

**A STUDY OF ELECTRONIC RECORDS MANAGEMENT IN THE NAMIBIAN
PUBLIC SERVICE IN THE CONTEXT OF
E-GOVERNMENT**

by

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ABSTRACT

In striving to achieve good governance, organisations including Governments worldwide have been turning to information technologies. The conduct of business online has led to an increase in the creation of electronic records, which has brought about challenges in the management of records. This study, titled “A Study of Electronic Records Management in the Namibian Public Service in the Context of E-Government”, was based on the assumption that the Public Service of Namibia has embarked on e-government, which should result in an increase in the creation of electronic records (e-records). The study aimed to answer the research question: “How can the electronic records environment be strengthened to support e-government in Namibia?”

An electronic records environment encompasses the existing records management awareness amongst all officers; records keeping procedures; legal and regulatory framework; safety, security and confidentiality of records; monitoring of records keeping practices; resources and facilities for records management; training and skills for records management; electronic information systems and ICT use; and the management of records emanating from these systems. The study investigated all these issues, and applying existing records management models, attempted to establish whether or not the Public Service of Namibia has the capacity to create, manage, share, and use electronic records to support e-government. This capacity is referred to as e-records readiness.

The study is a multi-case study of seven Ministries, two Local Authorities and two Regional Councils. The methodology used was a qualitative approach, employing interviews, document search and observation to collect data. A qualitative approach was the most suitable in the exploration of this new area of electronic records management, which has not seen much research, particularly in Namibia. The units of analysis comprised the institutions studied as well as the respondents, who included the action officers, records keeping staff, heads of records functions, IT staff and National Archives staff. The institutions as well as the respondents were selected using purposive and accidental sampling methods. The data was analysed manually using content analysis and presented in descriptive narrative with some illustrative tables and figures.

The study showed that e-government in the Public Service of Namibia, is in the initial phase of implementation and has led to an increase in the creation of electronic records. However, the status of records management in the Public Service of Namibia, which has a hybrid records system, that is, a paper and electronic records environment, is very poor. This is evident in the officers' lack of understanding of what records are and the importance of records management; inadequate legal and regulatory environment; failure to follow laid down procedures and standards; absence of a records management disaster plan including digital preservation strategy; and inadequate resources, which includes lack of staff and skills to manage records in general and in particular, electronic records.

The Public Service of Namibia's score of 55 out of 120 in an e-records readiness assessment carried out as part of the study, signifies high risk, which means that government's e-records are at risk of misuse and loss. The study came to the conclusion Namibia's e-government initiatives are not supported by a strong records management programme. This missing link needs to be rectified to ensure that Namibia benefits fully from its investment in e-government.

The study recommends an integrated records management programme for the Public Service of Namibia to improve the electronic records environment. Such a programme would promote records management awareness; determine resource requirements; review the legal and regulatory framework; review records management standards and procedures; develop and maintain records centres; manage archives; implement an electronic records management system; and ensure the sustainability of the programme through staff training and regular monitoring and evaluation. In view of the fact that the Public Service of Namibia might take the route of enterprise content management (ECM), and in recognition of the importance of interoperability of information systems for information sharing, further investigation is required into the electronic information systems running in the Public Service and possibilities for their integration with an electronic records management system, which the Office of the Prime Minister plans to roll out to the entire Public Service.

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Cathrine Tambudzai Nengomasha

DEDICATION

To my late mother Beulah Naume, who against all odds gave me a good education; and my late aunt Anne-Grace, who set a good example by showing that furthering one's education has no age limit.

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LIST OF ABBREVIATIONS AND ACRONYMS

AISI	-	Africa Information Society Initiative
ASPA	-	American Society for Public Administration
CABLE	-	Capacity Building for Regional and Local Authorities
CDs	-	Compact Discs
CEO	-	Chief Executive Officer
CESPAM	-	Centre of Specialisation in Public Administration and Management
CIA	-	Central Intelligence Agency
COTS	-	Commercial Off The Shelf
CRO	-	Chief Regional Officer
DBMS	-	Database Management System
DPSITM	-	Department of Public Service Information Technology Management
DSS	-	Decision Support System
ECM	-	Enterprise Content Management
EDMS	-	Electronic Document Management System
eGIF	-	Electronic Government Interoperability Framework
ERKS	-	Electronic Records Keeping System
ERMS	-	Electronic Records Management System
ESARBICA	-	East and Southern Africa Regional Branch of the International Council on Archives

ETSIP	-	Education Training Sector Improvement Programme
GIPF	-	Government Institutions Pension Fund
GIS	-	Geographic Information System
GRN	-	Government of the Republic of Namibia
GRNNet	-	Government of the Republic of Namibia Network
GRS	-	General Records Schedule
HRIMS	-	Human Resources Information Management System
ICA	-	International Council on Archives
ICGI	-	Interagency Committee on Government Information
ICS	-	Integrated Communications System
ICT	-	Information and Communication Technology
IFMS	-	Integrated Financial Management System
InterPARES	-	International Research on Permanent Authentic Records in Electronic Systems
IRMT	-	International Records Management Trust
ISO	-	International Organisation for Standardisation
IT	-	Information Technology
JISC	-	Joint Information Systems Committee
MBESC	-	Ministry of Basic Education Sport and Culture

MOL	-	Ministry of Labour
MWACW	-	Ministry of Women Affairs and Child Welfare
Moreq	-	Model Requirements for the Management of Electronic Records
MRLGH	-	Ministry of Regional Local Government and Housing
MRLGHRD	-	Ministry of Regional, Local Government and Housing and Rural Development
MTC	-	Mobil Telecommunications Corporation
NAN	-	National Archives of Namibia
NARA	-	National Archives and Records Administration
NASCO	-	Namibia Standard Classification of Occupation
NCC	-	Namibia Communications Commission
NRC	-	Namibia Resource Consultants
NEPRU	-	Namibia Economic Policy Research Unit
NLIS	-	Namibia Library and Information Service
NPC	-	National Planning Commission
OLTPS	-	Online Transaction Processing System
O/M/As	-	Offices, Ministries and Agencies
OMB	-	Office of Management Budget
OPM	-	Office of the Prime Minister
PCs	-	Personal Computers
PRO	-	Public Record Office

PS	-	Permanent Secretary
RMA	-	Records Management Applications
SQL	-	Structured Query Language
UBC	-	University of British Columbia
UK	-	United Kingdom
UNDPEPA	-	United Nations Division for Public Economics and Public Administration
USA	-	United States of America
WAN	-	Wide Area Network
XML	-	eXtensible Markup Language
XLS/XSL	-	XML Stylesheet Language

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The concept of good governance has recently been associated with many organisations. In public administration good governance is regarded as being part of the “New Paradigm in Public Administration” (Okot-Uma, 2001, p. 2), which emphasises the responsibility of government towards its citizens in terms of quality service delivery, accountability and transparency. As they strive to achieve good governance, governments and organisations have turned to new and emerging information technologies and are seeking to harness the potential offered by these technologies to transform government, democracy, government-related transactions as well as all the social and economic aspects of society (Okot-Uma, 2001).

There has been an increase in the number of organisations, as well as governments, doing business online (Wamukoya & Mutula, 2005; Mnjama & Wamukoya, 2007). As a consequence of this, there has been an increase in the number of electronic records being created. This has compounded the problem of managing records. In addition to correspondence on paper, we now have e-mail messages. Records keeping in organisations has changed as a result. Where there used to consist of common registries managing paper-based files, now organisations also have shared folders on organisations’ intranets in a number of computerised information systems, each managing a part of the organisations’ information needs (National Archives of Australia, n.d.).

Information systems conducting business in most organisations are not able to operate as record keeping systems, as they have been set up without any consideration of current record keeping issues (International Records Management Trust (IRMT), 1999a). The result is that these systems are not able to manage, preserve and make accessible records, which provide evidence of the organisations’ business operations. The management of electronic records poses special challenges. Meeting these challenges is critical, because well managed records are trustworthy and provide sources of information and evidence, which support some of the principles of good governance, such as transparency and accountability. To fulfil this accountability function,

records must be managed in such a way that they stay complete, authentic, reliable, retrievable, accessible and usable (Horsman, 2001). As governments embark on e-government, they need to pay special attention to the management of electronic records. The IRMT (2004, p. 1) cautions that, “Funds and effort will likely be wasted unless e-government initiatives are supported by a solid records and information management programme....”

1.2 Background to the study

Records managers and archivists have to overcome a number of problems in their efforts to bring about effective and efficient records management systems in the Public Service. Such problems include lack of appreciation for the importance of records management by senior officers, poorly staffed records offices/registries and insufficient financial resources (Braga, 2002; Keakopa, 2003; Makhura, 2001; Millar, 2004; Mutiti, 2001; Namibia Resource Consultants (NRC), 2002; Ngulube & Tafor, 2006; Sejane, 2005; Wamukoya & Mutula, 2005). Mnjama and Wamukoya (2007, p. 227) state that “the emergence and growing importance of e-records as a means of communicating and preserving corporate information poses new challenges hitherto unknown to administrators and records managers and unless the challenges are addressed nations stand to lose valuable information”.

Records managers and archivists are finding themselves having to question the foundation, on which they have based their work for decades. The record life-cycle model as articulated by Schellenberg (1975) has been the most common model for archivists and records managers since the 1960s. Though criticisms of the life-cycle model have surfaced in the past, the emergence of electronic records has initiated a heated debate (*Life-cycle and Continuum Debate*, 1999) over what should be the most appropriate model or framework for managing electronic records. Critics of the model have come up with an alternative model, the records continuum model. The basic difference between the two models is that while the life-cycle model proposes a strict separation of records management responsibilities amongst the records creators, records manager and archivist, the continuum model is based upon the integration of the responsibilities and accountabilities associated with the management of

records (*Electronic Records Management*, n. d., p. 40). The study attempted to establish the suitability of these models in the management of electronic records.

The impact of the information revolution is evidenced by developments in various sectors such as e-government, e-learning, e-banking and e-commerce (Stork & Aochamub, 2003). In an address in 2003 the then Prime Minister of the Republic of Namibia, Dr Theo-Ben Gurirab summarised the direction that Namibia was going to take regarding some of these sectors.

It is by advancing further science and technology-led development that we see the need for Namibia striving with confidence towards a knowledge-based society. The vision is not just of students sitting behind computers. It is rather of an economy having innovative capabilities, productive excellence and networking and servicing capacity. (Gurirab, 2003, p. 3)

Governments are increasingly recognising that information is an important component of good governance. As governments strive to improve service delivery, utilise resources efficiently, respond to citizens' needs and be open about decision-making processes and procedures, they have realised the need to manage and utilise information effectively. This requires the democratisation of access to information and communication, but as Okot-Uma (2001) observes, a number of issues impede governments' abilities to effectively provide access to information. These include problems of information capturing, maintenance and access. Information and communication technologies (ICTs) provide governments with the means to achieve this. *Namibia's National Development Plan II* (National Planning Commission (NPC), n.d, p. 662) and *Namibia Vision 2030* (Office of the President, 2004) spell out the role of ICT in promoting good governance. Namibia has an e-government policy whose main objective is to provide guidelines for an over-arching framework that will allow for the use of ICT applications to promote good governance (OPM, 2005a).

The preliminary situation regarding Namibia's state of e-readiness is reported by the Department of Public Service Information Technology Management (DPSITM) (2004) in a study that was conducted "throughout all Government Offices, Ministries and Agencies" (p. 7). The study found that "the first phase is already underway, whereby a number of Offices, Ministries and

Agencies have created electronic presences on the Internet through the publishing of information on the GRNNet website” (DPSITM, 2004, p. 7). It also discovered the existence of a number of electronic systems as well as new development projects. The majority of the systems are “specialised back office systems meant for small groups of specialised staff” (DPSITM, 2004, p. 7). Several e-government projects have been initiated, whose aim is to “consolidate the democratic governance process” (Stork & Aochamub, 2003, p. 42). These include: Ministry of Regional and Local Government and Housing (MRLGH) and Capacity Building for Local and Regional Authorities (CABLE) initiative, which is aimed at strengthening decentralisation and good governance through embedding ICT at local and regional government levels. It is imperative that these projects from the onset incorporate record keeping requirements to ensure the creation, capturing and preservation of evidence of government’s transactions and decision-making.

Governments, as with all organisations, need to keep records of decisions and transactions to meet the demands of accountability and to meet their own information requirements. As governments increasingly conduct their day-to-day work through ICT applications, records resulting from such transactions need to be captured, managed and preserved in an organised system, which maintains their integrity and authenticity. Although these electronic records, generated and stored in electronic form, can be shared more easily and can be accessed remotely, they are more fragile than paper and can easily be changed, get lost or become inaccessible through technology change.

Records management challenges posed by electronic records particularly to the public sector in East and Southern Africa Branch of the International Council on Archives (ESARBICA) region have been highlighted by several writers (Keakopa, 2003; Makhura, 2001; Mnjama & Wamukoya, 2007; Mutiti, 2001; Ngulube & Tafor, 2006; Sejane, 2005; Wamukoya & Mutula, 2005). These challenges facing ESARBICA include:

- absence of organisational plans for managing e-records;
- low awareness of the role of records management in support of organisational efficiency and accountability;
- lack of stewardship and coordination in handling paper as well as electronic records;

- absence of legislation, policies and procedures to guide the management of both paper and electronic records;
- absence of core competencies in records and archives management;
- absence of budgets dedicated to records management;
- poor security and confidentiality controls
- lack of records retention and disposal policies; and
- absence of migration strategies for e-records.

(Wamukoya & Mutula, 2005, p. 75)

The above support Millar (2004) who states that it is widely agreed that the authenticity of electronic records worldwide is at risk but more so in developing countries for the following reasons:

- The low status accorded to records and archives management.
- The absence or weak legislative and policy frameworks for electronic records management.
- The absence of and difficulty in applying technical and operational standards for the creation, management, and preservation of electronic records.
- The lack of adequate training and education in information technologies and electronic records management. (Millar, 2004, p. 4)

Riley (2003) points to a number of complications in managing e-records, such as management of metadata, authorship and approval of documents in electronic form. He adds that policies needed for comprehensive and long-term management of information creation are largely non-existent and calls for concepts and procedures that would delimit and control the creation of information at all levels of government (Riley, p. 8). In many instances electronic records are created in a complex environment of fragmented and incompatible information systems and standards, for example computer systems and metadata standards (Lipchack & McDonald, 2003).

The study attempted to establish whether or not the issues highlighted above are also applicable to Namibia's Public Service records management situation, which has been described as weak. This was the conclusion of participants at a workshop (*Evidence Based Governance*, 2003) who

went on to state that although the Namibian Government had initiated a programme to promote e-government, the full benefits of e-government would only be realised following improvements in the management of recorded information throughout government. This observation is supported by several researchers (Barata, Bennett, Cain & Routledge, 2001; Nengomasha & Beukes-Amiss, 2002; NRC, 2002). A study on the management of financial records in Namibia by Barata et al., (2001) revealed weaknesses in the systems' ability to manage financial records. "In a large number of offices there are no tracking systems in place to record the movement of records outside the creating or processing section" (Barata et al., p. 6). Also emerging out of the study was the fact that records, which exist in mixed media environments, require strong controls to protect them against unauthorised access, alteration, copying and destruction. They concluded that accomplishing this in the Public Service is very difficult, as "the records management function as a whole has no presence throughout government" (Barata et al., p. 8). They support the notion stated earlier that in order to successfully manage electronic records and protect their authenticity, there is a need to establish and oversee proper records keeping systems.

A study on records management in the Public Service of Namibia by the NRC (2002, p.23) observed the following:

Government registries are not functioning. They are manned by Grade 10 (an equivalent of three years of secondary school education) school leavers, too low for the competencies or skills required to effectively manage records. The resultant situation is that the action officers having very little regard for and confidence in those registry clerks, set up "their own ring binder system of storing paper documents in their offices or store information in their PCs, or assign their filing to private secretaries who have no training in this respect.

Nengomasha and Beukes-Amiss (2002) confirmed this state of affairs in a records survey in Namibia's Ministry of Health and Social Services. The survey observed a lack of a records management system, an absence of classification schemes, retention schedules and systematic disposal of records, resulting in heavy congestion of offices and poor retrieval of information. This is the situation described by Cain, Piers, and Thurston (as cited in Ngulube & Tafor, 2006, p. 69) that in many countries in sub-Saharan Africa existing paper record systems – the foundation for automation - are in a very poor state.

Inadequate legal and regulatory environments have been cited as challenges facing developing countries as they move towards making the management of records, particularly in electronic format, part of the broader concept of knowledge management. This observation is supported by Barata et al., (2002), whose study suggests that there is inadequate legal and regulatory framework in Namibia. At the same time, Stork and Aochamub (2003, p. 38) call for the establishment of an enabling legal and regulatory environment, arguing that e-government might encounter legal or policy barriers. They urge the legislature to ensure that laws are updated to recognise electronic documents and transactions.

The situation described above raises the issue of “e-records readiness”. This environment can hardly be described as being “e-records ready”. As pointed out earlier, active records management programmes are required to successfully ensure the records’ long-term preservation as well as their authenticity. In recognition of this fact, 54 archivists and archival educators from 38 Commonwealth countries who met in Johannesburg in September 2002, for *The Global Forum on Evidence-Based Governance in the Electronic Age*, to strategise on how to meet the challenges of the changing information environment, resolved that government projects and/or initiatives should include records and information management requirements as a key component of the planning and implementation process to support accountability, transparency, good governance and poverty alleviation (*The Global Forum*, 2002).

The Global Forum mentioned above was followed by a three-week electronic discussion (IRMT, 2003a; 2003b) focussing on e-records readiness. The discussion had 313 registrants from over 70 countries, and it examined issues relating to the challenges of creating, managing, sharing, and using electronic records to support good governance. Five key objectives that records and archives professionals must address in order to ensure the management of electronic records and the protection of essential evidence emerged from the discussion. These objectives are:

- To encourage records-oriented approaches, not just IT-oriented strategies, to records and information management issues, including the implementation of standards, practices, and guidelines for the management of IT products and electronic records.

- To strengthen legislation, organisational frameworks and policies to create, manage, protect, and preserve electronic records and products of information technologies.
- To accommodate the complex and changing technical realities of electronic records to ensure their management and preservation.
- To develop and maintain training and education initiatives (at both professional and general levels) to ensure success in the management of electronic records.
- To develop strategic initiatives, partnerships, and collaborative approaches to promote “e-records readiness” and raise awareness of and support for records and information management”. (Millar, 2004, p. 7)

1.3 Statement of the problem

The unfolding information and communication technology revolution on the one hand, and the emergence of new concepts of e-government, e-commerce and e-democracy on the other, have created a new awareness of the role of proper electronic records management. The problems associated with electronic records have been well-enumerated in this chapter. However, one challenge central to this study is the shift of control over the creation and management of information from centralised to the individual, through the use of certain ICTs, as well as the impact this has on the creation and preservation of trustworthy records for transparency and accountability.

None of the studies cited above, which have been conducted on Namibia, looked in detail at the management of electronic records; neither did they look at the role of the individuals in records creation and management. However, studies (Makhura, 2001; 2005; Ngulube, 2003; Sejane, 2005) conducted on records management in the Public Service organisations of some countries in Africa have been more at organisation level, i.e. they looked at the overall picture at the South Africa National Parks (Makhura, 2005), the Public Service of South Africa (Ngulube, 2003) and Public Service of Lesotho (Sejane, 2005). They were not looking at individuals or the action officers’ day-to-day operations and their contributions to the creation, management and preservation of records, which is pertinent to this study. Sejane (p. 128) in her thesis: *An Investigation into the Management of Electronic Records in the Public Service of Lesotho*

identified the “creation of authentic records” as an area for future research, and this study contributes to knowledge in this area.

E-records readiness is one of the areas critical for an effective records management strategy (Mnjama & Wamukoya, 2007; Wamukoya & Mutula, 2005; IRMT, 2004). Ideally, governments should conduct high-level assessments of key areas of e-records readiness in relation to other aspects of e-government, and determine whether or not the records and information management infrastructure is capable of supporting e-government initiatives (IRMT, 2004). An e-readiness assessment done for the Public Service of Namibia did not include e-records readiness (DPSITM, 2004).

This study attempted to address the gap left by these studies by carrying out an in-depth study of the electronic records management situation in the Public Service of Namibia. Establishing the role of individuals in the management of records in the electronic environment is the major contribution of this study to understanding e-records and addressing some of the challenges facing organisations in the management of electronic records. The studies mentioned above applied the records life-cycle model. This study tested the applicability of the life-cycle and continuum models, thereby contributing to the body of knowledge by addressing the question: “Which model provides a viable strategy for the management of electronic records in the Public Service of Namibia?” The study also attempted to establish the applicability of the *E-Records Readiness Tool* (IRMT, 2004). Mnjama and Wamukoya (2007) caution on the applicability to developing countries of e-records readiness tools developed for developed countries.

1.4 Objectives of the study

The study focussed on the concept of the management of electronic records within the context of e-government, with a focus on e-records readiness and preservation of records authenticity. E-records readiness was investigated in order to establish the status of records management in the Namibian Public Service and to assess whether or not the environment is conducive for the creation of electronic records. The investigation into the preservation of

records authenticity is pertinent to the study to ensure that records provide evidence, hence supporting transparency and accountability.

Specific objectives of the study were to:

1. Investigate the status of records management in the Public Service of Namibia.
2. Investigate e-records readiness in the Namibian Public Service.
3. Investigate appropriate records management models and standards for management of records in the Namibian Public Service.
4. Investigate the extent to which the Public Service of Namibia has integrated essential records management requirements in electronic information management systems.
5. Examine legislation and policies, which guide records management in Namibia and the extent to which they address electronic records management.
6. Assess the skills of records keeping personnel to manage electronic records.
7. Make recommendations on how the electronic records environment can be strengthened to support accountability and transparency, which are essential for good governance.

1.5 Research questions

The main research question, which this study aimed to answer was: “How can the electronic records environment in Namibia’s Public Service be strengthened to support e-government?”

This was answered through responses to the sub-questions in Table 1.1 below.

Table 1.1. Research Questions

Issues Investigated	Research Question
Current situation regarding records management in the Public Service	1. What is the status of records management in the Public Service of Namibia? 2. Is Namibia e-records ready to support e-Government?
Models and standards	3. What is the appropriate records management model, and standards for the management of records in the Namibian Public Service?
Electronic information systems and/or electronic records keeping systems: capturing and management of e-records	4. To what extent have records keeping requirements been incorporated in electronic information management systems in the Public Service of Namibia?
Enabling regulatory environment for the management of e-records in the Public Service of Namibia	5. What are the legislation and policies that guide the management and preservation of records in the Public Service of Namibia and what gaps exist, which need to be closed for these to adequately address electronic records management?
Skills for the management of e-records	6. Does the Public Service of Namibia have the necessary skills to manage e-records?
Strengthening e-records management in the Public Service of Namibia to support accountability and transparency for good governance	7. How can electronic records management in the Public Service of Namibia be strengthened to support accountability and transparency, which are essential for good governance?

1.6 Justification and significance of the study

The study was a response to the call for records managers and archivists to do something about the authenticity of electronic records, which are at risk (*Global Forum*, 2002; IRMT, 2003a). It is significant in a number of ways, as it:

1. Highlighted the status of records management in the Namibian Public Service, specifically in the area of electronic records management, which has not been adequately addressed in previous studies.
2. Established the e-records readiness of Namibia based on systematic investigation using established and accepted measurement criteria.
3. Provided guidelines on records management requirements for making Namibian Public Service e-records ready to support the demands of e-government.
4. Put to test the applicability of the *E-Records Readiness Tool* to Namibia's situation.
5. Contributed to the body of knowledge on the subject of electronic-records management.

The research findings were disseminated through publications in peer reviewed journals, public lectures and short reports to the individual institutions studied in compliance with the condition for permission to carry out the study.

1.7 Assumptions

The study was based on the assumption that the Government of Namibia has embarked on e-government, which should result in an increase of electronic records and a corresponding increase in Government's reliance on electronic information. For this reason, it was important to investigate the status of electronic records management in the Public Service, and based on the findings, make recommendations on how to improve or strengthen their management.

1.8 Definition of key terms

This section clarifies the key terms of this study. For the reader to clearly understand the scope of this study it was particularly important to define the terms Public Service, Local Authority, and Regional Council and other terms as they were applied in this study.

Archives – refers to records (see definition below), which are preserved because they have values other than the purpose for which they were created. These values could be historical values for research. According to the *Namibia Archives Act 12 of 1992*, records (with minor exceptions) become archives and become accessible to members of the public when they are 30 years old.

Electronic-government (e-government) – refers to the way in which governments use information and communication technologies to enhance transparency and accountability, and provide opportunities for people to participate in the democratic process by providing citizens and businesses with more convenient access to government information and services (Fang, as cited in Rose, 2004; Lipchack & McDonald, 2003; OECD, as cited in Stork & Aochamub, 2003).

Electronic record (e-record) refers to recorded information that is stored in a form which only a computer can read or process and that satisfies the definition of “record” as explained below.

Electronic-records management (e-records management) – based on the definition of records management below; the working definition of electronic records management for this study is planning the life-cycle of electronic records and reflecting it in the design of systems that support the work of Government.

Electronic-records readiness (e-records readiness) – is the capacity to create, manage, share and use electronic records to support good governance (Lipchack & McDonald, 2003).

Head office used interchangeably with headquarters refers to the administrative centre of the Ministry. In the case of the Public Service of Namibia, the Directorate of General Services assists the Office of the Permanent Secretary in running and providing administrative services to the whole Ministry.

Local Authority – an administrative unit of Local Government, “Local Government” being the government of a local area.

Metadata is information about how records were created, stored and used. The structure and context of an electronic record must be captured and preserved with its content (Erlandsson, 1996; IRMT, 1999a).

Public Service in this study refers to Government, that is, central (including Ministries and their departments), regional and local institutions.

Record is defined as recorded information regardless of physical form or medium created or received by an organisation in pursuance of its legal obligations. The record should comprise content, context and structure sufficient enough to provide evidence of the activity (IRMT, 1999a; Erlandsson, 1996).

Records authenticity – An authentic record is one that can be proved that it is what it says it is. It is reliable and has not been altered or changed over time. Authenticity guarantees that the record is not altered or changed from the time it is created, through maintenance and use up to the time that it is permanently preserved (Duranti & Thibodeau, 2001; International Organisation for Standardisation (ISO), 2001; Sannet & Park, 1999).

Records continuum – refers to a model of managing records, which unlike the record life-cycle model, does not place records into distinct phases with the records managers and archivists assigned responsibilities for certain stages. It is a model that views records management as a continuous process, right from the point of creation, even before creation, when records keeping systems are designed, up to their preservation and use as archives, in which records managers and archivists are actively involved in all points in the continuum (*Electronic Records Management*, n.d.; *Life-cycle and Continuum Debate*, 1999).

Record keeping system is to be distinguished from information systems. Record keeping systems keep and support retrieval of records of an organisation originating from that organisation's conduct of business. Information systems "store information in discrete chunks that can be recombined and reused without reference to their documentary context" (Bearman, as cited in Erlandsson, 1996; Kansas State Historical Society, 2005).

Records life-cycle - a model for managing records, which portrays records as going through various stages or periods from creation stage, active stage, semi-active stage to non-current stage, when the record is no longer required for current business and is either destroyed or permanently preserved as archives (*Electronic Records Management*, n.d.; IRMT, 1999b; *Life-cycle vs. Continuum Debate*, 1999).

Records management – based on the theoretical foundation of this study, the records life-cycle, the following definition of records management from IRMT (1999c) will be the study's working definition. The definition is:

that area of general administration concerned with achieving economy and efficiency in the creation, maintenance, use and disposal of records of an organisation throughout their entire life-cycle and in making the information they contain available in support of the business of that organisation. (IRMT, 1999c, p. 14)

Regional Council – an administrative unit of Regional Government, "Regional Government" being government of a region.

1.9 Research design and methodology

This section gives a brief overview of the research design and methodology of this study. A detailed discussion of the study's research design and methodology is given in Chapter 4.

1.9.1 Research design

This study is a multi-case study (Yin, 2003), also referred to as multi-site study (Audet & d'Amboise, 2001; Creswell, 1998), which is qualitative in nature. David and Sutton (2004, p. 437) refer to instrumental case study when a case is considered to be of secondary interest,

playing a supportive role of facilitating the understanding of the issue under investigation. This study comprised of a number of such instrumental cases.

1.9.2 Data collection techniques

Data collection techniques were used, which comprised interviews with individuals, direct observation and document search. The use of multi-methods or triangulation is encouraged in empirical studies. Several writers (Creswell, 1994; Denzin, 1978; Patton, 2002; Yin, 2003) support the use of triangulation. By using a variety of sources and resources, the evaluator and observer can build on the strengths of each type of data collection, while minimising the weaknesses of a single approach (Patton, 2002).

1.9.3 Data collection instruments

Interview guides, integrated with observation checklists were developed for data collection. Six separate interview guides were developed for records keeping staff, action officers, and heads of records function, IT personnel and the National Archives. A separate checklist, however, was developed for analysing electronic records management systems (if any) in the cases studied in order to establish the functional requirements and metadata they capture as well as to come up with recommendations for adequate functional requirements and metadata.

1.9.4 Reliability and validity

Reliability and validity concepts have been associated mostly with quantitative research, but they are now considered applicable to qualitative research as well (Golafshani, 2003). Reliability refers to consistency of measures and how replicable they are, that is the degree to, which an instrument measures the same way each time it is used under the same conditions with the same subjects (Hoyle, Harris & Judd, 2002; *Reliability and Validity*, n.d.). Validity refers to the strength of the researcher's conclusions, inferences or propositions (Cook & Campbell, as cited in *Reliability and Validity*, p. 1). A measure is valid to the extent that it measures what it purports to measure (Hoyle et al., 2002).

The study ensured reliability and validity through triangulation, as well as piloting, which led to revision and refinement of research instruments to make sure that respondents understood the questions as intended by the researcher.

1.9.5 Population and sampling techniques

The population of this study was Namibia's Public Service. A study population is "that aggregation of elements, from which a sample is actually selected" (Babbie, 2004, p. 190). The units of analysis were the Ministries (also the elements of study) and the individuals interviewed, who are the action officers, IT staff, records keeping staff, heads of records function, and National Archives staff. An element of study is "that unit, of which a population is comprised and which is selected in a sample, distinguished from units of analysis which are used in data analysis" Babbie, p. 189). Babbie points out that, elements of study can also be units of analysis. This was the case in this study.

The selection of participants within the Ministries was based on purposive and accidental sampling. Purposive sampling relies on good judgment to handpick participants who will satisfy the needs of the research (Hoyle et al., 2002, p. 187). Accidental sampling refers to "taking the cases at hand" (Hoyle et al., p. 186), in other words making do with those cases that are available. The staff establishments of the Ministries provided the sampling frame. All 20 Ministries, which made up the Namibian Public Service, were to be a part of the study but in the end the sampling turned out to be accidental as the researcher settled for those Ministries that availed themselves.

1.9.6 Data analysis plan

The study applied content analysis, which "refers to the process of extracting desired information from a text by systematically and objectively identifying specified characteristics of the text" Smith (as cited in Hoyle et al., 2002, p. 397). The object of qualitative content analysis can be all sorts of recorded communication, which includes transcripts of interviews, from open-ended, focussed but exploratory interviews, observations, video-tapes, documents, etc. (Mayring, 2000; Thorne, 2000). In the case of this study, these were transcripts of interviews from open-ended questions, focus group discussions, observations and documents.

1.10 Demarcation of the study and limitations

This section presents the scope of the study as well as its limitations.

1.10.1 Demarcation of the study

The study focussed on the Public Service covering seven of the 20 Ministries and included two regional governments and two local authorities as the National Archives' mandate to provide a records management service to the Public Service extends to regional and local authorities. The reason for a multi-case study design was to establish similarities or peculiarities and standardisation in records creation, maintenance and access, in order to generalise the findings of the study to the entire Public Service.

1.10.2 Limitations of the study

This study has several limitations as stated below:

- Sampling contributes to reliability of a study. The sampling technique used to select the individuals in the Ministries and the limited number compared to the Public Service could raise questions regarding the generalisability of the findings. Patton (2002) states that generalisation of findings is possible with qualitative case studies, depending on how they have been selected and studied. The researcher attempted to achieve generalisability through a large sample of respondents in two Ministries and by comparing findings with the key informants from the rest of the Ministries. Extending the study to key informants in five other Ministries was meant to establish similarities and peculiarities amongst them in order to enable generalisability. However, it is possible that there could be issues peculiar to those Ministries not covered by the study. As Silverman (2000, p. 102) noted, with statistical sampling a form of probability sampling, a researcher feels confident about the representativeness of their sample, which in turn, allows them to make inferences about the whole population. Non-probability does not allow for representative sampling.
- Another limitation of this study is that it concentrated on Namibia's Public Service, leaving out the private sector where, as far as this researcher is aware, no studies on records management have been conducted. Future research could look into this area to establish how the public and private sectors can collaborate to strengthen records management as well as to enhance e-government in Namibia.

- This study did not go beyond recommendations to problems identified. Further research could look into implementation of the recommendations as well as establishing their effectiveness.

1.11 Division of Dissertation

This section of the chapter highlights how the dissertation is organised.

Chapter 1: Introduction - gives a background to the study, the problem under investigation and the setting of the problem, objectives and significance of the study, as well as the definition of key terms.

Chapter 2: Context of the study- describes the historical background to show the factors that shaped the current Public Service and records management services; the current records management environment, including the current Public Service records management programme; the ICT environment such as telecommunications connectivity, human resources and training, e-readiness of the public sector; legal and regulatory environment and the Ministries, which are the subjects (cases) of this study.

Chapter 3: Literature review - discusses literature relevant to the study, focussing on related studies and their findings. These are compared with the findings of the study in later chapters. Review of the literature assisted in establishing issues to consider when developing the interview guides and observation checklists.

Chapter 4: Research design and methodology - gives a description of the research population, research design and data collection techniques, data collections instruments, data analysis techniques, piloting of the data collection instruments, and an evaluation of the research methodology.

Chapter 5: Data analysis and presentation of research findings – the findings are presented highlighting the following areas: status of records management in Namibia’s Public Service, e-

records readiness of the Public Service of Namibia, integration of records keeping requirements, legislation and policies, skills and training.

Chapter 6: Interpretation of the results - discusses the results in relation to the sub-questions and the overall research question as well as makes comparisons with findings of related studies.

Chapter 7: Proposed model for managing records in the Public Service of Namibia – highlights one of the recommendations of the study, an answer to the main research question: “How can the electronic records environment in Namibia’s Public Service be strengthened to support e-government?”

Chapter 8: Summary, conclusions and recommendations - gives a summary of the major findings of the study, practical applications of the research findings as well as suggestions for future research.

References include a list of sources cited. The style of referencing is the American Psychology Association (APA), which is the style adopted by the University of Namibia.

Appendices include the case study protocol, interview guides and checklist for electronic records management systems (ERMS) requirements.

1.12 Ethical Issues

The researcher considered ethical issues. Consent was obtained from the Ministries concerned as well as the individual participants. The researcher also informed the Ministries well about the study, and operated within the parameters agreed with the Ministries. However, the researcher heeded the caution by Hoyle et al., (2002) that giving too much information about the study to the respondents may lead to bias in the responses. They also advised against coercing respondents into participating in the research.

1.13 Summary

The chapter gave the background to the study highlighting the emergence of electronic records and the challenges they pose to records and archives management professionals as shown in the current on-going debates and discussions. The statement of the problem acknowledges these challenges and recognises the shift of control over the creation and management of records from centralised to individual, through the use of ICTs, and the impact this has on the management of electronic records. The purpose, justification and limitations of the study have been explained. In addition to contributing to the body of knowledge, the study aimed to come up with recommendations on how to improve the electronic records environment of the Public Service of Namibia. The rest of the chapters are a build-up towards answering the research questions of the study listed in this chapter as well as arriving at those recommendations. The next chapter presents the context of the study.

CHAPTER TWO CONTEXT OF THE STUDY

2.1 Introduction

This chapter describes (a) the historical background to show the factors that shaped the current Public Service and records management services; (b) the records management environment including issues of the Public Service records management programme and its implementation and training; (c) the ICT environment such as telecommunications connectivity, human resources and training; (d) ICT in the Public Service such as e-government strategies, electronic systems, e-readiness of the public sector; (e) the legal and regulatory environment; and (f) national e-records readiness.

In determining the issues to include in this chapter, the researcher was guided by one of the research objectives, namely to “Investigate e-records readiness in the Namibian Public Service”. This was achieved by assessing Namibia’s situation using the IRMT’s (2004) *E-Records Readiness Tool*. According to this Tool, the national e-records readiness can be assessed under the following six components:

- Legal mandate for the government-wide management of public records and information;
- Legal framework for e-commerce activities;
- Freedom of Information and Protection of Privacy legislation;
- Government-wide ICT infrastructure and capacity;
- Government-wide e-records management standards and guidelines; and
- Government-wide digital preservation strategy.

Issues covered in this chapter such as connectivity and access, internet services, Namibian government in the information age, Namibian Public Service e-readiness, electronic information systems in the Namibian Public Service, and Namibia’s legal and regulatory framework, are related to the six components listed above. Since the scope of the study is the Public Service, it is important that the context chapter highlights the national issues, which would contribute to an

effective national e-records readiness assessment and in turn contribute to the overall e-records readiness assessment of the Public Service.

The context of this study is the Public Service of Namibia. Namibia is a vast country of 824 265 sq km, with a population of 1 830 330 according to the 2001 population census (Office of the Prime Minister (OPM), n.d.). Namibia is bordered by South Africa in the south, Angola and Zambia in the north and Botswana and Zimbabwe in the east. The National Archives is charged with the responsibility of providing a records management service to the entire Public Service. Considering the vastness of the country, this is no small task.

2.2 Historical background

Namibia's political history has had a bearing on the development of the records and archives service in the Public Service. It is therefore necessary to give a brief political history of the country in this chapter.

Namibia, formerly known as South West Africa, was under German administration (as a colony) from 1883 until 1915 when it was occupied by South Africa. On December 17, 1920 South Africa undertook administration of South West Africa under the terms of article 22 of the Covenant of the League of Nations and a mandate agreement by the League Council. The mandate agreement gave South Africa full power of administration and legislation over the territory. During the 1960s, as the European powers granted independence to their colonies and trust territories in Africa, pressure mounted on South Africa to do the same with South West Africa. In 1966, the UN revoked South Africa's mandate. Also in 1966, the South West Africa People's Organisation (SWAPO) began its armed struggle to liberate South West Africa. Elections were held in November 1989 and an independent Namibia came into being in 1990 (Central Intelligence Agency (CIA), 2005).

2.3 Administrative history

Under South African occupation, Namibia was divided into 11 separate racial and ethnical based administrations. Namibia was governed largely as an extension of the Pretoria administration.

After the country became independent, these 11 administrations had to be rationalised into one national Public Service (Geingob, 2002). Lau (1994, p. 246) the then Head of The National Archives of Namibia (NAN) referred to Namibia as being in a “stage of transition as the whole administration was being restructured”. Independence brought in a new government and reorganisation of the Public Service, which has been blamed for the collapse of good records management systems, which used to exist in the Public Service (Taylor, 1994, p. 62). Recent studies on records management in the Public Service discovered that the situation has not changed. Poor records keeping is still evident in the Public Service of Namibia. Twelve years after Lau and Taylor’s reports, this can no longer be attributed to restructuring. One of the objectives of this study was “To investigate the status of records management in the Public Service of Namibia”. The findings of the study were able to establish the reasons behind poor records keeping and recommended means to improve the situation.

2.4 The Namibian Government

Namibia is a unitary state. The Government is divided into three organs: the Executive, the Legislative and the Judiciary, with each organ responsible for a specific function. The legislative branch is responsible for making laws, which are implemented by the executive and interpreted by the judiciary. A description of the Executive organ is necessary for an understanding of the setting of this study.

The Executive powers of Namibia rest with the President and the Cabinet. The President is the Head of State and Government. The Cabinet consists of the President, the Prime Minister, Deputy Prime Minister and Ministers appointed by the President. Together they implement the policies guided by the constitution and acts of Parliament. The Prime Minister is the Chief Advisor to the President and the overall coordinator of the Government Offices, Ministries and Agencies. Under him/her are Ministers and Deputy Ministers and their staff members who run different Ministries. At present there are 20 Ministers responsible for Offices, Ministries and Agencies.

In terms of the Constitution, Regional and Local Governments Article 102, the country is divided into regional and local units. There are thirteen (13) administrative regions and many other Local Authorities have been established in terms of both Regional Councils Act and Local Authorities Act of 1992. Regional and Local Authority Councils both have substantial fiscal powers and have to adhere to established procedures, systems and regulations in the day-to-day handling of financial matters. Each region has several local government bodies elected by the community to take care of community matters. Cities and urban centres have their own municipal or town bodies that make ordinances to deal with their local issues and have the powers to enforce these ordinances. All Regional Councils and Local Authorities have the power to legislate regarding their own affairs as long as their acts and conduct do not conflict with the overall guidelines in the Constitution. Given the power to legislate their own affairs, standardisation of electronic records management systems could be difficult to achieve. The feasibility of standardisation thus needed to be investigated by the study.

The objectives of *The Decentralisation Policy for the Republic of Namibia of 1997* are to “extend, enhance and guarantee participatory democracy and quality governance; ensure and safeguard rapid and sustainable development; transfer power to Regional Councils and Local Authorities based on national ideas and values; and to improve capacity of regional and local government councils to implement, manage and monitor delivery of services for their constituencies” (Ministry of Regional, Local Government and Housing (MRLGHRD), 2007, p. 4). MRLGHRD formerly MRLGH, which was one of the cases for this study, is “the leading agency for the implementation of the decentralisation process” (MRLGH, 1997, p. 50). ICT is considered an important factor in the decentralisation process. In its 2005/2006 Annual Report, MRLGHRD reported the upgrading of the network infrastructure of the Ministry from 100 Megabytes to 1 Gigabyte, which was necessitated by “the imminent connection of the thirteen Regional Councils to the Ministerial network ...” (MRLGH, 2007, p. 42).

MRLHGRD initiated a Decentralisation Extension Programme in 2006, which aimed at providing all staff members of the Regional Councils with 24-hour access to Internet and e-mail (Shilongo, 2008). According to the late Minister of MRLGHRD, John Pandeni, the programme has changed the working conditions of staff at regional level, providing them with valuable

research and communication resources that were not previously available (Shilongo, 2008). However, as this study found, a number of problems militate against the effective access and use of Internet and e-mail. These are highlighted in Chapter 5.

E-government is considered one of the key elements in the decentralisation process as the success of the decentralisation process rests upon efficient and effective local and regional administrative and service delivery capacity, as well as on the management of information and knowledge processes within Local and Regional Authorities: and between them and the line Ministry, MRLGHRD (MRLGH, 2004a, p. 4). Namibia's *Archives Act* places central government, Regional Councils and Local Authorities under the control of the Head of Archives. These are therefore guided by the same policies regarding records management. It follows therefore that any findings and recommendations of this study would be applicable to all three.

Decentralisation in Namibia aims to:

- ensure economic, cultural and socio-economic development;
- provide people at the grassroots level the opportunity to participate in their own decision-making; and
- extend democracy to them as a right based on national ideas and values.

MRLGHRD considers networking of all regional government offices and local authorities as critical if e-governance in Namibia is to succeed. Citizens everywhere must have the ability to gain access, using ICTs, to Government on-line services - whether this is at regional, local or central level (OPM, 2005b, p. 17).

CABLE e-office pilot project at seven sites was completed in 2004. It was intended as a capacity building project for the Regional Councils and Local Authorities to test the viability of the future of such ICT projects in the regions. A strategy-making process was organised as part of CABLE, which came up with MRLGH Sub-National e-Government Strategy. One of the results of this process is the *Sub-National E-Government Strategy Implementation Action Plan*. Two of the tasks relate to records management. These are:

- develop an acceptable definition of e-government that encompasses issues such as records management; and
- develop a clearing house or central source of information about e-government including training opportunities, access to available grants and other resources to support e-government, telecommunications, or electronic records. (MRLGH 2004, pp. 2-3)

The Ministry's Sub-National Government Strategy made several recommendations, the most important being to link all Regional Councils and Local Authorities into one single wide area network (WAN). It also recommended the standardisation of all software and systems used in Regional Councils and local authorities throughout Namibia (OPM, 2005b, p. 17). This coupled with the recommendation to integrate the sub-national strategy into national e-government initiative (Tjipura, 2005, p. 37), makes standardisation in e-records management a much more meaningful approach. Such software and systems should include electronic records keeping systems. According to the MRLGHRD, equipment installed in the first phase of the implementation of the Decentralisation Network Expansion Project allows for future expansion of existing Public Service Integrated Financial Management System (IFMS) managed by the Ministry of Finance; the Human Resources Information Management System (HRIMS) managed by OPM; and "the electronic records database management system of the various Regional Councils" (Shilongo, 2008, p. 2). The study did not discover any electronic records management systems running in any of the 11 institutions studied. What the Minister is probably referring to are electronic information management systems, which are not electronic records management systems.

2.5 Records management in Namibia's Public Service

The National Archives formed in 1939, and then known as the Archives Depot of the Territory, came under the South African *Archives Act* and under the control of the South African Director of Archives in 1969. This control remained until September 1979 when it became a part of the newly established Directorate of National Education in the new South West Africa (Namibia) Public Service (Taylor, 1994, p. 59).

Surveys of records in Ministries and Departments have shown evidence that there once were good records keeping systems in place, which for some reason collapsed (Barata et al., 2001; Nengomasha, 2004a; Nengomasha & Beukes-Amiss, 2002). Taylor (1994) gives an overview of the records keeping situation in Namibia. She attributes the collapse of records management systems to:

offices assuming different functions, being re-named, being closed, new offices being opened, which have resulted in many offices having no records management programme at all and each person doing his or her own thing. As new functions were created and some old ones closed, records were taken to the NAN without following proper procedures. (Taylor, 1994, p. 62)

2.5.1 Records management programme for the Public Service

A complete records management programme for the Public Service was developed between 1978 and 1990. The records management programme consists of the following components:

- Compilation and approval of filing systems and lists of other archives;
- Issue of disposal guidelines/authorities;
- Office inspection;
- Training of officials in records management; and
- Transfer of archives

2.5.1.1 Compilation and approval of filing systems

Each office is expected to implement an approved classification scheme based on the functional approach. These are supposed to be compiled with the help of the NAN staff who visit Ministries and Departments and carry out records surveys. In addition to the classification scheme there is need to prepare another list of non-correspondence type of records such as financial forms, registers, computer print-outs, administrative registers, slides, photographs, films and videos referred to as the “List of Other Archives” (Taylor, 1994, p. 60).

2.5.1.2 Issue of disposal guidelines/authorities

In terms of the *Archives Act*, no record may be destroyed without the permission of the Head of the NAN. Two types of permission are issued, disposal guidelines and disposal authorities.

Disposal guidelines are issued for files in approved filing systems, which have been correctly functioning for three years or more and to approved “List of Other Archives”. These guidelines indicate how long an item should be kept in the office of origin before it is either destroyed or transferred to the NAN for permanent preservation. Disposal guidelines are issued for current filing systems only. Offices can request for disposal authorities to be issued for specified items. These include records of discontinued classification schemes. The office lists the items and makes suggestions as to the nature of disposal of the items, either destruction or preservation. An archivist then appraises the items and determines if they have future research value or not. The Head of the NAN is then requested to issue disposal authority, after which the items are transferred to the NAN or destroyed (NAN, n.d.; Taylor, 1994). According to the *Archives Act*, records are transferred to the NAN when they are 20 years old and master films are transferred immediately.

2.5.1.3 Office inspection

Each Office is supposed to be inspected at least once a year by the NAN staff. A report with recommendations is compiled and sent to the respective office. The Office will then provide a date when it will have implemented the recommendations. The NAN sends follow-up reminders and expects progress reports on the implementations (Taylor, 1994, p. 60). However the study found that the NAN has not been able to do this follow up due to shortage of staff. Most recommendations by the NAN have not been implemented. In two Ministries, records keeping staff were not even aware that the NAN had sent such reports after the surveys it conducted.

2.5.1.4 Training of officials in records management

Informal courses meant for registry clerks and officers in charge of archives ranging from two to five days are offered by the NAN. Training for officers in charge of archives is based on the archives code and that training for registry clerks is more on practical aspects of registry management.

2.5.1.5 Transfer of archives

The statutory transfer period is 20 years as stipulated in Section 6.3 of the *Archives Act*. Section 6.4 stipulates that master films should be transferred immediately after the completion of the production.

The implementation of the programme has not been very successful. Barata et al. (2001) observed poor implementation of the records management programme. The Ministry of Basic Education, Sport and Culture (MBESC), 2004; Nengomasha, 2004; Nengomasha & Beukes-Amiss, 2002) support this observation.

Statistics from the NAN Annual Reports for 1983 to 1996 support the assertion by Taylor (1994) that a records management programme thrived up until 1990. From 1993 onwards there has been a reduction in records management activities. No report has been produced since 1997. However, studies cited above show that this decline has continued. Heavily congested offices are an indication that not many transfers of records have taken place in the last few years.

A consultancy report on the functioning of the NAN conducted in 2002 found that no inspections had been carried out since 1999 and even then the few inspections, which were carried out since the 1995/96 Annual Report were conducted by a Records Manager placed on attachment by the IRMT (MBESC, 2004, p.74). However, this situation is changing with the appointment of a Senior Records Manager in 2005.

Information supplied by the NAN shows that there are 112 known registries in Government distributed as follows: 77 in Ministries and Departments, 30 in Local Authorities, and five in Regional Councils (Nengomasha, 2004). The figure could be higher considering that there are for example, 13 Regional Councils. MBESC (2004, p. 58) reports that the exact number of registries is unknown but could be around 150. Nengomasha gives a figure of 28 as the number known registries in parastatal organisations (statutory institutions). The figures represent only those registries, which the NAN is aware of in its role as advisor in the management of records in Government registries. The NAN Annual Report for 1989 reports 134 registries. This figure rose from 66 in 1987.

Namibia's situation fits the situation described by The World Bank (2005) of countries emerging from the colonial period to statehood, doing so without adequate systems to keep the governments functioning because either no adequate record keeping systems were established or they were not maintained. Namibia's Public Service established records keeping systems which have collapsed and the NAN as it reported has not had any meaningful records management activities due to staff constraints. Inspection of registries resumed, although at a small scale, in the last two years since the hiring of a trained and experienced Senior Records Manager.

There is a state-of-the-art archives building but there is no records centre facility for the storage of semi-current and non-current records. Section 5 of the *Archives Act* makes provision for the setting up of "intermediate depots" (records centres). Several researchers (Barata et al., 2001; NRC, 2002; Nengomasha, 2004; Nengomasha & Beukes-Amiss, 2002) have recommended the setting up of records centres. NRC recommends decentralisation of records management functions to the regions, where regional centres should be set up.

