

**An Investigation of the Impact on Electronic Records Management on  
Service Delivery in the Department of Immigration in Zambia**

By

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I Mutale Kapanda do hereby declare that this dissertation represents my work and that it has not been submitted by anyone else at the University of Zambia or at any other university for the award of a degree.

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This dissertation of Mutale Kapanda has been approved as fulfilling the requirements for the award of the degree of Master of Library and Information Science by the University of Zambia.

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### **Dedication**

I dedicate this dissertation to my late father, John Kapanda, who would have been very happy and proud to see me graduate with this paper. I further dedicate this dissertation to my late mother, Margaret Chishimba Kapanda, who has made me to be where I am today; for without her, I would not have reached this far.

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The development of this document resulted in the involvement of some members of staff from the Department of Immigration as well as heads of provincial centres in different towns of Zambia who participated in this research and provided the much-needed information. Without the involvement of these people this research would not have been completed successfully.

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## **Abstract**

This study sought to investigate the impact of electronic records management on service delivery in the Department of Immigration. Specifically, the study had the following five objectives to achieve at the end of the study: to establish employee's experience with the electronic records management adopted in the department of Immigration: to determine the extent to which implementation of the ERMS had improved storage of records at the department of Immigration: to assess the extent to which ERMS had improved accessibility and retrieval of records: to investigate the impact of ERMS on service delivery at the department and lastly to identify the challenges arising from use of ERMS in the department.

This study used a case study research design using a single cross-sectional mixed methods approach meaning both qualitative and quantitative data was collected for the study. Data was collected from a sample of 110 respondents drawn from target population of approximately 200 staff who interact with the electronic management system (ERMS). A structured questionnaire consisting of close-ended and open-ended questions was administered on 100 respondents and oral interviews conducted on 10 key informants that were purposively selected for this study. Quantitative data was analysed using the IBM Statistical Package for Social Sciences (IBM SPSS) version 26 while qualitative data was analysed using thematic techniques.

The study established that automation has greatly improved the retrieval and accessibility of records as responded by 86.9% of staff surveyed. Further, automation has reduced storage costs and eliminated misfiling and loss of records, resulting improved service delivery. In. Furthermore, results from the study reveal that in terms of improving storage of records, efforts to have full storage off site back-up of records has equally been underway with SMART Zambia. This is to ensure that there is a full recovery plan in times of disasters. In addition, the findings revealed that 86.9% of the respondents were of the view that the implementation of ERMS had improved accessibility and retrieval time of records while 84.5% indicated implementation of ERMS had made it possible for same record to accessed by several users simultaneously. The findings from the fourth objective indicate 90.0% of the respondents rated the speed at which work was being done after implementation of ERMS was faster as opposed to 8.4% who felt it was slow. The major challenges from the study as revealed by the respondents included lack of fully trained personnel, potential security breaches at , inadequate funding, weak implementation strategies, poor Internet connectivity and frequent power outages, inadequate computer facilities. Other challenges include staff

resistance to change. Based on the findings and discussions, the study recommends that the Department of Immigration increases funding to purchase more computers and other related equipment; provides regular staff training based on a thorough needs assessment for all levels of staff; revision of current records management policy to incorporate electronic record management issues spelling out retrieval, accessibility; and improve backup system to enhance safety and security of electronic records.



## Table of Contents

Copyright Declaration .....	i
Declaration.....	ii
Certificate of Approval.....	iii
Dedication.....	iv
Acknowledgement .....	v
Abstract .....	vi
List of Tables .....	xi
List of Figures.....	xii
List of Acronyms .....	xiii
CHAPTER ONE: INTRODUCTION .....	1
1.1 Overview .....	1
1.2 Background of the study .....	1
1.3 Records Management Practices in the Department of Immigration .....	4
1.5 Problem Statement.....	8
1.6 Objectives of the Study.....	10
1.7 Research Questions.....	10
1.8 Significance of the Study .....	10
1.9 Limitations of the Study.....	11
1.10 Operational Definition of Terms .....	11
1.11 Ethical Issues .....	12
1.12 Summary .....	12
CHAPTER TWO: LITERATURE REVIEW.....	14
2.1 Overview .....	14
2.3 Implementation of Electronic Records Management .....	15
2.4 Electronic Records Management Systems .....	16
2.4.2 Hosting of Electronic Records Management Models.....	19

2.5 Impact of Migration on Retrieval of E-records .....	20
2.6 Electronic Records and Accessibility .....	21
2.7 Digitisation and Storage of Records .....	22
2.8 Benefits of Electronic Records Management .....	24
2.9 Challenges of Electronic Records Management.....	26
2.1.0 Theoretical Framework .....	28
2.1.1 Summary .....	30
<b>CHAPTER 3: RESEARCH METHODOLOGY .....</b>	<b>32</b>
3.1 Overview .....	32
3.3 Target Population .....	32
3.4 Sampling Techniques .....	32
3.5 Sample Size .....	33
3.6 Data Collection Instruments and Procedures .....	33
3.6.1 Questionnaire .....	33
3.6.2 Interview guide .....	33
3.7 Data Analysis .....	33
3.9 Summary .....	34
<b>CHAPTER 4: FINDINGS .....</b>	<b>36</b>
4.1 Overview .....	36
4.2 Characteristics of the Respondents .....	36
4.3 Staff's Experience with the ERMS .....	37
4.4 The Extent to ERMS has Improved Storage and of Records.....	39
4.5 The Extent to which ERMS has Improved Accessibility and Retrieval of Records .....	39
4.6 The Impact of ERMS on Service Delivery .....	39
4.6 Challenges of Employees Experience in the Use the ERMS .....	41
4.7 Participants' Recommendations on how to Improve the ERMS.....	42

4.8 Summary .....	43
CHAPTER 5: DISCUSSION AND INTERPRETATION OF RESEARCH FINDINGS ..	45
5.1 Overview .....	45
5.3 The Extent to which Implementation has Improved Storage of Records .....	46
5.4 The Extent to which ERMS has Improved Retrieval and Accessibility of Records .....	47
5.5 Impact of ERMS on Service Delivery .....	48
5.6 Challenges Facing the Implementation of the ERMS .....	49
5.6.2 <i>Inadequate Infrastructure Leading to Poor Service Delivery</i> .....	50
5.6.3 <i>Lack of experience by staff on ERMS</i> .....	51
5.6.4 <i>Inadequate ERMS Policy on Retrieval and Accessibility of ERMS</i> .....	52
5.6.5 <i>Poor Security</i> .....	53
5.7 Summary .....	53
CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS.....	55
6.1 Overview .....	55
6.1 Conclusion.....	55
6.2 Recommendations.....	56
References .....	57
Appendix II: Interview Guide for senior members of Staff .....	75
Appendix III: Interview Guide for Registry Staff .....	76

## **List of Tables**

Table 1: Respondents current job title .....	37
Table 2: Staff experience with ERMS usage.....	38
Table 3: Staff involved in the use of ERMS.....	38
Table 4: Ways in which ERMS has improved access and retrieval of records .....	39
Table 5: Role of ERMS in enhanced service delivery .....	40
Table 6: Challenges arising from migrating to ERMS.....	41
Table 7: Challenges encountered by ERMS users .....	42

## List of Figures

1: DeLone and McLean Information Success Model .....	<b>Error! Bookmark not defined.</b>
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### **List of Acronyms**

EDRMS	Electronic Documents and Records Management System
ERM	Electronic Record Management
ERMS	Electronic Records Management System
ESARBICA	Eastern and Southern Africa Regional Branch of the International Council on Archives
ICT	Information and Communication Technology
IRMT	International Records Management Trust
ISO	International Organisation for Standardisation
IT	Information Technology
IS	Information Systems
KII	Key Informant Interview
MHA	Ministry of Home Affairs
NRPC	National Registration Passport and Citizenship
OWASP	Open Web Application Security Project
USB	Universal Serial Bus
ZIMS	Zambia Information Management System

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Overview**

This chapter presents a general introduction to the study. The chapter contains the background of the research problem, the statement of the problem, the research questions, and the significance of the study. The chapter also presents the definitions of key concepts, expected limitations of the study, and the synopsis of the chapters.

### **1.2 Background of the study**

Records management is responsible for the “efficient and systematic control of the creation, receipt, maintenance, use and disposal of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records (Duranti, 1999). In this context, records are information created, received and maintained as evidence and information by an organisation or person, in pursuance of legal obligations or in the transaction of business (Duranti, 1999). Examples of records include final reports, emails confirming an action or decision spread sheets showing budget decisions, photographs or maps.

An electronic record on the other hand is any information created, used and retained in a form that only a computer can process. Electronic records include email, text messages, disaster recover, backup tape and records that exist on portable media such as memory sticks and other devices that can be read only by use of a computer (Mukred et al., 2019). Electronic records management is the efficient management of records stored on computerised systems. The key to electronic records management is to be able to support such documents through their entire life cycle. In this context, a record is content that documents a business transaction. It should also meet the International Organisation for Standardisation (ISO) 15489 definition of an information management system which is a computer system comprising of both hardware and software that serves as the backbone of an organisation’s operations. The Information System gathers data from multiple online systems, analyses the information and reports data to aid in management in making decisions (Shonhe& Grand, 2019). Mukred et al. (2019) adds that the successful implementation of electronic records management is the backbone of every organisation because it enhances accuracy, manifold and productivity. This study focuses on the impact of electronic records management on service delivery in the department of Immigration in Zambia.

Records are created and used daily to document actions, confirm decisions, identify rights and responsibilities and communicate information. Without records, governments and businesses today could not operate. It is no longer possible to “remember” vast quantities of information without creating an independent account. The department of Immigration under the umbrella of the Ministry of Home Affairs and Internal Security is charged with the responsibility of Immigration issues such as issuance of work permits and resident permits in Zambia. The department is mandated to regulate and monitor the entry, residence, employment and exit of all foreigners as well as monitoring the movement of Zambians in and out of the country.

Good records management practices ensure good governance, transparency and accountability as it is from these records created that decisions are made at an appropriate time as required, (Chachage and Ngulube, 2006). The department uses records for such wide-ranging purposes such as documenting the work of employees, confirming pensions, and leave and health benefits. In addition, records are vital in that they help in reviewing policies and procedures and confirming citizen’s rights such as benefits or land ownership.

Service delivery is a topical issue for most governments and scholars alike. It is regarded as the extent to which organisations produce a service or product that conforms to customer needs and wants (Kotler, 2010). On the other hand, service delivery has been described as the act of taking customer care concerns during the service encounter (Adeyemi, 2012). It is a consensus amongst scholars that public service delivery is critical to ensuring the national wellbeing and stimulation of economic development. This is because on a daily basis government carries out several regulated and unregulated activities to provide citizens with services and at the same time guarantee that these services are provided following the rule of law (Nandain, 2005; Wamukoya and Mutula, 2005). Wamukoya and Mutula (2005) argue that better service delivery always begins with better records management systems.

Abuki (2014) states that service delivery is all about customer service and effectiveness. Effectiveness in customer service implies doing the right things which is measured using indicators like customer satisfaction and this can be evident in speed; service quality, timing and reactions. A service becomes effective when it is valid to its users or consumers. It is also noticed that whenever service providers meet and exceed their customer’s expectations, then the customer is satisfied. Service delivery is a component of any organisation which defines the interactions that exist between service providers and clients where the providers offers a



service either in the form of information or a task and the clients finds value or loses value as a result.

Electronic Records management according to Ojo (2017) is vital when it comes to service provision. Through implementation of the electronic records management system, more work can be carried in a short space of time in the sense that work can be shared amongst different offices performing different functions. In addition, the transition to electronic records has freed storage space and therefore has reduced storage costs implications. Retrieval time of electronic records is short as compared to retrieval of manual records and in addition, issues of lost or misplaced records have been eliminated with the use of electronic records management systems. Studies conducted by Wamukoya (2000) agree with the assertion that implementation of ERMS improves service delivery because when records are automated, one does not have to spend so much time in search of a record nor do they have to move from one storage room to another in search of a document. Therefore, there is a need to have a proper records management system as it supports efficiency and effectiveness in service deliver in a variety of ways which among others may include documentation of policies and procedures that inform service delivery such as the type of services provided, who are responsible for carrying out the work, and what costs are involved (Abuki, 2014).

Shonhe and Grand (2019) have however affirmed that proper records management is significant to governments' realisation and achievement of their goals such as the rule of law, accountability, and management of state resources and protection of entitlements of its citizens as well as enhancing foreign relations. Nandain (2006:4) further observes that "effective information and records management provides the foundation for accountability and protection of human rights and increases citizens "awareness of their rights".

It would therefore be important to highlight that an effective records management program ensures that the institution meets its records keeping requirements by making sure that the department captures and preserves the evidence required to establish its accountability. A good records management system has to ensure that the institution is saved from the provision of expensive equipment and costly human resources for it to keep its records which may otherwise be not needed. Thus, governments must continue improving their records management programs in order to achieve greater service deliver, bearing in mind that the customers' socio-political and economical needs are diverse. The underlining point therefore

is that proper records management facilitates planning and informed decision making, supports continuity, consistency and effectiveness of public service delivery.

### **1.3 Importance of Electronic Records**

Effective e-records management is considered an integral part of efforts to successfully implement an e-government (Kamatula, 2018). However, a study conducted by Kashorda and Naema (2014) at Kenyatta University revealed that each person may have their own perception of the value of e-records. On the whole, a study conducted by Henriks and Andersen (2008) indicate that e-records management has the increased efficiency and effectiveness of governments, increased transparency and accountability in decision making, and enhanced the delivery of efficient and cost-effective public services to the citizens. Generally, effective management of records of different types plays an important role in supporting the accessibility of data and information for decision making, (Wilkins et al, and 2007). Accordingly, Ngoepe (2008) discloses that an effective records management programme is a major element of the governance of any organisation.

