Management's support and implementation of electronic document and records management systems in government departments

By

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DECLARATION

I, Ivory Velephi Ndebele declare that this dissertation is my original work, and has not previously been submitted to any other University for an academic award. I further state that I have appropriately acknowledged all sources used in this study.

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ABSTRACT

E-government implementation initiatives achieve different levels in implementing Electronic Document and Records Management Systems (EDRMS). Only a small percentage of e-government systems in developing countries are successful in this regard, while the rest are either total or partial failures (Elkadi 2013: 166; Nengomasha & Chikomba 2018: 254). The public sector has always lagged in adopting new technologies and approaches (Schoonraad & Mthethwa 2018: 26). Government departments in KwaZulu-Natal should align with the e-government strategy to implement the Integrated Document and Records Management System.

This study aims to determine the significant impact of EDRMS at KZN COGTA and its role in implementing the system. The objectives of this study are to determine the impact of EDRMS at KZN COGTA. The study also sought to establish factors affecting the implementation of EDRMS at KZN COGTA and assess the role of management in implementing EDRMS at KZN COGTA.

The researcher adopted a mixed-method approach whereby closed-ended questions were used for the quantitative data, and interviews were conducted for the qualitative data. Quantitative data were analysed using the Statistical Package for Social Sciences (SPSS), and qualitative data were analysed using thematic analysis. Purposive sampling for the quantitative data was used to select a sample size of 181 participants out of 341 population. The 341 population were selected because they were trained to use the system. Census sampling was used for the qualitative data. The population was nine and all nine were selected to participate in the study.

This study revealed that EDRMS is an essential system to have, provided that it is utilised to its full potential. It emerged that planning and change management are the factors that hindered the success of the implementation of EDRMS in the department of KZN COGTA. Therefore, management needs to put more effort into overcoming the department's shortcomings in implementing EDRMS. Managerial roles, like decisional and informational roles, are to be focused upon. "Proper planning prevents poor performance" (McClurg 2020: 56). Lastly, end-user engagement can drive the

success of the implemented system. End-users need to be informed about all the benefits of EDRMS before implementation. After training has been done, end-users should be enforced to use the implemented system.

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LIST OF ACRONYMS

AGIMO	Australian Government Information Management Office
BAS	Basic Accounting System
COGTA	Cooperative Governance and Traditional Affairs
DoH	Department of Health
DPSA	Department of Public Service and Administration
DHA	Department of Home Affairs
DTPS	Department of Telecommunications and Postal Services
ECM	Enterprise Content Management
EDMS	Electronic Document Management System
ERMS	Electronic Records Management System
EDRMS	Electronic Document and Records Management System
EGA	Electronic Government Agency
G2G	Government to Government
G2C	Government to Citizens
G2B	Government to Business
GITOC	Government Information Technology Officer's Council
IT	Information Technology
ICT	Information Communication Technology
IS	Information Systems
IDRMS	Integrated Document and Records Management Systems
KZN	KwaZulu-Natal
LOGIS	Logistic Information Management System
NHI	National Health Insurance
NDES	National Digital Economy Strategy
NARSSA	National Archives and Records Service of South Africa
NITDA	National Information Technology Development Agency
NDP	National Development Plan
NATIS	Integrated National Transport Information System
OGCIO	Office of the Government Chief Information Officer
RM	Records Management
SA	South Africa

SITA	State Information Technology Agency
SARS	South African Revenue Service
SPSS	Statistical Package for Social Sciences
SI	System Integration
SOP’s	Standard Operations Procedures
UN	United Nations
HNSF	National Health Normative Standards Frameworks

CHAPTER ONE - INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

In today's business environment, business and information managers in both public and private sectors need to know that information plays a vital role in organisations' functioning (Lowry & Wamukoya 2016: 180). Technological innovation in an organisation requires management with a vision and willingness to take risks (Schramm 2017: 133). According to Macdonald (2017: 4), senior management should be forward thinkers and have an idea of taking the organisation to the next level. Managers must take the initiative to understand the advantages of an integrated approach when dealing with documents and departmental records. Lowry and Wamukoya (2016: 179) state that electronic records systems are implemented with less or no attention given to the infrastructure required to guarantee the accuracy, validity, and reliability of records. It is presumed that managing electronic records is the responsibility of ICT personnel while, on the other hand, ICT personnel have no skills in records management (Lowry & Wamukoya 2016:179). As a result, there is poor management of most electronic records.

According to Lack (2018), implementing an Electronic Document and Records Management System (EDRMS) is a massive initiative that requires a department to invest much more in time, funds, and organisational resources. Kamatula and Kemoni (2018: 69) consider e-records implementation as an essential part of the e-government initiative. For the successful implementation of the EDRMS, managers need to fully commit and, at the same time, know what benefits an EDRMS can bring to the organisation (Lack 2018).

This chapter focuses on the background of the study. It provides more details on the research objectives, problem statement and rationale for conducting the

research. The researcher also discusses the dissertation's aim, significance, limitation and structure.

1.2 BACKGROUND OF THE STUDY

Ever since the KwaZulu-Natal (KZN) Department of Cooperative Governance and Traditional Affairs (COGTA) was first known as the Department of Local Government and Traditional Affairs, it has been dealing with physical records. Workflow, speed approval processes, loss of documents, time spent searching for the information and space for keeping records are why management came up with implementing EDRMS as the solution to all these challenges for the department's documents and records. However, this system has not yet been implemented fully. These challenges of lack of implementation of EDRMS prompted the researcher to conduct this study.

According to the National Archives and Records Service of South Africa (NARSSA) (2016), the public sector should fully commit to the planned e-government strategy. It also stipulates that government departments need to be in line with implementing the Integrated Document and Records Management System. It is also an obligation that suitable infrastructure, policies, strategies, procedures, and systems are put in place to ensure that all records are managed in an integrated manner. In this context, EDRMS appears to be the important component of e-government. According to Tsabedze and Kalusopa (2018:40), it is possible for e-government to be effective if it is driven by a robust e-records management system. Personal support and commitment of management is the most critical factor that hinders the success of implementing the EDRMS (NARSSA 2016; Mosweu, Bwalya & Mutshewa 2016; Maroye, Hooland, Celorrio, Soyez, Losdyck, Vanreck & de Tervangne 2017; Nengomasha & Chikomba 2018). Addressing the issue of management's support will help avoid failures in the implementation of EDRMS, particularly in government departments.

1.3 THE PROBLEM STATEMENT

Most government departments cannot fully implement EDRMS (NARSSA, 2016). In terms of section 13(5) of the National Archives and Records Service of South Africa Act of 1996, senior management staff should ensure that comprehensive records management practices are implemented and maintained.

The Department of COGTA has also embarked on implementing the system since 2015. However, it is not yet fully implemented, and the targeted time for the full implementation process has passed. According to Schoonraad and Mthethwa (2018: 26), the public sector is always trailing behind in implementing new technologies and approaches. A study conducted by Kamatula and Kemoni (2018: 80) indicated that management involvement is missing when it comes to e-records implementation initiatives. Management does not encourage the successful implementation of EDRMS by not considering e-records as a critical element of the organisation. Government is not fully committing itself, and not convincing staff about the advantages of using the system and not ensuring that necessary resources are available. Thus, lack of management support is a critical factor hindering the successful implementation of EDRMS (Mosweu *et al.* 2016: 41; Maroye *et al.* 2017: 71; Nengomasha & Chikomba 2018: 259). According to Schramm (2017: 131), at least one senior management staff in an organisation should lead the innovation. Senior management commitment and support ensures that it does not go wrong due to internal challenges.

Therefore, this study seeks to arm the management of KZN COGTA and other government departments with proper guidelines to follow when implementing EDRMS. The support required from them will be clearly defined. Moreover, in the interest of speed in service delivery, this study seeks to eradicate shortcomings in implementing EDRMS and assist government departments in adopting new technology.

1.4 THE AIM AND RESEARCH OBJECTIVES OF THE STUDY

The aims of the study are to:

1. Determine the impact of EDRMS at KZN COGTA
2. Determine management's role in implementing the system.
3. This study also sought to find strategies that will ensure the meeting of targeted timelines for implementing the EDRMS.

The objectives of the study were to:

1. Determine the impact of EDRMS at KwaZulu-Natal Cooperative Governance and Traditional Affairs (KZN COGTA).
2. Establish the factors affecting the implementation of EDRMS at KZN COGTA.
3. Determine the role played by management in implementing EDRMS at KZN COGTA.

1.5 RESEARCH QUESTIONS

From the above mentioned objectives of the study, the research questions were as follows:

1. What impact does the EDRMS have at KZN COGTA?
2. What are the factors affecting the implementation of EDRMS at KZN COGTA?
3. What is the role played by management in the implementation of EDRMS at KZN COGTA?

1.6 RATIONALE FOR THE STUDY

Many studies on the implementation of EDRMS have indicated management's lack of support as one factor hindering this system's successful performance (Mosweu *et al.* 2016: 41; Maroye *et al.* 2017: 71; Nengomasha & Chikomba 2018: 259). However, it has not been clearly defined on what grounds the management's support is missing or what they should be doing. For this reason, the researcher mainly focuses on the management's support because very few or no studies have been conducted on management's support per se.

The study is embarking on closing this gap by providing solid and lasting guidelines and the framework to assist in implementing EDRMS at KZN COGTA. The study will contribute to the body of knowledge; hence it broadly describes management's role in the implementation of EDRMS. Moreover, it goes beyond and discusses challenges facing South Africa (SA) regarding the implementation or adoption of e-government initiatives. Government departments are to take a stand and prove that they are willing to embrace new technologies for government initiatives.

1.7 SIGNIFICANCE OF THE STUDY

The problem statement has indicated that government departments are trailing behind when it comes to implementing new technology (Schoonraad & Mthethwa 2018: 26). This study hopes to put EDRMS implementation processes at a higher level to impact government departments positively. The study's research findings will assist management in improving the implementation processes of the EDRMS at KZN COGTA and other government departments, especially in KZN. Each stakeholder (management, service providers and employees) will have a clear understanding of what is expected of them when it comes to the implementation of EDRMS. Employees, on the other hand, will understand the significance of the EDRMS in the organisation.

This study hopes to assist government departments in implementing EDRMS without any failure. Interested individuals and organisations will also get access through publications of the results of this study.

1.8 STRUCTURE OF DISSERTATION

This dissertation is structured as follows:

Chapter One: Introduction and background to the study

This chapter provides the introduction and background to the study. The problem statement is clearly-outlined. The chapter identifies the aims, objectives, research questions and rationale for this study. This chapter further provides the significance of this study. This chapter also provides detailed background information about where the researcher conducted the study.

Chapter Two: The Literature review

This chapter provides the literature review. It provides the introduction and defines the key terms used in the study. The literature was be reviewed on the role played by EDRMS, factors affecting the implementation of EDRMS and challenges in developing countries, the role played by top management in implementing EDRMS in government departments as well as the importance of project risk management. A theoretical framework upon which this study is based is also clearly discussed.

Chapter Three: Research methodology

This chapter discusses the research design and methodology used. It provides the introduction, data collection methods and sample size.

Chapter Four: Data analysis

This chapter provides a detailed data presentation. It gives the introduction to the analysis and the interpretation of data. It also discusses the findings concerning the research questions.

Chapter Five: Conclusion and recommendations

This chapter deals mainly with the findings, recommendations, and conclusion. The researcher discusses the extent to which the aims and research questions were answered adequately. The limitations of the study and the prospects for further research are also presented in this chapter.

1.9 CONCLUSION

This chapter was introduced by discussing the need for management to be aware that information plays a significant role in an organisation's functioning. Therefore, full attention needs to be given to the implementation of EDRMS. It further looked at the background of the study. It discussed that the study originated from the Department of COGTA taking an initiative to implement EDRMS.

It also focused on the research objectives, problem statement whereby it was revealed that the EDRMS is not yet fully implemented at the department of COGTA and that the timeframe for completion had passed. The problem statement also originated from the fact that government departments do not have the full capacity to implement EDRMS. The objectives, as well as the

research questions, were outlined. It also focused on the rationale, significance, as well as structure of the dissertation. The next chapter will focus on the literature review based on EDRMS in its different aspects, Enterprise Content Management (ECM), E-government initiatives, and challenges. It will also look at the project risk management, the information life cycle, management of IT projects, policies, and procedures to be followed when implementing EDRMS. Lastly, it will look at the implementation compass framework and the theoretical framework.

CHAPTER TWO - LITERATURE REVIEW

2.1 INTRODUCTION

Management support is the most critical factor in implementing EDRMS in government departments (Nengomasha & Chikomba 2018); Abdulkadhim, Bahari, Bakri, & Hashim, 2015). According to Schoonraad and Mthethwa (2018: 26), “the public sector has always lagged in adopting new technologies and approaches”. The researcher reviewed the literature to get more insight into this research based on the study’s objectives. Therefore, this chapter unpacks literature on the e-government initiatives and challenges in developing countries, the introduction and adoption of EDRMS in South Africa, the impact of EDRMS in government departments, factors affecting the implementation of EDRM and the role played by management on the implementation of EDRMS. It further looked at the importance of project risk management, the information life cycle, governance and management of IT projects, records management policies and procedures, and the project charter to improve the implementation of EDRMS. This chapter also discussed how the theoretical framework could serve as a basis for this study.

2.2 DEFINITION OF TERMS

The researcher discusses terminologies for EDRMS below:

2.2.1 Electronic Document Management System (EDMS)

Smallwood (2013: 38) describes the Electronic Document Management System (EDMS) as software that can store and track electronic documents. The primary function of an EDMS is to manage electronic information within a departmental workflow. Moreover, EDMS has records management capabilities and refers to the Electronic Document and Records Management System (EDRMS). A well-implemented EDMS will provide better security

methods in procedures used to deal with government documents (Abdulkadhim *et al.* 2015: 420).

2.2.2 Electronic Records Management System (ERMS)

According to Mukred, Yusof, Alotaibi, Mokhtar and Fauzi (2019: 35965), ERMS refers to a system designed to track and keep records and related metadata. Kamatula (2018: 61) reveals that ERMS is mainly devoted to the management of documents declared as records. ERMS differ in that once captured in the system; one cannot make any amendments as further amendments will produce another version of a record which will then be stored as different records (Kamatula 2018: 61). The benefits of ERMS, as mentioned by Mukred *et al.* (2019: 35965), include the quick retrieval of information, reduction of human errors, security controls, and support in decision-making, reduction in storage space, and the use of paper in an organisation.

2.2.3 Electronic Document and Records Management System (EDRMS)

Electronic Document and Records Management System is a content management system that combines various document management and records management systems into an integrated system (Kamatula 2018: 63, Marutha & Ngulube 2018: 2). The main aim of EDRMS is to assist departments to ease document and records management through the information life cycle, from the formation to its disposal. Nengomasha and Chikomba (2018: 253) elaborate that EDRMS support organisations with their workflow methods. It allows employees to find and share documents easily.

2.2.4 The Enterprise Content Management (ECM)

Saffady (2017: 43) describes ECM as the most crucial technology suitable for all information governance in an organisation. Saffady (2017: 45) contends that ECM is not an archiving technology. Its design is for digital content in the active

phase of the information lifecycle. According to Shivakumar (2016: 42), ECM is a solution platform that allows employees to collectively manage, create, deliver, and store information that drives an organisation's operations. It is in keeping with the results obtained in section 4.5.8, whereby (63%) respondents agreed that ECM provides adequate storage space for end-users to perform their respective duties satisfactorily. A study conducted by Marutha and Ngulube (2018: 13) revealed that "ECM is the technology used to capture, manage, store, preserve, and deliver content and documents related to organisational processes.

Katuu (2016), cited by Nengomasha and Chikomba (2018: 253), indicate that ECM implementation stages are: pre-selection, selection and installation and lastly, the post-installation category. The pre-selection stage involves undertakings taken into consideration before deciding on any ECM application. These undertakings are based on organisational and technical scrutiny as well as records and evaluation of information administration. The second stage is whereby the ECM application is chosen and installed. The last step involves undertakings performed after the installation has taken place or completed to ensure continuity in using the organisation's system. Figure: 2.1 represent the integration of different systems until the last phase of ECM.

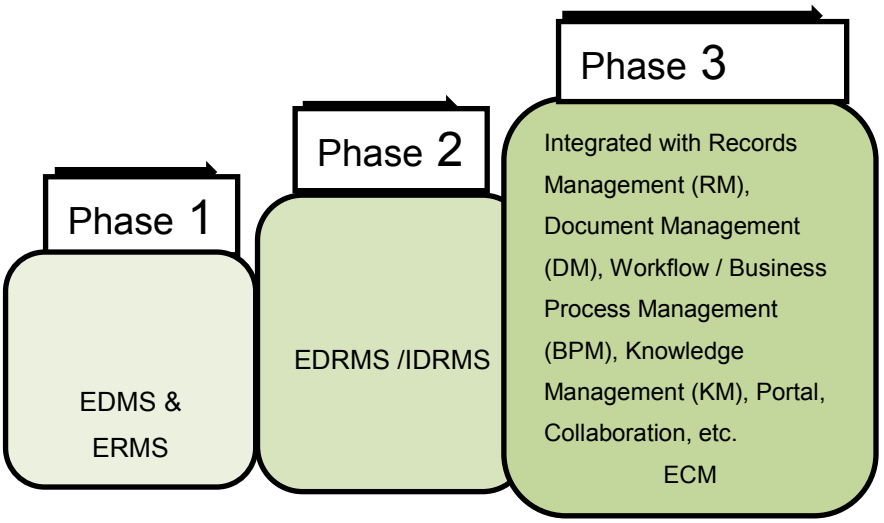


Figure 2.1: Integration of different systems until the last phase of ECM (Katuu 2016: 26; Marutha & Ngulube 2018: 9)

2.3 E-GOVERNMENT INITIATIVES AND CHALLENGES IN DEVELOPING COUNTRIES

This section discusses the e-government initiatives and challenges in developing countries. International countries are also studied. This section further discusses the challenges and opportunities of e-government in the South African context.

E-government is the everyday use of technology applications and other services and platforms to connect government and its citizens (South Africa, Department of Telecommunications and Postal Services 2017: 493). According to Gumede (2019), e-government refers to using information technology in the public sector to modernise, combine workflows and methods to ensure effective management of data and information. He added that it speeds up service delivery as well as improves communication channels. According to Joshi and Islam (2018: 1), developing countries encounter many challenges when it comes to the implementation of e-government projects. It is due to the lack of technology and restrictions of funObi and Iwasaki (2015: 21) discussed the e-government reports of various countries, including African countries. The first report focussed upon is Argentina. In Argentina, the National Office of Information Technology (ONTI) has the mandate to implement the Argentinean e-government strategy. E-government programs based on Government to Government (G2G), Government to Citizens (G2C) and Government to Business (G2B) developed. The most used online services in Argentina are e-procurement, e-tax, e-custom, one-stop service, and e-health system. The second country looked at is Australia. In the year 2011, the Australian government publicised its National Digital Economy Strategy 1 (NDES) with a mission to place Australia as a principal digital economy by the year 2020.

The Minister of Finance and Deregulation and the Australian Government Information Management Office (AGIMO) also published policies, techniques,

and rules to make the Australian government an operational government, which is among other things to encourage innovation. In terms of online services, the Australian government is looking forward to linking all government services to one username and password. MyGov. account will include services like Medicare, taxation office, personal controlled e-Health record, etc. In Australia nationwide, cybersecurity has been given first preference, and as a result, the government has implemented a cybersecurity policy. This policy is, amongst other things, based on risk management and protecting Australian values. The next paragraph discusses Thailand e-government status

A study conducted by Khampachua and Wisitpongphan (2015: 403) on implementing successful IT projects in Thailand Public Sectors revealed that the government cabinet of Thailand resolved that the Electronic Government Agency (EGA) be established for government departments to use their policies successfully. The primary responsibility of EGA is to drive the implementation of electronic government activities, encourage the implementation of public online services, and increase opportunities and equal access to government services.

Currently, Thailand has an ICT policy framework (2011-2020) called ICT 2020. The policy came into effect in 2011. It stipulates that in the year 2020, Thailand should have been smartly developed in terms of knowledge and wisdom based on its economy and its citizens. It merely means that citizens will have an opportunity to participate in the development processes. The “Smart Thailand 2020” vision states that “ICT is a key driving force in leading people of Thailand towards knowledge and wisdom and leading society towards equality and sustainable economy” (Obi & Iwasaki 2015: 162). As for the online services, the government offer users e-tender systems, e-tax systems, e-payment systems, public registration services and e-health systems.

Looking at the African countries, Kenya has a National ICT Master Plan 2014 - 2017 launched in 2014. Obi and Iwasaki (2015) state that the motive behind

having a master plan is to create a political, lawful, and regulatory environment, offer e-government services that are user-friendly to citizens and businesses, and increase the country's productivity. Furthermore, its goal is to encourage the operation and development of ICT-related enterprises to increase employment opportunities and support ICT innovation. The Kenyan e-government portal offers essential online services to citizens, including applying for government jobs, checking identity documents and passport applications, obtaining exam results, e-tax system, and reporting fraud. The e-procurement and payment system was launched in 2014.

In Nigeria, the government has several initiatives that comprise the State Economic Empowerment Strategies, the vision 2020, the National e-Government Strategy and a National IT policy. In Nigeria, the National Information Technology Development Agency (NITDA), whose duty is to co-ordinate the Nigeria project working together with the National e-Government Strategies Limited. The Nigerian government is trying very hard to provide reliable information on government operations and create a technological environment for its social and economic growth. The country has its e-Government portal, which is still facing some challenges, like the system is not user friendly to all users, and it is only connected to the public institutions. There are no online services assimilated into the portal and no information about social media to motivate the Nigerian residents to cooperate with their government.

According to Swaminathan and Meffert (2017: 100), digital transformation is still a challenge in many organisations. However, successful e-government projects indicate that adopting the private sector's best methods can enable the public sector to achieve comprehensive - digitisation. Even though there might be challenges regarding e-government initiatives, most of the countries discussed in this section have established their separate institutions or agencies whose responsibility is to look after implementing e-government initiatives in their country.

South Africa, too, can also do the same to ensure the successful implementation of e-government projects. Provincial governments like Gauteng and Western Cape are showing the way in this regard. In 2015, they established their e-government procedures and departments (SA, DTPS 2017: 496). It can spread to other provinces until the whole SA government departments fully engage in e-government. Section 2.3.1 and 2.3.2 discusses the challenges and opportunities of e-government in South Africa.

2.3.1 E-government challenges within the South African Context

In South Africa, e-government development is affected by some challenges. The National Integrated ICT Policy White Paper approved by the cabinet in 2016 indicates that e-government initiatives are not managed collectively. This has a negative impact to e-government initiatives as no entity is held accountable for numerous roles not attended to in government departments (SA, DTPS 2017: 503). Challenges of e-government in SA are further discussed in sections 2.3.1.1 to 2.3.1.5. 2.3.1.1 Decentralisation of e-government Initiatives.

E-government initiatives are not managed in an integrated manner between government departments, resulting in a lack of accountability. The major challenge is that the roles of the Office of the Government Chief Information Officer (OGCIO), State Information Technology Agency (SITA) and the Government Information Technology Officer's Council (GITO's) are not well explained. Amongst these organisations, none is fully committed to the implementation of e-government in SA. The SITA Act (section 6), stipulates that it is the SITA's responsibility to provide IT and IS to departments and the public. In SA, the implementation of e-government by SITA is disrupted due to decentralised funding and deficiency of regulations that guide the implementation of e-government initiatives to be successful (SA, DTPS 2017: 503).

2.3.1.2 Clarity in the Development Process

According to Singh (2016: 210), the progress of e-government applications is negatively affected by people directly involved in implementing an e-government project. This is because problems are not addressed appropriately and timeously, and end-users needs are not considered. It is very often that the system will be implemented without the end-user buy-in. The relationships between implementers and the development processes are led by the service provider and not the client. All these issues affect the progress of e-government initiatives.

2.3.1.3 ICT infrastructure

Information Communication Technology (ICT) plays a significant role in facilitating the public sector's innovation and services. However, the challenge is how to make the public sector services easily accessible, affordable, effective, and efficient. There is still a considerable need for ICT infrastructure in SA, including transmission capacity, installations, and hardware and programs to aid all SA citizens. ICT infrastructure is the main challenge of e-government in SA (SA, DTPS 2017: 516). Gumede (2019) attest that infrastructure discourages the advancement of e-government in our country. In addition to the ICT infrastructure, Singh (2016: 210) affirms that regular ICT systems support helps e-government applications. This maintenance includes software patches and licensing requirements. Software that is not maintained or upgraded hurts the functioning of an e-government system.

2.3.1.4 Security and privacy

The more government departments adopt e-government processes, the more a security issue becomes a challenge that needs to be considered in all

implementation stages. Muchaonyerwa (2017: 64) believes that government departments should have tight security measures in place to prevent unauthorised access to departmental information and for e-governance to be effective. She adds that electronic documents, records, and ICT systems need to be protected from hackers. E-government executions are impacted negatively by inadequate computer security.

Government employees and SA citizens need to have confidence and trust that their information is protected against hackers or information intruders. People should not fear using e-government services because they are scared that their information will be misused, e.g., fraudulent schemes and transactions. Nowadays, e-government services enable people to do many things online, like transacting and sending personal information. It is essential that, before the implementation of an e-government initiative in a government department, security measures are designed on the ICT system to safeguard the information (SA, DTPS 2017: 517).

2.3.1.5 E-governance Adoption

Joshi and Islam (2018: 5) posit that successful e-governance should not be measured by the complexity of the technology used but, special attention should be given to the end-users to see if they adopt the implemented e-government initiative. In his speech, the former Minister of Telecommunication and Postal Services, Dr Cwele, mentioned that SA is not performing well in global ICT indexes because it does not adapt quickly in e-governance initiatives. He said that the SITA had a responsibility of completing the National e-governance plan and roadmap by the end of March 2017 but could not meet the deadline. Gumede (2019) discovered that the United Nations (UN) e-government survey 2018 indicated that most African countries are trailing behind when it comes to e-governance adoption. He adds that e-government projects are unsuccessful because they lack appropriate data, human resource capability, and technology innovation.

2.3.2 E-government opportunities within the South African context

According to Mawela, Ochara and Twinomurinzi (2017: 150), e-government initiatives have got an advantage to strengthen government departments to function better and attain their desired goals. The SA government has developed its e-government policy framework, which encourages ICT use to improve the government's competency and efficacy (Mzekandaba 2017). This framework aims to ensure that the public can access government services and information anywhere and anytime. It also aims to empower digital transformation and implement an integrated electronic services portal where everybody will be assisted accordingly. Most importantly, it is to make the government responsive by making its processes transparent to reduce the rate of corruption in the workplace (SA, DTPS 2017: 503).

In South Africa (SA), e-government is more focused on the use of technology to modernise processes of government known as Government to Government (G2G) systems, e.g., Basic Accounting Systems (BAS) used to run financial transactions of a department. It also modernises Government to Citizens (G2C) systems and Government to Business (G2B) systems. For e-government initiatives to be successful, government departments should be willing to operate using technology The State Information Technology Agency is tasked with providing IT, Information Systems (IS), and ensuring information security to government departments and other public bodies. SITA is, therefore, a Digital Transformation Entity in an initiative to implement a National e-government Strategy and Roadmap. SITA is expected to work collectively with the Department of Communications and Digital Technologies (DCDT) and the Department of Public Service and Administration (DPSA) in managing and supporting projects related to e-government (SA, DTPS 2017: 521).

Gumede (2019) reports that e-governance makes it possible to improve transparency through government permitting citizens to contribute to decision-making, access government services, and access information. Business-

people find it easy to do business with government departments through e-government systems (Singh 2016: 206). This initiative is seen whereby a person will register his business on the National Treasury's e-Tender Publication portal and then register into a central supplier database. After the individual gets the job and delivers the service, he can email the invoice and gets paid without any delays (Mzekandaba 2017). The Gauteng province is showing a significant move towards implementing e-government services predominantly in the Department of Education. Gauteng e-government department was established to innovate government services (Diphoko 2019 Mzekandaba 2017).

The youth would apply their knowledge of computer science and information systems to solve government challenges. Technology and experienced gained through implementing e-government in Gauteng can be used nationally by other provincial public sectors (Diphoko 2019). The SA, DTPS (2017: 498) stipulates that, e-government initiatives' success lies upon establishing a separate e-government office that will merely concentrate on technology enhancements and implementation. According to Diphoko (2019), SA has a chance of using technology to accomplish its National Development Plan (NDP) 2030 in a timeframe of not more than ten years. He adds that countries like Estonia designed an e-government plan that is recognised as the world leader in e-government services. In Estonia, all citizens have an electronic identification card to access government services.

Even though SA is trailing behind in the implementation of EDRMS in government departments, as Schoonraad and Mthethwa (2018: 26) stated, there are successful cases of e-government initiatives, and others are still underway. Below are some of the successful e-government initiatives:

- The South African Revenue Service (SARS) e-filing system implemented to assist the public in registration and tax collection even though many South Africans still prefer doing it the manual way

(Jankeeparsad, Jankeeparsad & Nienaber 2016: 120 and Mzekandaba 2017).