Currently the NAN is a sub-division of the Directorate of Namibia Library and Archives Services (NLAS) and is located in the Ministry of Education. While this makes sense with regard to the NAN's responsibilities as a cultural institution, it makes it difficult for the NAN to meet statutory responsibilities for records management services in the Public Service. It is important to note that the *Archives Act* provides for the inspectorate role of the Head of NAN. The Head of the NAN is below the level of Director, and when he/she has to enforce compliance, his authority is not recognised. In some countries the Head of Archives is at Directorship level and in others such as U.S.A., at Permanent Secretary level (Barata et al., 2001). Even compared to other national archival institutions in the region, the post is still a grade too low. In member countries of Eastern and Southern African Branch of the International Council on Archives (ESARBICA), such as Botswana, South Africa, Zimbabwe and Zambia, the top management post of national archives is typically at Deputy Director, Assistant Director or Director level, but because of the placement of archives services in NLAS in Namibia, the Head of Archives is below Deputy

Director level (MBESC, 2004, p. 107). The Head of the NAN reports to The Director of NLAS whose position is below that of Under-Secretary.

Lack of trained records management professionals is another problem hindering the implementation of Namibia's record management programme (Barata et al., 2001; MBESC, 2004; Taylor, 1994). Nengomasha (2004) discusses the training offered in Namibia. Training is offered locally by the Department of Information and Communication Studies at the University of Namibia as part of a broadened programme, which incorporates library studies. This is offered at Diploma level, a two year Diploma in Records and Archives Management. Until 2007 a four-year B.A. in Library Science and Records Management was offered by the same Department. The degree programme was not very strong on records and archives management and as a result the graduates produced were not well prepared to take up records management responsibilities. Other forms of training are workshops offered in-house by Ministries and Departments using consultants, short courses on an irregular basis by the Polytechnic of Namibia and other records management companies such as The Document Warehouse.

The low salaries paid by government do not attract the few trained professionals. Registry staff is usually amongst the lowest paid in the Public Service. Most of these only have a Grade 10 certificate (O-level) and this has consequences for provision of an effective records management service. The level of the registry staff is too low for them to be recognised and taken seriously.

Too low for the competencies and skills required, the action officers have very little regard for these registry clerks resulting in them setting up their own ring binder system of storing paper documents in their offices, or store information in their PCs, or assign their filing to private secretaries who have no training in this respect. (NRC, 2002, p. 23)

Records management in the Public Service is set to improve under the Education and Training Sector Improvement Plan (ETSIP) (ETSIP, 2007). Under this Plan, funds have been provided for developing a records management programme in form of: improving storage and preservation facilities at the NAN, developing records management policies for the public sector, revising the *Archives Act*, developing regulations for the *Archives Act* and updating the archives guidelines. It is unfortunate that funds have not been provided for the building of records centres. The NAN is

in the process of drafting an e-records management policy, thus enhancing Namibia's e-records readiness. It is hoped that the findings of this study will provide valuable information, which can be used in finalising the drafting of the policy.

2.6 Records and archives management professions in Namibia

Records managers are not well defined and distinct from related professionals, such as archivists and librarians (Nengomasha, 2004b). In organisations such as Government Institution Pension Fund (GIPF), NamPower, Bank of Namibia and University of Namibia, the few professionals there are known by a variety of terms, which include information officers, records managers, records officers or archivists. These manage current records as well as archives. In some of these organisations, the information officers manage records, archives as well as library materials.

Some organisations advertise for librarians, but when one looks at the job's key responsibilities, what they need is a records management professional. In a number of cases it is not so much out of convenience that this is done, but a lack of understanding of the nature of documents, publications, records and archives, with the result that some organisations try to manage all in the same manner.

A couple of companies have advertised offering archiving services. This is a trend that has been seen in the last couple of years. The nature of the services which they offer and whether they adhere to archival principles, need to be investigated. Time will tell how vibrant these will turn out to be. However, this could be an indication of growth of records and archives management in Namibia.

2.7 The ICT landscape in Namibia

Information plays a pivotal role in e-government. This is why governments are looking at ways of distributing information to their customers, i.e. the citizens and businesses. The Africa Information Society Initiative (AISII), an action framework to build Africa's information and telecommunications infrastructure, has a vision for an information society where by 2010:

- Every man and woman, school child, village, government office, and business can access information through computers and telecommunications;
- Information and decision support systems are used to support decision-making in all the major sectors of each nation's economy;
- Access is available throughout the region to international, regional, and national "information highways";
- A vibrant private sector exhibits strong leadership in growing information-based economies;
- African information resources are accessible globally reflecting content on tourism, trade, education, culture, energy, health, transport, natural-resource management; and
- Information and knowledge empower all sectors of the society (Amoako, 1996, p.2).

Two years to go before the set date of 2010, this has turned out to be more idealistic than a reality, looking at the various stages in which African countries are regarding ICT development. However, Namibia has set itself a more realistic time frame and goals with its *Vision 2030* (OPM, 2004a) and subsequent National Development Plans (NDPs). Hesselmark and Miller (2002) carried out a survey on ICT in Namibia and concluded that there "has been a shift towards a more developed information society" (p. 35). The following gives a brief overview of Namibia's ICT infrastructure, indicating Namibia's preparedness for e-governance.

2.7.1 Connectivity and access

The United Nations (UN) categorises Namibia as a lower-middle-income country and when ranked with other countries in this category, Namibia is lagging behind in terms of mobile and fixed lines coverage (Stork, 2005, p. 107). Namibia's vast lands (825 418 square meters) with low population densities (1 830 330 according to the 2001 population census), are an obstacle to telephone connectivity (Stork & Deen-Swarray, 2006).

Telecom Namibia, Government owned, is the sole provider of fixed lines. The number of fixed lines has increased from 57 000 at independence in 1990 (Hesselmark & Miller, 2002, p. 15) to about 140 000 in 2006 (Stork & Deen-Swarray, 2006, p. 191). Namibia's teledensity for fixed

lines increased from 0.96% in 1998 (Stork & Aochamub, 2003, p. 10) to 6.96% in 2006 (Stork & Deen-Swarray, 2006, p. 91). Payphones have been installed across the country, particularly in areas with previously low telephone coverage. There are about 5 000 payphones, 2.8 public phones per 1 000 people (Stork & Aochamub, 2003, p. 10). In 2007 Telecom Namibia introduced a fixed-wireless service, which is cheaper than any mobile product in South Africa, Botswana or Namibia (Stork & Deen-Swarray, 2007, p. 2). Fixed wireless services refer to mobile technologies that do not allow roaming between cells. Although constrained by mobility, for Namibia it provides users, most of whom rarely leave town hence always within the cell, with what they want at affordable cost (Stork & Deen-Swarray, 2007, p. 2).

There are two mobile service providers, MTC and Cell One, the latter being fairly new on the market, having started operating in 2007. MTC has about 516 000 mobile subscribers with a mobile teledensity of 25.66% (Stork & Deen-Swarray, 2006, p. 91). Cell One has around 70 000 subscribers (Haarhoff, 2007). The 2003/4 Household Income and Expenditure Survey found that 33.5% of Namibians own a telephone or cell phone, while a further 33% have access to one (Ministry of Education, 2007, p. 67). Appendices K and L illustrate Telecom Namibia's landline coverage and MTC's cell phone coverage respectively.

2.7.2 Internet services

Namibia claims to have the third highest Internet usage in Africa (OPM, 2005b, p. 3). There were roughly 14 000 Internet users using fixed lines for Internet access and 8 000 users accessing the Internet via leased lines in 2002 (Stork & Aochamub, 2003, p. 15). Access to the Internet is bound to improve if plans for a multi-purpose community centre for each of the 13 regions materialises. In his address at an e-governance awareness workshop in 2005, the then Permanent Secretary in the Ministry of Information and Broadcasting, Mocks Shivute, informed participants that the "Government has made provision for the establishment of one multi-purpose community centre in the 13 regions to give ordinary people access to information and to introduce them to the latest technologies" (Shivute, 2005, p. 31). He acknowledges that the rural communities are poorly serviced in terms of fixed and mobile telephone services and Internet connectivity (p. 187). However, there are plans to expand access to ICT to rural areas through a project Government is involved in. This will create a national Internet gateway (Gurirab, 2005, p. 59).

2.7.3 Training and human resources in ICT sector

Namibia's ICT sector suffers from lack of trained and skilled ICT human resources (Asino, 2005; Office of the President, 2004). Most organisations therefore import these skills from other countries. The following figures on the situation in the Public Service are a reflection of the magnitude of the situation in the country. Table 2.1 highlights shortage of IT staff in the Public Service.

Table 2.1. Understaffing in the ICT sector of the Public Service of Namibia

Institution	Understaffing percentage (% indicates positions filled)
Office of the Prime Minister	50%
Office of the Attorney General	0%
National Planning Commission	88%
Ministry of Agriculture, Water and Forestry	0%
Ministry of Regional, Local Government and National Housing	0%
Ministry of Trade and Industry	0%
Ministry of Mines and Energy	33%
Electoral Commission of Namibia	0%

Source: Asino (2005, p. 201)

These are 2005 figures, and some of the 0% figures have changed, for example, this study found that there are IT officers in the Ministries of Agriculture, Water and Forestry; and Regional, Local Government and National Housing and Rural Development; the situation in the Public Service overall has not changed much. DPSITM confirmed that there is still a shortage of staff; hence the extensive use of foreign based consultants for systems development and maintenance. Table 5.12 portrays the extent of the use of foreign-based consultants for systems development, which could have implications for continuity, standardisation and interoperability.

The shortage of staff becomes even more pronounced when Namibia is compared with other countries in the region. Namibian Communications Commission (NCC) has only seven employees compared to 67 at Botswana Telecommunications Authority and 321 at the

Independent Communications Authority of South Africa (Stork, 2005, p. 117). The proposed new regulatory institution to be set up under provisions of the *Telecommunications Bill 1999* once enacted will need adequate skilled personnel.

There are three main tertiary institutions in Namibia, University of Namibia, Polytechnic of Namibia and International University of Management. In addition to these, there are seven vocational training centres, four colleges of education, three agricultural colleges and one police training college. There are also parastatals such as Namibia College of Open Learning and private colleges like Damelin and the Higher Education Institute, which offer a variety of programmes (Hesselmark & Miller, 2002, p. 23).

The improvements in the teaching of ICT in schools and training in institutions of higher learning is set to improve the situation of lack of skilled personnel. The Ministry of Education, in partnership with SchoolNet Namibia, aided by numerous donors is involved in establishing computer laboratories with Internet connectivity in all schools in Namibia. About 300 of Namibia's 1 500 schools have been provided with IT facilities, providing some 130 000 learners with access to the Internet (OPM, 2005b, p. 20). How adequate these computers are, is subject of another investigation. The implications for this study however is the fact that efforts are being made to equip citizens with the skills to communicate with government online, which could mean that should Freedom of Information law be enacted, many requests for information online should be anticipated and the records management systems should be in a position to handle these requests.

The IT Virtual Learning Centre in the OPM offers public servants training in computer skills needed in performing their duties (OPM, 2004, p. 24). A total of 580 officers were trained in a number of courses at the Centre. Table 2.2 below indicates the number trained per course:

Table 2.2. Computer Skills training by Office of the Prime Minister

Course	No. trained
Introduction to PCs and Software Application	108
Netscape Communicator	4
MS Word 2002 – Fundamentals	68
Proficient User	59
Expert User	55
MS Excel 2002 – Fundamentals	57
Proficient User	57
Expert User	60
MS Access 2002 – Fundamentals	10
Proficient User	5
Expert User	7
MS PowerPoint – Proficient User	20
Expert User	5
MS SQL Server 2002 Administration Parts 1-5	25
MS Windows 2002 Administration Parts 1-5	44

Source: Extracted from OPM (2004, p. 25).

The figures indicated above are not very high considering the size of the Public Service. More would need to be done every year if the Centre is to make any meaningful impact. However, this Centre could be useful for imparting skills in e-records management related courses.

2.7.4 The Namibian Government in the information age

In 1990 DPSITM was created in OPM to guide and oversee all aspects of ICT usage in the Public Service. The Department set up standards, guidelines and procedures that assisted in hardware and software acquisition, IT training and the establishment of a government wide network (GRNNet), as well as in web development (OPM, 2005c). An IT policy was formulated in 1993 and updated in 2003.

A Cabinet Committee on IT (CCIT) was established to ensure that ICT matters are considered at the topmost decision levels of the country. DPSITM became the technical arm of CCIT. DPSITM also worked to develop standards and cooperative architecture. A GRN Intranet/Internet Gateway was developed, which now links all Government Ministries. However, this study established that due to shortage of space, some Ministries have offices operating in rented buildings, which are not networked. A GRN Website was created where some information

about the Namibian Government can be accessed (OPM, 2005c). The study also confirmed the situation reported by Hesselmark & Miller (2002, p. 35), that ‘although there are several government websites, these are not informational and not necessarily up to date’.

In its 2005/2006 Annual Report, OPM (OPM, 2007) reports on a project to update websites (see Table 2.3) and plans to commission some new and reviewed websites in the 2006/2007 financial year (see Table 2.4).

Table 2.3. Project on the Updating of Government of the Republic of Namibia (GRN) Websites

System Name	Office, Ministry or Agency Concerned
DNEA website System	Ministry of Basic Education, [Department of National Examination and Assessment] DNEA
e-Service website	Office of the Prime Minister (OPM)
GRN website	All offices, Ministries and agencies
MOL website	Ministry of Labour (MOL)
ICS web-site	Ministry of Labour, [Integrated Communications System] ICS
OPM website	Office of the Prime Minister
MWACW website	Ministry of Women Affairs and Child Welfare (MWACW) (now Ministry of Gender Equality and Child Welfare)
Law Reform and Development Commission Website	Ministry of Justice
National Library Book Catalogues and Bibliographies System	Ministry of Education, National Library

Source: OPM (2007, p. 20)

Table 2.4. New/Reviewed websites to be commissioned in the 2006/2007 financial year

Office/Ministry or Agency	Reviewed /New
Office of the Prime Minister	New
Office of the Prime Minister	Reviewed
Ministry of Foreign Affairs	Reviewed
Ministry of Health and Social Services	New
Ministry of Information and Broadcasting	New

Ministry of Justice	New
Ministry of Lands and Resettlement	New
Ministry of Works, Transport and Communication	New
Ministry of Youth, National Service, Sport and Culture	New

Source: Extracted from OPM (2007, p. 32)

Websites are considered ‘one of the easiest and cheapest ways to achieve higher impact e-government with a minimum of investment’ (Pascual, 2003, p. 17). However, most websites are not able to help achieve e-government’s ultimate goal of providing citizens with services as they have not been properly designed and there are a number of problems in accessing government websites (West, 2007). Problems include pages, which no longer exist but remain on the site; pages that are slow to load; pages cramming too much text on a page; links, which do not work; sites, which do not cater for the physically challenged such as the poor sighted; and outdated information (West, 2007, p. 10).

Annual updates on global e-government by Darrel M. West are based on an analysis of government websites. The *Global E-Government Report, 2007* (West, 2007) based on an analysis of 1 687 government websites in 198 countries gives Namibia a rating of 21.5 (21.4 in 2006) on a 0 to 100 point e-government index applied to each country’s websites based on the availability of publications, databases and a number of online services. Out of 198 countries, Namibia is ranked 179 (168 in 2006). Table 2.2 gives figures for a few selected African countries for comparison with Namibia.

Table 2.5. E-Government Country Rankings 2007

Country	Rating out of 100 points	Rank (Position out of 198 countries)
Botswana	32.0 (22.0)	73 (162)
Lesotho	30.0 (16.7)	99 (188)
Malawi	22.7 (20.7)	173 (172)

Mauritius	24.7 (23.7)	155 (149)
Mozambique	28.0 (24.0)	120 (142)
Namibia	21.5 (21.4)	179 (168)
South Africa	27.7 (29.2)	136 (70)
Swaziland	32.0 (34.0)	71 (26)
Zambia	34.0 (23.5)	49 (150)
Zimbabwe	26.7 (26.0)	144 (117)

Note. 2006 figures are in brackets

Source: Extracted from West (2007, pp. 12-15)

2.7.5 Namibia's e-government vision and implementation

This section gives an overview of e-government strategies and initiatives in the Namibian Public Service. E-government can easily be associated with an increase in the creation of electronic records in government. There are many definitions of e-government but all reflect the same thing, that is, it is about government employing information and communication technologies to democratise access to information and enhance service delivery to its customers, which include citizens and businesses. Fang (as cited in Rose, 2004) defines e-government as:

a way for governments to use the most innovative information and communication technologies, particularly web based Internet applications, to provide citizens and businesses with more convenient access to government information and services and to provide greater opportunities to participate in democratic situations and processes. (p. 221)

This is not far from the definitions such as “the online exchange of government information with, and the delivery of services to, citizens, businesses and other government agencies” (INTOSAI Standing Committee on IT [Information Technology] Audit, as cited in INTOSAI, 2005: p. [1]) or “exploiting information and communication technologies (ICT) to provide better quality services to the government customers (Citizens and businesses), mainly through electronic delivery channels (Internet, digital TV, easy web, mobile phone, etc.)” (Bresciani et al., n.d., p. 1).

Namibia's electronic-governance (e-governance) policy (OPM, 2005, pp. 2-3) refers to e-governance as ‘the use of information and communication technologies in public administrations, combined with organisational change and new skills, in order to improve public and democratic processes and strengthen support to public policies’. The Namibian government,

as with many other governments is using computer technologies to support business activities. The benefits of conducting business electronically have become clear and the shift towards the electronic delivery of programs and services has been set.

There has been an increase in the number of computers in the Namibian Public Service, from 40 personal computers in 1990 to 4 000 in 2004 (Asino, 2005, p. 33) and 3 500 civil servants have e-mail and Internet access (Amutenya, 2005, p. 35). Government has about 8 000 employees. All Government buildings are cabled, computers are networked and all Ministries have computer networks in place, and all ministerial networks are interlinked. GRNNet refers to one integrated Government network that is centrally located at the DPSITM. Thirty-five sites are directly connected to GRNNet (Amutenya, 2005, p. 35).

This study is appropriately placed within the context of e-government. As government adopts e-government strategies and initiatives, it is imperative that record keeping requirements be taken into consideration in the respective systems and programmes. Such record keeping requirements will ensure the creation, capturing, maintenance of reliability and authenticity, sharing and preservation of electronic records, thus promoting government's accountability, transparency and effectiveness.

Namibia's e-governance implementation strategy is in four phases (OPM, 2005b, 2) as illustrated in Table 2.6 below.

Table 2.6. Government of Namibia's E-Governance Implementation Strategy

Phase	Phase description
Phase 1 Information	The government being present on the web, providing the public and businesses with relevant information in order to promote transparency and democracy.

Phase 2 Government interaction with the public	During this phase government will interact and exchange data with the public through various applications such as e-mail, government database search engines and the downloading of forms or filling-in forms online. This way the public will be able to interact with Government 24/7 thus improving efficiency and effectiveness.
Phase 3 Entire transactions online	Entire transactions being completed electronically between Government and businesses, the public and within Government itself. To make this phase possible, laws on issues such as digital signatures should have been enacted.
Phase 4 Single electronic point of contact for all government services.	This means integrating all government information systems and involves transforming internal Government processes and managing change in order to maximise cost savings, efficiency and customer satisfaction.

Source: Adapted from Republic of Namibia, OPM (2005b, p. 2)

These phases correspond with the following four levels of e-Maturity defined by INTOSAI Standing Committee on IT Audit:

- **Publication** - of information only
- **Passive interaction** – transactions can be initiated but cannot be completed electronically
- **Active interaction** – citizens and government are able to complete basic transactions electronically
- **Seamless e-government** – government and citizens obtain optimal value from their electronic interaction. (INTOSAI, 2005)

Hesselmark and Miller (2002, p. 35) report that, although there are several government websites, these are not informational and not necessarily up to date. Namibia's ranking according to West's (2007) report shows that this has not changed. As yet there are no e-enabled procurement procedures, or services to the citizen. Any electronic records management plans would need to take cognisance of these phases and their time frames if electronic records management is to effectively support e-government. Take phase four for example, the National Archives, mandated with the role of providing a records management service to the entire Public Service, would need

to plan in such a way that by the time government reaches this phase, electronic records management systems throughout government enable the sharing of information through the single electronic point of contact. This has implications for the recommendations of this study regarding a suitable model for electronic records management in the Public Service.

2.7.6 Electronic information systems in the Public Service of Namibia

A study conducted by DPSITM (2004) revealed a number of electronic information systems in the Public Service of Namibia as shown in Table 2.7.

Table 2.7. Electronic Systems Identified by DPSITM (2004) Study

Office/Ministry/Agency	Systems
Ministry of Basic Education	National Examination and Assessment System - (registering and recording students and exam results for Grades 10 and 12).
Ministry of Finance	(a) Automated System for customs data (b) Funds control System (c) Subsistence and Travel System (S&T) (d) Payroll (e) Bank reconciliation (f) General Ledger (g) Inland revenue
Ministry of Justice	Guardian fund
Ministry of Health and Social Services	Social Welfare System - (administration of social pensions, war veterans maintenance grants and disability grants)
Ministry of Home Affairs	(a) Border Control Passport System (b) National Population Registration System (c) Pol 6 System - (Crime Statistics Registration System)
Ministry of Labour	Integrated Communications System (ICS) – (system to provide jobseekers, training providers and government with up-to-date labour market information and provide information on available human resources and skills on the labour market in Namibia)
Electoral Commission of Namibia	Voters Roll System
Office of the Prime Minister	Human Resources Information Management System (HRIMS)

Source: Extracted from DPSITM (2004, pp. 7-19)

The Office of the Prime Minister's *Annual Report 2005/2006* (OPM, 2007) reports on the new or old projects in the process of implementation or upgrading:

Table 2.8. Ongoing Systems Development, Redevelopment and Upgrading in the Government of the Republic of Namibia (GRN)

System Name	Office, Ministry or Agency	Developmental Status
Firearm Registration System	Namibia Police, Ministry of Safety and Security	Testing Phase
Birth Registration System	Ministry of Home Affairs	Testing Phase
Human Resources Information Management/Payroll Integrated System	Office of the Prime Minister/Ministry of Finance	Development Phase
Offender Information Management System	Ministry of Prisons and Correctional Services	90% of development completion
Tender Document Tracking System	Ministry of Finance, Tender Board	Analysis Phase

Source: OPM (2007, p. 20)

The biggest benefit of most of the systems in existence is that they work and can be utilised to build additional services upon them, such as records keeping functions. However, a number of threats question the systems, ability to create, maintain and preserve authentic records. The threats include lack of qualified systems development and operational staff to maintain, update and extend the systems. In addition to this, “these systems are vulnerable to virus attacks, hacking attempts, spoofing, operational errors and system misuse...” (DPSITM, 2004, p. 19).

The Public Service lacks standards (Amutenya, 2005, p. 36) as well as a policy on open systems for OPM to enforce (Asino, 2005, p. 34). There are, however, plans to “set standards on hardware and software, use the same databases across O/M/As [i.e. Offices, Ministries and Agencies] and consolidate knowledge on standards being used (Asino 2005, p. 34). The study established nevertheless that this has not yet been done. However, should it materialise, it will have positive implications for electronic records management as it signifies interoperability, long-term preservation and use of information contained in the systems.

2.8 Namibia’s legal and regulatory framework

This section looks at Namibia's regulatory and legislative environment, such as records and archives legislation, i.e. *Archives Act 1992*, *Information and Communication Technology Policy*, *Information and Communication Technology Policy for Education* and *Telecommunications Act*.

2. 8.1 Archives laws and related legislation

Legislation plays a significant role in records management. From experiences of other countries relevant legislation includes the records and archives laws, e-commerce laws, freedom of information and privacy or data protection laws. Namibia does not have a freedom of information legislation. The NAN, learning from experiences of other countries, for example South Africa and the United Kingdom where such laws exist, has been pro-active and organised a workshop in July 2006 to deliberate on its input into such a law once the drafting commences. With regard to data protection, Namibia's E-Laws Working Group notes "there is need for privacy laws in relation to, for example, data protection, data interference and data monitoring" (OPM, 2005c, p. 4).

Namibia's *Archives Act* "provides for the custody and care of and control over archives in Namibia and for matters incidental thereto". Section 1 (a) defines archives as "all documents received or created in the course of conduct of affairs". The Act defines a document as:

a combination of any medium and the information contained thereon or therein, including on paper, parchment, vellum, files, scrolls, or in the form of punched tape, magnetic tape, compact disc, photographic negatives and copies, cinematographic film, microfilm, microfiche, or gramophone, phonographic or other kind of sound recordings.

The *Archives Act* empowers the NAN to regulate the filing and care and disposal of records, including electronic records in central government, local government and statutory institutions (parastatals).

2.8.2 Information and Communication Technology (ICT) Policy

The *Information and Communication Technology (ICT) Policy for the Republic of Namibia* of 2002 calls for the establishment of a strong body to guide the implementation of the Policy whose key recommendations are to:

- Enhance rural access to information
- Strengthen the ICT professional community
- Achieve excellent public ICT education
- Foster e-commerce, e-business and e-government (focussing on the status of existing government intranet, desirability of e-procurement, and needs for policy and legislation facilitating e-commerce)
- Liberalising the telecommunications environment
- To develop the ICT industry by creating an ICT cluster in Windhoek (Hesselmark & Miller, 2002, pp.12-13; Stork & Aochamub, 2003, pp. 30-31)

2.8.3 Telecommunications Bill

The passing of the *Telecommunications Bill* of 1999 is expected to address the issue of a single regulatory authority responsible for the ICT sector. The situation where two different Ministries were responsible for the running of the ICT industry was not tenable. The Ministry of Information and Broadcasting was responsible for the supervision of MTC via NCC and the Ministry of Works, Transport and Communication was responsible for the supervision of Telecom Namibia. With effect from April 2008 all communication functions resort under the Ministry of Information and Communication Technology (formerly Ministry of Information and Broadcasting) (Kangueehi, 2008). The adoption of the Bill will be a step forward in setting up an enabling environment that allows private initiatives by entrepreneurs to deliver ICT services to suit communities thereby addressing the serious challenges the ICT sector faces of a relatively small population and the consequent low population density (Stork, 2005, p. 117).

2.8.4 ICT Policy for Education

The *Information and Communication Technology Policy for Education* of 2005 considers appropriate human capital as one of the cornerstones for the development and integration of ICT in the Namibian society. To this end Namibia's Education and Training Sector came up with the *ICT Policy for Education* to enhance the use and development of ICT in the delivery of education and training (MBESC, 2005). This Policy replaces the 1995 *National Policy for ICT in Education in Namibia*.

2.8.5 Use of Electronic Communications and Transactions Bill

A Draft *Use of Electronic Communications and Transactions Bill* of 2005 has been prepared and distributed for public comments by the E-Laws Working Group under the Office of the Prime Minister. The Bill's overall objective is:

To provide for the regulation and facilitation of electronic (e-communications and transactions); to promote the use of electronic communications and transactions; to provide legal certainty, recognition and functional equivalence of e-communications, e-transactions and information systems management, especially in relation to the use of electronic signatures, records and archives, and the security thereof; to promote and facilitate the use of information and communication technologies, to prevent the abuse thereof; and to provide for matters connected therewith. (OPM, 2005d, p. 2)

Chapter 3, Literature Review contains analytical discussions of the provisions of the Bill as they relate to electronic records management.

2.8.6 E-Governance Policy

The E-Governance Policy for the Public Service of Namibia of 2005 (OPM, 2005a) facilitates the provision of Government services via ICTs. The policy stipulates the need for a new legal framework to provide for the recognition of electronic messages, electronic authentication, electronic payment systems standards and inter-operability, procurement, customs and taxation. The policy also calls for regulation of consumer protection, the protection of privacy and communications and security of electronic signatures. Important to note is that the policy recommends that any new e-government projects should have a records management component. The e-governance policy objective is to provide guidelines for an over-arching framework that will ensure access to information; passive to active interaction; fulfilling needs and simplifying access; provision of transparent administration; and widening access and increasing confidence (OPM, 2005a, p. 2).

2.8.7 Information Technology Policy for the Public Service

The *Information Technology Policy for the Public Service* (Public Service Committee on Information Technology, 2003, p. 1) provides guidelines and regulations regarding the acquisition of computer facilities, sharing of such facilities between government Ministries and the creation of an environment that will ensure that the Namibian government reaps maximum benefits from computer use. The policy covers the following:

- Institutional arrangements – the policy delineates the roles and responsibilities of various government departments, committees, etc. regarding information technology use.
- Open, cooperative information systems architecture – the policy establishes guidelines that will ensure that Ministries can share data with each other.
- Human resources development – develops guidelines and strategies that will assist in the recruitment, training and retention of computer professionals in the Public Service.
- Computer security – develops strategies to ensure the security of data, information and computer hardware, the main aim being to ensure the integrity and safe-keeping of information.
- Development of information technology infrastructure – provides a number of strategies to develop a network with transmission media capable of transmitting data, both near and far, at reasonable speed.
- Acquisition of hardware, software and services – strict guidelines and controls to guard against procurement of obsolete equipment and poor software.
- Information technology personnel administration – provides guidelines on responsibilities and codes of conduct of computer professionals in the Public Service (Public Service Committee on Information Technology, 2003, pp. 3-4).

Sharing data amongst Ministries requires proper electronic records management, which will ensure the creation and maintenance of standard metadata. Strategies to ensure the integrity of data should include records management strategies as well.

2.8.8 Namibia's Vision 2030

Namibia Vision 2030 (Office of the President, 2004) spells out the role of ICT in promoting good governance. The Vision is based on the understanding that ICT technologies are at the heart of

social and economic transformation. The policies mentioned above are in line with Vision 2030's recommendations and strategies for transforming Namibia into an innovative, knowledge-based society, supported by a dynamic, responsive and highly effective education and training system.

2.9 Summary

This chapter places the study into context. It has attempted to justify the main assumption of this study that Namibia has adopted e-government and that some e-government strategies are being put in place. The ICT environment in Namibia is being developed and there is evidence to support this, such as teledensity improvement, increase in the use of computers in the Public Service, and ICT related policies, just to mention a few.

Namibia being a vast country, the mandate of the National Archives of Namibia to provide a records management service to the entire Public Service is a mammoth task, and the shortage of staff only worsens the situation.

The next Chapter presents the literature review.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

Literature review enables a researcher to develop a clear understanding of the research topic; establish what has already been researched on the topic and identify gaps, which the researcher's own study can fill. It should highlight concepts and theories on the subject area (Bless & Higson-Smith, 1995; Hart, 1998; Sarantakos, 1993). In reviewing the literature for this study the researcher heeded the advice by Hart who warns against "thinly disguised annotated bibliographies".

A literature review requires breadth and depth, rigour, and consistency, clarity and brevity, and effective analysis and synthesis ... in other words the use of ideas in the literature to justify the particular approach to the topic, the selection of methods, and demonstration that this research contributes something new. (Hart, 1998, pp. 1-2)

The literature reviewed in this chapter is related to the subject of managing electronic records in the context of e-government. Literature reviewed includes monographs, journal articles, workshops/conferences/seminars reports; empirical studies reports; electronic records management standards, guidelines and tools of various institutions. Most of the sources have been accessed from the Internet.

Related literature on Namibia, Africa and indeed the developing countries is limited, hence the many references to the United Kingdom, United States of America and to a lesser extent Australia. This is particularly the case with empirical studies. This is not surprising as the area of electronic records management is a fairly new area particularly in Africa, still grappling with problems associated with the management of paper records.

From the objectives and subsequent research questions of this study the following concepts are discussed in this literature review:

- records management theories and models
- definition of a record
- E-mail as records
- components of an electronic record
- metadata
- preservation of e-records: preserving reliability and authenticity
- e-readiness and e-records readiness
- record keeping systems
- record keeping systems functional requirements
- standards, guidelines and models
- legal and regulatory framework
- skills and competencies

3.2 Theoretical framework

Theory shapes, directs and focuses a study (Babbie, 2004; Flinders & Mills, 1993). A discipline encompasses the rules of procedure that guide research and the knowledge so acquired. In records management, the rules that guide investigation of researchers into issues, problems or concepts are determined by records management theory and methods. Buckland (1990, p. 1) suggests three varied opinions regarding records management theory.

1. There is a well defined and established theory governing records management practice;
2. There is no theory guiding records management practice;
3. There are a number of theories that belong to allied disciplines or sciences supporting records management practice, which are used whenever the need for action founded on principles manifests itself.

Writers after him (Brumm, 1992; Flynn, 2001; Ghetu, 2004; Upward, 2001; Yusof & Chell 2002) to mention a few, have discussed theoretical issues underlying the records management profession around these three opinions. Cox (as cited in Yusof & Chell, 2002, p. 55) argues that, "... the field is under-developed where theory is concerned..." Pemberton et al. (as cited in

Yusof & Chell, p. 55) and Walters (as cited in Yusof & Chell, p. 55) differ with Cox, arguing that records management has evolved around a specific body of knowledge and is strongly supported by its own theory. According to Brumm (1992), a number of related disciplines have an influence on records management. These include knowledge management and information management.

Information and communication technology (ICT) can have a negative or positive impact on the management of records for accountability, depending on how they are used (Meijer (2001). Shepherd and Yeo (2002) argue that ICT has enhanced the profile of records management from just being viewed as a space saver, something “nice to have” to being viewed as a supportive function in the organisation, in which it contributes to improvement in business performance through the management of information and preservation of evidence for accountability and transparency. However, there are issues regarding use of ICT that need to be addressed if creation and preservation of trustworthy records for accountability is to be ensured (Dearstyne, 2002). Such issues relate to e-mail systems, web technology systems, individual software for the creation of office documents, database management systems and smart systems (Meijer, 2001). Meijer’s arguments are discussed in detail in section 3.7.

A number of theories from related professions guide the records management profession, especially in the electronic environment. Mutula (2006, p. 567) argues that a “knowledge management based approach to implementing e-government projects in East and Southern Africa ... provides an important framework for enhancing transparency, integrity and accountability in government”. Nengomasha (2006) states that records management and knowledge management complement each other in supporting organisations to enhance their performance. Dearstyne (2002) calls for research on “how to build effective partnerships and cooperation among information management professionals who have important influence on records creation and management, e.g. computer specialists, information technology experts, auditors...” (p. 146). However, Brumm (1992) cautions records managers to make these related professionals understand the nature of their profession to avoid a “misunderstanding of records management” (p. 2). Dearstyne (2002, p. 149) affirms the same and calls for the records manager and archivist to “maintain professional identity”. The study found that there is need for collaboration between

records management professionals and other professionals in ensuring the creation and preservation of trustworthy records.

Records management, which is a part of archival science, draws its theory from archival theory. Archival science is a system consisting of theory, methodology, practice and scholarship (*The Impact of Technological Change*, n.d.). Records management has been changing and this change has led to debate regarding the suitability of traditional theory and concepts in managing electronic records (Bantin, n.d.; Flynn, 2001; Upward, 2001; Yusof & Chell, 2002). Dollar (as cited in Bantin, n.d.) and Dearstyne (2002) calls for a re-orientation in archival practices. The impact of ICT and possibilities of integration with related disciplines as discussed above, support Dollar's argument, and the researcher in this study aimed to establish the nature this reorientation should take and the theory that supports this reorientation. A discussion on the current records management theories and models follows.

3.2.1 Records life-cycle theory

The records life-cycle concept, developed by the American, R. T. Schellenberg (Shepherd & Yeo, 2003) has guided the management of records. It uses an analogy of a biological organism, which is born, lives and dies, and a record, which is created, maintained and used for as long as it has continuing value and is then disposed of by destruction or by transfer to an archival institution (IRMT, 1999c, p. 17). A record goes through four phases in its life. Most standard texts on records management principles and practices (Penn, 1994; Shepherd & Yeo, 2003) describe stages or phases of the records life-cycle. Yusof and Chell (2000) discuss the debate on the number of stages of the records life-cycle, which vary from three to 10 and conclude that regardless of the number of stages or how the stages are described, records do indeed pass through different stages in their lives.

One of these descriptions has been adopted for this study. In the first phase, the creation stage, records are created or received and accumulated. In the current or active stage, current records are maintained through various records keeping procedures such as classification, and they are frequently used. They are stored in offices of creators or in the records office. In the semi-current or semi-active stage records are not referred to often for current business. They are stored in a

records centre pending ultimate disposal. In the non-current stage records are no longer required for current business. Only 3-5% of records are preserved as archives and transferred to an archival institution. Figure 3.1 illustrates the life-cycle of records.

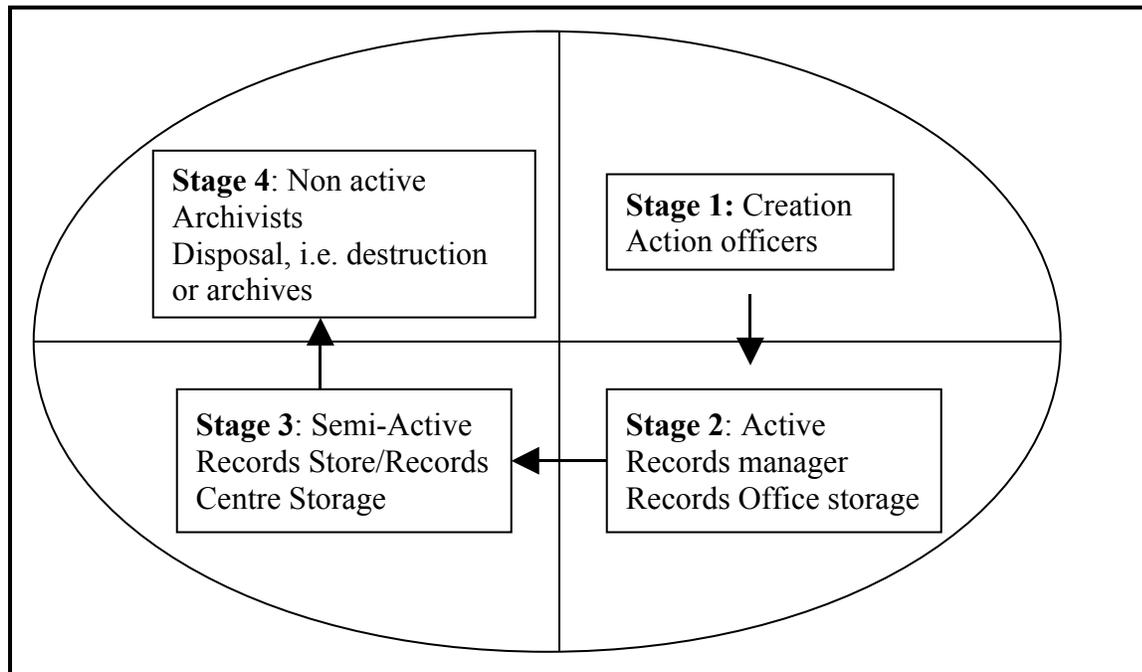


Figure 3.1 The Life-cycle Concept of Managing Records

The need for collaboration between records managers and other professionals in electronic records management has been emphasised in the discussion above. Dearstyne (2002) refers to the Indiana University Electronic Records Project as a successful electronic records programme development initiative, which has shown that cooperation is the key to progress. The project revealed that “successful electronic records and archives work will require a willingness to blur traditional boundaries, work in partnership with others, improvise when solutions are not clear because the issues and problems are relatively new, and occasionally compromise archival and records management principles” (Dearstyne, 2002, p. 149). One such traditional boundary reflected in the figure above, which needs to be blurred, is the assignment of responsibility between the records manager and the archivist, and as O’Shea (1996) argues, this is not practical in an electronic environment.

The custody of archival materials in an archival institution may not always be the best approach with electronic records. Ngulube and Tafor (2006) query whether the archival institutions in sub-Saharan Africa would be able to manage electronic records. According to the *Kansas Electronic Records Management Guidelines*, the Kansas State Historical Society provides advice to state agencies who maintain electronic archival records in their custody; having realised that it does not have the capacity to manage and maintain a wide range of electronic systems and records applications or to manage the migration of records to other media and standards over time (Kansas State Historical Society, 2005). Dearstyne (2002) advises that most records management and archival programmes would need to be “customised to fit the particular circumstances of their time and setting” (p. 153). Experiences of the Kansas State Historical Society have shown that it may be necessary to “re-set the line of responsibility between the agencies and the archives/records programmes” (Dearstyne, p. 154). The study investigated the National Archives’ capability to manage and maintain electronic archival records and recommend a model for managing electronic records in the Public Service in Namibia.

E-government requires information systems, which allow the management of electronic documents in a variety of forms to be managed as a single corporate asset. Barry (1994) describes a framework for integrating records keeping systems in one unified information system with four phases:

1. creation and identification;
2. appraisal;
3. control and use; and
4. disposition.

The framework, he argues, is a convenient way in to delineate institutional information flow and processes, identify significant gaps and risks in information systems, and determine requirements for electronic document management systems. The following is a description of Barry’s (1999, pp. 4-5) framework:

Life-cycle tools if included in an electronic document management system (EDMS) can carry out appraisal and disposition functions automatically. Creation and identification stage involves the creation and finalisation of a new document, record or file, assign unique identifying and version information and provide security, authentication, clearance and other

document profile information. Appraisal entails determining the value and ultimate disposition of documentary material and schedules it for destruction, reclassification, and security downgrading or archival retention, typically in terms of years after creation. Control and use stage ensures the facilitation of communication of documents (including records) internally and externally, facilitate search and retrieval, provide control mechanism (e.g. version tracking, access control) and facilitate migration, conversion, encryption and portability through succeeding technological environments over time (hardware, software, standards). During disposition stage the following takes place, notification to the writer, author, office of primary responsibility and institution prior to and subsequent disposal of records; routinely survey and dispose of records according to established retention schedule and maintain authentic archival information in reusable form.

Barry's framework is based on the premise that an organisation derives its information from a variety of information sources, of which records are just one such source. It is possible to manage all these information sources in one integrated information system, which incorporates electronic record keeping requirements so that records are captured and managed properly through their entire life. This framework, if applied to the Public Service of Namibia, would require close collaboration between the OPM, which is in charge of IT, the National Library in charge of libraries and published materials and the NAN, which is mandated to provide a records management service. However, there are still a few considerations as discussed below, which call for caution, should a decision be taken to follow this route.

Although there are common elements between electronic document management systems (EDMS) and electronic records management systems (ERMS), the difference between the two is significant. Bantin (2002) explains that there are three prominent types of systems that manage electronic documents and records today: online transaction processing (OLTP) systems, decision support systems (DSS), and electronic document management systems (EDMS). Bantin (p.6) discusses the similarities and differences between EDMS and ERMS as follows: "EDMS applications more closely resemble record keeping systems than any other type of information system. However, even EDMS applications lack some of the key requirements necessary to

manage documents over their entire life-cycle and to create reliable and authentic records that provide evidence of critical activities of the institution”.

On the advantages and disadvantages of integrating electronic records requirements into EDMS Barry (1994, p. 3) argues that:

ERMS is more likely to enjoy higher priority, survive the budget knife and receive needed technical support from the internal information management and technology support organisation if it is implemented as part of a corporate EDMS than as an independent system. The down side of the argument is that there are very few EDMS systems yet available on the market, which have sufficient functionality to support ERM needs and information management technology specialists are often unfamiliar with such systems or related technology.

Fernandez and Sprehe (2003) support this argument with their claim that few electronic document management systems (EDMS) available on the market have sufficient functionality to support ERM needs. The unfamiliarity by the information management technology specialists with ERMS is the more reason why there is need for close collaboration between information management technology specialists and records management specialists.

3.2.2 The records continuum theory

Some writers (Flynn, 2001; Ghetu, 2004; Jackson, 2008; O’Shea, 1996; Pederson, 1999; Upward 2000; Yusof & Chell, 2000) have questioned the records life-cycle’s suitability to managing records. Some of them argue that this is so particularly in an electronic environment, suggesting that the records continuum model is more appropriate for the management of electronic records. Their arguments centre on the fact that the life-cycle theory fails to cater for the design stage of records keeping systems, and the fact that records may transform into new records (Yusof & Chell, 2000, p. 138). According to Jackson (2008, p 3), records exist before they are “born” through links to business processes analysis and systems design and can be recovered after “death” either by recovery forensically or due to the usual use of a form of “soft delete”. Pederson (1999) in an e-discussion forum on the *Life-cycle and Continuum Debate* explains that the records continuum is about “a regime for records keeping ... as continuous, dynamic and

ongoing without any distinct breaks or phases”.

The continuum theory, like the records life-cycle theory, acknowledges that records have a life-cycle, but that in an electronic environment, the stages of that life-cycle are not rigidly set and that the life-cycle can be extended. According to Upward (2000, p. 1) “the continuum is being used in Australia as a metaphor to assist in getting records management right in record keeping environments built around electronic communications, and the model supports this endeavour”. The records continuum model is defined by the *Australian Standard for Records Management* as a “coherent regime of management processes from the time of the creation of records and before creation in the design of record-keeping systems, through to the preservation and use of records as archives” (AS 4390.1-1996: General, Clause 4.6, as cited in Roberts, 1998). The records life-cycle starts from creation, whereas the records continuum covers the design of record keeping systems. This is illustrated in figure 3.2.

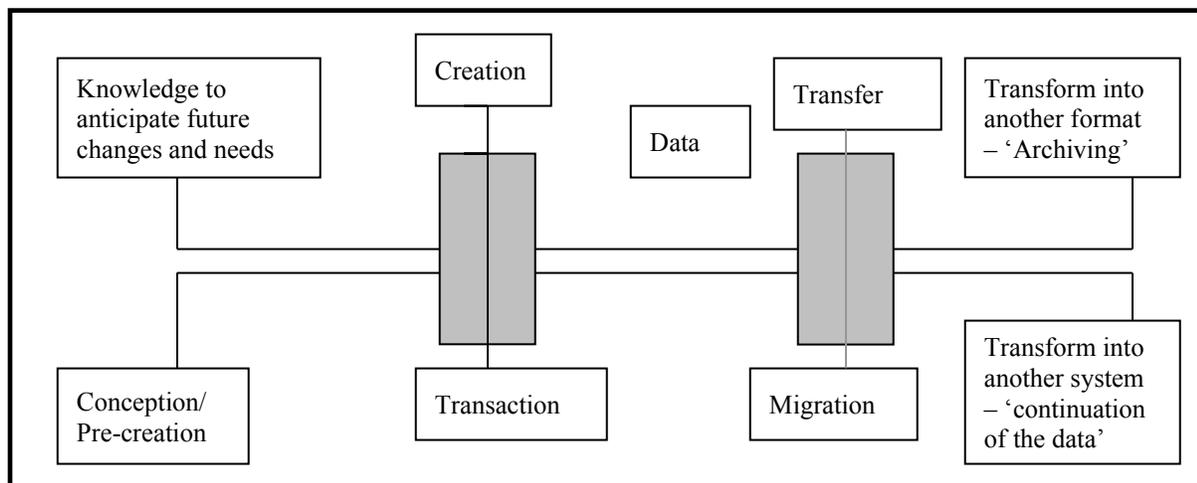


Figure 3.2 The Continuum of Electronic Records

Source: Yusof and Chell (2000, p. 139)

Figure 3.2 highlights one of the criticisms of the records life-cycle model’s suitability in managing electronic records. O’Shea (1996) argues that the life-cycle approach, based on the movement of self-contained paper-based records from creation through administrative use to ultimate destruction or retention, is unsatisfactory in a changing technological environment. Through systems upgrade and migration, e-records can transform into new records or format (Yusof & Chell, 2000). “Electronic records can move backwards in the continuum from

“archival” to current use easily when required or reused at the end of their “life” to create new data”.

Following the e-discussion forum on the *Life-cycle and Continuum Debate*, (1999) this author is of the opinion that the difference between the life-cycle and the continuum is not very clear to many professionals and requires further research. This is based on comments such as “that sounds just like the life-cycle”. One correspondent remarked that what the Australians referred to as the continuum was in fact what she calls the life-cycle. A model by IRMT (1999c) of managing records reflecting the records continuum appears not to be different from the records life-cycle, confirming this ‘confusion’. The model comprises the following actions:

- the creation or acquisition of the record
- its placement within a logical, documented system that governs its arrangement and facilitates its retrieval throughout its life
- its appraisal for continuing value, recorded in a disposal schedule and given effect at the due time by appropriate disposal action
- its maintenance and use, that is, whether it is maintained in the creating office, a records office, a records centre or an archival repository, and whether the use is by its creator or a successor in function or by a third party, such as a researcher or other member of the public. (p. 21)

The suitability of the life-cycle approach for managing paper records has been proven over the years, and continues to have a place in the management of electronic records although it has shortcomings. An integration of the records life-cycle and records continuum theories would provide a model of managing records that takes into account the stages, which records go through. It will ensure incorporation of record keeping requirements at the design stage of information systems and make room for transformation of a record at the end of its “life”. Yusof and Chell (2002) argue that organisations’ management of records should incorporate both the life-cycle and the continuum concepts as they do not exist independently of each other since currently and in the foreseeable future, organisations will continue to operate hybrid systems.

A theory incorporating the records life-cycle and continuum concepts has been referred to as the hybrid records life-cycle theory. Chachage and Ngulube (2006) give a simplified explanation of the hybrid records life-cycle as the blending of the pre-natal stage of the records continuum with the records life-cycle conceptual stages. This explanation highlights one of the shortcomings of the records life, which is that it does not include the design stage of electronic management systems. Arguments by O'Shea (1996); Yusof and Chell, (2000), highlight another important factor regarding electronic records, the fact that paper records are universally treated as physical tangible objects and records in the electronic environment are not. Yusof and Chell argue that:

the records life-cycle concept and its division into several stages clearly indicates that records are managed as objects ... However, records in the electronic environment are no longer tangible objects ... it is the content of the record and no longer the medium that becomes the concern for records management”(p. 137)

Moss (as cited in Flynn, 2001) comments that in the United Kingdom the records continuum model has hardly gained the ascendancy it enjoys in Australia and calls for more research into the continuum model to clear this apparent ‘confusion’ between the life-cycle and records continuum models. According to literature search conducted by this author, writings on the records continuum seem to have been prolific in the nineties/early twenties but thereafter not much has been written on the subject.

3.2.3 Applying knowledge management theories to e-records management

The continuum theory recognises that records keeping in an organisation requires cooperation among all parties involved in the operations of the organisation. This is particularly true in an electronic environment where the use of some software applications such as e-mail systems, text editors, and spreadsheet applications has moved control over the creation and preservation of records away from central control to the individual (Meijer, 2001).

The changing environment within which records managers and archivists are operating, determines the nature of cooperation required among action officers, records managers, archivists and IT personnel. This cooperation can be explained by the structuration theory of Giddens (as cited in Lyytinen & Ngwenyama, 1992), which provides an “ontological framework

for the study of human social activities, that is, recurrent social practices and their transformation” (Lyytinen & Ngwenyama, 1992, p. 23). This theory is applicable to e-government particularly where e-government is at a stage of active interaction between government and its citizens. Mutula (2006, p. 567) argues that a “knowledge management based approach to implementing e-government projects in East and Southern Africa ... provides an important framework for enhancing transparency, integrity and accountability in government ...” Experiences have shown that for e-government to succeed it must be based on a solid foundation of well kept records. Records management is one of the decision support systems for e-government. Mutula (p. 573) explains that “e-government is an information intensive environment that consists of decision support systems such as records management systems, integrated financial management systems, human resource management systems, communication systems, databases and portals”. According to Pozzenbon and Pinsonneault (2005, p. 356), “Structuration theory provides a theoretical approach that helps understand users’ interaction with information technology (IT) and the implications of these interactions”.