Kamatula (2010) further says electronic records management also leads to increased efficiency and file management, better searching capabilities, more consistent content and improved task management which allows for tasks to be assigned to users if required. Advanced workflow capabilities are also available that allow to route documents throughout the organisation while maintaining the ability to track their progress. Effective implementation of electronic records management requires seamless alignment with business operations in order to improve output. Most countries in Africa are investing a lot of resources in terms of finances and manpower on electronic records management projects. Ellis (2005) argues that implementation of EMS is at a great risk of such an end as they change projects that involve unpredictable nature of people and budget allocations that often weigh heavily on the side of technology instead of changing the habits of users.

Good records management practices support efficiency and effectiveness in service delivery in many ways. These include documentation of policies, procedures, rules and regulations that inform service delivery such as type of services provided and who is responsible for service provision. Ngulube (2007) asserts that effective information and records management provides the foundation for accountability, protection of human rights and increases citizen's awareness to their rights. Records are important sources of information and knowledge, (Sejane, 2005). They assist the Government to make timely, relevant and informed decisions,

hence contribute to sustainable economic and political development (Kemoni, 2007). Electronic records management is a key element in the smooth running of the Department of Immigration due to the nature of the services they provide and especially that they deal with a huge clientele of non-Zambians on a daily basis. And so, the need for the Department to provide electronic services becomes inevitable as such services enables clientele to access the information they want as and when they need it.

Electronic records management increases security and control as some documents maybe extremely sensitive and having adequate security and control over who can retrieve the organisation's information is imperative, (Smyth, 2004). In addition, migration to electronic documents greatly improves internal and external collaboration. For example, an employee may be able to identify where a file is at any given time. In addition, the observation has been that managing records electronically improves timeliness in the sense that staff can be able to search or view a file or document from their computer rather than manually dig through a filing cabinet which saves time, (Sunders, Lewis & Thornhill, 2016). Migration translates into lower archiving costs in the sense that processing, storing and retrieving archived records can be significantly improved when moving to electronic environment.

Due to the accumulation of paper records over the years and considering that space is becoming yet another challenge for the institution, the need to migrate to digital format of record keeping arose. Waldron (2004) asserts that electronic and documents management become a vital element in a situation where almost all space gets consumed up and in addition, accessibility with regards to electronically generated records become easier. However, for this transition to be considered a success story, it could be evident or shown on the impact it will have in service provision. Furthermore, Shepherd and Yeo (2003) asserted that cases of missing records are rampant in organisations that do not embrace modern technologies in managing information. Bowen and Johnson (2005) reveal that poor management of information in any organisation is viewed to be a threat to organisational growth. It is against this background that this study investigates the impact of electronic records management on service delivery in the Department of Immigration considering that it provides a vast number of services to different nationals in different locations, (Ryan, 2005).

#### **1.4 Records Management Practices in the Department of Immigration**

The Department of Immigration has over the years strived to improve its border management systems by embracing the use of the latest information and communications technologies (ICT); thus, pushing its operations to a paperless status. This and many other initiatives are helping the Department to see to it that the majority of genuine migrants can move easily and effortlessly across the borders without unnecessary delay, while immigration officers continue to focus their attention on undesirable non-compliant migrants. The Zambia Department of Immigration aims to effectively and efficiently facilitate and regulate the entry and exit of persons and control the stay of immigrants and visitors in the country to contribute to internal security and sustainable socio-economic development.

The Department of Immigration which has ninety-eight offices spread throughout the country is charged with the responsibility of issuance of resident and work permits for both foreigners as well as Zambians travelling out of the country. The Department falls under the Ministry of Home Affairs and Internal Security whose mandate is to provide and maintain internal security to promote sustainable socio-economic development for the people of Zambia (Ministry of Home Affairs and Internal Security, 2014). The department is guided by its mission statement which is “to facilitate and regulate the movement of persons entering and leaving the country, and control the stay of Immigrants and visitors in order to contribute to the maintenance of internal security and sustainable socio-economic development. The department is headed by the Director General who is assisted by two assistant Commissioners for operations and administration. Each province is headed by Principal Immigration Officer assisted by Immigration Officers and Assistant Immigration Officers.

The Department is charged with the following responsibilities, (Home Affairs Magazine, 2013)

- i. control all border areas and regulate entry and exits at all ports of entry
- ii. regulate the migration of any person to Zambia while promoting economic growth
- iii. ensure that businesses in Zambia may employ foreigners who possess scarce on the Zambian labour market;
- iv. enable exceptionally skilled or qualified people to sojourn in Zambia.
- v. facilitate the movement of students and academic staff for study, teaching and research.
- vi. Assist in the prosecution of any offence under the Immigration and Deportation Act.

vii. Administering statutory fees.

In carrying out these functions, the Department of Immigration generates a lot of records and documents in carrying out its day-to-day activities. It would be inevitable to mention that each department adopts a method of recordkeeping that it deems relevant in as much as the government has been in the lead to encourage provision of electronic services.

In the implementation of electronic records management systems, choosing a module or approach that aligns best with the organisation's specific needs and requirements is very vital because it has to be in tandem with what will be put in place, (IRMT, 2000). The concept of understanding the context of electronic records management, opportunities and challenges that arise from migration are all embedded in the module to be used.

The department of Immigration adopted an electronic records management module that firstly looked at planning and managing of electronic records and by so doing this helped out by giving out a clear road map of how the process would be done. In addition, the module gives a guide on the creation, use and disposal of electronic records. In every used system of records management, there is need to know how these records would be disposed and after how long would disposal be done, (IRMT, 2000). In their nature of being electronic, disposal is needs to be done with caution as most of them get to be stored in formats that can be difficult to completely get rid of depending on the system that has been put in place. The module further guides on preservation of the electronic records would be done and in what electronic media would they be preserved and lastly it gives specifics on managing personnel that handle electronic records, (Immigration Handbook Manual, 2010). In managing personnel, the issue of confidentiality in records that should not be accessed by everyone comes in. In addition, the "read only" records equally have to be handled with clear caution as they would not have any back up of any print format

The management of current records in the public sector is the responsibility of the Records Management System and Policy Development Section of the Public Service Management Division of Cabinet Office of Zambia (International Records Management Trust, 2007; Hamooya, 2009: 69). Each ministry and department of government has a registry where current records are housed. Hamooya (2009) further observes that the overall objective of the section is to ensure that records are handled in the most efficient way thereby enhancing information delivery which will contribute to operational efficiency. This is being achieved through prescribing systems and methods of handling records for current use in offices.

Currently, the registry services manual and the government office instruction document are in use.

Hamooya (2009) observes that currently Zambia is in the midst of the transition from paper-based business records to a predominantly electronic record (e-record) environment. This transition has been necessitated by the proliferation of Information and Communications Technologies (ICTs). The Zambian Government is involved in initiatives that involve ICTs in the public sector. According to the Zambian Government National Information and Communication Technology Policy (2006), a number of ICT projects have increased over the years resulting in building blocks such as the Integrated Financial Management System (IFMIS) project, Payroll Management and Establishment Control Project and building of Local Area Networks. In addition, the Government has further implemented the electronic Government also known as the Smart Zambia Institute which is a division in the Office of the President which is charged with the responsibility of the management and promotion of electronic Government services and processes. The Division draws its mandate from the Electronic Government Act No. 41 of 2021 which is a Governance Act required to facilitate access to electronic Government services to improve service delivery.

Citing the case of the Department of Immigration, the reasons behind migration could be attributed to the fact that using electronic records management saves employers' time in finding and accessing needed records. The easiness in distribution of documents throughout an organisation and to the public has been made possible. This is to say the use of electronic documents enables multiple access of records at the same time. In addition, the challenge of losing records is eliminated in the sense that Electronic records management (ERMS) allows documents to be stored in a central location where everyone can access them from the same file classification system.

### **1.5 Problem Statement**

Studies conducted by scholars on implementation of ERMS have observed that various Government departments have been facing challenges in the management of records and consequently, this has affected the quality of public service delivery (Abuki, 2014; Kemoni&Ngulube, 2008; Mampe&Kalusopa, 2012; Wamukoya&Mutula, 2005; Moemi&Rotich, 2015; Oyaro, 2013). The high incidence of poor service delivery in government agencies is a key factor that has put pressure on the government to implement electronic records management systems (Ali & Nasir, 2010; Kettani& Moulin, 2014). The main essence

of implementing ERMS is that of improving efficiency and effectiveness, accessibility of records and management of records (Mosweu, Mutshewa & Bwalya, 2014). This is the same concept that the department of Immigration has taken into consideration with the view that once e-records system is in use, the service delivery is more likely to improve.

A study conducted by Shonhe and Grand (2014) on implementation of electronic records management in the public health sector of Tanzania has revealed that implementation of ERMS ensures effective management of resources, minimises litigation risks, improves accountability and transparency, and provides the basis for complying with legal requirements. Implementation of ERMS programs requires management skills about procurement, project management, change management and training (Smith, 2007). The literature studied has revealed that to date, there has been no systematic research conducted with respect to the effectiveness in managing electronic records in the implementing organisations. Only a small number of organisations report on their electronic records management system projects and not surprisingly, these reports focus on the system implementing process and only report in very general terms the results of the projects (Wamukoya and Mutula, 2005).

The problem that has prompted this study is that upon implementation of electronic records management system in the department of Immigration, it has not been established whether electronic records management has led to the provision of a more effective and efficient delivery of services in terms of accessibility, retrieval and storage of records. In addition, the study sought to establish if at all there any challenges arising out of the migration process. Therefore, this problem presents a potential study for investigation in the Department of Immigration. Many studies have been carried out regarding the implementation of electronic records management system but have not examined critically the impact that it could have had on services such as retrieval, accessibility and storage of these records.

For example, Studies conducted by Kemoni and Ngulube (2008), Kwatsha (2010), and Luyombya (2010) noted that there exist deficiencies in evidence on how the current state of electronic records management facilitates customer service delivery in public universities in Kenya. It is observed that the link between electronic records management systems and service delivery in organisations is unclear as it hasn't been established how effective ERMS has been after implementation. So far, there has been a lapse on following up whether the

system implemented has had either a positive or negative impact on service provision and if users of the system have accepted and adapted to it.

### **1.6 Objectives of the Study**

The main objective of the study was to investigate the impact of electronic records management on service delivery in the Department of Immigration. The specific objectives of this study were to:

- i. establish employees' experience with the ERMS used at the Department of Immigration;
- ii. determine the extent to which the implementation of ERMS had improved storage of records at the Department of Immigration;
- iii. assess the extent to which ERMS had improved accessibility and retrieval of records;
- iv. investigate the impact of ERMS on service delivery at the Department of Immigration;
- v. identify the challenges arising from use of electronic records management system at the Department of Immigration.

### **1.7 Research Questions**

This study is guided by the following research questions:

- i. What is the employees' experience with the ERMS used at the Department of Immigration?
- i. To what extent has the implementation of ERMS improved the storage of records at the Department of Immigration?
- ii. To what extent has the implementation of ERMS improved the accessibility and retrieval of records at the Department of Immigration?
- iii. What is the impact of ERMS on service delivery at the Department of Immigration?
- iv. What are the challenges arising from the implementation of ERMS at the Department of Immigration?

### **1.8 Significance of the Study**

Most of the influential research projects on ERMS are led by the Western World. Scholarly studies from developing countries remain relatively silent on this subject (Kettan&Moulin, 2014). This is probably because some organizations in both the public and private sectors have been experimenting with technical solutions to the management of electronic records,



the practice is not yet widespread in developing countries (Abuki, 2014). As a result, most institutions have not yet had an opportunity to adopt ERMS (Mampe&Kalusopa, 2012). It is therefore hoped that this study will help determine the degree to which the implementation of ERMS at the Department of Immigration has achieved its intended outcomes, where it has experienced lapses and most possibly highlight how performance might be improved. Furthermore, the findings of this study will be of benefit to both organizations that intend to implement ERMS and to the records management communities charged with the responsibilities of guiding the management of electronic records. Lastly, the findings of this study will contribute to the already existing body of knowledge on the implementation of electronic records management system.

### **1.9 Limitations of the Study**

Limitations are those conditions beyond the control of the researcher that may place restrictions on the conclusion of the study and their application to other situations (Smyth, 2004). Therefore, it would be imperative to highlight some of the challenges the researcher is more likely to encounter within the course of the study.

The unwillingness of some respondents to return the questionnaires was another constraint to this study especially with the ones sent electronically because there is no physical follow up on them. However as anticipated, some respondents could not cooperate during research data collection. Others would only tick the responses without thorough reading and understanding of the questions. However, inspite of the aforementioned obstacles, the researcher did manage to gather information through regular follow ups.

### **1.10 Operational Definition of Terms**

This study would encompass certain key terms that will continuously flow in the entire paper and these terms include: Records Management, electronic record, digital transition, electronic document records management system and service delivery.

- i. **Record:** refers to a document made or received in the course of an activity and set aside for action or reference (Mampe&Kalusopa, 2012).
- ii. **Records Management:** is responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposal of records including processes for capturing and maintaining evidence of information about business activities and transactions in the form of records, (Duranti, 1999).

- iii. **Electronic Record:** A record generated or received by in digital format that can be manipulated, transmitted or processed by a computer (Bwalya & Healy, 2010).
- iv. **Digital Transition:** according to Duranti (2010) is the shift from analogue or physical information to that, which is stored, recalled or manipulates using a digital platform.
- v. **Electronic Document Records Management System:** is a computer software program or a set of applications which are built to track and store records (Anunobi, 2011). The program can be used to manage the creation and maintenance of records, apply retention and disposal schedules, control access and use.
- vi. **Service delivery:** This is a component of business that defines the interaction between providers and clients where the provider offers a service, whether that be information or a task, and the client either finds value or loses value as a result. Good service delivery provides clients with an increase in value (Abuki, 2014).