- The Smart Identification Card System with high-security measures launched by the Department of Home Affairs (DHA) (Mzekandaba 2017; SA, DTPS 2017: 496).
- The e-Recruitment system launched by the Public Service and Administration Minister, Ayanda Dlodlo, in Pretoria, where she declared an interoperability determination between the DPSA and Gauteng Department of e-Government (Bulbulia 2018).
- The Integrated National Transport Information System (NATIS) used for car and licensing registration. The system still needs to be upgraded to allow the citizens of the country to have access everywhere (SA, DTPS 2017: 10).
- The Department of Health (DoH) approved National Health Normative Standards Frameworks (HNSF) for interworking in e-Health. When this strategy is fully developed, it will outline e-Health solutions at all levels between the public and private health systems and allow them to work together to take care of people's lives. It will also ensure the National Health Insurance (NHI) initiative implementation (SA, DTPS 2017: 496).
- The Basic Accounting System (BAS) used by government departments to record all accounting transactions (SA, DTPS 2017: 10).
- The Logistic Information Management System (LOGIS) to be used by government departments for all their procurement requirements (SA, DTPS 2017: 10).

2.4 THE INTRODUCTION AND ADOPTION OF EDRMS IN SOUTH AFRICA

This section provides more details on how the introduction and adoption of EDRMS have been acknowledged in South Africa.

The introduction and adoption of e-government initiatives in SA have caused many government departments to adopt electronic records (Muchaonyerwa 2017: 63). However, EDRMS is undermined by most government departments because some employees working with it are not competent in dealing with electronic records (Muchaonyerwa 2017: 64; Ngoepe 2017: 33). It is not limited to government employees only but extended to the public. At some stage the citizens cannot use e-government service because they do not have the necessary skills to access the required information. Marutha and Ngulube (2018: 191) attest that records management programmes in SA are still a challenge as most government departments operate without structured records processes.

Katuu (2015: 1) elaborates that even though the management of records in SA has been mentioned on many occasions, electronic records have not been prioritised in the past. For records management to successfully implement and support organisational operations, it mainly depends on the framework used to manage records. The fruitless framework has unfavourable results to the records, such as misfiling, file lost, illegal destruction and theft (Marutha & Ngulube 2018: 187). This negative impact is also attested by the Limpopo Department of Health, whereby medical records were getting lost because the system used was not integrated. Further, the system could not track the creation and movement of the medical history of patients.

Studies by Marutha and Ngulube (2016) cited by Marutha and Ngulube (2018: 188) indicate that many government departments in SA manage their records without a proper framework in place. They further elaborate that the framework should be built upon policies and processes to ensure uniformity. However,

where there are policies and processes in place, implementation is not properly done, maybe due to a lack of necessary resources.

2.5 THE IMPACT OF EDRMS IN GOVERNMENT DEPARTMENTS

This section discusses the impact that EDRMS implementation has in the public sector.

Read and Ginn (2016: 5) state that, due to technological changes, many organisations are developing processes that eliminate the number of generated physical records. The issue with physical records is that it is time-consuming. It also costs money as many paper copies are made, files are often lost, and the workflow progress is not well monitored (Read & Ginn 2016: 5). According to the NARSSA (2016), governmental bodies should implement and maintain Integrated Document and Records Management Systems (IDRMS) to manage a well-designed subject file plan according to which records are filed.

According to Smallwood (2013: 36) organisations that require complete information management solutions should use software firms that allow for the digitising of paper documents and manage and track departmental records. As previously mentioned, the ECM is used to capture, manage, store, preserve, and deliver contents and documents related to organisational operations (Marutha & Ngulube 2018: 13).

Implementing EDRMS in an organisation brings a positive change in many ways as there is an increase in operational efficiency because time spent searching for information is reduced. It also helps reduce costs associated with storing and managing documents as every process is kept on the system. ECM provides departments with a central source for archiving data regarding information security, thereby reducing the risk of information lost from physical

drives. It further encodes data transfer from capture to archival, offers access to the right users, and eradicates data leakage (Dataquest 2018: 1).

EDRMS also allows for declaring information as departmental records and the retention and detecting disposal times thereof. The origin of the record must be kept once it has been declared as a departmental record. Moreover, keeping the connectivity between records and files is crucial. Also, maintaining connectivity between file series and the file plan that the department works on ensures that records are dealt with in an accurate manner (NARSSA 2016).

Computerised routing of documents is achieved from the beginning to the final stage depending on its work processes. This system helps expedite approval and other department decision processes as the official can perform their duties even when out of the office. Using EDRMS also makes it easy to generate, manage and disseminate reports across the department (Smallwood 2013: 50). Figure 2.2 represent the five categories together with their applications that Marutha and Ngulube (2018) find to be most important in the use of ECM:

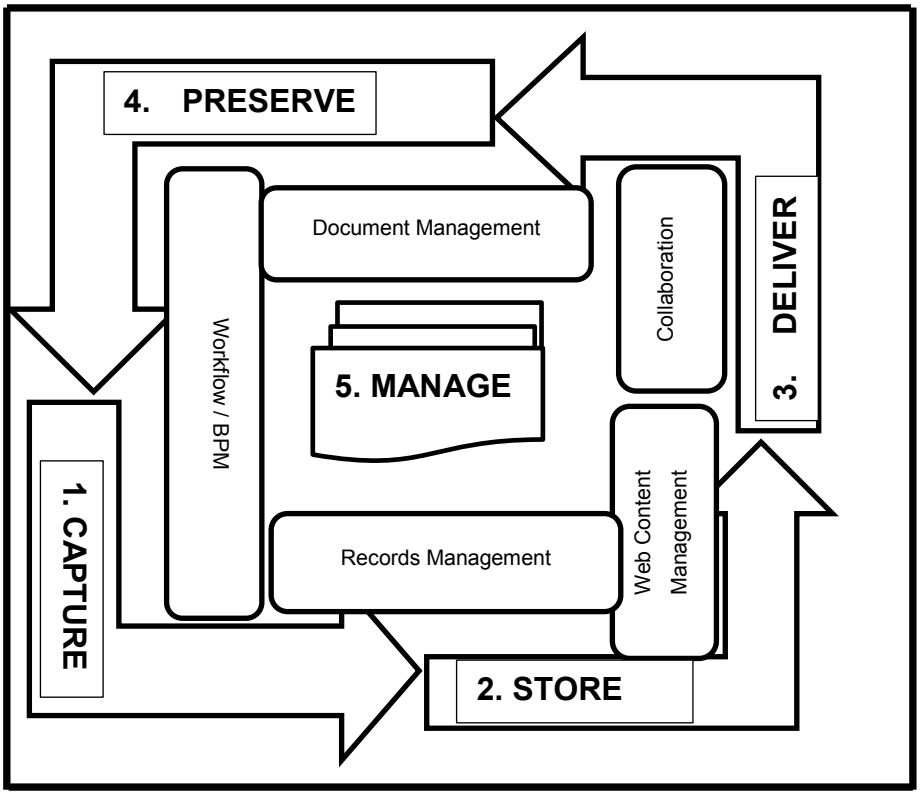


Figure 2.2: Illustration of the five categories of ECM Components (Marutha & Ngulube 2018: 11)

2.6 FACTORS AFFECTING THE IMPLEMENTATION OF EDRMS

This section provides more information about the factors that are likely to affect the implementation of EDRMS. The importance and impact of each element are discussed in detaiFor this study, factors can be described as contributing to a particular outcome or situation (Anon 2018). Research conducted by Abdulkadhim *et al.* (2015: 17947) on EDMS and EDRMS reveals the following common factors illustrated in Figure 2.3 as the main factors affecting EDMS and EDRMS implementation. These factors are unpacked further in Figure 2.3.

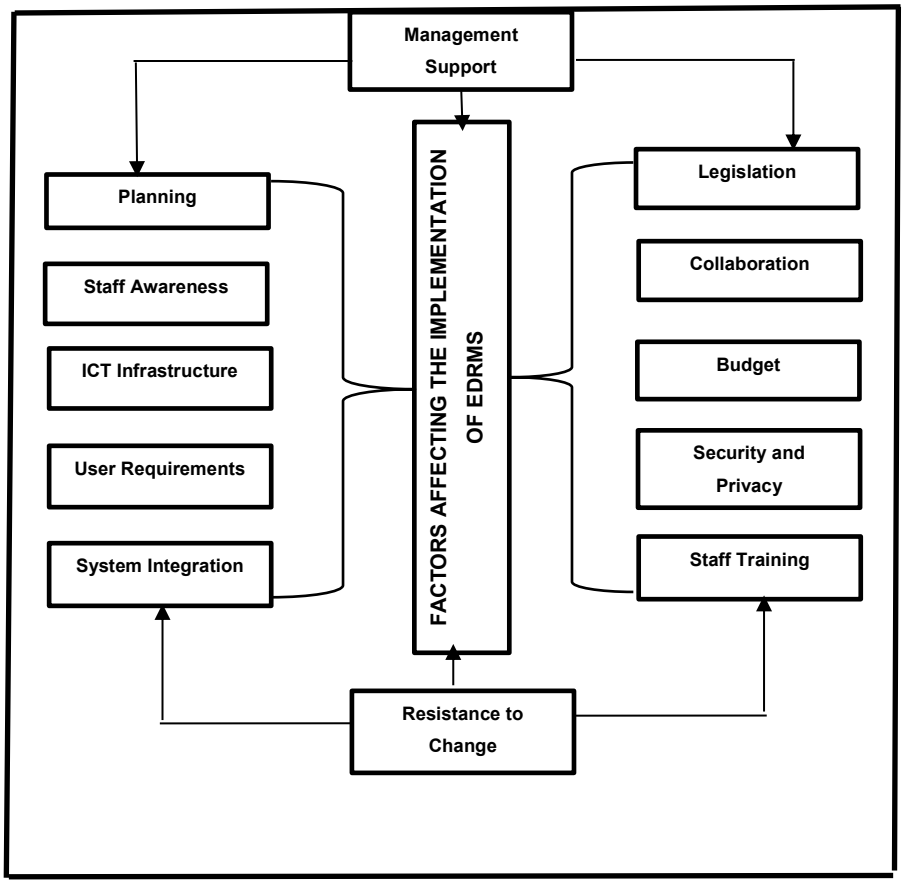


Figure 2.3: Factors affecting the implementation of EDMS and EDRMS (Abdulkadhim, *et al.* 2015: 17947)

2.6.1 Management Support

Management support is the degree to which management understands the importance of the IS function and the degree to which it is engaged in IS activities (Anon. 2018). Management involvement in the implementation of EDRMS is of vital importance. Nengomasha and Chikomba (2018: 254) regard it as the critical success factor; hence the successful implementation of EDRMS depends on them. They have to ensure the availability of necessary resources and funds for the running of the system. Further, they have to ensure that proper training is done and encourage staff to use the system. Rivera-Ruiz and Ferrer-Moreno (2015: 81) mentioned that strategic leadership is needed to ensure that its goals are met. Khan, Long and Iqbal (2014: 1376) state that

management support can be viewed as a moderator between project leadership and project success. They further emphasised that management should avail themselves as project champions for the successful implementation of IT projects.

2.6.2 Planning

Proper planning plays a significant role in the implementation of any project. Without a clear vision, goals and adequate framework in place, IT project are negatively impacted. (Abdulkadhim, *et al.* 2015: 17948; Mashiloane & Jokonya 2018: 877). According to Joshi & Islam (2018), government departments should consider hearing the end-users views when planning or making decisions on an e-government project to be implemented.

2.6.3 Legislation

Before attempting the implementation process, management needs to ensure they first study the Act requirements on the implementation of EDRMS (Abdulkadhim *et al.* 2015: 17848). Proper policies related to the system need to be in place, too, so that the whole process could be done accordingly. As amended, the NARSSA Act stipulates all the requirements and guidelines be followed by governmental bodies whenever they implement EDRMS.

2.6.4 Staff Awareness

Awareness is the most crucial stage, which should go along with the introduction of the implementation initiative. End-users should be aware and prepared for the change to occur (Abdulkadhim *et al.* 2015: 17949, Joshi & Islam, 2018: 9).

2.6.5 Collaboration

Cooperation between all parties involved in the implementation phase, including IT, is another crucial factor not considered by management (Abdulkadhim *et al.* 2015: 17948). If parties do not work hand in hand to achieve the goals stipulated when planning, the implementation process is likely to fail. Wiggins (2016: 186) attest that it is imperative that parties involved in the project's outcome develop a communication protocol through the project management structure, which includes: Programme Management, Senior Executive, Senior User, Senior Supplier, Project Manager and Team Manager. Mashiloane and Jokonya (2018: 878) reveal that the lack of communication negatively affects the project's running as it also damages the organisation's reputation. Bell (2016: 11) contends that many people's collaboration does not necessarily mean that the implementation will succeed. He adds that the more people are involved in certain circumstances, the more the implementation will fail.

2.6.6 ICT Infrastructure

As mentioned in section 2.3.1, infrastructure is another essential factor to be seriously considered when dealing with e-government initiatives. According to Laudon & Laudon (2019: 185), "IT infrastructure provides the foundation or platform for supporting all the information systems in the business". It comprises five components: computer hardware, software, data management technology, networking and telecommunications technology, and technology services. Dynamic electronic records infrastructure is needed to assimilate EDRMS to the current organisational procedures to become compulsory for end-users to use the system (Mosweu *et al.* 2016: 42). Singh (2016: 210) elaborates that ICT systems need to be maintained regularly; this relates to system upgrade and licensing requirements.

2.6.7 Budget

According to Abdulkadhim *et al.* (2015: 17948), lack of funds is considered an enormous challenge that negatively impacts the implementation phase's success. It is another factor that management needs to look at and ensure that enough funds are available to keep the implementation running. Mzekandaba (2017) reports that funding is a considerable disruption in e-government initiatives' implementations because, the national budget does not cover the expensive e-government technologies required by governments departments.

2.6.8 User Requirements

The system implemented should undoubtedly serve the purpose of being implemented. All modules specified or agreed upon should be implemented and used successfully by the end-user. Section 4.8.3 of the qualitative analysis revealed that implementers were unsure about the modules that were to be implemented. This alone hurts end-user requirements. If the user requirements are not met, then the implementation is not successful (Abdulkadhim *et al.* 2015: 17948). This is also confirmed by the results obtained in Figure13, whereby 46.7% of respondents were in disagreement that the ECM system has significantly improved and shortened the approval processes. It is an indication that the user requirements are not met.

2.6.9 Security and privacy

According to the SA, DTPS (2017: 505), government departments work in situations whereby electronic documents, records and ICT systems need to be protected from illegal access. Cooperation between officials should be achieved without concerns of security measures. E-government services are accessed through the internet's availability, and if web sites are cracked, then the government information can be accessed and altered by hackers. The SA, DTPS (2017: 505) stresses that full security measures comprising of six

features, namely: prohibition, deterrence, prevention, detection, recovery, and correction thereof, should be considered. Leaking the information also leads to a lack of trust. Swaminathan and Meffert (2017: 166) stressed that "security measures should be built into all components whether hardware, software, and middleware." Furthermore, security challenges can only be detected if these components are maintained and tested regularly.

2.6.10 System integration

System Integration (SI) is an IT process that enables merging different subsystems to make a single system (Marutha & Ngulube 2018: 1). Subsystems combined are EDMS and ERMS to form a single system which is EDRMS. It ensures that each subsystem implemented functions correctly and as anticipated. Organisations use SI for the advantage of gaining excellent operations (Lehtonen 2018). Costs and technology are the main factors hindering the successful integration of e-government implementations (Mzekandaba 2017; Joshi & Islam 2018: 16).

2.6.11 Staff training

After all the processes have been done, employees need to be well trained in using the implemented IT system. They need to be given time to adapt to the new technology implemented. If they seem not to adapt, retraining is necessary. It is also essential to see if they possess the right skills to adapt to the new technology (Abdulkadhim *et al.* 2015: 17949). Mosweu (2016: 7) highlighted that the full implementation of EDRMS alone does not ensure that end-users are familiar with the system. Continuous adequate refresher courses need to be conducted until users ultimately adopt the use of the system. After training has been done, manual processes must be stopped, and users are given a platform to use the system to perform their duties (Mosweu 2016: 7).

2.6.12 Resistance to change

User's willingness to adapt to the new technology might be the results of a combination of various factors already mentioned by Abdulkadhim *et al.* (2015: 17950). These factors include employees not formally being informed about the change to occur, problems with ICT infrastructure, the training not adequately conducted, and the system not being user-friendly.

According to Mosweu (2016: 8), change management goes along with communicating with the end-users about the implemented system properly. Users may resist change because they do not know the importance of the implemented system. Commonwealth of Australia (2011) cited by Mosweu (2016: 8) contends that change management is not only about moving from manual to digital records, but senior management should demonstrate how organisational information will be managed. Effective change management ensures user buy-in to the implemented EDRMS.

2.7 THE ROLE OF MANAGEMENT IN THE IMPLEMENTATION OF EDRMS

This section describes what management, in general, is. It describes the functions and guidelines for management support in every project implementation. According to Jones and George (2018: 5), management refers to "planning, organising, leading, and controlling human and other resources to achieve organisational goals efficiently and effectively". These are further referred to as management functions (Robbins & Coulter 2018: 45).

The planning function is the stage whereby managers set goals to be achieved in line with the organisation's vision and provide strategies for achieving those goals. It is their responsibility to integrate plans so that the vision of the department could be fulfilled. The effectiveness and efficiency of the organisation depend on the manager's way of planning. After departmental

goals have been set, managers now co-ordinate what needs to be done, who must do it and how it should be done. The complete framework of “job to be done” is set at this stage, called organising. Managers need to show their support by being present whenever the employees need them. They also need to work with people to achieve the department’s goals. They need to show support by motivating employees, establish the most effective communication channels, and attend to queries and conflicts that arise along the way. They should, at all times, know what is happening or how far the job has progressed. It is called the leading stage.

End-users need to be encouraged to use the system so the significance of implementing it can be seen. After the goals have been set, the framework is put in place, and managers avail themselves for support. Lastly, they need to review if processes are progressing as planned. They need to evaluate if goals are being met or not, and if not, corrective measures need to be taken to accomplish the department’s goals. Jones and George (2018: 7) stressed that managers in all stages, different departments, small or big, need to perform these tasks successfully to attain the organisational goals.

To perform the functions mentioned above, they need to possess specific skills called management skills. These management skills are particular abilities that managers have to perform their tasks successfully (Jones and George 2018: 13). Learning and experience assist managers in attaining and developing the following three skills. The first skills are technical skills that refer to different techniques that managers need to achieve their goals. These techniques depend on the position or the business unit the manager is functioning under. The second skills are interpersonal; managers with good interpersonal or human skills are likely to efficiently achieve their goals. This is because they have good interaction with employees.

On the other hand, managers who lack these skills can make it difficult for the organisation to achieve its set goals. All management levels should possess

these skills. Lastly, conceptual skills enable managers to think broadly, which allow them to handle difficult situations. They can see if there is a problem, identify its root cause, and provide a solution as quickly as possible. They must understand how each business unit within the department is linked and takes appropriate decisions. Managers with these skills are likely to win over employees to work towards achieving the department's goals. These skills are mostly required by senior management.

2.7.1 Guidelines for management support in every project implementation

This section describes guidelines for management support in every project implementation. The purpose of this section is to alert management about essential strategies to focus upon whenever they embark on implementing an IT project.

2.7.1.1 Making Decisions

A good manager makes informed decisions. Regarding the implementation of EDRMS, managers must consult with the right stakeholders having information and knowledge about IT projects (Moize 2015).

2.7.1.2 Clarify Strategic Objectives

For every project implementation, management must know the objectives and goals they want to achieve. They should also motivate staff to use the implemented project (EDRMS) and deal with any challenges that may arise along the way.

According to Lack (2018), successful EDRMS implementation is obtained when a thorough project plan is developed. The project plan should clearly outline what needs to be achieved and the due dates. The project plan goals

should be “SMART” (specific, measurable, attainable, realistic, and timely). Deschamps and Nelson (2014: 51) stressed that management should set a framework to lead them to their vision and mission for innovation and suggest values to direct innovation activities. Priorities should be well known, and resources are fully allocated for innovation strategy to be successful (Deschamps & Nelson 2014: 51).

2.7.1.3 Project funding

Lack (2018) states that the implementation process’s budget, need to be identified so that there are no delays due to the lack of funds. According to Schwalbe (2016: 266), many IT projects are not started because IT experts do not recognise the significance of basic accounting and finance principles.

Finances play a crucial role as projects cannot be a success without any funding. Abdulkarim *et al.* (2015: 427) attest that lack of funds is considered a considerable challenge that negatively impacts the implementation phase’s success. According to Schwalbe (2016: 54), project managers require resources like money, human resources, and additional hardware and software. If management ensures that these resources are available whenever needed, project implementation will succeed.

2.7.1.4 Right project team

According to Lack (2018), the project team is an essential element for implementing the EDRMS project. Therefore, the management’s role is to ensure that the right project team is available to run the implementation process. Management, the project manager, and the project team each play a crucial role in ensuring that the implementation does not fail. Management needs to ensure that each role player plays its part accordingly and can intervene positively should there be any challenges along the way.

2.7.1.5 Project governance

Management should be fully committed when it comes to project governance. They should ensure that the right framework is in place for the implementation process; further, a clearly defined policy should be implemented. Also, the right people are selected to drive the implementation, and these people are aware of the department's objectives. Lack (2018) elaborates that having a clear understanding of regulatory requirements helps implement a successful EDRMS. A clearly defined policy on EDRMS should be in place and honestly followed as a single omission of the critical point could lead to an unsuccessful implementation process. Project governance serves as a pillar in ensuring that the objectives and goals of the project are met.

2.7.1.6 Project buy-in

Before considering all factors that make a project to be a success, project buy-in is the priority. In the case of EDRMS implementation, all stakeholders involved up to the system's end-users should work on the same vision of seeing the system being a success. Should there be a lack in one or two of these factors, the project will likely fail because there is no project buy-in. Schwalbe (2016: 369) elaborates that teamwork makes it possible for tasks to complete successfully. It is the responsibility of the project manager to ensure cooperation in an IT project.

2.7.1.7 Managing risks

Most IT projects fail because of management's lack of preparedness to cater for risks that might hinder the project to be a success (Moize 2015). Management should create a risk register to identify risks that might affect the project. The risk register should also pay special attention to those risks that are likely to happen and assign people to deal with them. Project risk management is further explained in detail in section 2.8.

2.7.1.8 Ensure adequate training of end-users

A thorough training session for the system users is another critical element not to be left out by management on the implementation plan (Lack 2018). Management and trainers should be alert of the challenges that may arise during the training session and deal with them accordingly. A step-by-step support guide after training also helps system users quickly understand what was dealt with during training sessions.

2.7.1.9 Re-evaluation of the system

Deschamps and Nelson (2014: 51) stressed that the management team should frequently re-evaluate the organisational innovation system, its processes, environment, and culture. They are to identify and overcome existing problems in the departmental system. Outcomes should be monitored and evaluated on an on-going basis, and conflicts arising during the innovation process should be addressed in a proper way.

2.8 THE IMPORTANCE OF PROJECT RISK MANAGEMENT

This section clarifies the importance of project risk management whenever an organisation embarks on implementing a project. It further describes the main processes involved in risk management.

Project risk management is the way of identifying, examining, and taking action against risks that arise throughout a project's lifecycle (Dinu 2015: 162; Schwalbe 2016: 426 & Ray 2017). Taking action against threats is the best way of achieving the project goals. Dinu (2015: 162) elaborates that risk management plays a crucial role in sustaining the project constancy and effectiveness throughout the lifecycle of a project. Hopkin (2018) states that risk management's motive is to enhance value to the organisation as risk

management activities are designed to reduce the insecurity of outcomes. Therefore, risk management appears to be of the utmost importance. The section on e-government initiatives and challenges in developing countries revealed that the Australian government developed a cyber-security policy which, amongst important aspects, talks about risk management on e-government initiatives (Obi & Iwasaki 2015: 27). The five main processes involved in risk management are discussed in sections 2.8.1 to 2.8.5.

2.8.1 Planning

According to Schwalbe (2016: 431), risk management involves strategising how to deal with the project's risk management activities by reviewing the project charter; a project team can discuss and analyse risk management activities. The project charter is briefly discussed in section 2.14. The main objective of this process is to come up with a risk management plan. Dinu (2015: 164) states that the risk management plan alerts the implementing team about the techniques they can use to identify, evaluate, and react to risks within the project. Management must protect the project from known and unknown threats and use available chances to improve project performance.

The planning list contains details about the procedures, duties to be performed and people responsible for, financial framework, project period, classified risks, the possibility of occurrence, the effect and tracking. Planning appears to be the backbone of every success. Mashiloane and Jokonya (2018: 879) revealed that without a clear vision, goals and proper framework in place, an IT project is likely to fail.

2.8.2 Identifying

According to Ray (2017), one cannot resolve a risk without knowing what it is. After doing the risk planning, risks that can hinder the project success are now identified together with their characteristics and recorded on the risk register.

The implementing team further examines how these risks can disrupt the project (Dinu 2015: 164).

2.8.3 Risk evaluation

According to Hall (2019), risk evaluation analyses the importance of risk using qualitative and quantitative methods. After planning and identifying, the implementing team can use different techniques to rate risk and update information on the risk register (Schwabe 2016: 432). Qualitative risk analysis is about ranking the possibility of the risk occurring and its effect on the project, while quantitative risk analysis is about carrying out the numerical estimations of the impact of risks in a project or project objectives (Schwabe 2016: 432 & Hall 2019).

Hall (2019) believes that quantitative analysis is time-consuming, yet it assists a lot in decision making. Risk evaluation is done to react intelligently and properly to risks identified and allocate proper resources required to mitigate risks (Hall 2019).

2.8.4 Planning risk responses

This process involves taking steps to maximise opportunities and minimise threats to meet the objectives of the project. Project teams can come up with risk response strategies through risk management processes (Schwalbe 2016: 454). According to Hall (2019), risk response refers to the method that is chosen to deal with project risks.

According to Steyn (2018: 6) risk response is differentiated into two strategies, namely: strategies to deal with risks and strategies to deal with opportunities. Different ways to respond to each strategy are discussed below:

In response to strategies for risks, implementers can do the following:

- Escalate: This is an appropriate strategy when the project team is in agreement that a threat is outside the scope of the project. Threats are therefore escalated to appropriate and higher levels in the organisation.
- Avoid: This strategy is used to prevent risk from occurring by coming up with techniques that will make it impossible for a risk to impact the project.
- Transfer: This strategy is used to transfer the ownership of the risk to a third party, usually by getting insurance or risk sharing contract with the service provider.
- Reduce: Taking preventive measures that will reduce the probability of risk occurrence

Accept: Accepting the risk as it is and be ready to live with its consequences.

In response to strategies for opportunities, implementers can do the following:

- Escalate: Likewise, escalation is appropriate when the project team is agreement that an opportunity is outside the scope of the project. Opportunities are therefore escalated to appropriate and higher levels in the organisation.
- Exploit: In this case, the project team wants to ensure that the opportunity is realised. This strategy is therefore used for high priority opportunity.
- Share: Ownership of an opportunity is transferred to a third party so that it shares some of the benefit should the opportunity occurs.

- Enhance: The main aim of this strategy is to improve the probability of an opportunity occurrence.
- Accept: Accepting the opportunity as it is without taking any practical actions.
- Share the opportunity with a third party as a reward to make it more possible to happen or where you have greater chances of attaining more significant benefits.

Develop something right out of the risk that will, in turn, have a positive impact.

2.8.5 Controlling risk

Risk control is whereby Project Managers develop corrective methods to minimise the effect of risk on projects. This can be done by having proper plans and providing the necessary infrastructure required (Kliem & Ludin 2018: 8). Weedmark (2019) elaborates that risks can cause disasters, delays, unnecessary expenditure or cause the whole project to discontinue if chances are not appropriately controlled.

2.9 THE INFORMATION LIFE CYCLE

This section provides an illustration of the General Information Life Cycle and briefly discusses the stages involved.

Wiggins (2016: 58) outlines the information life cycle and demonstrates processes for records management from creation to disposal.

Figure: 2.4 represents the General Information Life Cycle.

