IT infrastructure. Usually, when you find a computer in the registry it was obtained from some other office where it was discarded, and then, failing to throw it away, they will say take it to the registry. Here is a computer; even what the chief [registry officer] has here is not a new computer” [P8CRO].

#### **4.4 Preparation of Employees for the Deployment of an Integrated Electronic Records Management System**

The study has revealed that very little has been done to prepare employees for the deployment of an IERMS. No training has been undertaken to equip staff with the skills required to work with an IERMS. One participant submitted that:

“So, in terms of skill set, I doubt if they will be...if they are readily available for deployment of... but it will require a lot of training for them to change because the skill set is so low, and you start wondering do they expect a good service” [P01DRCAB].

Another participant stated:

“Registry officers need some training as most of them are direct from school (i.e., Grade 12s). I don’t even know if they can even do e-records. They don’t understand it” [P09CRO].

It was further established that no strategies had been put in place to manage change. One participant that there was a need to prepare staff for the impending deployment of IERMS so that they could support the project.

#### **3.4 Challenges of Implementing an Integrated Electronic Records Management System**

The study has established several challenges which include a lack of adoption strategy for an IERMS, a lack of end-user involvement in the development of IERMS, ill-prepared staff in terms of ICT skills, and an overall lack of change management. Other challenges include a lack of awareness among registry officers over the legal framework, an absence of standards for e-records management, and a general lack of funding to acquire ICT equipment needed by records officers to digitalise and file records electronically. On funding, this is what some participants said:

“So, for anything, you can ask Smart Zambia if they have got enough resources to implement the records management system to deploy the integrated records system in public service...the budget line for induction is almost non-existent” [P01DRCAB].

“Funding is very poor. Just imagine maybe you are given K70 000 or K50 000 for the whole year. What do you do with such amounts of funds? You can’t even inspect all the 10 provinces to see if there is compliance with records ethics management. Funding is not good” [P8CRO].

On lack of the necessary ICT skills, almost all the participants complained of a lack of training in e-records management as captured in the submissions below:

“The most unfortunate thing is entry requisites for records management staff is very basic; just need to be a Grade 12. Most of the government functions have upgraded their requisites to a basic degree whilst records management has remained seriously low. Records management is the only function that has remained with cracks in the public service. Because the skill set is so low, you start wondering, do they expect good service or it’s a deliberate design” [P01DRCAB].

There was also a lack of change management as records officers have not been prepared for the impending deployment of an IERMS. One participant submitted that:

“Change management, mindset dedication, transferring manual to electronic, that requires commitment. Scanning it will require a lot of hard work, it will require initiative, it will require a lot of dedication” [P05CRO].

## **5. DISCUSSION OF THE FINDINGS**

The findings above have shown that Smart Zambia Institute has begun developing an IERMS with no consultation from stakeholders such as records officers. Stakeholders’ involvement is crucial in the design, development, and implementation of an IERMS. The lack of user involvement in functional requirements can negatively impact project delivery, business functionality, and technical functionality (Eichhorn, 2014). The failure of Smart Zambia to involve stakeholders could result in the development of a system that cannot meet the needs of records officers and may be rejected by the end users.

It is clear from the findings of this study that the Zambian Government has provided the legal framework for e-records management in Zambia. Two major pieces of legislation, the Electronic Government Act of 2021, and the Electronic Communications and Transactions Act of 2021 support e-records management in Zambia. The Electronic Government Act of 2021 in section 4 permits public bodies to keep e-records and describes how they should be kept (The Republic of Zambia. Parliament, 2021). The Electronic Communications and Transactions Act of 2021 also mandates organisations to capture and retain electronic mail and keep them as e-records. However, there is a general lack of information on the existence of a legal framework for e-records among records officers in public service, which may negatively affect the way records officers work in the electronic environment.

The study findings have shown a lack of adoption of standards to support e-records management. This may result in public service creating and using an e-records system that does not meet international standards set by the International Standard Organisation, the United of America Department of Defence, the National Records of Scotland, and the European Commission (Newa & Mwantimwa, 2019).

The study has revealed that there are no measures put in place by the Government of Zambia to prepare staff for the impending implementation of an IERMS. There is no change management strategy and staff training to ensure a smooth transition from paper to e-records management. Proper change management and training reduce resistance to innovations and help smooth the adoption of technology (Buehring, 2021). Through change management, people are trained and this increases project buy-in of the stakeholders at all levels (Keith, 2005).

It is clear from the findings that many registry and records officers in Zambia lack ICT skills which are essential for e-records management. Many records management staff in public service have no formal training in e-records management. As observed by Ambira, Kemoni, & Nglude (2019) and Nengomasha and Chikomba (2018), there is a need to train the staff on how to work with an IERMS and the general use of ICT equipment such as scanners that may be used in the process of digitalising the records.



It has been also established that the Zambian Public Service has adequate backend ICT infrastructure in terms of servers. Smart Zambia Institute has established three data centres which are being run by Infratel Zambia Limited (Infratel, 2023). Therefore, hosting any system including an IERMS cannot be a problem for the public service. However, as observed by Sasmita and Sutirman (2017), the lack of end-user ICT infrastructure is a challenge in public service in Zambia as many records officers do not have computers, or internet connectivity in their offices. If the IERMS has to be deployed in public service in Zambia, the government has to acquire all the necessary end-user ICT equipment and provide internet connectivity, or else it will be impossible for a records officer to work with an IERMS that is installed on a remote server.

From the findings above, one could argue that there is little or no political will to implement an IERMS in public service in Zambia. Since the launch of the Public Service Records Management Policy in 2012, the only tangible result seen from the Government is the enactment of relevant laws to anchor e-records management in the country. No funding has been dedicated towards the automation of records in public services and all the participants interviewed cited lack of funding as a major challenge. As captured in the theoretical framework, top management support is cardinal to any project as it unlocks project resources. The lack of political will in Zambia contradicts the findings by Nengomasha and Chikomba (2018) who attributed success in the deployment of an IERMS in Namibia to the Government's commitment to the project.

## 6. CONCLUSION AND RECOMMENDATIONS

It can be concluded that an IERMS has not been implemented in public service in Zambia but Smart Zambia Institute, a government department has begun developing an IERMS. It has also been established that the Zambian government has enacted relevant laws such as the Electronic Government Act of 2021 to provide for e-records management in Zambia. However, the public service in Zambia has not developed or adopted standards for e-records management. The findings of the study have also shown that end-user ICT equipment and internet connectivity are lacking among records officers in public service. Further, there is no change management strategy, resulting in a lack of training for records officers.

Given the above findings, the Government of Zambia should:

- i) Quickly finalise the development and deployment of an IERMS in consultation with stakeholders.
- ii) Develop a change management strategy.
- iii) Procure end-user ICT equipment and provide internet connectivity to records officers.
- iv) Develop or adopt standards on e-records management in public service.
- v) Raise awareness among records officers about the existence of laws that support e-records management.

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