Medina (2008, p. 2) explains this user interaction with IT in relation to electronic records as follows:

Just as employees are required to understand how to properly operate equipment and work in a safe manner, they should be aware of the risks of poor records management. You wouldn’t give an employee the keys to a piece of heavy equipment without proper training on how to use it. The same should apply to the use of e-mail and other applications that generate information that may bring harm to an organisation if not used properly.

Namibia has embarked on e-government, which has seen an increase in the number of officers with computers and access to e-mail, development of websites or revision of existing websites by Government institutions and the move towards web-based technologies where information systems, which have been client-server based have been transformed into web-based.

Lyytinen and Ngwenyama (1992) present a structural analysis of cooperative work that can be applied to the management of electronic records. They define cooperative work as “sets of cooperative practices drawing upon specific rules/resource sets that are jointly produced and

reproduced through shared, recurrent social and economic interactions among individuals” (Lyttinen & Ngwenyama, 1992, p. 28). The creation and preservation of reliable and authentic electronic records requires a shared purposive activity among the parties involved, which can only be achieved through cooperative action. Cooperative work would require flexibility by records managers and archivists to blur traditional boundaries and “re-set the line of responsibility between the agencies and the archives/records programmes” (Dearstyne, 2002, p. 154).

According to Steemson (2004, p. 5), e-government requires records managers to reshape their organisations by “re-training fellow workers from chief executive to humblest clerk to think about records management, applying controls to everything they write or receive”. These workers can be grouped according to their records management practices and needs. Management makes up one group. These rely on secretaries to manage their records, most of them contrary to records management practices as set in the Archives Code. Another group consists of action officers who can be further divided into those who are aware of records and the importance of managing them, and those who are not. Yet another group would be the IT officers who are key stakeholders in the management of electronic records but might not understand records the way the records managers do. An obvious group is the records keeping staff. Applying communities of practice theory (Wenger, 1998) records managers need to act as brokers who can influence a community of practice to change the way they look at things. They can also act as a bridge amongst the different communities. The records manager can act as the bridge between management, National Archives and all the other groups in terms of selling records management, training in good records management practices, and conveying records management policy.

Wenger (1998, pp. 2-3) argues that “communities of practice in organisations arise as people address recurring sets of problems together. So claims processors within an office form communities of practice to deal with the constant flow of information they need to process”. Similarly action officers may form communities of practice to deal with poor service by the registry, or the registry might form a community of practice to deal with non-cooperative action officers or non supportive management. According to Wenger (1998, p. 2), “membership is

based on participation rather than an official status ... and span institutional structures and hierarchies”. A community of practice can comprise of a few officers regardless of rank, who are aware of records management and the importance of records and trying to do the right thing amidst the indifference from the majority of the officers. These can influence the rest on proper records keeping.

The study aimed to establish an approach feasible for the management of records in the Namibian Public Service, thereby partly answering the research question: “What is the appropriate records management model and standards for the management of records in the Public Service of Namibia?” The researcher proposed a model that incorporates records management and knowledge management theories.

3.3 What is an electronic record?

In an IT environment, it is important to understand what “records” are. If reliable and trustworthy records are to be captured and preserved, the records management’s perspective of the term “record” has to be well understood by all parties concerned. Xiaomi (2001, p. 6) states that one of the aspects in which the records continuum model differs from the life-cycle model, is “the elements of records definition”. For the records life-cycle model, it is the physical entity and for the records continuum model the elements are content, context and structure. Metadata, which incorporates content, context and structure metadata is an important aspect in the understanding, management and preservation of electronic records.

3.3.1 Records are evidence

Records management considers records as linked to an activity, and information technology experts see records as any information in digital form, which would include all types of recorded documentation. The management of electronic records is a collaborative effort between records managers, creators of the records and IT specialists, all who view a “record” differently. Turnbaugh (2002, p. 34) calls for “redefining record and the products of information technology” as a first step in investing real authority in the record professions.

The *International Standard on Records Management* (ISO 15489 –1:2001(E)) defines records as “information created, received, and maintained as evidence and information by an organisation or person, in pursuance of legal obligations or in the transactions of business” (International Organisation for Standards (ISO), 2001, p. 3). Schellenberg (2002, p. 16) defines records as “... documentary materials, regardless of physical form or characteristics, made or received by any public or private institution in pursuance of its legal obligations or in connection with the transaction of its proper business ...” The definition by the International Council on Archives (ICA) Committee on Electronic Records (Erlandsson, 1996, p. 7), which refers to records as “recorded information produced or received in the initiation, conduct or completion of an institutional or individual activity and that comprises content, context and structure sufficient to provide evidence of the activity regardless of the form or medium” shares a lot in common with Schellenberg’s definition but goes on to spell out that they must comprise ‘content, context and structure’. This definition clarifies the concept of record, as records management professionals understand it and how it differs from the information technology professionals’ understanding. It also differentiates records from other types of recorded documentation such as data, information, documents and knowledge.

All three definitions cited above agree on one thing and that is, records are a result of an activity, be it a business or a personal transaction. Records and archives management is coming to a consensus around a definition of record as “recorded information in any form created or received and maintained by an organisation, person or system in the transaction of business or the conduct of affairs and kept in a widely accessible form as evidence of such activity” (*Electronic Records Management*, n. d., p. 11). Electronic records are records, which satisfy the conditions and characteristics discussed above, and which have been created digitally. They include word processing documents and e-mails.

3.3.2 Metadata

Effective management of electronic records requires that data, which describes the records, i.e. metadata, be captured and preserved with the records. The purposes of record-keeping metadata as summarised by IRMT (1999a, pp. 22-23 include:

- identifying records;

- authenticating records;
- administering terms and conditions of access and disposal;
- tracking and documenting the use(s) of records;
- enabling access/location, retrieval and delivery for authorised users;
- restricting unauthorised use; and
- capturing in a fixed way the structural and contextual information needed to preserve the record's meaning.

Metadata can be defined as a set of data elements used to describe, represent, and manage information objects over time (Bantin, 2002, p. 4). Metadata is background information required to make sense of data, and this is done by linking the content to its structure and context. Structure and context imply presence of metadata (IRMT, 1999a, p. 22). The IRMT further explains that:

Structural metadata consists of information about the design of the data or records... Contextual metadata identifies the provenance of a record, such as the person or system responsible for creating it... Content metadata contain the actual data that documents the transactions. (IRMT, 1999a, pp. 23-25)

Bearman and Trant (1997, p. 3) in their report on the deliberations of an Electronic Research Working Meeting Session on the Definition of Electronic Records state that the consensus largely developed since 1990, is that:

1. Records are evidence of transactions (relationship of acts), means of action and information about acts.
2. Records are known by their metadata-form.
3. Ideal records metadata can be defined from societal understanding of recordness.
4. Any record will be a better record (less risky) for having complete metadata.
5. The metadata is about content, context and structure.

Duranti (2001, pp. 272-273) identifies seven components of an electronic record as follows:

- Medium – the physical carrier of the message;
- Content – the message that the record is intended to convey;
- Form - the rules of representation that allow for the communication of the message;
- Action - the exercise that gives origin to the record;
- Persons - the entities acting by means of the record;
- Archival bond – the relationship linking the record to the previous and subsequent one;
and
- Context – the juridical, administrative, procedural, and documentary framework in which the record is created.

The research project, *Functional Requirements for Evidence in Recordkeeping* undertaken by the University of Pittsburg from 1993 to 1996, under the direction of Professor Richard J. Cox, identified key recordkeeping metadata (*Electronic Records Management*, n.d.). The project's primary objective was to develop a statement of requirements for ensuring the preservation of evidence in recordkeeping. It came up with 67 metadata items and established that metadata must be captured at the design stage of electronic information management systems, and be maintained in active software environments (Wallace, 1994).

After the Pittsburg project other research projects came up with their own set of metadata. These include University of Albany (1999) *International Research on Permanent Authentic Records in Electronic Systems* (InterPARES); University of British Columbia (UBC) Project (n.d.) *The Preservation of the Integrity of Electronic Records*; the National Archives of Australia (2000) *Record Keeping Metadata Standard for Commonwealth Agencies*; the New South Wales, State Records (2001) *Record Keeping Metadata Standard*) and the Department of Defence (2002) *Design Criteria Standard for Electronic Records Management Software Applications*. Most of the lists of recordkeeping metadata differ in the way they are organised, in the amount of description they provide on specifications and specific items they list as essential or mandatory, but they agree on the following:

1. Basic categories of metadata that systems should capture and retain, e.g. most metadata lists include various pieces of documentation to describe the context of creation. This contextual metadata typically includes information on the agents involved in creating, receiving, and transmitting the record; the date of receipt; and the relationship of the record to the specific business processes and to related records.
2. Metadata model includes some documentation on terms and conditions of access and use, and that the system document use history.
3. Data on disposition of the record, such as disposal authorisation and date, and a disposal action history.
4. Metadata describing the record content, such as information on the title of the record, date of creation, and subject.
5. Information on the structure of the record, such as documentation on how the record is encoded, how the record can be rendered, and how the content of the record is structured. (*Electronic Records Management*, n.d.)

The researcher designed the questionnaire for IT staff, as well as a checklist for analysing information systems in the cases studied, based on these five areas in order to establish if electronic information management systems are capturing records to provide evidence and establish if electronic records management systems (if any) incorporate the necessary records keeping requirements.

3.3.3 Electronic mail (e-mail) as official records

E-mail, a document created or received on an electronic mail system, is just another form, in which records come into organisations. E-mail warrants special focus due to its widespread and substantive use within organisations. By looking at a number of guides produced by various organisations on managing electronic mail, two categories come out, official e-mail and non official e-mail. Official e-mail, received in the course of business is an official record and must

be preserved like any other official records of the organisation. Non-official mail (including personal messages and junk mail) are not records and may be deleted at any time (Maine State Government, Records Management Services, 2003).

Wallace (2001) discusses two lawsuits in the United States of America, PROFS (Armstrong v. Executive Office of the President) and General Records Schedule (GRS) 20 (Public Citizen v. Carlin). These cases led to the establishment of an e-mail record keeping policy in the United States Federal Government. In 1993 the Federal Government changed its stance from arguing that e-mails did not produce official records and that e-mail messages were comparable to telephone conveyed messages; to focussing instead on the records keeping issues that its use brought about (Wallace, 2001). As Turnbaugh (2002) argues, people have the notion that records are on paper only and if records managers are going to win the battle of managing electronic records, they have to make people understand that they could be in any other physical form.

Studies (Keakopa, 2007; Nengomasha, 2004; Nengomasha & Beukes-Amiss, 2002) carried out in the Namibian Public Service reveal use of e-mail technology in the Public Service but there are no clear guidelines on how to deal with the management of e-mail records. Sejane (2005) in a study on electronic records management in the public sector in Lesotho came up with similar findings. Keakopa (2007) states that the Public Service of Namibia's IT policy addresses e-mail communication, but it is not effective as most civil servants seem not to be aware of the policy.

A study by the Graduate School of Library and Information Science at the University of Texas at Austin identified four approaches to managing e-mail as a record. These are:

1. Printing to paper;
2. Managing e-mail records within the e-mail system;
3. Integration of e-mail messages into a document management system; and
4. Capturing e-mail records within a records management system (University of Texas at Austin, Graduate School of Library and Information Science Technology, 1997).

The University of Texas at Austin study identified advantages and disadvantages for each of the four approaches and recommended incorporation of all e-mail records into a records

management system alongside other electronic documents and paper-based documents. Advantages of integrating ERMS and EDMS are discussed at 3.8.

The University of Texas at Austin study, which included private and public sectors revealed that printing to paper was the approach used most. The litigation described by Wallace (2001) touched upon the issue of the suitability of printouts as surrogates for original electronic records. The ruling on the basis of what was happening at the time was that printouts were not exact duplicates of the original electronic record. Wallace (2001, p. 7) points out that it was an issue of metadata, that is, “the capture of transmission data along with the record copy and then their transfer into a record keeping system”. Following a change in legislation in the United States, e-mail messages can be deleted provided the name of the sender, name of the date and time of transmission and/or receipt is printed with the message (Maine State Government, Records Management Services, 2003). This information is the metadata Wallace refers to. The printed messages are then dealt with like any other records of the organisation. The legal issues regarding electronic records in Namibia are discussed in 3.6.

The archiving of e-mail has been put forward as a solution to management of e-mail and a “best-first step” towards compliance with legal requirements (Nicholson, 2008, p.1). Medina (2008) cautions that e-mail must be managed as a business record; and it must be done in a manner consistent with existing records management policies and practices. Cover (2007) cites examples of poor e-mail management, which include ignoring retention and disposition requirements or not deleting e-mail messages at all. Medina argues that e-mail should not be treated as a records series by simply creating a store of all e-mail. The experience of the United States is an example of how governments can be adversely affected by poor management of e-mail. The White House’s practice of recycling back-up tapes before 2003 led to arguments that some e-mails were lost and has been “the subject of several lawsuits” (Williamson & Eggen, 2008).

The study sought to identify the approaches for managing e-mail in use in the Public Service of Namibia, assess their effectiveness and if need be make recommendations on a suitable approach depending on whether there is a paper based filing system or an electronic document and/or records management system; and taking into consideration the legal and regulatory environment.

This section of the literature review has attempted to explain records and in particular electronic records as defined in this study. The study was based on the assumption that since the Government of Namibia has embarked on e-government, it should result in the increase of electronic records and a corresponding increase in reliance by the Government on electronic information. The study therefore needed to establish that electronic records are indeed being created in the Public Service. Establishing if indeed e-records are being created and captured in the Public Service and the nature of metadata preserved, provided an answer to the research question: “What is the status of records management in the Public Service of Namibia?”

3.4 E-Records readiness

One of the research questions this study sought to answer was: “Is Namibia e-records ready to support e-government?” E-records readiness is the capacity to create, manage, share, and use electronic records to support good governance (Lipchack & McDonald, 2003). Ideally governments should conduct high-level assessments of key areas of e-records readiness in relation to other aspects of e-government and to determine whether or not the records and information management infrastructure is capable of supporting e-government initiatives (IRMT, 2004). Establishing the status of records management in the Public Service of Namibia, which largely operates a hybrid system was important for this study. Mnjama and Wamukoya (2007, p. 280) state that there is a relationship between “the state of paper-based records systems and the success or failure of automation projects ... In many cases filing systems are unreliable and inconsistent, resulting in poor information capture and access”. They further advise that:

automated systems cannot simply be super-imposed on dysfunctional or chaotic paper systems as this has often been a recipe for failure in many countries. Given that African governments have largely operated in paper-based environment for a very long time, the change process from paper to electronic systems is bound to be more complex than is often realised. There is the need to fix the paper mess before contemplating to automate. When a decision is reached to automate, there is the necessity to maintain some sort of hybrid system, which allows for parallel or complimentary paper and electronic systems to co-exist for a period of time. (p. 280)

Governments wishing to implement e-government have carried out e-government readiness assessments, which is necessary to guide the planning process. In Namibia this resulted in the formulation of e-government policy framework and the development of an action plan (OPM, 2005a). E-readiness, the degree to which an organisation is prepared to participate in the networked world, should encompass e-records readiness assessment. This will enable the governments to “conduct high-level assessments of key areas of e-records readiness in relation to other aspects of e-government and to determine whether the records and information management infrastructure is capable of supporting e-government initiatives” (IRMT, 2004, p. 1).

A survey was conducted by Bridges.org (2005) to ascertain where e-readiness assessments have been conducted and the tools used. A total of one thousand five hundred and six (1 506) e-readiness assessments have been conducted (Bridges.org, 2005, p. 2). Two of these were in Zimbabwe and Namibia. Looking at Namibia (DPSITM, 2004) and Zimbabwe’s (Office of the President and Cabinet, 2005) e-readiness’ assessment reports, this researcher concluded that these e-readiness assessments did not include e-records readiness.

The E-records Readiness Tool designed by the IRMT (IRMT, 2004) provides a simple, high-level assessment that determines whether or not a government or a public office’s records and information management infrastructure is capable of supporting e-government initiatives. The tool is a brief questionnaire that divides e-records readiness into the 12 high-level components listed below, that make up the framework for managing electronic records, e.g. laws, policies, procedures and ICT infrastructure.

1. Legal mandate for the government-wide management of public records and information
2. Legal framework for e-commerce
3. Freedom of information and protection of privacy legislation
4. Government-wide ICT infrastructure and capacity
5. Government-wide e-records management standards and guidelines
6. Government-wide digital preservation strategy

7. Policies and responsibilities for records and information management
8. E-records management products and technologies
9. Resources and training for records and information management personnel
10. Tools and procedures for records and information management
11. Internal and public awareness of records and information management
12. Compliance with records and information management policies and procedures. (IRMT, 2004, p. 1)

These components touch upon some areas of concerns highlighted by over 300 participants from around the world during an *Electronic Discussion on Electronic Government and Electronic Records: E-Records Readiness and Capacity Building* (IRMT, 2003). The areas of concern, considered as critical to e-records readiness and to the ability of governments or institutions to manage electronic records, are:

1. The lack of understanding by public officials at all levels about the purpose and nature of “records” and record keeping, and about why they need to exist, why they need to be managed, and what their responsibilities are for the management of records through time.
2. The perception or misperception that computer technologies will solve all information management problems, and increasing governmental and international focus on information technology without parallel level of support for records management programmes, including the care of both electronic and paper-based records.
3. Despite the perception of the power of information technologies (above), the reality of a “digital divide “ in the electronic age and the disparity around the world in levels of access to information technologies, which leads to challenges in managing, preserving, and making available information and records in electronic form.

4. The lack of clarity about how to create/capture, manage, protect, and preserve electronic records and the products of information technologies, coupled with continuous change in technologies and systems.
 5. The absence of or weakness in legislation and policies – including formal frameworks for accountability – for the management of information technologies and their products, including electronic records, as well as for paper records.
 6. The lack of systems, standards, practices, and guidelines for the management of IT products and electronic records, or the difficulty of obtaining or applying existing standards effectively.
 7. The need for effective strategies for records professionals and others to know where to start, who to contact, how to move forward to deal with the above issues.
- (IRMT, 2003).

As part of the study, an e-records readiness assessment for Namibia using the E-Records Readiness Tool, was able to establish the extent to which, these concerns are applicable to Namibia's Public Service and at the same time answer the question "Is Namibia e-records ready to support e-government?" This study is one of the few studies which have established the practical application of the Tool particularly in an African situation. Moloi (2007) presents the findings of a study carried out in 2006 to establish the e-records readiness of the Public Service in Botswana. The study applied some of the components leaving out one component "Tools and procedures for records and information management", which this researcher consider critical to establishing e-records readiness, bearing in mind one area of concern the world's records managers and archivists consider as critical to e-records readiness and to the ability of governments or institutions to manage electronic records. This is the lack of understanding by public officials at all levels about the purpose and nature of "records" and record keeping, and about why they need to exist, why they need to be managed, and what their responsibilities are for the management of records through time (IRMT, 2003).

The first six of the twelve components address national, government wide e-records readiness and the last six components address agency-specific e-records readiness. The literature reviewed covers issues relating to most of these components. Chapter two addresses the component “Government-wide ICT infrastructure and capacity” based on the e-readiness assessment conducted for the Public Service of Namibia as well as other sources. The study eliminated those components covered by the e-readiness assessment such as “Government-wide ICT infrastructure and capacity”.

3.5 Strategies for preservation of electronic records

An overall goal of digital preservation is to ensure that electronic records are available, readable and intelligible. Availability refers to the records being present and accessible for use. A back-up disk that cannot be read or whose contents cannot be understood is not useful. Readability refers to digital objects or composite objects that can be processed on a computer system or device other than the one that initially created them, or in which they are currently stored. Intelligibility can be defined as the requirement that the digital information be comprehensible to a human being (Digital Preservation Testbed, 2001a).

3.5.1 Factors threatening long-term preservation of e-records

Several writings suggest that the main problem surrounding the preservation of authentic electronic records is that of technology obsolescence (Bantin, 2002; Digital Preservation Testbed, 2001a; Oltmans, 2005; Rothenberg, 1999). Ensuring that electronic records remain authentic is a complex issue, which has generated a lot of debate and research. Ross and Hedstrom (2005, p. 1), members of a working group to define a working agenda for digital archiving and preservation, identified “twenty-two research activities worthy to be investigated”. This literature review refers to the following research projects:

- The research on “*Digital Preservation: carrying Authentic, Understandable and Usable Digital Records Through Time*”, which explored few technologies and approaches for the long-term preservation of digital records (Digital Preservation Testbed, 2001b);

- The Digital Preservation Testbed founded by the Netherlands National Archives and Ministry of the Interior and Kingdom relations to in 2000 to research different methods of digital preservation over the long term (Digital Preservation Testbed, 2001b);
- University of British Columbia (UBC Project) “*Preservation of the Integrity of Electronic Records*” aimed at developing a set of functional requirements to be used in the design and implementation of electronic records management systems (University of British Columbia Project, n.d.);
- InterPARES Project, which is a collaborative effort among fourteen countries to develop strategies, policies and standards of authenticity and preservation of electronic records within archives (Duranti & Thibodeau, 2001; Sannet & Park, 1999); and
- United States Task Force on the Archiving of Digital Information, a task force of the then Commission on Preservation and Access published its final report in 1996 (Rothenberg, 1999).

Authentic records are what they purport to be and authenticity guarantees that the record is not changed or manipulated after it has been created or received or migrated over the whole continuum of records creation, maintenance and preservation (Duranti, as cited in Sannet & Park, 1999). Strategies for digital preservation must also preserve the authenticity and integrity of records (*Electronic Records Management*, n.d.).

Since the early 1990s, there has been growing recognition that electronic records will become inaccessible after being kept for long periods of time, unless some positive action is taken to preserve them. The fragile nature of electronic medium, and the dynamic way in which technology is deployed, threaten the reliability and authenticity of electronic records if appropriate information management disciplines are not applied. Electronic records are susceptible to deliberate or accidental deletion and the medium on which the information is stored, is fragile. Cornwell Management Consultants, (n.d.); Duranti, 2001; IRMT, 2004; Meijer

2001; Millar, 2004; and Rothenberg, 1999 concur that the long-term preservation of electronic records is being threatened by factors, which include:

- Media instability and deterioration;
- Obsolescence and incompatibility of hardware, software, data formats or storage media;
- Lack of metadata, which makes it difficult to access information or to use it meaningfully because of the lack of contextual information; and
- Lack of clearly assigned responsibilities and resources for long-preservation.

It is widely agreed that this state of affairs is worldwide but worse in developing countries for the following reasons:

- low status accorded to records and archives management;
- absence or weak legislative and policy frameworks for electronic records management;
- the absence of and difficulty in applying technical and operational standards for the creation, management, and preservation of electronic records; and
- the lack of adequate training and education in information technologies (IT) and electronic records management. (Millar, 2004, p. 4)

The above suggests that factors threatening long-term preservation of electronic records are policy, technology and skills related. The study therefore investigated all these factors.

3.5.2 Solutions for preservation of e-records

Several writers (Bantin, 2002; Digital Preservation Testbed, 2001a; Hedstrom, n.d.; Oltmans, 2005; Ross & Hedstrom, 2005; Rothenberg, 1999) discuss possible strategies for the long term preservation of digital records. These include implementation of electronic records management policies, control of the creation and disposal of records by individuals, good storage conditions and migration and emulation to take care of the problems of hardware and software obsolescence, and the designing of reliable record keeping systems.

3.5.2.1 Electronic records management policies

Preservation of electronic records should not be left until the time of archiving. Ross and Hedstrom (2005, p. 3) state that preservation measures should be inbuilt in all aspects of the life-

cycle of a digital entity as it impacts on what should be preserved, how it should be preserved, and what information exists about its context of creation and use. They reiterate earlier views, such as those of the Electronic Records Working Meeting (Bearman & Trant, 1997). The Meeting agreed that broad frameworks directing people to keep electronic records need to be accompanied by specific performance standards, monitoring/reporting mechanisms, rewards and penalties. The meeting went further to call for sound electronic records management policies, which are implementable (Bearman & Trant, 1997).

Responsibility for the creation and retention of electronic records has shifted to individuals (Meijer, 2001). How do organisations ensure the creation of reliable and trustworthy records in such an environment? Ross and Hedstrom (2005) argue that organisations using ICTs are confronted with choices concerning the implementation and use of ICTs. These choices can result into conflict. An organisation can choose between strong central control as opposed to less emphasis on central control. As he correctly observed less control over e-mail could lead to loss of messages important for accountability. He concludes by saying that there is no one simple answer to what solution organisations should settle for.

The issue of control over creation and retention of records including e-mail was investigated in this study.

3.5.2.2 Digital preservation strategies

The physical and chemical changes in the storage media can be minimised by good storage conditions. However the obsolescence of hardware and software requires technical solutions. There has been a view that there is no general solution to this problem but it is possible to solve the specific technology obsolescence problems faced by a single organisation (Cornwell Management Consultants, 2004). Yet another view is that preserving an electronic record is literally impossible, only the ability to reproduce an electronic record is possible to preserve. One can store the contents of the records; along with special bit strings that indicate how it should be structured and presented but the sum of those bits is not itself the record. The application of some software is needed to put the bits into a state recognisable as part of a record (Duranti & Thibodeau, 2001). (Duranti & Thibodeau, 2001, p. 49) argue that based on the inevitable

necessity to reproduce an electronic record, demonstrating the authenticity of electronic records depends on verifying that:

- the right data was properly stored;
- either nothing happened in storage to change this data or any changes are insignificant;
- all the right data and only the right data were retrieved from storage; and
- the retrieved data was subjected to an appropriate process and the processing was executed correctly to output an authentic reproduction of the record.

These views refute findings of earlier research by The United States Task Force on the Archiving of Digital Information, a task force of the then Commission on Preservation and Access whose final report in 1996 concluded that there is as yet no viable long-term strategy to ensure that digital information will be readable in the future (Rothenberg, 1999).

There are several strategies for digital preservation. The main preservation strategies are technology preservation; printing to paper; emulation; encapsulation; virtual machine software; eXtensible Markup Language (XML); storage in standard formats; and migration (Digital Preservation Testbed, 2001a; Rothenberg, 1999). Hedstrom (n.d.) states that until the last few years, digital preservation had relied on two main technical strategies standards and migration. Digital Preservation Testbed (2001a) support this assertion by Hedstrom by referring to migration as the most familiar and most widely-implemented preservation approach and citing The InterPARES project results of 2000-2001 survey of record-keeping institutions, which identified migration as the most prevalent approach. To date two strategies stand out, emulation and migration. Rauch and Rauber (2004, p. 1) state that “a number of projects and working groups elaborated two major strategies to preserve digital objects over a longer period, namely emulation and migration...” This literature review discusses these two strategies: migration, which has mostly been used, and emulation, a new approach, which is considered to offer a better solution.

Migration is “a set of organised tasks designed to achieve the periodic transfer of digital materials from one hardware/software configuration to another or from one generation of computer technology to a subsequent generation” (Task Force on Archiving Digital Information,

as cited in Digital Preservation Testbed, 2001a, p. 9). Although it has been widely used, it has also been criticised. Some of the shortcoming of migration cited are the fact that results are often unpredictable mainly due to lack of testing and documentation; may involve loss of data; lack of industry standards in place; migration is not a unitary one-time process because migration requires a new solution for each new format and each type of document to be converted to new form and the massive volume of data and/or the rate of technological changes is likely to overwhelm most migration schemes (Digital Preservation Testbed, 2001a; 2001b; Hedstrom, n.d.; Rothenberg, 1999).

Emulation has been cited as the only approach that appears to offer a solution to digital preservation (Rothenberg, 1999) and is being investigated as an alternative to migration (Hedstrom, n.d.). Emulation is based on the theory that the only way to ensure authenticity and integrity of the record over the long term is to continue to provide access to its original environment, i.e. its original operating system and software. This is done by preserving not only the record, but also an emulator specification, which contains enough details about the original environment for that environment to be created on a future computer when necessary. The main proponent of this is Rothenberg (1999) who first outlined it in 1992. Hedstrom writes positively on emulation, which has been referred to as the only proposed approach that appears to offer a true solution to the problem of digital preservation (Erlandsson, 1996). However emulation has been criticised on the following grounds:

- (a) It is largely theoretical and has not been put into practice for electronic records preservation (Walker, n.d.);
- (b) The development and maintenance of emulation tools is complex (Digital Preservation Testbed, 2001a; Oltmans, 2005); and
- (c) There is no guarantee that it would be possible to recreate the full computing environment of the record on future computers (Digital Preservation Testbed, 2001a).

A study by Sejane (2005) on electronic records management in the public sector in Lesotho concluded that there are no written policies and guidelines with regard to technical [digital preservation] strategies. The study however does not bring out the strategies if any being used in the Lesotho public sector. This study aimed to identify any digital preservation strategies being used in the Public Service in Namibia and their effectiveness, and based on the literature and the situation on the ground, come up with recommendations on suitable strategies for the Public Service of Namibia.

3.5.2.3. Metadata and authenticity

Several authors (Duranti & Thibodeau, 2001; Sannet & Park, 1999) writing on the authenticity of electronic records have referred to the InterPARES Project (n.d.), which is a collaborative effort among fourteen countries to develop strategies, policies and standards of authenticity and preservation of electronic records within archives. The InterPARES Authenticity Task Force's goal was to identify conceptual requirements for assessing and maintaining the authenticity of electronic records. The importance of the findings of this project is in a number of areas such as the designing of reliable records keeping systems; the development of rigorous security measures and control procedures that ensure the authenticity of records since creation; and establishment of trustworthy methods of overcoming obsolescence of live systems (Duranti & Thibodeau, 2001, p. 50). These findings support findings of an earlier project by the University of British Columbia (UBC) Project (n.d., p. 3) *Preservation of the Integrity of Electronic Records*, which determined that the reliability and authenticity of electronic records are best ensured by:

- embedding procedural rules in the overall records systems;
- integrating business and documentary procedure;
- emphasising their documentary context; and
- managing together records belonging in the same fonds.

Preservation of the authenticity of electronic records is crucial if electronic records are to provide evidence of government decisions and activities for accountability and good governance. If records are to be managed following a continuum of care throughout their entire life approach, it means that preservation strategies should be considered right at the design stage of electronic record keeping systems. The literature review established that there is no one single approach to

preserving authenticity of electronic records. The study therefore attempted to identify current practices in the Namibian Public Service and suitability of any of the approaches to preserving the authenticity of electronic records, thereby answering the research question, “How can the electronic records environment in Namibia’s Public Service be strengthened to support e-government?”

3.6 Legal and Regulatory Framework

Underpinning functional requirements identified and discussed in this chapter is the concept of compliance. The laws, regulations, and policies that authorise or define a specific government business process, either explicitly or implicitly, define the records keeping requirements for that process. Each requirement can be mapped to a compliance factor based on law, regulation, standard or best practice (Centre for Technology in Government, 1999). It is for this reason that this study had to answer the question, “What are the legislation and policies that guide the management and preservation of records in the Public Service in Namibia and what gaps exist, which need to be closed for these to adequately address electronic records management?”

Success of e-government requires a conducive environment, which comprises a strong legal and regulatory framework. Rob Floyd, Public Sector Specialist with the World Bank (Floyd, 2002) shares his experiences working on e-government programmes in a number of developing countries: “...the successful backbone of any successful e-government, evidence based governance system is a good national ICT policy, good legislation to back-up that policy, the ability to implement it and the infrastructure to maintain the integrity of data and information”. The E-Records Assessment Tool developed by IRMT (2004) is based on this understanding. Several of the components it addresses touch upon all these issues mentioned by Floyd. Okot-Uma (2002, p. 5) argues that “...the most fundamental entity that underlies the functionality of e-governance is the records that are kept electronically”. He therefore supports the need for comprehensive legal framework that looks at the following three aspects:

1. Electronic signatures, which will accord legal effect to transactions that have been conducted entirely electronically as well as give legal recognition and validity to records that exist electronically.

2. Party protection and trust legislation because citizens are involved as individuals. Such laws include customer protection laws so that a customer who is online is protected within the context of given jurisdiction, data privacy laws for the individuals, and cyber crime laws.
3. Set of laws, such as fiscal incentive legislation, customs laws, tax laws and core investment laws as well as intellectual property laws. (p. 5)

Records management responsibility as far as all these laws are concerned is to investigate the records management implications in all these laws and make sure that they do not conflict with core records management laws and regulations. Stevens (2002) advises that the passing of some legislation may require an overhaul of the records management infrastructure within the system so that they can meet the standards laid down in the new law itself.

3.6.1 Legislations Relevant to Records Management

Several legislations stand out in terms of their relevance to records management. These include records or archives acts, which guide records and archives management, the freedom of information, e-laws and data protection legislations. In addition to these are the finance, taxes, pension, and limitations legislations.

The University of Edinburgh (2005), in its *Records Management Policy Framework* cite Data Protection Act and Freedom of Information Act as being of general relevance to the University as a whole; the Finance Act, Taxes Act, and Pension Act, which guide specific functions. Similarly, the Joint Information Systems Committee (JICS) (JICS, 2003) considers Limitation Act, Data Protection Act and Freedom of Information Act as legislation, which affect the management of its records. A study carried out in the United Kingdom by Loadman (2001) showed that out of 35 respondents working in conformity to legislation, about thirty-three responded that they use the Data Protection Act. The next most used legislation after this is the Financial Services Act and the Statutes of Limitations Acts with about 22 respondents each. About seven respondents use the Public Records Act.

Investigating legislation and policies that impact on records management in the Public Service was important in this study as the researcher is in agreement with Mnjama and Wamukoya (2007, p. 280) that “the level of commitment to managing e-records can be gauged by the existence or non-existence of such things as records management policies and procedures”.

3.6.2 Legal and regulatory framework: experiences from other countries

It is widely agreed that records provide citizens with the means not only of holding the government to account for its conduct but also to safeguard their individual rights. A freedom of information law gives citizens access to any information the government may have as long as it does not fall in the protected areas like personal individual information such as medical records, commercial secrets, etc. Most OECD countries have passed access to information laws of one form or other, starting with United States, which was one of the first countries to do so in the early 1970s and followed by Canada. However the reality of provision of information to citizens is only realised if the records management systems can meet the demands for information (Department of Constitutional Affairs, 2002; Public Record Office (PRO), 2002; Stevens, 2002).

The passing of the *Freedom of Information Act* 2000 by Britain has led to a chain of instructions by the Lord Chancellor and the Public Record Office on records management. These include the *Lord Chancellor's Code of Practice on the Management of Records* issued by the Department of Constitutional Affairs (2002) (as per Section 46 of the *Freedom of Information Act*) and the ensuing *Model of Action Plan for Achieving Compliance with The Lord Chancellor's Code of Practice on the Management of Records* (Lord Chancellor, 2002) issued by the Public Record Office (PRO) (2002). This plan of action covers records created in all media and outlines steps needed to create effective records management systems so that Freedom of Information requests can be dealt with efficiently within the prescribed limits. Stevens (2002) assertion on the overhaul of legislation is supported by the United Kingdom experience, which realised the need to revise its national records and archives legislation. The rationale behind the revision given by the National Archives of the United Kingdom is that records and archives are now being widely used as a resource by the community since the enactment of the *Public Records Acts* of 1958 and 1967 (National Archives, 2003).

South Africa enacted the *Promotion of Access to Information* in 2001 (Pickover & Harris, 2001). The Act requires that every public and private body produce a regularly updated manual detailing their records systems and related contextual information. This is meant to provide citizens with information about the records in the custody of private and public bodies so that they know what is available for use. The Act is dependent on good records management for its effective implementation. Pickover and Harris bring up the same concerns raised in the United Kingdom. They claim that freedom of information has “a long road to travel” in South Africa, citing staff shortages of records keeping personnel, lack of resources, little status accorded to records management professionals, and high staff turnover. This is the situation that Millar (2004) describes and this is the same state of affairs coming out of the various studies (Barata et al., 2001; NRC, 2002; Nengomasha, 2004; Nengomasha & Beukes-Amiss, 2002) on Namibia’s Public Service.

United States enacted the *E-Government Act* in 2000. This Act made provision for the establishment of an Office of Electronic Government in the Office of Management and Budget (OMB) to improve Federal management of information resources. In Namibia, the OMB is the equivalent of the OPM and the Office of Electronic Government is the DPSITM. The Office of Electronic Government is headed by a presidentially appointed Administrator who assists the Director of OMB in implementing the requirements of the Act by providing overall leadership and direction on electronic government. This includes overseeing specific IT reform initiatives, activities and areas of shared responsibility under the Act such as access to, dissemination of, and preservation of government information. Section 207 of the Act makes provision for the improvement of the methods by which government information, including information on the Internet is organised, preserved, and made accessible to the public (Office of Management and Budget, 2004, p. 20).

The *United States E-Government Act 2000* endorses and requires agencies to support cross – agency initiatives such as E-Records Management. The Director of OMB approves projects funded by the E-Government Fund. Particularly interesting to note is that one of the criteria on which funding decisions are made, is that the project “identifies records management and records

access strategies” (Office of Management and Budget, 2004, p. 6). In compliance with Section 207, the Director of OMB established the Interagency Committee on Government Information (ICGI) in 2003 one of whose deliverables is *Recommend Policies and Procedures to OMB Director and National Archives and Records Administration (NARA) Archivist for Record Keeping of Information on the Internet and Other Electronic Records* (Office of Management and Budget 2004, p. 21). There are three ICGI working groups namely, the Categorisation of Information Working Group, the Electronic Records Policy Working Group and the Web Content management Working Group. The working groups include representatives from agencies throughout the federal government, including any relevant e-government programmes. The Electronic Records Policy Working group’s purpose is to fulfil the requirements of subsection 207(e) of the Act, *Public Access to Electronic Information* (Office of Management and Budget, 2004, p. 22). In addition the Electronic Records Policy Working Group acts as the executive board for the Electronic Records Management Government Project and provides ongoing consultation with the Archivist and interested parties regarding modifications to policies and procedures.

Experiences from other countries as reflected in this section of the literature review confirm the need for a supportive environment for e-records management. The study investigated how supportive the environment is for e-records in Public Service of Namibia and made recommendations on how Namibia can create a conducive environment based on some of these experiences.

3.6.3 Namibia’s legal and regulatory framework

Legislation plays a significant role in records management. From experiences of other countries relevant legislation includes the records and archives laws, e-commerce laws, freedom of information and data protection laws. Namibia has not enacted a freedom of information law yet. With regard to data protection, Namibia’s E-Laws Working Group notes “there is need for privacy laws in relation to for example, data protection, data interference and data monitoring” (OPM, 2005c, p. 4). The *Constitution of Namibia* Article 13 (1) entrenches an individuals’ rights with respect to the “non interference with the privacy of their ...correspondence or communication save in accordance with the law as is necessary in a democratic society...”

The *Archives Act* “provides for the custody and care of and control over archives in Namibia and for matters incidental thereto” (Republic of Namibia, 1992, p. 2). Although the Act states “in Namibia”, it binds public institutions only. The *Archives Act* empowers the NAN to regulate the filing and care and disposal of records, including electronic records in central government, local government and statutory institutions. Section 1 (a) defines archives as “all documents received or created in the course of conduct of affairs”. The definition does not make a distinction between records defined as “...documentary materials, regardless of physical form or characteristics, made or received by any public or private institution in pursuance of its legal obligations or in connection with the transaction of its proper business ...” (Schellenberg, 2002, p. 16), and archives i.e. the 3-5% of the records found worthy of permanent preservation. The definition does not take cognizance of the fact that a record goes through a life-cycle and that some records move from being records to archives, hence the life-cycle concept of managing records.

“In assessing laws, policies and procedures, it is of vital importance to examine whether the government accepts electronic records as evidence” (Mnjama and Wamukoya, 2007, p. 281). The researcher concurs and investigating the situation regarding acceptability of e-records as evidence was a part of the study. In July 1996, the United Nations Commission on International Trade Law adopted a *Model Law on Electronic Commerce*. During the last few years many nations have enacted new digital signature/e-commerce laws including Namibia whose law is at Bill stage. Namibia is working on a legal framework to regulate electronic transactions and commerce and to provide for related matters with the objective of promoting the use of information and communication technologies (ICT) (OPM, 2005c). Once this Bill is passed there will be legislation to regulate e-government in Namibia to some extent, taking into consideration that other legislations such as freedom of information and data protection are equally important to support this legislation. Namibia has an ICT policy, which was adopted in 2002, and at the time of its adoption it was recommended that the legal issues around electronic transactions and commerce be addressed.

The draft *Use of Electronic Communications and Transactions Bill* has been prepared and distributed for public comments by the E-Laws Working Group under OPM. The Bill's overall objective is:

To provide for the regulation and facilitation of electronic (e-communications and transactions; to promote the use of electronic communications and transactions; to provide legal certainty, recognition and functional equivalence of e-communications, e-transactions and information systems management, especially in relation to the use of electronic signatures, records and archives, and the security thereof; to promote and facilitate the use of information and communication technologies, to prevent the abuse thereof; and to provide for matters connected therewith (OPM, 2005d).

The Draft Bill has some strong and weak points with regard to electronic records management issues as discussed below.

1. Section 1 of The Bill defines 'electronic record' as "a record created, generated, sent, communicated, received or stored by electronic means". The definition is more in line with the understanding of electronic record according to information technology specialists and not the records managers' understanding. The definition of 'electronic record' needs to be revised in order to distinguish between electronic document and electronic record. It is not every electronic document that is an electronic record. An e-mail on some official transaction is a record whereas an article downloaded from the internet and stored electronically for reference is not. There is need for standardisation of the definition of electronic records in the final use of electronic communications and transactions legislation and Namibia's *Archives Act* when it is finally amended.

2. Section 12 (1) stipulates the following:

Where the law requires information to be presented or retained in its original form, that requirement is met by a data message if:

- a) There exists a reliable assurance as to the integrity of the information from the time when it was first generated in its final form, as a data message or otherwise; and

- b) Where it is required that information be presented, that information is capable of being displayed to the person to whom it is to be presented.

Section 12 (3) states that:

- c) The criteria for assessing integrity shall be whether the information has remained complete and unaltered, apart from the addition of any endorsement; and any change which arises in the normal course of communication, storage, display; and
- d) The standard of reliability required shall be assessed in the light of the purpose for which the information was generated, and in the light of all the relevant circumstances.

The concern of records management is whether organisations' e-communications and transactions applications and the electronic record that emanates from them can comply with these requirements. Records and archives managers should work closely with information technology specialists to ensure that such applications incorporate records keeping requirements, which will ensure the creation of trustworthy i.e. reliable and authentic records.

- 3. Section 13 (1) deals with the issue of admissibility and evidential weight of data messages. It states that:

In any legal proceedings, nothing in the application of the rules of evidence shall apply so as to deny the admissibility of a data message in evidence:

- a) On the sole ground that it is a data message; or
- b) If it is the best evidence that the person adducing it could reasonably be expected to obtain, on the grounds that it is not in its original form.

Section 13 (3) addresses the issue of reliability of electronic records. It stipulates that:

In assessing the evidential weight of a data message, regard shall be had to:

- a) The reliability of the manner in which data message was generated, stored or communicated;

- b) The reliability of the manner in which the integrity of the information was maintained;
- c) The manner in which its originator was identified; and
- d) Any other relevant factor.

The literature review has discussed earlier the importance of records as evidence as well as the metadata that should be captured and preserved to ensure the authenticity of electronic records including e-mail messages. An authentic record is one that can be proven to be what it purports to be, to have been created or sent by the person identified, and created or sent at the time purported (ISO 15489-1:2001(E)). The challenge for electronic records management is to ensure the preservation of electronic records' authenticity.

The passing of The Bill will make electronic records admissible in a court of law removing any uncertainties noted by Barata et al., (2001) in a study on the management of financial records in Namibia in their statement "It is unclear whether electronic records are admissible as evidence in a court of law. This clause is further strengthened by Section 10, which provides for the recognition of electronic signatures.

4. Section 14(1) Retention of records touches upon the issue of digital preservation to ensure accessibility, readability and intelligibility. It states that:

Where the law requires that certain documents, records or information retained, that requirement is met by electronic record retention, provided that the following conditions are satisfied:

- a) The electronic record contained therein is accessible so as to be usable for subsequent reference; and
- b) The electronic record is retained in the format in which it was generated, sent or received, or in a format which can be demonstrated to represent accurately the information generated, sent or received; and
- c) Such electronic record, if any, is retained in a form that enables the identification of the origin and destination of an electronic record or a message and the date and time when it was sent or received.

Section 14 (1) addresses an overall goal of digital preservation, which is to ensure readability and intelligibility in order to facilitate data exchange over-time (Bantin, 2002, p. 7). The causes of deterioration and obsolescence of digital records have been discussed in this chapter. Records management programmes would need to incorporate strategies, which will enable organisations to comply with the requirements of this section of the law.

All e-communications and transactions data should be scheduled for retention based on periods that meet business needs and comply with the law. An effective records management programme incorporates records retention and disposal schedules for the systematic disposal of records. Incorporating these in electronic information management systems will ensure compliance with this section of the law. As Stephens (2001) explains, “Such retention periods should be implemented by integrating data purge functionality consistent with approved retention periods into the software environment supporting the applications” (p. 6). As with sections 12 and 13, the reliability and authenticity of the records and information is emphasised. Interesting to note in this section is the issue of custody of the records or information. Section 14 (3) makes provision for the storage of electronic records outside the organisation that created them thereby supporting the life-cycle approach to records management.

5. Section 25 deals with the acceptance of electronic filing and issuing of documents.

Section 25 (1) stipulates that:

Any public body that, pursuant to any law-

- a) Accepts the filing of documents, or requires that documents be created or retained;
- b) Issues any permit, license or approval
- c) Provides for a manner of payment, may, notwithstanding anything to the contrary in such law-
 - (i) accept the filing of such documents, or the creation or retention of such documents in the form of data messages;
 - (ii) issue such permit, license or approval in the form of a data message

or

- (iii) make or receive payment in electronic form or by electronic means.

Section 25 (2) states that:

In any case where a public body performs any of the functions referred to in sub-section (1) such body may specify by notice in the Gazette-

- a) the manner and format in which data messages must be filed, created, retained, or issued;
- b) in cases where data messages have to be signed, the type of electronic signatures required and the format in which such electronic signature must be attached to, incorporated in or otherwise associated with data message;
- c) the appropriate control processes and procedures to ensure adequate integrity, security and confidentiality of data messages;
- d) any other requirements of data message and/or payments.

The provisions of this section give prominence to record keeping procedures and practices designed to ensure the creation and maintenance of complete, accurate and reliable evidence of business transactions in the form of recorded information. In order to comply with provisions stipulated in this section, organisations will need to hire well trained records management professionals who in turn will implement records management programmes for the organisation and come up with clear guidelines on electronic record keeping procedures based on best practices. The study aimed to establish the extent to which the Public Service is ready to comply with the legislation, as well as come up with recommendations on how it can work towards compliance.

3.6.4 Freedom of information legislation for Namibia

As already indicated, Namibia does not have a freedom of information legislation. However there are lessons to be learnt by Namibia from the experiences of other countries. One such lesson is that when Namibia eventually comes round to enacting a Freedom of Information Act it takes into account records management considerations. One might ask, "Does Namibia have the necessary records management capabilities to satisfy provisions of such an Act?" As

experiences from other countries have shown, any freedom of information legislation, is only as good as the quality of records to which it provides access. Such rights are of little use if reliable records are not created in the first place, if they cannot be found when needed, or if the arrangements for their eventual archiving or destruction are inadequate. The freedom of information legislation would also need to be in line with the *Archives Act*, which as discussed earlier, needs to be revised. Whilst freedom of information gives the citizen a right of access to official information, data protection protects the personal data and here is a challenge for records management. Digital data is easily transmitted, and records management should make sure that whilst complying with freedom of information requirements, the requirements of data protection are not infringed. Currently in Namibia there is no data protection legislation but the Namibian Constitution in Articles 13 and 15 provides for this.

The United States of America E-Government Act accords records management prominence. *Namibia E-Governance Policy* (OPM, 2005a) Section 3.7 states “DPSITM in conjunction with the National Archives will ensure that every e-government project will incorporate a suitable records management component”. Section 3.8 states that “DPSITM in conjunction with the National Archives will ensure the archival transfer of electronic records and their continued availability through hardware and software emulations”. DPSITM needs to be aware of the role of the National Archives right from the time of design of the ERMS to ensure that records keeping functional requirements are incorporated. It is not just about transfer but a continuum of care for the management of records throughout their entire life.

Following the U.K. example, these clauses of The *Namibia E-Governance Policy* on records management could be strengthened by issuance of Code of Practice on Management of Records (to replace the existing *Archives Code*) and an Action Plan for Compliance with the Code of Practice issued by OPM in conjunction with the NAN. Namibia has an *Archives Code* (NAN, n.d.), which gives guidance on the management of records in the Public Service. The *Archives Code* does not give guidelines on dealing with electronic mail and other electronic records. The study established the constraints this has on effective electronic records keeping and made recommendations regarding the Archives Code’s shortcomings.

3.7 Electronic information systems

When acquiring solutions for electronic records keeping, organisations have a number of issues to take into consideration. These include the cost of the solution and other systems already in the organisation. The study investigated current situation in terms of the information systems currently running in the Public Service, which could be online transaction processing system (OLTPS), decision support system (DSS), electronic records management system (ERMS), electronic document management system (EDMS) etc. and established, the extent to which they manage records.

Meijer (2001) reports on the results of a consultation of experts on electronic records management on the possible implications of ICTs on accountability. The results of the consultation showed that the “type of software application influences the risks and opportunities for managing records for accountability” (Meijer, 2001, p. 261). Software applications can fall into the following categories: e-mail systems, database management systems, individual software for creation of office documents, web technology systems, and ‘smart’ systems (Meijer, 2001, p. 261).

3.7.1 E-mail systems

E-mail systems are increasingly being used by government organisations as they support internal coordination and improve communication with citizens (Meijer, 2001; Wamukoya & Mutula, 2005). “An e-mail system can be defined as a medium, which enables users to asynchronously exchange messages between addressable electronic mailboxes using computers linked by telecommunications” (van den Hooff, as cited in Meijer, 2001, p. 261). Meijer (2001) reports on the findings of consultations with thirty electronic records management experts, which highlight the following pros and cons associated with the use of e-mail communication:

1. E-mails have replaced “paper communication” and not saving e-mail messages decreases the availability of information for accountability.