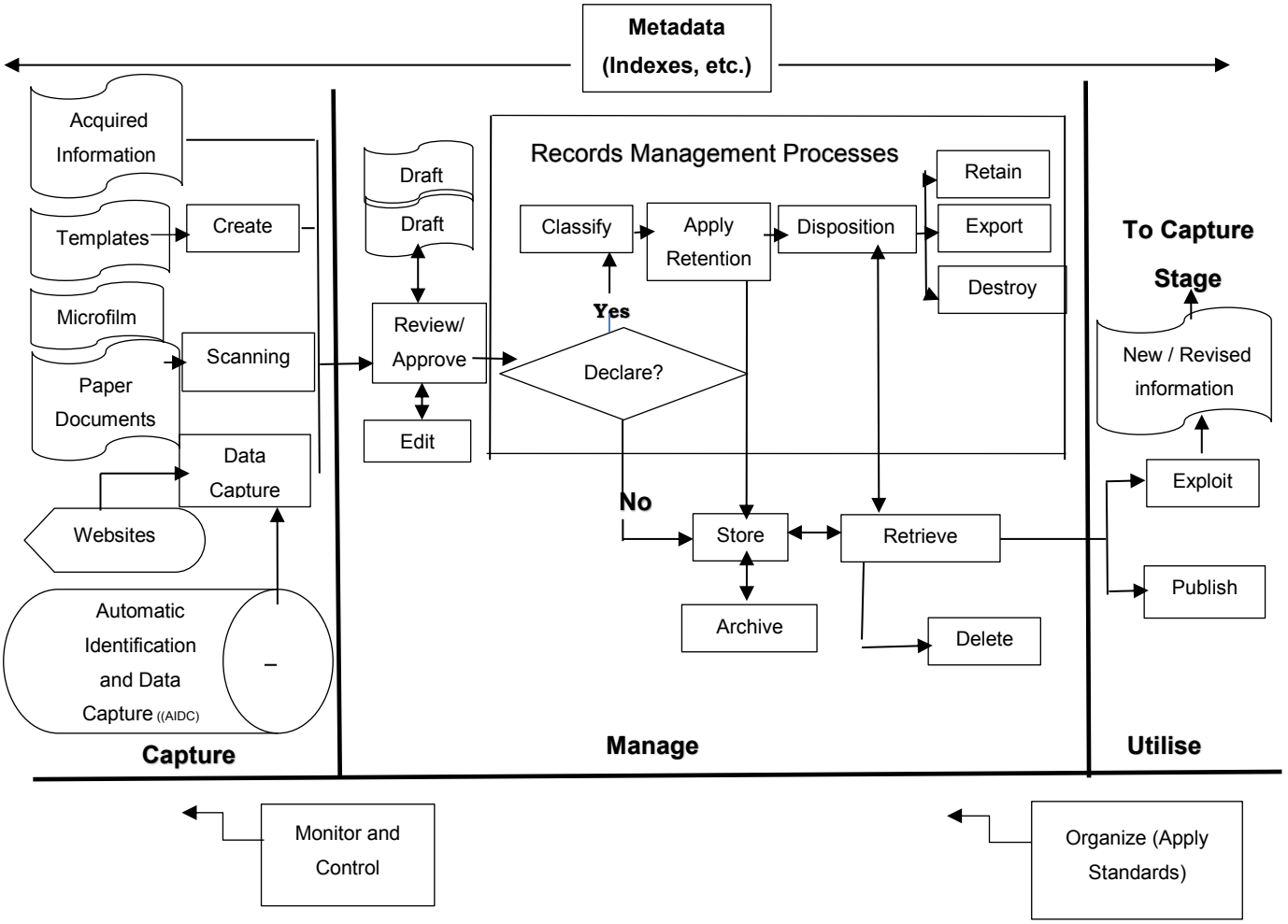


Figure 2.4: General Information Life Cycle (Wiggins 2016: 58)

2.9.1. Stages of the Information Life Cycle

The Stages of the Information Life Cycle are briefly discussed below:

2.9.1.1 Capture

Documents to be captured may either be done physically or electronically. Electronic formats make it easier to manage information, i.e., from the creation to the disposal stage.

2.9.1.2 Editing, review and approval

Approval procedures are applied to created information before it is further disseminated. These procedures depend on the form of a document and its projected usage to the organisation. This stage produces the final version or the draft of the recorded information.

2.9.1.3 Declare

Recorded information must be declared as a record. Declaration plays a vital role in preventing recorded information or document from being destroyed before time or further changes made to the document.

2.9.1.4 Classify

Declared information should be placed in some form of classification. This is normally done using a file plan. A file plan makes it easier to search for a document and project the preservation of a record.

2.9.1.5 Retention

Proper retention schedules prevent information from being destroyed before time. Organisations should ensure that lawful and regulatory requirements are applied, which clarify periods and reasons or significance for keeping various information.

2.9.1.6 Disposal – retain, exploit and destroy

As per the policy and retention schedules, records are revised to resolve if they are kept, wholly destroyed or transferred to archives. Regarding the implementation of EDRMS, the system should be capable of destroying electronically stored information.

2.9.1.7 Store and archive

A storage system should be available to keep the information after being edited, reviewed, and declared as a record. A backup system needs to be kept in place in case something happens to the primary storage system. It ensures that information is not easily lost.

2.9.1.8 Retrieve

Retrieval of information should not be challenging if proper ways of storing data are followed. However, security measures should be put in place so that no unauthorised persons should have access to confidential information.

2.9.1.9 Delete

A declared record is not deleted anyhow and by anybody except by the accredited person, normally a department's Records Manager.

2.9.1.10 Utilise

The stored information may be requested, either internally or externally, to be utilised for various purposes. The correct procedures should be followed when requesting information, and the content of the data must remain the same.

2.9.1.11 Metadata (indexes, etc.)

More specialised search and retrieval tools such as corporate intranets, personnel databases, and case management systems will be available within organisations. These tools typically enable users to enter search terms or browse through hierarchically-arranged subject directories to home in on the required information. Very broadly, in this sense, they are information indexes and represent one type of metadata – this being a set of data that describes

and gives information about other data. Other types of metadata will record such matters as ‘document version’, ‘retention schedules’, ‘approver details’, ‘electronic file formats’ and ‘access rights for individuals’. These are necessary for the day-to-day management and operation of the system.

2.9.1.12 Monitor and Control

The whole information life cycle is examined and controlled through its performance. Performance measures may include speedy retrieval of the requested information and satisfaction of users.

2.9.1.13 Organise (Apply standards)

The information life cycle must be well organised as it entails different aspects in their different perspective: people, technology, policies, and procedures. Legal and regulatory principles need to be obeyed.

2.10 GOVERNANCE AND MANAGEMENT OF IT PROJECTS

This section highlights the importance of governance and management of IT projects. According to Mashiloane and Jokonya (2018: 876), IT projects' governance and management need to be given special attention to ensure successful implementation. Section 2.3 on e-government initiatives and challenges in developing countries made it clear that every country is doing something on its e-government projects' status. Heeks (2005), cited by Mawela, Ochara and Twinomurinzi (2017: 151), discovered that e-government projects comprise three outcomes.

The first one is the complete failure whereby the project is never implemented at all or implemented but instantly left. Secondly, there is a partial failure whereby the main objectives of the project are not accomplished. Lastly, there

is a worthwhile project whereby the whole initiative is a success, and the main goals are being accomplished. Project governance refers to all components that make the project a success, and it needs to be aligned according to the organisational needs (Sandra 2015).

Mashiloane and Jokonya (2018: 877) state that project governance clearly outlines the implementation structures, procedures, and control mechanism for projects to support projects in achieving the organisational goals. Khampachua and Wisitpongphan (2015: 404) state that it is essential that a system implemented is of benefit to the department rather than being a burden.

They further stress the importance of getting the policymakers and senior managers involved in the project right from the beginning. This is important to find out which procedures can be followed to avoid project failure. The policies and missions of each department are formulated by the central office and distributed to provincial departments.

2.11 RECORDS MANAGEMENT POLICIES AND PROCEDURES

This section highlights the importance of records management policies and procedures in government departments. Handling records under regulation and policies is not an alternative but responsibility for the government department regardless of the challenges in managing digital records. One of the policy guidelines involves allocating and outlining records management tasks to officials who work directly with records (Mosweu *et al.* 2016: 40). The NARSSA (2016) provide guidelines on the management of all records formats, including electronic records. Each department should establish its policy that will link with the department's goals and objectives.

Business units or officials and IT staff within the department should be nominated to take full responsibility for electronic records. Records

management policy should follow sound procedures for creating, maintaining, retaining, and disposing of all documents, including electronic records. Sound procedures for the security, privacy and confidentiality of records should be followed and comply with legal requirements (NARSSA, 2016).

Many African countries are left behind in managing electronic records because there are no e-records management policies (Muchaonyerwa 2017: 65). The author recommends that before introducing any technology, it is essential to address the policy and support procedural frameworks. The formulation of the records management (RM) policy as stipulated by the National Archives requires the senior management's full support to engage in various aspects like reviewing the department’s legal and regulatory laws about records management.

Researching policy components and evaluating management practices towards the current records system are also important. Engagement with staff to get their views is also essential before the policy can be drafted (Wiggins 2016: 209). The results attained in section 4.6.3 indicated that end-users are not specific whether the system is designed according to the policy and other legislative requirements.

2.12 STAGES TO DESIGN AND IMPLEMENT A RECORD SYSTEM

Wiggins (2016: 207) outlines stages to design and implement a record system as depicted in Figure 2.5. This is followed by a descriptive summary of the project stage. This summary includes 6 stages, A to F.

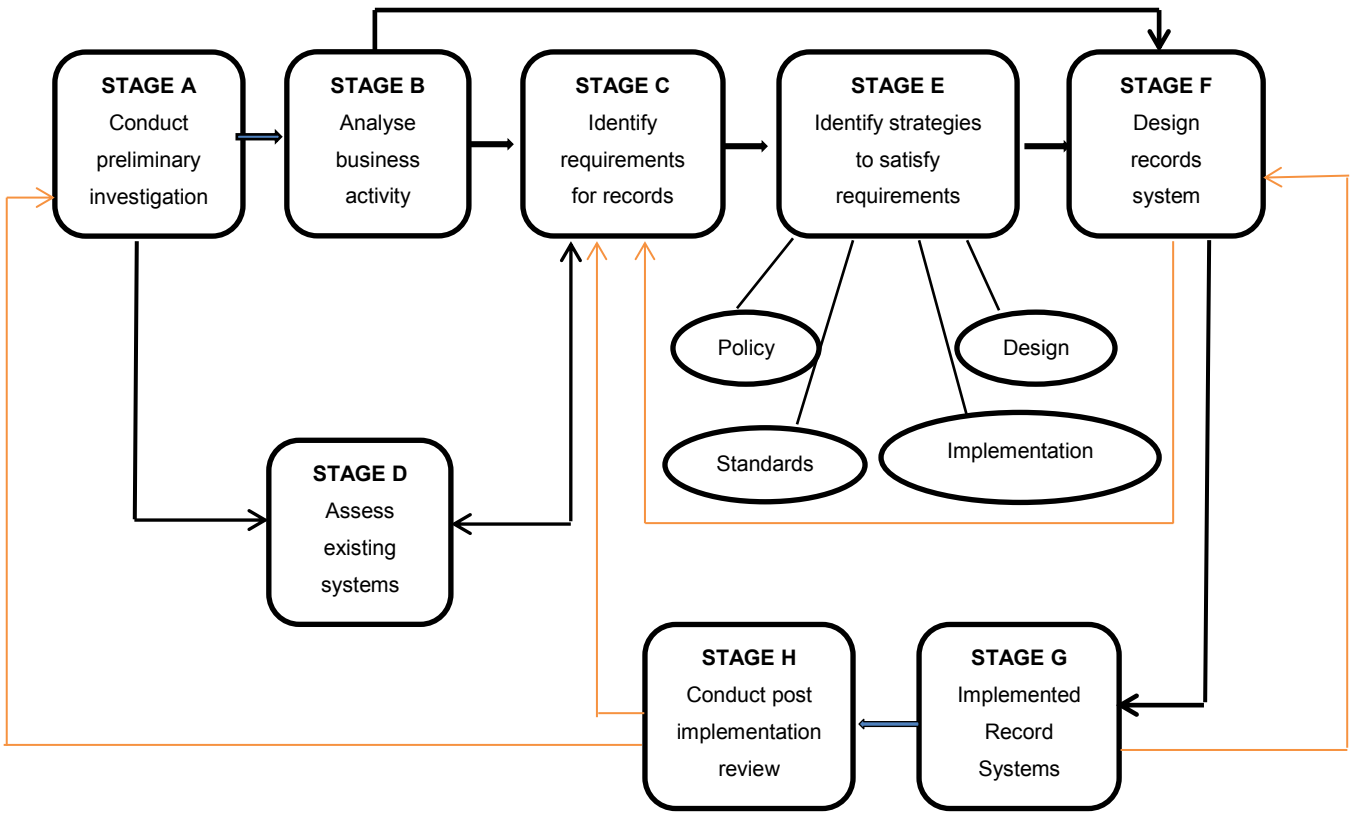


Figure 2.5: Projects stages for a records management Project (Wiggins 2016: 207)

2.12.1 Summary of the Project Stage

As mentioned in section 2.12, this section describes the eight project stages for a record management project. Its purpose is to give an overview to implementers of what should be contained in a framework to implement EDRMS.

- Stage A: A preliminary investigation helps identify a need for the implementation and provides a clear picture of how the department operates.
- Stage B: This stage deals with identifying what the department deals with and the type of records it keeps, and the importance of maintaining those records.

- Stage C: Identify what is needed for record creation, receipt, and retention, and produce detailed information concerning who should have access and how.

- Stage D: Evaluates the department's records system, the negative and the positive view and outline what needs to be done.

- Stage E: After identifying what needs to be done, successful implementation strategies are put in place. There should be no divergence from the vision and objectives of the department. Policy on records should be studied in terms of its design, standards, and implementation.

- Stage F: The records system should be user-friendly and cover the comprehensive technology that the organisation needs. The output should not only focus on file plans but also on procurement documentation and tender evaluations.

- Stage G: The supplier implements the chosen records system according to the designed specification. The system is tested, and users have been trained accordingly.

- Stage H: After the implementation, the system is then assessed if it serves the department's expected benefits. If not, corrective measures are taken.

Stages A to D above covers the preparation phase, while stages E to H are the preparation results in stages A to D.

2.13 THE IMPLEMENTATION COMPASS FRAMEWORK

This section discusses the implementation compass framework as well as summarises the elements involved in the framework. The implementation compass framework is regarded as a tool for identifying and taking the right actions in an organisation whenever a strategy is implemented. It was established by the Bridges Business Consultancy (2013) when investigating "the different strategy used by organisations that succeed in their implementations". This framework is being extensively used and has undergone extensive scrutiny. Managers have special roles to undertake in strategy implementation. These roles include creating an implementation plan and identifying the correct framework that can be adopted.

Funding the implementation is yet another vital role as without enough funds, implementation is likely to fail. Managers need to be aware that employees do not automatically resist change, but the correct conditions should be created to embrace the change. If necessary, extra training should be conducted to acquire new skills. The advantage of using this framework is that it provides guidance and the basis for the implementation plan. Moreover, it keeps implementing the management radar to ensure success (Bridges Business Consultancy 2013). Figure 2.6 represent the Implementation Compass Framework.

Figure 2.6: Implementation Compass Framework (Bridges Business Consultancy 2013)

2.13.1 Summary of the Implementation Compass Framework

The implementation compass framework is summarised as follows:

People who perform the implementation process should have the right skills and knowledge and be motivated to do so. The implementation process is likely to fail if employees are not engaged. Leaders should do this through awareness, buy-in and commitment. Regarding the biz-case, staff members should be aware of the strategy and its importance to an organisation. This will prevent a “resistance to change attitude” as employees will be aware of its strategy. Management needs to explain the new implementation's objectives through on-going communication about the success, failures, and best practices to be carried throughout the whole implementation process. Employees need to be informed of what is expected of them so that the implementation can be a success.

Correct measures need to be put in place to drive and track the success of the implementation. This allows management to know what needs to be improved throughout the implementation process. Employees need to be prepared to adopt a new strategy. The implementation should be aligned with the culture

of the organisation. Management should instil a culture supporting and fostering change and ensures congruence between the implementation strategy and the processes. They should enforce processes that support the strategy and see processes that need to be redesigned. They must emphasise the expected actions so that they are continuously repeated and, at the same time, lead by example.

Most importantly, employees performing well should be recognised and rewarded to motivate them. The motivation will encourage others to adapt to the new strategy. Moreover, management should continuously review its implementation to ensure that the right actions and behaviours are taken to produce the required results.

Deschamps and Nelson (2014: 51) stressed that the management team should frequently re-evaluate an organisation's innovation system, processes, environment, and culture and provide new guidelines. Managers should set a framework to lead them to their vision and mission for innovation and suggesting values to direct innovation activities (Deschamps & Nelson 2014: 51). This will help them find ways to identify value sources from innovation and generate them and capture them. Priorities should be well known, and resources be fully allocated for innovation strategies to be successful. The outcomes should be monitored and evaluated on an on-going basis, and conflicts arising during the innovation process should be addressed in a proper way.

The overall implementation compass framework is an overview of most of the factors affecting the implementation of EDRMS in government departments. Factors like resistance to change, staff awareness and communication are featured in this section. This is an indication that management has a lot to consider when dealing with the implementation of EDRMS in the public sector.

2.14 DEVELOPING A PROJECT CHARTER

This section highlights the importance of a project charter in an organisation. According to Schwalbe (2016: 155), management must inform the rest of the department when implementing a project. They need to distribute a project charter. Schwalbe (2016: 155) defines a project charter as a document that officially recognises a project's presence and guides the project's intentions and management. Essential aspects of the project charter include the project statement of work, the business case, agreements, and the organisational process assets.

A project statement of work is a document that defines the service to be carried out by a project team. It usually includes an overview of the requirements, the characteristics of services, and organisational information such as strategic plans and an organisation's goals. The business case gives more details on the primary purpose of implementing the project regardless of the costs incurred or the risks identified. As previously stated by Bridges Business Consultancy (2013), the business case clearly defines the importance or benefit of implementing a strategy for the organisation. Savings to be made by the department are looked at. Before authorisation and approval of the implementation takes place, a business case should be complete and comprehensive. The project charter should also include the contract or agreement between the client and the supplier. This agreement should comprise adequate information needed for a good project charter. Lastly, the organisational process assets include policies, procedures, guidelines, information systems, financial systems, management systems, and historical information that can impact a project's success.

2.15 THEORETICAL FRAMEWORK

This section discusses the management theory of Mintzberg (1973), reviewed by Caramela (2018). Its purpose is to provide management with clear

responsibilities to be played in their positions. This theory is linked to the study because a manager cannot offer full support for any project implementation if they lack managerial roles. Management is expected to uphold the vision, strategy, and communication throughout the project implementation's lifecycle (DaSilva, Jeronimo & Vieira 2019). According to Muller and Turner (2017: 85), different managerial competencies are required for various projects. The theoretical framework for this study is discussed in details below:

This theory analyses the management roles and duties of a manager to organise the workplace and streamline difficult concepts (Caramela 2018). According to Robbin and Coulter (2018: 46), management roles are the actions or responsibilities expected from a manager. Managers encounter different problems every day, and decisions that seem right today might not be on the next day (Jones & George 2018: 10). Mintzberg resolved that managers' responsibilities can best be described by observing the roles they are involved in daily. As mentioned in section 1.6, this study focused mainly on management’s support and implementation of EDRMS. One of the objectives of this study was to determine the role played by management in EDRMS implementation. Therefore, this theory encompasses all aspects needed by a manager in any private or public organisation. Moreover, this theory is used because a manager cannot offer full support for any project implementation if they lack managerial roles. Management is expected to uphold the vision, strategy, and communication throughout the project implementation's lifecycle (DaSilva, Jeronimo & Vieira 2019).

2.15.1 The Management Theory of Henry Mintzberg

Mintzberg (1973), cited by Roubin and Coulter (2018:46), differentiates management roles into three categories: interpersonal, informational and decision making. Figure 2.7 illustrated below represent the managerial roles:

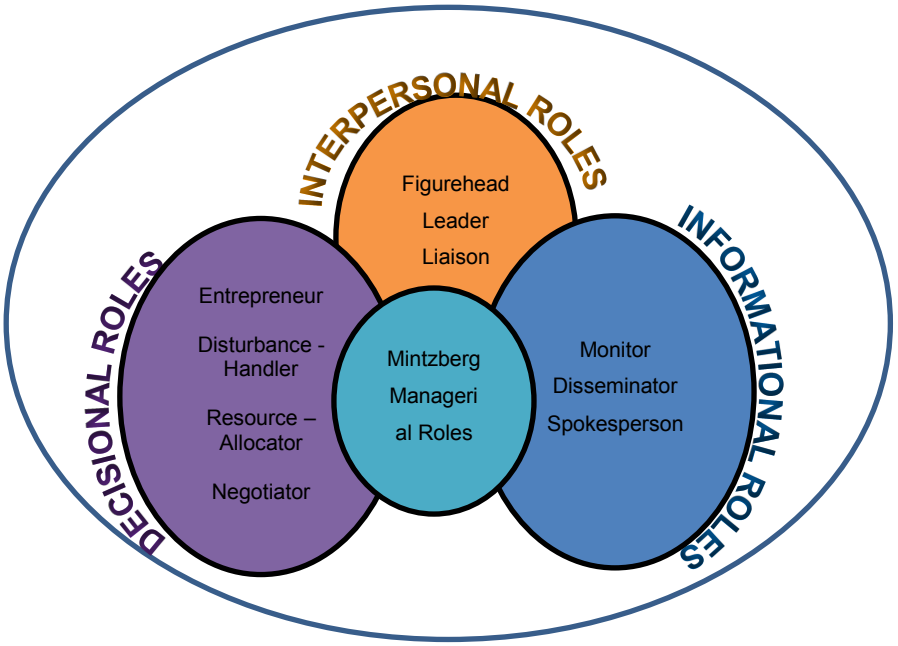


Figure 2.7: Managerial Roles (Mintzberg 1973)

The managerial roles are unpacked in their different categories below:

2.15.1.1 Interpersonal roles

Section 1.3 of the problem statement indicated that management discourages the successful implementation of EDRMS by not fully committing themselves and by not convincing the staff about the advantages of using the system (Mosweu et al. 2016: 41; Maroye et al. 2017; Nengomasha & Chikomba 2018). If a manager does not have interpersonal roles, surely he will fail to gain employees commitment and trust in return.

Mintzberg (1973), cited by Caramela (2018), believes that the manager needs to show confidence so that everyone feels secure and supported and gains confidence that the job will be performed accordingly. They professionally represent their company. They are leaders who communicate, coach, and guide their team towards a specific goal. To keep things running smoothly, they should interact with different people both within and outside the department and convey necessary information.

2.15.1.2 Informational roles

Section 2.7 on the role of management in the implementation of EDRMS revealed that management needs to know what the organisation needs to achieve. It further revealed that the goals should be specific, measurable, attainable, realistic, and timely (Lack 2018). Therefore, it is the management's responsibility to ensure that employees are well informed about implementing EDRMS in a department. It is in keeping with the results attained in section 4.5.3.1, which indicates that management did inform staff about the significance of implementing EDRMS in the department. It makes the end-users feel like being essential parts of the winning organisation.

Factors like staff awareness appeared to hurt the implementation process if management does not pay special attention. It can also lead to resistance to change, not because the system is not user-friendly, but because the user is not aware of its significance (Abdulkadhim *et al.,* 2015). Results attained in section 4.5.2.1 indicated that management is the most factor that drives the success of the EDRMS implementation because they are to provide support from the beginning to the final stage of the implementation process. As stated in section 2.13, management should emphasise the expected actions so that they are continuously repeated and, at the same time, lead by example. Mintzberg (1973), cited by Caramela (2018), state that the successful manager is the one who always monitor the situation he or she is responsible for and make quick changes when necessary. A manager has to relay all valuable information to his team. Specific projects fail because relevant information is not disseminated at the right time.

2.15.1.3 Decision making roles

Mintzberg (1973) recommends that managers should act like entrepreneurs in terms of urgently resolving issues that arise. They should also inspire change and innovation. It is always the case that there would be hindrances along the

way during the implementation of a project. Being a manager means that you should be able to handle those hindrances appropriately. To meet the organisational goals and objectives, managers should use what they have available. Resources can include the budget for the project, raw materials, and employees.

Mzekandaba (2017) reported that it is a problematic factor for implementing e-government initiatives regarding project funding. It is then their responsibility to ensure that the required resources are in place before the implementation process begins. Hence, Mintzberg regards them as resource allocators. This is another factor that has a negative impact if not well taken care of. Management should also possess skills of being true negotiators. Before going outside, managers should first get their team members aligned with the project's overall goal and vision.

2.16 LEADERSHIP COMPETENCY THEORY OF PROJECT PERFORMANCE

In conjunction with the Management Theory of Henry Mintzberg, this section discusses the Leadership Competency Theory of Project Performance. According to Muller and Turner (2017: 85), project success could easily be achieved through managerial competencies. They further state that various kinds of competencies are needed for a variety of projects. The significant competencies for IT and organisational change projects are communication, self-awareness, developing others and motivation.

The situational requirements include managing resources, critical analysis and judgement, strategic viewpoint, emotional flexibility, influence, and faithfulness. However, successful managers do not limit themselves in competencies that they can acquire to choose and combine those relevant for a project at hand at a given time (Muller & Turner 2017: 87). Figure 2.8 is an illustration of a leadership competence-based theory of project performance:

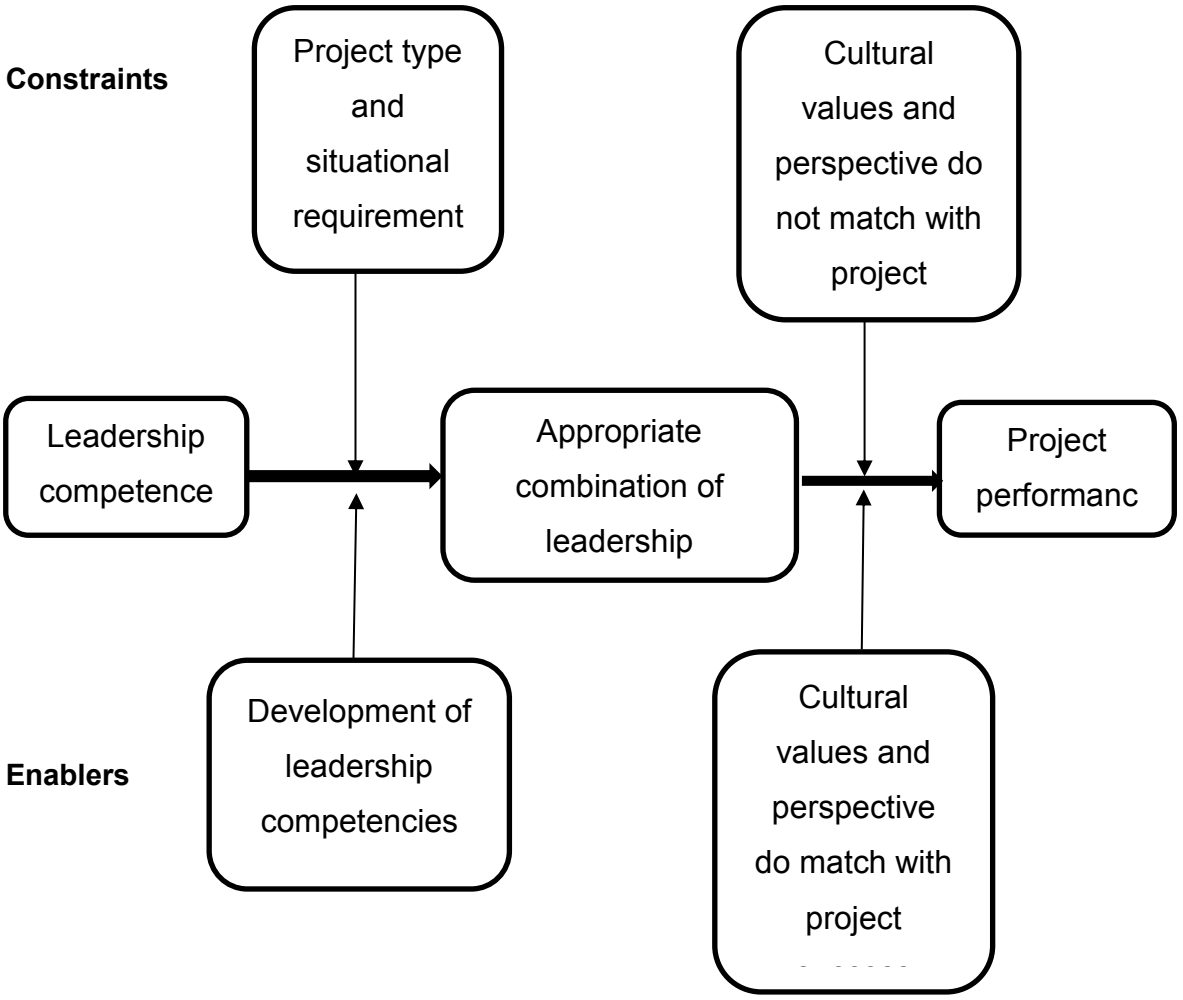


Figure 2.8: Leadership Competence-Based Theory of Project Performance (Muller & Turner 2017: 87)

In Figure 2.8, the combination of situational requirements only limits the chances of project success. Furthermore, if organisational principles and user requirements do not match with the project success criteria, the project is bound to fail. On the other hand, enablers that can lead to project success involves the development of leadership competencies. This can be attained through education, short courses within the department and mentoring. Moreover, if organisational principles and user requirements match the project success criteria, project success chances are very high. The central part is the correct combination of leadership competencies in a given project result in project performance. Furthermore, the leadership competency theory of

project performance correlates with the managerial roles provided in Mintzberg's view. For a manager to perform the functions depicted in Figure 2.7, he needs to possess the skills as stipulated in the Leadership Competency Theory (refer to Figure 2.8).