### 1.11 Ethical Issues

Ethical clearance to carry out the research was obtained from the University Ethics office. Clearance was further obtained from the department of Immigration headquarters to conduct the research from the institution. As using questionnaires is highly dependent on honesty of the respondent, this may not be fully guaranteed. However, confidentiality of respondents was observed during the study. However, the researcher heeded the caution by that giving too much information about the study to the respondents may lead to bias in the responses.

### 1.12 Summary

This chapter has provided the background to the study highlighting the emergence of electronic records management systems and the impact such a system has on service delivery precisely on the accessibility, retrieval and storage of records. The statement of the problem recognises the shift from the old traditional way of record keeping to electronic records through ICTs and how transitioning to electronic has enhanced the provision of services in the department of Immigration. The significance and limitations of the study have been explained in line with the study. In addition to contributing to the body, the study aimed to come up with recommendations on how to have more improved services after outlining the challenges that have arisen since the adoption of ERMS. The rest of the chapters are a build up towards answering the research questions of the study listed in this chapter as well as

arriving at those recommendations. The next chapter presents the literature review of the study.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Overview**

This chapter covered reviews of literature that relate to the implementation of ERMS. The reviewed literature specifically covers the functionalities of ERMS, types of electronic information systems, electronic records management policy, best practices and electronic records management standards benefits of implementing ERMS, challenges of implementing ERMS and successes of migration. Therefore, the purpose of this chapter is to review literature sources relevant to the area of study to determine what has been done, what has not been done and thereafter identify the gaps from the literature.

### **2.2 Concept of Electronic Records Management**

The general principles of records management apply to records in any format. Digital records (almost always referred to as electronic records), however, raise specific issues. It is more difficult to ensure that the content, context and structure of records is preserved and protected when the records do not have a physical existence. This has important implications for the authenticity, reliability, and trustworthiness of records, (Duranti, 1999).

Recordsmanagement 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). The majority of this information, however, is less reliable, retrievable, or accessible than ever before. Software systems generate, manage, and store digital data using proprietary technologies and media that are not developed to segregate different types of information, to prevent manipulation or tampering, or to establish and maintain an intellectual order, and that are subject to the dynamism of the computerindustry, (Dollar, 2000)

An electronic record on the other hand refers to a any record generated or received in digital format that can be manipulated, transmitted or processed by a computer. Records management refers to the whole range of activities which an organisation should perform to properly manage its records (Mutimba, 2014). These e-records are kept in electronic records management system, (ERMS).On the other hand, an electronic records management system is a computer software program or a set of applications which are built to track and store

records (Peter, 2002). The program can be used to manage the creation and maintenance of records, apply retention and disposal schedules and control access and use.

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.

Records Management Systems (RMS) are considered to be software used by an organization to manage its records. The system's primary management functions are categorizing and locating records and identifying records that are due for disposition. A records management software also locates, retrieves, and disposes of the electronic records that are stored in a repository through integration with relevant core Electronic Document Management System functions

### **2.3 Implementation of Electronic Records Management**

Records are the crucial part of Information that aids an organisation to make timely decisions as well as contribute to service processes to achieve desired goals. Organisations need to keep records of business decisions and transactions to meet the demands of corporate accountability. In the government sector, there are specific public accountability requirements as well as the need to comply with public records legislation. A record is evidence of an activity or transaction and demonstrates accountability. Records are created by the day-to-day work that takes place in government; they need to be captured, managed and safeguarded in an organised system in order to retain their value. It has however been observed that has been made. The observation that has been made previously is that most organisations use the old model of organising records into paper files, and filed in physical storage rooms (Alsharo et al, 2020). However, use of paper-based records has raised a number of challenges in the recent past that includes losing and misplaced files, difficult in tracking files and accessing of files, (Mosweu & Bwalya, 2014). Therefore, organisations are automating paper records to create electronic records called e-records.

The main business reason for an electronic records management system is to enable sharing of documents across several sites to make finding of information easier, to stop duplication and to help version control in order to make institutions run more efficiently (Ellis, 2005).

Alsharo et al., (2020) observed that ERMS has been implemented in different places around the world, especially in developing countries for over 20 years. A number of scholars (Yunus et al., 2018; Murkred et al., 2019; Alanazi et al., 2020; Alsharo et al., 2020; Linch, 2020) have revealed that ERM experience has become a growing trend in developing countries that helps to resolve different challenges from paper-based system.

The records management professionals consulted in the course of a study on implementation of electronic records management in the department of Immigration services in Ghana confirmed that a computerized records management project implemented in the Management Information System Unit had resulted in improved organizational processes, improved access to information and consistency in service delivery, (Nyampong, 2015). This means that a corporate-wide, technology-based redesign of information processing as well as electronic records management has the potential to transform Ghana Immigration Services and enhance growth and development, (Nyampong, 2015). However, a further observation from the study conducted showed that the department was not adequately prepared for e-records transition at the time of implementation.

The main business reason for an electronic records management system is to enable sharing of documents across several sites to make finding of information easier, to stop duplication and to help version control in order to make institutions run more efficiently (Ellis, 2005). The case under review is the Department of Immigration under the Ministry of Home Affairs in Zambia.

#### **2.4 Electronic Records Management Systems**

Electronic records management systems are needed to assist government organisations in applying records management practices to electronic records, (Abuki, 2014). Electronic records management helps organisations to exploit information more effectively and support the immediate operational requirement for business information, (Moemi & Rotich, 2015). Electronic records management supports the medium to long term information needs of the business, building and maintaining the corporate memory. It manages a corporate filing structure to which records are classified, the integrity and reliability of records once they have been declared as such, and explicit disposal schedules which determine how long records should be kept and how they should eventually be disposed of – for some records by permanent preservation in the national archive, (Bearman, 2004).

An electronic records management system should be capable of managing electronic records throughout their lifecycle, from capture and declaration through ‘trusted record-keeping’ to eventual destruction or permanent preservation, while retaining integrity, authenticity and accessibility, (Waldron, 2004). Often, electronic records management requirements are not sufficiently recognised in determining the functional requirements for new electronic records management systems and in the development of information strategies.

Electronic records management system should capture, receive, and preserve records according to their characteristics. This is to maintain records authenticity, reliability, integrity, trustworthiness, and usability throughout lifecycle. Hence, electronic records system is a system specifically designed to manage the maintenance and disposition of records throughout its lifecycle, (Ryan, 2005). The system maintains the content, context, structure, and links between records to enable their accessibility and support values as evidence. Records and information management involves managing records in all formats from their creation to their ultimate disposal. The growing use of computers and the consequent creation of more and more electronic records are putting pressure on governments and other organizations to manage increasingly decentralized record-keeping systems, (Akotia, 2005). As a result, many organizations find that it is more and more difficult to locate information when it is required.

The key difference between ERMS and the traditional records management of physical records is the focus. ERMS captures records as part of a digital business process, (Ellis, 2005). The concept in an ERMS is that original digital records are preserved and not paper copies that pile up in boxes in records rooms or storerooms. This enables the creation of efficiencies by improving automation of business activities, providing accurate auditing and applying records schedules reliably (ISO, 2001).

Electronic records management system (ERMS) is a key component of any digital transformation strategy and information governance effort. By managing records electronically, one can automatically capture document metadata, which the ERMS can use for identifying records, categorising them and facilitating their retrieval (Ryan, 2005). Digital records management helps ensure that information is captured, older versions are removed and the right information can be found as and when needed (Peter, 2002).

Proper records management not only ensures that files are readily available whenever they are needed, but it can also improve workflow and productivity within the organisation. Retrieval of records would be quicker as well as processing while eliminate redundant data.

#### ***2.4.1. Commonly Used Electronic Records Management Systems***

Record management software is a solution business leverage for tracking, storing, accessing, sharing, and organizing their business-related documentation or records, (Micheal, 2019). The record management software manages all records from creation to when the documents are disposed of. Record management software is essential in ensuring knowledge-sharing, meeting regulatory compliance requirements, and risk management.

The most commonly used records management systems among the many include Alfresco Governance Services (AGS) popularly known as Alfresco Records Management which controls important information that needs to be retained over time. it is used in highly regulated environments for managing governmental information or personal records or where information might be audited, (Apleni& Smuts, 2020). Fully integrated into enterprise, Alfresco Governance Services makes it easy to work with files and have them declared as records at the right time without changing the way of work. The primary advantage of a record management system is that it can categorize and sort documents and data automatically. Whether classifying and categorizing documents, enforcing access, or disposing of redundant data, a records management system empowers a business to improve its efficiency, save money, and gain an edge over the competition, (Micheal, 2019). OpenKM is another commonly used document management system also known as electronic document management system, (Apleni& Smuts, 2020). This software can store, manage and track electronic documents and images of paper-based information captured using a document scanner, (Azadi, 2008). OpenKM integrates all essential document management, collaboration and advanced search functions into an intuitive and easy to use system, (Lukicic&Sruk, 2009). The application includes administration tools to define the roles of users, set access control, set user quotes, secure documents and set up automation, (Azadi, 2008). Other electronic records management systems used include Click Up records management, File Hold records management system, Doc Saving management System, Nava Vault electronic management system, Share Point andFluix electronic management systems, (Lukicic&Sruk, 2009). The different software systems perform different functions according



to the organisation's needs. The main function that all these systems have in common is that of sharing, monitoring, improving efficiency and ensuring compliance, (Azadi, 2008).

#### ***2.4.2 Hosting of Electronic Records Management Models***

Cloud-Based Hosting. This refers to a software application that's stored, managed and available through the cloud. It is generally stored on shared computing resources such as cloud servers. This digital storage solution acts as a warehouse for the files within the organisation allowing for access at anytime and anywhere, (Bwalya & Healy, 2010). Cloud computing involves the delivery of hosted services through the internet. A cloud can be either public or private. A public cloud sells services to anybody who has access to the internet while a private cloud is a proprietary network or data centre that provides services for a small group of individuals with limited access and rights. It's particularly useful for organisations with remote teams as well as those with offices in multiple locations. The department of Immigration is a very good example of an organisation with multiple offices located in different parts of country and therefore adopting such a system for the department would prove to be very prudent.

This type of RMS software keeps files secure and eliminates the need for additional programs to perform routine backups, (Bearman, 2004). Furthermore, it enables users to assign specific files to other team members and send notifications in real time rather than sending emails back and forth.

Local Hosting. This refers to the storage and organization of digital records within an organization or a specific department. Local hosting within an ERMS refers to the specific location where digital records are stored. This could be a departmental server, a cloud-based storage system, or any other designated repository, (Mosweuet al. 2014). Local housing ensures that records are organized, accessible, and secure within a defined scope (such as a department or team). It also involves setting up rules for capturing, maintaining, and accessing records, both internally and externally, (Maulid 2015). When it comes to the management of electronic records, the same principles that apply with all other manual still apply. Digitalised records which we refer to as electronic records raise other issues that are

not covered with the manual records, (Maulid, 2015). The context, content and the structure of records preserved and protected in digital format bear with them implications in terms of authenticity, reliability and trustworthiness of records, (Moemi& Rotich, 2015). This is because these records do not have a physical existence where one is in position to retrieve in the physical state.

Taking an example of the department of Immigration, the first rollout of its first ever electronic Records management system was in 2007 using the Zambia Integrated Management System (ZIMS) 1.0 and this was done in five districts. With time, the system was thereafter upgraded to ZIMS 2.0 in 2010 and the upgrade to date has covered forty-five district offices inclusive of Lusaka Headquarters' and Provincial Office. Furthermore in 2019, system was further upgraded to ZIMS 3.0. This upgrade enhanced the ZIMS by among other features which saw the introduction of electronic submission of and payment for permit applications and issuance of digital permits, (Min. of Home Affairs Bulletin, 2020). Through their Zambia Information Management System, the department has adopted the electronic document and records management system (EDRMS) which is a type of content management system and refers to the combined technologies of document management and records management systems as an integrated system (Dollar, 1999). Electronic document and records management aims to enable organizations to manage documents and records throughout the document life-cycle, from creation to destruction.

## **2.5 Impact of Migration on Retrieval of E-records**

According to Bowen & Johnson, (2005), information retrieval can be defined as a software program that deals with the organisation's storage, retrieval and evaluation of information from document repositories. Information retrieval assists the users in finding the information required. The system notifies users regarding the existence and location of documents that might consist of the required information. Retrieval of a record basically means having a system in place that would make it easier for the records to be reached as soon as possible without so much delay. Bearman (2004) observed that businesses opt to use electronic document storage and retrieval system because of the convenience involved.

The fact that records have been digitalised has enhanced quick accessibility as long as there is good internet network connectivity thus making it possible for individuals to access them wherever they could be. This is extremely useful for people who travel a lot or those who need to access documents while on a tour, vacation or visit. Ryan (2005) asserts that the retrieval of documents from the electronic document storage and retrieval system has been

made easier and faster as when compared to searching through boxes and catalogs. In fact, a lot of offices are striving towards a paperless method of running the business. Electronic retrieval of records has proved to be a method that saves a lot of time, resources and energy are simply conserved.

## **2.6 Electronic Records and Accessibility**

Many private and public organizations share electronic records through e-government systems to conduct business-to-government and government to government transactions. Electronic records management is essential to ensure business efficiency and effectiveness of e-government transactions. In this age of extensive regulatory controls, exhaustive audits and high volumes of electronic transactions, implementing an effective record management system is of utmost importance to almost all organisations.