2. E-mail messages have partly replaced telephone conversation, which organisations do not capture and preserve but if e-mail messages are captured and saved, more information can be available for accountability.
3. Capturing and saving all these messages can result in the accumulation of large quantities of records, which if not properly managed can result in problems of accessing information.
4. Control over e-mail tends to be highly individual and often lacking in organisational control; and loss of control is an important problem for the management, retrieval, and use of messages as e-mail messages may not be registered or saved. Since individuals control the continued existence of e-mail its preservation and reliability is threatened. (p. 261)

3.7.2 Database management systems (DBMS)

Database management systems (DBMS) are widely used in public administration (Meijer, 2001; Wamukoya & Mutula, 2005). They are used either to manage transactional data or as a source of information to be processed (Meijer, 2001, p. 261). A study by Katuu (as cited in Wamukoya & Mutula, 2005 p. 72) on e-records management practices in Africa, Asia, the Caribbean and the Pacific revealed that 60% of information within governments was electronically generated. “A database management system (DBMS), is a software system, which manages the creation and use of databases” (David & Olson, as cited in Meijer, 2001, p. 261). The issues raised by the electronic records management experts regarding DBMS are:

1. DBMS may not store the preceding elements when they are updated. One respondent argued that “Databases seldom have historical components”.
2. Due to the dynamic nature of databases, organisations run the risk of information for accountability not being saved or not being trustworthy. If the origins of data sets are not known it may be difficult to interpret or trust the data. One respondent mentioned this problem specifically for geographical information systems: “A GIS is only a collection of geographical information. It does not show how, when, and in what functional context a specific information element was generated”. (Meijer, 2001, p. 262)

3.7.3 Individual software for creation of office documents

Individual software for the creation of office documents for example text editors, spreadsheets applications, and software for creating slides are “probably the applications used most by individual civil servants in public administration in their daily work” (Meijer, 2001, p. 262). The issues raised by the electronic records management experts regarding office software applications are:

1. Introduction of office software applications confronts organisations with lack of control over the creation and capturing of data. It may be difficult to find out for an example to find out which version of a document, is the final version.
2. Frequent release of new versions of office software applications may also present a serious problem. Lack of compatibility between software versions could hamper long-term access to data. (Meijer, 2001, p. 262)

3.7.4 Web technology systems

The use of web technology by governments to conduct business is increasing (Meijer, 2001; Ngulube & Tafor, 2006; Wamukoya & Mutula, 2005). Laudon and Laudon (as cited in Meijer, 2001, p. 262) define the World Wide Web as “a system with universally accepted standards for storing, retrieving, formatting and displaying information in a networked environment”. The issues raised by the electronic records management experts regarding web technology system applications are:

1. Web sites are constantly updated and organisations risk loss of information when web sites are updated and the “old information is not preserved. Normally there is no history file that provides for information about what was on the web site at what point of time.
2. Hyperlinks may not function anymore because the location of the information or the information itself may have changed.
3. Without adequate measures, hackers from outside can change the data in an open network technology system.
4. Connection to an open network offers organisations a strong opportunity for better access to their data. (Meijer, 2001, p. 262)

Websites are considered to “present the greatest preservation challenge of all digital media” (Ngulube & Tafor, 2006, p. 70). The problem of hyperlinks is discussed by Ngulube and Tafor (2006) after a study of five communication studies journals from 2000-2003. Out of the 1136 footnotes that cited online resources, 373 did not work at all. Their discussion also supports the findings of the study reported by Meijer.

3.7.5 “Smart” systems

“Smart” systems refer to expert systems and simulation systems. Simulation software is used to simulate developments or processes (Meijer, 2001, p. 262). Expert systems are “information systems that solve problems by capturing knowledge for a very specific and limited domain of human expertise” (Laudon & Laudon, as cited in Meijer, 2001, p. 262). Concerns raised by the electronic records management experts regarding these systems are:

1. Since the essential feature of smart systems is that they contain codified knowledge, when capturing information for accountability, organisations have to capture the “logic” on which consultations, decisions or simulations is based. Without the “logic” such information cannot be interpreted or trusted.
2. There is a risk that data for accountability (that is input, output and the programme itself) become inaccessible in the long term due to software obsolescence and difficulties of system maintenance and migration. (Meijer, 2001, p. 263)

The importance of the above findings to this study is that they support the view point of this study that records should be managed with the action officers as “the use of certain ICTs shifts the control over the creation and management of information from centralised to individual control” (Meijer, 2001, p. 263).

3.8 Electronic records management systems (ERMS)

An electronic records management system (ERMS) is an example of a database management system (DBMS). ERMS is referred to by various terms such as electronic records keeping systems (ERKS); records management applications (RMA). These terms will be used interchangeably in this literature review. Record management systems are often confused with or

described as “information systems” or “document management systems” (Erlandsson, 1996). Bearman (1993, p. 17) describes record-keeping systems as follows:

Record-keeping systems keep and support retrieval of records while information systems store and provide access to information. Record-keeping systems are distinguished from information system within organisations by the role they play in providing organisations with evidence of business transactions. Non-record information systems, on the other hand, store information in discreet chunks that can be recombined and reused without reference to their documentary context.

From the definition of record as discussed in this literature review, it should be very clear that a record keeping system is not the same as an information system. Bantin (2002) agrees with Bearman’s (1993) definition of records keeping system and refers to it as “a special kind of information system that manages and preserves the records that provide evidence of business activities” (Bantin, 2002, p. 3).

The literature review has brought out clearly that the design of systems to manage electronic records is a major contributory factor to the creation of reliable and trustworthy worthy records as well as preservation of authenticity. There is general agreement that electronic record keeping systems should fulfil certain primary objectives and requirements (Bantin, 2002; Centre for Technology in Government, 1999 ISO, 2001; Kansas State Historical Society 2005; New South Wales, State Records 2003). Bantin (p. 4) lists the following objectives and requirements: “capture records and metadata; keep records immutable and secure; ensure records are usable; schedule records for disposition, preserve records”.

An information system often consists of information that is not records, and some electronic documents do not qualify as records. Collaboration between information technology experts and records managers is called for to ensure that electronic information management systems are capable of creating, managing and preserving reliable and authentic records. Records managers must become educated in IT concepts to the point that they can intelligently question whether custom-designed or commercial off the shelf (COTS) ERM systems guarantee authenticity, reliability and integrity, and usability of records. Conversely, IT professionals must become

sufficiently versed in records management so that they understand and incorporate the necessary measures in IT systems architecture and operations. Several authors (Barry, 1994; Fernandez & Sprehe, 2003) recommend that records keeping requirements be incorporated into design of electronic information management systems.

When it comes to electronic records management systems (ERMS) authors cite problems of commercial off the shelf (COTS) ERMS. Barry (1994) supported by Bantin (2002) and Fernandez and Sprehe (2003) argue that few electronic document management systems (EDMS) available on the market have sufficient functionality to support ERM needs. Bantin explains that there are three prominent types of systems that manage electronic documents and records today: online transaction processing (OLTP) systems, decision support systems (DSS), and electronic document management systems (EDMS). “EDMS applications more closely resemble record keeping systems than any other type of information system. However, even EDMS applications lack some of the key requirements necessary to manage documents over their entire life-cycle and to create reliable and authentic records that provide evidence of critical activities of the institution” (Bantin, p. 6).

Fernandez and Sprehe (2003) describe the situation that has pertained in organisations for a long time. They explain that an organisation may begin with the naive assumption that it can simply acquire and deploy one of the many capable, commercial-off-the-shelf (COTS) ERMS available on the marketplace today. However, this assumption may be quickly dashed because electronic records originate from the organisation’s existing or legacy information technology environment. Horsman (2001, p.1) states that “records keeping system is not so much a ready-made software package as it is a framework for the definition of the functional and technical requirements that should be met when managing electronic records”. Upgrade of existing systems is possible but as the PRO (1999, p. 51) advises, maintenance changes can be very expensive than incorporating these requirements from design stage. Discussion on these record-keeping functionalities follows in the next section.

3.8.1 Functional specifications for electronic records management

Issues relating to the design of electronic records management systems and the role of records managers in the design of these systems have been widely acknowledged and discussed at various fora, in publications and research projects reports. Such research projects include:

- *The Protection of the Integrity of Electronic Records* (UBC project) by the University of British Columbia (UBC) from 1994-1997, which aimed at identifying and defining the requirements for creating, handling and preserving reliable and authentic electronic (Duranti, 2001; Meijer, 2001);
- Collaboration between the UBC research team and the United States, Department of Defense Records Management task Force from January 1995-October 1996 on the development of requirements for records management support systems (both electronic and non-electronic) for the effective management and use of Department of Defense records (Duranti, 2001);
- *International Research on Preservation of Authentic Records in Electronic Systems* (InterPARES) project (InterPARES, 2001); and
- University of Albany, Centre for Technology in Government from 1996 to 1998, which focussed on the development of practical tools to support the integration of essential electronic records management requirements into the design of new information systems. (Centre for Technology in Government, 1999)

Arguments for records keeping requirements to be met by electronic records management systems emanate from the differences between electronic records and paper records. Duranti (2001) argues that the fundamental difference between electronic and traditional records is that the components of electronic records may reside in different parts of the medium or even the system and may not physically exist if not purposely generated. Her argument is supported by the Public Record Office (PRO) (2001), states that electronic records lack the “built in” physical characteristics of conventional records that help to establish the relationship between a record and its functional and administrative context.

The following requirements aimed at ensuring the reliability of electronic records are identified from best-practices, most of them a result of the findings of the studies cited above. The *Protection of the Integrity of Electronic Records* research project findings were the basis for the production of the United States of America, Department of Defence records management standard for electronic records system, which has been adopted by many organisations (Department of Defence, 2002). The suggestions attributed to Duranti below are based on the same findings:

The functional requirements for electronic records management and preservation are well articulated in Duranti (2001), Centre for Technology in Government (1999) and PRO (1999). All these writers emphasise the need to take drastic measures to establish strong controls on records creation and stress that these should be incorporated right at the design stage of the electronic information systems. The PRO (1999, p. 51) advises that “The functional requirements necessary for managing and preserving records, once identified at an early stage can be built into the design and implementation of electronic systems more easily, and less expensively than later maintenance changes”. According to Duranti (2001, p. 274) this is attained through implementation of the following three measures:

1. Embedding of procedural rules of records creation in an organisation-wide, centralised records system, and of integrating business and documentary procedures.
2. Instituting procedures for strengthening electronic records, interrelationships and the links that they have with the conventional records created by the same organisation; and
3. Integration of the management of the electronic and conventional records belonging to a hybrid system”.

Capturing the record within the electronic environment involves the management of the interface between the record keeping system and the applications, such as word processors or e-mail clients, which are used to create or receive records. Systematic capture requires both a technical interface and a set of rules or procedures, which govern its behaviour and successful application within the organisation (PRO, 1999, p. 44). Approaches to ERMS in organisations include unified approach in a single EDMS or a standalone ERMS. According to Fernandez and Sprehe

(2003, p. 1) “a key issue when acquiring an ERMS is how it will integrate with legacy and future information management systems”. Barry (1994) explains that integration is desirable for minimising duplication of document inventories, document profiling or meta-data, independent user interfaces and duplicate, possibly incompatible, systems and support requirements and to minimise capital investments and staffing resources to support separate electronic document management systems EDMS and ERMS needs.

The issue organisations need to address in designing information systems is whether records keeping systems stand on their own or are integrated in one unified system. Barry (1994) proposes a unified approach. He describes a framework based on the records life-cycle approach with four phases namely creation and identification, appraisal, control and use, and disposition. The framework he argues is a convenient way in which to delineate institutional information flows and processes, identify significant gaps and risk in information systems, and determine requirements for electronic document management systems. Barry’s framework is discussed in detail under Section 3.2.1 of this literature review. Frameworks developed in later years (Duranti, 2001; PRO, 1999) support Barry’s framework.

The PRO (1999, p. 55) describes “a design scenario for integrating EDM and ERM”. The system described in this scenario provides for automatic generation and completion of a profile for every document/record stored within the corporate information structure. This will hold additional contextual information, which groups or associates records into logical assemblies, and ensures that they can be completely retrieved and managed in these assemblies. The profiles are updated to reflect the disposition of the document and may be retained (for audit trail purposes) after the corresponding record is no longer required and has been destroyed. A standard classification scheme is used to assign a term from within the corporate file plan/thesaurus, which matches the subject or function of the record. Individual electronic records are then tagged with others of the same category to form an assembly or ‘file’ within the corporate filing structure. Where appropriate this scheme should be linked with the filing system for paper records to ensure that all documents of both media are managed against the same retention and disposition procedures, and that all holdings of any given subject can be accounted for.

There are a number of benefits derived from the integrated design approach. These include:

- Improved protection against future litigation as the evidential value of the records is enhanced by a consistent and documented management process;
- Corporate accountability is protected as relevant records can be readily identified along with appropriate audit trails;
- Improved information retrieval as users can find much wider and more varied range of information than is possible using paper based system;
- Knowledge management and the promotion of information sharing due to the availability of a richer and more accessible repository of information as a corporate-wide resource;
- Related information held in electronic and paper form can be identified and accounted for; and
- Archival benefits through long-term access to corporate information. (PRO, 1999, p. 55)

Though the United Kingdom, Australian, Canadian, and United States governments have adopted this integrated approach, there are no known best practices from Africa to associate Namibia's Public Service situation with. However, it is not a case of one size fits all, because as already mentioned, legal and regulatory environment and other issues specific to an organisation determine the approach that organisation takes.

E-government may see the Public Service of Namibia moving towards enterprise content management (ECM) solutions, as they seek for key integrated information management solutions to provide online services or share information and transactions horizontally. Forquer, Jelinski and Jenkins (2005) discuss several examples of public sector institutions in the United States and Europe, which have adopted ECM solutions. Ngulube and Tafor (2006, p. 71) discuss the need for records managers in the Eastern and Southern Africa Branch of the International Council on Archives (ESARBICA) region to formulate policies and guidelines for "capturing of web-based records into formal records keeping systems". Electronic records management's place in ECM is its ability to tightly integrate with e-mail; document; and web content management systems to ensure content integrity and to minimise risk and litigation (Glazer et al., 2005).

3.8.2 Standards, guidelines and models for ERMS

The management of electronic records obviously requires specialised software to accommodate the wide range of functional requirements. A number of detailed specifications for electronic records systems have been established internationally. These include the following standards, guidelines and models:

1. United States of America. *Department of Defense - DoD Standard 5015.2.*

Design criteria standard for electronic records management software.

This Standard sets forth mandatory baseline functional requirements and identifies non-mandatory features deemed desirable for Records management Application (RMA) software...the standard incorporates requirements for classified marking, access control, declassification and downgrading, and other issues (Department of Defense, 2002, p. 2).

2. United Kingdom. *Office of the e-Envoy – E-government interoperability framework (e-GIF).*

The e-Government Interoperability Framework (e-GIF) sets out the government's technical policies and specifications for achieving interoperability and ICT systems coherence across the public sector. The e-GIF defines the essential pre-requisites for joined-up and web-enabled government. It is a cornerstone in the overall e-Government strategy (Office of the e-Envoy, 2003, p. ii).

3. Canada. *Electronic Records as Documentary Evidence.*

The standard establishes:

...requirements for organisations to follow when creating digital electronic records in any form –text, databases, image, and audio – in order to demonstrate the record's authenticity. By following the standard's requirements, organisations will be able to demonstrate the integrity of the system that recorded or stored the electronic record (Fisher, 2004, p. 39).

4. Kansas State Historical Society. *Kansas Electronic Records management Guidelines.*

The guidelines are intended to provide guidance to agencies on the management of electronic records throughout their entire life-cycle, from initial system design to the

final disposal or permanent preservation of state records (Kansas State Historical Society, 2005, p. 5).

5. European Commission. *Model Requirements for the Management of Electronic Records (MoReq)*

It focuses mainly on the functional requirements for the management of electronic records by an electronic records management system (ERMS). This specification is written to be equally applicable to public and private organisations, which wish to introduce ERMS, or wish to assess the ERMS capability they currently have in place (European Commission, 2005, p. 1).

6. International Standard Organisation (ISO). *ISO 15489-1 Information and Documentation-Records Management – Part1: General*.

This Standard was developed in response to consensus among particular ISO member countries to standardise international best practices in records management using the Australian Standard AS 4390, Records Management, as its starting point. It applies to records in any format or media, created or received by any public or private organisation during the course of its activities (ISO, 2001a, p. vi).

7. National Archives of Australia. *Functional Specifications for Electronic Records management Systems Software. Exposure Draft*.

The Functional specifications for Electronic records Management Systems Software provides the Australian Government agencies with a set of generic requirements for ensuring adequate recordkeeping functionality within electronic records management systems (ERMS) software (National Archives of Australia, 2006).

8. The World Bank. *Court Records Assessment Manual*.

The manual is intended to be applicable to paper-based, electronic, and hybrid systems. Record professionals who conduct evaluations of records and information systems can use it (World Bank, 2006).

The *ISO 15489-1 Information and Documentation- Records Management – Part1: General Standard* as Crockett and Foster (2004, 46) describe, is the first international standard applicable to any organisation, devoted to records management, which provides detailed specification for the structure, content and implementation of records management programs”. In an article, *Using ISO 15489 as an Audit tool* Crockett and Foster (2004) describe the experiences of a European pharmaceutical which provide lessons for any organisation that wants to test the standard in its own records management programme. They identified the following areas where the Standard would be useful for auditing:

- What records management programmes should encompass;
- Identification of regulatory environments and what it comprise;
- Main principles of records management;
- Characteristics of records as defined in the standard;
- Functionality and components of records systems;
- Records management processes and controls; and
- What monitoring and auditing should encompass. (Crockett & Foster, 2004, p. 52)

Most models and guidelines including South Africa, United Kingdom to mention a few, are aligned with the requirements of ISO 15489-1. InterPARES Authenticity Task Force considers ISO 15489-1 to have two noteworthy features, which are the considerable amount of technical detail it provides in specifying required software functionalities, and its address of matters such as organisational policies and procedures (InterPARES Project, n.d., p. 28). According to Tough and Moss (2003, p. 28) the shortcoming of ISO 15489-1 is its failure to define the term file and “appears to be deficient in respect of the role of file plans and directory structures”.

The approach is for organisations to look at the various models and guidelines and adopt the best features suitable for their needs. Different models and guidelines focus on different areas. As Fisher (2004) explains, some standards are more focussed on providing a “checklist used to validate specific pieces of software for record-keeping purposes” such as DoD 5015.2-STD and the Public Record Office standard. The scope of DoD 5015.2 is restricted to the management of active records, and as procurement standard, its contents focus almost exclusively on required system functionalities. Others “identify the overall environment in which any electronic system

operates”, such as the Canadian standard, Kansas State Standard and MoReq. MoReq is now widely used throughout the world and has been translated from English into at least eight languages demonstrating its acceptability (Cornwell Management Consultants, n.d, p. 2). The InterPARES Project (n.d., p. 30) also reports that MoReq features a greater extent of variability than the other standards discussed here, including the InterPARES requirements. MoReq takes into consideration that countries have different environments, such as legal and regulatory demands for managing records; as such the standard can be adapted to suit these.

The Court Records Assessment Manual can be adapted to suit records other than court records. The testing of the Manual in diverse administrative contexts such as Argentine, Ecuador, Singapore, South Africa and the Gambia, (The World Bank, 2003) has shown that it is easily adaptable. This researcher is of the opinion that the Manual’s section on information systems is not well covered compared to other models.

Standardisation is critical to managing electronic records effectively. Relying on recognised information technology standards is a preventive measure against potentially devastating effects of hardware and software incompatibility, coupled with rapid obsolescence of technology. Information technology being applied today should be adequate to ensure the long-term preservation and use of the information contained in the systems. eXtensible Markup Language (XML) stand out in a number of these guides and models as a suitable technology for creating common information formats.

The e-GIF adopted the XML and XLS (XML Stylesheet Language) as “core standards for data integration and presentational” and consider it as a “strategic decision” as it only “adopts specifications that are well supported in the market place” (Office of the e-Envoy, 2003, p. ii). Digital Preservation Testbed (2001, p. 8) is in agreement with e-GIF when it states that XML “...is often regarded as the most promising present day data format for archiving and interoperability...”. XML is a text-based mark-up language for describing the structure and meaning of data and because it is text-based it is human readable, but it is designed primarily to be easy to process using computers. It is an open standard defined by the World Wide Web Consortium and is not tied to any particular type of hardware or operating system. XLS is part of

the XML standard and is a way of defining the appearance of an XML document (Digital Preservation Testbed, 2001, p. 8). XML has also been widely accepted as a particular type of migration approach (Digital Preservation Testbed, 2001; Hedstrom, 2003; Rauch & Rauber, 2004). There are many information technology standards of relevance to electronic records keeping, and this can be confusing. Having a standard well tested and widely accepted is helpful to many organisations in deciding on which standard to adopt, for standardisation.

However the study was guided by the strengths of these models, standards and guides in designing the proposed records management programme for the Public Service of Namibia presented in Chapter 7. These models, standards and guides were very useful in developing reliable and valid data collection instruments for the study to ensure reliability and validity of the data. The study investigated if there are any ERMSs in the Namibian Public Service and if none exist, the plans in place to introduce such systems and establish awareness and intent to follow best practices and meet international standards.

This section of the literature review focussed on issues relating to the following research questions:

1. What is the appropriate records management model, and standards for the management of records in the Namibian Public Service?
2. To what extent have records keeping requirements been incorporated in electronic information management systems in the Public Service of Namibia?

3.9 Skills and competencies for e-records management

Records management has been described as a profession that is constantly evolving. This has implications on skills and competencies to manage records. Training should be an ongoing activity for all staff involved in the creation of records in one way or other. ISO 15489-1- Information and documentation-Records management-General advises on training as follows:

Organisations seeking to conform to the standard should establish an ongoing programme of records training. Programmes for training in requirements for records management and specific practices should encompass the roles and responsibilities of, and be addressed to, all members of management, employees, contractors, volunteers and other individuals

responsible for the whole or part of a business activity of an organisation in making records during their work and in capturing those records into records. (International Organisation for Standardisation, 2001, p.17)

Unfortunately those entrusted with “managing electronic evidence are not equipped with the necessary knowledge, tools, and know-how to ensure that electronic evidence is preserved in a state that will make it be admissible in a court of law” (CESPAM, 2005). This is supported by a study carried out by Wamukoya and Mutula (2005) on capacity-building requirements for e-records management in east and southern Africa. They report on a dearth of skills in the management of electronic records and emphasise the “need for collaboration and partnership in the areas of education and training, continuing professional development and the establishment of centres of excellence in e-records management” (p. 1). A study by Ngulube and Tafor (2006) also revealed scarcity of skills in managing records, which has partly contributed to the poor management of paper records, leading them to query whether governments in sub-Saharan would be able to handle the additional challenges posed by electronic records. Earlier, writers such as Akotia, 2002; Katuu, 2004; Keakopa, 2003; and Mutiti, 2001 had also observed the same situation. These authors call for training for records managers and archivists so that they are able to meet the challenges posed by electronic records. What this researcher finds lacking in all these views is a call to train records and archives management partners in the creation and maintenance.

Whilst electronic records management requires that records creators be imparted with some skills in electronic records management, the records managers and archivists “require a revision and expansion of the skills sets that they apply in their work” Dearstyne (2002, p. 148). The required skills include:

1. Traditional records management and archival skills;
2. Strategic analytical skills, including strategic thinking, planning, problem solving;
3. Oral and written communications skills;
4. Understanding technological applications; and
5. Improvisation, including an understanding of how to blend tradition and innovation.

Lessons from The Delaware electronic records project (Slavin, 2002) support the need to impart records managers and archivists with “digital” skills. According to Dearstyne (2002, p. 148), this will enable them to understand:

- (a) functional specifications for record keeping systems;
- (b) functioning of records management software and access tools for electronic information;
- (c) automated records descriptive practices; and
- (d) preservation issues associated with digital technologies”.

The Delaware electronic records project *Model Guidelines for Electronic Records* were not effective because the guidelines, intended to guide agencies in the development of information systems, were meant for systems analysts and the records management people failed to understand the methodology and language of the systems analysts so they could not defend the guidelines effectively. The Project concluded that what was needed was to “fill the delta between the guidelines and the knowledge base” of the records managers (Slavin, 2002, p. 46).

The study investigated records keeping skills amongst the records keeping staff, records creators, and IT personnel and made some recommendations for skills development. The role of training institutions in skills development for e-records management is recognised. However if the situation reported by Abbott (2001) and Nengomasha (2004) on the state of training programmes offered by training institutions in South Africa and Namibia respectively are reflective of the situation in Africa and particularly in ESARBICA, then there is need for the training institutions to revamp their programmes to align themselves with the capacity building requirements for e-records management.

This section of the literature review addressed the issues the research needed to investigate in order to answer the question, “Does the Public Service of Namibia have the necessary skills to manage e-records?”

3.10 Summary

The study was based on the assumption that the Government of Namibia has embarked on e-government, which should result in the increase of electronic records and a corresponding increase in reliance by the Government on electronic information. Electronic records poses challenges and these have been discussed in the literature: from the definition and understanding of the term records and creation; capture and maintenance of records in electronic information systems; the foundation on which records management practice is based, highlighting the life-cycle, continuum theory and applicability of knowledge management theories; legal and regulatory framework focussing on legislation covering electronic communication and transactions; digital preservation strategies; and standards and skills for records management.

The literature revealed that few studies have been conducted on electronic records management in Africa and in Namibia specifically. All these studies applied theoretical frameworks based on the traditional records life-cycle theory. This study incorporates records management and knowledge management theories. The studies concur that there are problems with the management of electronic records, which include poor management of e-mail message, failure to access and read electronic records through hardware and software obsolescence, fragile storage media, the fact that e-records can easily be manipulated, lack of data formats and metadata standards and possible loss of data through data migration

The literature reviewed highlights the current debate on the custody of electronic records, with questions being raised on whether archival institutions in Africa are in a position to take electronic records into their custody. Any model for managing electronic records would need to take this issue into consideration.

It emerged from the literature that a few e-readiness assessment studies conducted in Africa have not included e-records readiness. Best practices show that governments wishing to implement e-government need to carry out e-readiness assessments, which encompass e-records readiness

assessments as governments are not likely to derive maximum benefit from e-government initiatives, which are not supported by strong records management programmes.

The next chapter discusses the study's research methodology.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter describes the research design and methodology of the study whose main focus was the management of electronic records within the context of e-government, with an emphasis on e-records readiness and preservation of records authenticity. The subsequent main research question to be answered was: “How can the electronic records environment in Namibia’s Public Service be strengthened to support e-government?” The research design and methodology are considered the most effective based on the research question and the topic, which has not seen much research, particularly in Namibia. Hence it required an in-depth study (Babbie, 2004; Mouton, 2001).

4.2 Research design

This study was a multi-case study (Yin 2003), also referred to as a multi-site study (Audet & d’Amboise, 2001; Creswell, 1998), which was qualitative in nature. David and Sutton (2004, p. 437) refer to an instrumental case study when a “particular case is examined to provide insight into an issue to redraw a generalisation”. The case is considered to be of secondary interest, playing a supportive role in facilitating an understanding of the issue under investigation. This study investigated a number of such instrumental cases.

A case study is suitable when the research being conducted is an in-depth study of less than 50 cases (Mouton, 2001, p. 149). This research was carried out in 11 institutions comprising of seven Ministries, two Regional Councils and two Local Authorities. Yin (2003) sees evidence gathered from multiple case studies as being “more robust” than from a single case study and this provides a basis for generalisation. Researchers choose multi-case studies for reasons of generalisability (Creswell, 1998; David & Sutton, 2004). The researcher was able to generalise the findings from these institutions to the entire Public Service of Namibia, which consists of 20 Ministries. Creswell (1998, p.83) cautions against choosing too many cases as it leads to a lack

of depth and states that, “Typically researchers choose no more than four cases”. Another word of caution comes from Denzin and Lincoln (2000, p. 439), who advise against being so driven by the need to generalise that attention is drawn away from understanding the case itself.

This researcher chose qualitative research as opposed to quantitative research due to the flexibility of qualitative research, which allows for methods to be devised as the research progresses (Struwig & Stead, 2001, p. 17). Qualitative research is context specific (Patton, 2002; Strauss & Cobbin, 1990). It uses a naturalistic approach that seeks to understand phenomena in context specific settings” (Golafshani, 2003, p. 600). This study was context specific, the context being the public service of Namibia. Researchers have also favoured the case study approach, where the phenomenon is best studied within its environment. According to Yin (2003) a case study investigates a contemporary phenomenon within the real life context. The context in which records are created, was pertinent to this study. One of the characteristics of electronic records is context, which refers to the business, and the technical environment in which the record is created. The principle of *respect des fonds*, which guides the management of records, requires that the creator of the records be respected.

Multi-case study and qualitative research have their shortcomings. Multi-case study research is considered time consuming and expensive. On the flexibility accorded by qualitative research, Struwig and Stead (2001, p. 17) caution against losing sight of the aims of the study and being overwhelmed by data. However, Yin (2003) believes that most of the shortcomings attributed to multi-case study research can be overcome through proper research, planning and implementation. Denzin and Lincoln (2000, p. 448) list the following shortcomings:

1. Bounding the case, conceptualising the object of study;
2. Selecting phenomena, themes or issues, that is, the research questions;
3. Seeking patterns of data to develop the issues;
4. Triangulating key observations and bases for interpretation;
5. Selecting alternative interpretations to pursue; and
6. Developing assertions and generalisations about the case.

Other problems associated with qualitative research relate to issues of reliability and validity, and a discussion on this is at 4.4 below.

4.3 Population and sampling

Time and financial resources made it unpractical to study the entire population of the intended study. Researchers “study a representative subsection of a precisely defined population in order to make inferences about the whole population” (Arber, as cited in Silverman, 2000, p. 102).

4.3.1 Population

The population of this study was the Public Service of Namibia. A study population is “that aggregation of elements, from which a sample is actually selected (Babbie, 2004, p. 190). The units of analysis were the Ministries (also the elements of analysis) and the individuals interviewed, that is the action officers, IT staff, records keeping staff, heads of records function, and NAN staff. Elements and units of analysis are often the same in a study, but they can also be different (Babbie, 2004, p. 189). An element of study is “that unit of which a population is comprised and which is selected in a sample, distinguished from units of analysis, which are used in data analysis” (Babbie, p. 189).

Patton (2002, p. 229) advises that the “key issue in selecting and making decisions about the appropriate unit of analysis is to decide what it is you want to be able to say something about at the end of the study”. In this study the research wanted to say something about the e-readiness of the institutions studied and how the individuals in those institutions contribute to that. The institutions are the context which, Gilliland-Swetland (2005, p. 239) explains is a possible unit of analysis and for electronic records “the delineation of context as a concept has been expanded to include technological context as well as the more customary juridical administrative, procedural, and documentary contexts”. These are evident in this study through the way in which data was analysed and presented (see Chapter 5).

This study also focussed on the role that individuals are playing in the management of records throughout the entire life-cycle. The use of IT has changed records keeping in organisations. To a large extent the management of records is now in the hands of the action officers. Where there were common registries managing paper based files, there are now also shared folders on organisations’ intranets in a number of computerised information systems, each managing a part

of the organisation's information needs (National Archives of Australia, n.d., p. 1). One of the challenges in managing records is making all interested parties, namely action officers and IT personnel, work closely with the records manager to ensure the creation and preservation of reliable and trustworthy records for transparency and accountability. The focus was therefore on the individuals to find out the situation on the ground. This is the justification for also making the interviewees the unit of analysis for this study. This focus on the individuals and their role is one of this study's main contributions to research on records management. One of the aims of the study was to investigate whether records management theory supports this change in records keeping manifested in the greater involvement of the action officers.

Gilliland-Swetland (2005, p. 239) discusses the research methodology in electronic records management research and highlights the issues that have been raised over units of analysis. She points out that, "Archival science is still heavily material-centric". She further refers to Australian research based on the continuum theory, which has examined various records keeping entities, associated relationships, and their records keeping mandates (Mckemmish, Acland & Reed, as cited in Gilliland-Swetland, 2005, p. 239). This study therefore is more in line with the Australian research in terms of units of analysis signifying the relevance of the continuum theory to this study.

4.3.2 Sampling

Sampling is the selection of the representative subsection. Samples for qualitative research are relatively small compared to those for quantitative research. According to Patton (2002, p. 224), "there are no rules for sample size in qualitative inquiry ... sample depends on what you want to find out, why you want to find it out, how the findings will be used and what resources (including time) you have for the study". Qualitative studies have been carried out with as many as 50 cases and as few as one (Patton, 2002; Yin, 2003).

Statistical sampling procedures are synonymous with quantitative research. Generalisability is not questioned much because the sampling procedures allow representative samples. In qualitative research such statistical procedures are not the norm. Qualitative research allows the researcher to "select information rich cases, from which one can learn a great deal about issues

of central importance” (Patton, 2002, p. 46). Sampling contributes to reliability of a study. With statistical sampling, researchers feel confident about the representativeness of their sample, which in turn allows them to make inferences about the whole population (Silverman, 2000, p. 102). According to Patton, generalisation of findings is possible with qualitative case studies, depending on how they have been selected and studied. Silverman (2000, p. 103) discusses ways in which generalisation, can be done from cases to populations without following statistical logic. It can be done through any one or a combination the following:

- Combining qualitative research with quantitative measures of populations;
- Purposive sampling guided by time and resources;
- Theoretical sampling; and
- Using an analytical model, which assumes that generalisability is present in the existence of any case.

Applied mostly in qualitative research is purposeful sampling, also known as purposive or judgement sampling (Patton, 2002, p. 230). “In judgement sampling, you decide the purpose you want informants (or communities) to serve and you go out to find some” (Bernard, as cited in Patton, 2002, p. 230). Hoyle et al., (2002) reiterate the same sentiment when they state that purposive sampling relies on the researcher’s use of good judgement to hand pick those subjects that will satisfy the needs of the research.

Applicable to this study were purposive sampling and theoretical sampling. Bryman (as cited in Silverman, 2000, p. 105) argues that qualitative research follows a theoretical and not a statistical logic and states that it is about “generalisability of cases to theoretical propositions rather than to populations or universes”. Mason (as cited in Silverman, 2000, p. 105) explains theoretical sampling as:

selecting groups or categories to study on the basis of their relevance to your research questions, your theoretical position and most importantly the explanation or account, which you are developing... Theoretical sampling is concerned with constructing a sample ... which is meaningful theoretically, because it builds in certain characteristics or criteria, which help to develop and test your theory and explanation.

This explanation by Mason is a simplified explanation of Patton's (2002, pp. 238-9) description, which distinguishes between theory based sampling, operational sampling and theoretical sampling. Silverman (2000, p. 105) notes that theoretical and purposive samplings are often treated as synonyms and that the only difference between the two is when the purpose behind purposive sampling is not theoretically defined.

This study, which aimed to generalise its findings to the entire Public Service of Namibia had initially selected all the 20 Ministries using purposive sampling on the basis of their relevance to this study with the assumption that they will provide rich information for the generalisability of the findings. However, since some Ministries denied the researcher permission to carry out the research, the sampling turned out to be accidental as the researcher ended up settling for the seven that responded and granted the researcher permission to conduct the research in their establishments. Accidental sampling refers to the process of picking those participants who are available (Hoyle et al., 2002). The selection of Regional Councils and Local Authorities was done using accidental sampling, except for Local Authority B, which was done using critical sampling. The researcher approached several Regional Councils and Local Authorities and was turned down by most of them. She stopped when she had reached her target sample size.

Critical sampling is one of the seven strategies for purposefully selecting information rich cases discussed by Patton (2002). "Critical cases are those that can make a point dramatically or are, for some reason particularly important in the scheme of things" (Patton, 2003, p. 236). Local Authority B, by virtue of its size, was chosen to establish practices, which might differ from the other smaller entities. This critically selected case however was not very different from the other cases. Choosing two Regional Councils and two Local Authorities was aimed at generalisability, which according to Patton (2002, pp. 236-7), can be achieved even with one critical case based on the weight of the evidence produced from the single case.

The selection of individuals in the Ministries and Departments, Regional Councils and Local Authorities for the categories of action officer, head of records keeping function, records keeping staff and IT officers, was based on accidental and purposive sampling. It was purposive in the sense that each category was represented; and accidental by taking whoever was available from

that category. The staff establishments of the Ministries provided the sampling frame. In two of the Ministries the researcher interviewed more respondents making sure to interview at least a respondent each from each Department of those Ministries. In the rest of the Ministries the target was at least one respondent representing each category. This explains the large number of respondents in Ministry A (11=13%) and Ministry B (18=21%). Having these large samples from the two Ministries was meant to get a clearer picture of the situation. The results were validated with the findings from the other cases.

4.4 Data collection techniques

This section discusses the data collection techniques and the instruments used for this study. Data collection techniques used comprised interviews, direct observation and document search. The use of multi-methods or triangulation is encouraged in empirical studies. Creswell (1994), Denzin (1978), Patton (2002), and Yin (2003) support the use of triangulation. By using a variety of sources and resources, the evaluator and observer can build on the strengths of each type of data collection, while minimising the weaknesses of any single approach (Patton, 2002).

4.4.1 Interviews

Interviews are a qualitative method of gathering data through open-ended questions. Open-ended interviews, unlike questionnaires that have pre-determined response categories, allow respondents to express their minds thereby giving accurate points of view of their experiences and phenomena under investigation (Patton, 2002).

There are three types of interviews (Maykut & Morehouse, 1994; Patton, 2002). Patton (2002, p.342) identifies three approaches to collecting qualitative data through open-ended interviews. These are the informal conversational interview, the general interview guide and the standardised open-ended interview. Maykut and Morehouse (1994, p. 81) categorise them as unstructured interviews, the interview guide and interview schedule. This researcher chose to combine the interview guide approach and the standardised open-ended interview for the face-to-face interviews, thus making the interviews semi-structured. Through a combination of the two approaches the researcher had the flexibility to “probe and determine when it was appropriate to

explore certain subjects in detail” (Patton, 2002, p. 347). The researcher was also able to stay focussed, making it easy to find and compare responses, thereby making data analysis easier (Patton, 2002, p. 344). The combined approach takes advantage of the strengths of each approach, overcoming their shortcomings.

Interviews were conducted with records keeping staff, heads of records keeping function, action officers, National Archives officials, and IT personnel. Interviews encourage narratives, and according to Hoyle et al. (2002), narrative, which refers to oral accounts of personal experiences told by respondents to the researcher, can reveal some themes, which could be explored in the research. Interviews however have shortcomings, which include distortions due to a number of factors such as bias, emotional state of the interviewee at the time of the interview and lack of awareness (Patton, 2002, p. 306). The researcher overcame these shortcomings by making sure that interviews were conducted when the time was convenient to the interviewees, and observation.

Interviews as the main method of data collection have been used in other research. A survey carried out in 1996 by Silverman established that in *Qualitative Health Research*, 71% of ‘recently’ research-based articles published had used interviews as their main method (Silverman, 2000). The same study showed that 55% of articles published in *Sociology* had also used interviews as the main method. In records management some studies (Borglund, 2006; InterPARES Project, 2001) used interviews as the main method. However, comprehensive studies (Makhura, 2005; Ngulube, 2003; and Sejane, 2005), which have been done on records management in the Public Service in Africa have been mostly quantitative, with some degree of triangulation with qualitative methods of data collection. The investigations have mostly been at organisation level, that is, what the overall picture in the selected organisation is. These include South Africa National Parks (Makhura, 2005) the Public Service of South Africa (Ngulube, 2003) and Public Service of Lesotho (Sejane, 2005). They were not looking at individuals’, that is, the action officers’ day-to-day operations and their contribution to the creation, management and preservation of records, which is pertinent to this study. Most of the action officers might not be well versed with records management and records keeping practices to adequately respond to a questionnaire, hence the choice of interviews as the main method of data collection. Records

management research carried out by students under the supervision of this researcher has shown that records keeping staff in the Ministries and Departments respond (particularly to questions relating to procedures and practices) according to what the situation should be like in terms of the written guidelines in the *Archives Code* provided by the National Archives, and not what is actually happening. This is another reason why the researcher decided against using questionnaires.

4.4.1.1 Interview guides

An interview guide lists the questions or issues that are to be explored in the course of an interview and consistency in the inquiry (Patton, 2002). The advantages of using an interview guide are that it:

- Ensures careful use of interview time;
- Makes the interviewing systematic and comprehensive by deciding well in advance the issues to be explored; and
- It keeps the interactions focussed

The interview guides were designed in such a way that they addressed the following components of e-records readiness, according to the *E-Records Readiness Tool* (International Records Management Trust, 2004, p.1):

- Legal mandate for the government wide management of public records and information;
- Government wide digital preservation strategy;
- Policies and responsibilities for records management;
- Tools and procedures for records management;
- E-records management products and technologies;
- Resource and training for records management;
- Internal awareness of records management; and
- Compliance with record management policies.

The other components of the E-Records Readiness Tool, namely Legal framework for e-commerce activities; freedom of information and protection of privacy legislation; and government wide ICT infrastructure and capacity were covered in Chapters two and three.

Data gathered answered the following research questions of the study:

1. What is the status of records management in the Public Service in Namibia?
2. Is Namibia e-records ready to support e-government?
3. What are the appropriate standards and model for the management of records in the Public Service of Namibia?
4. To what extent have records management requirements been incorporated in electronic information systems in the Public Service of Namibia?
5. What are the legislation and policies that guide the management and preservation of records in the Public Service of Namibia, and what gaps exist, which need to be closed for these to adequately address electronic records management?
6. Does the Public Service of Namibia have the necessary skills to manage e-records?
7. How can electronic records management in the Public Service in Namibia be strengthened to support the accountability and transparency, which are essential for good governance?

The literature review established that the Public Service of Namibia has a hybrid records system, that is, paper/electronic records systems. The Public Service still produces and receives documents on paper, which according to laid down procedures, should be filed in central registries. At the same time officers are creating and receiving correspondence electronically, for example through e-mail, most of which is stored electronically only. The interview guides were designed with this in mind, in order to address both paper and electronic records. The interview guides comprised of sections, with each section carrying a set of questions addressing a particular issue to be investigated, specific research questions to be answered and the e-records

readiness tool components. Appendix D gives details of the general structure of the interview guides with some omissions or additions in the different guides depending on the areas of focus.

4.4.2 Document search

Documents comprise written material and other documents from the cases under investigation (Patton, 2002). Document search gave the researcher an insight into the activities taking place within the organisation. Unlike respondents, who are aware of being studied, documents have the advantage of “unobtrusive and non-reactive measures” (Hoyle et al., 2002, p. 361). Crockett and Foster (2004, p. 47) support document search because of its dual purpose of providing a complete overview of a records management programme and its components, and assessment of compliance. Documents looked at included:

- classification schemes;
- records keeping staff job descriptions;
- records management procedures;
- records management tools including registers;
- records keeping manuals;
- file movement tracking tools; and
- NAN survey reports.

Other documentation, which the researcher requested for, but was not available in any of the establishments studied, included:

- documentation on records destruction;
- data migration documentation;
- vital records protection procedures, including recovery in the event of disaster;
- retention schedules;
- electronic systems documentation; and
- vital records inventory.

As with other data collection methods, documents have limitations. They may be incomplete or inaccurate (Patton, 2002, p. 262).

4.4.3 Direct observation

Observation can capture aspects of phenomena under investigation that interviews or documents cannot and would also normally escape the attention of those being interviewed (Babbie, 2000; Patton, 2002). Observation addressed the problem of distortion of data as a result of respondents' unawareness. Direct observation helped verify some of the information gathered from the interviews and documentation. Through observation the researcher collected data on activities and processes carried out in the establishments studied (Patton, 2002, p. 5). Issues observed were indicated at relevant points throughout the interview guides.

Several issues were picked up through observation, which the researcher would not have done through interviews. For instance, the action officers indicated that they send copies of their e-mails and other correspondence to the registry for filing. A random file census carried out in the registry by the researcher showed that this was not the case. In one Ministry the researcher was able to establish that filing in the central registry of that Ministry had not been done for two years from observing piles of documents in the registry, the office of the registry supervisor and records storeroom. Observation also helped to establish the practices regarding document version control as lack of awareness had produced unsatisfactory responses during interviews.

4.4.3.1 Observation checklist

The researcher highlighted issues to be observed at appropriate places in the interview guides (see appendices E-G), thereby concurring with Patton's (2000) views that interviews and observation are often fully integrated approaches. Integrating the two also simplified data analysis as data from the two could easily be compared and synchronised.

A separate checklist (see appendix J) was developed to analyse electronic records management systems (ERMS) in place (if any) or those in the process of being acquired or being considered for acquisition, for essential records keeping requirements according to established best practices.

A number of studies (see section 3.8.1) came up with sets of records keeping metadata, which systems must satisfy. Several records keeping metadata standards are in existence. These include

the Department of Defense (2002) *Design Criteria Standard for Electronic Records Management Software Applications* (2002), the National Archives of Australia (2000) *Record Keeping Metadata Standard for Commonwealth Agencies*, and the New South Wales, State Records (2001) *Record Keeping Metadata Standard*. Most of the lists of recordkeeping metadata differ in the way they are organised, in the amount of description they provide on specifications and specific items they list as essential or mandatory, but they agree on the following:

1. Basic categories of metadata that systems should capture and retain, for example most metadata lists include various pieces of documentation to describe the context of creation. This contextual metadata typically includes information on the agents involved in creating, receiving, and transmitting the record; the date of receipt; and the relationship of the record to the specific business processes and to related records.
 2. Metadata models include some documentation on terms and conditions of access and use, and that the system documents user history.
 3. Data on disposition of the record, such as disposal authorisation and date, and a disposal action history.
 4. Metadata describing the record content, such as information on the title of the record, date of creation, and subject.
 5. Information on the structure of the record, such as documentation on how the record is encoded, how the record can be rendered, and how the content of the record is structured.
- (*Electronic Records Management*, n.d.)

The checklist was designed in such a way that it established the extent to which the system(s), satisfy these essential/mandatory metadata requirements.

The guides incorporating observation checklist were adapted from various models and guides which include the *InterPARES Project Case Study Interview Protocol* (InterPARES Project, 2001); *Model Requirements for the Management of Electronic Records* (European Commission, 2005); *DoD Standard 5015.2 Design Criteria Standard for Electronic Records Management Software Applications Standard* (Department of Defense, 2002); *ISO 15489-1 Information and Documentation – Records – General* (ISO, 2001); *Kansas Electronic Records Management*

Guidelines (Kansas Historical Society, 2005), *E-records Readiness Tool* (IRMT, 2004), and the *Court Records Assessment Manual* (World Bank, 2003).

4.5 Piloting and pre-testing

Pre-tests and pilot studies are different types of mini studies carried out as part of the process of planning and preparing for a study. When pre-testing, the researcher checks the effectiveness of the instruments to eliminate ambiguity and ensure that the respondents understand the questions as intended by the researcher, thereby ensuring validity. On the other hand, a pilot study is a “small scale replica and a rehearsal of the main study” (Sarantakos, 1993, p. 277). Piloting checks the effectiveness of the research design, suitability and reliability of the methods chosen and the practicality of carrying out the research (Bless & Higson-Bless, 1995; Powell, 1997; Sarantakos, 1993; Yin, 2003). Sarantakos (p. 277) states that with case studies piloting can establish availability of respondents, accessibility of the research environment and effectiveness of the data collection technique, whether it will collect too much or too little information. Following this argument, the researcher decided to carry out a pilot study.

For the pilot study, the researcher selected an environment with similar categories of respondents. Piloting was carried out in November 2006 in the Ministry of Environment and Tourism. Through piloting, it was possible to clarify as well as identify other issues pertinent to the study, which were then included in the inquiry. Piloting established for instance that the time required to complete the interview guides was too long and that some of the questions were unintentionally repetitive and ambiguous. The interview guides were then adjusted accordingly.

4.6 Reliability and validity

Reliability and validity concepts have been associated mostly with quantitative research, but they are now considered applicable to qualitative research as well (Golafshani, 2003). Reliability refers to the consistency of measures and how replicable they are, that is, the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects (Hoyle et al., 2002; *Reliability and Validity*, n.d.). Validity refers to the strength of the

researcher's conclusions, inferences or propositions (Cook & Campbell, as cited in *Reliability and Validity*, n.d., p. 1). A measure is valid to the extent that it measures what it purports to measure (Hoyle et al.).

Many authors (Babbie, 2004; Golafshani, 2003; Guba & Lincoln, 1989; Patton, 2002; and Silverman, 2000) have written on reliability and validity. According to Babbie (2004), whilst qualitative research seems to have greater validity than quantitative research, it has reliability problems. Stenbach (as cited in Golafshani, 2003) argues that reliability issues have no relevance in qualitative research, as they are not concerned with measurements. With qualitative research, a lot depends on the ability of the researcher, and coming up with measures is very personal (Babbie, 2004; Patton, 2002; and Silverman, 2000). "The human is the great strength and fundamental weakness of qualitative inquiry and analysis – a scientific two-edged sword" (Patton 2002, p. 433). Babbie shares the same sentiments and points out that those researchers who use qualitative techniques are aware of this and take great pains to address it.

Golafshani (2003, p. 600) refers to arguments by some qualitative researchers that the term validity is not applicable to qualitative research and argues that, "The concepts of reliability and validity are viewed differently by qualitative researchers who strongly consider these concepts defined in quantitative terms as inadequate". However, these researchers have "realised the need for some kind of qualifying check or measure for their research" (Golafshani, p. 602). Instead of the use of external validity or generalisability and reliability, Guba and Lincoln (1989) argue for the use of transferability, which refers to application of a research's findings in another setting. This is possible if the research process is well described and understood. Reliability and validity considerations therefore are at the centre of the design, data analysis, data collection and evaluation of the results of a study. The following explains how this study attempted to ensure reliability and validity.

The application of e-records readiness criteria identified from best practices; triangulation, i.e. the use of several kinds of methods or data that is from observation, document search and interviews; as well as piloting and refinement of research instruments, ensured the reliability and validity of the study's findings. Several authors who include Hoyle et al. (2002), Mathison (1988)

and Patton (2002) argue for triangulation as a strategy for improving validity and reliability of research. According to Hoyle et al. (2002, p. 301) multiple and diverse measures “will strengthen confidence in the study's construct validity”. Mathison (p.13) elaborates that “triangulation controls bias and establishes valid propositions”. Patton (p. 247) supports triangulation as it “strengthens a study by combining methods”.

The interview protocol and interview guides were aimed at achieving consistency, replication, as well as enabling assessment of reliability. Kirk and Miller (as cited in Silverman, 2000, p. 188) point out that, “For reliability to be calculated, it is incumbent on the scientific investigator to document his or her procedure and to demonstrate that categories have been used consistently”. Palmquist (n.d.) notes that it is imperative that one accurately measures the idea and/or items one is seeking to measure. Piloting of the interview guides before actual data collection commenced enhanced validity, as areas of ambiguity were identified and rectified.

4.7 Data analysis and presentation plan

Creating a database is not sufficient to conduct a qualitative study. In order to generate findings that transform raw data into knowledge, a qualitative researcher must engage in active and demanding analytic processes throughout all phases of the research. Understanding these processes is therefore an important aspect not only of doing qualitative research, but also of reading, understanding and interpreting it (Thorne, 2000). What follows in this section is how the data analysis for this study was carried out.

The study applied content analysis, which “refers to the process of extracting desired information from a text by systematically and objectively identifying specified characteristics of the text” (Smith, as cited in Hoyle et al., 2002, p. 397). The object of qualitative content analysis can be all sorts of recorded communication, which includes transcripts of interviews, from open-ended, focussed but exploratory interviews, observations, video-tapes, documents, etc. (Mayring, 2000; Thorne, 2000). In the case of this study, these were transcripts of interviews from open-ended questions, observation and documents.

Trace (2001, p. 3) describes the data analysis process of the InterPARES Research Project. The approach was to read and re-read the case study interview transcript in order to code for emergent themes. Trace cautions that in using qualitative techniques such as content analysis, it is important that the person analysing the data allows the themes to emerge rather than attempt to impose a preconceived set of themes on the data. The approach ensures that any anticipated themes are given the opportunity to emerge from the data and that no undue weight is given a priori to any preconceived themes. The themes in this study were derived from the theoretical background and research questions (Mayring, 2000) and literature review (Riley, n.d.) and other areas, which came up and become prominent in the interviews.