2.17 CONCLUSION

This chapter reviewed literature based on the objectives of the study as specified in the introduction. Further literature was studied on topics that have an impact or correlate with this study. These topics included e-government initiatives and challenges in SA about the management of e-government initiatives. End-users involvement, as well as security and privacy, were the main challenges in SA. It emerged that SA is still facing many challenges when it comes to the implementation of e-government initiatives. However, there are successful cases of e-government like the e-filing system. The introduction and adoption of EDRMS in South Africa were focussed upon. Further, this section highlighted the impact of EDRMS in government departments.

The literature reviewed indicated that EDRMS has a positive impact on the functioning of government departments. Factors affecting the implementation of EDRMS and the role played by management on the implementation of EDRMS were also discussed. The literature revealed that management has a considerable role in ensuring all resources, funds and communication are available. It further looked at the importance of project risk management, and it appeared to be the essential component not recognised by management.

Literature was also reviewed on the information life cycle, governance, and management of IT project records management policies and procedures, and the project charter to improve implementation of EDRMS. Lastly, this study discussed how the theoretical framework by Henry Mintzberg (1973) was used to understand this study.

Studies conducted in other countries regarding e-government initiatives and challenges were also reviewed. The following chapter gives more details on the research methodology used in the study, which includes the research design, target population, sampling procedure, sample size, data collection, data analysis, and validation and reliability.

CHAPTER THREE - RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter discusses in detail the research methodology used in this study. The researcher also discussed the mixed-method approach adopted for the research. The researcher also discusses the target population, the sampling procedure, the sample size, data collection techniques, data analysis, and the study's validity and reliability for both the quantitative and the qualitative methods.

3.2 RESEARCH DESIGN

According to Creswell (2014: 219), the convergent mixed method collects both quantitative and qualitative data simultaneously, analyse them separately, and then matches the results to determine if the findings confirm each other. Johnson and Christensen (2016) state that the mixed-method approach involves combining quantitative and qualitative research methods, techniques, and other paradigm characteristics. This research approach helps a researcher attain in-depth data and more understanding of the research problem (Creswell 2014: 4). The rationale for adopting a mixed-method approach is that neither a qualitative nor a quantitative method was sufficient to provide more information about the research problem and the research questions of this study. Combining both approaches strengthened the research as a mixed approach and overcame each separate process's weaknesses and biases (O'Leary 2017: 164).

3.3 TARGET POPULATION

McLeod (2014) describes the target population as the population group from which the sample might be acquired. The population are "participants" as they partake in the study. O'Leary (2017: 204) states that "the researcher must have

a clear and a well-defined population in mind before doing any sampling". The population targeted for this study were the government employees from the Department of KZN COGTA and officials from the system service provider. Employees chosen for the study were employees trained on how to use ECM. The target population size was 341 participants for quantitative and nine participants for the qualitative method. The total population size for both methods was 350.

3.4 SAMPLING PROCEDURE

Sampling is the collection of a subgroup from the population involved in a study (Daniel 2012: 2). Johnson and Christensen (2016) define sampling as sketching a sample from a population. A subgroup selected from a larger group is studied to understand the larger group's characteristics. Section 3.4.1 and 3.4.2 discusses the sampling procedures used in this study for both the quantitative and the qualitative methods.

3.4.1 Quantitative sampling procedure

The researcher employed purposive or judgemental sampling for the quantitative method. The researcher found purposive sampling more effective because the researcher needed to get in-depth information about the study's objectives from the right participants. Johnson and Christensen (2016) state that researchers classify people's qualities to be included in research and attempt to find participants with those characteristics. According to Picardi and Masick (2014: 156), the researcher using purposive sampling determines cases to include in the sample based on their relevance to the questions, quality and amount of information they are likely to provide. For the quantitative method, a sample was drawn based on the ECM usage report and officials that are live on the system. This information was obtained from ICT within the Department of KZN COGTA.

3.4.2 Qualitative sampling procedure

For the qualitative method, the researcher used the census sampling method. Census sample occurs when the entire population is selected for data collection (Floyd & Fowler 2014: 3). The benefit of using the census method is that the results' accuracy is enhanced as every population is studied before drawing any conclusion. According to O'Leary (2017: 225), the census does not depend on the sample as it covers each person in a defined population. The sample was drawn based on the participant's skills, knowledge, and contribution to the implementation of EDRMS. This involved participants from the service provider and management staff within the Department of KZN COGTA.

3.5 SAMPLE SIZE

Sample size refers to the number of participants in an experiment or study. The sample size has implications for how accurate the study results will be and how detectable the effect will be (Singh & Masuku 2014: 7). Quantitative and qualitative sample sizes are explained in section 3.5.1 and 3.5.2 as follows:

3.5.1 Quantitative sample size

The quantitative sample size was calculated from the 341 population size within the Department of KZN COGTA using O'Leary's sample size formula (2017:206). The formula is: $SS = Z^2 \times (p) \times (1-p) \div C^2$ $NEW\ SS = SS \div [1 + (SS - 1) \div POP]$ whereby SS = Sample Size, Z = Z value (1.96 for 95% confidence level), P = Standard of deviation (expressed as 0.5), C = Confidence Interval or Margin of error (expressed as 0.05) and POP = Population. The formula yielded a quantitative sample size of 181.

3.5.2 Qualitative sample size

The researcher drew the qualitative sample size from nine officials from the service provider and the management staff from the Department of KZN COGTA. Since the researcher used the census sampling method for the qualitative approach, the entire population was selected.

3.6 DATA COLLECTION

According to Johnson and Christensen (2016), the advantage of collecting data in a mixed research design is that it can be collected on the same sample or different samples. Another advantage is that the researcher has a full complement of data collection methods such as tests, questionnaires, focus groups, observations, interviews, and secondary data collection methods. This is dependent on the research questions, research objectives and rationale for choosing the mixed method (Johnson & Christensen 2016). For this study, quantitative and qualitative data were collected concurrently.

3.6.1 Quantitative data collection method

Quantitative data was collected using a questionnaire. Creswell (2014) defines a questionnaire as a collection of written questions grouped in a single document whereby the participant chooses the answer amongst the given responses to each question. Questionnaires have an advantage in that participants can complete them in their own time without the researcher's presence. The questionnaire was distributed to 181 COGTA officials who were trained to use ECM. The questionnaire was formulated based on the objectives of the study. Before the study's objectives, biographical information was also asked to understand the respondents' personality. The first set comprised nine questions related to the impact of EDRMS in the Department of COGTA. The second set includes six questions regarding the factors affecting the implementation of EDRMS in the Department of KZN COGTA. The last groups

comprised six questions and were related to management's role in implementing EDRMS in the Department of KZN COGTA. The total number of quantitative questions was 21.

3.6.2 Qualitative data collection method

Qualitative data were collected from face-to-face interviews, and they were audio recorded. Interviews are used when the researcher aims to collect data in-depth and contextualised (Frey 2018). Face-to-face interviews have the advantage of motivating participants to respond honestly and give profound information and insight about the research problem (Schober 2018: 291; Schonlau, Gweon, & Wenemark, 2019). Interviews were conducted with the COGTA management staff, the service provider and officials involved in the implementation process. The researcher purposively selected these participants based on their involvement, skills, and knowledge in implementing the EDRMS at KZN COGTA. Since this study adopted a mixed-method approach, the qualitative questions were also based on its objectives.

3.7 DATA ANALYSIS

Creswell (2014: 15) states that quantitative and qualitative data are analysed independently and then integrated in the convergent mixed-method approach. The researcher used a side-by-side comparison approach to combine quantitative and qualitative data. A side-by-side comparison approach requires that the researcher reports the quantitative results first, followed by the qualitative results, which either confirms or disconfirms the quantitative results. According to Wilson (2017), mixed methods help to analyse data in the same project so that the strengths of each help offset the limitations of the other. Quantitative and qualitative data analysis is further discussed in sections 3.7.1 and 3.7.2.

3.7.1 Quantitative data analysis

Statistical data collected from the KZN COGTA respondents were analysed using the Statistical Package for Social Sciences (SPSS) programme. Foley (2018) regards SPSS as a powerful tool for manipulating and decrypting survey data. Statistical data was then presented in graphs. The Statistician prepared this.

3.7.2 Qualitative data analysis

Qualitative data obtained from the service provider and the KZN COGTA respondents were transcribed by the researcher using Microsoft Word. This was quickly done since the number of people who participated in the study was relatively very small. According to Ose (2016), some computer software designed to analyse qualitative data might be too innovative and classy when all is needed is to sort and structure the text. Thematic coding was further used. It is an excellent method to analyse qualitative data if a researcher is trying to obtain insight about participant's opinions, knowledge, and experiences about the research problem (Caulfield 2019).

3.8 VALIDITY AND RELIABILITY

Johnson and Christensen (2016) state that research reliability is present when similar results would be attained if the study was to be conducted again, while research validity refers to the truthfulness of the conclusions made from the results of the research. According to Edmonds and Kennedy (2017), validity is the extent to which the results truthfully answer the study's stated research questions. The researcher tested reliability through Cronbach's Alpha. Reliability testing is explained further in section 4.3 of Chapter Four. The researcher applied triangulation to strengthen the validity and reliability of the findings. Triangulation is defined by Byrne (2017) as the use of more than one

method to generate various kinds of data about a particular research subject or set of research questions.

Moreover, it can increase the validity and reliability of research findings (Johnson & Christensen 2016; Mishra & Rasundram 2017; Noble & Haele 2019). Both quantitative and qualitative questionnaire had questions which were related to the research questions. Constructed research findings for both quantitative and qualitative methods produced the same results. Validity and reliability for both the quantitative and the qualitative methods are explained in sections 3.8.1 and 3.8.2.

3.8.1 Quantitative validity and reliability

Quantitative validity was measured in terms of construct, internal and external validity. Construct validity assesses whether the method used to measure matches to the construct you intend to measure (Broniatowski & Tucker 2017: 486; Middleton 2019). In this research, in addition to the literature review, a questionnaire was used to collect data. The questions were constructed to correspond to the research questions and the objectives of this study, as stated in sections 1.4 and 1.5 of Chapter One. Patino and Ferreira (2018: 183) define internal validity as the degree to which the study's findings represent the study population's truth and are also not subject to practical errors. This study was conducted with the end-users and the participants who were directly involved in implementing the EDRMS at COGTA.

On the other hand, external validity is the degree to which a study's outcome can be applied or generalised to different situations (Streefkerk 2019). This study was based on the implementation of EDRMS, which is an IT project. It articulates that this study's findings might apply to other IT projects implemented in government Departments.

3.8.2 Qualitative validity and reliability

Nowell, Norris, White and Moules (2017: 3) state that trustworthiness is the only way researchers can convince themselves and readers that their research findings are considered. In qualitative research, reliability depends on sources and quality of data, dependable outcomes, and researcher experience (Daniel 2019: 119). The data for the qualitative method was obtained through literature review and interviews. Interviews were conducted with participants who were directly involved in the implementation process of the EDRMS. It ensures that the researcher obtained the quality of data necessary for this study.

Furthermore, the qualitative method results were triangulated with that of the quantitative method to ensure the outcomes' reliability (Morgan & Ravitech 2018: 1730; Daniel 2019: 120). According to Daniel (2019: 120), the researcher must confess any personal biases and admit that qualitative research results are subject to numerous realities. In terms of researcher experience, the researcher conducted this study because EDRMS implementation in the Department of KZN COGTA seemed not to be achieving its desired results. The researcher needed to obtain responses as per the objectives of this study stipulated in section 1.4 of Chapter One. This study's results have indeed confirmed what other Authors have found about implementing EDRMS or any IT project in a government department. Hence, government departments always trail behind in technological innovations (Schoonraad & Mthethwa 2018: 26).

3.9 ETHICAL CONSIDERATION

According to Biddix, Renn and Roper (2018: 65), ethical consideration is mainly about treating the participants and their data. “An ethically aware researcher will consider how the study may affect others either during the participation, afterwards and when the results are published” (Biddix *et al*., 2018: 65). This study was conducted flexibly without any threats or being tough

on the respondents. All respondents were informed that they are welcome to participate and withdraw at any time should they wish to do so. Participating was strictly voluntary, and no incentives were to be offered to the respondents.

They were further ensured of their anonymity and confidentiality as they were not to specify their names when answering the questionnaire. The respondents who have unique positions also opted not to specify it as this would have indirectly revealed their names. The same also applied to qualitative respondents. The respondents were labelled as per their employment category and not their names or ranks, which would have exposed who they are. In interview research, a breach of confidentiality is very likely to happen.

In most cases, the sample size is too small, and researchers may find themselves revealing too much of their demographic information. This, in return, may reveal their identity (Biddix *et al.,* 2018: 71). No aspect of this study expected to put the respondents at any risks, be it financially, socially or employability. Most importantly, permission was granted for the researcher to conduct the study at the research site, a letter of information was provided to the respondents, and the researcher obtained a written consent from the University to conduct this study.

3.10 CONCLUSION

This chapter described the research methodology used in the study, which included the research design. The researcher adopted a convergent mixed-method approach to attain an in-depth and more meaningful data collection approach. The target population were officials from the Department of KZN COGTA and the service provider.

For the quantitative method approach, a purposive sampling procedure was used. The respondents were drawn from the ECM usage report, and officials

trained and lived on the system. For the qualitative method approach, the sample was drawn based on the officials' knowledge and involvement in the implementation process. The next chapter will discuss data analysis and interpretation thereof.

CHAPTER FOUR - DATA ANALYSIS AND INTERPRETATION

4.1 INTRODUCTION

This chapter analyses and interprets data as per research aims and objectives of the study. As this study used a convergent mixed method approached, a side by side comparison was used whereby quantitative data was first analysed and then the qualitative data analysis ensued. The analysis begins with the biographical information which includes the gender, age, rank as well as qualifications of respondents. The biographical information is presented in Figure 1 to Figure 4. The next part of the quantitative analysis interprets findings regarding the impact of EDRMS. This is followed by the factors affecting the implementation of EDRMS and the role played by management on the implementation of EDRMS in the Department of COGTA. The results are illustrated in graphs presented in Figure 5 to Figure 25.

4.2 RESPONSE RATE

This section briefly discusses the response rates that were achieved for both quantitative and qualitative parts of this study. According to Lindemann (2019), the survey response rate is the number of people who answered the questionnaire divided by the total number of people to which the survey was distributed to. Furthermore, the survey quality is determined by the survey response rate (Lindemann 2019).

4.2.1 Quantitative response rate

As per the quantitative sample size, a total of 181 questionnaires were prepared and distributed. The number of responses that were returned was 105. Therefore, the quantitative response rate was 58%. Lindemann (2019) and Bhat (2020: 4) resolve that an acceptable average survey response rate

is 33%. According to Weedmark (2019) a minimum response rate of between 30% to 40% is acceptable if the study was done internally amongst employees. This means that the response rate of 58% achieved in this study is acceptable.

4.2.2 Qualitative response rate

The qualitative sample size was 9 participants and an open-ended interview schedule was prepared for all chosen participants. Only 7 participants were available for the interview which means that the response rate was 78%. Finchman (2008) cited by Edmonds and Kennedy (2017) recommends a response rate of 60% to be the goal for most kinds of research. However, these authors' suggest that researchers should strive for at least 80% response rate when they wish to generalise to the whole population. Since the results of this study cannot be generalised to the whole population, the 78% qualitative response rate is suitable for this study.

4.3 RELIABILITY TESTING

The reliability testing was done using the Cronbach's Alpha. Cronbach's Alpha is a measure used to investigate the reliability of a questionnaire (Verma & Abdel-Salam 2019: 55). According to Haele and Twycross (2015: 67), "Cronbach's Alpha is the most commonly used test to determine the internal consistency of an instrument". Reliability is attained when a questionnaire measures what it should measure. The case processing summary depicted in Table 4.1 indicates that all cases were valid at 100% and there was none excluded. Table 4.2 shows the reliability statistics which is calculated at 0.920. This is evident that the statements in the questionnaire were consistent and reliable. This also shows that similar results could be attained should the study be conducted again. A high value of Cronbach's Alpha is considered to be 0.80 which confirms that each subtest is investigating the same underlying construct (Rohde, McCracken, Worrall, Farrell, O'Halloran, Godecke, David & Doi 2020).

Table 4.1: Case processing summary

		N	%
Cases	Valid	105	100.0
	Excluded	0	.0
	Total	105	100.0

Table 4.2: Reliability statistics

Cronbach's Alpha	N of Items
.920	21

4.4 PRESENTATION OF BIOGRAPHICAL INFORMATION

The following section discusses the quantitative data obtained from the respondents.

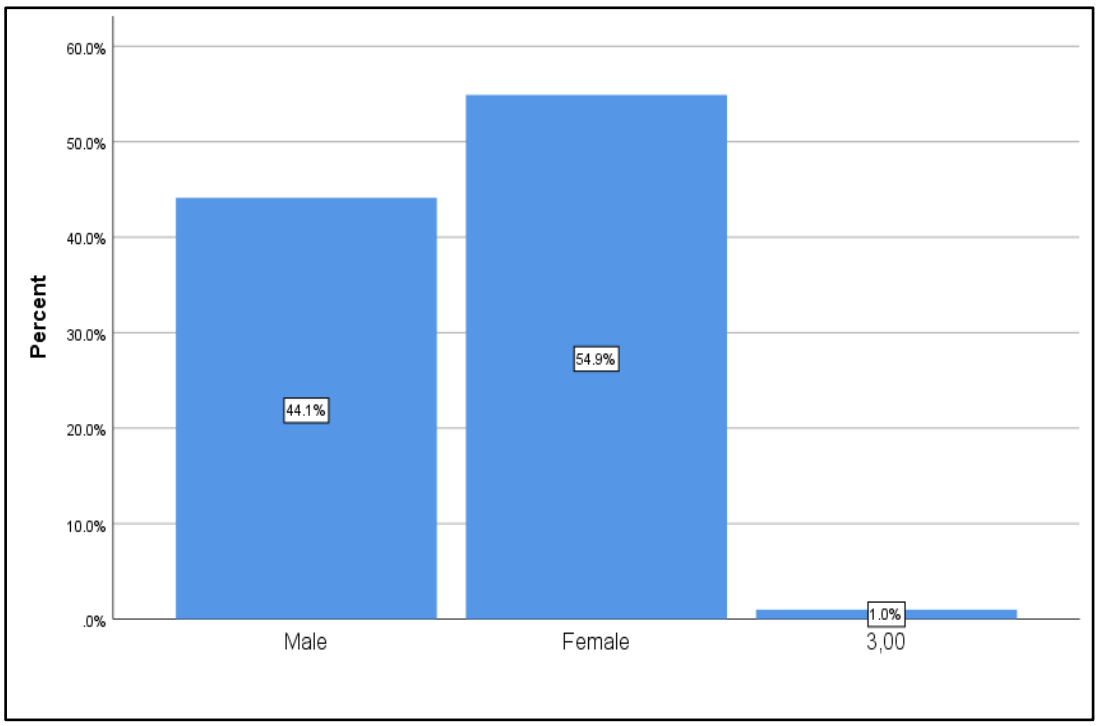
4.4.1 Quantitative data

Figure 1 to Figure 4 presents data about the biographical information of the respondents who participated in the quantitative study. The following information was requested: gender of respondents, age, rank, and highest qualifications.

4.4.1.1 Gender of respondents

The results indicate that there are more female staff than male staff since 55% of respondents were female and 44% were male. One percent (1%) opted not to indicate the gender as shown in Figure 1. This is an indication that the Department of COGTA is dominated by female staff that is using the EDRMS.

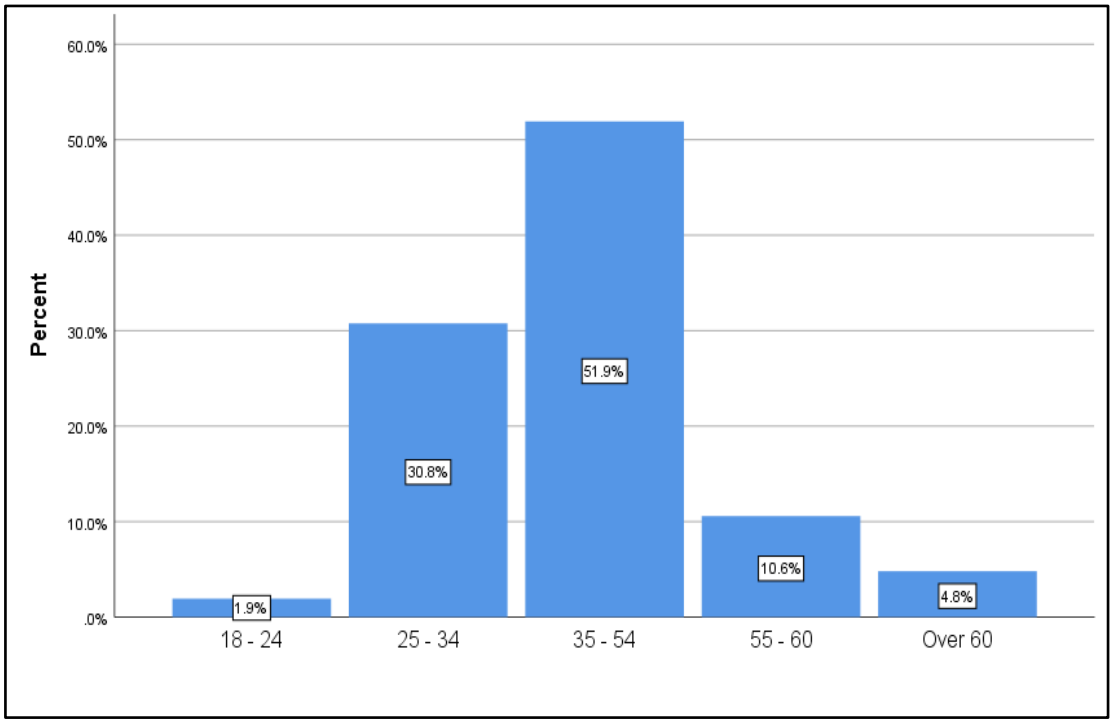
Figure 1: Gender of respondents



4.4.1.2 Age of respondents

Figure 2 shows that 1.9% of respondents were between the ages of 18 - 24 years, while 30.8% of respondents were between 25 - 34 years. Further 51.9% of respondents were between the ages of 35 - 54 years and 10.6% were between 55 - 60 years. The number of respondents that were over the age of 60 years were 4.8%. This indicates that the Department of COGTA is dominated by officials between the ages of 25 - 54 at 82.7%. These results indicate that there are more end-users that are still at the ages considered to be able to adapt easily to the new system that is implemented by the Department. The ever-changing technology is challenging to old people as they easily lose patience. Therefore, they need to be properly directed and supported (Mohta & Halder 2020: 152).

Figure 2: Age of Respondents

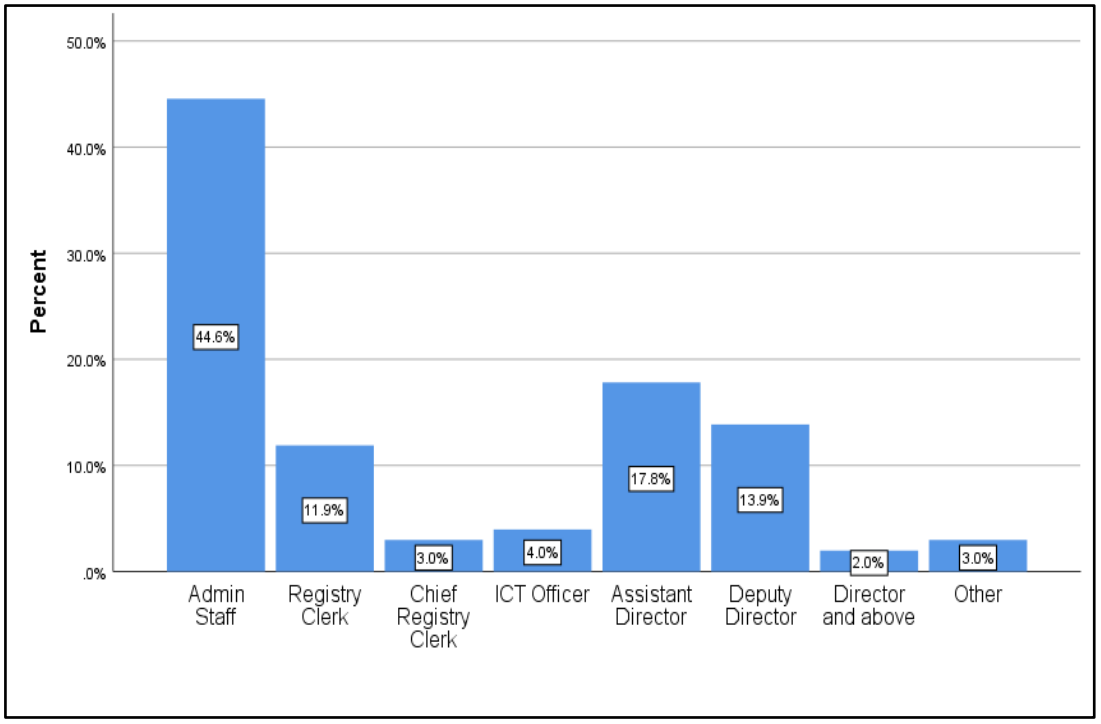


4.4.1.3 Position of respondents

Figure 3 depicts the positions that are being held by staff. Most of these responses were attained from the Administration Staff at 44.6%. The remaining respondents were as follows: Registry Clerks 11.9%, Chief Registry Clerks 3%, ICT Officers 4%, Assistant Directors 17.8%, Deputy Directors 13.9%, Director and above 2% and other 3%. These results indicate that the Department of COGTA is dominated by Administration staff at 44.6%. Administration staff are the ones at the forefront of the workflow. Registry Clerks and Chief Registry Clerks are dealing with the filing of documents. They are at the last level of the workflow. Therefore, for the benefit of the Department, Registry Clerks are the ones to lead by example in utilising the system to its full potential by simple filing on ECM. Some officials indicated others and did not specify their positions thereof. This is due to the fact that positions of some officials are unique, so it is easy to tell who responded to the questionnaire. Therefore, they did this purposely in order to protect themselves

although the questionnaire clearly stated that respondents will be kept anonymous.

Figure 3: Position of respondents

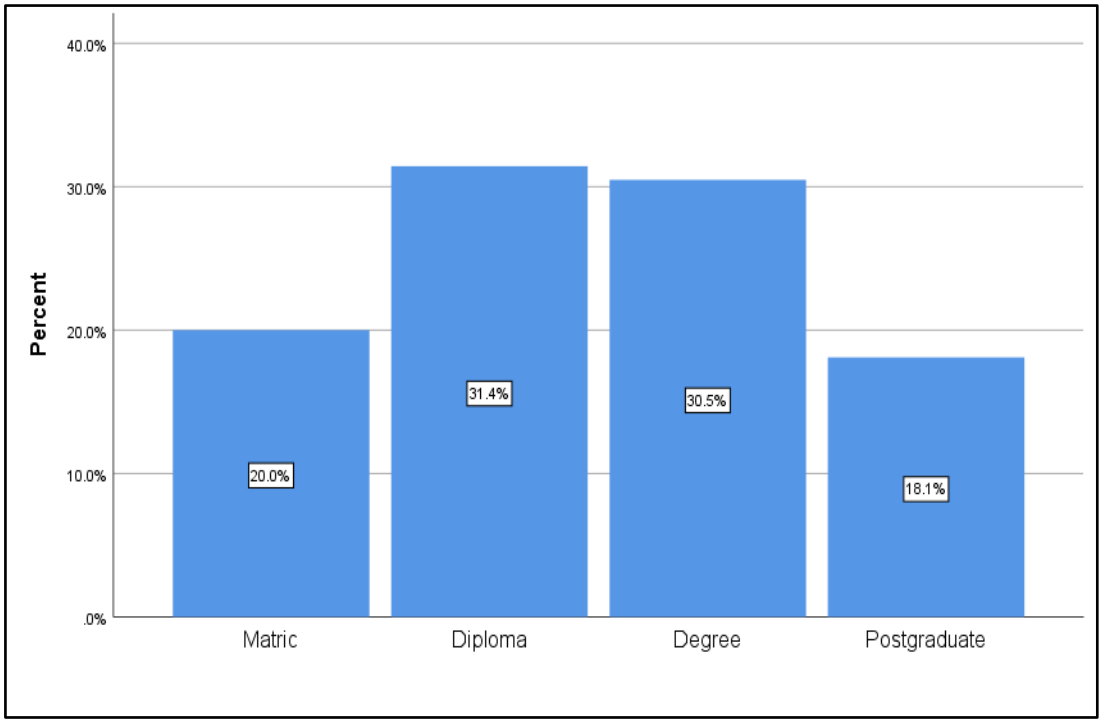


4.4.1.4 Highest qualification

Figure 4 indicates that 20% of end-users hold a Matric certificate, 31.4% hold a Diploma qualification, 30.5% hold the Degree qualifications, and 18.1% are at Postgraduate level. These results designate that even though the Diploma level is high, more officials at KZN COGTA are pushing towards upgrading their educational levels. As technoloy changes, individuals get information about many things, including education and and employment opportunities. Therefore, one can conclude that there is a growing need to link new technology with career services and related professional practices (Kettunen & Sampson Jr 2019: 2). According to Stroeva, Zviagintceva, Tokmakova, Petrukhina, and Polyakova (2019: 503), special consideration is paid to the

system of higher education as it produces qualified specialists. These specialists will become the enablers of technological innovation.