Access to a record entails availability as and when needed at any time. Electronic records management systems have brought a huge change in as much as accessibility is concerned. Records can only be deemed to be useful if it can be accessed because once accessibility turns out to be a challenge; it is as good as lost. However, Ellis (2010) argues that in as much as records need to be easily accessed, there is need to have regulation. This is so because records need to be protected and that only authorised users need to have access to protect the integrity and authenticity of records.

Taking an example of records generated by the department, it would be inevitable to mention that there are some records which can only be accessed by members of staff while others are “Read only” meaning they cannot actually be printed into hard copies unless to those authorised only. The ability to share records electronically has a number of advantages. For example, successfully set inter-departmental queries reduce the time and physical effort required to communicate and move among departments. With the help of networks, e-records can be accessed by more people hence enhancing transparency and accountability in organisations as supported by Ndenje-Sichalwe and Ngulube (2009).

Oyaro (2017) observed a number of benefits that can be realized through implementing and working with an electronic document and records management system. Ellis (2005) however writes that information keepers need to recognise that deploying of software alone does not guarantee provision of better services as compared to use of manual records. It is a well implemented and managed system that has addressed the change management and

acquaintance of staff to the new system that yields better results. Therefore, transitioning to ERMS enhances quicker and convenient discovery and access to required information.

## **2.7 Digitisation and Storage of Records**

It is quite evident to say that implementation of electronic records management has enhanced storage and hence has proved to be a better system to use as compared to the use of paper records where files would be stored in cabinets thereby consuming more office space, (Ellis 2005). Peter (2005) observes that paper-based data storage occupies a larger space in offices. It is considered to be a wasteful cost to the company as no organisation can keep all of the paper-based documents secured in their best condition. In addition, paper-based records are more likely to get misplaced and one it is like that, it becomes almost impossible to locate it especially where records have accumulated. However, the implementation of electronic records systems ensures that records are not only located conveniently but they are never lost nor misplaced.

According to Kettani and Moulin (2014), records stored in electronic format are safer and secure than paper-based records. Furthermore, it occupies less space and is the most reliable option for managing a large amount of data especially the most critical and sensitive data that the department of Immigration handles on a daily basis.

According to Shonhe and Grand (2019), an action plan of recovering data in case of any natural disaster such as fire, floods, storm or any other natural disaster needs to be put in place at any given time. In such an emergency, paper-based records are primarily destroyed and all information lost. However, once documents are digitised, they can be much secured very conveniently on different servers in multiple locations. However, Ellis (2005) asserts that as ERMS may come with its benefits, the drawback with ERMS is how to decide which system would be technically sound to be adapted for the institution's data management and have the right professionals to manage the system.

Good record keeping management practices enable speedy and efficient access to sharing of information, creation and maintenance of accurate and reliable information, easy accessibility, transparency and accountability, availability of authentic reliable and tangible records that would reflect a true reflection of whatever transaction that transpired at any particular time, (Mugenda, 2008). A study carried out by Mosweu, Mutshowa and Bwalya (2014) has revealed that once records have been digitised, it would be inevitable to store such in a repository that is backed up regularly and is compliant with all privacy and security

requirements. Peter (2002) further asserts that records ought to be organised in such a way that they can be identified and purged appropriately and be able to migrate content to a new system upon replacement. The system should also be maintained through regular software update. Digitisation of records has been seen as a great way to save space and cut storage costs. However, this is highly dependent on the legal and regulatory requirements especially with regards to what is stipulated in the records retention schedule, (Oyaro, 2017). Best of all, the imaged and indexed documents are instantly available to staff across your organization and can be quickly and easily accessed then needed.

A records management policy is a formal document that outlines an organisation's procedures for managing its records. The policy should address how records are created, stored and accessed as well as how they are destroyed or archived (Smith, 2007).

The extensive use of automation to conduct government business has been largely seen to be on the increase and has eventually led to the proliferation of electronic state records. The emerging use of ERMS has however created many concerns regarding the management of such records, (Chachage&Ngulube, 2006). For example, records in electronic format are hardware and software dependent. This entails that they can only be read and understood if the storage medium can be read by existing equipment and if the programs used to create the digitised data are still available. In addition, information is among the most valuable asset that the state and government agencies such as the department of Immigration have at their daily disposal. It is the basis for decision making, justification of resources, determination of benefits as well as a variety of other routine operations, (Kamatula, 2018). While technology gives the department the capability to respond to the growing demand for information, it also presents a number of concerns such as long-term retention, compatibility, accessibility and security.

Therefore, it would be imperative to ensure that government records in whichever format are managed in compliance with laws and requirements. To date, the department of Immigration has not yet established an electronic records management policy that would give a guide with regards the management of electronic records. However, the same policy that has been applicable to manual records still applies to the electronic records in as much as the formats of these records are different. This means there is need as a department to establish an electronic records policy from the existing manual records management policy. Nonetheless, policies pertaining to digital transition have been released by governments in many developed

countries (Fletcher, 2002; Ozedemir, 2019; Reed, 2015). These policies represent a part of the holistic construction of the e-government, leading to a higher level of transparency, accountability, and public participation, (Kalusopa&Ngulube, 2012).

## **2.8 Benefits of Electronic Records Management**

Over the past century, the traditional office has changed dramatically. New technologies such as telecommunication, computers, internet and many others have improved efficiency. Many organisations today are still stuck in the paper world when it comes to regulated documents. It is estimated that 80% of all business information is stored solely on paper. This is mainly because there are other significant technical, financial and operational barriers to overcome when implementing electronic records management systems, (Smyth, 2005). However, implementation of ERMS has brought about a number of benefits that some of which are discussed in the paper.

Firstly, it is possible to quickly lose content or records that have created. Sometimes records are lost or misplaced and becomes more difficult to locate such a record. However, once data has been digitised, it is easy to create back-up copies to store –off site. For example, the department of Immigration in Zambia has created an off-site back up plan with SMART Zambia. This gives the assurance that if any disaster was to occur with the system at Immigration headquarters, at least back up plan would still be accessible. Luyombya (2010) therefore asserts that an ERMS creates a more reliable back up system that ensures that an organisation may survive any disaster. In addition, migration has lessened on the need to create huge space for storage of records. It would be worth mentioning that paper-based records consume a large part of office space in most organisations and this is what has largely contributed to poor records management in most organisations, (Kettani & Moulin, 2014).

The implementation of electronic records management systems has improved retrieval and accessibility of records in that records can be retrieved in a very short space of time without any delay thus creating efficiency unlike having long retrieval times due to poor records management keeping systems, (Anunobi&Ezeani, 2011). The same applies to accessibility of electronic records in that the system has made it easier for records to be accessed without so much delay. Consulting on e-records has become faster as compared to the manual records management system, (Bowen & Johnson, 2005). This has resulted into a great improvement in terms of service delivery to the general public.

Implementation of an ERMS enhances security and control in that an organisation can have extremely sensitive documents and therefore having adequate security and control over who can retrieve the information is imperative, (Kaunda, 2005). Achieving control through a paper-based records system is very challenging. Therefore, by transitioning the data to the cloud, it is very possible to set permissions to each document and clearly identify who retrieved what document and when, (Ellis, 2005).

Kalusopa and Ngulube (2012) reveal that transitioning to an ERMS has enabled supervisors to make real time assessments of the business operations such as daily tasks and project progress. Unlike in the past where paper-based work would take normally more time to process, electronic records management has made the process more convenient and facilitate working officials to understand where a file could be at any particular time, whether at review or approval process especially when it comes to application of the different visas that the department offers to the citizens, (Kamatula, 2018).

As observed by Smyth (2005), the traditional way of managing records usually consume a huge amount of time. Piles and piles of records in physical make the retrieval process more complicated and time consuming. However, contemporary tools and electronic archiving solution providers enable people to dig out needed file really quick. In addition, institutions that have implemented ERMS have now been able to easily access records from anywhere around the globe. As the mobility of people increases, so does the need to access documents virtually sore up, (Records Solutions, 2010). Furthermore, migration becomes even more of a benefit in that it helps to get rid of bulky old filing cabinets. In this world of technology advancements today, institutions no longer want their offices and workplace to look messed up. However, digitisation of the company records allows organisations to get rid of all those old-fashioned ways of maintaining organisational data and adopt innovative practices that optimise business activities and productivity.

In addition, transition to ERMS of doing things has made even data archiving units to regularly maintain versions of the update as well as the history of the previous work done on any document. Days of file circulation around offices are long gone, for example from Human Resource to Finance, invoices and receipts to clients and other departments. The uses of electronic records make the proportion of any files considerably easy and super-fast, (Maulid, 2015). A record or file can be shared with any member of staff that ought to act on it through email and other file sharing platforms, (Newa, 2017).

## **2.9 Challenges of Electronic Records Management**

The use of electronic records can be seen as a method of record keeping that has increased productivity, there are several challenges that have arisen because of use of such a system. Firstly, electronic records are fragile meaning that electronic records in poor environmental conditions can be subject to loss and destruction. Even slight changes in humidity and temperature can disturb the magnetic properties of disks and tapes thus leading to the loss of some or all of the records. Power outages or situations where power is shut off suddenly can lead to a sudden loss of electronically generated information, especially if there are no emergency backup facilities in place.

According to IRMT (2000), the success of any integrated records management program depends on the professional capacity and status of the staff responsible for the use, creation and maintenance of records. This is because the continuous records management process at any phase of the record life cycle should be performed within an integrated structure with no limit to professional collaboration and development, (Duranti, 1999). Therefore, the challenge that comes with electronic records management is that there is inadequate training in records management policies and procedures, (Asongwa, 2012). In addition, an inadequate security measure about storage of electronic records is yet another challenge that exposes them to vulnerability.

Electronic Records and Security – Electronic records can be easily manipulated and overwritten. Maulid (2015) observes that unless strict security provisions are in place, electronic records can be altered or deleted without the organisation's knowledge simply because the storage media and the computer environment do not appear to have changed.

Technological Dependence – Electronic records are entirely dependent upon technology both for their creation and their storage, (Maohi et al., 2017). As a result, they must be managed over time in a computerised environment. Given the rapid obsolescence of computer hardware and software and the degradation of storage media, the mechanisms for management of electronic records require a higher level of sophistication than is needed to manage paper records, (Oyaro, 2013).

Electronic records are dependent upon the availability of the contextual information necessary to understand the records within the context of the administrative and operational



activities that generated them in the first place, (Ellis, 2005). The gap between records management and information technology development must be bridged.

Absence of assigned accountability and responsibility- according to Kaunda (2005), this is probably one of the most serious threats to electronic records as accountability for the human resources and financial resources of an organisation are assigned very carefully and there are major penalties for mismanaging these valuable resources. Records are also a valuable resource but they do not receive the same degree of attention, (Maguire, 2005). These electronic records maybe lost because people within the organisation were not charged with the task of protecting them.

Electronic records are more of as management issue than a technical issue. Records managers need to build tools and techniques necessary to ensure that electronic records are managed properly and these tools are not just technical in nature but more importantly should address key management changes in the organisation, (Kalusopa and Ngulube 2012).

Abuki (2014) has observed that records management's primary concern is the efficient, effective and economical management of information. The guiding principle of records management is to ensure that information is available when and where it is needed, in an organised and efficient manner, and in well-maintained environment. Bowen and Johnson (2005) further states that in today's litigious society, records management is more important than ever but unfortunately is still overlooked and under-funded at all levels of government. Asongwa (2012), therefore, argues that a sound records management program does not cost, it pays. It pays by improving customer service, increasing staff efficiency, allocating scarce resources and providing a legal foundation for how an agency conducts its daily mission.

According to Wamukoya (2000:48) "Government institutions face various challenges about the management of records". African countries have tried to undertake civil service reforms but they have not been successful as anticipated. Shepherd and Yeo (2003) note that these reforms cannot be fully achieved without proper, reliable and effective records management programs. This is because records play a critical role in service delivery. For instance, according to Wamukoya and Mutula (2005), records play a central role in combating vices such as corruption, promoting accountability, good governance, transparency and protection of citizen's rights.

Other studies done by scholars such as Mosweu et al., (2014) and Shonhe et al., (2019) have revealed that change management, privacy and security are among the challenges facing ERMS. However, Kamatula (2018) states that lack of expertise, lack of knowledge and ICT facilities has been observed to exacerbate challenges related to accessing and tracing records stored.

In terms of electronic storage and security of records, Shepherd and Yeo (2003) further explains that where computers are networked, the storage of online electronic records can be centralised or decentralised, where records are kept on central server or local servers in the different parts of an organisation. According to the ISO 15489 – 1 (2001 section 8.3.6) an electronic records management system should apply control on access of records so that the integrity, authenticity and reliability of records is not compromised in any way. Other studies done by scholars such as Mosweu et al. (2014) and Shonhe et al. (2019) have revealed that change management, privacy and security are among the challenges facing ERMS. However, Kamatula (2018) states that lack of expertise, lack of knowledge and ICT facilities has been observed to exacerbate challenges related to accessing and tracing records stored.