Riley (n.d.) and Patton (2002) refer to inductive and deductive procedures of finding themes or categories. Inductive relies on pre-constructed solid templates of categories and deductive derives themes/categories as they arise in the content. Denzin (2000) gives procedures of carrying out content analysis as: identifying a body of text, determining unit of analysis; finding themes (inductive or deductive); building a codebook; marking the texts and analysing the code from texts quantitatively. This approach, more suitable for quantitative research, is referred to as quantitative content analysis, which is defined as “a research technique for the objective, systematic, quantitative descriptions of the manifest content of communication” (Berelson, as cited in Rourke, Anderson, Garrison & Archer, 2001, p. 2). Using the deductive approach, the researcher thematically analysed the transcript data first and then analysed these themes in the light of the research questions (Trace, 2001).

Several writers on content analysis (Leavy, 2000; Mayring, 2000; Palmquist, n.d; Rourke, et al., 2001; Trace, 2001) reveal that categories are at the centre of content analysis. By breaking down the contents of materials into meaningful and pertinent units of information, certain characteristics of the message may be analysed and interpreted. Studies have been conducted with as many as 500 concept categories and as few as one (Palmquist, n.d.).

As mentioned above, transcripts made up one of the objects of content analysis. The transcripts were analysed following the approach referred to as “constant comparative analysis”, which involves taking one interview and comparing it with all others to develop conceptualisations of

the possible relations between various pieces of data (Thorne, 2000). According to Thorne, many methodologies draw from this analytical strategy in order to create knowledge that is more generally descriptive or interpretive. Patton (2002, p. 438) concurs and refers to description as forming the bedrock of all qualitative reporting. Descriptive findings or patterns make themes, which take a more categorical or topical form (Patton, p. 453).

Data was analysed manually though there is on the market computer software packages that can analyse qualitative data. Qualitative analysis packages such as Atlas/ti, winMax, NUD*IST and HyperQual (Mayring, 2000; Rourke et al., 2001) are reported to have proved their worth. These are essentially aids for sorting and organising sets of data, but none are capable of the intellectual and conceptualising processes required to transform data into meaningful findings (Mayring, 2000; Thorne, 2000). This view is supported by Hoyle et al. (2002; p. 399) who argue that computerised content analysis can analyse a large amount of data very quickly but cannot handle “verbal subtleties such as sarcasm”.

Presentation of data can be by objective or by research instrument (Varkevisser, Pathmanathan & Brownlee, 2003). Where data is presented by objective, all the data from different collection methods, e.g. interview, observation and document is integrated and one set of data helps to validate, support or confirm the findings of the other. The research instrument approach presents the data separately by instrument and integrates the findings in the discussion. The approach of presenting data by objective was used for presentation of research findings of this study. The integrated presentations are in the form of narrative interpretations, illustrative quotes from in-depth interviews and some few charts and tables.

4.8 Data collection process

This section describes the process the researcher underwent from seeking authority to conduct the study, arrangement for interviews, up to the collection of the data.

4.8.1 Seeking permission from the institutions and individuals

The researcher sent a letter (Appendix A) to all institutions seeking permission to conduct the research in their organisations. Two copies of the letter were sent by fax and hand delivered or posted. This was a lengthy, frustrating process as institutions generally do not respond and the researcher had to make follow-ups by telephone. Of the 20 Ministries, six could not trace the letter and requested for copies, which were supplied. In some instances it took the researcher a long-drawn negotiation process of more than eight months to get permission. The least time the researcher had to negotiate for permission was two weeks. Piloting was done in November 2006 and data collection was conducted from February to July 2007. After getting permission to conduct the research in the organisations, the next step was to arrange interview appointments with individuals. This also took long to do. Setting up interviews with the research participants was not an easy task. They would cancel appointments or request to be interviewed at short notice.

4.8.2 The interview process

The researcher conducted all interviews personally. This ensured consistency in interviewing. The researcher went into the interviews bearing in mind advice on conducting interviews by various authors such as Babbie, 2004; Hollway & Jefferson, 2000; and Maykut & Morehouse, 1994. The advice includes maintaining control and enhancing the quality of responses, establishing rapport and neutrality, wording questions properly to avoid ambiguity as well as avoiding multiple questions.

Data was captured through note-taking and use of a tape recorder. A tape recorder was only used with the consent of the interviewees who were told that it is to assist with note-taking and subsequent data analysis. About two thirds of the respondents consented to the use of the tape recorder. Even where a tape recorder was used, hand written notes were taken as a back-up in the event of losing the recorded data due to tape malfunction or other factors (Patton, 2002, p. 383). The researcher had intended to make use of an assistant to take notes but after two interviews the research assistant was not coping in terms of speed and accuracy. The cancellation of interview appointments at short notice did not give the researcher enough time to arrange for a good assistant. In the end the researcher had to contend with doing all the interviewing and note taking as well. The researcher was always careful not to lose herself into note-taking in order not to lose

the attention of the interviewee. Seale et al. (2004, p. 18) advise that less writing gives the researcher more room to interact with the interviewees. The researcher reviewed notes at the end of each day for any insight on issues relevant to pursue in subsequent interviews. This is what Patton (2002, p. 383) refers to as the “emergent nature of qualitative research”.

4.9 Research ethics

There are several ethical issues that must be considered when designing research. These include privacy and confidentiality, as well as informed consent.

A researcher must explain how privacy and confidentiality issues will be addressed. Codes of ethics insist on the protection of participants’ identities and those of research locations (Denzin & Lincoln, 2000, p. 139). Creswell (2003, p. 185) advises on the masking of names of people, place and activities to maintain privacy and confidentiality. In this study, the researcher used codes for institutions in order to protect their identities.

There are three primary ethical principles that are cited when discussing ethical concerns in research involving human participants. These are the principles of autonomy, beneficence and justice. Autonomy refers to the obligation on the part of the researcher to respect each participant as a person capable of making an informed decision regarding participation in the study (University of Washington School of Medicine, 1998). The researcher has the obligation to explain the nature of the research so that participants make an informed decision on whether or not to take part in the study (Denzin & Lincoln 2000, p. 138). In this study the researcher satisfied this requirement by explaining the research as explained in the data collection protocol (see Appendix B) and requesting the participants to read and sign an informed consent form (see Appendix C) as an indication that they were prepared to participate in the study. Participants were also given the option not to participate if they did not wish to do so. The principle of beneficence, which refers to the obligation on the part of the researcher to maximise benefits for the individual or the organisation was addressed by sending participating institutions reports with recommendations, on their situation. In any case, with most of the institutions, this was the condition for being granted permission to conduct the research.

Accuracy of data “is a cardinal principle” in social science research and “fabrications, fraudulent materials, omissions and contrivances are both non-scientific and unethical (Denzin & Lincoln, 2000, p. 140). Reliability and validity of a study partly depends on it. In this study the researcher abided by this principle, occasionally going back to the participants for verification of data.

4.10 Evaluation of the research methodology

This section of the chapter evaluates the research methodology that was employed for this study. One of the things a researcher should do at the end of a study is to evaluate their research methodology, which would help in replication especially where there have been problems with the methodology. This way other researchers can avoid the same pitfalls that befell that researcher. Creswell (2003) discusses strategies of enquiry, noting that researchers have recognised that all methods of research have limitations. Researchers have dealt with this problem through triangulation or the use of mixed methods. This study used mixed methods within the qualitative approach. The researcher however looks at how triangulation of qualitative and quantitative methods would have impacted the research.

What determines the choice of a research design? Creswell (2003; 1998) explains that a research question starting with a “how” or “what” may call for qualitative study, with the findings portraying what is going on (Creswell, 1998, p. 17). Quantitative research on the other hand asks “why and looks for a comparison of groups” (Creswell, p. 17). Following this argument, the qualitative research design adopted for this study was appropriate as it aimed to answer the question: “How can the electronic records environment in Namibia’s Public Service be strengthened to adequately support the demands of e-government?” Another determining factor when choosing a research design is the nature of the topic being studied. A topic that is new and has not been researched on much may benefit from qualitative research narratives rather than open-ended questions. Researchers have used qualitative research for its narrative analysis, yield information that is not accessible through traditional methods and reveals themes that researchers did not even think to ask about (Hoyle et al., 2002, p. 394). Based on literature review, the researcher reasoned that the field of electronic records management was a new area where not

much research had been done, particularly in Namibia. Therefore, for this reason the qualitative design was considered appropriate.

Qualitative researchers need to demonstrate that their conclusions are valid beyond the specific conditions of their study (Hoyle et al., 2003, p. 418). Yin (2003) discusses criteria for judging the quality of a research design, which include construct validity, internal validity, external validity and reliability. “Construct validity refers to establishing correct operational measures for the concepts being studied” (Yin, p. 35). Researchers have argued that case study research does not develop sufficient operational set of measures basing data collection on subjective judgements (Yin, p. 35). This study applied multi case study approach as well as triangulate qualitative research methods to improve on construct validity.

The second criterion, internal validity, relates to “the instrument’s significance for the study situation” (Sarantakos, 1993, p. 76) and is enhanced by ensuring that no other variants other than the ones of interest can differently affect the studied outcome. According to Hoyle et al. (2003, p. 41) internal validity allows researchers to reach causal conclusions about the association between the independent and dependent variables. It was not the purpose of this study, which was exploratory and descriptive to establish causal relationships, so internal validity does not apply.

The third criterion for judging research design is external validity, which refers to the generalisability of a study’s findings. In this study the researcher strived to ensure that the findings of the study can be generalised to the entire Public Service. Including many Ministries in a study that could easily have sufficed with one ministry was meant to achieve representativeness and validation of the findings. However, a triangulation of qualitative and quantitative methods would have easily achieved this beyond any doubt for one of the advantages of quantitative research is that it “gives a broad, generalisable set of findings presented succinctly and parsimoniously” (Patton, 2002, p. 14).

The fourth criterion for judging the quality of a research design is reliability. Reliability of a study means that the same research design, applied in a different setting by a different researcher, will come to the same conclusions. Creswell (2003, p. 195) explains that writers on qualitative

research have used terms such as “trustworthiness”, “authenticity” and “credibility” to refer to this idea. Ways of ensuring that the research is replicable include honest reporting of the research findings, including “negative or discrepant information that runs counter to themes” (Creswell, p. 195) and proper documentation of the procedures followed (Yin, 2003, p. 37). The researcher applied both strategies and employed the use of a data collection protocol, thereby guarding against the pitfall of case studies, which have been viewed with suspicion due to lack of proper documentation.

One of the strengths of a qualitative approach is the flexibility that it accords the researcher to adopt new strategies as the research progresses. When doing the data analysis the researcher realised that the process may have been simplified if the research design had been both qualitative and quantitative. Some of the information the researcher extracted from the interviews and observations could have been gathered and easily analysed and presented through the use of questionnaires.

Arranging for interviews takes time and there is no guarantee of getting hold of the individuals on the set day and time. If time is a constraint and resources are limited, interviews are not the best data collection method to choose. However, the research design enabled the researcher to analyse data as the data collection progressed, which helped the researcher make up on lost time due to problems mentioned above. From the data analysis the researcher was also able to improve on the interview guide for the NAN as the NAN staff was deliberately interviewed last after all the Ministries had been covered.

Interviews enabled the researcher to explore the issues in depth as well as come up with insights into things that would not have been adequately covered by questionnaires. For example, the differences in records management awareness between officers who have been in the service longer and those who joined in recent years would not have been captured by interviews. This confirms the observation that interviews are “particularly helpful in the early stages of a research program when the research is trying to identify variables that are critical to understanding a phenomenon” Hoyle et al. (2002, p. 395). Observations and document search showed the magnitude of things such as:

- office congestion;
- incoming and outgoing mail registers, which do not capture information that will make the registers serve the purpose for which they are intended; and
- files considered current but have not had anything filed in them in years because officers are keeping records in their offices. The same officers expressed how they use the files in the registries and that what they keep in their offices are “copies”

Best of all, observation method eliminated the problem that the researcher has observed from the research done by students she has supervised, of respondents who respond according to what the *Archives Code* (Public Service records management handbook) says and not what they are practising.

The study concluded that there is merit in triangulating qualitative and quantitative methods. Babbie (2004) argues that some research situations and issues require statistical presentations to be spelt out. Once the researcher started presenting and analysing the data this became apparent. To come up with the statistics the researcher had to go through each response and manually count, which was made possible by the semi-structured interview guide. Triangulation with quantitative data collection methods such as use of a questionnaire, which could easily be coded would have eased and hastened this process. However, the fact that the study did not triangulate qualitative and quantitative methods only made the data analysis process tedious, but did not affect the validity or reliability of the research findings in any way.

4.11 Summary

This chapter discussed the research design and methodology and explained why the qualitative multi-case study approach was used. The population was explained as well as the sampling techniques. Though the study triangulated qualitative research methods, it would have benefited from triangulation of qualitative and quantitative just to ease and hasten the process. The chapter also looked at issues of reliability and validity and ethical issues highlighting how the researcher ensured reliability and validity and took care of ethical considerations in this study. Analysis of data, research process and evaluation of the research methods were also covered in the chapter.

The next chapter is on analysis and presentation of the research data.

CHAPTER FIVE

PRESENTATION OF RESEARCH DATA

5.1 Introduction

This chapter presents the research data gathered through interviews, observations and document search in seven Ministries, two Regional Councils and two Local Authorities. In order to maintain confidentiality, the names of the institutions have been withheld, and where there is need to highlight a particular institution, the institutions are distinguished by a symbol. Data is presented mainly in the form of descriptive narrative with direct quotes from the participants as well as figures. Data from the different establishments as well as from the different data collection methods has been integrated within the thematic areas.

The chapter is divided into the following sections based on the thematic areas of the interview guides:

- E-government initiatives in the Public Service
- Records management awareness
- Records keeping procedures
- Safety and security of records
- Regulatory environment
- Compliance and monitoring
- Resources, facilities and maintenance
- Training and skills
- Electronic information systems

The five separate interview guides for action officers, heads of records function, information technology (IT) staff, NAN staff and records keeping staff were all designed in such a way that they addressed the issues highlighted above. The issues were addressed at different angles for an example, the interview guide for NAN staff and head of records function looked at the above issues from management and supervisory point of view and for the records keeping staff from a

records management view. Similarly the interview guide for action officers addressed the same issues from the records creators and users point of view.

In addition to the pre-determined categories, others emerged during data analysis and these were incorporated as sub-sections of the main thematic areas.

5.1.1 Participants of the study

In the 11 institutions, data was gathered from action officers, records keeping staff, IT officers, and heads of records keeping function. Additional data was gathered from the NAN and OPM. The NAN provides a records management service to the Public Service. The OPM is in charge of IT in the Public Service through DPSITM. An effective electronic records management programme in the Public Service would therefore be a collaborative effort between the Public Service institutions, the NAN and OPM.

Table 5.1 shows the number of officers interviewed subdivided by category of interviewees, that is, action officers, IT staff, head of records keeping function, National Archives of Namibia and Office of the Prime Minister staff.

Table 5.1. Number of Interviewees by Interviewee Category

N= 85

Institution	Total number Interviewed by institution	Number of Officers Interviewed By Category of Interviewee			
		Records keeping staff	IT personnel	Head of Records Keeping function	Action officers
Ministry A	11	5	1	1	4
Ministry B	18	3	1	1	13
Ministry C	4	1	1	1	1
Ministry D	4	1	1	1	1
Ministry E	4	1	1	1	1
Ministry F	4	1	1	1	1
Ministry G	4	1	1	1	1
Regional Council A	9	3		1	5
Regional Council B	12	2		1	9
Local Authority A	6			1	5
Local Authority B	5	2	1		2
National Archives	2				
Office of Prime Minister	2				

5.2 E-government initiatives in the Public Service of Namibia

This study was based on the assumption that the Public Service of Namibia has embarked on e-government, which should see a rise in the creation of electronic records. In order to establish the extent of e-government in the Public Service the researcher posed the following questions to action officers, heads of records keeping functions and IT personnel: “What e-government initiatives are taking place in the organisation?” and “How have these changed the way in which you operate?” The responses can be categorised into the following:

- **e-service** – term derived from the Government website <http://www.eservice.net.local>, which provides Public Service employees with “easy access to comprehensive and up-to-date information ...including legislation, staff rules, circulars etc”. (Office of the Prime Minister, 2004, p. 20).
- **e-mail** – short for electronic mail refers to the sending of messages from one computer to another by telecommunication.
- **access to electronic journals and scientific databases** – access to electronic articles reporting on new research, which are periodically published and available on the internet.
- **web-sites development** – efforts by the Public Service of Namibia to provide information to citizens and other people on the Ministries, Departments and Agencies and promotion of their services.
- **e-governance policy** – this is discussed in section 2.8.6.
- **Web-based systems** – systems downloaded from the Web each time they are run.
- **e-conferencing** – short for electronic conferencing, it refers to communication that “can take the form of audio and/or video conversations, message swapping, file sharing and other forms of electronic interaction that simulate the experience of everyone being in the same room” (White, n.d., [Online]).
- **expansion of network to Regional Councils** - the Regional Councils are linked to the MRLGH and not linked to the rest of the Public Service through OPM. The Regional Councils see the expansion of the network to connect with the rest of the Public Service as one of the major benefits of e-government.
- **plans for electronic filing and computerising the registry** – the OPM acquired an ERMS, which it intends to roll out to the entire Public Service.

- **workshops** – these are workshops on e-governance mostly organised by the Office of the Prime Minister.
- **not much going on** – these respondents had heard about e-government but felt it is just talked about and nothing has been done and could not elaborate further on this.
- **not aware of any** – some respondents had never heard about e-government.

The rate of responses is illustrated in Table 5.2 below. The number of responses is not meant to tally with the number of participants as some participants cited more than one initiative.

Table 5.2. E-Government Initiatives in the Public Service of Namibia

N=60

Initiative	No of responses
access to electronic journals and scientific databases	6 = 10%
e-mail	11 = 18.3%
web-sites development	10 = 16.7%
e-governance policy	2 = 3.3%
web-based systems	2 = 3.3%
electronic/video conferencing	2 =3.3%
expansion of network to Regional Councils	7 = 11.7%
e-service/e-system	14 = 23.3%
plans to computerise registry/electronic filing	2 = 3.3%
workshops	2 =3.3%
not much	4 = 6.7%
not aware of any	6 = 10%

The responses show that e-government is felt through the presence of computer use; e-mail; e-service; access to electronic journals and scientific databases and expansion of network to Regional Councils.

5.2.1 Awareness of e-government

Six participants were not aware of any e-government initiatives taking place in the Public Service. All participants in the local authorities said they were not aware of any e-government

initiatives. One respondent from a Regional Council explained that awareness is more at managerial rather than the lower levels. “At first we [Regional Council] heard about e-government from line Ministries until last year [2006] when the OPM involved us, but not at the lower level, only managers”.

5.2.2 Access to computers and e-mail use

Of the 81 (figure excludes the NAN and OPM respondents) interviewees, only 5 (6.2%) did not have computers. These comprised a receptionist and four registry clerks. Of the 76 who have computers only one (1.3%) said she does not have e-mail. An IT officer in one Ministry said that in that Ministry “all staff members have e-mail as a rule and access to internet”. An Acting Chief Executive Officer in one of the local authorities commented that he does not believe in e-mail for all staff and remarked “I am careful to install e-mail for each and everyone due to virus and misuse of e-mail. In our office only two officials are committed to e-mail. They print it out and hand to applicable staff members.

5.2.3 Institutional web-sites

All seven Ministries and one local authority are busy working on their web-sites, according to the eight IT officers interviewed. In six of the cases it is case of updating existing web-sites. In the other two cases, these are being designed where none had existed before. One IT officer remarked “When designing our web-site we are looking at how people can interact with our system”. One Ministry spoke about web-site points in the regions where “if people want to have web-sites on the Ministry they can go to these sites. They are being developed and not yet fully functional”. The redesigning of the web-sites according to one IT officer is part of a Public Service initiative to “establish a portal where Ministries will put all information for access by citizens. We are redesigning our web-sites so that we put them on portal”. In one Ministry individual Directorates are developing separate web-sites.

5.2.4 Access to electronic journals and scientific databases

In Ministry B, officers spoke about the ability to access electronic journals and access scientific databases. An officer spoke about an e-government initiative where the Ministry is piloting a system where some published good practices in farming will go to farmers electronically. “Our

people are able to log on to a certain website and down load information and adapt it for farmers. Before, we would waste a lot of time going to the library”.

5.2.5 Public Service e-service

The e-service also referred to by other officers as e-system was cited too by most officers as evidence of e-government in the Public Service. Commenting on how the e-service has changed the way he operates one officer said “We are saving a lot of time. One presses a button. Before, we used to fax. We used to pull a file to check issues and with the filling system it took time to pull a file but with e-system, it’s at the press of a button”. An officer in one of the Regional Councils remarked that “the introduction of e-service makes it easy to get access to circulars”.

5.2.6 Web-based systems

The respondents highlighted the fact that the Public Service is aiming towards making all systems web-based. One IT officers remarked “OPM wants all systems to be web-based. It is not yet a law”. These sentiments were voiced by yet another IT officer in a different Ministry ““Most of our information systems have been client-server but the trend now is to have web based for an example Finance, Human resources and Agriculture Statistics”. In a different Ministry an IT officer explained “There has been migration from an older SQL [Standardised Query Language] to new web-based HRIMS [Human Resource Information Management system]”. In yet another Ministry an IT officer described the HRIMS changes this way “The HR [human resources] first was decentralised. Each Ministry had a server backed by OPM, now it is linked up to OPM”. One of the e-government initiatives is to “have web-based enquiry of exams. The system is being enhanced so that each school can register its students. ICT in education initiative TECH!NA aims to get computers in every school, library etc”.

5.2.7 Expansion of network to link Regional Councils

Regional Councils are linked to the Ministry of Regional Local Government and Housing and not linked to the rest of the Public Service through OPM. The Regional Councils see the expansion of the network to connect with the rest of the Public Service as one of the major benefits of e-government. “In June [2007], we hope to be connected and view documents on directives, rules and regulations, amendments etc. At the moment we use e-mail to get these

documents”. An officer in another Regional Council uses Excel to manage human resources work and remarks how easy it would be if they were a part of the HRIMS. “It is easy to retrieve information on staff members, leave days. When someone resigns and gets appointed again after two years you can retrieve information easily. Regional Councils are not part of that system we are still manual. They are busy now connecting us to e-service”.

5.2.8 Success and failures of the e-government initiatives

The study established more failures than successes. The successes, advantages of e-mail use, access to e-service, access to electronic journals and other databases were discussed above. However there are more failures than success stories. Failures were reported mostly due to insufficient capacity to implement policy and a number of other issues highlighted below in section 5.2.9. A Deputy Director commented on effectiveness of the e-government initiatives “There is a policy document on e-government but there is not much effort to expedite the implementation of the e-government”. Another officer in a different Ministry reiterated this “The Public Service to a certain degree has put in place e-government initiatives but there are shortcomings. Government has good policies in place but we have insufficient capacity to implement policies effectively”.

5.2.9 Problems hampering e-government

Interviewees cited a number of problems hampering e-government. Problems highlighted include viruses, slowness of the system, a lack of skills and training, outdated policies and inadequate legal framework.

5.2.9.1 Viruses and bandwidth problems

According to one IT officer, the problems are “virus infections, data line to and from Ministries, which is overused and makes the system to slow down. Users reopen and reopen and machines freeze... Some people lost data on their machines due to virus”. Another officer in a different Ministry referred to “hiccups with the use of technology – problems with network”. When asked to explain he mentioned that the system is slow. One officer remarked that he does not use the internet because it is slow. Another officer remarked “At regional offices where we have intranet, we do have a problem with Government systems”. Two respondents who spoke about

the electronic conferencing facilities in the Regional Councils explained that they are not fully utilised and one suggested that it “could be due to connectivity problems”. Officers spoke about slow internet, e-mail being constantly down and viruses corrupting the data.

5.2.9.2 Lack of skills and training

Another problem highlighted is lack of skills and training in IT. According to one Director “People don’t have training in I.T. Sometimes people send documents and people don’t have the necessary skills to open and add their opinions. Most people have computers but they are used mostly for typing. It should go more than typing”. Another officer’s comment confirms this issue of training. A clerk commented “I was just given a computer but no training. I try to do back-ups on my memory stick but when I want it, the whole thing is gone, the memory stick is empty”. After further probing it turned out that the officer was expressing the fact that training is not enough and that it should cover different issues to do with use of computers. He received some two-day training on EXCEL. Another officer remarked “With the VIP payroll system, at the end of every month we do back-ups. We are supposed to do it on CDs, but I don’t know how to do it. When updating the system we notice that CDs are empty. I am not really good with computers”. Another comment from one of the Regional Councils reiterates this problem of a lack of training. “We are having problem with the server; after someone has been to repair something is missing after they are gone”. The officers in charge of IT and are “supposed to know what the problem is” cannot help. One IT officer argued that the IT officers and the action officers are too busy to have time to train or be trained. “We have not done training in a long time ... Most of the time I am alone. Users do not have time to come and sit in for training”. One officer was of the opinion that the fact that e-government initiatives are not making any impact on the way they operate is to do with “insufficient capacity to implement policies effectively”. An officer commenting on why he does not use the shared folder system in the Department said “We hardly share information there ... I request for information through e-mail. May be IT can give occasional training on how to use the system”. The IT officer in the same Ministry acknowledged that “There has not been any training for everyone on e-mail. It was left to the users to come to us. We give introductory training on word processing etc. I agree there is need for training”. In the same Ministry another officer remarked “People lack training and knowledge on what needs to be done. The Secretary types something today and if you want it tomorrow they can’t find it”.

The following comments from a Deputy Director in one Ministry emphasise the need for training and the role that training institutions should play in order to address the shortage of IT skills in the Public Service. “There is need to saturate the market with trained people. Most people work in government and do not last. They leave for greener pastures. I hope that training institutions will flood the market. The reason why the country brings in consultants from outside is lack of skills. Educational institutions should guide students into IT courses...”

The following comment from one IT officer highlights the frustration lack of skills cause among officers and the impact that it has on the success of e-government in the Public Service of Namibia:

A lack of skills in Government result in us not providing necessary support to our users. Recently the network was extended to the regions. These people need our support but we are not able to do that. It makes me feel as if we are building white elephants. One other issue is management support. As experienced by many officers our leaders are not conversant with IT issues so they are not able to give instructions on what the Ministry should use ICT for. It is left to juniors to try to persuade e.g. e-governance project – we are expected as a Ministry to make progress but since introduction, very little has been achieved as management are not aware of what they should do to accelerate the e-governance process.

5.2.9.3 Outdated procedures and inadequate legal framework

The current procedures in the Public Service and absence of electronic-signature (e-signature) laws also come out as hindrances to effective use of e-mail. A number of officers indicated that e-mail is not effectively used as all correspondence has to be signed by the permanent secretary. There is no law legalising electronic signatures. The following remarks from different officers support this:

- “E-mail is stored on individual computers. There are no records of e-mail on the server because it is not recognised as official communication. It is considered unofficial”.
- “With contact persons we write e-mails. If it is an issue that requires protocol you need to write a letter, which needs to be signed and it may take a bit of time to get to the other institution. You have a situation where a signature might be electronic but that letter still

needs a stamp. Maybe they scan it and put it on the system”. Further probing established that the Ministry does not recognise e-signatures as legal documents. He was expressing sentiments on how the process can be hastened as he felt that the policy that all correspondence going out be signed by the Permanent Secretary (PS) leads to delays. When talking to most of the officers it transpired that the reason why e-mail system has not been effectively used in the Public Service for official business is because of the Public Service policy that all correspondence going out bear the P.S’s signature and all incoming mail pass through the P.S’s office. As a result official e-mails have not really been seriously considered as official records.

- One officer in one of the local authorities highlighted the lack of an effective legal framework when he said “We just basically use what the National Archives has given us. They have not looked at e-signatures yet. With electronic communications we are using the South African Act”.
- “It is seldom that we receive e-mail attachments. They are not signed”.
- All officers responded that there are no e-mail policy and guidelines.

5.2.9.4 Limited system capacity

The discussions highlighted inadequate system capacity, which has in some instances led officers to delete e-mails and other documents haphazardly, based purely on the need to free space on their computer memory. The following comments from officers confirm this:

- “We keep documents on computer for a limited time and some we delete because of limited capacity ...We get advice from IT that we should not keep too much as it disrupts the system”.
- “We put a limitation on the size of attachments”.
- “My mail box is small so every day I save to folders and those that I do not need I delete. I cannot have more than 300 mails in my in box. I delete daily. I search the bigger one Meg. [1 megabyte] and above and remove them”.
- “I delete e-mail messages after I receive a message from the systems administrator that I have gone beyond my capacity”.
- “E-mail gets overloaded and if you are out then you cannot get any more e-mail in”.

Not having a limitation also seems to create problems of their own e.g. e-mail overload. One officer remarked “I have lots of space on my mail box. I have two in boxes”. Further probing established that one mail box had 1031 e-mails, with ten of those unread. The other had 3108, all of them read. He retrieves information from the mail box often and uses the find function to search for information. Another officer narrated what he used to do when he had unlimited e-mail in a different Ministry. He used to print e-mail attachments for filing by his secretary and save the same electronically in subject folders but he did not “delete anything from the inbox”. Now due to memory restrictions, he has to delete e-mails in order to receive other e-mails.

5.3 Records management awareness

One of the objectives of the study was to establish the current status of records management in the Public Service. Establishing records management awareness amongst officers was one way of meeting this objective. The interviews were therefore designed to establish the records management awareness amongst staff from their understanding of what a record is; knowledge of their responsibilities and those of others towards records keeping.

5.3.1 Understanding of the term record

If individuals in organisations are to throw in their weight towards effective management of records, it is important that they understand that records emanate from and provide evidence of their official activities. To establish the extent of this understanding the research posed the question “What is your understanding of the term record?” Some of the responses received were:

- “Creation of a document needed by the company for future purpose”.
- “All sorts of information supposed to be kept for future reference and research be it electronic or paper”.
- “Having information either on paper or computer and then it should be stored for use at a later stage”.
- “Anything like documents and letters”.
- “Safe keeping of documents so that they can be found”.

- “A kind of safe-keeping of records. Have documents on things you have worked on as part of your work for future reference”.

Regarding electronic records, the reaction with most officers was, “I do not create any electronic records”. It was through further probing that the researcher established e-mail messages and attachments, folders with minutes, correspondence, memoranda etc. One of the problems the researcher encountered in seeking permission to carry out research in the organisation was the mention of the term electronic records, as most organisations responded that they did not have any electronic records. The researcher then had to explain the nature of electronic records.

5.3.2 Responsibilities for managing records including electronic records in the Public Service

Another way of establishing records management awareness in the Public Service was by highlighting the extent of records awareness or lack of it through officers’ understanding of their responsibilities as well as those of others for records management. Questions were therefore designed to establish if officers knew if they have a part to play in the management of records; establish if the role of records keeping staff in the registries and the National Archives of Namibia is prominent; and if there is a high post championing records management in the institution and its visibility.

5.3.2.1 Action officers’ responsibility for records keeping

Questions were raised to establish responsibilities for managing records in the Public Service. Action officers as creators and users of records have responsibilities for records. The question posed to them was “Are there any guidelines, instructions or manuals, which assign you specific records functions?” The response from all except those working in human resources or finance was “no”. Even before carrying out the interviews this researcher had developed the opinion that some action officers are not aware that they have some part to play in ensuring the effective management of records in the organisation. When arranging for appointments with individual action officers for the interviews, after explaining the purpose of the interview, the initial reaction was “I do not have anything to do with records” or “Have you tried the registry?” There are however some officers though in the minority who are very

much aware of this responsibility. A Deputy Director in Ministry B spoke passionately about this responsibility “As long as you are a civil servant you have responsibility to manage records on the ground ...If they [civil servants] fail due to poor records keeping they reflect badly on the Permanent Secretary. At all stages people have responsibility”. This officer joined the Public Service in 1994 and lamented lack of commitment for records keeping among officers.

5.3.2.2 National Archives of Namibia (NAN) responsibility for Public Service records

Records management is one area of general administration and yet the responsibilities regarding financial and human resource management, also part of general administration are very well known by members of staff, even those not dealing with these issues directly. Responding to the question “Which Ministry or Department has overall responsibility for the management of records including electronic records in the Public Service?”, officers who had been in the service longer who joined prior to independence, what several of these respondents refers to as “the old dispensation” indicated correctly that it was the NAN. The younger generation gave answers varying from “I don’t know” to “Office of the Prime Minister”.

5.3.2.3 Highest position overseeing management of records in the Ministry/Regional Council/Local Authority

The researcher aimed to establish if the officers were aware of the highest position in their institution responsible for the management of records. The question posed was “Within the Ministry/Dept/Local Authority/Regional Council what is the highest post that oversees records management?” The responses included Permanent Secretary, Chief Regional Officer or Chief Executive Officer. One officer responded “Yes effective records keeping is the duty of the Permanent Secretary as the accounting officer and all of us are empowered by the Permanent Secretary to make sure that that takes place”. In one Ministry, responses from different officers included Permanent Secretary, Chief Control Officer, and Deputy Director for General Services. In the Regional Councils the responses included Chief Control Officer, Chief Regional Officer [Accounting Officer], and Deputy Director for Human Resources. In one Regional Council one Deputy Director responded “It is a difficult question to answer. In our

case the highest office is the Chief Regional Office. One would say he is overall responsible. He should be aware of how we manage our records and approve... If things go wrong due to poor records keeping he will be answerable. However you find that different Departments are in charge of records. I wouldn't say our situation is the ideal". This officer was reiterating what the earlier quoted respondents said regarding the Accounting Officer. In one Ministry the Control Officer in charge of supervising the registry said that the highest position responsible for records management was the Permanent Secretary who is the accounting officer, but went on to explain that a former Director of General Services used to champion records management and issued directives and constant reminders on how records should be managed.

In the local authorities the situation was no different. In one of the local authorities one respondent said "To say that central registry is working, it is not. If the C.E.O. [Chief Executive Officer] is not supportive it won't work. ...The old C.E.O. would kill the receptionist if mail was not registered and for any misfiling". In Local Authority B, the IT manager who is in charge of the registry was cited by both action officers interviewed and the registry staff as the highest position overseeing records management function. The registry personnel report to the IT manager who according to the person working in the registry "... is also trying to learn from us. He also does not have a clue".

5.3.2.4 Records keeping staff responsibility

Many respondents had a problem responding to the question "Which person or office has the responsibility for day-to-day management of records including electronic within the organisation?" This was more so in institutions where the registry exists in name only, more like a records store room than a records office for current records. There is duplication in records keeping functions between the registry and the private secretaries of the Chief Regional Officers. In the two Regional Councils, the private secretaries for the Chief Regional Officer and the Governor hardly use the registry as they keep copies of what is in the registry in their offices. The Governor's secretary commented "The making of copies for the registry is a waste. The ones [records] they are keeping at the registry are not being used and they cannot issue without our authority". In any case most officers keep records in their offices. The position of the person who works in the registry in one Regional Council is Clerk and is also

responsible for stock and stores. Regarding the management of electronic records there is no office that champions or guides this. It is no wonder that with such a set up, the action officers are not sure where the day to day responsibility for records management lies. In the other Regional Council, the only registry clerk was sent to relieve in another department on non records keeping tasks leaving the registry unattended. This was the same situation in Ministry E where a registry clerk for two years she was employed in the Ministry as registry clerk never carried out the functions of a registry clerk. In the first year she operated as private secretary to the Under Secretary and in her second year she was seconded to the Finance Division. This left the registry attended to by a messenger.

The study established the following hierarchy (Figure 5.1) of levels of responsibilities, with the Permanent Secretary/Chief Regional Officer/Chief Executive Officer as accounting officers being the top most level. The study established a problem of delegation of records keeping responsibilities to the lowest level, inadequate monitoring (see section 5.7) and lack of commitment from the higher levels.

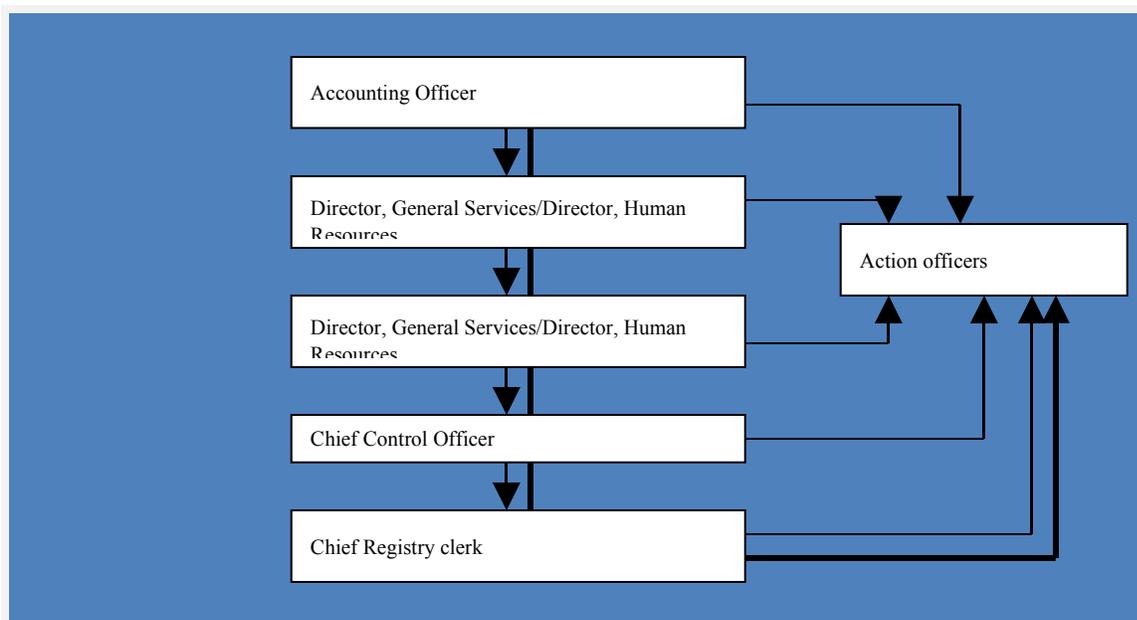


Figure 5.1 Records Management Levels of Responsibility

The light arrow lines in Figure 5.1 show what the line of responsibility should be like according to existing government structure. The bold line portrays the situation that pertains in the Public

Service, lack of support from above with the registries left entirely on their own to tackle action officers and try to enforce proper practices. No one listens to them and the result is the poor state of records in the Public Service.

5.4 Records keeping procedures

Records keeping procedures investigated by the study covered the type of registry system, filing system, flow of mail into the organisation, movement and tracking of records, retention and disposal.

5.4.1 Registry/records office system

The research meant to establish the registry or records office systems pertaining in the Public Service. This is particularly important to determine accessibility and culture of sharing information.

Table 5.3. Type of Registry System

Institution	Type of registry system			Remarks
	Centralised	Decentralised	“Mini” Registries	
Ministry A	*	-	*	-
Ministry B	-	*	*	-
Ministry C	*	-	*	-
Ministry D	*	-	-	-
Ministry E	*	-	*	-
Ministry F	*	-		-
Ministry G	*	-	*	-
Regional Council A	*	-	*	-
Regional Council B	*	-	*	-
Local Authority A	-	-	-	No registry
Local Authority B	*	-	*	-

Regional Councils

Of the two Regional Councils studied, one has a central registry system operating more as a storeroom. The offices of the Chief Regional Officer and the Regional Governor keep a copy of

everything that pass through them and send the originals to the respective Departments. The following comment from the Clerk in charge of registry indicates that some of the documents and correspondence kept in the offices are originals. “Sometimes we ask people to bring papers to file but it does not work. If we write a memo to tell them that we need original letters or e-mail to come for filing it is difficult to make people do it”. This was confirmed by one of the officers who keep a “mini registry”. When asked if the records he keeps in his office were copies of what is in the registry he responded “There are times when you find originals”.

On the surface the other Regional Council is operating a centralised registry system but a closer look shows that this is not the case. Figure 5.2 demonstrates the movement of correspondence in this Regional Council.

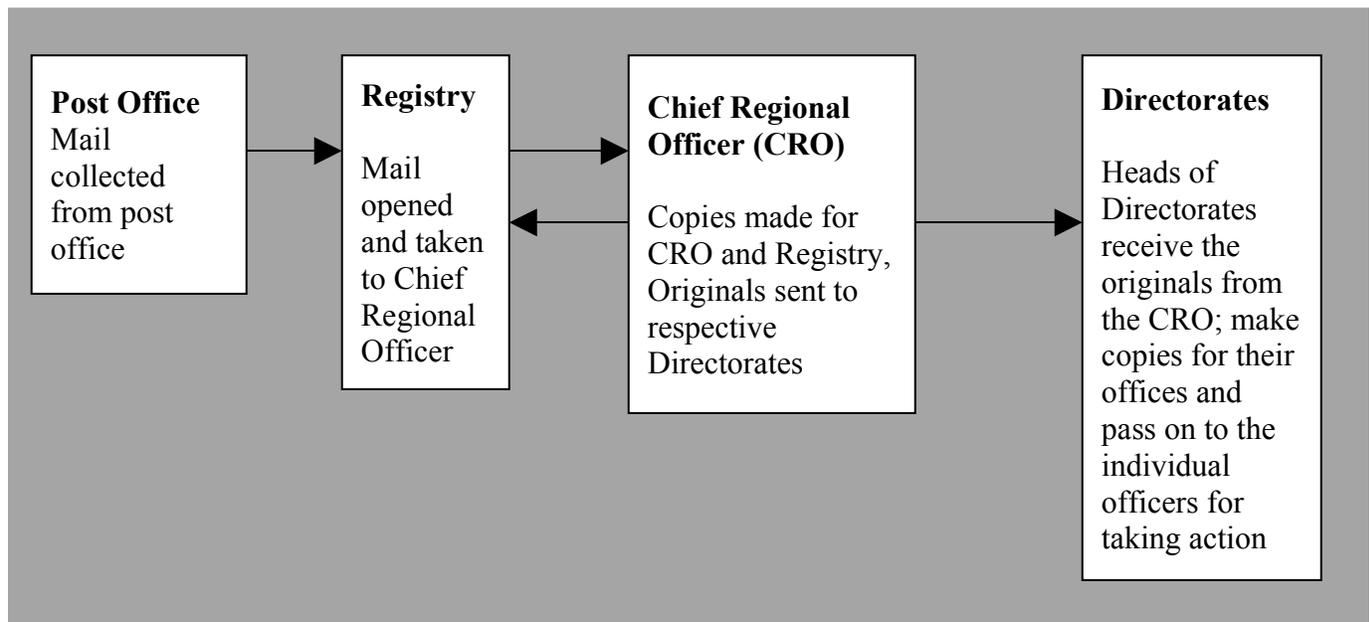


Figure 5.2 Incoming Mail Flow in Regional Council B

Figure 5.2 illustrates that the original copies of mail are not in the registry but in the offices. In the case of faxes, the office of the Chief Regional Officer receives them and makes copies for the registry and the respective departments. The Regional Council ends up with at least four copies of the incoming correspondence. A copy of the same in the registry, office of Chief Regional Officer, office of head of the directorate, office of the division and office of the officer responsible for taking action.

For outgoing mail, the process is reversed. Respective Departments send correspondence for signature to the Chief Regional Officer, after signature the correspondence is returned to the respective officers who are required to send copies to the registry but this does not always happen as Departments also keep copies in their offices. When asked why they do not always make sure that copies are sent to the registry one officer responded “There is no need really because if I want a copy I can make a copy from my computer”. Another responded “We have stopped sending copies to the registry because we do not go there anymore. You will not find what you are looking for. Starting last year the person was assigned to do other work. It is a registry in name only”.

The difference between the mail movement procedures in Regional Council A and Regional Council B is that in Regional Council B the office of the Chief Regional Officer sends originals of incoming correspondence to the Departments and a copy to the registry whereas in Regional Council A the Office of the Chief Regional Officer sends copies to the Departments and the original to the registry. In Regional Council B the originals are kept by the individuals because once they reach the Departments, they are distributed to the respective action officers by the Head of the Department.

The Ministries

In the Ministries, officers are aware of the existence of the registry, however some are not very familiar with the functions of the registry, considering it more as a place to dump records and old documents that are no longer in use. They explained that a registry system for management of paper records exists though it is not working very well. This system does not cater for electronic records. One action officer commented, “We have a very well functioning registry system but the problem is with the people who are inefficient and incompetent”. Registries can operate in the Public Service as the heart of the organisation and this is proven by Ministry F, which is different from all the other Ministries and has a records keeping system that is working. Officers interviewed in this ministry who include the Head of Records Function and two other action officers expressed familiarity with the registry functions and its use. Observation also revealed

that the offices are not congested and officers do not create mini registries as is the case in other Ministries.

The situation in the other six Ministries is not different from the Regional Councils. Ministry B operates a decentralised registry system. Two registries serve different directorates. The comments below indicate that the registry system infrastructure is there but is not working in some quarters purely due to attitudes of individuals. The responses show two extreme views - positive and negative perspective of the registry system.

- “The system does not function at all. Mail should come to the registry. They [registry clerks] should understand filing system, referencing and pending system and deliver files to the Director. That is not at all the case. It is put in individual envelopes to Directorates. What you see in my office, files, shows the registry system is not working”.
- “We have a filing system for each directorate. We have a central registry where all files are kept. Sometimes we do not get what we want from the registry. That happens when you are not sure, in which file the document must go. The people in the registry also misfile”.
- “We have a very well functioning registry system but the problem is with the people who are inefficient. The people [registry staff] are incompetent so we [action officers] file ourselves and only send the file to the registry after everything is finished”.
- “The instruction is for us to use the registry. For us it is a new system. I make a copy for the registry and I keep my own copy. Just to test the system, after six months I want to go and ask for documents and see if I get them. I have never requested for any files from the registry”. This officer has been in the service for 12 years.
- “The principle is ‘don’t keep anything in the office’ but in practice we don’t send anything to the registry”.
- “I keep original records in my office, which are not available elsewhere. I have officers keeping their own records as well. There is a traditional way of filing our things [technical documents] but in addition, we found that there are some operational things [records], which we keep in our offices. I don’t know why we have to keep them”.

The above were comments from the action officers. The following are comments from the registry staff:

- “They [action officers] are always blaming the registry staff when they cannot find records on the files, which they never sent to the registry in the first place”.
- “There are a lot of files from X [Directorate] that officers took and never returned. Y [Directorate] are always keeping files in their offices”.

Ministry A has a centralised registry system, which does not work at all. No filing has been done in the ministry for two years and when asked how officers are managing without the documents being put on file, one of the Registry Clerks responded: “It does not cause that big a problem because officers rarely ask for files from the registry”. When speaking with the officers the researcher established the reason behind this situation. Officers have established “mini registries” because of the problems experienced in retrieving records from the central registry. A Deputy Director remarked, “The central registry system is not functioning. There is very minimal link between my division and registry. I have my own filing system in my office. My sub-divisions also have their own. I keep my own copies of records, which they also keep in case I don’t get records I need from them. You expect something filed and it is not there. My office is full of files, which I am not supposed to keep but I do because I am afraid if I don’t I will not find them again”. The same sentiments were expressed by all the other officers. An observation by the researcher showed that the offices of the action officers are full of records. A call from the Permanent Secretary for officers to send copies of correspondence to the registry remains unheeded by many. Even for those who do, they do not always remember to send copies to the registry. An officer explained, “I keep a copy for my file and make copies for the registry”. The study found a lack of enforcement to comply with such directives. When the researcher asked if the officer sends copies of everything to the registry, he responded, “It sometimes happens that you bypass the registry in the process”.

The Deputy Director for Human Resources also in charge of the central (main) registry remarked, “I send copies to the main registry and the Human Resources Office. The problem is my colleagues in other departments. They keep their files in their offices and if they want information they struggle”. Commenting on the efficiency or inefficiency of the registry he

commented, “Those who know what a registry is supposed to do for them are complaining. Those who come from a culture of registry, proper records keeping, about 5% [of staff complement] are complaining. The rest, 95% are not complaining because they do not know”. The officer echoed the sentiments of one of the Deputy Directors in Ministry B who said, “With independence a lot of people were phased out. It is the old people who know the good system. People from the old dispensation [pre-independence era] in the next five years will all be gone and the Public Service will hit rock bottom [in terms of records keeping]”. An officer in one of the local authorities voiced the same: “I was once a teacher. In pre-independence era, in schools, government offices, etc. there were strict requirements on records keeping. I did a holiday job during the old Tswana Administration and I realised the importance of records keeping”.

The success of the central registry system in Ministry F signifies that a central registry system for paper records can work in the Public Service of Namibia.

Local Authorities

As has been indicated elsewhere, one of the local authorities studied has a registry whilst the other one does not have a registry at all. Local Authority B operates a centralised registry system, which is working more like a records storeroom. Local Authority A attempts to gather records in one place for “storage” whilst officers maintain “mini registries”. The movement of mail as well as filing practices in the organisation suggest this. Incoming mail is received by the receptionist who opens and forwards it to the Chief Executive Officer who decides who should action upon it. From the Chief Executive Officer it goes back to the Town Secretary who makes copies and sends them to relevant departments. Original copies are kept in a central place and filing is done once a year. Typing for outgoing correspondence is done by the Executive Secretary who passes it on to the Chief Executive Officer for signature and from this office it goes to the receptionist for mailing. The receptionist makes copies for relevant departments as well as a copy for the central files.

The central registry system does not work. The following comments from the Town Secretary paint a very bleak picture. “With Council minutes there is no problem. With correspondence, it depends on the CEO and most of them do not have any knowledge of records keeping. To say

that central registry is working, it is not. ...They don't understand that the Town Engineer cannot file original documents in his office... At the beginning all original documents of personnel were centrally kept but now people's documents are now missing as Personnel [Department] now keep records in their offices". This was confirmed by the Personnel Officer. "When I started here there was nothing on personnel files. I had to open files and so most of the file jackets are empty".

The study showed a problem of duplicate copies of the same records and the failure to ensure the safety and proper storage of original copies to denote the official record of the activities for authenticity.

5.4.2 Organisation of records

The research aimed to establish the organisation of records and the use of files. It particularly wanted to establish the use of classification schemes, be they standardised or not.

5.4.2.1 Presence of Classification Scheme

Nine of the 11 institutions studied have a classification scheme. Central government, regional and local authorities use a standardised classification scheme format based on the functional approach to classification developed by the National Archives of Namibia.

Table 5.4. Presence of a Classification Scheme by Institution

Institution	Yes/no	Standardised
Ministry A	yes	yes
Ministry B	yes	yes
Ministry C	yes	yes
Ministry D	yes	yes
Ministry E	yes	yes
Ministry F	yes	yes
Ministry G	yes	yes
Regional Council A	no*	N/A
Regional Council B	no	N/A
Local Authority A	yes	yes
Local Authority B	yes	yes

Note.* A filing system is in the process of being developed.