Figure 4: Highest qualification



4.5 ANALYSIS OF RESULTS AS PER RESEARCH OBJECTIVES

Figures 5 to 25 provide an analysis of the results according to the research objectives of this study. Objective four of this study which is to determine a suitable framework for the successful implementation of EDRMS, was included on the qualitative questionnaire only. This is due to the fact that the end-users would not know anything about it, except for the people involved in the implementation process. Therefore, this section analyses the first three objectives of this study. A five-category Likert scale questionnaire was used. The Likert scale questionnaire had the following choices: Strongly Agree, Agree, Not Sure, Disagree and Strongly Disagree. There were some respondents who did not respond to certain statements. This study

acknowledged this and therefore, these are recorded as “missing” in addition to the five category Likert scale options.

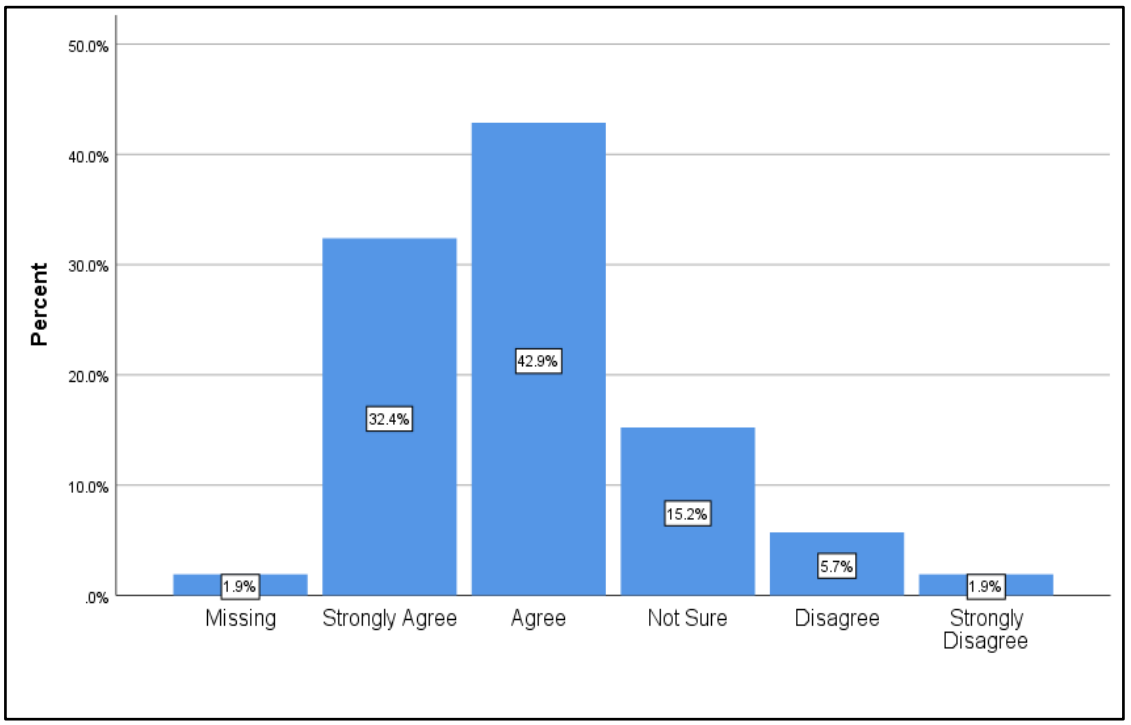
4.5.1 Objective 1: To determine the impact of EDRMS at KwaZulu-Natal Cooperative Governance and Traditional Affairs (KZN COGTA)

In order to determine the impact of EDRMS at KZN COGTA, Figure 5 to Figure 13 were used to obtain and interpret the findings.

4.5.1.1 Electronic Document and Records Management System is far better than managing physical or paper records

The results illustrated in Figure 5 indicate that the majority at 32.4% and 42.9% strongly agreed and agreed respectively that EDRMS is far better than managing physical records. A total of 15.2% were not sure, 5.7% and 1.9% of respondents, respectively, disagreed and strongly disagreed while 1.9% opted not respond. It is evident that employees in the Department of KZN COGTA believe that EDRMS has a positive impact when it comes to the management of records. These results reveal that KZN COGTA should work harder to successfully implement the system as most officials are in agreement that it is advantageous to have it in place. According to Libert, Beck and Wind (2016: 34), the first step to become a network organisation is to migrate from operating physically and then progress to digital. This might be seen as challenging but nowadays it is imperative that everyone and every organisation operate digitally.

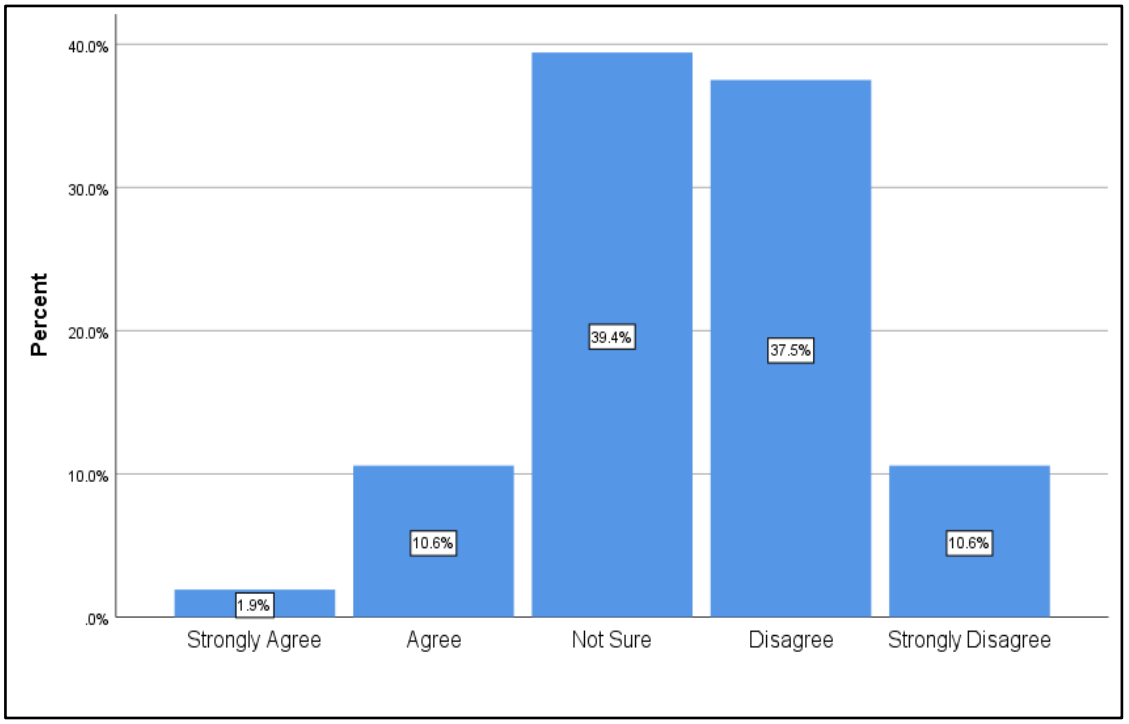
Figure 5: Electronic Document and Records Management System is far better than managing physical or paper records



4.5.1.2 The extensive use of the ECM system by staff

The analysis on the usage of the ECM system indicated that 1.9% and 10.6% respectively, strongly agreed and agreed that the ECM system has been used extensively by the staff, 39.4% respondents were not sure, 37.5% disagreed and 10.6% strongly disagreed that ECM has been extensively used by the staff. A total of 87.5% of the respondents who are not sure and who are in disagreement clearly indicate that very few officials are using the system in the Department. These results show a factor of resistance to change as discussed in 2.6.12 of the literature review in Chapter Two. According to Paulikas (2018: 85), the success of technological innovation is generally influenced by the end-users. Amongst the factors that causes resistance to change, is the inappropriate management of technological system implementations (Paulikas 2018: 89). Results on the usage of ECM system are depicted in Figure 6.

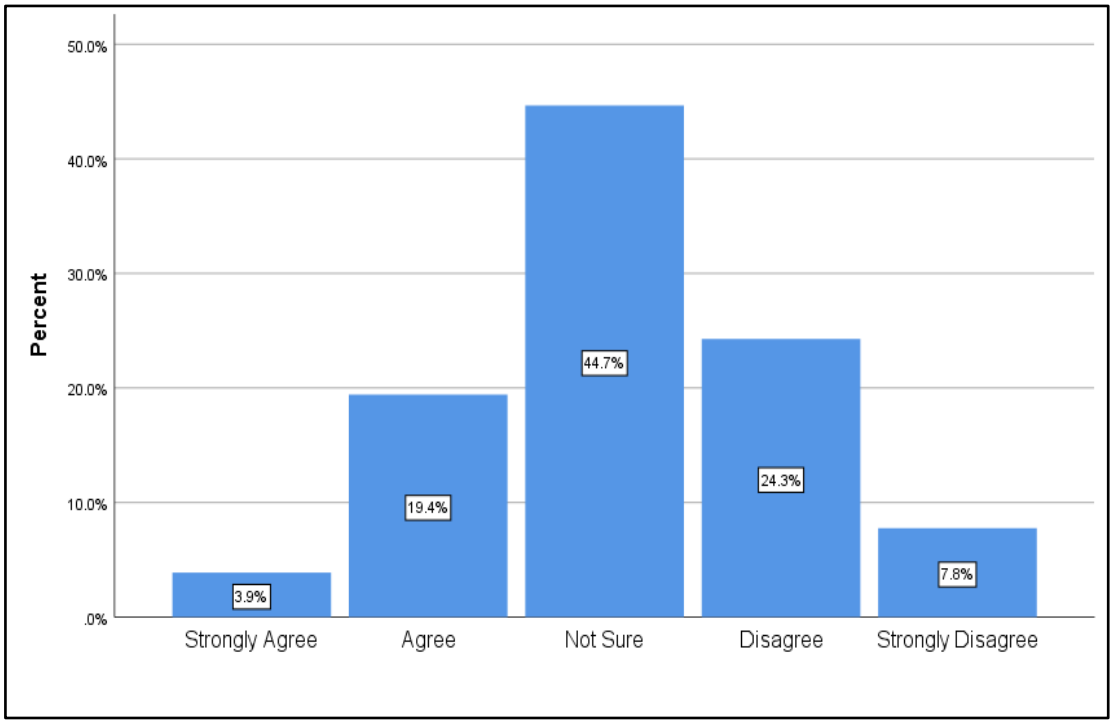
Figure 6: The extensive use of the ECM system by staff



4.5.1.3 End-users find it easy to work with the ECM system

The results illustrated in Figure 7 emanates from Figure 6 where it was discussed that 39.4% was not sure whether the system is used to its full potential by the end-users or not. In this case, a total of 3.9% strongly agreed that end-users find it easy to work with the ECM system, 19.4% agreed, 44.7% of respondents were not sure, 24.3% disagreed, 7.8% strongly disagreed with the aforementioned statement. It is clear that the system is generally not used by the end-users. This can be attributed to many factors such as no user buy-in, lack of motivation as well as provision of necessary resources. The overall results indicate that most end-users do not know what is happening with the system as the majority is not sure whether end-users find it easy to work with the ECM system or not.

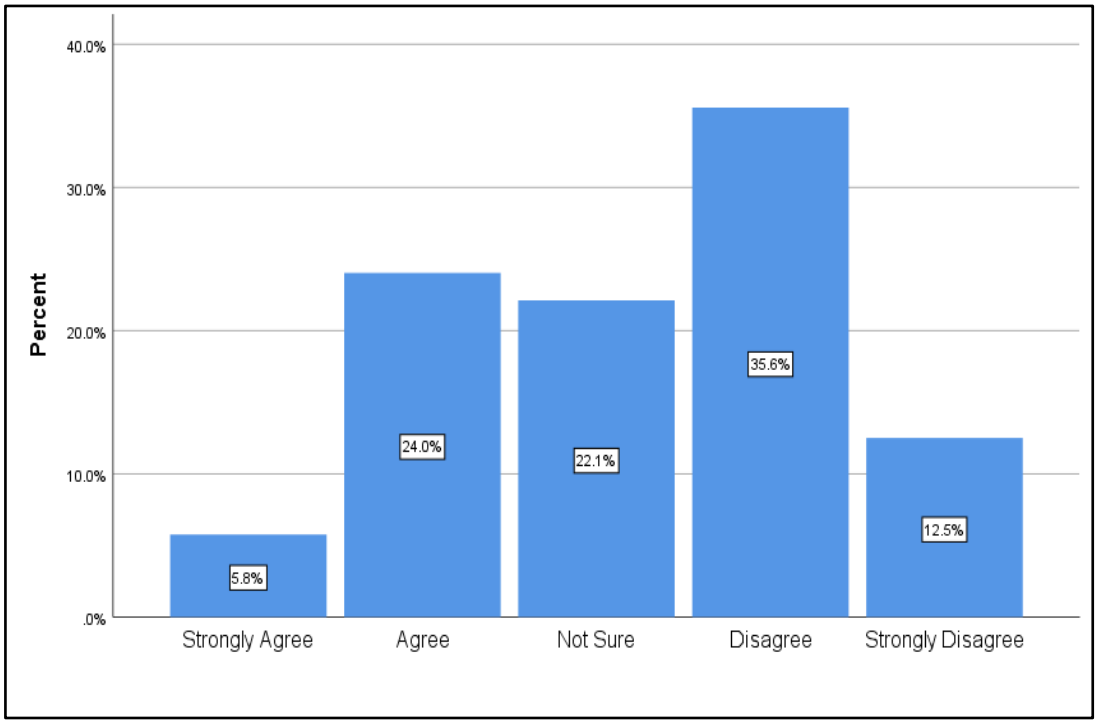
Figure 7: End-users find it easy to work with the ECM system



4.5.1.4 ECM has brought a positive change in the way staff does filing

As shown in Figure 8, 5.8% of respondents strongly agreed, 24% agreed, 22.1% were not sure, 35.6% disagreed and 12.5% strongly disagreed with the above mentioned statement. Looking at the results**,** it is very clear that more staff is denying that ECM has brought a positive change in the way they do their filing. The analysis in Figure 3 concurs with this result where it was concluded that Registry Clerks and Chief Registry Clerks should be the ones leading by example on the filing part as they are dealing with the filing of records in the Department. Again, if there is no one enforcing this, still there will be no change in the way staff does filing. Moreover, respondents have, in the previous Figures (Figure 6 and 7) indicated that they are unsure and in disagreement that that ECM has been used extensively by the staff. They are not sure whether the system is user friendly or not. Therefore, it is possible that the majority of end-users are not seeing a positive change in the way staff does filing.

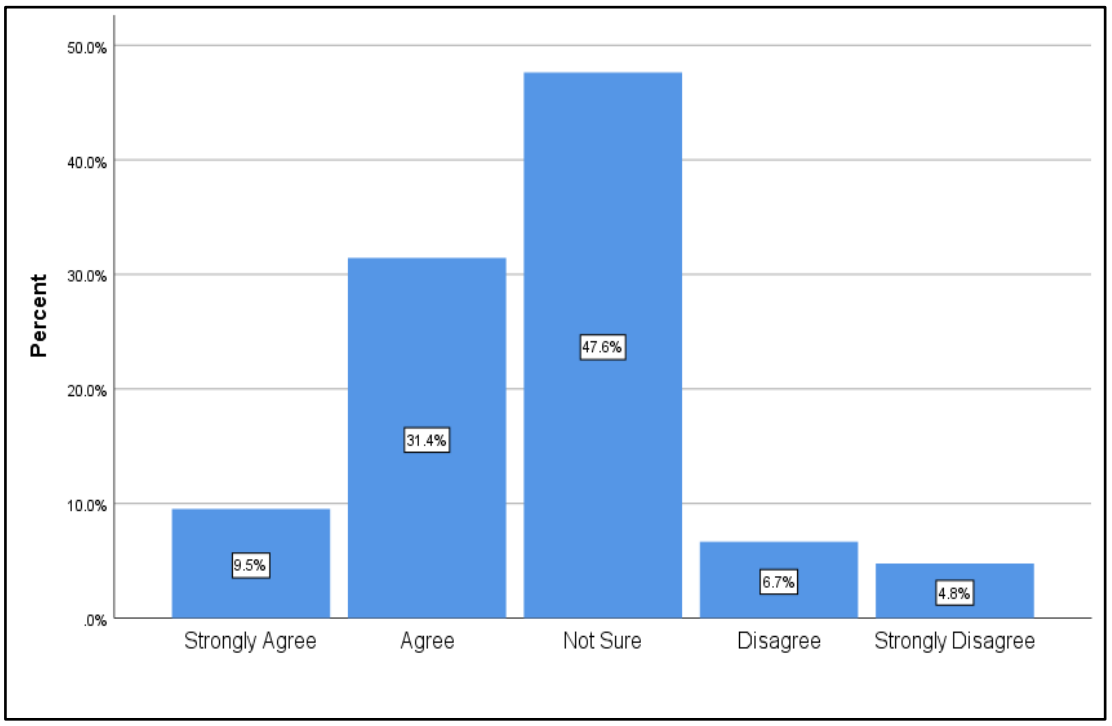
Figure 8: ECM has brought a positive change in the way staff does filing



4.5.1.5 The system has high security measures to cater for filing of confidential documents

The results presented in Figure 9 indicate that 9.5% strongly agreed, 31.4% agreed, 47.6% were not sure, 6.7% and 4.8% respectively, disagreed and strongly disagreed that the system has high security measures to cater for filing of confidential documents. A total of 47.6% of the respondents are not sure about the security of the system. This could be attributed to the fact that most employees do not know much about the functioning of the ECM system in the Department. A total of 40.9% though agreed that the system has high security measures which means that only authorised persons can have access to confidential documents or records.

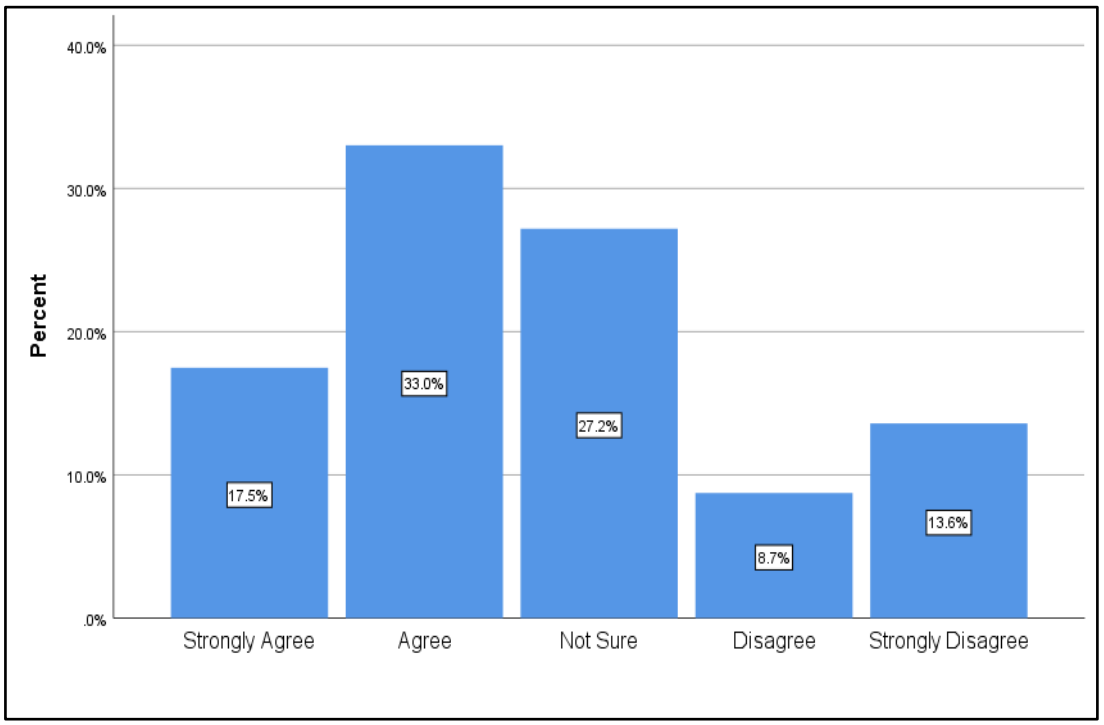
Figure 9: The system has high security measures to cater for filing of confidential documents



4.5.1.6 The ECM is very versatile because it performs numerous tasks such as routing of documents and detection of files due for destruction.

Based on the results depicted in Figure 10, 17.5% and 33% strongly agreed and agreed respectively that ECM performs numerous tasks. Respondents at 27.2% were not sure, 8.7% and 13.6% disagreed and strongly disagreed respectively with the statement. These results emanated from Figure 5 where it was discussed that end-users agree that EDRMS is far better than managing and maintaining physical or paper records. It is yet again clear that it is good that the system be fully functional as it performs numerous tasks and not restricted to filing only. This is an indication that management should work harder in ensuring that the system is fully implemented so that it will be utilised to its full capability.

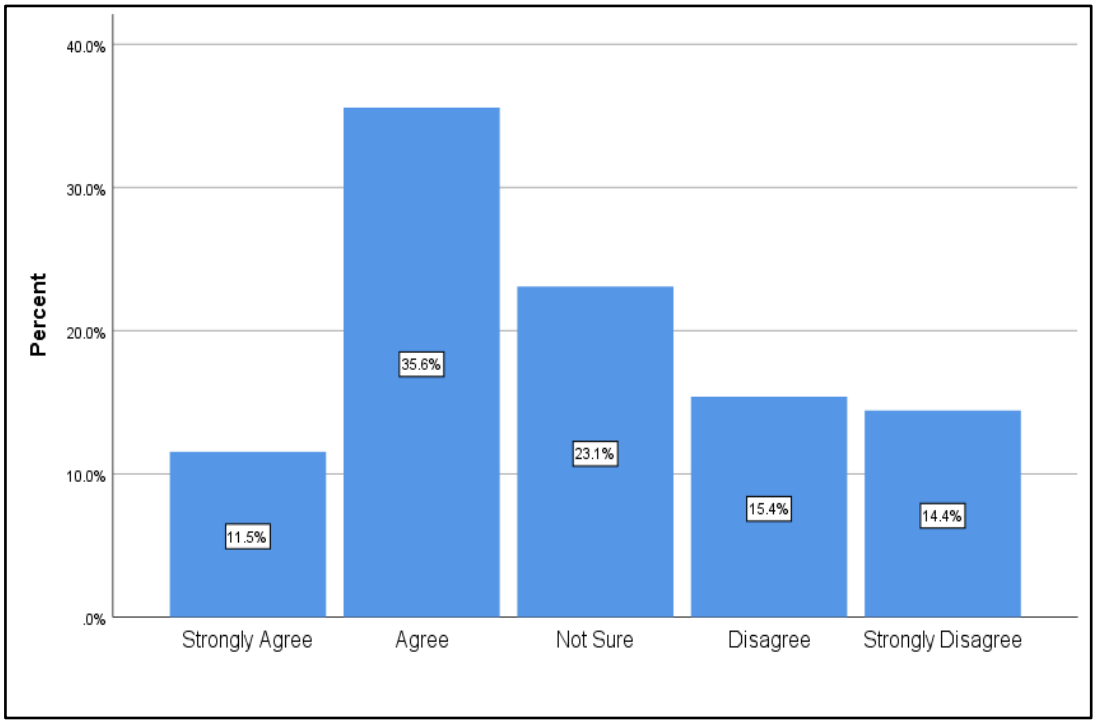
Figure 10: The ECM is very versatile because it performs numerous tasks such as routing of documents, detection of files due for destruction



4.5.1.7 The retrieval of documents is now much quicker

As depicted in Figure 11, 11.5% strongly agreed and 35.6% agreed that the retrieval of documents is now much quicker. On the other hand, 23.1% were not sure, 15.4% disagreed and 14.4% strongly disagreed with the aforementioned statement. These results reveal that even though more end-users have agreed, most of them are not sure and also in disagreement that the retrieval of documents is quicker. This is due to the fact that some end-users are using the system and some are not. Overall, end-users who make use of the system do testify that the retrieval of the documents is much quicker as it requires just a click of a button. On the other hand, end-users who do not use the system will still be not sure or disagree that there is a positive change in the retrieval of documents.

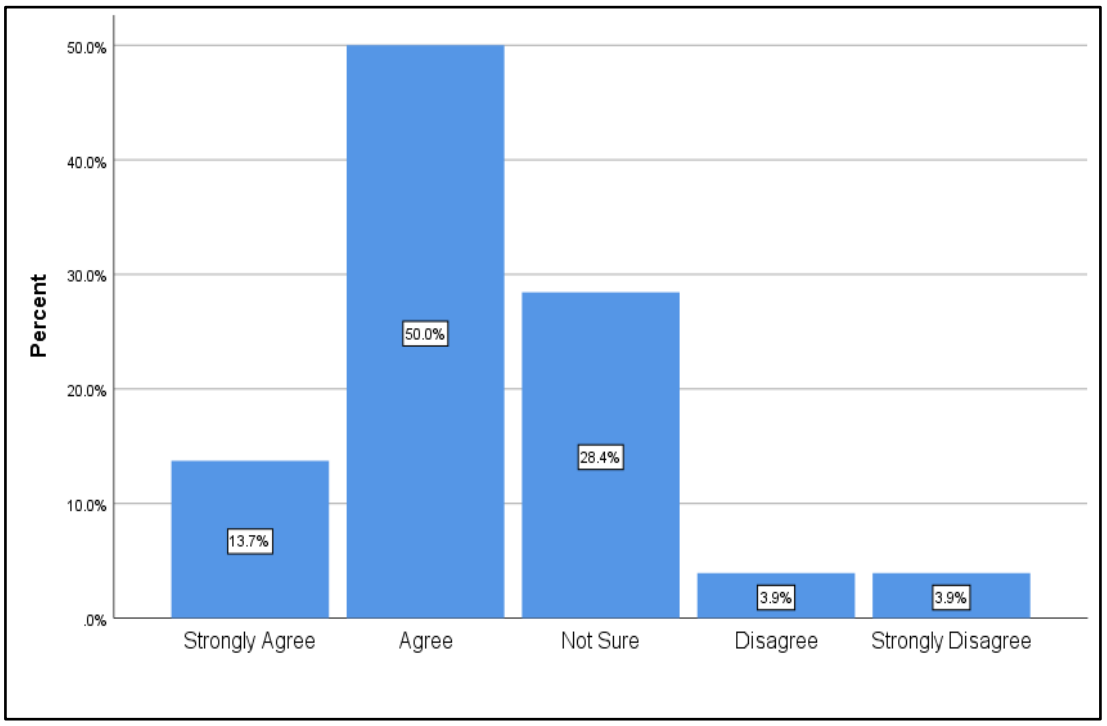
Figure 11: The retrieval of documents is now much quicker



4.5.1.8 ECM provides adequate storage space for the staff to perform their respective duties satisfactorily

The results illustrated in Figure 12 indicate that 13.7% strongly agreed, 50% agreed, 28.4% were not sure, 3.9% disagreed and 3.9% strongly disagreed respectively that, ECM provides adequate space for the employees to perform their respective duties satisfactorily. These results confirm the findings of the literature review in section 2.2.4, that ECM also provides storage capabilities for employees (Shivakumar 2016: 42; Marutha & Ngulube 2018: 4). They also show the importance of the EDRMS in the Department as discussed in Figure 5 and Figure 10.