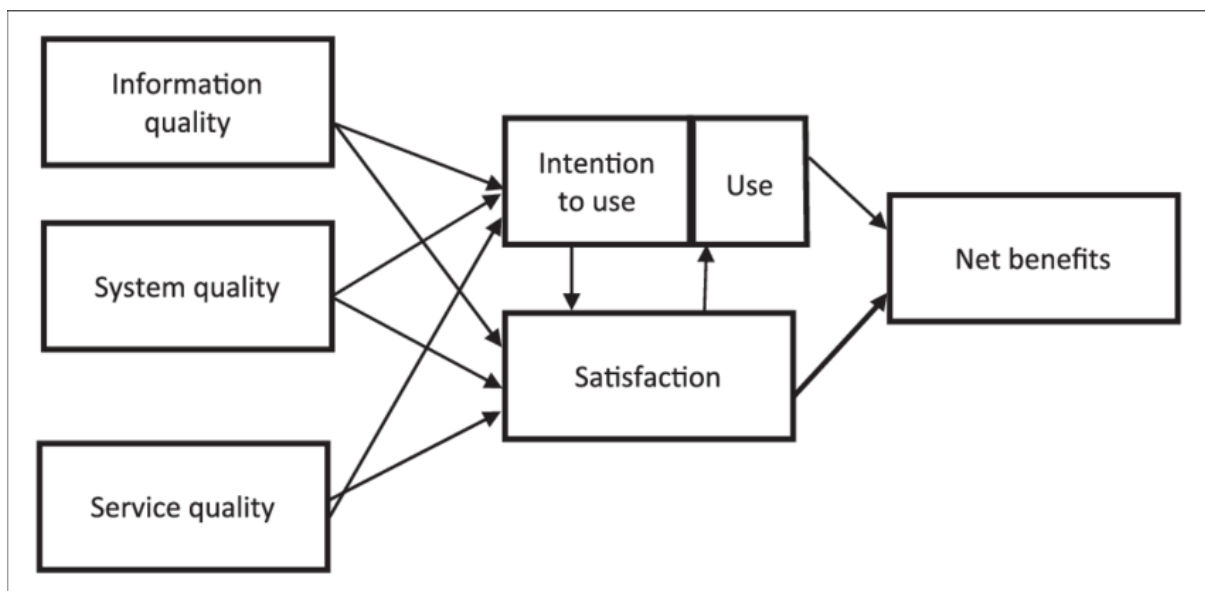
### **2.1.0 Theoretical Framework**

This study is guided by the updated Information System Success Model developed by DeLone and Mclean (2016), also referred to as the D&M Success Model. The purpose of the model is to measure effectiveness or success of Information System implementation in an organisation, (Ojo, 2017) The creation of the D&M IS Success Model was driven by a process understanding of IS and their impacts. This process model has just three components: the creation of a system, the use of the system, and the consequences of this system use. Each of these steps is a necessary, but not sufficient, condition for the resultant outcome(s). For instance, without system use, there can be no consequences or benefits.

The theory has been seen to be relevant to this study in that it seeks to provide a comprehensive understanding of an information system implementation. Although the D&M IS Success Model is a result of the attempt to provide an integrated view on IS success that enables comparisons between different studies, the operationalization of the model's different success dimensions varies greatly between the several studies which have been published in the past. Especially, the diversity of different types of information systems the model has been adapted to lead to several constructs operationalisation. However, with a large amount of publications using the D&M IS Success Model as theoretical basis (Bowen

&Johnson,2005), typical item sets for each of the constructs have emerged which have often been used in several IS success studies.

Ten years after the publication of their first model, and based on the evaluation of the many contributions of it, DeLone and McLean (2002) proposed an updated IS model. The primary differences between the original and the updated model are the addition of service quality to reflect the importance of service and support in successful e-commerce systems and secondly the addition of intention to use to measure user attitude as an alternative measure of use. Thirdly the collapsing of individual impact and organisational impact into more parsimonious net benefits constructs. The updated model consists of six interrelated dimensions of IS success. These dimensions include Information system and service quality, use (Intention to use) and user satisfaction and net benefits.



*Figure 1: Updated Deleon and Mclean Information System*

The diagram above shows the theory that has been seen to be relevant to this study in that it tries to measure whether the migration has improved such services as retrieval, accessibility and storage of electronic records by use of an information system. For example, the information quality success dimension constitutes the desirable characteristics of an Information system’s output. In the case of the department of Immigration, an employee would be able to generate information such as details of applications made by their clients by use of the ERMS. In the same vein, charges for the various services offered would equally be generated through the system. Thus, it subsumes measures focusing on the quality of the information that the system produces and its usefulness to the user.

The success dimension of service quality represents the quality of the support that the users receive from the IS department and IT support personnel such as training. The objective of the migration was to ensure the improvement of the services that the department offers to its clients. As already alluded before in the times of manual records management, much time would be spent to attend to clientele and long queues of those waiting to be attended to were unavoidable.

The success dimension (intention to use) represents the degree and manner in which an information system is utilised by its users. However, measuring the usage of an information system is a broad concept that can be considered from several perspectives. Nonetheless, transition to ERMS has translated into rising numbers of clients that are dealt with on a daily basis. This is because both staff and clients have been able to access the system. For example, clients have been in a position to do Visa applications online regardless of their location. In the same vein, members of the staff who interact with the system more often are equally able to process the applications received within a short space of time.

The user dimension has a linkage to the user satisfaction success dimension which constitutes the user's level of satisfaction when utilising an information system. It is considered one of the most important measures of an information system's success. Measuring user satisfaction becomes especially important when the use of an Information System is mandatory and the amount of use is not an appropriate indicator of the success of the system.

The success dimension net benefits constitute the extent to which the information system is contributing to the success of the different stakeholders. The construct subsumes the former separate dimensions which are individual impact and organisational impact of the original D&M IS Success Model as well as additional IS impact measures from other researchers. Most of studies applying the D&M Success Model measure the benefits of utilising an IS on the individual and organisational levels.

### **2.1.1 Summary**

This chapter focused on reviewing literature of different authors in trying to establish whether implementation of electronic documents and records contributes to having an efficient delivery service. This has been articulated by analysing the importance of electronic record management and the role it plays in delivering efficient services in the Department of Immigration. The chapter further explains the concepts and the most widely used systems in

electronic records management. It further discusses the impact that migration has had in terms of retrieval, accessibility and storage of goods in relation to what system has been adopted in the department. It further discusses the theory that has been seen to be relevant in the adoption of an electronic management system and conclusively looks at different studies done by other scholars relating to the study in question. The chapter further discusses how retrieval, accessibility and storage of records has been eased with the introduction of ERMS and this has been articulated by relating to other studies carried out by other scholars on implementation of ERMS. Furthermore, implementation of ERMS has not been adopted without any hindrances. Therefore, the chapter concludes by looking at the challenges that have arisen as a result of implementing an electronic records management system.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1 Overview**

This chapter gives a detailed description of the research methodology. It describes the qualitative research methodology and data collection methods and qualitative data analysis. Data collection, including sources of data, population under study, sampling methods, data collection techniques, has been extensively covered. Questionnaires and guided oral interview guide would be used in the collection of data. This chapter closes by explaining data analysis procedures, reliability and validity and ethical considerations of the study.

### **3.2 Research Design**

A research design focuses on the method that a researcher needs to consider and techniques that can be used for the collection of data, (Marshall & Rossman, 2006). This study adopted a single cross sectional descriptive mixed method approach to investigate the impact of electronic records management on service provision in the Department of Immigration. This therefore implies that the study comprised of quantitative data that was collected through questionnaires from selected respondents and qualitative data that was collected through interviews with key selected informants.

### **3.3 Target Population**

The target group comprised of 200 participants on whom the research was to be conducted on and included mainly staff working with records in the registries, personnel in the information technology department and the human resource personnel who interact with the ERMS. These were selected to be participants as they are the ones dealing with records on a daily basis, therefore it was in this vein that they automatically qualified to be selected in the study.

### **3.4 Sampling Techniques**

The study adopted judgement or purposive sampling technique to select those people who were likely to have the required information and were willing to share it. The researcher used her own judgement, complemented by her own experience in the field of ERMS in selecting a sample of the Department of Immigration which has its Headquarters in Lusaka and has offices spread out in all the provincial centres in Zambia as well as at the points of entry in the country

### **3.5 Sample Size**

The sample included 100 members of staff working in the registries and also staff in the Information and Communication technology section of the Department of Immigration. In addition, purposive sampling was used to select 10 key informants comprising of provincial heads, giving a total sample of 110. A sample size of 110 staff was considered adequate. Most statisticians agree that the minimum sample size to get any kind of meaningful result is 100 (Bullen, 2022). The 10 key informants were selected to be part of the research on the pretext that these are the senior officers in the department and are likely to have reliable information regarding the outcome on the use of ERMS.

### **3.6 Data Collection Instruments and Procedures**

This study used a self-administered questionnaire to collect quantitative data from 100 respondents while a semi-structured interview guide was used to collect qualitative data from 10 key informants who were purposively selected for this particular study.

#### **3.6.1 Questionnaire**

A self-administered questionnaire was used to collect data from 100 respondents. The questionnaire consisted of close-ended and open-ended questions. The use of questionnaires ensured that there was wide coverage in terms of scope of the research questions. The questionnaires were self-administered. Follow-ups were conducted in order to increase the response rate.

#### **3.6.2 Interview Guide**

A semi-structured interview guide was used to collect in-depth data from the key informants in order to supplement the data collected through the questionnaire. The key informants interviewed comprised ten provincial heads as they are the key persons accountable for the implementation of the ERMS.

### **3.7 Data Analysis**

Data for this study was collected using questionnaires for quantitative and was analysed using IBM SPSS version 26 to generate descriptive statistics such as frequency distribution tables and charts. Data from the open-ended questions in the questionnaire and interviews being qualitative in nature was analysed using reflexive thematic analysis within a contextualist approach, as this allows the flexibility of combining multiple sources of data (Braun &

Clarke, 2006; 2020). Both forms of data provided accounts of participants' experiences with the implementation of the ERMS in the Department of Immigration, and therefore were considered as one whole data set throughout analysis, rather than analysed separately.

The inclusion of data from different perspectives offered multiple ways to engage with the research, allowed a rich understanding of the experiences being studied (Saunders, Lewis and Thornhill, 2016). An inductive approach was taken to analyse the qualitative data, working with the data from the bottom-up (Braun & Clarke, 2013), exploring the perspectives of the participants, whilst also examining the contexts from which the data were produced. Through the analysis the researcher sought to identify patterns across the data in order to understand the impact of the implementation of the ERMS on service delivery at the Department of Immigration.

### **3.8 Validity and Reliability**

As always with any research, It is important to consider reliability and validity when creating the research design, planning methods to be used and writing up the results in quantitative research. In order to test the reliability and validity of the data collection instrument, both the questionnaire and the interview guide were pilot-tested on a small sample of respondents who were representative of the larger sample. Validity ensured the questionnaire measured what it claimed to measure taking into consideration the limitations that come with the instruments while reliability ensured the questionnaire yields consistent responses when administered repeatedly even by different researchers. There was a reconnaissance study in order to pre-test the instruments. This stage revealed the suitability of the methods and instruments that were employed in the study. This consequently led to early detection of errors and distortions in the questionnaire which were corrected in the process. This helped the researcher to be familiar with the research environment and also offered the opportunity to practice research in real situation before the main study began (Sarantakos, 1998).

### **3.9 Summary**

This chapter presents how the research study would be designed. It therefore largely covers the research design, the target population, sample size and sampling methods to be employed. It further explains the data collection instruments to be used which includes questionnaires for 100 respondents and oral interviews for 10 key informants who happen to be senior



members of staff in the department as well as the procedure that would be used to collect this data. It also discusses how reliability and validity would be achieved for the accuracy of the results to be obtained. Lastly, the chapter ends by looking at data analysis that is how both qualitative and quantitative data would be analysed after being collected by the researcher as it used the mixed method approach. The next chapter presents the findings and interpretation of the data collected in the study.

## **CHAPTER 4: FINDINGS**

### **4.1 Overview**

This chapter presents the findings of the study and is structured according to the objectives. Data was obtained through self-administered questionnaires and interviews from key informants. The data gathered is mainly presented in the form of descriptive statistics and narratives. The main objective of the study was to investigate the perceived impact of electronic records management on service delivery in the Department of Immigration. The findings in this chapter respond to the following research questions:

- i. To establish employees' experience with the ERMS used at the Department of Immigration
- ii. To what extent has the implementation of ERMS improved storage of records at the Department of Immigration?
- iii. To what extent has the implementation of ERMS improved accessibility and retrieval of records of at the Department of Immigration?
- iv. What is the effect of ERMS on service delivery at the Department of Immigration?
- v. What are the challenges arising from the implementation of ERMS at the department of Immigration?

### **4.2 Characteristics of the Respondents**

The survey targeted a sample size of 100 respondents from nine immigration district offices across the country and 10 key informants who are senior officers in the department. One hundred questionnaires were distributed and 95 questionnaires were filled-in and returned, giving a response rate of 95.0%. Table 1 below shows the distribution of the respondents by district immigration office. Lusaka Headquarters Office (HQ) had the highest (22), followed by Livingstone (12) and Kabwe (12). Others were Solwezi (11), Ndola (10), Chipata (8), Lusaka Provincial Office (5), Mongu (5), Mansa (5), and Kasama (5).

Table 2 below presents the job descriptions of the respondents who took part in this study. These are the staff that regularly interacted with the ERMS. It can be observed that immigration officers (24.2%) had the highest rate of participation in the study followed by registry clerks (21.1%), Assistant Immigration officers (10.5%), and Records and Registry officers (10.5%). Others were IT specialists (5.3%), Senior Immigration Officers (3.2%),

Records managers (2.1%), Immigration Secretary (1.1%), Legal Officer (1.1%), Risk Management Officer (1.1%) and Senior Records Officer (1.1%).