The development of Local Authority A classification scheme “was part of the 2005 annual plan”, the Chief Control Officer in charge of records keeping function explained. “We had a specific objective to do with records management. Endorsement of the filing system is part of the plan. The filing system has not been finalised yet as we want to harmonise with other offices in view of decentralisation”. One officer in Regional Council A commenting on the classification said, “I was recently told that when sending out a letter it should go through the registry where it is allocated a reference number”. However, when the Clerk in charge of the registry was interviewed she responded that she does not use any classification scheme and no referencing of mail is done.

The researcher wanted to establish frequency of updating the classification schemes. Not much has been done in terms of updating the classification schemes. One Ministry is in the process of amending its classification in line with decentralisation. The Chief Registry clerk explained, “We have just added new series due to decentralisation and got rid of some”. In another Ministry, the classification scheme has been updated for some series but the large part of the classification scheme remains unchanged as far as officers can remember. One Deputy Director in one of the two departments of Ministry A commented, “With independence many things changed. New elements were brought into the system. New Divisions had to have a filing system. In the Department of Water Affairs they follow the old system [classification scheme]”. However, when talking to a Deputy Director in this Department it transpired that the Department is not coping very well with this outdated classification scheme. “I don’t think the system has been modernised. It was created very long ago. Things get misplaced”. This sentiment was expressed by most Ministries. The classification schemes are outdated. Even in the Ministry faring much better than all the other Ministries studied, the classification scheme has not been updated since 1989 when the ministry was established. The National Archives said that “A number of filing systems have come in for approval; new as well as updated ones but they do not cover the whole government”.

5.4.2.2 Awareness and use of classification schemes

Having established the presence of classification schemes, the study went on to find out if officers are aware of the classification scheme and the extent to which it is being used.

The following figure illustrates the awareness and usage of the classification scheme by action officers including heads of Records Keeping Function.

The researcher established that classification schemes are not used effectively in the institutions studied. In Ministry A, five officers were interviewed and all of them said they used the classification scheme. When asked how effectively they use it, only one said he used it well. In Ministry B, 14 officers were interviewed and only four use the classification scheme, two of them effectively. All officers in Ministry A use the classification scheme because it is a policy in the ministry. Those who do not use it effectively said that they put a reference number even when they are not sure if it is the correct one, because the Permanent Secretary will not sign anything that does not have a file reference number. The situation was the same in other Ministries, even in Ministry F, which is doing better than all the others. The head of the records keeping function remarked that he was aware that there were inaccuracies in some of the reference numbers used, but as long as the officers were consistent with the error then documents could still be found. In one Ministry the head of the records keeping function expressed that the use of the filing system was not good; and the Chief Registry Clerk confirmed this when she said, “We give everyone a copy of the filing system but they don’t consult the filing system. When we do filing we change the number”. This shows that filing in this Ministry is not consistent. In yet another ministry the story was the same. “To be honest with you I am the only one of the registry people who knows about records keeping. Ninety-nine percent do not know. They use their own files in their offices where they pile everything. Their series numbers differ. They are not using files in the registries. The files in the registry are empty. There is a system, which just needs implementation”. In another Ministry the Chief Registry clerk complained that the offices of the Minister, Deputy Minister, Permanent Secretary and Deputy Permanent Secretary were the ones not using the filing system because, “they do not have series in the filing system”. Surveys conducted by the NAN in public sector institutions (48 in the last two years) revealed the same situation.

5.4.2.3 Use of files and practice of filing

The basic unit of organisation of records is the file. The study therefore aimed to establish the situation regarding the use of files and filing in the Public Service.

The study established that the file is considered as a final resting place for semi-current records and not as a tool in the day-to-day conduct of business. Officers deal with loose documents. This researcher was shown by officers, documents that come to them from the registries without being filed. The research revealed a general disregard for daily filing and daily use of files with documents being moved without being filed.

The following remarks and comments from officers interviewed give a picture of the situation regarding the use of files and filing. The picture painted below reflects what is happening in almost all the Ministries studies except in Ministry F.

- “We have a filing system where hard copies are recorded. The letter should come with a file from the registry but I still receive correspondence, which is not in a file. I don’t work with files. The culture is not there. One percent of what I receive is in files”.
- “You see what is in my office? Files. It shows that the registry system is not working. Mail from the registry come individual’s envelopes [folders]. I have opened a file for each ministry. I have asked the registry for file reference numbers for these files but no response from the registry”.
- “Correspondence is lying around [in offices of officers the respondent supervises] and not in files. I help by putting file reference numbers”.

The researcher carried out a file census in the Ministry B’s two registries. Pulling files from the cabinets at random and checking the latest date on each file yielded the results shown in Table 5.5 below.

Table 5.5. Poor Filing/Incomplete Files

File reference numbers	Latest Date
V1P – V3/8/1/1	2001
	2004
	2002
1/3 – 3/5/3/3	2005
	2005
	2006
	2005
7/3/4/2	1990
7/2/2/2	2006
7/2/6/3/2	2005
4/2/4/1/2/7	1986
3/7/3/50	2007
1/7/2/2	1992
10/4/2/12	2006

These are not closed files, which could suggest that the registry either forgot to close the files as is required by the Archives Code when the file is 3cm or has been inactive; or the files are active and the corresponding documents are being kept in “mini registries”. This is contrary to the procedures, which require that records be stored and maintained centrally. When talking to most officers they said that they send copies of records to the registry but the file census told a different story. When the researcher sought clarification from the registry staff, they explained that action officers do not as a routine send copies but wait for records to accumulate and then “dump” them on the registry. The same situation was observed in all but one of the Ministries studied, as well as the Regional Councils and the Local Authorities. In Local Authority B the Archives Officer pointed out that most files accumulate in their office before they are sent to the registry for filing. She pointed to two linear feet of records, which had been brought in for filing by an officer. In Local authority A the Council Secretary explained, “I only got a chance to file Tender Board Minutes after the officer who was Chairperson of the Tender Board left the service. Some of the minutes were signed and some were not and I even had to go to the secretary to see if I could get copies”.

In Ministry A, the registry clerk explained, “Filing was last done two years ago”. The researcher observed approximately five linear feet of records piled behind the Chief Registry Clerk’s desk, and a further 15 to 20 linear feet on shelves in the storeroom adjacent to the registry. Explaining the reason why records have not been filed in the last two years the Chief Registry Clerk said, “Yes I have a pile of records on the floor, which I do not want to be mixed with the old records because we are developing a new filing system”. This explains the situation highlighted by one of the registry clerks: “The older files are the ones most being used”. The researcher sought clarification from action officers on why this is the case and the reason given was that officers use the registry as storeroom or “archives”, as one of them put it. They consult the registry for old files to deal with old matters in most cases left pending by their predecessors. The rampant practice already explained earlier is when officers leave the service they box everything from their “mini registries” and take it to the registry. When asked to “Explain cases if any of complaints from action officers as a result of loss or absence of records” the Chief Registry Clerk responded, “There are complaints [by action officers] about the new filing system and the fact that records are not in files”. Officers explained that they rely on copies of correspondence on their computers and copies in files in their offices, in other words they rely on their “mini registries”. The Deputy Director in charge of the Registry wants to “see every letter filed and clean tables. If I ask for a file-by-file number it is brought to my table in no time at all. This is my vision on how I want the registry to operate”.

The situation observed generally in all Ministries, except Ministry F, is that files are used as final resting place for documents when the action officers have dealt with and concluded the matter. One Chief Registry Clerk said, “I used to file and it happened that things got lost or people temper with files. So I file when the inspectors are finished with the matter, maybe after a week, sometimes after a month or two”. This same situation was observed in Regional Council B and Local Authority A. The most serious case is one local authority that files once every year. The Executive Secretary whose functions include “all typing, filing and arranging functions” explained that “filing in addition to my other duties is too much to handle every day, so we do it once a year”. When asked how officers find what they are looking for in the event that they have to refer back, the answer was, “They check their computers and the response gives us an idea, of which box to look for the incoming correspondence”.

The culture of working with files is not there in the two Regional Councils studied. Responding to the question: “How do you keep track of a record removed from storage?” the Clerk responded “I have a register where I am supposed to register files when they leave the registry but I do not use it because no one takes any files. They make a copy”. This is only done when an officer wants a copy of a signed document. When asked: “Explain delays if any in getting files requested from the registry” an action officer responded, “We don’t use the registry that much. Only if we need a copy of a signed document, otherwise I keep all my information on my computer”. Copies of correspondence (incoming and outgoing) from the offices of the Chief Regional Officer and the Governor are sent to the registry once a month for filing.

In Regional Council B the registry clerk explained how the filing is done in the absence of a classification scheme. “I have a file for incoming and another for outgoing for each Ministry”. Further probing revealed that each ministry the Council corresponds with has two files, one for incoming mail and another for outgoing mail. What this means is that documents relating to the same subject are filed separately.

5.4.2 Tracking of records

The researcher wanted to establish mechanisms that exist in the Public Service to track the movement of records and files. The researcher posed the questions: “How do you keep track of records removed from storage?” and “If a record cannot be found how can you prove that it exists?” The responses show an awareness of registers but their implementation and the effectiveness of their use varies in the different establishments.

The registry, offices of the Permanent Secretaries, Directors of Departments and Directorates and Deputy Directors of Divisions, Chief Regional Officers, Governors of Councils, Chief Executive Officers in Ministries and their Departments, Councils and their Departments and Municipalities and their Departments keep registers of correspondence that come into and leave their offices. Where the culture of working with files exists, officers are meant to sign for files that they take out of the registry.

Although officers are keeping “mini registries” there are no mechanisms in place to keep track of records they have received. In situations where records leave their offices for use by others, this movement is not recorded. Table 5.6 shows the situation in the main registries of the different establishments.

Table 5.6. Use of records control and tracking tools

	Incoming Mail Register Yes/No	Outgoing Mail Register Yes/No	File Card/Register (Where applicable) Yes/No
Ministry A	no	no	yes
Ministry B	yes	no	yes
Ministry C	yes	yes	yes
Ministry D	yes	no	no
Ministry E	yes	no	*
Ministry F	yes	yes	yes
Ministry G	yes	no	yes**
Regional Council A	yes	no	*
Regional Council B	yes	no	*
Local Authority A	yes	yes	no
Local Authority B	yes	yes	yes

Note.

* Files don't leave the registry. Officers get copies of what they want.

** Only one directorate, General Services has records in the main registry but even then these files are incomplete.

The implementation of these tools is not very effective. In Ministry A, “sometimes officers don't sign for the file. Some refuse to sign and say it is just to make a copy then they keep the files in the offices”. One officer in Ministry A remarked, “I have dealt with cases where a document I had received and sent to the registry could not be found. It was difficult to prove that the document had been received by the Ministry. We don't have a system of recording what is coming in and going out of the Ministry”. This remark could either mean that although there are incoming mail registers in the Ministry's registries, the recording of incoming mail is not always done or the officers receive mail sent directly to them without passing it on to the registry to follow the normal registry process. It has already been pointed out earlier that officers receive and keep originals in their offices.

In Ministry B, the registry staff indicated that they had an outgoing mail register, which turned out to be just a register, which records the envelope sizes of mail sent for postage, as well as the quantities. This is because mail comes already sealed in envelopes and in most cases, without copies for the registry files. The same problem was also observed in Ministries D and E.

In the two Regional Councils the registries do not have outgoing mail registers. It would be difficult to maintain such registers as officers send to the registries mail that is already sealed for posting without copies for the files. In Regional Council A, as already indicated, copies for all outgoing mail come to the registry for filing from the Office of the Chief Regional Officer much later.

In Local Authority A, the registering of incoming mail is sometimes not done “when mail is sent to the Chief Executive Officer directly”. According to the Archives Officer in Local Authority B, the file movement card/register system had not worked as “people had free access to the registry and they came and took files without signing for them. Since we had a counter it is improving”.

5.4.3 Loss and/or damage to records

The research wanted to establish incidences of lost or damaged records. The researcher addressed 59 action officers (including heads of records keeping function) on the issue of missing or lost records. Forty-six (78%) responded that they had experienced a case or cases of lost records. The reason given by action officers for loss of records include misfiling by registry staff, wrong reference numbers used by action officers, and the sending of mail directly to action officers. The registry staff attributed the missing records to officers not signing for records they take out, officers not returning files to the registry and officers not sending correspondence sent to them directly to the registry for filing or keeping a copy of what they send out.

A senior officer referred to a case where a record showing proof that the Head of State (the President) had sanctioned, according to regulations, the passing of a law by a minister could not be found. This law led to the closure of a factory and the owners took the minister to court. Since the record showing that the law had been sanctioned by the President could not be found, the

Ministry lost the case and had to pay about half a million Namibian dollars. Another officer in the same Ministry remarked, “Cases have happened that they have even missed Cabinet decisions”.

An officer in the same Ministry commented, “Sometimes we do not get what we want from the registry. That happens when you are not sure in which file the document must go. The people at the registry also misfile. Ninety percent of the time I get what I want”. This officer is highlighting the problem of wrong file reference numbers, which results in loss of records as they end up in the wrong. Since the system of registers is not working in the Ministry, it becomes difficult if not impossible to track the documents.

An action officer in Ministry B referred to above commented that the loss of records “happens a lot” and blamed it on letters addressed directly to officers recommending that “there must be a rule that officers don’t receive mail directly but all mail should go through the registry”. This is confirmed by one of the registry clerks who remarked on loss of records. “Yes we have a lot of cases of lost records. They say records are here but we search everywhere and don’t find them. Sometimes a document is sent directly to the Director, Under Secretary and Permanent Secretary”.

A Director, one of the few who work with files and will not sign anything that is not on file said that “files sometimes cannot be found and they have to open a temporary file”. He acknowledged that in some instances files go missing permanently. The opening of temporary files was confirmed by the registry clerks.

Delays in decision-making due to loss of records is highlighted in the following remark: “I remember when I joined the Ministry [about two and a half years back] I was looking for information on something and that information could not be found and up to now that matter is not solved”.

Registry personnel in Ministry B attributed the missing records to officers taking files and not returning them to the registry. An officer narrated a comic but unfortunately true story of a file

that confirms this assertion by the Registry Clerk. A file could not be found for years. When an officer passed away the file was found under the cushion of his chair. Either he was hiding the file or using it to raise the seat.

In another Ministry the case of lost records led to an employee losing his job after return from study leave as the letter where the employer had made an undertaking to retain the position of the employee could not be found. Unfortunately the employee had also lost his own copy of this undertaking. In this Ministry, the head of records keeping function and action officer had indicated that there were no cases of lost records.

Loss of records was established in the other institutions studied. Table 5.7 illustrates the extent of lost or missing records in the Public Service.

Table 5.7. Lost or missing records

Institution	Number of officers to whom question was addressed	Number who have experienced cases of lost records
Ministry A	11	10 = 90.9%
Ministry B	13	12 = 92.3%
Ministry C	2	2 = 100%
Ministry D	2	0 = 0%
Ministry E	2	1 = 50%
Ministry F	2	2 = 100%
Ministry G	2	0 = 0%
Regional Council A	9	5 = 55.6%
Regional Council B	11	9 = 81.8%
Local Authority A	3	3 = 100%
Local Authority B	2	2 = 100%
Total	59	46 (78%)

5.4.4 Records disposal

The researcher investigated the practice regarding disposal of records.

5.4.4.1 Records disposal: individual practices

The researcher posed the question: “How do you deal with records which are not being used or not required?” Some of the responses from the action officers were:

- “I take them to the registry”, proving this researcher’s view that most action officers use the registry as a store room or “archive”.
- “The practice I have picked up is that the things are just left like that. When one leaves the successor comes. I am sitting with records of Mrs ... [predecessor]. Sometimes they are useful but sometimes I feel they are taking a lot of space but I just leave them there”.
- “When I joined the Ministry, I just dumped the records which I found in the office in a storeroom. I don’t throw away but dump them in another room until such time that someone says clean up”.
- “I send to the registry because the Archives Code requires destruction in a proper manner”.

The general practice is for action officers to pack from their “mini registries” the record they no longer require and send them to the registry and for others or those who have space, to keep them in their offices. None interviewed said they had destroyed any records. By this they meant paper records. However, they destroy e-mail messages and attachments all the time. Most destroy e-mail messages and attachments because of the low inbox capacity. The practice of saving e-mail messages and attachments to folders is not regulated. One officer remarked, “My mail is small so every day I save to folders and those that I don’t need I delete daily”. Whereas officers would not hear of destroying paper records, they have no qualms about destroying the e-mail records. When this issue was brought up in the interviews with the IT officers, one commented, “It is only deleted on their machines but not on the exchange server”. In another establishment, an IT officer commented, “E-mail is not recognised as official mail”. However, as established and discussed earlier, this is e-mail received in the conduct of business.

5.4.4.2 Records disposal: institutional practices

All records keeping staff as well as the heads of records keeping function indicated that they are aware of the procedures to deal with records that are no longer required. Ministry F, the one cited earlier as the exception to all other Ministries studied, last transferred its records to the National Archives of Namibia (NAN) in 2003 and have documentation to support this. However, the records keeping staff in the other Ministries could not recall records ever being transferred during their time. These officers joined the registries in 1991, 1995, 1997, 2003, and 2004. None of the establishments have retention schedules. However two Ministries, Ministry A and Ministry E are in the process of listing their records in order to request for disposal authority from the NAN.

Except for the retention periods for common or facilitative functions, all of the institutions studied said they did not have retention schedules for their specific or substantive functions.

5.5 Safety security and confidentiality of records

The questions: “Can you explain how you ensure the safety and security of paper or electronic records?” and “In the event of a fire, flood or other disasters, how you would ensure the safety and security of paper or electronic records?” were raised to establish the safety and security control measures in the Public Service. E-government requires the protection of individual privacy by ensuring that records are protected against unauthorised access. Creation and preservation of trustworthy records require that records be protected from unauthorised alteration.

The responses included provision of a counter in the registry, signing for records by officers when requesting for records from the registry, passwords for computer files. Staff said they lock their offices. Only one Ministry, Ministry F, mentioned the Public Service directive, which requires that at the end of the day all files be taken to the registry to be locked away. However, when asked if the officers always adhere to this directive the answer was, “The policy is they return files to the registry at the end of the day but in practice they keep them for days or weeks”. The responses show that there are no systematic strategies to insure records from natural and

other biological factors. In responding to the question: “In the event of a fire, flood or other disasters, how will the records be safeguarded?” All officers expressed that there is not much that can be done to save the records. The researcher had observed fire extinguishers and fire hoses in these institutions but most officers do not know where these are located. There are no fire drills to prepare staff should a fire break out.

The NAN was asked the question: “Does government have a disaster management plan and does this encompass records management?” This question was meant to establish if records management is part of an overall Public Service disaster preparedness plan. The response was “No”. However, as part of a digital preservation strategy the NAN is planning to purchase equipment for “mass storage, which has data back-up and planning for offsite storage”.

5.6 Legal and regulatory environment

A regulatory environment facilitates the effective management of records. The researcher investigated the existence and awareness amongst staff of legislation relating to records keeping issues as well policies, procedures and guidelines.

5.6.1 Legislation that regulates records management

The researcher asked the question: “What legislation guides the work that you do?” and went on to probe to determine if the law requires certain types of records to be created and maintained. Most responses cited the *Public Service Act* and the *Finance Act*. However, judging from the responses to the question: “What is the law that specifically regulates records management in the Public Service?” Most officers did not know about the *Archives Act*.

5.6.2 Standards and guidelines for managing records

In response to the question: “What guides you in the management of records, both paper records and electronic records?” classification scheme, *Public Service Charter*, *Treasury Instructions* were some of the answers given. Only two (4.7%) of the 43 action officers interviewed referred to the *Archives Code*, three (30%) of the 10 heads of records keeping function; and four (20%) of the 20 records keeping staff referred to the *Archives Code*. However, with further probing, all the

records keeping staff said they had heard about the Archives Code and some of them even showed the researcher a copy, but explained that they did not use it. The NAN explained that the standard used in the Namibian Public Service is “the *Archives Code*, which does not have any legal standing”.

5.7 Compliance and monitoring

Responses to the question: “Who conducts audits to evaluate record keeping practices?” included: nobody, the chief control officer or other person in administration in charge of the records keeping function. When asked the frequency of such audits, the responses show that they are not done often.

5.7.1 Internal audits

One action officer in Ministry B commented, “I don’t know who is really in charge of the registry. They say it is Mr.... but I still have to hear a word from him about records. He has spoken about a lot of things including telephones but not registry”. This respondent has been in the Ministry for three years. In Ministry D the Control Registry Clerk responded: “It is the Chief Control Officer though in this Ministry, one would say it is me. They trust that I am perfect so they don’t have to supervise me”. A Control Officer who was delegated the responsibility of overseeing the registry by the Chief Control Officer commented that she does not supervise the registry as a matter of routine. “I only get involved in the registry if they have a problem”. When asked how often she has been consulted over problems of the registry she answered, “Not very much”. The National Archives concurred that chief control officers “with a lot of other duties” are responsible for monitoring the registries in the Public Service.

5.7.2 External monitoring

Responding to the question: “How is compliance with standards, policies and regulations monitored?” the NAN responded, “Occasional inspections ... roughly speaking a third of records management staff time is spent on monitoring”. However, Regional Council B and Local Authority A located about 200 kilometres out of Windhoek where the NAN is situated, complained that the NAN had not visited them in a long time. An officer in Local Authority A commenting on non compliance with the Archives Code said, “The Archives’ visits are no

longer happening so people are saying why must I do it”. When asked when last the NAN visited them Regional Council B and Local Authority A responded that it was before independence [1990]. The NAN cited a shortage of staff. There are three posts for the records management function. Despite staff constraints the NAN has carried out 48 records surveys in central government, regional and local government and parastatals. Most of these have been in Windhoek. “Due to staff problems National Archives only goes to the regions upon request”. Of the 48 surveys five were carried out in the regions. However, the situation is bound to change as “provision has been made for an archivist post for each of the 13 regions. The archivists’ responsibilities would be to coordinate records management in the regions”.

5.8 Resources and facilities

Records are bulky and can put a strain on an organisation’s resources and facilities. This is compounded by the absence of a records management programme and/or the presence of weak records keeping systems. This was found to be the case in the Public Service of Namibia. There were complaints about lack of staff and storage space for paper records; inadequate funds for training such as sending records keeping staff to workshops. In the course of the interviews shortages that have a negative impact on records keeping were identified in other areas, such as computer tapes, memory allowed for e-mails and human resources, which are discussed under the relevant sections in 5.10.

5.8.1 Records keeping personnel

The adequacy of records keeping personnel in all the institutions studied has never been tested because the registries are not operating the way they should. Officers keep records in their offices and requests for records in the registry are very rare. The question: “Explain delays if any in getting records requested from the registry”, reaffirmed the situation that had earlier been established, that of mini registries and the fact that most officers do not use the central registry at all. Only two (3.8%) out of 53 heads of records keeping function and action officers answered that there is a shortage of staff in the registry. Even in Regional Council A where the registry is staffed by one officer who is also assigned other clerical duties, only one person out of the eight

interviewed responded that there is a shortage of staff. Table 5.8 shows the number of records keeping staff per registry.

Table 5.8. Staffing in the Registries

Institution	No of staff in the registry	Carry out non-records keeping tasks as well Y/N
Ministry A	3	Y
Ministry B	4	Y
Ministry C	1	Y
Ministry D	2	Y
Ministry E	3	Y
Ministry F	7	Y
Ministry G	7	Y
Regional Council A	1	Y
Regional Council B	1	Y
Local Authority A	0	N/A
Local Authority B	2	N

As already presented earlier, it is common practice for registry personnel to carry out other duties in addition to records keeping functions. A registry clerk in Ministry A commented, “I have been working in this office alone for four years. When the messenger does not show up, I collect and deliver mail from the post as well as from the upstairs [the offices of management staff]. If you don’t collect it stays there”. In Ministry G the control Registry Clerk remarked, “We are used to relieving private secretaries”. It was the same in Ministry D, where a registry clerk was relieving in another Division on non-records management duties. In Ministry E the only registry clerk (the other two posts being vacant) in the two years she had been in the Ministry did not stay in the registry to carry out any records keeping tasks. The first year she worked as private secretary to the Under Secretary and in the second year she was sent to work in finance division. In the meantime, the registry was attended to by a messenger. In the same Ministry all three registry posts are vacant.

In Regional Council A the clerk assigned registry duties is also responsible for stores. In Regional Council B the only registry clerk was sent to relieve in transport on non-records management tasks, leaving the registry unattended.

Out of the seven Ministries, only two indicated that there was a shortage of staff. The heads of records keeping function in the other five Ministries were asked if the staff would be adequate if officers were not keeping mini registries and the central registry was functioning as it should. The response from two was that there would definitely be a shortage of staff.

5.8.2 Storage for records

In responding to the question: “What is required for the Ministry/Regional Council/Local Authority to manage records effectively”, storage space was one of the things mentioned. The current disposal practices explain the congestion in the Ministries. Ministries C, E and F indicated that they had ran out of space. They could not transfer any records to the NAN as there was no space at the NAN. The NAN confirmed this and explained that there is no interim storage or records centre. However, the NAN compiled “specifications for interim storage of Government documents applicable to private companies”. NAN mentioned that there are four private companies who have shown interest in providing interim [records centre] storage to Government. The interview further revealed that the NAN has future plans to establish records centres as part of capital projects but it will take several years. Asked if the congestion found in the Ministries, regional and local authorities was due to the absence of records centres, the Head of NAN responded that that was partly the reason but also “lack of disposal guidelines and lack of training of registry personnel to deal with disposal”. The NAN indicated that not many disposal guidelines had been issued in recent years.

5.9 Training and skills

This section analyses and presents the data on issues relating to training and skills for the management of records. The researcher investigated induction programmes for new staff, with the intention of establishing if such induction programmes cover records keeping. The researcher

also investigated other records management training programmes available to the officers, both records keeping staff and action officers. The level of training for the different officers in the registries is also highlighted.

5.9.1 Lack of training in records management

Lack of training was identified as one of the factors leading to poor records keeping in the Public Service. Commenting on the “poor shape” in which the Public Service records management is, a senior officer at the NAN cited “inadequate training of records managers and clerks”. The following comments from action officers and records keeping staff confirm this.

- “Also what lacks is there is no training, no in-house training” (Town Secretary, Local Authority A).
- “If we write memos to tell them [action officers] that we need original letters or e-mail to come for filing, it is difficult to make people do it. We want our filing to be successful so we need training” (Registry Clerk, Regional Council A).
- “I suggest that all of us get training to sensitise people on the importance of a file” (Chief Control Officer, Ministry E).
- “There is need for training, particularly registry staff ... Funds permitting everyone needs to be included” (Action Officer, Ministry F).
- “Training for all users of information to avoid piling of records in offices and letters being sent to other Ministries with no reference numbers” (Chief Control Officer, Ministry G).

Some of the responses suggest that training in records keeping should be given to everyone and not just records keeping staff. Most participants’ appraisals of courses run by the NAN recommended the same courses for all officers, senior officers as well as management in order to improve records management in their institutions.

5.9.2 Induction programmes for new employees

The researcher raised the following questions: “Is there an induction programme for new employees joining the Ministry/Organisation? Did you go through that induction? Did it include record keeping practices in the Ministry/Organisation?” The responses show that most Ministries do not have institutional induction programmes but rely on the overall one given through the

Office of the Prime Minister (OPM). However, Ministry B indicated that it is usually left to the Division/Section Head to “take the new officers under their wing and show them the ropes”. Of the 13 action officers interviewed in Ministry B only three (23.1%) had been briefed by their head on records keeping practices of the Ministry. Officers indicated that the OPM induction programme is not always done on time. “Ideally it should be done the first week but it does not happen”. The programme does not cover records keeping but the one for human resources and finance officers has specific aspects of records keeping. Of the 64 respondents to whom the question: “Did you go through the [OPM] induction programme?” was raised, 48 (75%) said they had attended the programme.

5.9.3 Other records management training programmes

Most of the records keeping staff interviewed have attended the three to four days training workshops given by the NAN. Only three (15%) of the 20 records keeping staff interviewed said they had not taken the course. The three include two private secretaries. However, only two (20%) of the 10 heads of records keeping function indicated that they had attended some records management training or awareness course. Some courses are offered by some by private companies such as ESAMI and others. The duration ranges from three days to a month. One registry clerk commented, “Information on records management courses comes and we request but we receive no response to our request to attend the courses”. This was a comment from a registry clerk who has been in the service for six years and attended a three-day workshop organised by the NAN in his fifth year of service. This three-day workshop has been his one and only training in records management. This is the situation with most officers. Shortage of funds is cited as the reason why they cannot be sent for training more often.

5.9.4 Registry staff: employment levels and qualifications

The heads of records keeping function were asked to comment on the adequacy of the levels of records keeping positions. A Deputy Director in Ministry D explained that “the entry level is Grade 10. Second level is Grade 12. The Control Officer requires a degree but not specifically on records management ... If you look at assignments at every level it is to file. If you look at it in that context it is fine. Where it needs more initiative ... I say requirements should be higher, at least a post graduate Diploma or Degree in Records Management”.

A Deputy Director in Ministry C responded, “We always take Grade 10 with an E in English – that is the requirement. It is adequate. It [records management] is not a specialised area that requires better qualifications. I have not come across anyone who has done records management after Grade 12. People can be trained. If you take Grade 12 they come in and leave. Those over qualified move out, Grade 10 stay”.

A Deputy Director in Ministry A was of the opinion that the Government sets minimum requirements but Ministries can employ those with higher qualifications. “The problem is with the low salaries and the career path where there are no prospects for promotion so registry staff leave for other Divisions”. This accounts for the sending of registry staff to other Divisions to the extent of leaving registries unattended. The registry is a stepping-stone to other positions within the Public Service. The attitude is that no one intelligent enough comes to the registry with the intention of staying. The Deputy Director’s sentiments were echoed by other officers, action officers and registry staff alike.

The National Archives of Namibia (NAN) also concurred. “The general educational requirements for records clerk are too low”. Asked what the NAN was doing to rectify this, the response was, “There is no move by the National Archives towards improving the level of records posts ... Why we cannot is that the registry clerks are not under the National Archives. It is something to be tackled as part of public sector reform”. The researcher asked if the NAN would take the route taken by other countries, for example Botswana, to have records keeping staff under the NAN establishment. The Head of NAN responded, “No. It will create supervision nightmares similar to ministerial libraries situation”.

5.9.5 Registry staff morale and staff mobility

The study revealed low staff morale among registry personnel. Lack of career prospects are a major contributory factor, apart from marginalisation of the registry staff and records keeping work. Confirming this are the following comments from records keeping staff:

- “People don’t take this office [registry] seriously”.
- “As long as you are in the registry you are nothing”.

- “Nothing pushes you to develop in this field. I am just here to earn a salary”.
- “According to the establishment one can go up to Chief Registry Clerk, but only if the person in that position dies or resigns”.
- “Officers come and go. Four or five months. I have copies of applications on the wall and do not even hide that I want to move”.

One would expect high staff mobility from the above responses but that is not the case, as shown in Table 5.9.

Table 5.9. Records Keeping Staff Mobility

Institution	High staff Mobility Yes/No
Ministry 1	yes
Ministry 2	no
Ministry 3	no
Ministry 4	no
Ministry 5	yes
Ministry 6	no
Ministry 7	yes
Regional Council 1	no
Regional Council 2	yes
Local Authority 1	N/A
Local Authority 2	no

5.10 Electronic information systems

The research investigated the use of ICT and its products. This included the strategic development of IT resources and systems in the Public Service; and the various electronic information management systems in the studied institutions.

5.10.1 Responsibility for strategic development of IT resources and systems

A question: “Who is responsible for the strategic development of IT resources and systems within the particular institution or the Public Service as a whole?” Six Ministries out of the seven replied that there is a Ministerial IT Committee. The IT officer in Ministry B explained, “There

are two levels. The Office of the Prime Minister outlines the whole IT strategy for Government. In the Ministry, the Ministerial Information Technology Committee is responsible for all IT related issues with the guidance of the Information Technology Division of the Ministry”. Each of the seven directorates is represented on the IT Committee. When asked if records management is represented in the Committee, the response was, “The Director of General Services is the Chairperson and represents records management”. In Regional Council A the Chief Control Officer who is directly responsible for the records management function is also in charge of IT. In Ministry A, the Director Human Resources and Finance is in charge of the records management function as well as the IT Division. In Local Authority B the head of IT Division is in charge of records management function and supervises the registry.

5.10.2 Electronic information systems: design and implementation

Several electronic information management systems can be found in the institutions studied. These include systems designed and maintained by the OPM, DPSITM; systems designed by external consultants – local and foreign; and back-office systems created by the officers. When the researcher tried to establish details about the systems from the IT Departments of the Ministries, the general response was that these Departments could not give details as most systems were developed by consultants and the officers using the systems were in a better position to say what the system can do. The IT Department’s role is to take care of the hardware and connectivity, for which they have external companies to take care of the major problems. The researcher could therefore not get responses to questions posed to the IT officers on various issues regarding the systems running in the Ministries, such as the type of systems: online transaction processing systems, decision support systems, etc; system architecture, metadata standards used and other functionalities. One Deputy Director in charge of Information Systems in Ministry B responded, “I don’t have clear answers to these questions because most systems were developed by consultants. I cannot explain the functionalities of the systems”. In Ministry A the IT officer responded, “We have a system which was designed by a consultant, and he is in a better position to answer those questions”. This was the same response the researcher got in Ministries B, C, D and G. The researcher was referred to different officers using and managing the different systems as “The IT Department is not creating any information, they defend their own territory and they don’t want us there. All the IT Department does is to get the equipment

running”. The researcher asked if the IT Department shouldn’t be having greater control on what was happening and the response was, “I don’t know if they will accept any policies from us. The IT Department has not been in existence for long, so for a long time they have been helping themselves”.

In the Public Service the OPM and Ministry of Finance provide and maintain the HRIMS and the IFMS respectively. In Regional Council A, the VIP Payroll System is supported by a commercial company. The hardware and software maintenance is done by another commercial company. The study found a similar situation in Ministry B, where three different companies deal with hardware, software and network respectively. In Ministry A, one of “the systems was designed by a consultant who is still maintaining the system but there are concerns that if anything happens to him today, the Ministry would be in trouble”.

Table 5.10 indicates where there is some foreign company involvement in the design and maintenance of information systems. This does not exclude the involvement of local companies, as some systems have been developed by local companies. However, one IT officer commented that there have been problems with a system where “the local guys were just a front for a South African Company. The Ministry now wants the system linked with another system and there is no system documentation. The Namibian company cannot help”. Collaboration between foreign companies and IT staff in the Public Service was also reported on several projects.

Table 5.10. Systems Development

Institution	Systems development - consultants involved Y/N	If yes name of country if foreign
Ministry A	y	South Africa
Ministry B	y	Australia, Finland
Ministry C	y	
Ministry D	y	
Ministry E	y	Sweden/South Africa
Ministry F*		
Ministry G	y	Mauritius, South Africa
Regional Council A	y	
Regional Council B	y	
Local Authority A	y	South Africa
Local Authority B	y	South Africa

Note. * IT officer responded that there are no systems running there other than the HRIMS and the IFMS managed by OPM and Ministry of Finance respectively.

Establishing systems maintenance was particularly important considering the fact that the systems were designed by consultants, some of whom are outside the country. For maintenance of the systems, the Public Service relies heavily on outside consultants.

5.10.3 Information management systems currently running

The following Table 5.11 shows some of the systems currently running or in the process of being developed. The list is by no means exhaustive as the researcher only listed those that the IT officers spoken to could remember. The interest of the study here is not an exhaustive list, but to show information from which one can conclude interoperability and extent of creation of electronic records in the Public Service.

Table 5.11. Electronic Information Management Systems

Name of System	Function(s) the systems support OLTPS, DSS, EDMS, ERMS	System Architecture Standalone PCs, client server, web-based	System programme Language (oracle, Sybase, SQL, proprietary)	System Support In-house (Namibian Public Service)/External	Status Currently running or being developed
Human Resources*	OLTPS	Web-based	SQL with Java	In-house/OPM	Running
Integrated Financial Management Systems*	OLTPS	Web-based	Oracle	In-house/Ministry of Finance	Running
Build Together Programme	DSS	Client Server **		External	Running
Transport Information Management System	DSS				Being developed
Training Database	DSS				Being developed
<p>* HRIMS and IFMS apply to all Ministries. The IT officer commented that “This [HRIMS] is being scrapped for Oracle so that it can be integrated with the IFMS”. An Assets Register, a module of IFMS is in the process of being developed. The same Asset Register is also being developed in other Ministries.</p> <p>** This system was developed in the 1990s as client server but is now in the process of being developed as web-based to link with the Regional Councils.</p>					
Namibia Livestock Identification and Traceability System (NamLITS)		Web-based and client server	Progress 4GL	External (local company)	Running
HYDSTRA (Hydrology System)	DSS	Client server	FOXPRO	In-house	Running
Ground Water	DSS	Client server	SQL	In-house	Running

Database System (GROWAS)					
Rural Water Supply Information System (RUWIS)		Standalone PC		Local	Running
Complaints Management System (CMS)		Web-based		Local	Being Developed
Maritime System	OLTPS	Client server	FOXPRO	OPM	Running
Remedy System					
Integrated Communication System	DSS	Web-based	Java*	OPM	Running
Pension System	OLTPS	Web-based	Java**	OPM	Running
* The system used to be in FOXPRO but was converted to Java to make it more accessible.					
** The Pension system is being converted to Java. The database is still in FOXPRO					
CADASTRAL Information Management System	EDMS	Web-based	Oracle	External	Running
Deeds Registry System	EDMS	Web-based	Oracle	External	Running
Communal Land Information Management System					At planning stage
Land Tax Collection and Billing System					At planning stage
Examinations and	OLTPS	Web-based	Oracle	External	Running

Assessment					
Education Management Information System	EDMS	Client server	Oracle		Running
Capacity Building System	DSS		Oracle	External (Local)	Running
National Student Administration Fund	DSS		Oracle	Internal	Running
VIP Payroll System	OLTPS		Oracle/SQL	External (Local)	Running
Geographic Information System					Planning stage

Note. The list does not include any systems for Ministry F, which reported that it does not have any systems running except the Human Resources and the Integrated Finance Management System; and the Local Authorities, which were evasive and did not give specific details.

5.10.4 Systems documentation

The researcher investigated the documentation of the systems currently running in the institutions investigated. Most of the institutions do not have the documentation of these systems. The private companies that installed the systems keep the documentation. Table 5.12 highlights the situation regarding system documentation.

Table 5.12. Systems Documentation

Institution	Kept by the institution Y/N	Remarks by IT Officer/or specific officers using the systems
Ministry A	y/n	“We don’t have a lot of documentation. I have for hardware. The ...[One of the systems] was developed a long time ago in the 1990s and it has no documentation”
Ministry B	y/n	“We don’t have a central place where we keep it. I have tried to collect it but it is not comprehensive” (IT Officer). “Some of the changes are in people’s heads. If we could get off the shelf application it would be much easier” (Officer in charge of one of the systems developed in-house by the Directorates).
Ministry C	n	“There is nothing”
Ministry D	n	“No system documentation”
Ministry E	n	“No documentation on how system was designed. Only procedures manuals”
Ministry F		
Ministry G	y/n	One system – “Yes we have it here” Another system – “What I have is outdated as there have been system upgrades. All up to date documentation is with the programmer in Pretoria”.
Regional Council A	n	No system documentation. It is kept with the Windhoek Company that designed the system.
Regional Council B	n	No system documentation. It is kept with the Windhoek Company that designed the system.
Local Authority A	n	“Kept by the Consultant in Pretoria”
Local Authority B	y	“Kept by the person responsible for standards and policies”

5.10.5 System upgrades

System upgrades have been done on systems in all these institutions. The researcher wanted to investigate the impact the upgrades had on data and structure of records. The IT officers explained the move from the old finance management system to the new system, as well as the move from the old SQL human resources management system to the web-based Human Resources Information Management System. This will now result in linkage with the Regional Councils. Currently they are using excel. In Ministry B an officer commented on one of the directorate’s systems. “With our own we keep on adding sections as we see fit. Some of the formats have changed over the years”. This is the same officer who responded that there is no system documentation and all these changes are in people’s heads.

5.10.6 System safety and security

Various measures were described by IT officers on how safety and security is ensured. However, it came out that there is not much protection from the dangers that a fire outbreak can cause. These came out from the various responses. “In the case of power failure ... we have a redundancy in our server, a mirror system, as opposed to primary domain. If the primary domain goes out the mirror will take over. If they both go out we would need to reinstall back-up” (Ministry F). The researcher established the same system in Ministry D. “We have the mirroring system, which mirrors all data from the primary disk to the secondary disk”. However, in both cases the primary domain and the mirror are kept in the same place so in the event of a fire both would be destroyed. The IT officer explained that “The ideal situation would be a duplicate main frame offsite”. The Ministry cannot do back-ups on tapes due to the non-availability of streamer tapes. “We have been struggling to get streamer tapes. If fire happens we are in trouble as we cannot do back-ups on tapes and store them offsite”.

All institutions reported passwords as a security measure. Other security measures cited are use of folders and levels of permission. Users save to the server and are not given permission to delete. This use of folders was found in several other institutions.

Viruses are also a threat to the systems. Asked if viruses threaten the system, one IT officer responded, “One of the Ministries, their anti-virus is not working so we spend time taking out viruses and reformatting”. When asked what the impact was the response was, “They do lose data. It has happened to me”. When asked if electronic documents lost always have hard copies, the response was, “It depends. If it’s one which needed the PS’s [Permanent Secretary] signature yes, but we don’t print everything that is on computer”. This problem of viruses corrupting data was established in other institutions as well. The system established reliance on electronic copies when hard copies cannot be found. This is common and it is not surprising considering the poor filing practices. It was also established that in some cases hard copies never existed in the first place, as it is not everything that is printed. However, as the next section shows, back-ups are not properly done and stored.

5.10.7 Back-up practices

The research established several back-up practices. Table 5.13 highlights some of these practices.

Table 5.13. Back-up Practices at Institutional Level

Institution	Back-ups Y/N	Server/Other medium	Storage of back- ups	Remarks
Ministry A	Y	Server and tapes	Off-site	“All documents are stored on the server with back-up offsite”
Ministry B	Y	Mostly server and tapes as well for some of the systems.	Off-site	Most of the in-house created databases rely on the automatic back-up done by the server. However some systems do back-up on tapes as well, which are stored offsite. For one of the systems, the back-up tapes are kept at home by the officer in charge.
Ministry C	Y/N	Server	Onsite	“We do back-up on the same hard drive. If it is damaged everything will be lost. All documents created by the officers are not backed-up on the server”.
Ministry D	Y	Server and tapes	Offsite	
Ministry E	Y/N	Server and tapes.	Onsite	The Ministry is in three buildings. Head office has no server so no back-ups are done. The other building has no network, so back-up done for only one building. The tapes are stored in the same place as the server.
Ministry F				
Ministry G	Y	Primary server and secondary server	On-site	The Ministry has failed to secure streamer tapes so it cannot do back-up on

				tapes.
Regional Council A	Y	Server and tapes	On-site	“We have a server, which is in a sort of safe place. Back-ups are done daily and then kept in safe place”. The researcher observed that the tapes are kept in the same room with the server.
Regional Council B	Y	Server and tapes	Off-site	Officer in charge keeps them at home
Local Authority A	Y	Primary Server and secondary server	Off-site	Kept by the company which set up and maintains the system.
Local Authority B	Y	Server and tapes	Off-site	“IT Department does all the back-up. Individuals can also do if they wish”.

The researcher established that there are no standard back-up procedures in the Public Service and these practices are far from being satisfactory. As highlighted in Table 5.13 there are cases where officers’ work is not saved on the server at all. There are problems of information not being found on the server where it is supposed to be for one reason or another.

An accountant commented,

On computer, the information is missing. We are having problem with the server. If I save it on my documents, I find it but because we share information we save on the server and not always on our desktops. After someone has been to repair something is missing after they are gone. This creates problems for us. The one who is in charge of the system here cannot do anything and then we end up creating everything unless you have a copy. But some of the things we do not have copies.

In view of this problem the study established that some Ministries do back-ups on the same server as highlighted by the following: “We do back-up on the same hard drive” and where there are secondary servers for back-up they are stored in the same room as the primary server. One officer explained the Public Service policy regarding back-up storage media. “According to policy they [back-up tapes] are not supposed to be in the building. We are supposed to have a data bank where I am supposed to take them. For now I take them home”. The practice of keeping back-up tapes at home was found in three other institutions places. Ministries in general do incremental back-up daily, weekly and monthly and overwrite tapes in the process because

they are expensive. Of all the institutions that do back-ups on tapes, only one said that they do not overwrite tapes. Forty-eight surveys carried out by the National Archives of Namibia (NAN) in central government, Regional Councils, local authorities and parastatals confirm these findings. However, all eight parastatals had offsite storage for their back-ups.

The study established that in Ministry E there is no network in one of its buildings and the head office has no server. In Ministries D and G it was established that even if there are servers the work of the staff is not saved on the server automatically. In such situations it becomes extremely important that staff do back-ups of their work. An experience by an officer in Ministry B shows what can happen.

We have a problem of lack of back-up with our in-house system. Even IT [Division] was not prepared for a long time to allow us to save on the server. Some time ago when one of our [Departmental] servers crashed, we lost our mapping capability for a long time. We used to run tapes but computers we are using, we cannot access information on earlier data. IT [Division] is now giving support and our software is now hosted on the server.

A senior officer in the same Ministry explained, “For electronic records, back-ups are on the central server. They [IT Division] said it is not necessary for individuals to do back-ups ... I have lost a document before and it was retrieved from the server”.

None of the institutions studied have back-up guidelines for staff. IT officers in Ministries where staff cannot back-up on the server said that there are no guidelines for staff on back-up. Staff in the Ministries explained that they have not been taught what to do and that they just do their own thing to safeguard their files. IT officer in Ministry E explained, “Some back-up on memory sticks, some burn on CDs and some don’t do back-ups at all”. When asked if there were instructions or guidelines for staff the response was, “There are no instructions or guidelines set”. In Ministry G the IT officer said, “I don’t know how they [staff] manage. I use folders. Once in two weeks I copy from PC to the F drive. Any member of staff can do that but whether they know how to do it I don’t know. Some people work directly on the F drive in case their PC gets corrupted but the problem is if it is down they cannot get access”.

Having established cases of data loss and potential for further loss, the researcher wanted to find out from the NAN the current practices regarding the transfer of electronic records. The Head of the NAN explained that, “There is no digital preservation strategy. Usually where they have e-records, they have back-up strategy”. However, the NAN is “preparing for deposit in terms of getting storage space, not for comprehensive digital archiving, but preserving selected digital records seen to be in danger, such as important databases in government in danger of getting lost”.

5.10.8 E-mail systems

All Ministries, Regional Councils and Local Authorities have e-mail systems. There were mixed reactions towards e-mail use. In one Ministry a Deputy Director said, “It is policy in this Ministry that every officer should have access to e-mail”. An Acting Chief Executive Officer in one of the Local Authorities does not share the same sentiments. “I am careful to install e-mail for each and everyone. Viruses and misuse of e-mail are a problem. In our offices only two officials are committed to e-mail”.

Issues regarding e-mail use, benefits and problems have been touched upon earlier in various sections but they are pooled together here for easier reference and emphasis. Some officers expressed the convenience of using e-mail. A Deputy Director said, “I am communicating more and more through e-mail and beyond borders as well”. An officer commented, “It is easy to communicate with the Ministry. They want most records electronically”. Most officers however expressed not so positive views regarding the use of e-mail. The following comments highlight this.

- “E-mail is unreliable. I don’t even use it”.
- “I don’t play around with e-mail because I do enquiries over telephone”.
- “Anything official we fax. I am not convinced that e-mail is an appropriate means of communication as you lose diplomatic nuances and pomposity. It is too personal”.
- “The problem is e-mail is always down and the internet is slow”.
- “E-mail is stored on individuals’ computers. There are no records on the server because e-mail is not recognised as official mail”.

E-mail use has several problems that were highlighted by the respondents. These include limited storage capacity and slowness of the system. Regarding the slowness of the system, an IT officer in Ministry G commented that “officers who receive big files have to go home to download”. Officers explained the fact that they cannot receive as many messages due to limited storage capacity. Some are constantly reminded to delete e-mail messages by the systems administrators and in some cases this is done automatically by the systems administrator to create space. Comments such as, “We keep computer documents for a limited time because of limited facilities” or “I keep as little e-mail as possible... We get advice from IT that we should not keep too much information as it disrupts the system”. The problem is destruction is done with no set guidelines on what should be destroyed or not and what should be done with the ones preserved. As one Deputy Director commented, “There are no guidelines on electronic records”. One officer explained, “I cannot have more than 300 e-mails in my inbox. I delete daily. I search the bigger ones, 1 meg. and above and remove them”. Some cannot receive mail when they are away for periods of time as their inboxes get full as one officer commented, “Because of control from OPM, e-mail bounces back ... then I cannot receive or send e-mail”. However, where there is no storage capacity limit, there is a tendency for officers to leave the e-mails accumulate in their inboxes. Most officers with no storage capacity constraints still keep the messages in their inboxes after printing or saving messages and attachments in folders. One officer explained how he manages his e-mail, “A lot I copy into folders. Quite a few I print. I have lots of space in my mail box”. This officer has two inboxes, one which had 1 031 with only 10 of those unread, and the other one 3 108.

Although e-mail use is widespread, it is still not considered the “usual way of communication” and is “used mostly for non-official” business hence the comment from one IT officer, “Many people are not using a quarter of the e-mail functionality. There is not much correspondence by e-mail. It is used mostly for non-official business”.

5.10.9 Electronic records management systems (ERMS)

The researcher also investigated the existence of ERMSs in the Public Service. There are no ERMSs running in the Public Service. The Office of the Prime Minister is in the process of acquiring an electronic records management solution that is an archives management system

module of the e-Office software package. The system documentation describes e-Office as having three modules, namely e-Presence for archives management, e-Process for workflow management and e-Policy for office automation management. The features of the e-Presence are described as:

1. Integration of documents management is supported including the whole life time of the document such as drafting, auditing, approving archiving process and destroying, etc.
2. Plenty functions provided to support the utilisation of the archived information resources.
3. Secure storage technology offered by the system to improve the safety of archives management. (Beijing CA-China Software Technology Co., Ltd., [2001])

When asked to comment on this system and whether it meets records keeping mandatory requirements, NAN commented, “Basically we are not involved and have not seen any specifications ... The Office of the Prime Minister is in charge of this and the National Archives has been involved in this ERMS on a token level”. However, the National Archives of Namibia (2006) Draft *E-Records Functional Requirements for ERMS* specify the following records keeping core functional requirements:

- Control – the ERMS must allow folders and records to be organised, so that they can be managed, found and understood;
- Capture – the ERMS must formally capture records regardless of their technical characteristics;
- Access and security – the ERMS must have the ability to assign rights and restrictions on the use or management of particular records in order to facilitate security;
- Disposal – The ERMS must be able to control the retention and disposal of records held by the system, in accordance with disposal authorisation;
- Searching and retrieval – The ERMS must be able to retrieve digital records and folders by a variety of search methods, and render the results on screen;
- Metadata – The ERMS must support the use of metadata to describe digital records and to enable automated records management processes; and
- Compliance – The ERMS must meet relevant local, national and international requirements for recordkeeping and records management. (NAN, 2006, p. 8)

Additional requirements spelt out in the document relate to systems management and design; and additional functional requirements, which include the ability to provide or integrate with document management facilities; being able to integrate with a workflow facility (considered non mandatory); and the ability to support a hybrid records system (NAN, 2006, p. 9).