Figure 12: ECM provides adequate storage space for the staff to perform their respective duties satisfactorily

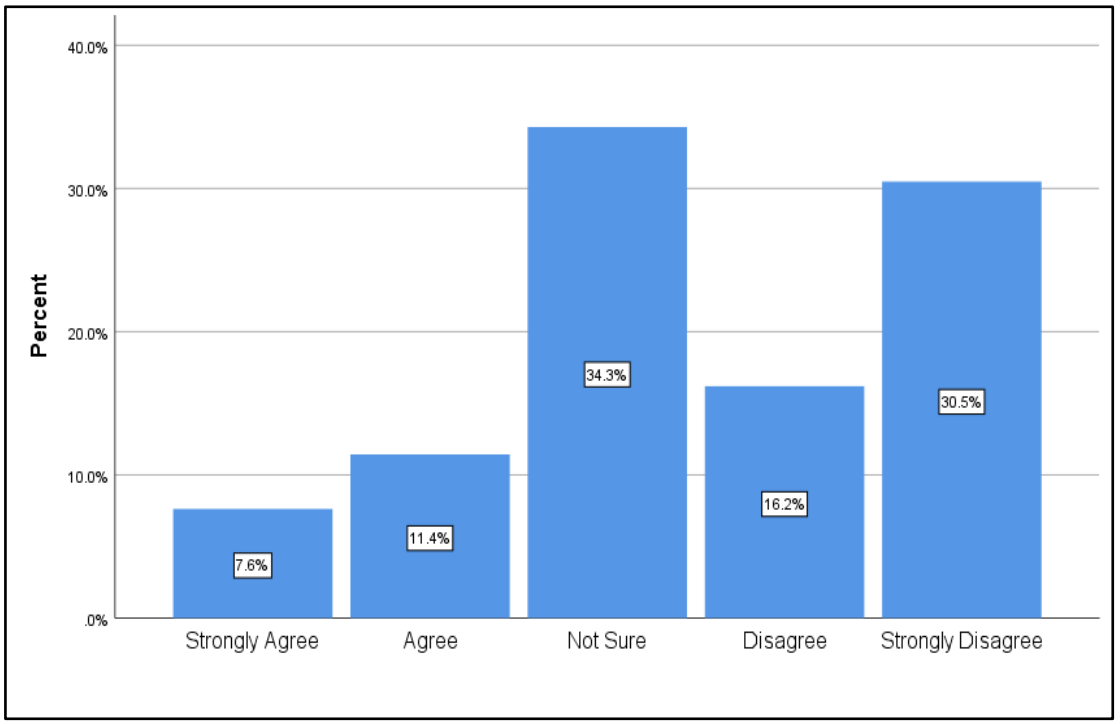


4.5.1.9 The ECM system has significantly improved and shortened the approval processes

Based on the results presented in Figure 13, 7.6% strongly agreed and 11.4% agreed respectively that the ECM system has significantly improved and shortened the approval processes. A total of 34.3% respondents were not sure, 16.2% disagreed and 30.5% strongly disagreed. The high percentage of 46.7% of respondents who are in disagreement and 34.3% who are not sure that approval processes in the Department have been shortened, reveal that, even though the ECM system is in place, some features are still not functional. In Chapter Two, it was indicated that all modules agreed upon should be successfully implemented and should also be used by the end-user. If this is not the case, then the user requirements are not met and the implementation is not a success. Lastly, this also confirms the results of the qualitative analysis whereby one respondent expressed that, utilising EDRMS in the Department

would have saved time and money on travelling +/-200km just to get a document signed.

Figure 13: The ECM system has significantly improved and shortened the approval processes



4.5.1.10 Conclusion to objective 1

Based on the findings obtained from objective one, it can be concluded that the ECM is not utilised to its full potential by the end-users. Most respondents were not sure and disagreed that ECM is used extensively by the end-users. Furthermore, this makes it difficult to determine the capability of the system implemented as the respondents have disagreed that ECM has brought a positive change in the way staff do filing. The employees are not sure whether the system is user friendly or not. There has been no change in the approval processes as most employees are not sure and are in disagreement that ECM improves the approval processes. It can therefore be concluded that EDRMS has brought about a partial positive impact at KZN COGTA due to the fact that

the system is not fully implemented and integrated into the normal operations of the Department.

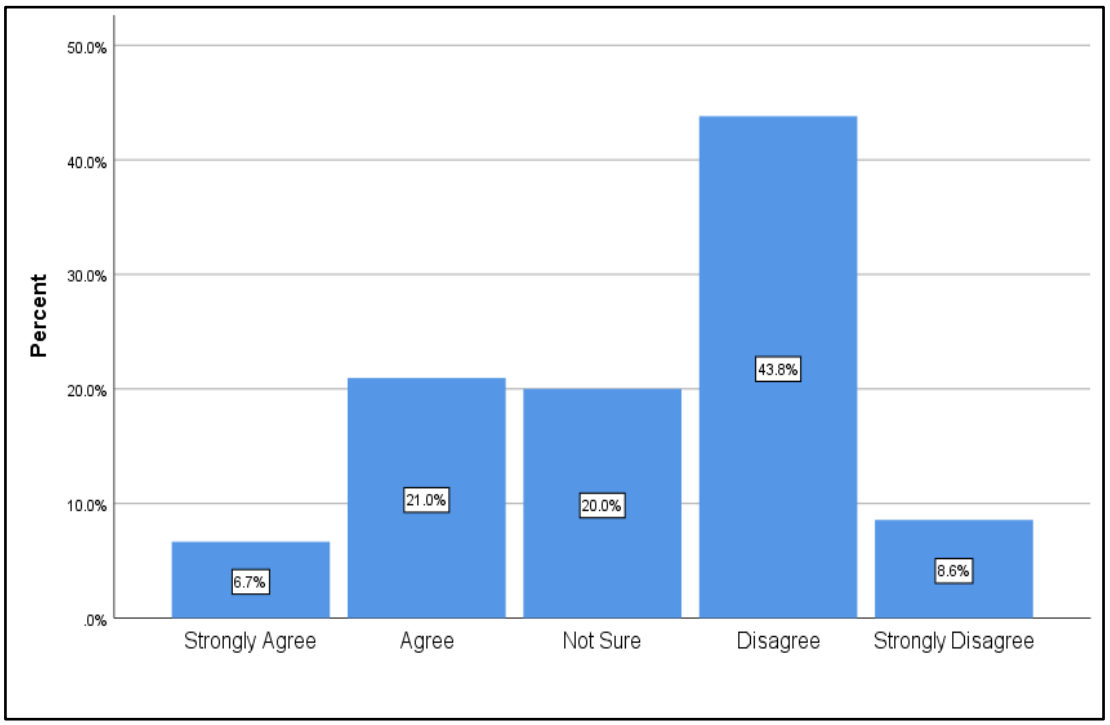
4.5.2 Objective 2: To establish the factors affecting the implementation of EDRMS at KZN COGTA

Factors affecting the implementation of EDRMS are analysed in Figure 14 to Figure 19.

4.5.2.1 Management has been providing continuous support throughout the implementation of EDRMS

As shown in Figure 14, 6.7% respondents strongly agreed and 21% agreed that management has been providing continuous support throughout the implementation of EDRMS. On the other hand, 20% were not sure, 43.8% disagreed and 8.6% strongly disagreed with the aforementioned statement**.** Based on these results, it is clear that the majority of respondents are of the view that management has not been providing continuous support throughout the implementation of EDRMS. As indicated in section 2.6.1 of Chapter Two, management's support has been regarded as the critical success factor for the implementation of EDRMS (Nengomasha & Chikomba, 2018: 254). Management's support is important in ensuring the provision of necessary resources, budget, ensuring that the implementing team is working together as well as urgently attend to shortcomings arising during the implementation process (See section 2.6.1 of Chapter Two). It indicates that, this is the most important factor which drives the success of the EDRMS implementation.

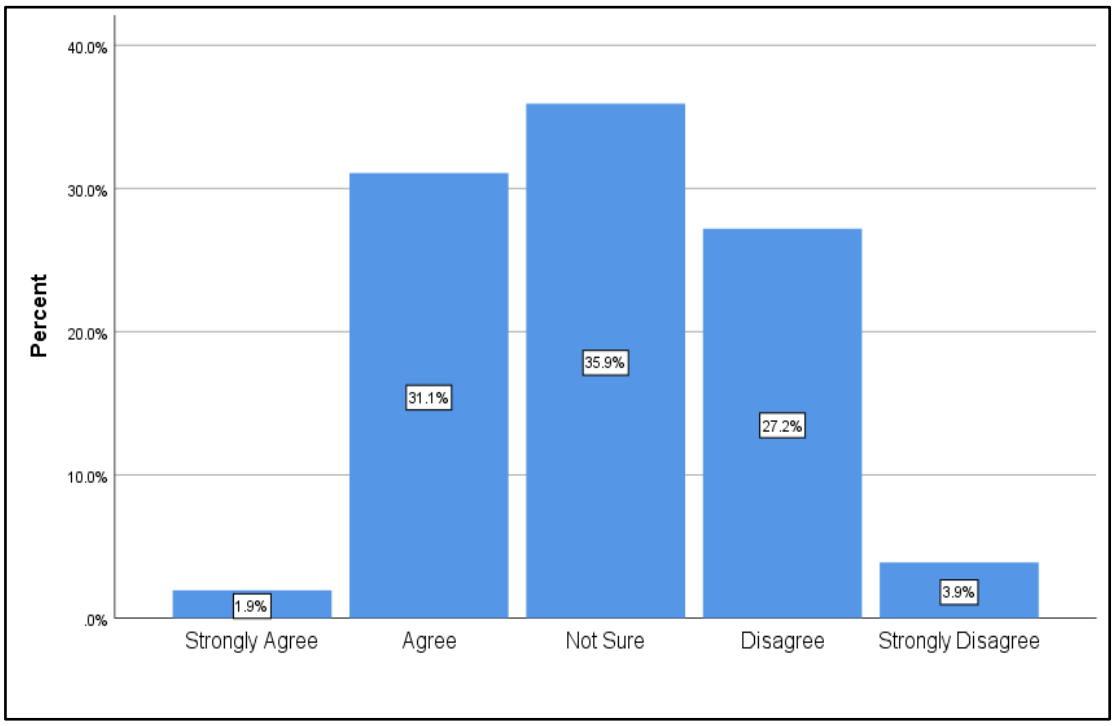
Figure 14: Management has been providing continuous support throughout the implementation of EDRMS



4.5.2.2 The department has adequate ICT infrastructure to support successful implementation of EDRMS

As reflected in Figure 15, respondents at 1.9% strongly agreed and 31.1% agreed that the department has adequate ICT infrastructure to support successful implementation of EDRMS. A total of 35.9% were not sure, 27.2% disagreed and 3.9% strongly disagreed with the statement. This high percentage of respondents who are not sure emanates from Figure 6 and Figure 7 whereby end-users are not sure whether the system is used extensively nor it is easy to work with. This is also in keeping with the results obtained in section 4.6.2 whereby the qualitative analysis revealed that some of the challenges experienced were the out-dated operating systems and network challenges. One respondent even proposed that the department could have had proper planning with SITA prior to implementation taking place.

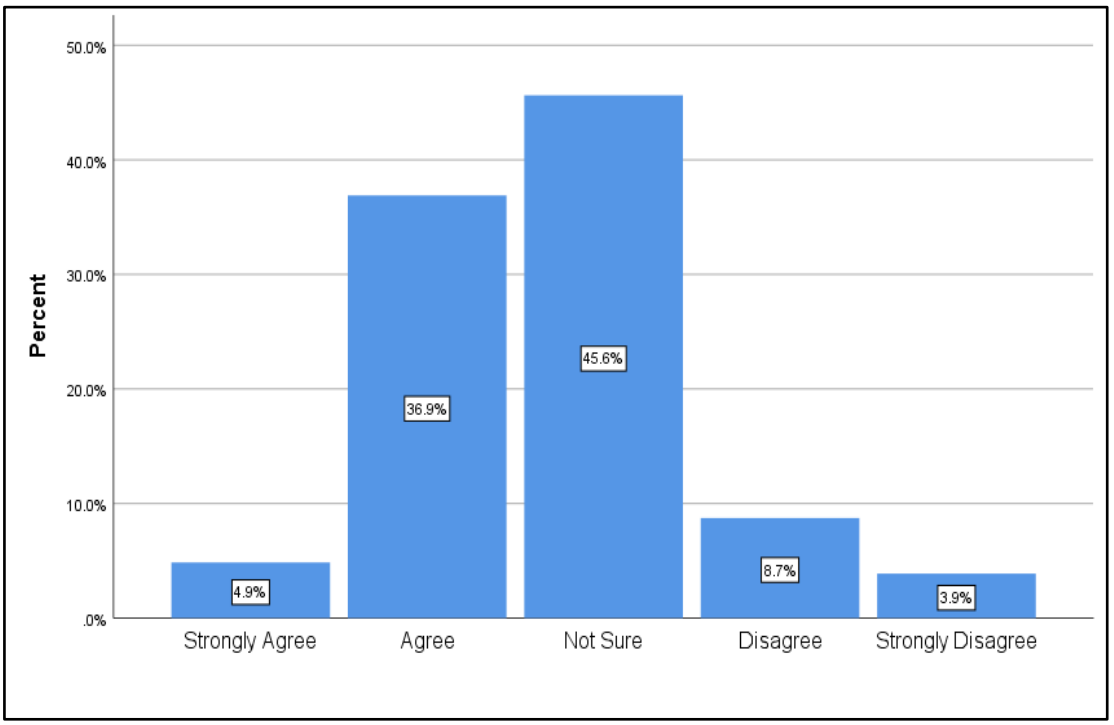
Figure 15: The department has adequate ICT infrastructure to support successful implementation of EDRMS



4.5.2.3 The system is designed as per the departmental EDRMS policy and other legislation requirements

The results presented in Figure 16 indicate that a total of 4.9% of respondents strongly agreed, 36.9% agreed, 45.6% were not sure, 8.7% and 3.9% disagreed and strongly disagreed respectively, that the system is designed as per the departmental EDRMS policy and other legislation requirements. These results reveal that end-users do not have an understanding when it comes to EDRMS policy and other legislation requirements. Literature on record management policy and procedures (section 2.11 of Chapter Two) designated that unavailability of e-records management policies result in many countries being left behind in managing electronic records (Muchaonyerwa 2017: 65).

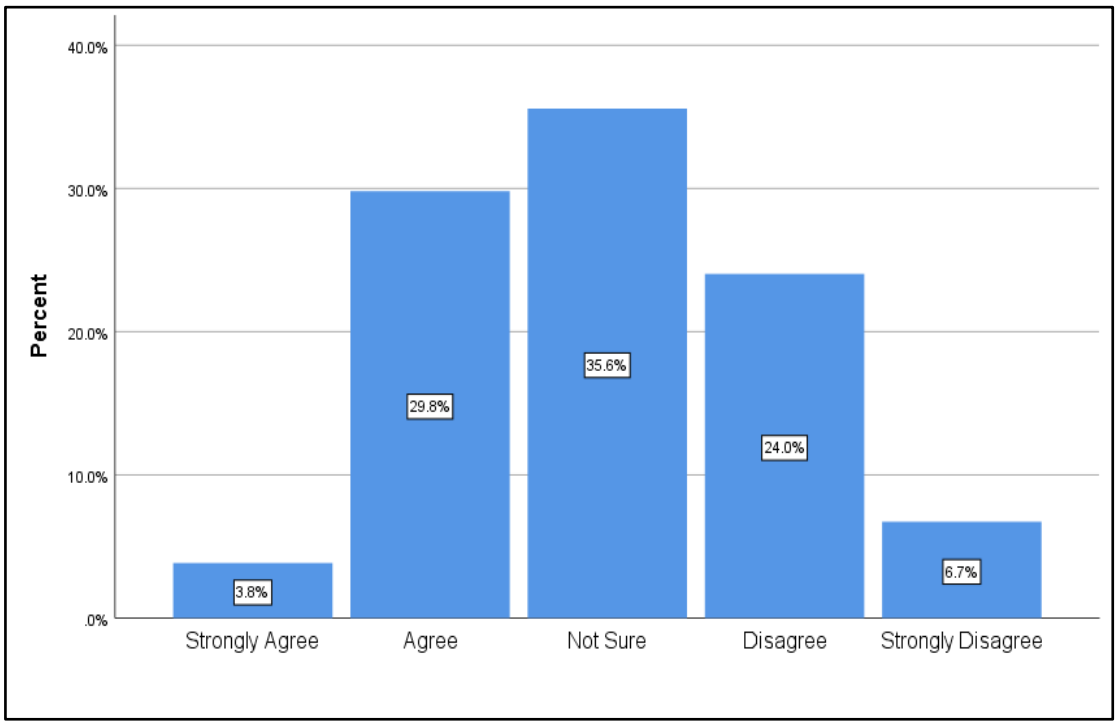
Figure 16: The system is designed as per the departmental EDRMS policy and other legislation requirements



4.5.2.4 The implementing team (management, training staff, ICT etc.) is working together to ensure successful implementation of EDRMS

Figure 17 reflects that 3.8% strongly agreed, 29.8% agreed, 35.6% were not sure, 24% disagreed, 6.7% strongly disagreed with the aforementioned statement. This indicates that most end-users are not sure whether the implementing team is working together or not to ensure successful implementation of EDRMS. According to Borcoşi (2018: 42), a winning team has a mutual goal that every team member is aware of and wishes to achieve within the team. Some of the features of a winning team are as follows: purpose and direction which is clear and common, passion, clear and managed processes, clear roles, involvement, internal and external communication as well as determination (Borcoşi 2018: 43).

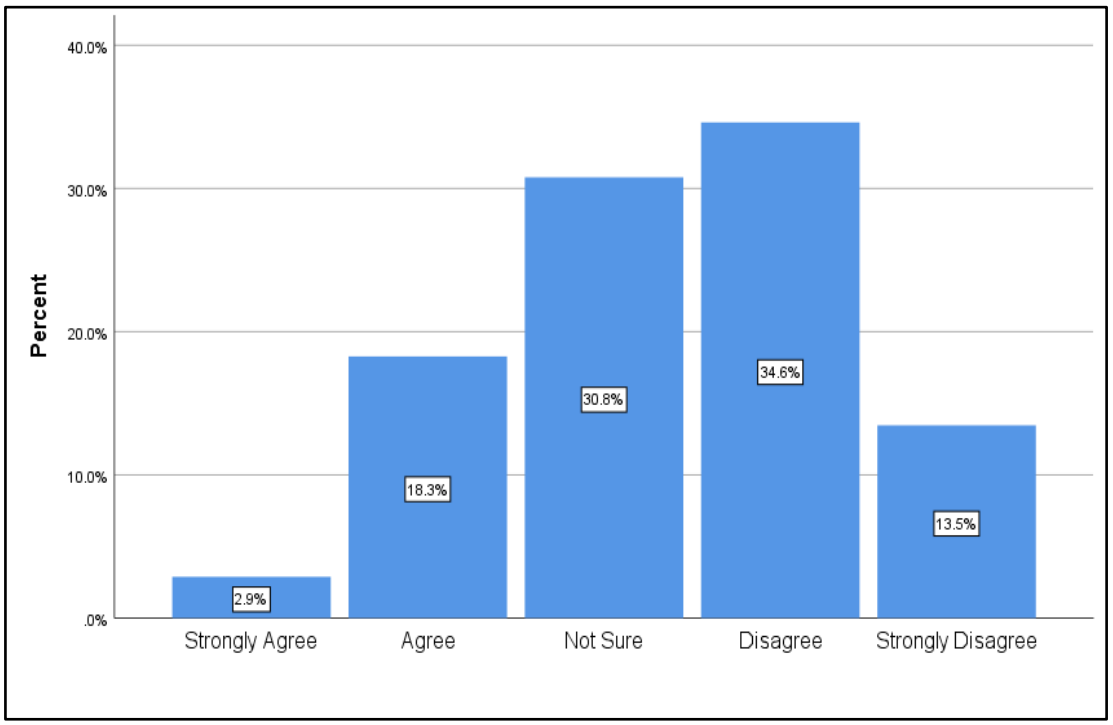
Figure 17: The implementing team (management, training staff, ICT etc.) is working together to ensure successful implementation of EDRMS



4.5.2.5 Collaboration between management, the service provider and employees has made EDRMS implementation a success

As illustrated in Figure 18, respondents at 2.9% strongly agreed, 18.3% agreed, 30.8% were not sure, 34.6% disagreed and 13.5% strongly disagreed that collaboration between management, the service provider and employees has made EDRMS implementation a success. The results also indicate that not much fruitful results of EDRMS have been seen by the end-users. Hence, 31% of respondents are not sure and 48.1% disagreed that collaboration has had a positive impact in the implementation of EDRMS. Collaboration can be a critical factor of successful technological revolution especially if the teams have good leadership (Schramm 2017: 142). According to Baker (2020: 4), the limitations and direction of collaboration in an organisation are often persuaded by elements such as friendship, belief, devotion, and perceived value or readiness of proficiency.

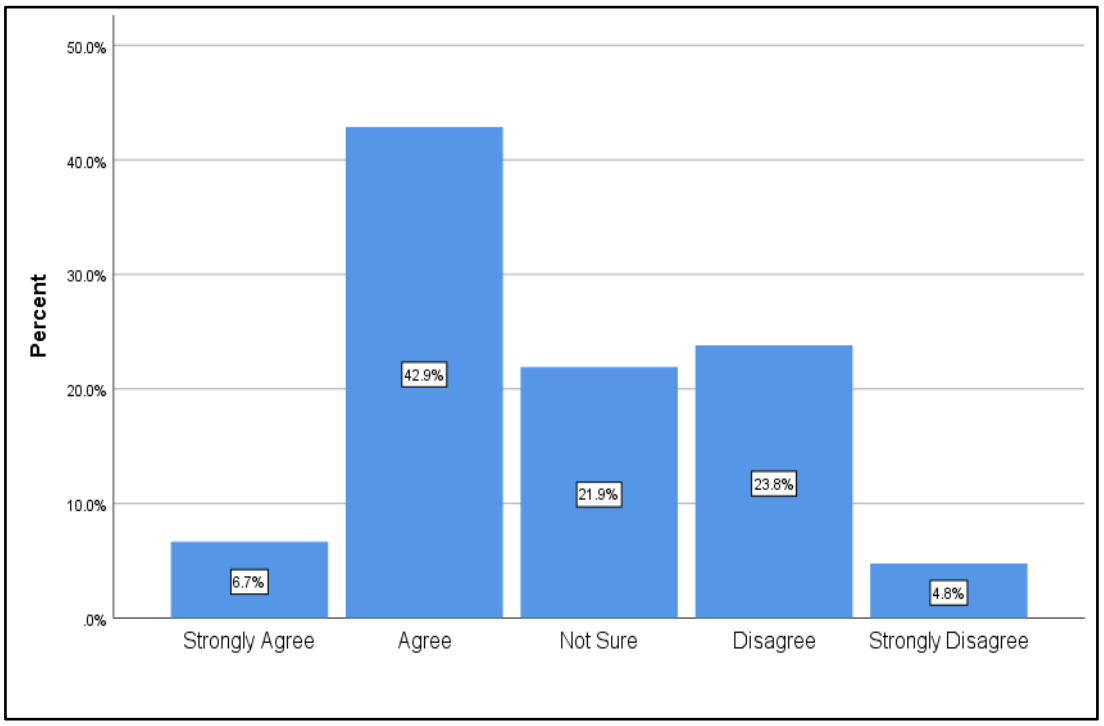
Figure 18: Collaboration between management, the service provider and employees has made EDRMS implementation a success



4.5.2.6 End-Users have received adequate and relevant training on ECM

Based on the findings in Figure 19, respondents at 6.7% strongly agreed, 42.9% agreed, 21.9% were not sure, 23.8% disagreed and 4.8% strongly disagreed with the aforementioned statement. The majority of respondents are in agreement that end-users have received adequate and relevant training on ECM. Literature on staff training (section 2.6.11 of Chapter Two) attest that it is imperative that manual processes be stopped after training has been done. This has an advantage of giving the end-users a platform to use the implemented system.

Figure 19: End-Users have received adequate and relevant training on ECM



4.5.2.7 Conclusion to objective 2

Based on the data analysis presented for objective two, a number of factors have adversely affected the implementation process. It emerged that employees do know that there is ECM in the Department, but they are not sure what is happening with it. It is evident that there is no continuous support given to the end-users. This has also been supported by the results obtained in Figure 14 whereby 52.4% respondents disagreed that management has been providing continuous support on the implementation of EDRMS. The need for adequate infrastructure is another important factor that implementers should have looked at prior to the implementation taking place. The results show that respondents agreed that they were trained, but after that there was no platform to perform what they were trained on. The lack of cohesion has also contributed negatively on the implementation process. This is supported by the results obtained in Figure 17 and 18 whereby end-users were not sure and

also in disagreement that there is teamwork and collaboration amongst the implementers.

4.5.3 Objective 3: To determine the role played by management in implementing EDRMS at KZN COGTA

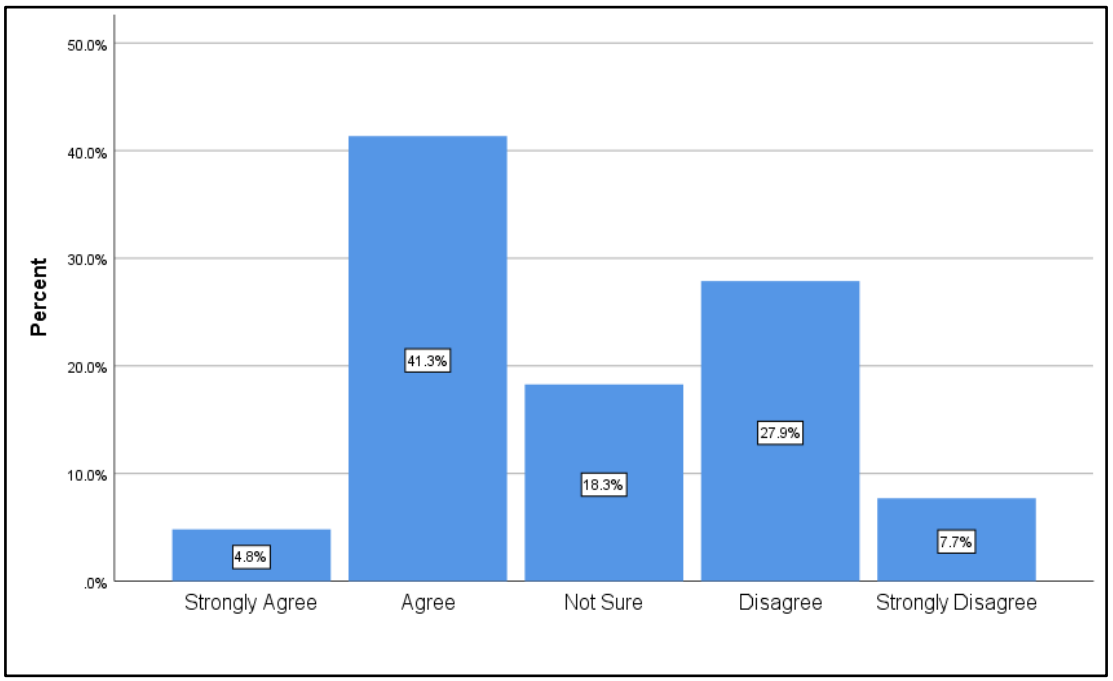
Figure 20 to Figure 25 interprets the results obtained on the role played by management on the implementation of EDRMS.

4.5.3.1 Management has informed staff about the significance, vision and mission of the EDRMS in the department

As presented in Figure 20, 4.8% and 41.3% of respondents are in agreement that the management has informed staff about the significance, vision and mission of the EDRMS in the Department as they strongly agreed and agreed respectively. A total of 18.3% were not sure, 27.9% and 7.7% disagreed and strongly disagreed, respectively. These results indicate that management has played its role by informing the staff about the significance of EDRMS in the Department. Management's responsibility is to ensure that employees are well informed about the goals of implementing EDRMS (as extensively discussed in Chapter Two).

A study conducted by Wibowo and Darmanto (2019: 57) on the role of management on the implementation of computer-based accounting information systems, revealed that lack of awareness of end-users in the implementation process creates discernment that end-user participation is not important. Overall results indicate that, end-users were informed about the implementation of EDRMS. It is then, up to them including the management to make it a success through utilising it and management ensuring that end-users are encouraged to use the implemented system.