Table 1: Respondents current job title

<b>Job title</b>	<b>Frequency(N=95)</b>	<b>Percent</b>
Immigration Secretary	1	1.1
Head of ICT	1	1.1
Senior Immigration Officer	3	3.2
Senior Records Officer	1	1.1
Senior Registry Officer	1	1.1
Assistant Immigration Officer	16	16.8
Records Manager	2	2.1
Immigration Officer	23	24.2
Records Officer	10	10.5
Registry Officer	10	10.5
Registry Clerk	20	21.1
Risk Management Officer	1	1.1
Legal Officer	1	1.1
IT Specialist	5	5.3
Total	95	100.0

#### **4.3 Staff's Experience with the Electronic Records Management System**

The first objective of this study sought to establish employees' experience with the ERMS used at the Department of Immigration. The findings revealed that 67.4% of the respondents were well acquainted with the use of ERMS while 32.6% of the respondents were not. In addition, 87.7% of respondents (87.7%) acquired their skills on how to use the ERMS through training programs; 67.7% of the respondents acquired their skills through hands-on training; and 32.3% of the respondents acquired their skills through self-training using the ERMS manuals (Table 1). During an oral interview with key informants, participant 1 indicated the following statement as shown below:

“sometimes short-term trainings are organised and some members of staff who are key with regards to ERMS are engaged in these programs”.

In addition to the above statement participant 2 indicated:

“the unwillingness of some staff to adapt to change has been another contributing factor because they always what to use what they are used to and not adapt to new technologies”.

Table 2: Staff experience with ERMS usage

<b>Variable</b>	<b>Values</b>	<b>Frequency (N=95)</b>	<b>Percent</b>
Has staff been well acquainted with the use of electronic records management?	Yes	64	67.4
	No	31	32.6
How have other staffs acquired skills required to ERMS?	Training Programs	57	87.7
	Hands on experience	44	67.7
	Through ERMS manuals	21	32.3

Respondents were further probed regarding the following issues: Which staff was mostly involved in the use of ERMS? To what extent was staff able to efficiently use the ERMS without bringing work to a halt? If no, what could be some of the factors which may lead to inefficiency in work performance?

The findings revealed that 67.4% of the respondents, who are registry staff, were the major users of the ERMS. These were followed by senior officers who in this case refers to Senior Immigration officers (54.7%), and the rest of the staff (27.9%). Regarding the extent to which staff were able to efficiently use the ERMS without bringing work to a halt, findings revealed that 49.5% of the respondents were confident that they were able to use the ERMS efficiently without bringing work to a halt while 22.1% of the respondents were not confident; 28.4% of the respondents did not state their views on this question (Table 3).

Table 3: Staff involved in the use of ERMS

<b>Variable</b>	<b>Values</b>	<b>Frequency (N=95)</b>	<b>Percent</b>
Staff involved in the use of ERMS	Registry staff	58	67.4
	Senior officers	47	54.7
	Other members of staff	24	27.9
Are staff ability to use the ERMS efficiently	Yes	47	49.5
	No	21	22.1
	not stated	27	28.4
Factors contributing to inefficiency in work performance	Lack of skilled personnel	21	42.9
	Lack of proper training	27	55.1
	Lack of top management support	19	38.8
	Inadequate funding	41	83.7

Regarding the factors contributing to the inefficiency in work performance, participant 3 said

“this was mostly as a result of lack of proper training on the part of the staff as this hindered the proper handling of electronic records, and in addition lack of skilled

manpower couple with very little support from top management, as mostly management would rather deal with the manual records than electronic”.

#### **4.4 The Extent to ERMS has Improved Storage and of Records**

This section addresses the second objective of the study which was to determine the extent to which the implementation of ERMS had improved storage of records at the Department of Immigration. The findings from open-ended questions and follow-up interviews revealed that the implementation of the ERMS had improved storage of records at the Department of Immigration. Records were now stored on a server which was able to store huge number of records. There was no need of creating more physical storage space, purchasing more storage facilities like filing cabinets used in the paper-based records management system. Consequently, records were now much more secure and safer.

#### **4.5 The Extent to which ERMS has Improved Accessibility and Retrieval of Records**

The third objective of the study sought to investigate the extent to which the implementation of ERMS had improved accessibility and retrieval of records at the Department of Immigration. The findings revealed that 86.9% of the respondents were of the view that the implementation of ERMS had improved accessibility and retrieval time of records. Therefore, it was revealed that ERMS had tremendously improved accessibility and retrieval of records.

Furthermore, 77.4% of respondents observed that implementation of ERMS had made possible for the same record to be accessed by several users simultaneously, and 84.5% of the respondents were of the view that ERMS had facilitated quicker sharing of information (Table 4).

Table 4: Ways in which ERMS has improved access and retrieval of records

<b>Question</b>	<b>Frequency</b>	<b>Percent</b>
Quicker retrieval time of records	73	86.9
Easy accessibility of records	71	84.5
Quicker sharing of information	71	84.5

#### **4.6 The Impact of ERMS on Service Delivery**

The fourth objective of this study was to investigate the impact of ERMS on service delivery at the Department of Immigration. The majority (89.5%) of the respondents were of the view that the introduction of the ERMS had improved the way in which work was being conducted as retrieval time of records was quicker (86.9%) and tracking of records was easier (77.4%)

(Table 4). Furthermore, 90.0% of the respondents rated the speed at which work was being done after implementation of ERMS faster, as opposed to 9.5% who felt it was slow (Table 5).

*Table 5: Role of ERMS in enhanced service delivery*

<b>Variable</b>	<b>Values</b>	<b>Frequency (n=95)</b>	<b>Percent</b>
Has migration to ERMS improved how work is being done?	Yes	85	89.5
	No	10	10.5
How has ERMS improved work performance?	Easy tracking of records	65	77.4
How would you rate the speed at which work is being done after implementation of ERMS?	Very slow	1	1.1
	Slow	8	8.4
	Fast	74	77.9
	Very fast	12	12.6

Findings from the interviews generally revealed that before the introduction of ERMS, work performance was slow as all processes were done manually. As a result, this led to more time being spent on handling clients and at the end of the day very few clients were attended to resulting long queues of clients waiting to be attended to. Often clients could not be cleared on the same day.

Participant 4 was of the view that the introduction of ERMS has transformed the way work is being performed at the Department of Immigration, as noted in his statement below:

“ERMS has changed the way work is being performed as the speed at which work was being delivered before was very slow but after the installation of the system, there has been great improvement in service delivery, although not in all areas”.

Participant 5 also said that:

“migration has greatly improved the retrieval of records in that within a very short space of time, a record is able to be availed”.

In response to an open-ended question on how the implementation of the ERMS had improved service delivery at the Department of Immigration, the respondents identified the following benefits:

- i. Increased staff productivity as more records were being created in a short time
- ii. Reduced amount of paper work

- iii. Improved filing of records
- iv. Easier and quicker access and retrieval of records
- v. Issues of misplaced, misfiled or missing records were no longer happening
- vi. Economical use of storage space
- vii. Improved security of records
- viii. Improved privacy and confidentiality
- ix. Improved decision making

#### 4.6 Challenges of Employees Experience in the Use the ERMS

This section presents findings on the fifth objective aimed at identifying the challenges employees experienced in the use of ERMS. The major challenges respondents encountered in their use of ERMS included inadequate ICTs such as limited computers especially in the provincial centres (87.4%); lack of trained personnel (64.4%); greater risk of potential security breaches and damage of electronic records due to virus attacks (51.7%); lack of affordable tools to appropriately and effectively manage electronic records (50.6%); lack of a comprehensive electronic records management policy (49.4%); inadequate security measures ( records are prone to possible security breaches) (46.0%), instability of the storage media (46.0%); and lack of a comprehensive backup plan (43.7%) (Table 6).

*Table 6: Challenges arising from migrating to ERMS*

<b>Variable</b>	<b>Freq. (n=95)</b>	<b>Percent</b>
Inadequate ICTs (e.g. computers, printers, scanners)	76	87.4%
Lack of trained personnel	56	64.4%
Greater risk of potential security breaches and damage to virus attacks	45	51.7%
Lack of affordable tools to appropriately and effectively manage electronic records	44	50.6%
Lack of a compressive Electronic Records Management policy	43	49.4%
Inadequate security measures	40	46.0%
Instability of storage media	40	46.0%
No proper backup plan in place	38	43.7%

Two notable challenges that were frequently cited in the findings from the interviews and open-ended-question were poor Internet connectivity and power outages. Furthermore, one key informant observed that the existing records management policy did not adequately provide for handling of electronic records and also in terms of disaster management. In addition, it was observed that not everyone was well acquainted with the use of ERMS

resulting most times in delays in the processing of clients’ requests. Another major challenge affecting transition to electronic records was a lack of long-term preservation plans for e-records, as noted in the statement of another respondent shown below:

Participant 6: “The question that arises is that while they [records] can be preserved in some electronic device today, the probability of the device going obsolete in the next decade is very high thereby making it hard to ensure future availability of the records”.

Furthermore, the study sought to investigate other challenges encountered by other ERMS users in the process of carrying out their daily duty routine work. These included lack of skills on how to use the ERMS (61.9%), restrictions on accessing some records (59.5%), poor Internet connectivity (57.1%), inadequate information on how to access the services being provided (45.2%), and lack of appreciation of the importance of the ERMS (31.0%) among some users (Table 7).

*Table 7: Challenges encountered by ERMS users*

<b>Statement</b>	<b>Frequency (n=95)</b>	<b>Percent</b>
Lack of skills on how to use the Electronic Records Management System	26	61.9%
Access to some records is restricted	25	59.5%
Poor Internet connection	24	57.1%
Inadequate information on how to access the services being provided	19	45.2%
Lack of appreciation of the importance of the ERMS	13	31.0%

Other challenges identified from the key informants’ interviews were that some members of staff found it difficult to accept change, System failure, Inadequate equipment, Inadequate, funding to roll the project to all stations across the country, Loss of records during the transition period and establishing the authentication of electronic records is yet another problem.

#### **4.7 Participants’ Recommendations on how to Improve the ERMS**

Participants were also asked to recommend what should be done to improve electronic records management system at the Department of Immigration. The participants made the following recommendations: management should: 1) conduct regular staff training on the use of the ERMS; 2) improve Internet connectivity; 3) improve security of the ERMS; 4)



acquire better ICT equipment such as computers and scanners; 5) provide a robust offsite backup storage facility including storage devices (hard-drives, cartridges and large capacity USB drives with integrated data backup software), and 6) formulate a comprehensive ERMS policy.

Participant 7: “The most important thing concerning ERMS is to ensure that staff and end users get to be very well acquainted with the use of electronic records, therefore, adequate training for members of staff should be provided. Lack of training is what makes some systems such as this one to fail”.

#### **4.8 Summary**

This chapter has presented the findings of the study. The study has established that transition from paper-based records management system to electronic management system was only done in a few centres and had not yet been rolled out to the entire Department of Immigration centres across the country. Findings on staff experience with electronic records management revealed that 67.4% of the respondents were well acquainted with the use of ERMS while 32.6% of the respondents were not. In addition, 87.7% of respondents (87.7%) acquired their skills on how to use the ERMS through training programs; 67.7% of the respondents acquired their skills through hands-on training; and 32.3% However, it was observed that in the centres where the electronic management system was adopted, it has led to improved storage and organization of records. Furthermore, records have become easy to access and retrieve within a very short space of time as observed by 86.9% of the respondents and clients do not have to spend a lot of time in queues to access the services they need. In addition, 89.5% of respondents revealed that ERMS has improved the way in which work was being done and 77.4% indicated work performance had greatly improved. This has enabled the Department experience significant improvement in its service delivery, particularly in the offices where the ERMS has been implemented.

The major challenges respondents encountered in their use of ERMS included inadequate ICTs such as limited computers especially in the provincial centres (87.4%); lack of trained personnel (64.4%); greater risk of potential security breaches and damage of electronic records due to virus attacks (51.7%). Other challenges included inadequate information and communication technologies, weak implementation strategies poor Internet connectivity, frequent power outages, poor back-up practices and poor security measures, lack of policy direction on electronic records, inadequate staff training, and staff resistance to change.

Recommendations included increased funding, provision of regular staff training, provision of adequate information and communication technologies, revision of the current records management policy to incorporate electronic record management, and improvement of backup system to enhance safety and security of electronic records.

## **CHAPTER 5: DISCUSSION AND INTERPRETATION OF RESEARCH FINDINGS**

### **5.1 Overview**

This chapter discusses and interprets the findings of the study. Presentation of research findings is followed by discussion of the most important points, which integrates the findings into theories and purpose of the study. The findings have been discussed in line with the objectives of the study.

### **5.2 Staff Knowledge Levels Regarding Electronic Records Management Systems**

The success of any ERMS implementation is not just dependent how quickly the system has been installed and budgetary allocation, but by the ability and willingness of the staff in the organization to use it effectively after it has been installed. The study has established that the majority of the staff were well acquainted with the use of ERMS as they had acquired skills through the various training programs they had received. Therefore, the majority of the staff were confident in the use of the ERMS and were able to use it efficiently and effectively. However, the study also established that a considerable number of staff were not confident with the use of the ERMS and were therefore not able to use it effectively. This was mainly due insufficient training. Most interviewees linked user involvement with the training factor, as they believed that sufficient training gives the users the confidence to use the system that is being implemented. Therefore, effective training is key in getting the buy-in of the stakeholders at all levels, (Luyombya, 2010). When employees are given adequate training, they will fully understand the system and utilize it effectively, (Smyth, 2004). This will help them perform their work within the new environment. Training is an important activity and should include the training of all users of the system at their various levels including system administrators and workflow administrators, (Waldron, 2004).