5.10.10 Interoperability, accessibility and readability of electronic information overtime

Responding to the questions: “What is the metadata standard used by the system?” and “How is compatibility of systems and exchange of data ensured?” the IT officer in Ministry B responded, “All systems are developed in different languages. It has not been tested if the systems are compatible. Everyone is running theirs separately. We would need to ensure compatibility and exchanges of data especially when we create an information management system bringing information from all databases”. The IT Officer in Ministry A responded, “For most systems the language is proprietary. For all future developments it will be content management systems, it will be web-based, in ORACLE. All will be integrated”.

5.11 Computer generated records

Computer generated records found include spreadsheets, word processed documents, e-mail documents and attachments and databases.

5.11.1 Management of electronic records at institutional level

The general observation is that there is no awareness that records need to be captured so that they can easily show evidence of the transactions that they document. There is no conscious effort to understand the attributes of the records being created even by the people managing the systems. The question: “What is the metadata standard used by the system?” was not well responded to. Three officers in charge of the systems said they did not know what metadata was. The other responses were: “The databases have common functions. The descriptors were done by the developers. We do not have a metadata standard”. The other response by the Deputy Director in charge of IT in an institution where the researcher identified more than five systems running responded, “Speak to different directorates. We don’t have a system we are running except websites”. The researcher later established that software for some of these systems is hosted on the

main server. In another Ministry the response was, “We use the United Nations Institute for Statistics standard. We capture indicators we feel are valuable to us”. In the same Ministry another department responded that they could not refer to a specific standard.

5.11.2 Management of electronic records by individuals

The practice of typing pools is dying out. Ministries still have pools of secretaries but these are mostly used to relieve the private secretaries and do some bulk typing. Most officers do their own typing. As established already in this chapter, officers send mail to the registry for posting already sealed in the envelopes, with no copy for the files. One would therefore expect in this situation the electronic copy to be well managed by capturing in a filing system, which reflects the paper files as well.

Most officers are of the opinion that the electronic records which they keep, particularly correspondence, are not official as they do not have the signature of the Permanent Secretary. This is mostly true of e-mail. The challenges individuals face regarding the management of e-mail have been presented in section 5.10.8.

The poor filing established with paper records is experienced with electronic records as well. The individual practices in the Public Service for handling electronic records established by the study include printing and filing on the paper files, and saving in folders. However, officers create their own folders and except in Local Authority B, there is no effort to create standard folders where records relating to the same function can be stored.

5.12 Summary

This chapter has presented the research data from interviews, observation and document search, integrated and organised according to the thematic areas of the study. The researcher started by analysing data according to pre-determined thematic areas in line with the study’s objectives and research questions. However, in the process of analysing the data other categories emerged which were incorporated and data has also been presented under these emerging categories. Data

was presented in the form of descriptive narratives and where feasible, figures were used to highlight issues.

The data shows a hybrid records system in the Public Service of Namibia. The findings show that records management in the Public Service of Namibia is weak in a number of areas, such as lack of awareness of records management, undefined responsibilities for records management, shortage of skilled staff, poor filing habits, decongestion in offices, lack of guidelines for electronic records management such as management of e-mail messages and attachments. There are set guidelines for the management of paper records as set out in the Archives Code, but these are not complied with.

The study established a number of electronic information management systems including electronic document management systems, decision support systems and online transaction processing systems currently running in the Public Service. Records emanating from these systems are in danger due to poor filing, poor back-up practices and preservation of system documentation. There is no digital preservation strategy in the Public Service.

No electronic records information management systems are currently running, however the Public Service of Namibia has acquired an electronic records management system yet to be implemented, with the intention of rolling it out to the entire Public Service. The move in the Public Service is to go web-based and upgrade systems so that they are compatible. Old systems are being upgraded such as moving from FOXPRO to JAVA.

The next chapter discusses the findings of the study incorporating the literature.

CHAPTER SIX

DISCUSSION AND INTERPRETATION OF RESEARCH FINDINGS

6.1 Introduction

This chapter discusses and interprets the findings of the study. Presentation of research findings is followed by discussion of the most important points, which integrates the findings into theories and purpose of the study. Sarantakos (1992, p. 423) explains the importance of this chapter. "...the discussion of the findings offers some answers to the research questions, and explains many of the issues included in the research problem". The interpretation of the research data as presented in Chapter 5 is organised according to the research objectives. At the end of each section the respective research question is answered. In addressing whether each research objective has been met, the discussion looks at the findings incorporating the literature and in particular best practices, from which recommendations have been drawn.

6.2 E-government in the Public Service of Namibia

The main assumption of this study was that the Public Service of Namibia has embarked on e-government, which should result in an increase in the creation of electronic records. The study therefore investigated the e-government initiatives taking place in the Public Service to establish the extent of e-government growth in the Public Service of Namibia. From the responses one can deduce that e-government in the Public Service of Namibia is at its initial phase. Initiatives discovered by the study include improvement of websites or establishing websites where none existed. The e-service cited by 23.3% of the action officers provides information on civil service regulations, vacancies and directives. This is in line with phase one of the e-government implementation strategy, which will see government being present on the web, providing the public and business with relevant information in order to promote transparency (OPM, 2005a, p. 2). According to the IT Officer for Ministry B, "If we improve our website, we would transfer information there ... that the public requires". This is the "publishing" or "publication of information level of e-Maturity (INTOSAI, 2005). However, plans are underway to integrate the HRIMS and the IFMS and make the e-service "interactive". Thus Namibia falls within the

majority of some developing countries, which are supplying e-service to the extent of publication of information and passive interaction (INTOSAI, 2005). Namibia's e-government implementation strategy is discussed in Section 2.7.5.

A number of reasons have been put forward for slow diffusion of e-Government in Africa. According to Heeks (2002, p. 9), there are "six factors, which are of main relevance to e-government in Africa. These can be posed as an inventory of 'e-readiness for e-government' questions". These questions raised by Heeks, are discussed below and data from this research is used by the researcher to address them in relation to Namibia's situation. The records management implications are highlighted.

1. Is the data systems infrastructure ready?

This question addresses the issue of management systems, data standards, records and work processes in place to provide the quantity and quality of data to support the move to e-government (Heeks, 2002, p. 9). According to Floyd (2002), an infrastructure to maintain the integrity of data and information is part of the backbone of a successful e-government. Namibia's Public Service data systems infrastructure is not yet ready to support e-government. This assertion is based on the following findings:

- There is not enough awareness of records as evidence of official activities, which should be preserved for evidence and good governance. There is evident lack of awareness by officers of the fact that they are creating electronic records although they talk of e-mail messages and their attachments. The officers admitted their reliance on electronic copies of correspondence and other documents.
- Electronic information systems such as the Integrated Financial Management System and Human Resources Information Management System generate transactional records that are not captured and maintained in a records keeping system. This compromises the creation and preservation of reliable and authentic records for evidence, accountability and transparency.
- Most offices are congested with records. Officers keep records in their offices whose existence no one else knows about. Documents are not filed and this problem now includes electronic records where the use of folders and naming conventions is not systematic. This

problem is compounded by the absence of classifications schemes in some institutions, or where they exist they are outdated or not used at all. Absence of retention schedules for systematic and regular disposal of records, coupled with the absence of records centre facilities, has worsened the situation.

- Cases of missing records were reported by the respondents. In one case Government was taken to court and ended up paying about N\$500 000 because records could not be found to support its case. Cases of employees whose entitlements had been delayed or lost were also reported.
- Various measures are in place for the safety and security of records. These include burglar bars, fire fighting equipment, passwords and back-ups. However, these measures are not effectively implemented. Some offices lack burglar bars and fire fighting equipment. Where the equipment exists, in most cases it is not regularly serviced. There are no fire drills to train staff on how to operate the equipment. Records are threatened by viruses, poor back-up procedures, and/or lack of it completely. The researcher discovered that in some of the institutions, back-up tapes were stored in the same room as the servers, or at home.
- There is hardly any compliance with the Archives Code, the records management standard for the Public Service. This standard is not known by most officers as well as some of the records keeping staff. Internal monitoring is almost non-existent as senior officers responsible for records management delegate this task; with the result that nothing gets done. External monitoring by the National Archives mandated to offer a records management service to the Public Service is not carried out often due to personnel constraints.
- Resources in short supply include tapes for back-ups, storage space for paper records, adequate server space resulting in the haphazard destruction of e-mails; IT and records keeping staff; and no dedicated budget for records management. Two of the institutions studied did not have records management positions. In some institutions, records keeping staff are seconded to other divisions to do non-records keeping work, leaving the registries unattended.
- Most electronic information systems were developed, and are maintained by external consultants who have kept the systems documentation. The whereabouts of documentation

for most electronic information systems is not known by the IT officers, which presents serious implications for digital preservation strategies and future access to information created by these systems.

- The Public Service is moving towards web-based systems and there have been a number of systems upgrades. Cases of changes in data format and failure to access data were reported by the officers. This has serious implications for the trustworthiness of the records of the Public Service. Trustworthy records are reliable and authentic. Reliability is the ability of a record to “stand for the facts they are about” and authenticity means that records can “prove to be what they purport to be, immune from any sort of tampering and corruption. Reliability relies on the completeness of the records” (Duranti, 2001).

2. Is the legislation infrastructure ready?

Legislation plays a significant role in records management. Experiences of other countries show that relevant legislation includes records and archives, e-commerce, freedom of information and data protection laws. Namibia is in the same category as most African countries where “digital signatures cannot be accepted” (Heeks, 2002, p. 9). E-commerce legislation is currently at bill stage, the *Use of Electronic Communications and Transactions Bill* of 2005. The *Namibia Archives Act 12* of 1992 does not specifically spell out electronic records although they are implied in the overall definition of archives. The revision of the *Namibia Archives Act* currently underway, will hopefully spell out what electronic records are, as well as the mandate of the National Archives regarding their management. There is no freedom of information and data protection laws, which are important for democratisation of information whilst protecting the rights and privacy of individuals. Namibia’s e-governance policy (OPM, 2005) calls for regulation to protect consumers, protect privacy and communications, and security of electronic signatures. Namibia’s legal framework is not yet ready to support e-government.

The research findings showed that Namibia has a weak legal and regulatory framework. This has serious implications for the success of e-government in the Public Service of Namibia. Success of e-government requires a conducive legal and regulatory environment, which according to Floyd (2002), is another part of the backbone of a successful e-government. Okot-Uma (2002, p. 5) supports this, stating that “...the most fundamental entity that underlies the functionality of e-

governance are the records that are kept electronically” and their management needs to be supported by a “comprehensive legal environment” which addresses amongst other things, electronic signatures, legal recognition and validity of records that exist electronically, data protection and privacy of individuals.

3. Is the institutional infrastructure ready?

This question addresses the fact that e-government can only progress if the institutions exist as a focus for awareness and act as a means for facilitation of e-government (Heeks 2002, p. 9). Such responses as: “What is e-government?” to the question: “What e-government initiatives if any are taking place in the Ministry/Department/Local Authority/Regional Council?” suggest a lack of awareness in some officers. Korac-Kakabadse, Kouzmin and Korac-Kakabadse (as cited in Heeks, 2002) refer to the absence of institutions that coordinate, lead and drive e-governance in Africa.

In Namibia, the OPM is the institution that is driving e-government. There is however need to identify key stakeholders and to assign roles and responsibilities for e-government implementation. Failing which, the result is the situation that exists in the Public Service of Namibia. The OPM went ahead and spearheaded the acquisition of an electronic records management system without the input of the NAN regarding the systems specifications. The OPM claims that the piloting of the project was done in consultation with the NAN (Republic of Namibia, OPM, 2007) and yet interviews with the NAN revealed that the National Archives has ‘no knowledge of the specifications for the system’ that was acquired as it has not been sufficiently involved to recommend the appropriate specifications.

An E-government Committee meant to have a representative each from key stakeholders, namely Ministries and the NAN, never became functional and the officer said that there are plans to set up another Committee. Findings of this study indicated that the absence of such a Committee threatens the success of some initiatives such as the e-records management system meant for the entire Public Service. The OPM feels it is in charge of electronic records management since it is in charge of e-government. This shows a failure to realise that IT is just a tool in managing records and that the mandate for managing records including electronic rests with the NAN.

Failure to clearly demarcate and assign roles and responsibilities for e-government can compromise the success of e-government projects. Records management is one of the building blocks for e-government. Lessons from best practices show that records managers should coordinate the effort among records creators, recipients, and computer systems management in organisations to ensure that records are maintained and protected in accordance with acceptable records management principles (Department of Energy, 1996).

4. Is the human infrastructure ready?

This question addresses the issues of attitudes, knowledge and skills required to initiate, implement and sustain e-government initiatives (Heeks, 2002). The researcher established that there is lack of skills and training in IT as well as records management. One IT officer commented: “Lack of skills in Government results in not providing necessary support to our users. Recently the network was extended to the regions. These people need our support but we are not able to do that. It makes me feel as if we are building white elephants”.

The following comments by the respondents highlight the shortcomings of the human infrastructure. A clerk commented: “I was just given a computer but no training. I try to do back-ups on my memory stick but when I want to access the information, everything is gone, the memory stick is empty”. Another officer remarked: “With the VIP payroll system, at the end of every month we do back-ups. We are supposed to do it on CDs, but I don’t know how to do it. When updating the system we notice that CDs are empty. I am not really good with computers”. Another comment from one of the Regional Councils reiterates this problem of lack of training. “We are having problems with the server; after someone has been to repair, something [information] is missing after they are gone. The officers in charge of IT are supposed to know what the problem is but they cannot help”.

Attitudes towards records keeping and lack of commitment to follow laid down procedures as spelt out in the Archives Code are other examples that show that the human infrastructure is not ready yet. Records keeping staff indicated that they are looked down upon and no one listens to the advice that they give regarding records keeping. A Deputy Director in one of the Ministries was of the opinion that records management requires no special training or skills. “We always

take Grade 10 with an E in English – that is the requirement. It is adequate. It [records management] is not a specialised area that requires better qualifications. I have not come across anyone who has done records management after Grade 12. People can be trained. If you take Grade 12 they come in and leave. Those over qualified move out, Grade 10 stay”. The attitude he portrayed is that no one intelligent enough comes to the registry with the intention of staying. The Deputy Director’s sentiments were echoed by other officers and records keeping staff alike.

Changing the mindsets of individuals has been noted as being one of the biggest challenges of e-government. For records managers, the challenge is the retraining of everyone in the organisation, from the top management to clerical staff “to think about records management, applying controls to everything they write or receive” (Stemson, 2004, p. 5).

5. Is the technological structure ready?

The study discovered problems such as bandwidth and viruses. According to one IT officer, the problems are “virus infections, data line to and from Ministries, is overused and makes the system slow down. Users reopen and reopen and machines freeze... Some people lost data on their machines due to viruses”. Another officer in a different ministry referred to “hiccups with the use of technology - problems with network”. When asked to explain he mentioned that the system is slow. One officer claimed that he does not use the Internet because it is slow. Another officer remarked: “At regional offices where we have intranet, we do have a problem with Government systems”. Respondents explained that the electronic conferencing facilities in the Regional Councils are not fully utilised, with some suggestions that it could be due to connectivity problems.

In its *2005-2006 Annual Report* the Office of the Prime Minister (OPM) (2007) reported on a system, which had “grown beyond its capacity” and had “almost come to a halt due to aging equipment ... mail and web servers were obsolete and could no longer cope with the traffic to and from the system per second. The system upgrading and designing of the Intranet/Internet network ... brought it in line with the e-Government implementation requirement for capacity and fast access to Government online services” (OPM, 2007, p. 6). The findings of the study suggest that a lot more still needs to be done to achieve fast access to Government online services.

Namibia, as is the case with most African countries, is a long way short of the computing and telecommunications infrastructure, on which many Western e-government initiatives have been based (Heeks, 2002). The technological infrastructure problems have significant implications for the creation, maintenance and preservation of trustworthy records. The deletion of e-mails, virus attacks, etc. compromise the integrity and authenticity of records.

6. Is the leadership and strategic thinking ready?

Considered to be the most critical pre-condition for successful e-government is leadership “with a vision who put e-government onto the agenda, who set e-government within a broader reform agenda, and who make it happen” (Heeks, 2002, p. 10). The following remarks by an IT officer highlight the problem of leadership. “As experienced by many officers our leaders are not conversant with IT issues so they are not able to give instructions on what the ministry should use ICT for. It is left to juniors. We are expected as a ministry to make progress but since introduction, very little has been achieved as those in management are not aware of what they should do to accelerate the e-governance process”. The author also discovered that most senior members of staff mandated to direct records management delegate this responsibility to junior staff.

The issue of leadership or lack thereof is further highlighted in section 6.3.1.2, which deals with responsibilities for managing records. The results of the study indicated that generally there is a lack of commitment from senior management, and there is over reliance on delegation to juniors who cannot influence decisions. This supports, within the Namibian context, the assertion by Udo and Edoho (as cited in Heeks, 2002, p. 12) that “the limited number of senior officials willing or able to champion ICTs in governments in Africa acts as the most serious constraint to e-government diffusion”.

6.3 Status of records management in the Public Service of Namibia

One of the questions to be answered by the study was: “What is the current status of records management in the Public Service of Namibia?” The study highlighted the poor status of records

management in the Public Service of Namibia confirming research findings of other studies (Barata et al., 2001; Nengomasha, 2004; Nengomasha & Beukes-Amiss, 2002; NRC, 2002). The study by Barata et al. concentrated on financial records management in the Namibian Public Service and concluded that “the records management function as a whole has no presence throughout government” (p. 8). The findings of the study place Namibia amongst the group of countries, which became independent after being colonized and found themselves unable to maintain record keeping systems (World Bank, 2005). The researcher came across officers from the pre-colonial government who are very much aware of what needs to be done regarding records management in the Public Service, but do not follow the proper records keeping procedures anymore. Whilst there are these officers who know but decide not to do it, there are officers who have no idea what records are or the procedures for managing Public Service records are. There is a danger that if the last of the old generation of civil servants leave the Public Service before the younger generation is made aware of the importance of managing records, then the situation could become even worse as most of the younger generation have never been inducted into records keeping procedures.

The study established that the organisational framework for managing records in the Public Service is in place. The National Archives is mandated with providing a records management service to the entire Public Service, that is, central government, regional and local government. Unfortunately this Department is too short staffed to make any meaningful impact. The few records management surveys that have been done by the National Archives have targeted the registries and most of the reports written have not reached records keeping staff. Neither have there been follow up on these surveys by the National Archives to ensure implementation of the recommendations emanating from the surveys.

The concern raised by Millar (2004) and participants of the electronic discussion group on “*Electronic government and electronic records: e-readiness and capacity building: an electronic discussion*” (IRMT, 2003a) regarding the authenticity of electronic records being at risk particularly in developing countries, is very true for Namibia. As the study showed, the existing poor culture of managing paper records has been transferred to the management of electronic records. If electronic records are to be managed well, this culture has to be changed.

The discussion in this section of the chapter is arranged following the same thematic headings, in which the data was presented as follows:

1. Records management awareness
2. Records keeping procedures
3. Safety security and confidentiality of records
4. Regulatory framework
5. Monitoring of records keeping practices
6. Resources and facilities for records management
7. Training and skills for records management

6.3.1 Records management awareness

The discussion here centres around two issues, understanding what records are and responsibilities for their management.

6.3.1.1 Understanding what records are

Lack of understanding of what records are, and appreciation of the importance of records, has led to failure to protect some records such as e-mail messages and their attachments. The study established that most officers delete e-mail messages and their attachments with no qualms at all, as they do not consider them to be official records. This threatens their future availability; hence preservation strategies need to consider this important aspect. From most of the responses the researcher established that staff realise the importance of information for reference. The distinction between information resources, which could be publications and records that document the activities and transactions which they carry out, did not come out in most of the responses, hence the failure to realise the importance of records emanating from the transactions that they carry out as a resource that should be well managed. Hope (2007, p. 1) explains the importance of making this distinction.

In the past electronic document management (EDM) was an issue for the management of computer systems where the objective was to locate documents, replace paper with digital images and store these items in the storage media that allowed for writing once and reading many times. This approach, while useful, has shown itself to be inadequate, hence the

ENRON fiasco ... Governments and the private sector now realise that this has changed ... The business record is now regarded as being more important than the document ... Companies are now acknowledging that a record is any evidence of business activity.

6.3.1.2 Responsibilities for managing records

The study established that most officers do not know that they have a role to play in managing the records that they create and receive. Mullon (2007) argues that the movement from paper filing cabinets to electronic files requires involvement of everybody as document management in organisations has become the responsibility of each staff member, from creation to destruction. The records management standard ISO 15489-1 (Section 6.3) recommends that:

Records management responsibilities and authorities should be defined and promulgated throughout the organisation, so that, where a specific need to create and capture records is identified, it should be clear who is responsible for taking the necessary action. The responsibilities should be assigned to all employees of the organisation ... Specific leadership responsibility and accountability for records management should be assigned to a person with appropriate authority within the organisation (ISO, 2001, p. 5)

Leadership responsibilities for records management in the Namibian Public Service have been delegated to records keeping staff that do not have the necessary authority to enforce decisions regarding proper records keeping, and yet records management is a serious governance and compliance issue, which “requires greater stewardship from senior level management” (Kahn, 2002, p. 14).

The situation in the Public Service of Namibia confirms some writers’ assertions that “low awareness of the role of records management in support of organisational efficiency and accountability”; and “lack of stewardship and coordination in handling paper as well as electronic records” are some of the records management challenges facing the public sector in East and Southern Africa Branch of the International Council on Archives (ESARBICA) region (Wamukoya & Mutula, 2005, p. 75).

The records management standard ISO 15489-1 Section 6.3 emphasises the importance of assigning responsibilities for records management, stating that:

... responsibilities should be assigned to all employees of the organisation, including records managers, allied information professionals, executives, business unit managers, systems administrators and others who create records as part of their work, and should be reflected in job descriptions and similar statements. (ISO, 2001, p. 5)

The records management standard for the Public Service of Namibia, the *Archives Code* Section 3.1 states that “Officers in all departments need to be aware that everyone is in some way responsible for records and that responsible behaviour is implemented throughout all relevant operational activities”. However, very few officers are aware of the existence of the *Archives Code* and what is required of them. Such a situation does not create a conducive environment for the creation of trustworthy records. A model for managing records in the Public Service of Namibia would therefore need to take the issue of responsibilities into consideration.

6.3.2 Records keeping procedures

Records management problems facing ESARBICA countries apply to Namibia. These are:

- absence of organisational plans for managing e-records;
- absence of legislation, policies and procedures to guide the management of both paper and electronic records;
- absence of core competencies in records and archives management;
- absence of budgets dedicated to records management;
- poor security and confidentiality controls;
- lack of records retention and disposal policies; and
- absence of migration strategies for e-records. (Wamukoya & Mutula, 2005, p.75)

The study established an absence of records management policy for the Public Service and formal institutional policies. The *Archives Code* gives guidance on the management of paper records but not on electronic records. Staff lack skills to manage records and the level of the positions in the Namibian Public Service do not attract skilled and trained staff. There is no separate budget for records management. Records management is catered for under general services and is usually marginalised. Records management personnel do not have the same

opportunities to go for training as those in other disciplines. The study established poor security for both paper and electronic records. The study established poor back-up practices and storage, poor security in storage areas for paper records, absence of fire fighting equipment and where it exists, poor maintenance of each piece of equipment, all of which compromise the security of the records.

Millar (2004, p. 4) adds to the list of challenges, “the low status accorded to records and archives management”, which is also true of Namibia. Examples of this in the Public Service of Namibia include the following:

- operating without a post specifically assigned the functions of records management as is the case in two of the 11 institutions studied;
- Chief Control Officers in charge of records management in addition to many other tasks, resulting in them not giving priority to records management, in one institution;
- filing done once a year because there is no staff to perform the function;
- registry staff being sent to perform other duties, leaving the registries unattended;
- and
- low level positions for records management.

Comments such as: “It [records keeping] is not a specialised area that requires better qualifications ...” highlights the negative attitudes that officers have and the low status accorded records management.

The literature review established that there once were good records keeping systems in the Public Service of Namibia, which for some reason collapsed, confirming for Namibia the situation described by the World Bank (2000, p. 7) of records keeping systems in countries that were once “part of European-dominated colonial regimes”. The following statement about these countries by the World Bank (2000, pp. 7-8) summarises the Namibian Public Service situation as established by the study:

In these countries, structured record keeping systems were common; supporting the information needs of small, centralised civil services, often with a well-trained and experienced records staff... In the years following independence, this situation deteriorated

progressively as part of a general decline in public administration. Informal practices supplanted formal rules... While the civil service expanded steadily, bringing with it a corresponding increase in the flow of paper, more formal ways of working gradually collapsed, often replaced by ad hoc work methods. There was little incentive to maintain effective record keeping systems or to allocate adequate resources for records storage and staff

Namibia is a good example of the situation described by the World Bank. Namibia's Public Service expanded with the attainment of independence. This was through the rationalisation of previously separate 11 administrations into one national Public Service (Geingob, 2002). As explained by Taylor (1994, p. 62), independence brought in a new government and reorganisation of the Public Service, which has been blamed for the collapse of good records management systems, which used to exist in the colonial Public Service. Respondents who worked in the old administration were quick to make a comparison between records keeping then and now. As one put it, "The legacy left by the previous system as to records keeping is slowly dying".

Riley (2003, p. 8) calls for "procedures that would delimit and control the creation of information in all levels of government". Records management procedures in general are flouted and not followed. The concept of the central registry is in name only, in practice it does not exist. Files in central registry do not necessarily contain original documents of the organisation. They are at times mere copies of the originals scattered throughout the institutions in 'mini' registries. "mini" registries, if that was the policy, would not be wrong, but these are operating in an environment where the policy is to centralise. The other problem with these "mini" registries is that the records are not managed in such a way that evidence for all transactions is preserved and that they are easily retrievable by the office owners and other officers. In an electronic environment, the concept of a central registry will not work. Practices in Local Authority B show that the sharing of information in an electronic environment is possible through the use of shared directories. The study found that except for this case, there is no use of shared directories in the Public Service of Namibia.

The basic foundation, on which the organisation of records is based, has not been spared. The concept of files for paper records is seen in the Public Service as the final resting place for records when all the transaction has been completed. Officers do not deal with files but loose documents. It is not surprising that misfiling is rampant, and cases of records which cannot be found when need, are high. As already discussed, this poor culture of managing paper records has been transferred to electronic records. Electronic files being created by officers are not brought together by any identification and classification means. Bearman and Trant (1997, p. 1) note that:

networked computing has transformed the mechanisms of business communications ... records whether in paper or electronic, are the carriers and documentation of the everyday transaction of business. As such, the fundamental issues regarding capture and retention, whether in paper or electronic form are their identification, classification by provenance, and retention in context of use so that they can be understood.

Classification of records is a pre-requisite for effective management of records and yet two of the 11 (18 %) institutions surveyed did not have classification schemes at all. For those institutions that have them, most are outdated or not in use. The National Archives of Namibia speaks about the management of records throughout their entire life-cycle and one would assume that the model of managing records in the Namibian Public Service is the records life-cycle. The life-cycle management of records sees the movement of records from the creation, to maintenance and use, to semi-current stage and non-current stage when records are destroyed or archived. At the current stage records are stored in the registry, at semi-current stage in the records store room or records centre and at non-current stage records are either destroyed or archived. One thing to note is the absence of a records centre system for the management of Public Service records and yet this a crucial aspect of the life-cycle management of records. Also of note is the absence of retention schedules, which is important for the effective management of records.

The principles of managing records as spelt out in ISO 15489 -1 are not applicable to the Public Service of Namibia. The very basic principles of records keeping, records classification and records filing are not followed. A classification scheme is not something that can be followed half-heartedly with some officers deciding to do it and others deciding otherwise. The file is the

basic unit of arrangement. When documents are moved from one officer to another, as single entities, without being in files, related records are kept apart. Keeping records together, and in the way in which they were created, respects one of the basic principles of records management, *respect des fonds*. This is important if records are to tell a story, a true reflection of the transaction they represent. This is not the case in the Public Service of Namibia. The creation of trustworthy and reliable records has been compromised. What were found in the Public Service of Namibia were mostly documents and not records in the true sense of the word. Records show the context in which they were created, by being registered in a classification scheme. The principle of original order is not applied in most cases. Filing is not done regularly, only effected after a few months or years when the officers are clearing their offices upon retirement, resignation or transfer. This makes it very difficult, if not impossible, to file the records in the order in which they were received and created. The researcher observed some files with some records out of chronological sequence. In Regional Council B, records which relate to the same transaction are split up as filing is done according to institutions/organisations. For example, all correspondence from one Ministry is filed in that Ministry's file regardless of the subject matter. Correspondence on a particular subject is as a result split up and scattered in different files.

The study also discovered the absence of retention and disposal schedules. Although paper records are not being destroyed, the same cannot be said of electronic records. Congestion in offices and records store rooms was observed, as well as random destruction of electronic records such as e-mail and other documents. E-mails are destroyed, and sometimes this is done following directives from the system administrators to do so, in order to create computer space. Kahn (2002, p. 47) refers to the Enron/Anderson case and advises that organisations can no longer "allow their technology departments to arbitrarily dictate policy about what is retained, and for how long based upon technology choices alone, budget restrictions and computer space limitations".

Records from the institutions surveyed have not been transferred to the NAN in a long time. They are clogging offices, store rooms and some of them are stored in very poor conditions, together with broken furniture for instance, and in damp conditions, threatening the preservation of some of these records for posterity. Electronic media is stored in various places, offices,

computer rooms and officers' homes. The study discovered that there are no transfers of electronic records. However, a model for managing records in the Public Service as presented in Chapter 7 will make provision for the handling of electronic media.

The custody of electronic records, whether the custody of electronic materials should rest with the National Archives or remain with the institutions, has been discussed by several writers (Abbot, 2002; Bearman, 1994; Chachage & Ngulube, 2006). Some archival institutions have adopted the strategy of leaving custody of electronic records with the creators. The Australian Archives' strategy is that records will remain in the custody of the creating agencies and be migrated with current records (Bearman, p. 287). The Kansas State Historical Society provides advice to state agencies who maintain electronic archival records in their custody; having realised that it does not have the capacity to manage and maintain a wide range of electronic systems and records applications or to manage the migration of records to other media and standards over time (Kansas State Historical Society, 2005). Chachage and Ngulube query whether the African archival institutions have the capacity to accept custody of electronic records, but at the same time are weary of leaving custody in the hands of the creating institutions considering the poor status of records management in these institutions. Abbott (2001) discusses the South African situation. "The National Archives of South Africa accepts custody of open reels, cassettes and magnetic tapes but not optical media due to limitation in resources such as staff and technological infrastructure. The National Archives' strategic thinking is moving closer to the Australian model whereby the onus for preservation is placed on the governmental body by means of formal agreement with the National Archives" (Kirkwood & Venter, cited in Abbott, 2001, p. 64).

This study therefore confirms the conclusion of a study of financial records management in the Public Service of Namibia by Barata et al., (2001, p. 8) that "the records management function as a whole, has no presence throughout government". This is the environment, in which electronic records are being created. The implications of this for e-government are significant. Such an environment is a breeding ground for corruption in the absence of trustworthy records for evidence. Accountability, transparency and good governance rely on reliable records, and the information which they contain.

6.3.3 Safety security and confidentiality of records

To investigate the safety security and confidentiality of records, the study looked at fire precaution measures, security from virus infections, unintentional alteration or deletion, back-up practices and storage of back-up tapes, disaster management plan including a digital preservation strategy as well as access level and permission to paper and electronic records including computer files. E-government requires the protection of individual privacy by ensuring that records are protected against unauthorised access. One officer was worried that officers pass on passwords to their colleagues when they are away, granting access to people who should not really have access to certain information. The study established that in the event of a disaster such as fire or flood there is nothing that can be done to protect records. There is no disaster management plan either at national level issued by the National Archives or institutional plans. Poor back-up procedures as shown in Chapter 5 (Section 5.10.7) highlight the vulnerability of electronic records. Poor e-mail management as well as poor management of other computer-generated documents (see Sections 5.10.8 and 5.11) do not only compromise the creation of authentic records, but threaten their preservation as well.

The officers' failure to follow procedure of storing back-ups off site, compromises the safety of the electronic records. The current practices are such that in the event of a fire, most back-ups will be destroyed as well. This confirms one of the concerns raised by the *E-discussion* (IRMT, 2003) and one of the observations made by Millar (2004, p. 4) that "the absence and difficulty in applying technical and operational standards for the creation, management and preservation of electronic records" is worsening the threat to the long-term preservation of electronic records in developing countries. Poor safety and security measures as discovered by the study mean that the Public Service of Namibia corporate memory is at risk.

6.3.4 Legal and regulatory framework

Using the E-Records Readiness Tool discussed in Chapter 3, Namibia scored (based on components 1-3, which focus on legal framework) 35 out of 60 for legal framework. Legal framework is one of the criteria for e-records readiness. Unfortunately the Tool does not give an interpretation of the scores for specific components or sections, hence the researcher had to make

her own interpretation of this score based on the overall rating score assessment. The score of 35 means moderate risk with the recommendation that “Namibia should proceed with caution while continuing to build consensus and collaboration amongst stakeholders to maintain and improve the legal framework...” (IRMT, 2004, p. 1).

Namibia’s poor records management status is compounded by inadequate legal and regulatory framework, confirming Braga’s (2002) observations that the problems facing developing countries in records management particularly in the electronic records environment are compounded by inadequate legal and regulatory frameworks. Implementing effective records management programmes relies on a strong legal and regulatory framework. Records managers need to make detailed assessments of the legal and regulatory environment in which they operate (Shepherd & Yeo, 2003).

6.3.4.1 Legislation and policies which guide records management in the Public Service of Namibia

In interviewing action officers the researcher wanted to establish awareness regarding legislation that regulates the keeping of records, the Archives Act as well as laws or regulations specific to the mandate of their institutions and the work they do that may obligate them to create and maintain certain types of records. Few officers mentioned the Archives Act; and other than references to State Finance Act, Treasury Instructions, and Public Service Charter, none of the officers mentioned any legislation that relates specifically to their institution or the work they do.

Through literature review and documents search the researcher discovered the absence of data protection and freedom of information laws. Experiences from other countries show the demands that e-government has on records management, particularly where freedom of information and data protection laws have been enacted (Bailey & Cameron, 2004). Namibia does not yet have these laws but as explained in Chapter 3 (Section 3.6.3) Namibia sees the desirability of having such laws. Learning from these other countries’ experiences, Namibia can prepare for the challenges these laws bring. Efficient records management becomes a strategic necessity for all institutions in order to comply with legal and regulatory obligations. Reviewing the regulatory framework is a first step in designing records management programmes (World Bank, 2000). A

model for managing records management in the Public Service of Namibia as proposed in Chapter 7 would also need to address the issue of Namibia's weak legal and regulatory framework.

6.3.4.2 Standards for managing records in the Public Service in Namibia

The *Archives Code* is the records management standard for the Public Service of Namibia. The Head of Archives correctly observed that there is need to ensure that the *Archives Code* is in conformity with best practices such as those recommended by ISO 15489.

The *Archives Code* is however "issued by the Head of Archives in terms of Article 12 of the *Archives Act 12 of 1992*", which states: "The Head of Archives may in any manner which he or she deems proper, issue directives" regarding a number of areas of records management in the Public Service (Republic of Namibia, n. d.). However, as discussed in Chapter 2.5.1 the position of the Head of Archives, below the level of Director, is too low for the task mandated to the National Archives. A model for managing records in the Public Service of Namibia would, therefore, address this.

6.3.4.3 Compliance and monitoring of records keeping in the Public Service

The study established that there is no compliance with the *Archives Code*. The NAN considers the fact that the *Archives Code* has no legal standing, a contributory factor to non-compliance. Experiences from other countries seem to suggest that the problem is more of lack of monitoring to establish compliance and recommend measures to ensure conformity than the legal status. The *Lord Chancellor's Code of Practice on Records Management* and *Code of Practice on Records Management*, requirements under the United Kingdom *Freedom of Information Act* and Scottish *Freedom of Information Act* respectively, do not have legal standing. However, the Information Commissioners can issue "practice recommendations" setting the steps the institutions should take to ensure conformity with the Codes (Bailey & Cameron, 2004). Namibia's *Archives code* makes similar provisions in section 3.7, but this provision has not been implemented.

The study found poor monitoring of records keeping function by officers in charge and the National Archives itself due to staff constraints. Records keeping staff and action officers

indicated that the officers in charge do not give records management any prominence and priority. The few records management survey reports written by the National Archives in most cases did not even reach the records keeping staff, meaning they are seated in one of the offices with no action being taken on them. This was specifically the case in Ministries A and B where officers in the registries indicated that since the National Archives conducted surveys more than a year ago, they had not heard the outcome. In the meantime, the National Archives had submitted the reports. The calibre and level of staff in the registries renders them powerless or unable to communicate with management on these matters. This confirms the concerns raised by the *E-discussion* (IRMT, 2003); Millar (2004) about the low status accorded to records management and lack of understanding by public officials at all levels. This issue also emphasises the discussion at 6.2.1.2 about failure by senior management to take up and implement their records management responsibilities.

The issue of responsibilities for managing records in the Public Service of Namibia is critical, particularly in an electronic environment where the capturing of records rely on the cooperation of all those who create the records. A model for managing records in the Public Service of Namibia as discussed in Chapter 7 would therefore need to address this issue.

6.3.5 Resources and facilities for records management

The study also found lack of resources for managing records, which include staff, accommodation for registry and records storerooms. As section 5.8 indicates, most registries are heavily congested and Ministries lack adequate space for records store rooms, most of which are dumping rooms for records as well as broken furniture, old tyres and other broken down things. The absence of a budget specifically for records management emphasises the marginalisation of records management. Records keeping officers complain that when it comes to records management courses and workshops, they are always told that there is no money but money is always available for courses and workshops for other areas.

A lack of resources was also evident in back-up practices such as lack of resources to buy enough tapes, leading to overwriting of tapes and streamers tapes; inadequate server capacity leading to haphazard deletion of e-mail. Although these considered more of IT problems, they

have serious implications for the preservation of authentic electronic records. A model for managing records in the Public Service of Namibia as discussed in Chapter 7 would need to address this issue of resources.

6.4 Electronic information systems in the Public Service in Namibia

The Public Service of Namibia is increasingly conducting its day-to-day work through ICT applications. Meijer (2001, p. 261) established that the “type of software application influences the risks and opportunities for managing records....” This study found the following categories of software applications in the Public Service: e-mail systems, database management systems, individual software for the creation of office documents and web technology systems.

A number of systems are running in the Public Services. However, records resulting from such transactions are not being captured, managed and preserved in an organised system to maintain their integrity and authenticity. Attention has not been paid to metadata standards or data format. This is evident from the fact that most of the IT personnel interviewed could not say what the metadata standard or data format they were using. The situation reported by Lipchack and McDonald (2003) is very true of the Public Service of Namibia. The study showed that electronic records are created in a complex environment of fragmented and incompatible information systems (Lipchack & McDonald, 2003). This is the electronic records environment in which electronic records are being created. It is an environment where records will not be accessible in the long run, resulting in a loss of evidence necessary for the enhancement of transparency and accountability. However, efforts are now being made to make the information systems compatible.

6.4.1 E-mail systems

The study confirmed findings of studies (Keakopa, 2007; Nengomasha, 2004; Nengomasha & Beukes-Amiss, 2002) carried out in the Namibian Public Service, which revealed use of e-mail technology in the Public Service with no clear guidelines on how to deal with the management of e-mail records. Sejane (2005) in a study on electronic records management in the public sector in Lesotho came up with similar findings. Keakopa states that the Public Service of Namibia IT

policy addresses e-mail communication but is not effective as most civil servants seem to be unaware of the policy. This study confirms the observation but also discovered that the policy does not spell out the need to effectively manage e-mail records. Although e-mail usage is growing in the Public Service of Namibia, it has not entirely replaced “paper communication”. This study confirmed one of Meijer’s findings that “Control over e-mail tends to be highly individual and often lacking in organisational control; and loss of control is an important problem for the management, retrieval, and use of messages...” (Meijer, p. 261).

The way in which e-mail is handled in the Public Service of Namibia, confirms the poor state of the electronic records environment, which does not ensure the capturing of records for evidence and thereby compromising transparency, accountability and good governance.

6.4.2 Web technology systems

The use of web technology by governments to conduct business is increasing (Ngulube & Tafor, 2006; Wamukoya & Mutula, 2005; Meijer, 2001). Government Ministries in Namibia are in the process of creating new websites and updating existing ones. Many websites are outdated. These are some of the problems identified by Meijer’s (p. 261) study, which states that “Websites are constantly updated and organisations risk loss of information when websites are updated and the ‘old information’ is not preserved. Normally there is no history file that provides for information about what was on the website at what point of time”. This study’s findings show that these same problems apply to Namibia, who like the other African countries is faced with “the greatest preservation challenge of all digital media” (Ngulube & Tafor, p. 70). A model for managing records in the Public Service of Namibia would need to take into consideration this challenge and ensure that preservation strategies put in place cover websites content.

6.4.3 Database management systems (DBMS)

The study found a number of database management systems (DBMS) software in the Public Service of Namibia, confirming the observation by a number of writers (Meijer, 2001; Mutula & Wamukoya, 2005) that DBMS are widely used in public administration. A study by Mutula (as cited in Wamukoya & Mutula, 2005, p. 72) on e-records management practices in Africa, Asia, the Caribbean and the Pacific revealed that, 60% of information within governments was electronically generated. In the Public Service of Namibia, they are used, just as Meijer’s (2001)

study established, either to manage transactional data or as a source of information databases. Electronic information systems such as the IFMS and the HRIMS are used to manage transactional data. A number of scientific databases (see Table 5.11) provide a rich source of information. However, as the study found, there is no concerted effort on the part of the Public Service of Namibia to create and preserve authentic and reliable records by ensuring that the content, context and structure of records, which provide evidence of official transactions is captured and preserved.

6.4.4 Electronic records management systems

The study also established that there are no electronic records management systems running in the Public Service of Namibia. An electronic records management system (ERMS) is an example of DBMS software defined as “a software system that manages the creation and use of databases” (David & Olson, as cited in Meijer, 2001, p. 261). An ERMS keeps and supports retrieval of records while information systems store and provide access to information. Record-keeping systems are distinguished from information systems within organisations by the role they play in providing organisations with evidence of business transactions. Non-record information systems, on the other hand, store information in discreet chunks that can be recombined and reused without reference to their documentary context.

A system has been acquired by the OPM to be applied to the entire Public Service. During interviews the OPM indicated that the records keeping requirements, which the system must satisfy were drawn up using the DoD 5015-2 (see Chapter 3, Section 3.8). However, the NAN in charge of records management in the Public Service of Namibia indicated lack of awareness of the records keeping requirements that the system satisfies, and in one of its reports states that “Government approved the purchase of an ERMS without consultation of the draft specifications, which the National Archives had drafted (NAN, 2007). This signifies lack of coordination between the two Public Service institutions. Although the Office of the Prime Minister is in charge of e-government, management of electronic records is the mandate of the national Archives. Comparing the checklist drawn up by the researcher with the draft specifications drawn up by the NAN, the two cover the same mandatory requirements. These two were drawn up based on the same best practices as spelt out by DoD 5015-2.

Having failed to get hold of the system specifications for the system acquired by the OPM, the researcher concluded after reading the vendors document on the system (See section 5.10.9) that this is a commercial off-the-shelf (COTS) system, which many authors (Bantin, 2002; Barry, 1994; Fernandes & Sprehe, 2003) caution against as they hardly have enough records keeping functionalities to support ERMS. As electronic records originate from the organisation's existing or legacy information and communication technologies, ERMS should be designed to suit a specific organisation in order to "create reliable and authentic records that provide evidence of critical activities of the institution" (Bantin, 2002, p. 6).

Implementation of an ERMS would be one of the important components of a records management programme for the Public Service of Namibia in the context of e-government. However, implementation of an ERMS would need to take into consideration the other systems that are running in the Public Service of Namibia and address the issues of interoperability.

6.4.5 Individual software for creation of office documents

The study established a number of in-house (department or individual) developed systems, which are completely controlled by the individuals concerned. Problems with individual software as identified by Meijer (2001) were also identified in the Public Service of Namibia. One such problem is lack of control of these systems. Most of them do not have any system documentation with changes being in "people's heads" as one respondent put it. System upgrades are done by the officers in charge of these systems as they see fit and there is no documentation on these upgrades. Most individual software is not maintained on the main server as one respondent put it "all documents of staff are not backed on the server ..." and in another ministry "We have a lack of back-up with our in-house system. Even IT [Division] was not prepared for a long time to allow us to save on the server. Sometimes when one of our [Departmental] servers crashed we lost our mapping capability. We used to run tapes but computers we are using, we cannot access information on our earlier data. IT is now giving support and our software is now hosted on the server". This study confirms Meijer's findings regarding the problems of individual software, which was spelt out as follows:

- Introduction of office software applications confronts organisations with lack of control over the creation and capturing of data. It may be difficult to find out for example, to find the final version of a document.
- Frequent release of new versions of office software applications may also present a serious problem. Lack of compatibility between software versions could hamper long-term access to data (Meijer, 2001, p. 262).

This highlights the two threats that records of evidence in the Public Service face. The first one is that some records are not captured at all and there are no mechanisms to ensure that this is done. Secondly, those few records that are captured might not be accessible because of software incompatibility.

6.4.6 Updates of hardware and software

The study also investigated the update of hardware and software. Cases of changes in data format and failure to access data with the new software or hardware were reported by some officers. This shows that “records created and maintained in electronic form are continually at risk of inadvertent or intentional alteration, and such alteration may not be readily perceptible. The authenticity of electronic records is threatened whenever the records are transmitted across space (i.e. when sent between persons, systems or applications) or time (when stored offline), or when the hardware or software used to process, communicate, or maintain them is upgraded or replaced” (United Kingdom, National Archives, n.d.). System changes and upgrades include the move from the old finance system to the new finance system, and a number of other systems moving from FOXPRO to Oracle (see figure 5.13). An IT officer acknowledged that systems have not been tested for data loss or alteration and another officer explained that “alteration may not be readily perceptible”. This highlights one of the shortcomings of records migration, which is the fact that results are often unpredictable mainly due to lack of testing (Digital Preservation Testbed, 2001b). What this means is that this study did not see any effort on the part of the Public Service of Namibia to ensure the authenticity of these electronic records by verifying that the right data was properly stored; nothing happened to change this data or any changes are insignificant and that the data during the migration process was carried out correctly to ensure the reproduction of authentic records (Duranti & Thibodeau, 2001, p. 49).

6.4.7 Enterprise Content Management (ECM)

One IT officer in a discussion on system interoperability explained that “For all future developments it will be content management systems, it will be web-based, in Oracle. All will be integrated”. The system acquired by the Public Service e-Office with the Archives management module for electronic records seems to confirm this statement. An officer in the OPM confirmed that e-Office was “tested to ensure that it can integrate with the IFMS and the HRIMS. The idea is to integrate all these systems into this system”. This indicates that the Public Service of Namibia is moving towards ECM solutions to provide online services or share information and transactions horizontally in support of e-government (Forquer, et.al., 2005).

Ngulube and Tafor (2006, p. 71) discuss the need for records managers in the Eastern and Southern Africa Branch of the International Council on Archives (ESARBICA) region to formulate policies and guidelines for “capturing of web-based records into formal records keeping systems”. The National Archives of Namibia is therefore faced with an additional challenge of formulating policies for ECM.

Electronic records management’s place in ECM is its ability to “tightly integrate with e-mail; document; and web content management systems to ensure content integrity and to minimise risk and litigation” (Glazer et al., 2005). As the study showed, without an effort on the part of the Public Service of Namibia to ensure compatibility of the different electronic information systems, ECM will be difficult to implement.

6.4.8 Systems documentation

The study (see Chapter 5, Section 5.10.4) found that most systems do not have system documentation. Figure 5.13 highlights the situation in the institutions studied. Digital preservation strategies rely on documentation for migration, emulation or any other strategies to ensure accessibility and readability over time; as well as overall effective management of electronic records. As Bearman and Trant (1997: 3) point out, “any record will be a better record (less risky) for having complete metadata”. Lack of metadata particularly structural metadata was easy to establish as most institutions do not have the system documentation, which is with the consultants who designed the systems, most of whom are foreign based. Responses to

questions on the systems metadata standards and the data formats revealed that either these do not exist or if they do, they are not considered important.

The situation established by the study and discussed here signifies a great threat to the preservation of evidence from the records produced by the systems. Lack of metadata affects the readability and intelligibility of the information. Should the Use of *Electronic Communications and Transaction Bill* (OPM, 2005d) be enacted, the Public Service would need to pay attention to preservation of system documentation and metadata to adhere to Sections 12, 13 and 14, which demand the preservation of authentic records. These sections among other things require that electronic records be reliable, accessible and usable; and be retained in their original format or demonstrate that the current format represents the information accurately (See Chapter 3 Section 3.6.3).

6.4.9 Back-up procedures

Poor back-up and lack of system documentation was established by the study (see Chapter 5 Section 5.10.7). Figure 5.1 highlights the back-up practices in the institutions studied. Overwriting of tapes, no back-up in some cases and poor storage practices were identified by the study. This problem poses a huge threat to preservation of evidence. The study revealed that the case of the Municipality of Omaruru, which lost all its valuable data as reported in a local paper by Maletsky (2006) can happen to any of these institutions.

6.5 Skills for managing electronic records in the Public Service in Namibia

The study established lack of skills to manage records in general and specifically electronic records. Records keeping staff officials training and the little training which they attend, hardly cover electronic records. Induction for new employees, when it is given, does not cover records keeping. In a situation such as the Public Service of Namibia where officers are managing records in their offices or the case of electronic records where officers are creating their own personal electronic filing systems in form of folders, there is need for training not for records keeping staff only but for all involved in one way or another with the records (paper or electronic) of the organisation. McLeod, Hare and Johare (2004, p. 5) explain the training that is

required in the electronic environment to empower all players and stakeholders who need “... to be trained or educated afresh or for the first time”. ISO 15489-1 Section 11, recommends training for all members of management, employees, and individuals “responsible for the whole or part of a business activity of an organisation in making records during their work and in capturing those records into records systems” (ISO, 2001, p. 17). A model for managing records in the Public Service of Namibia as discussed in Chapter 7 should therefore recognise the importance of training and skills for records management.

6.6 E-records readiness of the Public Service of Namibia

This study aimed to establish the e-records readiness of the Public Service of Namibia. An e-readiness assessment was done for the Public Service of Namibia (DPSITM 2004) but it did not include an e-records readiness assessment. The reason for looking in detail at the overall records (including paper) management in a study that focuses on electronic records management was to establish the e-records readiness of the Public Service of Namibia, for which a study on e-records management for e-government would be incomplete.