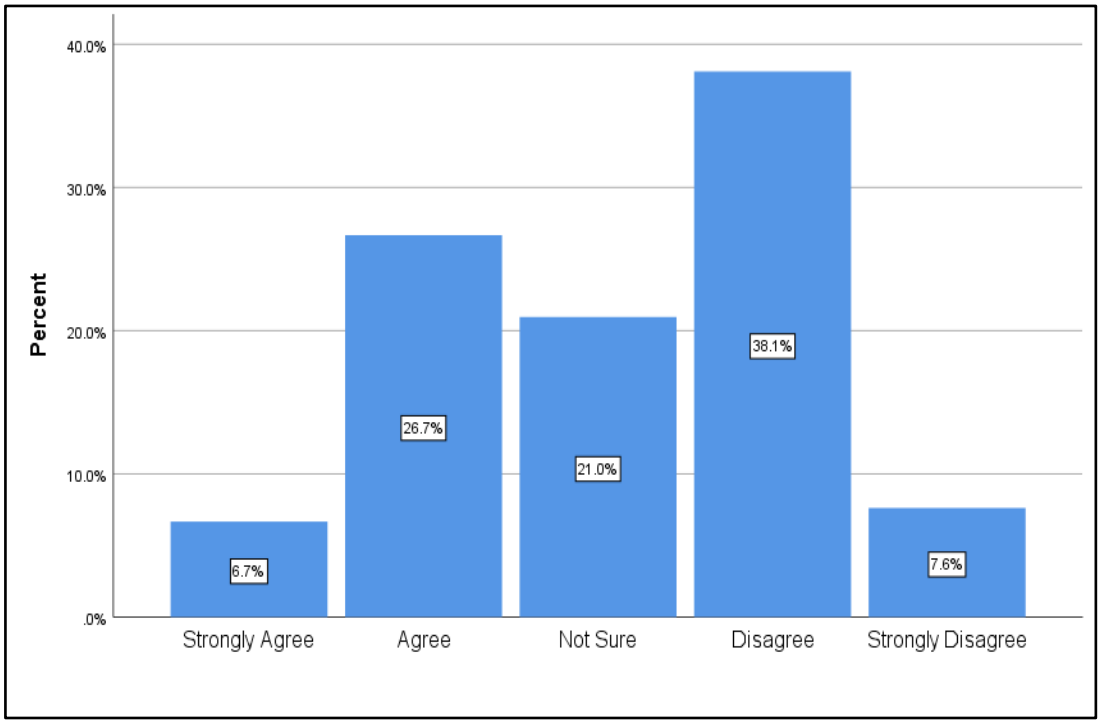
Figure 20: Management has informed staff about the significance, vision and mission of the EDRMS in the department



4.5.3.2 Management always motivates the staff to use the ECM system

Figure 21 illustrate that 6.7% strongly agreed, 26.7% agreed, 21% were not sure, the majority of 38.1% disagreed and 7.6% strongly disagreed that management always motivates the staff to use the ECM system. With the exception of the 21% who are not sure, the overall results of 45.7% of respondents who are in disagreement reveal that employees are not motivated or encouraged to use the ECM system. This in return has the consequences of employees not being able to determine if the system is successful or not. According to Smit, Botha, Vrba and Ngambi (2016: 400), the motivation process encompasses an inner state of mind that directs an employee's comportment and drive towards accomplishing the organisational goals. Managers can impact the performance of their employee's as long as they understand what encourages them. Performance is determined by variables such as motivation, training, knowledge and skills and the opportunity to perform (Smit *et al.* 2016: 401).

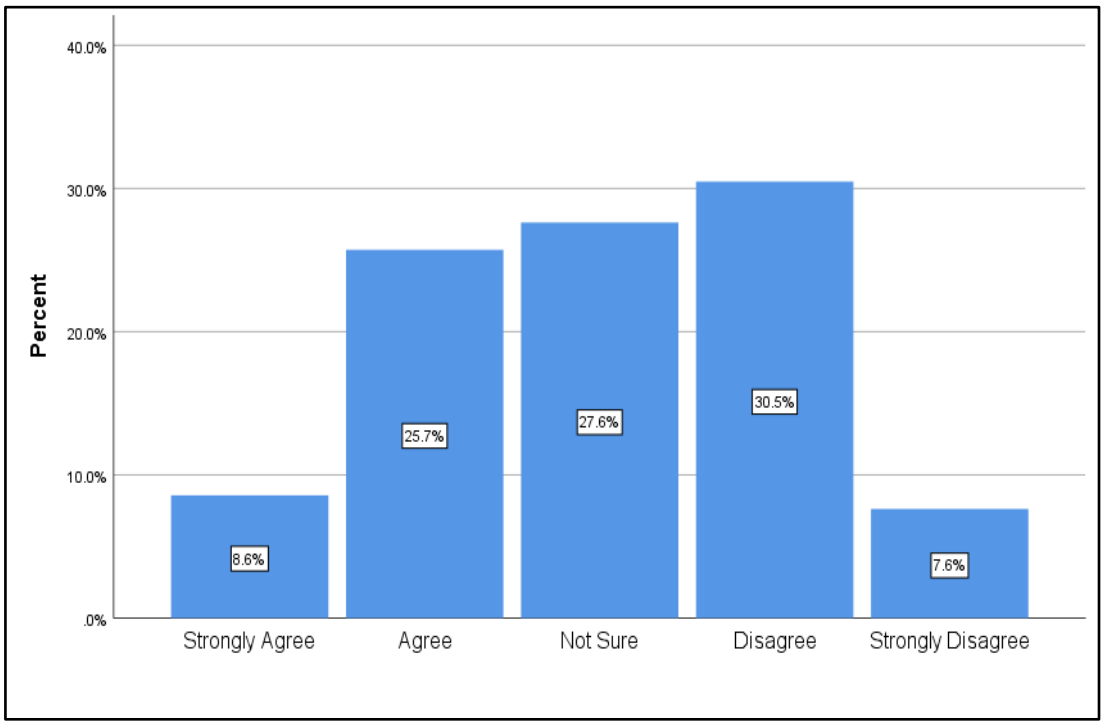
Figure 21: Management always motivates the staff to use the ECM system



4.5.3.3 Resources (adequate computer hardware, supervision, etc.) to cater for the needs of the EDRMS are well provided

As reflected in Figure 22, 8.6% strongly agreed, 25.7% agreed, 27.6% were not sure, 30.5% disagreed and 7.6% strongly disagreed that resources to cater for the needs of the EDRMS are well provided. The majority of employees who are in disagreement and who are not sure feel that, resources for the successful implementation of EDRMS have not been adequately provided for. Smit *et al.* (2016: 254) believe that providing the necessary resources needed by employees to carry out the change, assist them to execute their jobs accurately. Provision of necessary resources is an important factor that ensures the successful implementation of an IT project. This finding is consistence with Figure 15 whereby it was shown that the respondents were not sure whether the Department has adequate ICT infrastructure to support successful implementation of EDRMS.

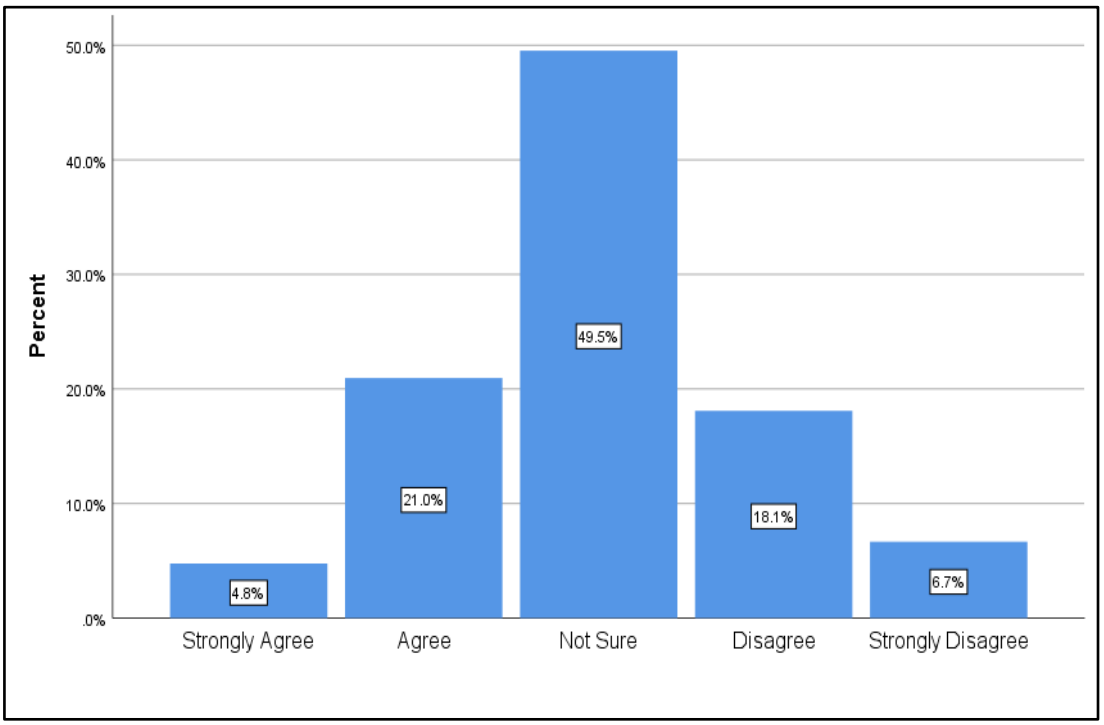
Figure 22: Resources (adequate computer hardware, supervision, etc.) to cater for the needs of the EDRMS are well provided



4.5.3.4 Users always get prompt and relevant support when they encounter problems with ECM

Figure 23 illustrates that 4.8% strongly agreed, 21% agreed, 49.5% were not sure, 18.1% disagreed and 6.7% strongly disagreed that users get prompt and relevant support when they encounter problems with the ECM. A relatively high percentage of 49.5% of end-users who are not sure about this statement indicates that they are uncertain whether the system is being used or not. A study conducted by Mosweu (2016: 6), revealed that on-going support of the end-user becomes essential for the success functioning of the EDRMS. Moreover, end-user support assists them to conquer the feeling of hesitation with regards to the new procedures brought by the implementation of EDRMS.

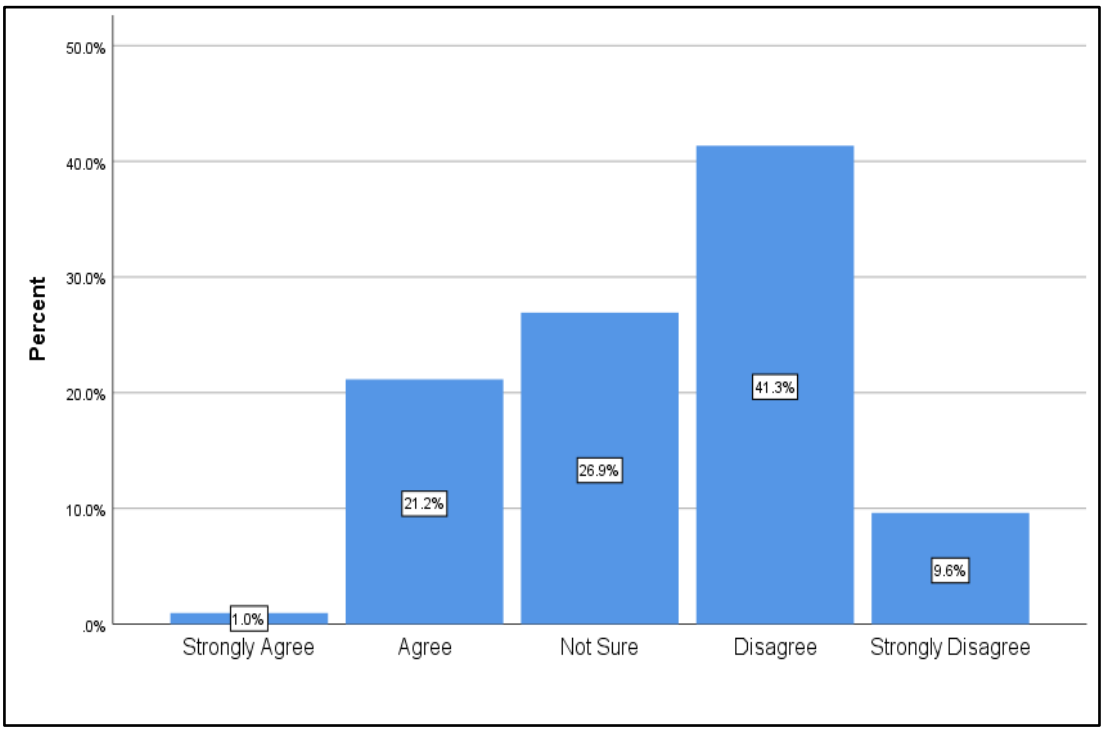
Figure 23: Users always get prompt and relevant support when they encounter problems with ECM



4.5.3.5 Management always champions and highlights the benefits of EDRMS

As per Figure 24, 1% strongly agreed, 21.2% agreed, 26.9% were not sure, 41.3% disagreed and 9.6% strongly disagreed that management always champions and highlight the benefit of EDRMS. The high percentage of employees who disagreed and who are not sure, clearly reveal that management has an important task to ensure that employees see the importance of EDRMS in the department. These results originate from Figure 21 where it was discussed that end-users are not motivated to use the ECM system.

Figure 24: Management always champions and highlights the benefits of EDRMS

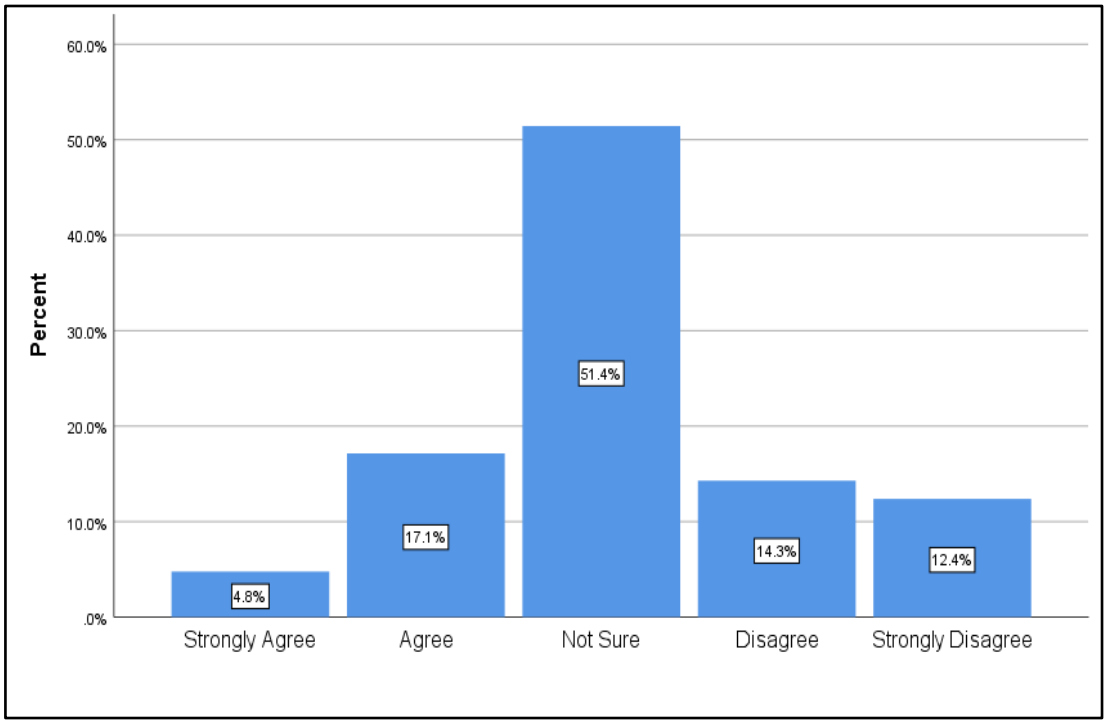


4.5.3.6 Management has necessary skills and competencies that facilitate the successful implementation of EDRMS

As depicted in Figure 25, 4.8% strongly agreed, 17.1% agreed, 51.4% were not sure, 14.3% and 12.4% disagreed and strongly disagreed respectively, with the above mentioned statement. The results reflect that the majority of employees are not sure whether management has the necessary skills and competencies that facilitate the successful implementation of EDRMS. The Implementation Compass Framework clearly outline that people that perform the implementation process should have the right skills and knowledge that will facilitate successful implementation process (section 2.13.1 of Chapter Two). Jones and George (2018: 13) state that managers need to have necessary skills, knowledge and abilities that will help them deal with company issues accordingly. According to Ngoepe (2017: 41), records management experts in government departments need to possess skills in electronic records and in

information technology. This will enable the records experts to fully contribute to the planning of electronic records systems and in major restructuring of the existing systems.

Figure 25: Management has necessary skills and competencies that facilitate the successful implementation of EDRMS



4.5.3.7 Conclusion to objective 3

The analysis for objective three revealed that management has a huge role to play for employees to use the system and ensure that the entire implementation process becomes a success. One positive aspect that management has effected is that they have informed employees about the importance of implementing EDRMS in the Department. However, informing them alone or the introduction alone is not enough and does not predict a successful implementation. Management needs to engage in techniques that will ensure that successful implementation is achieved. It also emerged that employees are not motivated to use the system. Therefore, most respondents

were in disagreement that management always motivate them to use ECM. Further, employees do not see management championing and highlighting the benefit of EDRMS. Also, the provision of adequate resources to perform the job had a negative impact as respondents disagreed that adequate resources have been provided. Employees indicated that they are not sure whether one does get assistance when encountering a problem working on the system. They indicated that they are not sure whether management do have necessary skills to facilitate the successful implementation of EDRMS. This is due to employees not seeing positive results of the EDRMS in the Department.

4.6 QUALITATIVE DATA ANALYSIS

Biographical information was also attained from the qualitative respondents. Table 4.3 shows demographic profile of respondents.

Table 4.3: Demographic profile of respondents

Demographics		**Percentage**
Gender	Male	71%
	Female	29%
Age	18 - 24 years	0%
	25 - 34 years	43%
	35 - 54 years	57%
	55 - 60 years	0%
	Over 60 years	0%
Employer	KZN COGTA	57%
	Service Provider	29%
	Other: Former COGTA employee	14%
Qualification	Postgraduate	43%
	Degree	43%
	Diploma	14%

Respondents were also asked to indicate whether they were employed by the service provider or by the Department of KZN COGTA. Information regarding their highest qualifications was also requested. Five of the respondents were males and two were females. This is an indication that in most cases male employees are involved in IT careers or holding management positions. Four respondents were between the age group of 35 - 54, while three were between the ages of 25 - 34. Four officials were from the KZN COGTA, one official was the former KZN COGTA official who is no longer with the Department but, was part of the management or implementing team. Two officials were part of the service provider's group. In terms of their qualification, three respondents are Postgraduates, three hold Degrees and one holds a Diploma. This indicates that these officials are adequately qualified.

The identification of the participants was not revealed in order to ensure anonymity. Table 4.4 shows respondents and interview information codes. Interviews were held over a period of June - August 2020 and lasted between 60-90 minutes.

Table 4.4: Respondents and interview information

Participant	Employer	Mode
Respondent 1 (R1)	COGTA official	Face to face
Respondent 2 (R2)	COGTA official	Face to face
Respondent 3 (R3)	COGTA official	Face to face
Respondent 4 (R4)	Former COGTA official	Face to face
Respondent 5 (R5)	COGTA official	Face to face
Respondent 6 (R6)	Service Provider	Face to face
Respondent 7 (R7)	Service Provider	Face to face

The audio-recording from the interview sessions was transcribed and replicated into text. Transcription of the interview is necessary for the strengthening of the logical analysis of data (Nascimento & Seinbruch 2019: 416). The data transcribed was contrasted to the notes that were taken in the

interview sessions to confirm the quality and accuracy of data. Thematic coding was used to organise and increase the traceability and authentication of the analysis (Nowell, Morris, White & Moules 2017: 2). To accomplish the aim of this study, the results were analysed in accordance with the major themes that emerged. There were two major themes that were identified, namely EDRMS impact andfactors affecting EDRMS implementation. These themes are shown in Table 4.5.

Table 4.5: Research themes

Objective	**Theme**
Determine the impact of EDRMS at KZN COGTA	Theme 1: EDRMS impact
Establish factors affecting the implementation of EDRMS at KZN COGTA.	Theme 2: Factors affecting EDRMS

4.6.1 Theme 1: EDRMS impact

This theme emerged in the endeavour to address objective one based on interview question 1. It emerged that although most officials are not using the system to its full potential, it is a valuable system to have. These results are an affirmation obtained in Figure 5 and Figure 6 of the quantitative analysis. The system is advantageous in many ways as it reduces paper usage, increases document collaboration, document traceability and it is associated with the 4th Industrial Revolution. Even though other facilities like workflows have not yet been implemented, the system per se is good to have in an organisation. Question and responses related to the impact of EDRMS in the Department of COGTA are presented in Table 4.6.

Table 4.6: Opinion on the impact of EDRMS

Question 1	In your own opinion what impact would you say EDRMS has in the Department of COGTA?
Respondents	**Responses**
R1	*"It has a great positive impact as it results in advantage realised by the Department in that it is a cost-effective system since the organisations purchasing costs regarding has been reduced by more than 40%. It also contributes to environmental friendly policies that are being encouraged for 4th Industrial Revolution whilst also saving time for employees."*
R2	*"As far as I am concerned, the EDRMS has had very little or no impact at all in the Department. My view is based on two reasons, firstly, the majority of officials are simply not using the system. Secondly, the system has not been fully implemented e.g., workflows have not been implemented."*
R3	*"It reduces the amount of paper documents and the reduction of documents or file sizes on the network."*
R4	*"It improves collaboration, reduces cost of stationery and the risk of missing documents."*
R5	*"Very little impact in terms of utilising the system to its full potential."*
R6	*"Saved money and paper, also helped COGTA officials who were travelling +-200km just to get a get a document reviewed and signed off."*

R7	*"The EDRMS would assist the department in terms of facilitating document collaboration between different stakeholders within the department. It helps in clearly showing the custody and traceability of documents sitting on the secure and control system."*

4.6.1.1 Conclusion to Theme 1: EDRMS impact

According to the responses on the impact of EDRMS at KZN COGTA, it can be concluded that the department has not yet seen all the results it initially hoped for. This is because even the modules that are implemented are not used to their full potential. Officials are still travelling to get documents signed if the responsible official is not around. End-users are also not filing as they are supposed to. This makes it difficult for management to see the results of the implementation of EDRMS in the Department.

4.6.2 Theme 2: Factors affecting EDRMS

Theme 2 emerged because of two intentions, that is, to find out about the factors that had an impact on the implementation and to determine what could be the solutions to those factors or challenges experienced during the implementation process. Question 4 of the interview addressed the factors affecting the implementation of EDRMS and is tabled in Table 4.7. Question 5 is about the solution to challenges. It is presented in detail in Table 4.7.1.

Change management appeared to be the leading challenge during the implementation of EDRMS at the Department of COGTA. Beuhring (2020) posits that change management can be managed effectively if people affected by change are involved. According to Springer (2019: 405), change can be unplanned or planned. Unplanned change transpires because of an immense surprise to the organisation. On the other hand, planned change transpires

when management recognise the need for circumstantial change and therefore start preparing and implementing in accordance with a pre-planned set of activities and on a prescribed time frame. According to Smit *et al.* (2016: 253), even if management suggest change that is advantageous to everyone, employees will still resist change if they do not know the motive behind implementing change. Organisational development is a pliable process for planning and implementing the change. Its main emphasis is to construct a working atmosphere whereby an organisation can, along with training, drive their change (Springer 2019).

The second challenge was the network or server related problems. Lastly, it was necessary to determine if proper planning, such as the need to procure IT equipment's compatible to the system are being implemented. Table 4.7 addresses factors affecting the implementation of EDRMS.

Table 4.7: Opinion on the factors affecting EDRMS

Question 4	Since the implementation of the implementation of the EDRMS, what challenges have been experienced by the Department so far?
Respondents	**Responses**
R1	*"Change attitude amongst users, migrating to the new system, users having to be encouraged in utilising the new system and also ensuring compliance. Another challenge was that the whole introduction led to organisation having to procure new IT equipment that would be compatible with the new system."*
R2	*"The most common problems have been password related problems, difficulty in logging onto the system due to network challenges which also affected the declaration process, some*

	officials uploading documents into the incorrect folders."
R3	*"Completing the project on time was a challenge, adoption and utilisation of the application by employees. Integration with an electronic signature application and maintenance of the application."*
R4	*"Resistance in using the EDRMS system."*
R5	*"Change management is a big concern. Users are not using the system as it was intended. Also there is a lack of support from the service provider."*
R6	*"Lack of end user training, out-dated operating system and hardware, no help from SITA when we have server issues, lack of change management and lack of proper planning i.e., unavailability of staff members should have been planned for."*
R7	*"Department officials do not want to adapt in using the system as required."*

4.6.3 Solution to challenges

Question 5 addressed the solution to factors or challenges that had a negative impact on the implementation of EDRMS. Proper planning is crucial for change management to all staff prior to full implementation of the system. Planning to attend to server issues prior to implementation as well as planning to involve all senior management in different Business Units to encourage staff to use the system. According to Smit *et al.* (2016: 9), planning is one of the management functions that define the organisation's future. Lack (2018) believes that a plan should also be designed for change management. Question 5 deals with solutions to challenges.

Table 4.7.1: Opinion on solution to challenges

Question 5	How do you think those challenges could have been overcome?
Respondents	**Responses**
R1	*"Proper change management strategy is necessary prior to full implementation."*
R2	*"Password related problems could have been avoided if the single sign on was implemented as originally envisaged. Server issues could have been attended to before the implementation of the system. Refresher training and coaching could have been conducted for struggling officials."*
R3	*"User requirements and expectations should have been communicated on time and understood by all stakeholders. Much focus was required on change management during the implementation."*
R4	*"Implement change management process including awareness campaigns".*
R5	*"Buy in from senior management, enforcing officials reporting to them to utilise the system."*
R6	*"End-user training for all staff, record management training for the file plan, up-grade desktops especially for district offices, kick-off meeting should have included SITA representatives and lastly, plan and budget for change management."*
R7	*"Change management could have been put more in action for advising users and marketing the system."*

4.6.3.1 Conclusion to Theme 2: Factors affecting EDRMS

Most respondents commented about change management as the main challenge experienced during the implementation of EDRMS. The root cause for this is because end-users regarded themselves as not part of the change that was supposed to take place in the Department. There was nothing compelling them to use the system. All the challenges experienced originate from proper planning that should have taken place before the implementation process. In terms of using the system, resistance to change could have been avoided if change management was envisioned by the implementers. Hence, most respondents commented about change management as a strategy that could have directed the end-users towards adopting the new implemented system.

4.7 ADDITIONAL QUESTIONS

In addition to the three themes, three additional questions were asked in an endeavour to gain opinions of the implementers about the whole process of implementing EDRMS. These three questions revolved around the modules to be implemented, the support received during the implementation and the general suggestions. Tables 4.9 to 4.11 represent these additional questions.

4.7.1 Modules implemented and modules not implemented

The result on the modules that were to be implemented and the ones that were not implemented was not clear amongst the implementers. Seemingly, all modules were not implemented. This is confirmed by the results obtained in Figure 9 of the quantitative findings which indicates a relatively high percentage of end-users who disagreed and were not sure that ECM has improved and shortened the approval processes. It also emanates from the question regarding the support framework whereby it was not clear whether there was a support framework or not (Table 4.8). Table 4.9 address the

responses from question 3 regarding modules implemented and the ones that were not implemented.

Table 4.9: Opinions on modules

Question 3	How many modules were supposed to be implemented and how many have been implemented so far?
Respondents	**Responses**
R1	*"Ten modules and all have been implemented."*
R2	*"I do not know how many modules were supposed to be implemented but I know that workflows, file plan change requests and the retention schedule have not been implemented."*
R3	*"The department has implemented ECM, it came with document management, collaboration, web content management, file and archive management, workflow and business process management and repositories."*
R4	*"Electronic Document Management and Electronic Records Management Modules and they are both implemented."*
R5	*"Three modules, document, records and workflow management. One is outstanding."*
R6	*"According to my knowledge +/-200 modules were implemented. However only the Electronic signature module was not implemented."*
R7	*"More than 100 modules, not sure of the exact number as I no longer have access to the system."*

4.7.1.1 Conclusion regarding modules

What has been discussed in section 4.6.4 regarding the support framework, also transpired on modules that were to be implemented. It is believed that if there was a support framework in place or if it was followed accordingly, implementers should have known what was supposed to be implemented. This has left end-users not realising the advantages of EDRMS in the Department, hence the way they perform their tasks has not changed.

4.7.2 Support received during the implementation

The support differed according to the tasks of individuals. Some received the support they expected, and some did not e.g., a COGTA official who did not receive support from the Business Units (Table 4.10). This is due to lack of senior management buy-in (Table 4.7.1). Question 6 relates to the support received during the implementation process:

Table 4.10: Opinion on support received

Question 6	Have you received the support you needed to implement EDRMS? If yes, what support and from whom did you receive it? If no, what support and from whom were you expecting it?
Respondents	**Responses**
R1	*"Yes, support was received for system implementation and training from the system developers."*
R2	*"The support was not at all satisfactory. Some Business Units were very reluctant to attend file plan meetings and the KZN Archives took ages to approve the proposed amendments to the file*

	plan. As a result functionalities such as file plan change request as well as the retention schedule were never implemented."
R3	*"Management offered the needed support."*
R4	*"Yes, I received support from Records Management Unit."*
R5	*"Yes, the training was conducted on the duties of being a super user and it was sufficient."*
R6	*"Yes, ICT officials were very supportive from the service desk, management, and infrastructure team.*
R7	*"Yes and No, received support from the Project Administrator. No, some officials were not complying with the implementation of the system e.g., missing important meetings."*

4.7.2.1 Conclusion on support received

It can be concluded that, the support to be received by officials on their different responsibilities mainly depended on how motivated the individuals were. It also depended on how well they were informed about the system. This called for collaboration as discussed in section 4.5.2.5 of the quantitative analysis.

4.7.3 General comments or suggestions

General comments or suggestions from respondents were a summary of what was obtained from questions 1 to 6 and some results obtained from the quantitative questionnaire. Question 7 relates to general comments or suggestions on the implementation of EDRMS at KZN.