Ongoing training and refresher training are critical factors in ensuring effective and efficient utilization of the ERMS, especially given the fact that employees leave the Department of Immigration and new employees coming in. Maguire (2005) observes that there can never be enough training given. Therefore, regular refresher training should be conducted to ensure efficient utilization of the system. The literature has also proved that individual training on the job, follow-up courses and support are necessary in order to achieve wide levels of use (Kwatsha, 2010). In linking the D&M success model to the study, Delone and McLean (2016) observe that for the effective functionality of the system, there is need to have a

trained manpower equipped with the skill that needs to ensure that work flow does not come to a halt at any particular time. therefore, the two scholars agree that staff need to be wellacquainted with the use and operations of an electronic records management if effective and efficient service delivery has to be achieved.

The findings of this study agree with Kemoni (2007) who argues that effective management of records was dependent upon staff responsible for records receiving education and training in records management. Adequate knowledge in records management cannot be acquired solely through orientation and one-off training. Without proper training of the staff, it is unlikely that the system will work effectively and efficiently. As such, training of records management staff should be a major component of the implementation process of an ERMS. Inadequate training is a key indicator of the limited success of implementation of ERMS in the department under investigation. Well trained and motivated staff members are critical to the implementation of e-records management. It is evident that competencies alongside motivations and other supporting infrastructure matter when it comes to the adoption and integration of e-records (Kemoni, 2009).

### **5.3The Extent to which Implementation has Improved Storage of Records**

The findings from the study revealed that transitioning to electronic records management has greatly improved storage of records as it has eliminated the need for huge physical office storage space. Furthermore, electronic records backups can store off-site and this has in turn significantly improved security of records. The storage of records in electronic format necessitates the use of additional storage plans and strategies to prevent loss. The study has revealed that backup systems which are a method of copying electronic records through system failures have been underway, (Sunders, Lewis and Thornhill, 2016).

Asogwa (2012) supports that during implementation plan, strategies such as putting in place strong back- up systems to electronic records that would still be available in times of disaster would be ideal and this can be achieved by having off-site back up storage facilities. Such systems ought to include a regular back-up schedule, multiple copies on a variety of media, dispersed storage locations for the back-up copies and provision for both routine access and urgent access to back up copies, (Wilkins et al, 2007). It was further learnt that all what was much needed with regards to storage of electronic documents were devices such as hard drives that could accommodate a huge volume of records. Maintenance processes maybe

needed to prevent physical damage to the media. Records may need to be copied to new versions of the same media to prevent data erosion. It is quite evident that with manual records management, a lot of office space is clogged up with a lot of records in most institutions, (Duranti, 1999). However, with the advent of electronic records management systems, the scenario is slowly changing as the heaps of paper records are slowly being preserved in archival depositories.

#### **5.4 The Extent to which ERMS has Improved Retrieval and Accessibility of Records**

Electronic records should be accessible and retrievable in a timely manner throughout their retention period (Duranti, 1999). Record keeping systems should be capable of exporting the content, structure and context of a record in an integrated presentation and in an accessible and useable format. The study revealed that the implementation of the ERMS at the Department of Immigration has significantly improved access and retrieval of records. The findings of this study agree with Kalusopa (2004) who argues that electronic records should be easily accessible in the normal course of business and that the searchable and retrievable for reference and secondary uses including audits, legal proceedings and other uses such as historical research. In addition, training and user support programs should be available to ensure that users can access and retrieve electronic records.

However, access to electronic records should be controlled according to a well-defined criterion. Record keeping systems should ensure that electronic records are protected from unauthorised users, (Ryan, 2005). This therefore calls for putting in place security measures that would ensure that certain information can only be accessed by staff authorised to action on them. However, associated with accessibility of records is the issue of security. This study has established that most records at the Department of Immigration were actually secured in that only authorised persons were allowed access to them through passwords.

The information quality success dimension outlined in the D&M Success Model also emphasises on the need to provide better quality information. In the same vein, the theory further emphasises on the use of the implemented system by the end users. Once such a system has been put in place, it is important to know how the users are getting used to it and the net benefits that accrue to the user. Therefore, from the findings, it can clearly be seen that that the respondents were agreeing to the fact that implementation had led to easy access to records and retrieving these records were no longer a huge challenge as before. If the

objective of migration is that of enhancing service provision to its users as a department, the need to ensure that proper record keeping systems are in place. So many are the times in some organisations that records for users are lost or misplaced. However, with the advent of technology, the use of electronic records systems has reduced on such vices. Records are able to be retrieved within a very short space of time. Martin and Voynov (2014) in their study cite an example of records in the health fraternity where patients no longer have to use manual cards to access services. This is because most of the services provided in health facilities in Ghana have gone electronic making it very easy and quick for staff to access patients' record cards.

However, the study has also revealed that, in spite of these improvements in the security of records, chances of the ERMS being hacked were still high and therefore there was a need to have strong security measures including establishing off-site backup system, use a firewall, antivirus software, antispymware package, complex passwords, and encryption, (Kashorda&Naema, 2014). Furthermore, the introduction of ERMS was perceived to have improved sharing of records thereby increasing efficiency. Cases of records misplaced were almost eliminated. Consequently, this has increased the availability of records and access to records, (Sejane, 2005). This very important because in records management, a misplaced record is as good as lost because once a record is misplaced; it cannot be traced and therefore rendered lost.

### **5.5 Impact of ERMS on Service Delivery**

The study has revealed that, despite the slow take-off of ERMS, the staff perceived them positively because they perceived they improved public service delivery. Adoption of ERMS was perceived to have improved storage, accessibility and retrieval of records. Furthermore, the introduction of ERMS has freed staff from doing manual routines like sorting, classification and filing of records thus allowing staff to attend to clients more efficiently. The transition to ERMS has therefore resulted into saving storage space, reduction of costs, improved safety and security, and increased access and sharing of information. ERMS has improved efficiency and increased work productivity among the staff. Furthermore, the introduction of ERMS in the Department of Immigration is hoped to enhance timely decision making, improved accountability and transparency.

These findings confirm the findings of previous studies that indicate that e-records management has the increased efficiency and effectiveness of governments, increased transparency and accountability in decision making, and enhanced the delivery of efficient and cost-effective public services to the citizens (Mukred& Yusof, 2014; Mukred& Yusof, 2015; Mukred, Yusof, Mokhatar & Manap, 2016). Furthermore, Ndenje-Sichalwe and Ngulube (2009) argue that records management fosters accountability, good governance, and protection of human rights. In line with the theory used in this study, provision of quality services is an important factor in institutions as it is through this that it will create an image of itself before the general public. Therefore, Delone and Mclean (2010) show that the output from such an institution providing such relevant services as such should be that of quality. Once services become excellent, the net benefit is that of client satisfaction. A further revelation in the study according to another key informant was that previously work was very slow in the manner it was conducted. Therefore, introduction of ERMS has changed the way in which work was being carried out in that it was quicker than before.

However, it was observed that since the ERMS transition has not been completed and seems to have stalled, these benefits were only being felt in the few centres where the ERMS has been implemented. Furthermore, the Department of Immigration is still running a parallel system of both paper-based traditional system and the ERMS, the Department is failing to realise the full benefits of the ERMS.

## **5.6 Challenges Facing the Implementation of the ERMS**

Despite the crucial role e-records play, there is a consensus amongst researchers that many organizations are not effectively implementing their management practices. To them, there are many challenges and constraints facing the public sector in the management of these records. For example, the management of e-records in the African environment is faced with a number of issues and challenges tied to the lack of policy infrastructure, lack of skills and competencies, and increased costs of managing the records (Kamatula, 2018; Moahi et al., 2017; Asongwa, 2012).The Department of Immigration cannot be left out as it has been experiencing a number of challenges and constraints in its adoption of the ERMS, including lack of an implementation strategy/policy, insufficient staff training on ERMS, inadequate ICT infrastructure, inadequate funding, poor ERMS policy, and lack of management support.Studies conducted byMukred et al., (2019); Newa, (2017); Maulid, (2015); Kalusopa, (2012) indicate that in all e-records readiness factors such as adequacy of ICT infrastructure;

implementation of records management policies, circulars, and standards; adequacy of competent staff; readiness of top management; preferences; and motivations are important enablers of effective integration e-records management systems.

### *1 5.6. Inadequate Funding*

The IRMT (2000) observes that an ERMS implementation is a major project, requiring a significant commitment of time, money, and staff. The resource requirements depend on a number of factors including the size of an organization, its business needs and the amount of configuration necessary. Furthermore, the cost and budget of implementing an ERMS will depend on: the level of functionality rolled out, the extent of customization, the complexity of configuration needed to satisfy business needs, the work areas of the agency to be included and the extent of integration or interface with other business systems.

This study has revealed that one of the major challenges facing the implementation of the ERMS at the Immigration Department is inadequate funding. Because of inadequate funding the Department could not procure adequate ICT equipment such as computers, printers, and scanners; could not provide for on-going staff training, procure current antivirus software; ultimately could not rollout the implementation process across the country (Mutimba 2014). A study by Oje (2010) reveals that an effective implementation program requires that all necessities be put in place if the intended objective has to be achieved and in doing so, adequate resources have to be made available so as to set up infrastructure and equipment that would accommodate a smooth implementation process, (Sejane, 2005). It is by having all the necessary needed equipment and infrastructure that would provide an enabling environment for electronic records management that would in turn lead to the provision of an efficient service delivery to the end users. Ideally, the records management section in the Immigration Department unit should have its own budget to cater for all its needs.

### *5.6.2 Inadequate Infrastructure Leading to Poor Service Delivery*

Two of the three components of the Delon and Mclean theory (2016) looks at creation of a system and also the use of a system. The creation of a new system is always with the aim that once this has been put in place, the need to put such a one in use is certainly the objective. However, it would be noted that inadequate funding has been one of the challenges affecting the implementation of ERMS at the Department of Immigration. The main challenges attributed was inadequate ICT equipment such as computers, printers, scanners, and storage



devices more especially with offices at the district level. Therefore, good ICT infrastructure is key to delivering services to the users.

Without infrastructure, implementation would definitely not achieve its intended objectives. For example, one printer was shared amongst many staff and this therefore implied that it was extremely risking printing highly confidential records. In addition, poor Internet connectivity and power outages were other challenges that were revealed in the study. For an ERMS to perform its functionalities there has to be efficient Internet connectivity that will ensure flow of work so that at no time should work come to a halt. A study conducted by Newa (2017) reveals that before any implementation of ERMS can be done, the most crucial part is that of establishing infrastructure that would provide an enabling environment for the system to operate more efficiently. Further revelations were that there was also lack of long-term preservation plans for E-records, a matter that needed to be seriously addressed through having an electronic records management policy. It was established that as it stands now, the preservation methods of electronic records that could be used include hard-drives and having digitised records in copies.

### *5.6.3 Lack of experience by staff on ERMS*

A second challenge revealed in this study was inadequate staff training in ERMS which in turn slowed the transition process. The research revealed that training on ERMS was done to a very small extent hence a majority of the respondents reported that they had acquired their knowledge and skills on the use of the ERMS through on-the-job training and using the ERMS training manuals. It was also evident from the findings that user needs assessment was not done well in the Immigration Department before the introduction of the system. Consequently, user involvement was very minimal before the introduction of the system hence affecting the implementation of the system.

Training is very significant for effective adoption of any ERMS project, (Kamatula, 2018). Pre-training assessment and post-training assessments should be conducted in order to prepare the users to adapt with the new environment of managing records (Mutimba, 2014). Apart from the registry staff most personnel had inadequate records management knowledge and skills leading to poor handling of records. It is evident that although staff attended some training in ERMS they did not acquire adequate knowledge and skills in handling electronic records.

Adequate and on-going training and support ensures staff awareness and maintains ongoing staff commitment to the system (Maguire, 2005); this is the ultimate goal of any ERMS project. ERMS projects cannot be considered complete for at least 5 years after the initial implementation (Wilkins et al., 2007). Training enables users familiarize and understand how the system operates. Most ERMS projects fail due to insufficient training given to the users. User training is very fundamental in ensuring a success of records management projects. Organizations need to invest a lot on training and building their users capacity in using the system.

#### *5.6.4 Inadequate ERMS Policy on Retrieval and Accessibility of ERMS*

Another important challenge noted by the participants was that the current records management policy is inadequate in handling electronic records. A good records management system requires a policy which provides adequate guidance on the system itself in various aspects such as acquisition, retention, preservation and disposal of records (Mutiti, 2001). There were no clear guidelines on how to handle electronic records in relation to their retention, storage retrieval as well as accessibility. Provision of an ERMS policy ensures that all work flows are conducted according to what is stipulated in the policy. According to Delone and Mclean (2016), the purpose of the model is to measure effectiveness of the system implemented and in doing so, the quality of the service being provided must be taken into consideration and this emulates from the provision of a policy that begins as a guide to what would be provided to the end user.

However, the study discovered that application of manual records management policy on electronic records had its own challenges in the sense that the way an electronic record would be treated in terms of retention and storage would not be the same, (Smallwood, 2013). Therefore, there is need to come up with guidelines such as retention for electronic documents, what storage devices would be appropriate and useable over a long period of time, (Ellis, 2005). Manual records can be kept for a very long time in files and stored filing cabinets. This cannot apply to electronic records as sometimes storage media become obsolete and therefore cannot be read. A comprehensive ERMS policy will enhance structure, consistency, security, and control over these records, (Kashorda & Naema, 2014).

It is recognized that an effective records policy whether for electronic records or records in all media is the result of an in-depth analysis of records operations and requirements within

the organisation in question (Mutimba, 2014). Therefore, in the ideal environment, a policy would not be developed or revised until the organisation had conducted surveys, established project plans, developed a business case and looked at the requirements for advocacy, outreach and change management, (Kemoni, 2007).