Table 4.11: Opinion on general comments

Question 7	Please provide any general comment or suggestion on the implementation of EDRMS in the department of KZN COGTA?
Respondents	**Responses**
R1	*"It is a great system which is cost effective, results to organisation and also supports the 4th Industrial Revolution initiatives."*
R2	*"For me, I think it would have been important to do the following to ensure a successful implementation of the EDRMS:* • *Registry should have been given more responsibilities in the system, e.g. uploading documents into the system, instead of being confined to doing only the declaration process.* • *Special scanners (for scanning bulky items) should been procured before the system was implemented.* • *Change management was not done for all officials. More officials would have been aware of the system, if they were made aware of it."*
R3	*"Strong Change Management team is always required during implementation."*
R4	*"It needs to be integrated with Electronic Signature to add more value."*
R5	*"Change management strategy need to be properly laid out and Project Steering Committee*

	should ensure that stakeholders are delivering as agreed."
R6	*"No comment"*
R7	*"No comment"*

4.7.3.1 Conclusion to general comments

Suggestions proposed that a lot should have been done by management to avoid challenges and delays. This includes putting change management into action and procurement of adequate equipment for EDRMS to be more functional. Registry staff appears to be the ones that can make a positive move if given the opportunity to upload documents to be filed.

4.8 CONCLUSION

This study used triangulation in order to strengthen the validity and reliability of the results obtained. Responses obtained from both the quantitative and qualitative methods were relatively similar to each other. The responses also answered the research questions. Based on the research questions of this study, the results confirmed that EDRMS has a positive impact in the Department. Management has done well by introducing EDRMS in the Department but, they need to put more effort in getting the end-users adopt the system, planning and change management factors were the main hindrances for the successful implementation of the EDRMS. The support framework appeared to be a pillar of every successful implementation. In this case it was not clear whether there was one followed or not.

The following chapter concludes this study and provides recommendations to the Department of KZN COGTA. Furthermore, suggestions for future research are outlined to assist in the successful implementation of EDRMS.

CHAPTER FIVE - CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

Chapter Four of this study provided the analysis from both the quantitative and qualitative data. The questionnaire and the interview schedule were designed to realise the research objectives of the study which were: to determine the impact of EDRMS at KwaZulu-Natal Cooperative Governance and Traditional Affairs (KZN COGTA), to determine the role played by management in implementing EDRMS at KZN COGTA, as well as to establish the factors affecting implementation of EDRMS at KZN COGTA.

This chapter provides conclusions based on the findings of this study. It further discusses the limitations and implication of the study. Moreover, this chapter suggests recommendations for government departments and future research allied to EDRMS.

5.2 OVERVIEW OF THE STUDY

This section provides an overview of this study.

As a point of departure, this study unpacked e-government challenges and opportunities in a South African context. Literature was further reviewed on e-government initiatives in other countries. It was discovered that most countries have established their separate agencies to look at e-government initiatives in their countries. It emerged that in South Africa we are still left behind as e-government initiatives are still decentralised. This occurs at national, provincial and district levels. However, provinces like Gauteng and Western Cape seem to be leading in e-government initiatives as they have established their independent e-Government departments (SA, DTPS 2017: 496). Moreover,

the ICT infrastructure is still a main challenge as it also emerged as factors affecting the implementation of EDRMS.

This study also reviewed the importance of project risk management as another way of ensuring a successful project implementation especially a technological one. It appeared that before a project starts it is vital that risks that are likely to occur are identified, examined, and analysed. Controlling measures should be in place to avoid delays and unnecessary failure. Thorough and proper planning appeared to be the solution that can ensure that everything runs smoothly, and targeted timelines are met. Using a mixed method approach worked to the advantage of this study as most of the data obtained in the quantitative method was confirmed in the qualitative method. Also, data which could not be attained in a quantitative method was attained in a qualitative method.

This study was about the Management's support in the implementation of EDRMS. The management theory of Henry Mintzberg made it possible to understand the roles that management need to play in order for their organisations to be successful. Interpersonal, decisional, and informational roles are a full package that management need even in the implementation of EDRMS. The data analysis presented in Chapter Four, for both the quantitative and the qualitative methods, provided the comprehensive analysis that ascertained the achievement of the objectives of this study.

5.3 ACHIEVEMENT OF THE OBJECTIVES OF THE STUDY

This section discusses the achievement of the research aim and objectives of this study based on the empirical findings of this study and the literature review.

5.3.1 Objective 1: To determine the impact of EDRMS at KwaZulu-Natal Cooperative Governance and Traditional Affairs (KZN COGTA)

The data analysis presented in Figure 6 indicated that the ECM system has not been extensively used by the end-users. A total of 87.5% of respondents were not sure and in disagreement that ECM is used by the staff. Since the end-users are not using the implemented system, there is no positive change that the ECM has brought in the Department. This is confirmed by the results obtained in Figure 8, whereby 70.2% of respondents were not sure and also in disagreement that the ECM has brought a positive change in the way staff does filing.

Furthermore, it emerged that other features of the ECM system are still not functional as there has been no improvement in the approval processes. This means that the routing and signing of documents is still done in a traditional way. This causes unnecessary delays which leads to the delays of service delivery. Smallwood (2013: 36) sanctions that, the use of ECM in routing of work steps, assist in speeding up approval processes and other workflow capabilities that are included in ECM.

The data analysis in Figure 13 showed that a total of 46.7% of respondents disagreed that the ECM has significantly improved and shortened the approval processes in the Department of COGTA. This finding also confirms the data obtained in Table 4.6 of the qualitative analysis whereby it was revealed that the use of ECM would have saved time and cost for the Department and for officials travelling to get documents signed. Over and above, the interview sessions also confirmed that in terms of utilising the system, there has been no positive impact. On the other hand, the ECM system has a positive impact if well implemented and utilised accordingly.

This study ascertained that implementing an ECM system which allows for the functionality of EDRMS in a government Department is advantageous in many

ways. A total of 75.3% of respondents agreed that EDRMS is far better than managing physical records (refer to Figure 5). The respondents at 50.5% also agreed that ECM can perform numerous tasks like routing of documents and detecting files due for destruction. This finding is congruent with the literature review as Read and Ginn (2016) attest that physical records come with more disadvantages as it consumes time when searching for a record, loss of documents are likely to occur, the cost of paper is increased, and the workflow progress is not well monitored. ECM provides access to authorised users and eliminates data leakage (Dataquest 2018).

As indicated by one of the management staff, EDRMS can be linked to the 4th Industrial Revolution. This means that officials can work in the comfort of their own homes on Departmental records and approving documents through EDRMS. With regards to the Department of KZN COGTA, positive results have not yet been seen. End-users are not utilising the system as they are supposed to. Therefore, there has been no great change from doing things the traditional way in the Department of KZN COGTA.

5.3.2 Objective 2: To establish the factors affecting implementation of EDRMS at KZN COGTA

The findings of this study outlined many factors that affect the implementation of EDRMS at KZN COGTA. The following discussion provides a summary of factors based on the empirical results from this study:

- **Management support**

  Continuous support from management, along with staff awareness has also contributed. The end-users are aware that the Department has embarked on implementing EDRMS, on the other hand, they are not fully informed about what they are supposed to do. They are not sure whether the system is to be used by certain officials or everyone in the Department should use it. The results shown in Figure 14 of the

quantitative analysis attest this as 52.4% of respondents disagreed that management has been providing continuous support throughout the implementation process.

- **ICT infrastructure**

  In some way, the ICT infrastructure also impacted negatively on the implementation of EDRMS in the Department of KZN COGTA. Some respondents identified factors like poor ICT infrastructure and lack of adequate equipment for staff to perform their duties. The out-dated operating systems and the network challenges, as discussed in the interview, are an indication of a poor ICT infrastructure.

- **EDRMS policy and other legislation requirements**

  The data analysis presented in Figure 16 shows that end-users at 45.6% are not sure whether the implemented system is designed as per the EDRMS policy and other legislation requirements. This articulates that the Department need to implement its EDRMS policy which is in line with the NARSSA requirements.

- **Collaboration**

  As mentioned in section 4.5.2.5, collaboration is another critical factor not to be ignored when dealing with technological innovation. In the Department of KZN COGTA, the end-users disagreed that collaboration has made the implementation process a success. Teamwork and commitment can yield positive results if well practised.

- **Staff training**

  This study found that end-users were trained on how to use ECM. This is an important part whereby end-users get to know how they will be using the system in relation to their daily duties.

- **Change management**

  Most respondents on the interview sessions revealed change management as the main factor that had a negative impact. End-users are not adapting to the new system because they regard themselves as not part of the change that needs to happen. According to Lyke-Ho-Gland (2019: 170), change is a teamwork, if employees are not involved, then the change effort can get disrupted

- **Resistance to change**

  The qualitative analysis also found that end-users are resisting using the implemented system. On the other hand, the concluding interpretation on staff training is that end-users did receive adequate and relevant training. Resistance to change is due to the fact that manual processes were not stopped so that end-users can get to work on what they were trained on. This factor can be linked directly with change management. According to Robbins and Coulter (2018: 225) it is the manager's duty to champion the change management in an organisation. Managers should use different techniques to deal with resistance to change. These techniques can include communication, participation, facilitation and support, manipulation as well as coercion (Robbins & Coulter 2018: 224).

- **Proper planning**

  This study found that proper planning is the key to combating factors that are likely to hinder the success of an IT project. This is an important factor which needs to be performed before the implementation process begins. This is the first step, if omitted or not properly dealt with, the implementation process will encounter insoluble problems.

5.3.3 Objective 3: To determine the role played by management in implementing EDRMS at KZN COGTA

The following discussion provides a summary of the role that management has played in the implementation of EDRMS at KZN COGTA:

- **The significance of EDRMS at KZN COGTA**
  This study has shown that the management of KZN COGTA has done very well by introducing the EDRMS in the Department. This shows that they are willing to take the Department to a higher level in terms of Departmental documents, records, and the functioning of the Department in general.

- **Motivation**
  The overall results of this study, from both the quantitative and the qualitative methods revealed that end-users are not using the implemented system. Management has not played their role as it emerged that end-users are not encouraged to use ECM. Introducing the system alone is not enough. According to Robbins and Coulter (2018: 590), motivation play a vital role as the person's efforts are encouraged, directed, and sustained in achieving a goal.

- **Championing the benefit of EDRMS**
  This study revealed that management has not been seen championing and highlighting the benefit of using the ECM in the Department. It can thus be concluded that factors like "resistance to change" should have not transpired should the management been seen championing and highlighting the benefit of using the implemented system. Schwalbe (2016: 54) is of the view that a champion manager has to be appointed especially in an IT project. This champion manager acts as promoter and a campaigner of the project which in return, help end-users adapt to the implemented system.

- **Necessary skills**

  Chapter Two of the literature review discussed that the management functions are to plan, organise, lead and control human and other resources to achieve organisational goals. Moreover, management need to have technical, interpersonal, and conceptual skills. All these functions and skills can help managers to be successful in their area of expertise. The analysis in Chapter Four showed that end-users are not sure whether management possess the necessary skills to facilitate the successful implementation of EDRMS in the Department. According to Schwalbe (2016: 64), IT projects require different skills and knowledge. Nowadays, many organisations hire graduates with diverse educational backgrounds such as Business Analysts, Programmers, Network specialists, Hardware Engineers, Software Engineers and System Engineers to provide different viewpoints on IT projects.

- **Adequate resources**

  The analysis of this study revealed that management did not play their role well, in terms of providing adequate resources needed for the successful implementation of EDRMS. Most end-users at 30.5% disagreed and 27.6% were not sure whether adequate resources have been provided. This is another critical contributor for the successful implementation of EDRMS. Schwalbe (2016: 54) states that the best way to destroy a project is to hold back the adequate resources. Therefore, management's support and commitment is necessary for the provision of the required resources during and after the implementation process.

5.4 LIMITATIONS OF THE STUDY

The following limitations have been identified by the researcher.

5.4.1 The findings of the study

Participants were from the department of COGTA and the system service provider only. Therefore, the findings of this study might not apply to other government Departments especially those who have successfully implemented EDRMS.

5.4.2 The sample size of the study

The sample size for the quantitative questionnaire was drawn from the employees that were trained to use the system. However, some employees experienced challenges in answering the questionnaire due to the fact that they are not using the system even though they were trained. This limitation had a negative impact on the response rate because the data obtained was not the one that the researcher intended to obtain.

The same applies to the qualitative method approach. The sample size was only nine and the researcher used a census sampling method. The researcher was hoping to get a 100% response rate but only 78% responded. This delayed the process of completing the study on time as it was very challenging to get hold of qualitative respondents. Also, the researcher believes that more valuable information could have been obtained since the two implementers were reluctant to participate in this study.

5.5 IMPLICATIONS OF THE STUDY

Many studies that have been conducted on IT projects indicated that management's support and commitment is the critical factor that hinders the

success of IT projects. Limited studies have been conducted on Management's support per se. This study has contributed to the body of knowledge by clearly enlightening the support that management should offer in the implementation of EDRMS or an IT project. Moreover, the management theory of Henry Mintzberg made it possible to clarify the roles that managers should play in their organisation.

5.6 RECOMMENDATIONS FOR THE DEPARTMENT OF KZN COGTA

Based on the empirical data, the following recommendations are suggested to the Department of KZN COGTA:

- Management should be vigilant in ensuring that before implementation takes place, proper and thorough planning is done. This would be a platform to anticipate all factors that are likely to make the implementation unsuccessful and be dealt with before they transpire. This would include planning for the procurement of necessary equipment such as special scanners and computers.
- Management, the service provider and the implementing team should work on finalising other functionalities of ECM as it is evident that it is a good system to have in an organisation.
- Management, the service provider and the implementing team should practice stage "A to H" as presented in Figure 2.5 on literature review of Chapter Two. All steps and processes should be followed when implementing a records management project as clearly outlined. Moreover, the implementation compass framework provides strategies to make every project implementation to be a success in an organisation.
- Change management should be practiced in order to enforce end-users to utilise the system to its full potential. This will combat a resistance to change. Prior to change management taking place, staff should be made aware about the benefits of the system being implemented in an

organisation. This would make them feel important and involved, thus creating the drive to be part of a winning organisation and combating resistance to change before it occurs.

- It is recommended that in addition to the records management policy, an EDRMS policy be implemented so that it could be easy for employees to comply when the system is fully implemented and for management to audaciously refer end-users to the policy.
- Lastly, it is further recommended that the Registry staff be given more responsibility. This would place the system usage on a high level as they deal with the filing of records.

5.7 SUGGESTION FOR FUTURE RESEARCH

This section provides suggestions for future research to be conducted on the implementation of EDRMS in an organisation, particularly government departments.

- Most respondents highlighted change management and resistance to change as the main factors that had a negative impact on the success of EDRMS at KZN COGTA. Thus, it is suggested that research on change management with regards to EDRMS implementation be conducted. The results from such research would provide insight on change management challenges and how they can be overcome.
- This study was conducted in one government Department in one province. Therefore, future research could be done in several government departments in various provinces so as to get an insight of the state of their e-government initiatives.
- Considering that this study was limited to a government Department, it is recommended that comparatives research be conducted in the private and public sector on the implementation of EDRMS. This would help in the development of concrete strategies that could benefit both government and private organisations in implementing EDRMS.

5.8 CONCLUSION

This study looked at the implementation of EDRMS in government Departments as one of the e-government initiatives that government Departments are embarking on. The study was conducted at the Department of KZN COGTA. It emerged that management needs to fully apply all management functions namely, planning, organising, leading, and controlling to achieve the organisational goals. When these functions are fully applied, all factors that are the hindrances and risks can be dealt with in time and in a productive manner. Similarly, the managerial roles discussed using the theory of Henry Mintzberg provides managers with a clear vision on how they can ensure the success of their organisations at all times.

In conclusion, it is believed that as much as we have other successful cases of e-government initiatives in South Africa such as e-filing, EDRMS too, can be a successful case. Priority is to be given to the implementation of EDRMS in government Departments as it is evident that Departments can function in a better way. Other advantages are the savings in terms of time, paper usage and providing a speedy service at the right time. This study suggested that when the planning for the implementation of EDRMS takes place, a detailed support framework should be in place to ensure successful implementation.

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ANNEXURE A – LETTER OF INFORMATION

LETTER OF INFORMATION

Title of the Research Study: Management's support and implementation of Electronic Document and Records Management Systems in Government Departments

Principal Investigator/s/researcher: Ms Ivory Ndebele, Btech: Office Management and Technology

Co-Investigator/s/supervisor/s: Supervisor: Dr S. Parbanath, PHD and Co-Supervisor: Dr C.J Nyide, DBA

Dear Participant:

Brief Introduction and Purpose of the Study: Like many organisations, government departments are also developing processes that eliminate the amount of physical records that are generated. In this regard, successful implementation of IT projects, depends on management availing themselves as project champions. The competency of the management support is based on strength of commitment and the speed of response to issues during the life cycle of implementation. This study has made reference to the department of Cooperative Governance and Traditional Affairs (COGTA) in KwaZulu Natal (KZN). This study seeks to determine the role played by management in the implementation of Electronic Documents and Records Management systems (EDRMS) in a government department.

Outline of the Procedures: We will use both a quantitative and qualitative types of questionnaires. Quantitative questionnaire is meant for COGTA officials and the qualitative questionnaire is meant for the Service Provider as well as some of the COGTA officials involved in the implementation process. Participants for the qualitative data are expected to express their views and experience during the EDRMS implementation at COGTA.

Risks or Discomforts to the Participant: There are minimal risks to the participants.

Benefits: Improved implementation processes in the KZN COGTA as well as other government departments and employee understanding of the EDRMS

significance in the department.

Reason/s why the Participant May Be Withdrawn from the Study: If they become ill during the data collection period or if they choose not to participate but, there will be no adverse consequences for the participant should they choose to withdraw at any time without providing a reason.

Remuneration: No remuneration will be received.

Costs of the Study: All costs of the study will be borne by the researcher.

Confidentiality: Participants will be kept anonymous and their responses will be kept confidential. After the completion of the study, all materials obtained will be kept at DUT in a secure location and will be securely disposed of after 5 years.

Research-related Injury: No injury is likely to happen to this study.

Persons to Contact in the Event of Any Problems or Queries:

Please contact the researcher (073 839 3063.), my supervisor (033 845 8843.) or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the DVC: Research, Innovation and Engagement Prof S Moyo on 031 373 2577 or moyos@dut.ac.za.

Potential participants must be assured that participation is voluntary and the approximate number of participants to be included should be disclosed. A copy of the information letter should be issued to participants. The information letter and consent form must be translated and provided in the primary spoken language of the research population e.g. isiZulu.

ANNEXURE B – CONSENT

CONSENT

Statement of Agreement to Participate in the Research Study:

☐I hereby confirm that I have been informed by the researcher, Ivory Ndebele about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: _____,

☐I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.

☐I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.

☐In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.

☐I may, at any stage, without prejudice, withdraw my consent and participation in the study.

☐I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

☐I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____	_____	_____	_____
Full Name of Participant	**Date**	**Time**	**Signature / Right Thumbprint**

I, Ivory Ndebele herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Ivory Ndebele	_____	_____
Full Name of Researcher	**Date**	**Signature**
_____	_____	_____
Full Name of Witness (If applicable)	**Date**	**Signature**
_____	_____	_____
Full Name of Legal Guardian (If applicable)	**Date**	**Signature**

Please note the following:

Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate language (grade 10 level
- use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counselling (Department of Health, 2004)

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. a wrong date or spelling mistake, a new document has to be completed. The incomplete original document has to be kept in the participant's file and not thrown away, and copies thereof must be issued to the participant.

References:

Department of Health: 2004. *Ethics in Health Research: Principles, Structures and Processes*
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ANNEXURE C – QUESTIONNAIRE FOR COGTA OFFICIALS

Title: Management's support and implementation of Electronic Document and Records Management Systems in Government Departments.

Background

E-government implementation initiatives achieve different levels in implementation of Electronic Document and Records Management Systems (EDRMS). Only a small percentage of the e-government systems in developing countries are successful in this regard, while the rest are either total or partial failures. Government departments are expected to be in line with the e-government strategy, in order to implement the Integrated Document and Records Management System.

The study will use the department of Cooperative Governance and Traditional Affairs (COGTA) in KwaZulu Natal (KZN) as a case study. The researcher is therefore interested in investigating the following:

- The impact of EDRMS at KZN COGTA.
- Factors affecting the implementation of EDRMS at KZN COGTA.
- The role played by management in implementing EDRMS at KZN COGTA.

Section A: Biographical Information

Indicate your choice with an "x"

Choose one of the following options:

1. **Gender:**
   Male ☐ Female ☐

2. **Age:**
   18-24 ☐ 25-34 ☐ 35-54 ☐ 55-60 ☐ over 60 ☐

3. **Please indicate your position**

Admin Staff	
Registry Clerk	
Chief Registry Clerk	
ICT Officer	
Assistant Director	
Deputy Director	
Director and Above	
Other: Specify	

4. **Please indicate your highest qualification**

Below Matric	
Matric Certificate	
Diploma	
Degree	
Postgraduate	

Section B:

The impact of Electronic Document and Records Management System (EDRMS).

Please make your choice by putting an “x” in the appropriate box.

	The impact of Electronic Document and Records Management System	**Strongly Agree**	**Agree**	**Not Sure**	**Disagree**	**Strongly Disagree**
1.	EDRMS is far better than managing and maintaining physical / paper records.					
2.	Ever since the Enterprise Content Management (ECM) system was introduced, it has been used extensively by staff					
3.	End-Users find it easy to work with the ECM system.					
4.	ECM has brought a positive change in the way the staff does filing.					
5.	The system has high security measures to cater for filing of confidential documents					
6.	The ECM is very versatile because it performs numerous tasks such as routing of documents, detection of files due for destruction etc.					
7.	The retrieval of documents is now much quicker.					
8.	ECM provides adequate storage space for the staff to perform their respective duties satisfactorily					
9.	The ECM system has significantly improved and shortened the approval processes.					

Section C

Factors affecting the implementation of Electronic Document and Records Management System.

Please make your choice by putting an "x" in the appropriate box.

	Factors affecting the implementation of Electronic Document and Records Management System.	**Strongly Agree**	**Agree**	**Not Sure**	**Disagree**	**Strongly Disagree**
10.	Management has been providing continuous support throughout the implementation of EDRMS.					
11.	The department has adequate ICT infrastructure to support successful implementation of EDRMS.					
12.	The system is designed as per the departmental EDRMS policy and other legislation requirements e.g. Records Act.					
13.	The implementing team (management, training staff, ICT etc.) is working together to ensure successful implementation of EDRMS.					
14.	Collaboration between management, the service provider and employees has made EDRMS implementation a success.					
15.	End-Users have received adequate and relevant training on ECM.					

Section D

The role played by management on the implementation of Electronic Document and Records Management System

Please make your choice by putting an x in the appropriate box

	The role played by the management on the implementation of Electronic Document and Records Management System.	**Strongly Agree**	**Agree**	**Not Sure**	**Disagree**	**Strongly Disagree**
16.	Management has informed staff about the significance, vision and mission of the EDRMS in my department.					
17.	Management always motivates the staff to use the ECM system.					
18.	Resources (adequate computer hardware, supervision, etc.) to cater for the needs of the EDRMS are well provided.					
19.	Users always get prompt and relevant support when they encounter problems with ECM.					
20.	Management always champions and highlights the benefits of implementation of EDRMS.					
21.	Management has necessary skills and competencies that facilitate the successful implementation of EDRMS.					

ANNEXURE D – QUALITATIVE QUESTIONS FOR THE SERVICE PROVIDER AND COGTA IMPLEMENTING TEAM

Title: Management's support and implementation of Electronic Document and Records Management Systems in Government Departments.

Background

E-government implementation initiatives achieve different levels in implementation of Electronic Document and Records Management Systems (EDRMS). Only a small percentage of the e-government systems in developing countries are successful in this regard, while the rest are either total or partial failures. Government departments are expected to be in line with the e-government strategy, in order to implement the Integrated Document and Records Management System.

The study will use the department of Cooperative Governance and Traditional Affairs (COGTA) in KwaZulu Natal (KZN) as a case study. The researcher is therefore interested in investigating the following:

- The impact of EDRMS at KZN COGTA.
- Factors affecting the implementation of EDRMS at KZN COGTA.
- The role played by management in implementing EDRMS at KZN COGTA.

In light of the above mentioned, you are kindly requested to participate in this case study. Please do not write your name as participants are meant to be anonymous. Thank you for your time and support.

Section A: Biographical Information

Indicate your choice with an X

Choose one of the following options:

1. **Gender:**

Male ☐ Female ☐

2. **Age:**

18-24 ☐ 25-34 ☐ 35-54 ☐ 55-60 ☐ over 60 ☐

3. **Please indicate your category**

COGTA Official	
Service Provider	
Other: Specify	

4. **Please indicate your highest qualification**

Below Matric	
Matric Certificate	
Diploma	
Degree	
Postgraduate	

Section B

5. Interview Questions

5.1 In your own opinion what impact would you say EDRMS has in the department of COGTA?

_____

_____

_____

_____

_____

_____

_____

5.2 How many modules were supposed to be implemented and how many have been implemented so far?

_____

_____

_____

_____

_____

5.3 Since the implementation of the EDRMS, what challenges have been experienced by the department so far?

_____

_____

_____

_____

_____

_____

_____

5.4 How do you think those challenges could have been overcome?

_____

_____

_____

_____

_____

_____

_____

5.5 Have you received the support you needed to implement EDRMS? If yes, what support and from whom did you receive it? If no, what support and from whom were you expecting it?

_____

_____

_____

_____

_____

_____

_____

5.6 Please provide any general comment or suggestion on the implementation of EDRMS in the department of KZN COGTA?

_____

_____

_____

_____

_____

_____

_____

_____

ANNEXURE E – ETHICAL APPROVAL

Faculty Research Office
Durban University of Technology
June 11, 2020

Student: Ivory Velephi Ndebele
Student Number: **20012072**
Degree: PhD IT
Email: ivory.ndebele@kzncogta.gov.za

Dear Ms I Ndebele:

ETHICAL APPROVAL: LEVEL 2

Your email correspondence in respect of the above refers.

I am pleased to inform you that the Faculty Ethics Research Committee (FREC), after following its ethical review procedure, has granted preliminary permission for you to conduct your research "**Management's support and implementation of Electronic Document and Records Management Systems in Government Departments**"

You are required to present the letter at your research site for permission to gather data at your research site. Please also note that your questionnaires and interviews must be accompanied by the letter of information and the letter of consent for each participant, as per your research proposal.

A summary of your key research findings may be submitted to the FREC on completion of your studies.

Kindest regards

Yours sincerely.

Prof R C Millham
FREC Chair

ANNEXURE F – TURNITIN

Dissertation_Turnitin.docx

ORIGINALITY REPORT

%8	%7	%2	%3
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

hdl.handle.net	Internet Source
mafiadoc.com	Internet Source
www.gowerpublishing.com	Internet Source
eprints.covenantuniversity.edu.ng	

Internet Source	%1
www.national.archives.gov.za	%1
Internet Source	<%1
files.transtutors.com	<%1
Internet Source	<%1
etd.cput.ac.za	<%1
Internet Source	
core.ac.uk	<%1
Internet Source	<%1
etheses.whiterose.ac.uk	
Internet Source	

10	uir.unisa.ac.za Internet Source	<%1
11	www.abacademies.org Internet Source	<%1
12	methods.sagepub.com Internet Source	<%1
13	ir.cut.ac.za Internet Source	<%1
14	Submitted to Troy University Student Paper	<%1
15	Submitted to University of Johannsburg Student Paper	<%1
16	Submitted to Polytechnic of Namibia Student Paper	<%1
17	scholar.mzumbe.ac.tz Internet Source	<%1
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23	www.itweb.co.za Internet Source	<%1
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28	dspace.nwu.ac.za Internet Source	<%1
29	Submitted to University of Northumbria at Newcastle Student Paper	<%1

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31	Submitted to Middlesex University Student Paper	<%1
32	Submitted to University of Dundee Student Paper	<%1
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34	Submitted to KCA University Student Paper	<%1
35	Submitted to Bay Path College Student Paper	<%1
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45	silo.pub Internet Source	<%1
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52	slimandfitblog.info Internet Source	<%1
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BIBLIOGRAPHY

ANNEXURE G – EDITING CERTIFICATE

Triedstone Consulting RC: 2020/429060/07

Proofreading, copyediting, market research/survey, digital marketing

Editing Certificate

I, with this, certify that I have diligently proofread, edited and made some structural suggestions on the Master's thesis of Ms Ivory Ndebele. Her research, which is entitled: ***Management's support and implementation of electronic document and records management systems in government departments,*** is well-chronicled, and the researcher satisfactorily proffered answers to the study's research questions.

The editing team tracked the changes made to the document using the MS Word track changes tool so that the student would have the option of accepting or rejecting editorial suggestions.

I would be willing to provide further editorial assistance if required.

Thank you for the opportunity.

Sincerely,

Joseph Olusegun Adebayo, PhD.