#### *5.6.5 Poor Security*

In the electronic age, records managers in Africa are facing a new threat, the challenge of working in a digital environment, with new tools and different work approach, (Lukcic' & Sruk, 2009). The experience and training of records managers in the sub-Saharan Africa is often inadequate to face the challenges which may include weak legislation, absence of organizational frameworks, inadequate ICT skills and competencies, colonial legacy, corruption and political instability, among other factors, (Ellis, 2005). The most important step to curtail these changes is for record managers in developing countries to get more closely involved with the other professionals in electronic information ventures.

Lastly, although the transition to ERMS has improved confidentiality of records in the sense that the records in electronic format cannot be accessed by anyone, a number of security problems were identified. These included poor backup practices, and difficulties of confirming authenticity of the electronic records. Furthermore, lack of robust firewalls rendered the system vulnerable to external threats such as hacking. Besides the challenge of hacking, the possibility of system crashing could not be overlooked as this is one of the most common challenges facing electronic systems today. Smyth (2004) observed that e-records today are vulnerable to security breaches and this poses a huge danger to them. Once records are exposed to other users whether inside or outside the system, their authenticity is compromised in a way in the sense that they can be easily altered.

### **5.7 Summary**

This chapter presented and interpreted the research findings. The study therefore investigated whether the transition to electronic records management has improved service delivery. However, from the data collected in the study, it has been observed there have been a number of factors that have contributed to the slow progression with regards to the use of E- records. The study revealed that there are inadequate trained personnel to run the ERMS, that is to say, most of the staff working with the system have no professional knowledge on the use of it. A cross tabulation conducted on who mostly uses the system and with what qualifications

they hold revealed that mostly it's the registry staff using it who barely have no professional skills in the operation of this system.

Furthermore, revelations from the study indicated that the records management policy that was in existence mostly applied to the manual records as opposed to the ERMS thereby making it difficult for some procedures to be strictly adhered to and in addition, some members of staff were still unaware of the existence of this policy. Therefore, an appeal was that a policy to deal with the ERMS be enacted and educate members of staff on the existence of such a one so that all procedures to do with ERMS would be adhered to.

The study investigated whether use of ERMS has improved service delivery through accessibility, retrieval and storage of records. Findings revealed that accessibility has been made quicker as retrieval time has greatly reduced as compared to retrieval of manual records. In addition, storage of records has equally improved in the sense that the challenge of having to look for so much space to keep records has been eliminated greatly as a number of records can be stored in hard drives and flash disks.

In concluding the chapter, the study revealed a number of challenges that arose as a result of ERMS and amongst them the major ones being the lack of training of staff handling ERMS. This has somehow impacted on the delivery of services in that sometimes staff has to learn through hands on experience.

## **CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS**

### **6.1 Overview**

The main objective of this study was to investigate the perceived impact of electronic records management on service delivery in the Department of Immigration. The specific objectives of the study were to investigate the employees experience with the implemented ERMS at the Department of Immigration; to determine the extent to which implementation of ERMS has improved storage of records at the Department of Immigration; to establish the extent to which ERMS has improved accessibility and retrieval of records; to investigate the impact of ERMS on service delivery in the department and lastly to find out the challenges that have arisen from adoption of electronic records; and to identify the challenges employees experienced with their use of the ERMS at the Department of Immigration. Against this background, this chapter summarises and concludes the research and makes some recommendations.

### **6.2 Conclusion**

This study has established that although the transition from paper-based records management system to electronic records management system at the Department of Immigration has only done in a few selected centres and is yet to be rolled out in all the centres across the country. On staff experience with use of electronic records, the study observed majority of the staff had acquired experience on the use of ERMS through training programs while others had been acquainted with the use of ERMS through hands on training.

Furthermore, most respondents agreed that migration has led to the quick accessibility and retrieval of electronic records while few respondents disagreed to that fact and the improvement in such has led to quicker and better services being provided. In addition, the study concluded that introduction of ERMS had equally improved storage of records in that electronic records require less space in comparison to electronic records.

The study as observed by majority of respondents concluded that migration had led to better and improved service quality being accessed by the end users. It was revealed work performance had greatly improved and tracking of records was easily done by staff.

Challenges that the department encountered with implementation included inadequate I.C.T equipment in some regional offices, sometimes internet connectivity proved to be difficult making work to halt, lack of a proper policy on that management of electronic records, and

possibility of security breaches. Furthermore, more staff need training on the management of electronic records as this will lead to efficiency. Other major challenges faced in the use of the ERMS include inadequate funding resulting in the delay to rollout the project to all the district offices across the country and weak adoption strategies. Staff resistance to change was yet another challenge encountered during implementation of electronic records management system.

### **6.3 Recommendations**

In view of the above challenges, the following recommendations are being made for implementation at the Department of Immigration to successfully enhance the management of electronic records to improve service provision.:

- i. develop a comprehensive records management policy that will clearly spell out how access, retrieval and storage of e-records would be done.
- ii. the Department of Immigration should have a dedicated budget for the ERMS complete roll over and to support records management activities in general.
- iii. conduct employees training based on a training needs assessment so as to enhance their skills.
- iv. provision of adequate security measure,

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THE UNIVERSITY OF ZAMBIA

SCHOOL OF EDUCATION

APPENDIX ONE

**Questionnaire: The impact of electronic records management on service delivery in the Ministry of Home Affairs: A case study of the Department of Immigration**

Dear Sir/Madam,

I am a student at the University of Zambia pursuing Masters of Arts in Library Studies. I am currently conducting a study titled: *The perceived impact of electronic records management on service delivery in the ministry of Home Affairs: A case study of the Department of Immigration*. To help me collect relevant data, I have prepared the questionnaire below and I am requesting you to kindly find time to answer it. Please be assured that your responses will be strictly confidential. The information obtained is purely for academic purposes only and will help make the compilation of the research project a success.

Yours faithfully,

Mutale Kapanda

**INSTRUCTIONS**

1. Please answer questions by making a cross (X) next to the correct answer and explain where necessary.
2. Use N/A for not applicable questions, and avoid skipping some questions.
3. If writing space is not enough, use separate page and write the question number next to the answer.

**SECTION A: PERSONAL INFORMATION**

1. How long have you been working in the current job?  
(A) Less than a year ( )  
(B) 1 year ( )  
(C) 2 – 5 years ( )  
(D) 6 – 10 years ( )  
(E) More than 10 years ( )
2. How would you rate your knowledge on the use of electronic records management in general?  
(A) Poor ( )  
(B) Very poor ( )  
(C) Average ( )  
(D) Good ( )  
(E) Excellent ( )

**SECTION B: How has introduction of ERMS impacted on storage, retrieval and accessibility of records.**

3. Has staff been well acquainted with the use of electronic records management in terms of accessibility, retrieval and storage?  
(A) Yes ( ) (B) No ( )
4. If yes, how have they acquired their skills as mentioned in the question above? You may tick more than one response.  
(A) Training Programs ( )  
(B) Hands on experience ( )  
(C) Through electronic records management manuals ( )  
(D) Any others, please specify .....

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5. Can you rate your knowledge of skills attained?

- (A) Skilled ( )
- (B) Semi- skilled ( )
- (C) Very skilled ( )
- (D) None ( )
- (E) Any other, specify

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6. Are the users able to use the system efficiently such that work does not come to a halt at any one particular time?

- (A) Yes ( ) (B) No ( )

7. If No, what could be some of the factors that may lead to inefficiency in work performance?

You may tick as many as apply.

- (A) Lack of skilled personnel ( )
- (B) Lack of proper training ( )
- (C) Lack of top management support ( )
- (D) Inadequate funding to enable purchase latest equipment (i.e., scanners, printers, computers) ( )
- (E) Any other, please specify

(F) .....  
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8. In relation to service provision, has introduction of ERMS improved the way in which services are being offered to the public?

- (A) Yes ( ) (B) No ( )

9. If yes, which of the following aspects have been seen to enhance on service delivery provision? Please tick all the applicable options.

- (A) Records accessibility ( )
- (B) Records retrieval system( )
- (C) Records storage and Conversion ( )
- (D) Records back up system

(E) Disposition ( )

(F) Others please specify .....

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10. As a member of staff using ERMS, how would you rate appreciation of electronic records management by other non-records management members of staff?

(A) Very Poor ( )

(B) Poor ( )

(C) Not sure ( )

(D) Good ( )

(E) Excellent ( )

11. How would you rate support granted by top management towards support of digitisation of records?

(A) Very poor ( )

(B) Poor ( )

(C) Good ( )

(D) Not sure ( )

(E) Excellent ( )

12. How would you rate the state of electronic records management in the Department of Immigration?

(A) Very poor ( )

(B) Poor ( )

(C) Good ( )

(D) Very good ( )

(E) Not sure ( )

(F) Excellent ( )

13. Has the change from manual records management system to electronic records management affected the accessibility and retrieval of records? (A) Yes ( ) (B) No ( )

14. If yes, explain your answer .....

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15. How are records from previous Manual management system being handled after transitioning to electronic records? Please tick all the applicable options.

- (A) Preserved as Archives ( )
- (B) Transferred to the current registries ( )
- (C) Destroyed ( )
- (D) Digitised ( )
- (E) Any other, please specify

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16. Has migration to electronic records management system improved the way in which work is being conducted? (A) Yes ( ) (B) ( )

17. If yes, how has ERMS improved work performance? Please tick all the applicable options.

- (A) Quicker retrieval time of records ( )
- (B) Easy accessibility of records ( )
- (C) Easy tracking of records ( )
- (D) Quicker sharing of information ( )
- (E) Storage of E-records ( )
- (F) Any other, please specify

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18. Do other users have access to this ERMS as and when they need it without any challenges?

- (A) Yes ( )
- (B) No ( )

19. If No, what problems do they encounter? Please tick all the applicable options.

- (A) Poor Internet connection ( )
- (B) Lack of adequate information on how to access the services being provided ( )
- (C) Users do not understand the importance of the Electronic Records Management System ( )
- (D) Lack of skills on how to use the Electronic Records Management System ( )
- (E) Access to some records is restricted. ( )
- (F) Any other, please specify

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20. How would you rate the speed at which work is being done after implementation of electronic records management system?

- (A) Slow
- (B) Very slow
- (C) Fast
- (D) Very fast

21. Has the transition improved on the storage of records?

- (A) Yes ( )
- (B) No ( )
- (C) If Yes, explain to what extent the transition has improved on the storage of electronic records?

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**C: Impact of ERMS on service delivery**

22. Has staff been well acquainted with the use of electronic records management in terms of accessibility, retrieval and storage?

- (B) Yes ( )            (B) No ( )

23. If yes, how have they acquired their skills as mentioned in the question above? You may tick more than one response.

- (E) Training Programs ( )
- (F) Hands on experience ( )
- (G) Through electronic records management manuals ( )
- (H) Any others, please specify .....

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24. Can you rate your knowledge of skills attained?

- (F) Skilled ( )
- (G) Semi- skilled ( )
- (H) Very skilled ( )
- (I) None ( )
- (J) Any other, specify

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25. Are the users able to use the system efficiently such that work does not come to a halt at any one particular time?

(B) Yes ( ) (B) No ( )

26. If No, what could be some of the factors that may lead to inefficiency in work performance? You may tick as many as apply.

(F) Lack of skilled personnel ( )

(G) Lack of proper training ( )

(H) Lack of top management support ( )

(I) Inadequate funding to enable purchase latest equipment(i.e., scanners, printers, computers) ( )

(J) Any other, please specify

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**Section D: Challenges Associated with the Use of Electronic Records Management System**

27. What are the challenges that arise because of the migration to electronic records management system? You may tick as many as apply.

(A) Lack of trained personnel ( )

(B) Lack of ICTs (e.g. Computers, Printers, Scanners) ( )

(C) Lack of an Electronic Records Management Policy ( )

(D) Lack of proper security to records ( )

(E) Instability of storage media ( )

(F) Greater risk of potential security breaches and damage to virus attacks ( )

(G) Lack of affordable tools to appropriately and effectively manage electronic records ( )

(H) No proper back up plan in place ( )

Others please specify .....

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28. As a records manager, would you support the adoption of using electronic records management in your institution? (A) Yes ( ) (B) No ( )

29. If No, what reasons can you give as to why?

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30. What suggestions can you recommend to help improve electronic records management in the Department?

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## **Appendix II: Interview Guide for senior members of Staff**

### **Interview Questions**

- 1.** What is your position?
- 2.** How many years have you been working in this institution?
- 3.** How familiar are you with electronic records management?
- 4.** Has the introduction of ERMS in your work place changed work performance as compared to the previously used manual Records management?
- 5.** How often do you interact with the system?
- 6.** Do you believe that ERMS has helped improve efficiency in the company that you are working?
- 7.** If yes, explain how transition to ERMS has improved efficiency in the delivery of services.
- 8.** Does ERMS help you to accomplish your work faster?
- 9.** Do you believe that your daily work has become easier with the use of the ERMS in relation to retrieval, accessibility and storage of the records?
- 10.** Could you develop your personal general opinion about the benefits an ERMS?
- 11.** What are some of the challenges that your organisation has encountered since the introduction of the ERMS?

## **Appendix III: Interview Guide for Registry Staff**

### **Interview Questions**

1. How many years are you working in this institution?
2. What is your position?
3. How familiar are you with the use of technology in relation to the work being performed?
4. How often do you use the ERMS?
5. Has the transition improved the way in which retrieval, accessibility and storage of records is being done?
6. Do you believe that introduction of ERMS has increased efficiency in the department that you are working?
7. Does ERMS help you to accomplish your work faster?
8. Do you believe that your daily work has become easier with the use of the ERMS?
9. By using the ERMS is the produced information more systematically organized and stored?
10. Could you develop your personal general opinion about the benefits and drawbacks of the adoption of an ERMS?