E-records readiness is defined as the capacity to create, manage, share, and use electronic records to support good governance. (Lipchack & McDonald, 2003). The findings of the study show that to a large extent records are not being created, meaning they are not being registered and filed into a records keeping system. Records are not being managed properly. The Public Service has procedures for managing paper records, which to a large extent are not being followed. In fact, there once were systems in place, which proved that if well applied these procedures can result in the efficient and effective management of records in the Public Service. Several possible reasons for the collapse of what were once good records keeping systems in the various Ministries and departments have been explored.

With a situation where operation of “mini” registries has become the norm of the day, with the owners of these registries being the only ones who know what information they are keeping and where it is stored, information sharing has become very difficult. Some officers explained that they spend hours searching for information. Sometimes they resort to calling someone who is on

leave or has retired to show them how to find information from the “mini” registry they created. This is not conducive for e-government or good governance. E-government means amongst others, fast and efficient service delivery. If information cannot be found on time, decisions cannot be made on time or if they are made without adequate information, they can be wrong decisions, which could be contrary to citizen’s rights. It came out from the research findings that sometimes information cannot be found and decision-making is delayed.

One of the objectives of this study was to investigate e-records readiness in the Namibian Public Service. The study was able to establish the applicability of the E-Records Readiness Tool (IRMT, 2004) for assessing the e-records readiness of the Public Service. The Tool provides criteria for assessment of e-records readiness of countries using varied criteria organised into components (See Chapter 3, Section 3.4 for a detailed description of the Tool). Each component is described at three possible stages of capacity. Based on the literature reviewed, documents and the data collected from interviews and observation, the researcher selected only those descriptions that closely match Namibia and the Public Service of Namibia specifically. Each description is given a score that ranges from 5 to 20. See Table 6.1 below.

Table 6.1. Namibia: E-Records Readiness Assessment

Component	Stage	Score
Component 1 Legal Mandate for the Government-Wide Management of Public Records	Stage 3 <ul style="list-style-type: none"> • A central agency such as the National Archives is legally responsible for providing expert guidance on and oversee the creation, management and permanent preservation of all official records, paper and electronic, and for access to the records. • A central agency, such as the National Archives, has legal responsibility for issuing and/or approving records retention and disposition schedules that indicate which categories of government records must be preserved permanently, or, alternatively, how long specific types of public records must be retained before they may be destroyed. 	20
Component 2	Stage 1	

Legal Framework for E-Commerce Activities	<ul style="list-style-type: none"> • There is no legislation that establishes ground rules for e-commerce transactions and admissibility of e-records in legal proceedings. 	5
Component 3 Freedom of Information and Protection of Privacy Legislation	Stage 2 <ul style="list-style-type: none"> • There is no freedom of information law, but there has been active public debate about establishing one. • There are plans to begin drafting such a law. 	10
Component 4 Government-Wide ICT Infrastructure and Capacity	Stage 2 <ul style="list-style-type: none"> • The country generally has a fairly reliable power grid and there are initiatives to upgrade the telecom physical infrastructure to support Internet technologies. • There is a central government agency responsible for defining and implementing a government-wide ICT strategy, technology architecture and plan. 	10
Component 5 Government-Wide E-Records Management Standards and Guidelines	Stage 1 <ul style="list-style-type: none"> • There is no government-wide standard for electronic records management. • There are no guidelines on the capture and management of e-mail and electronic documents. • There is no government-wide core standard for records and e-content metadata. 	5
Component 6 Government-Wide Digital Preservation Strategy	<ul style="list-style-type: none"> • Public servants generally do not consider digital preservation to be a critical issue. They assume that system administrators or new technologies will continue to make e-records and digital information accessible and usable indefinitely. • Decisions about suitable file formats and storage media for government computer systems are left to system administrators or product vendors. 	5

Component 7 Policies and Responsibilities for Records Management	Stage 1 <ul style="list-style-type: none"> The Public Service does not have a basic records management policy that establishes organisation wide principles, guidelines and responsibilities for records creation, capture, management and preservation. 	5
Component 8 Tools and Procedures for Records and Information Management	Stage 1 <ul style="list-style-type: none"> The Public Service does not have ... records retention and disposition schedules for records it creates. Records are frequently lost or 'misplaced'. Staff members manage digital records on their individual computer workstations. There are no central systems for storage or classification. 	5
Component 9 E-Records Management Products and Technologies	Stage 2 <ul style="list-style-type: none"> Some e-records and e-content products and technologies are being implemented. 	10
Component 10 Resources and Training for Records Management Personnel	<ul style="list-style-type: none"> The Public Service does not have a regular budget to support records management programmes, tools, equipment and staff. Basic records storage and retrieval tasks are assigned to junior staff, such as clerks, mailroom staff, or entry-level staff who are expected to move on to other positions. 	5
Component 11 Internal and Public Awareness of Records Management	Stage 1 <ul style="list-style-type: none"> Few senior managers, supervisors and staff recognise the significance of well-managed and trustworthy records for effective government service delivery and for reform initiatives. 	5
Component 12 Monitoring for	Stage 2	10

Compliance with Records Management Policies and Procedures	<ul style="list-style-type: none"> • Some of the Public Service’s business functions and organisational units have evaluated their records management infrastructure or have requested help from the National Archives in doing so. • Senior managers are sometimes reluctant to take corrective action when shortcomings in records management are identified. 	
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Source: Adapted from IRMT (2004)

Risk assessment: national e-records readiness

Namibia scored 55 out of 120 for national e-records readiness (components 1-6) signifying high risk, which means that “government records produced in digital form will be at risk of misuse and loss without government wide strategies and standards for e-records and digital preservation” (IRMT, 2004, p. 1).

Risk assessment: Public Service e-records readiness

The Public Service of Namibia scored 40 out of 120 for Public Service e-records readiness (components 7-12) signifying high risk, which means that “funds and effort will likely be wasted unless e-government initiatives are supported by a solid records management programme...” (IRMT, 2004, p. 1).

6.7 Summary

This chapter interpreted the research data and discussed the findings of the study. Namibia has in place some e-government strategies, which have led to an increase in the creation of electronic records. The study’s main assumption that the Public Service of Namibia has embarked on e-government, which should see an increase in the creation of electronic records was proved correct. However, a number of factors including poor records keeping threaten the success of e-government. The status of records management in the Public Service of Namibia is poor, confirming studies by other researchers. Namibia is not e-records ready to support e-government. Poor records management in the Public Service is reflected by lack of records management awareness, poor records keeping procedures, inadequate legal framework, lack of records

management policies and outdated standards, lack of qualified and skilled staff and inadequate resources. In the electronic environment, this is manifested by failure to manage e-mail and other electronic documents, poor back-up procedures, failure to preserve metadata, and absence of policies and procedures for managing electronic records.

The next chapter provides a proposal for a model records management programme for the Public Service of Namibia in cognisance of the fact that an effective records management programme is one of the building blocks for a strong foundation for e-government.

CHAPTER SEVEN
PROPOSED MODEL FOR MANAGING RECORDS TO SUPPORT E-GOVERNMENT
IN THE PUBLIC SERVICE OF NAMIBIA

7. 1 Introduction

Records management is one of the several challenges and opportunities for e-government implementation (Information for Development Programme (infoDev), as cited in Ngulube, 2007). It is imperative therefore that this study comes up with a strong recommendation on how the records management challenges facing the Public Service of Namibia established by the study could be addressed. This chapter presents a model for managing records in the Public Service of Namibia focussing on the research question: “How can the electronic records environment in Namibia’s Public Service be strengthened to support e-government?” In answer to this question, the researcher recommends the following integrated (integrating paper and electronic records) records management programme as a model for managing records in the Public Service of Namibia.

Since the Public Service of Namibia operates a hybrid records system, the model follows the records life-cycle and records continuum approaches to managing records. The researcher has also developed some aspects of the model based on the communities of practice theory, a knowledge management theory. This is appropriate as records management is one of the building blocks for knowledge management. The model also attempts to comply with best practices by adopting best available policies, methods, procedures, tools and processes that others are already using to address the problems facing records management in the Public Service of Namibia.

The proposed model explains the various stages the Public Service of Namibia would have to go through to strengthen the electronic records environment in view of e-government in order to create and preserve authentic and reliable records for transparency, accountability and good governance. The stages are:

- Determining resource requirements;
- Reviewing legal and regulatory framework;
- Reviewing records management standards and procedures;
- Providing physical protection of records;
- Developing records centres;
- Managing archives;
- Implementing an electronic records management system; and
- Sustaining the records management programme.

This framework for the records management programme is adapted from the World Bank (2000). The various components of the programme have drawn heavily on established records management thinking and best practices as gathered from Bantin (n.d), Bearman (1999), Mbakile (2007), New South Wales (2003), ISO (2001), Kansas State Historical Society (2005) and Public Record Office (1999).

Sejane (2005) recommends a model based on the South African model, which she considers suitable for e-records management in an African environment. The model, which recommends transfer of archival electronic records into archival custody, does not explain this departure from the route that South Africa is taking of letting electronic records stay in the custody of creating institutions (Kirkwood & Venter, as cited in Abbott, 2001, p. 64). Sejane's model also fails to take into account hybrid systems and the fact that electronic records in Africa are being created in an environment where status of records management is very poor; hence a model for managing electronic records effectively requires an overhaul of the entire records management programme or restructuring of existing systems (World Bank, 2005).

The World Bank Model (2000) as with most models for restructuring existing systems starts with the review and revision of legislation and policies. The model in this chapter departs from this and considers the promotion of records management awareness as the starting point for reasons explained in Section 7.2.1. The World Bank Model also does not have the component "Implementing an electronic records management system" which this proposed model has.

7.2 Integrated records management programme

The records management programme recognises three key stakeholders. These are the NAN, The OPM, and the respective institutions that include the Ministries, Departments, Regional Councils and Local Authorities. See figure 7.1 below.

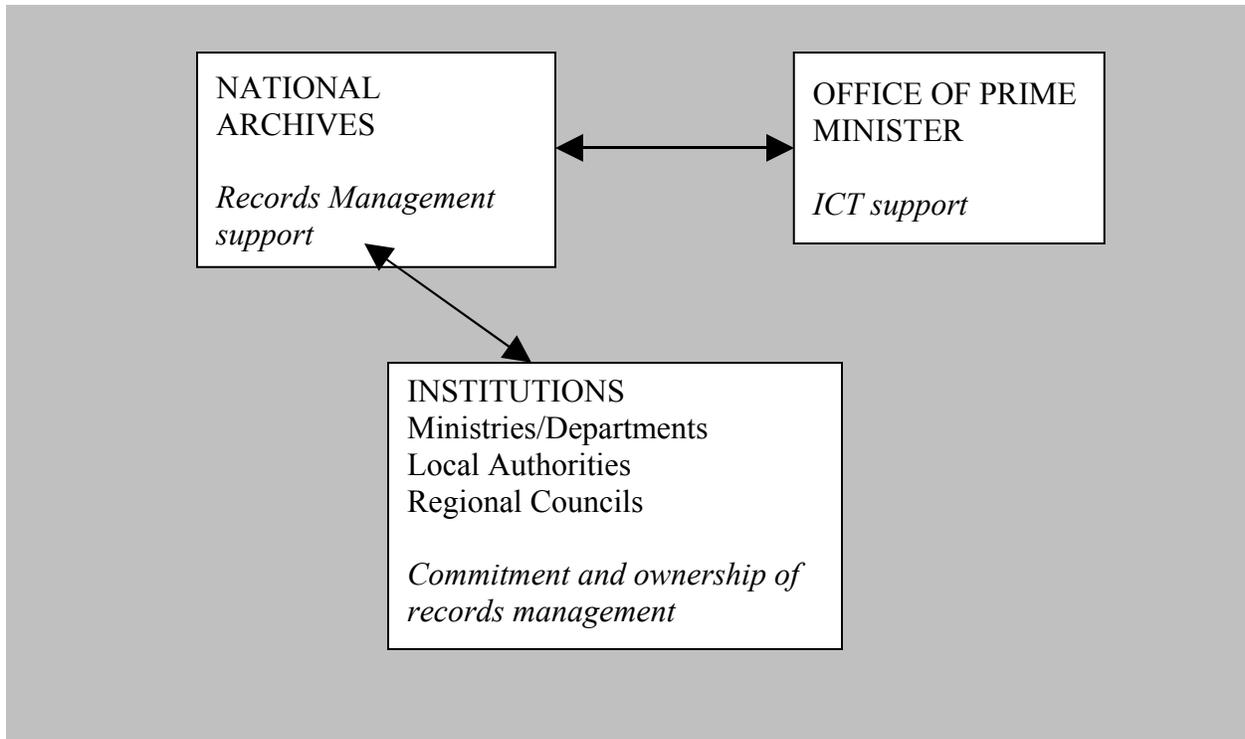


Figure 7.1 Records Management Programme Key Stakeholders

The roles of the stakeholders have to be clearly defined to make the records management programme successful. Details on their roles are discussed in the various components of the proposed integrated records management programme.

The proposed programme with its various components is illustrated in figure 7.2 below. The programme is aimed at restructuring the existing system, which is plagued by a number of problems highlighted by the study. These include a lack of awareness for the importance of records and records management; inadequate resources; weak legal and regulatory framework;

failure to follow set procedures; poor control and monitoring for compliance; lack of commitment from management; lack of awareness on what records are; and failure to appreciate the importance of managing records properly.

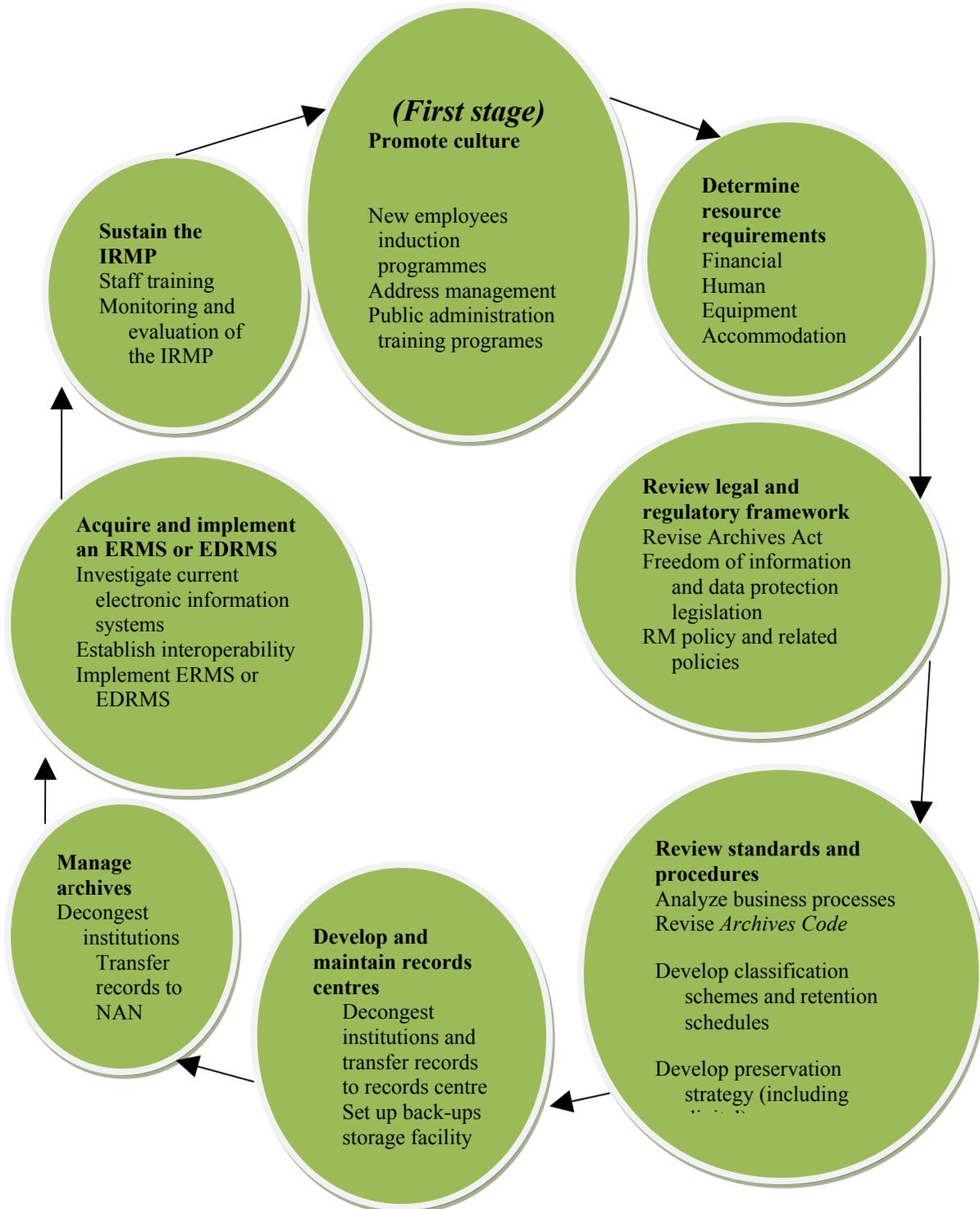


Figure 7.2 Integrated records management programme for the Public Service of Namibia

7.2.1 Promote culture change towards e-records management

E-government requires records managers to reshape their organisations by “re-training fellow workers from chief executive to humblest clerk to think about records management, applying controls to everything they write or receive” (Steemson, 2004, p. 5). Effective e-records management requires collaboration between records keeping staff and all stakeholders, in particular management support. This is not the case in the Public Service of Namibia due to a lack of awareness on the importance of records management in general. There is need therefore, to promote a culture change towards e-records management as a tool for e-government.

The first stage of the proposed integrated records management programme is to bring all stakeholders on board through awareness programmes, which include incorporating records keeping issues in induction programmes for new employees and other public administration training programmes, and take advantage of management meetings and other forums to address management on records management issues.

7.2.2 Determine resource requirements

The study found that there are inadequate resources to manage records effectively. Evidence of this is the absence of a budget specifically for records management, overwriting of tapes; shortage of staff; congested offices; and absence of records centres. As part of the records management programme there would be need to assess the current resource provision.

7.2.2.1 Determine staffing requirements

The quality of any records management programme is directly related to the quality of the staff that operates it. Staffing problems in the Public Service apply to Ministries and departments, local and regional authorities as well as the National Archives. Without skilled and experienced personnel all the other stages of the programme may not be adequately executed. The idea is to bring in skilled records managers in the institutions who will then work with the various relevant parties in reviewing legislation, drawing up policies and developing, analysing procedures and standards as well as conducting the training. Policies and procedures without capacity to implement and execute them are of no consequence.

Most important is the upgrading of the Head of Archives post to a level that commands authority and compliance with records management throughout all levels of the Public Service. Following examples of other countries (see Section 2.5.1.5); the Head of Archives post should be at Directorship level or higher.

The researcher proposes the Botswana example (Mbakile, 2007), which has established records manager posts for every ministry. The placement of all records management posts under National Archives establishment as is the case in the Public Service of Botswana is not recommended for the Public Service of Namibia. Firstly the National Archives of Botswana does not have the capacity to manage these posts and monitor the staff. Secondly as the Director of the Botswana National Archives explained, this has proved an impossible task and as a result the Public Service of Botswana is considering going back to having these posts on the staff establishment of the respective Ministries/Departments (Kgabi, telephone conversation, 8 September, 2008). The establishment of posts for a professional archivist for each region by the Public Service of Namibia is a step in the right direction. The level of the records manager post should be such that the person is respected and listened to as a records management professional adviser amongst the different groups in the organisation as illustrated in Figure 7.3 below.

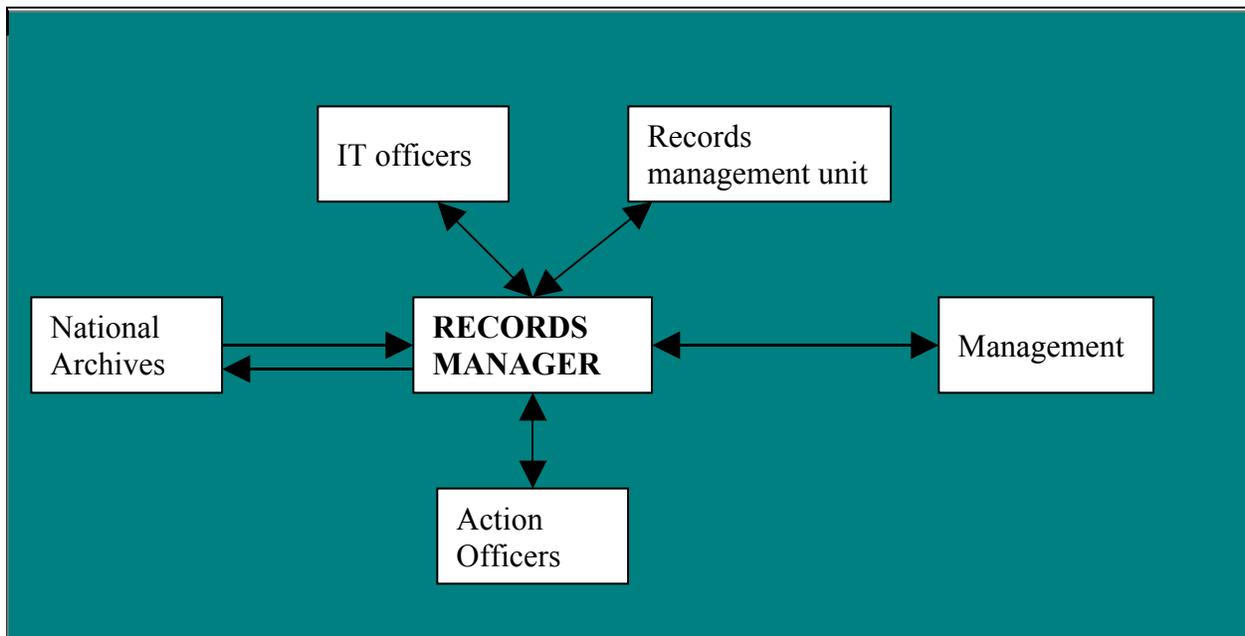


Figure 7.3 Records Manager as Broker in the Electronic Records Environment

Within each ministry, department, local authority or Regional Council, just as there are human resources, finance and transportation units or divisions, there should be a records management unit. The head of the records management unit would have an equal rank with heads of other units reporting to the Head of the Division. In the Public Service of Namibia this would mean that the head of the records management unit will report directly to the Director of General Services and not the current situation where the Chief Registry Clerk reports to the Chief Control Officer.

The registry would deal with paper records since the Public Service operates a hybrid system. However, in an electronic environment, a central registry system is not practical. Collaboration between records keeping staff, action officers and IT officers is of utmost importance in the care and management of electronic records. This collaboration emphasises the role of the records manager as records management broker, selling records management to management and all, advising on records management issues and training all members of staff who create and use records whether paper or electronic.

The role of the OPM through its Department of Administration and Information Technology is crucial to ensure that the Public Service has a well- trained and skilled records management cadre through a restructuring of the existing posts. The National Archives' role is to ensure that posts are taken up by the right candidates.

7.2.2.2 Accommodation

To manage records effectively the following accommodation is required:

- Registries or records offices for the storage and use of current records;
- Records centres for the storage and retrieval of semi-current records; and
- Archival repositories for the preservation and use of archival record (World Bank, 2000).

Whereas the NAN has the responsibility for setting up of records centres, individual institutions, as part of their planning, need to ensure that records management is well catered for through the provision of adequate accommodation for the records offices and the records store rooms.

7.2.2.3 Equipment and materials

Equipment and materials include computers, records storage equipment e.g. shelves and file covers, to mention a few. Several registries did not have any computers. There is a lot that the registry can do for the efficient management of records using computers. Records control tools such as file movement cards, bring up diaries, classification schemes, daily files, incoming and outgoing registers could be accessed on shared directories. Ensuring availability of equipment and materials relies on an adequate budget.

7.2.2.4 Financial Resources

Records management does not have a budget of its own in the Public Service of Namibia. The ideal situation would be for each records management unit to have its own budget. At least within General Services, there should be an item specifically for records management. Institutions should ensure that the budgeting exercise considers records management requirements.

7.2.3 Strengthening legal and regulatory framework

The study established that the legal and regulatory framework for managing Public Service records is weak.

7.2.3.1 Records management legislation

The *Archives Act* is currently being reviewed. Skilled and experienced staff would be able to contribute meaningfully to the revision of the Act and the development of other regulatory documents. As part of the on-going *Archives Act* review process, the study recommends that a clear definition of official record, which highlights e-mail messages as such, for their protection. When the time comes for the drafting of freedom of information and data protection laws, the NAN should play an active role and ensure that records management issues are adequately addressed.

7.2.3.2 Records management policies

Once legal and legislative issues have been considered, policies should be established to ensure that mechanisms are put in place to resolve shortcomings (World Bank, 2000, p. 32).

The study found an absence of policies such as formal institutional records management policies including electronic records (including e-mail) management policies. Skilled and experienced records managers would be able to develop records management policies for their institutions. A records management policy is at draft stage. The study recommends a “Policy on the Management of Government Information”, which could have a section on the NAN and its specific roles and responsibilities. The policy would also highlight the role of the National Library, and DPSITM. See figure 7.4 below.

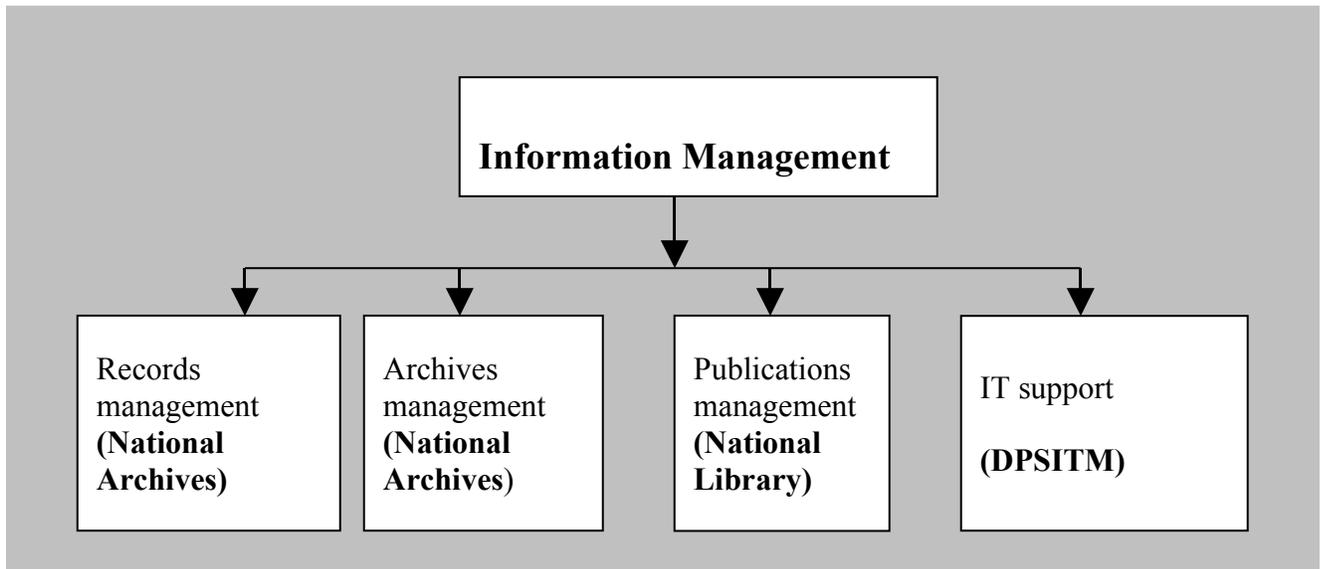


Figure 7.4 Information Management in the Namibian Public Service

This policy will not be a replacement for a stand-alone records management policy covering electronic records as well. In addition to these, each Ministry, Department, Local Authority, and Regional Council would need to put in place policies and structures to ensure conformity with the “Policy on the Management of Government Information”.

The accounting officers in the Ministry/Local Authority/Regional Council (Permanent Secretary/Chief Executive Officer/Chief Regional Officers) hold ultimate responsibility for effective and

efficient records management. The policies and structures will be developed in such a way that the partnership between creators of records and the NAN is succinctly spelt out.

Based on best practices the policy would spell out the fact that records management is a responsibility for all staff at every level in the institution because it is “at the level of the individual member of staff that the success or failure of any records management programme lies” (JISC, 2004, p. 8).

“Policy documents should be formally approved by the highest authorities and widely publicised or made available as widely as necessary” (World Bank, 2000, p. 13). In the case of the Public Service of Namibia, this would be Cabinet.

7.2.4 Review of records management standards and procedures

The Head of Archives lamented the fact that the *Archives Code* does not have legal standing. The E-Governance policy of Namibia has a clause on records management, which requires that all e-government projects have a records management component. Added to this clause should be a requirement for compliance with the set records management standards such as the *Archives Code*. A review of the *Archives Code* to give more detail on electronic records management, and streamline it to make it more user-friendly is recommended. A new title for the *Archives Code* for an example “Records management Handbook/Guide for the Public Service of Namibia” will make it more noticeable by action officers.

A functional analysis of the Public Service, involving all aspects of Government’s activities to establish how government records are created and used is essential. The Kansas State Historical Society (2005) considers it the first task in developing a functioning records management programme. Review of existing systems would also include systems which are used to perform government operations, and which are required to keep evidence of those operations as records. These systems include Excel spreadsheet on action officers’ hard drives, systems dedicated to particular activities such as human resources or financial management, databases accessible via the Internet as well as scientific databases created by offices (New South Wales, State Records,

2003). This is particularly important should the Public Service decide on enterprise content management solution.

7.2.5 Providing physical protection for records

The research established that although there are some measures in place to protect records, mostly burglar bars, and passwords, there is need to augment these measures and strengthen existing procedures. In the case of computer files, access and levels of permission need to be clearly spelt out to avoid the situation highlighted by one of the respondents where officers pass on their passwords without regard for confidentiality. The Public Service has not systematically identified and protected its vital records; neither does it have a digital records preservation strategy. The proposed records management programme will be strengthened by a strong digital records preservation programme that will ensure that records are available, readable and intelligible.

7.2.6 Developing records centres

The research established the absence of records centre systems in the Public Service. There is no in-house records centre to service records of the Public Service in Namibia. This has partly attributed to congestion in Ministries and departments; Regional Councils; and local authorities as records are not managed throughout their entire life-cycle. This stage of the integrated records management programme will entail developing and maintaining records centre facilities; transferring, storing and retrieving records; and disposing of records as indicated by the schedules. The plan by the National Archives to use commercial records centres should be seen as an interim measure. In-house records centres for the Public Service should be established. Namibia is a vast country, so that one central records centre facility would not be convenient. The Archives Act makes provision for intermediate depots in the different regions. The records centres should have appropriate storage space for storage of electronic media. This would solve the problem of off-site storage of back-up tapes identified by the study.

7.2.7 Managing archives

It was not the purpose of this research to investigate managing of archives in the NAN. However, the effective management of records and the final transfer of the 3 to 5 per cent worthy of

permanent preservation fall within the framework of this study. The NAN should put in place measures to ensure that this 3 to 5 percent is not endangered. This includes strategies for timely acquisition and receipt of such records into the NAN custody. The situation that pertains in the Ministries/local authorities and Regional Councils is that due to the absence of retention schedules, records are not taken into National Archive custody on time, if at all.

The custody of records on electronic medium has been discussed in Chapter 6 Section 6.3.2. Based on the practice by most archival institutions, the researcher proposes that except in very exceptional cases, records on electronic medium be left in the custody of the creators. This recommendation is done on the basis that each Ministry will have a professional records manager to advise on records management. As and when some institutions wind up, projects are concluded and the secretariats or bodies set up to manage such projects are disbanded, their records paper and electronic should find their way to the records centre or the NAN.

7.2.8 Implement an electronic records management system

Having achieved all the other stages the Public Service would be ready to implement an electronic records management system. With the culture of managing records revived; a strong awareness of records management amongst all members of staff; strong collaboration between all parties through the advisory services of the records manager; adequate legal and regulatory framework; standards and procedures including classification schemes and retention schedules in place; an analysis of the current electronic information systems in the Public Service done to establish interoperability, the Public Service could implement an electronic records management system. The researcher is not implying that achieving this would definitely ensure the successful implementation of an ERMS. However, not laying this foundation would definitely lead to problems with the implementation of an ERMS. Institutions may be ready at different times, hence implementation could start with those ready and incorporate the others as they reach a stage of e-records readiness.

The research established that the Public Service of Namibia is considering enterprise content management. The researcher recommends a feasibility study to establish interoperability of the current information systems running in the Public Service of Namibia and possibilities of an

electronic records and document management system. The National Archives of Namibia, The National Library and Office of the Prime Minister, Department of Information and Technology Management (see Figure 7.4) are key stakeholders in such an exercise.

7.2.9 Supporting and sustaining the programme

One of the issues that clearly come out of the study is the lack of awareness amongst staff, particularly those who have not been in the service for a long time.

Promotion of records management to the Public Service will be done through induction programmes for new employees, which should incorporate records keeping. The proposed “Policy on the Management of Government Information” could have a clause on this. One of the responsibilities of the Records Managers posted in the Ministries will be to provide on-going training for all staff on records keeping. A strong budget for records management will make provision for staff to go for formal training in records management.

Constant evaluation and monitoring of the records management programme will ensure that problems are quickly identified and rectified, avoiding another collapse of the records management programme. With professionally skilled and trained records managers driving records management in the institutions, this would be possible.

7.3 Summary

This chapter presented a model for managing records in the Public Service aimed at strengthening the electronic records environment. The records management programme takes into consideration the fact that the Public Service is operating a hybrid system, and is based on best practices from across the globe. The next chapter summarises and concludes the study highlighting the recommendations in Chapter 7 as well as contributions of the study.

CHAPTER EIGHT

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

This chapter summarises and concludes the research, and makes some recommendations. Bless and Higson-Smith (1995) explain the purpose of this chapter:

After interpreting the findings it is useful to summarise the aims of the research, compare them with the findings and draw conclusions on how much and in which manner, the goal has been achieved (p. 146).

The chapter is in three parts: the summary, conclusions and recommendations. The summary is arranged according to the main thematic areas, within which data was presented. The conclusion is organised according to the study's research questions. The recommendations include a model for managing records in the Public Service of Namibia, a number of related recommendations as well as areas for further research.

8.2 Summary

The main thematic areas, within which the summary is presented include:

- E-government initiatives in the Public Service of Namibia;
- Records management awareness;
- Records keeping procedures;
- Safety, security and confidentiality of records;
- Regulatory environment;
- Compliance and monitoring;
- Resources and facilities;
- Training and skills;
- Electronic information systems;
- Computer generated records; and
- Implications for accountability, transparency and good governance

8.2.1 E-government initiatives in the Public Service of Namibia

E-government in the Public Service is at phase one or publication level of e-maturity. Namibia's e-government initiatives are visible in e-mail usage, web-based technologies and website development.

8.2.2 Records management awareness

There is not enough awareness for records and importance of keeping records in the Public Service. Officers do not understand that records are a product of the activities of the organisation, which should be preserved for evidence and good governance. There is evident lack of awareness by officers to the fact that they are creating electronic records although they talk of e-mail messages and their attachments and reliance of electronic copies of correspondence and other documents. This failure to realise that these are records, which provide evidence of their activities have serious consequences for their maintenance as reliable and authentic records for transparency and good governance.

8.2.3 Records keeping procedures

Poor records keeping procedures highlight the lack of awareness for records and the importance of managing records in the Public Service of Namibia. Evident from the study is the operation of "mini" registries where no one else but the officers concerned knows about the records in there. There is also failure to file records and with officers dealing with loose documents, which are not organised in a filing system. This problem has been transferred to electronic records where the use of folders and naming conventions is not systematic. Absence of classification schemes, or the presence of outdated ones, is also a problem. Other problems found include loss of records, and congestion due to absence of disposal schedules and records centres.

8.2.4 Safety, security and confidentiality of records

Various measures are in place to ensure the safety and security of records. These include burglar bars, fire fighting equipment, levels of permission, passwords and back-ups. However, these measures are not effectively implemented and monitored. Some offices lack burglar bars and fire fighting equipment. Some of the equipment is not regularly serviced and there are no fire drills to train staff on how to operate the equipment. Records are threatened by viruses, poor back-up

procedures and/or lack of it completely. The poor storage of back-ups as evidenced by storage of back-up tapes in the same room as the servers, and officers storing back-ups at home, compromises the safety and security of records.

8.2.5 Legal and regulatory framework

The *Archives Act* no 12 of 1992 and the *Archives Code* regulate records management are the specific records management pieces of legislation and standards that regulate records management in the Public Service. Both the *Archives Act* and the *Archives Code* need to be revised so that they are more pronounced on electronic records management. A records management policy is at draft stage. Other related legislation and regulations include the *Finance Act* and *Treasury Instructions*. There are no freedom of information and data protection laws. These laws facilitate democratisation of access to government information, whilst protecting the privacy and rights of individuals. Democratisation of access to information is one of e-government's objectives. Similarly the absence of a law on e-communication and e-transactions hampers e-government. However, such a law is at the bill stage.

8.2.6 Compliance and monitoring

There is hardly any compliance with the *Archives Code*, which is also not known by most officers as well as some of the few records keeping staff. Internal monitoring is almost non-existent as senior officers responsible for this delegate and this ends up not being done. External monitoring by the National Archives, which is mandated to do that is not as frequent due to staff constraints.

8.2.7 Resources and facilities

Resources in short supply include tapes for back-ups resulting in the practice of over-writing tapes, storage space for paper records, adequate server space resulting in haphazard destruction of e-mails, lack of both IT and records keeping staff, and lack of a separate budget for records management.

8.2.8 Training and skills

There are no skills for managing electronic records in the Public Service, even within the NAN itself. Skills for managing records in general are inadequate. Most people managing records do not have formal qualification in records management and are at a level too low to be able to manage the more intellectual aspects of records management. For most officers managing records the only course in records management they have is the three to five days registry procedures course offered by the NAN. Most members of staff supposed to supervise the registry have no knowledge of records management. Shortage of staff with IT skills has meant that necessary training required to manage electronic e-mail and other electronic documents such as use of folders and naming conventions has not been given. Induction programmes do not cover records keeping, so officers are not made aware of the records keeping practices of the organisation.

8.2.9 Electronic information systems

Systems running in the Public Service include e-mail, web technology, database management and individual software for creation of office documents.

Contrary to best practices, most Ministerial Information Technology Committees do not include a records management person. Many information systems running in the Public Service do not capture and register electronic records. The Public Service does not have any electronic records management systems running. An electronic records management system, which could be a commercial off-the-shelf system has been acquired for the Public Service, coordinated by OPM and not the NAN in charge of records management in the Public Service. There is uncertainty regarding the records keeping functionalities of the system.

Most electronic information systems were developed and are maintained by external consultants who have kept the systems' documentation. Most IT staff do not know where the system documentation is, with negative consequences for future digital preservation strategies.

The Public Service is moving toward web-based systems and there have been a number of system upgrades. Cases of changes in data format and failure to access data were reported.

Metadata standards and data formats are not subjects which most IT officers, are well versed with. Cases of data which could not be accessed due to technological obsolescence were reported.

8.2.10 Computer generated records

Computer generated documents include e-mail messages and attachments, correspondence, minutes, and reports. The study established some reliance on electronic copies as the hard copies cannot be found. However, in the absence of the officer who created the record, in most cases such records are not accessible. Systems such as the IFMS and HRIMS generate transactional records not captured as records in context. This compromises the creation and preservation of reliable and authentic records for evidence, accountability and transparency. Poor back-up procedures threaten the existence of these records.

8.3 Conclusions

This section of the chapter is arranged according to the study's sub-research questions (see Chapter, Section 1.5)

8.3.1 Main assumption of the study: e-government and e-records in the Public Service of Namibia

The research findings show that the Public Service of Namibia is implementing phase one of its e-government implementation strategy. E-government presence is felt in the use of e-mail, and development of websites such as the e-service. The study's main assumption that the Public Service has embarked on e-government initiatives, which should result in an increase in the creation of electronic records, was confirmed to be true by the study.

8.3.2 Status of records management in the Public Service of Namibia

The status of records management in the Public Service of Namibia is poor. The e-records readiness assessment showed that there is need to address this if Namibia is to benefit from any e-government initiatives. Namibia operates a hybrid records system, therefore strategies to strengthen the electronic records environment in the Public Service would need to address the

management of the paper records as well. The poor records management practices of the paper records have been transferred to electronic records.

8.3.3 Namibia e-records readiness to support e-government

Namibia is not e-records ready to support the demands of e-government. According to the e-records readiness assessment carried out as part of this study, Namibia is in the high risk category, which means that electronic records are at risk of misuse and loss without government wide strategies and standards for e-records and digital preservation. The assessment also revealed that funds and efforts put into e-government will be wasted unless e-government initiatives are supported by a solid records management programme.

8.3.4 Legal and regulatory framework

One of the questions to be answered by the study was: “What are the legislation and policies that guide the management and preservation of records in the Public Service of Namibia and what gaps exist, which need to be closed for these to adequately address electronic records management?” The legal framework for managing records is in place in form of the *Archives Act* no 12 of 1992. However, it needs to be updated to take into consideration e-business, e-transactions and e-records. The revision of the *Archives Act* (currently under way), and the passing of *The Electronic Transactions and Communications Bill* will go a long way towards filling the gaps in the legal framework. The records management policy (at draft stage) should address weak areas such as e-mail policy, and disaster management strategy, and include digital preservation. As the Public Service seems to be taking the road to enterprise content management, policies need to take this into consideration. The NAN is therefore faced with an additional challenge of formulating policies for ECM.

The *Archives Code* although in need of revision and updating provides guidelines for records keeping in the Public Service. However, very few officers, particularly those who have not been in the Public Service for a long time are aware of the *Archives Code*. Those aware of it do not use it.

8.3.5 Records management model, principles and standards for management of records in the Namibian Public Service

The study established that the current practices of managing records in the Public Service fall short of acceptable records management principles and requirements for set standards as laid out in the *Archives Code*. A change of name from “Archives Code” to “Public Service Records Management Code” would also make it more appropriate as a guide on managing current records for action officers. The general perception of the term ‘archives’ is old records of no use.

Records management has been highly impacted upon by the new information and communication technologies, hence set practices as spelt out in the *Archives Code* are not practical in the electronic records environment. E-mail communication is already making some policies and procedures unpractical. For example, how practical is the requirement that everything coming into the organisation or leaving the organisation passes through the office of the Permanent Secretary? How practical are central registries in an electronic records environment? A model for managing electronic records would take into consideration that Namibia is operating a hybrid records system, which would still require institutional registries, centralised or decentralised, as well as consider the increased control the creators of the records have due to computerisation. The hybrid records management theory therefore is the most logical approach.

8.3.6 Integration of essential records management requirements into electronic information systems

This study on electronic records management in the Public Service found the existence of a number of information management systems running in the Public Service of Namibia, but came to the same conclusion as Wamukoya and Mutula (2005) about lack of knowledge in the Public Service on the management of e-records. One thing which came out very clearly, is that there is no incorporation of records keeping requirements in electronic information systems. There have not been any attempts to build into these systems some records keeping capabilities (see Chapter 3, Section 3.8.1 and Appendix I). The online transaction processing systems do not have capabilities to create records by capturing and registering them in a records keeping system.

There are no naming conventions for files, directories and folders. This is not surprising anyway as in a hybrid environment, the electronic filing system is supposed to mirror the paper filing system. However, as already discussed, records classification, mail referencing and use of files is not well practiced. It is not very clear what records keeping capabilities the new system, which has been acquired by the OPM has, as the draft requirements by the NAN were not applied. The answer to the research question; “To what extent have records management requirements been incorporated in electronic information systems in the Public Service of Namibia?” is that nothing has been done so far.

8.3.7 Skills for managing electronic records

Skills for managing records in general in the Public Service are not well developed. There is a lack of professionally qualified registry staff in charge of the registries. None of the registry personnel interviewed have a professional qualification. Training for most, has been in the form of two to three-day workshops. None of the courses covered electronic records management. Action officers who are operating “mini” registries have also not received any training. Few have attended awareness workshops.

The induction programme for newly employed staff offered by the Public Service was cited by some officers as having given them the little insight into records keeping practices. Computer literacy courses, which some officers have attended, have taught them about folders creation, but not naming conventions as required to link records to the transactions they represent. In a nutshell, the Public Service of Namibia does not have the necessary skills to manage e-records.

8.3.8 Implications of the current electronic records environment for accountability, transparency and good governance

It is widely accepted that records provide citizens with the means not only of holding the government to account for its conduct, but also to safeguard their individual rights. E-government aims to democratise citizens’ access to information. Success of e-government requires amongst other things, that citizens have trust in the information that its government’s information systems release. The reality of provision of information to citizens can only be realised if the data systems infrastructure, including records management systems can meet the

demands for information (Public Record Office, 2003; Department of Constitutional Affairs, 2002; Stevens, 2002). The study found situations where because of lost or missing records citizens had been denied their rights. The chaotic situation regarding records management established by the study creates a conducive environment for misappropriation of funds and other misconducts, incompetence etc. going unnoticed or taking long to be discovered. Lack of evidence encourages such misdeeds as it minimises the chances of perpetrators being caught.

8.3.8 Improving electronic records management in the Public Service to support e-government

The environment, in which electronic records are being created, has been clearly brought out by this study. Any strategies therefore for improving electronic records management in the Public Service of Namibia, which is operating a hybrid system, cannot be done in isolation of the paper records. An integrated records management programme applying the hybrid records life-cycle and continuum theory as discussed in Chapter 7 provides a holistic approach, which covers both paper and electronic records.

8. 4 Recommendations

One of the objectives of the study was to “make recommendations on how electronic records environment can be strengthened to support accountability and transparency, which are essential for good governance”. Bless and Higson-Smith (1995) state that “research is mainly relevant if it has implications for the improvement of the human condition” (p. 147). The study confirmed the existence of a hybrid records system in the Public Service of Namibia; therefore, the recommendations cover management of paper as well as electronic records. The following are the study’s recommendations:

1. The chaotic paper records management situation is not conducive for the creation and management of electronic records and good governance. A revamp of the records management systems and restructuring of the records management programme as proposed in the model in Chapter 7 is necessary.

2. Preservation of system documentation for the electronic systems currently in the Public Service requires attention. Public Service Information Technology Policy should have a statement on this.
3. The Public Service needs to compile a database of all the electronic information systems running capturing information such as metadata standards as well as other pertinent information. This could be done at Ministerial and Departmental level.
4. To enhance the safety and security of records, a number of measures need to be put in place. Back-up procedures and management of back-ups need to be improved; problem of virus attacks addressed; provision of fire fighting equipment such as extinguishers and fire hoses not only for the registry but that these be easily accessible to any office in view of the “mini” registries situation. The fire fighting equipment also requires regular servicing.
5. Public Service Information Technology Policy could have a statement on electronic records management highlighting the fact that records resulting from ICTs such as e-mail constitute evidence of government activities.
6. Records management training is required for all Public Service officers, including records keeping staff and action officers. Records management staff need formal training to prepare them for progression in the field of records management as well as meet challenges of the profession. Action officers need to understand and appreciate what records are and the vital role they play in ensuring effective and efficient management of records in their organisations. They need to be taught how to effectively manage, the records which they create. IT and other system administrators also require records management awareness.
7. The Public Service needs to seriously consider the level of records management positions and realise the need for professionally trained people to manage records. Records management should be given the seriousness that it deserves. The practice of reassigning records management staff to other duties greatly affects the efficient and effective management of records in the Public Service.

8. The creation of records centres, ideally records centres in each region, should be given serious consideration. In addition to relieving congestion in the offices through deposit of the paper records, records centres will provide the much needed offsite storage for back-up media. Records centres managed by professional staff become centres of excellence to showcase proper records management in the respective regions.
9. The Public Service should develop a “Policy on the Management of Government Information”. Other policies, which also need to be developed, such as records management incorporating electronic records, e-mail policy, and enterprise content management policy, will make this policy a point of reference.

8.5 Contributions of the study

The study has several implications for theory and practice of the management of records, particularly in view of the impact of information and communication technologies.

8.5.1 Implications for theory

One of the contributions of this research is the application of knowledge management theories, specifically for this study structuration and communities of practice to records management research and practice. The application of the structuration theory was one of the motivating factors to consider the individual interviewees as the units of analysis. According to Pozzenbon and Pinsonneault (2005, p. 1356) “Structuration theory provides a theoretical approach that helps understand users’ interaction with information technology (IT) and the implications of these interactions”. The study therefore meant to understand the interaction of the officers in the Public Service with IT and the impact thereof on records and records management. The research problem centred around the challenge of managing records posed by the shift of control over the creation and management of information from centralised to individual control through the use of ICT; and the impact this has on the creation and preservation of trustworthy records for transparency and accountability. Communities of practice concept led to the role of the records manager as broker, influencing the model for managing records in Chapter 7.

Knowledge has become the primary source of competitive capacity for organisations and records are one of the information assets for knowledge creation, hence the relevance of knowledge management theories to records management and conversely RM theories to KM. Records life-cycle and records continuum theories will no doubt continue to guide records managers; however, the relevance of other theories such as knowledge management theories to records management was established by this study.

8.5.2 Implications for practice

Chapter 1 Section 1.4 clearly states the purpose of the study, which was to investigate the status of records management in the Public Service of Namibia, establish e-records readiness and assess whether or not the environment is conducive for the creation of trustworthy electronic records to support e-government. A conducive environment is a pre-requisite for the preservation of records authenticity to ensure that records provide evidence, hence support transparency and accountability.

Emanating from fulfilling this purpose is one of the contributions of this study; which is testing the applicability of the *E-Records Readiness Assessment Tool*. The study established that the Tool can be adapted to any organisation. For any stage there are issues, which may not apply to particular organisations, and each organisation needs to pick what applies to it. This can be done without affecting the effectiveness of the Tool. However, applying the Tool needs a clear understanding of the various issues surrounding records management in particular organisations and at national level as well. It is something that cannot be hurriedly done but requires proper investigation.

In fulfilling the purpose of the study and answering the main research question of the study: “How can the electronic records environment in Namibia’s Public Service be strengthened to support the e-government?”, in the form of the proposed model for managing records in the Public Service as spelt out in Chapter 7, the researcher hopes that the study has contributed to policy and practice.

8.6 Areas for further research

The study identified the following areas for further research:

1. Following the structuration theory, this study concentrated on individuals within Ministries. However, once e-government reaches the “government to interactive stage”, research could be conducted to establish the interaction of the citizens with ICT and how that impacts on records management.
2. An area that warrants research is records centres in Namibia. The absence of a records centre for the Public Service, the coming up of commercial records centres, the vastness of the country and establishing how the country could adequately be served, and the role of records centres in managing electronic records would make this an important and interesting area to investigate.
3. The study established that Namibia does not have a records disaster management plan including digital preservation programme. This area warrants further research, which could cover the creating departments and the records centres (commercial at the present moment), as long as they are preserving government records.
4. This study concentrated on Namibia’s Public Service, leaving out the private sector where, as far as this researcher is aware, no studies on records management have been conducted. Future research could look into this area to establish how the public and private sectors can collaborate to strengthen records management in Namibia as well as enhance e-government.
5. A possible topic for research is a survey on “*E-records readiness assessment: who is doing what and where*” similar to the survey carried out by Bridge.org (2005) on e-readiness assessment.
6. An investigation of the current electronic information management systems in order to establish interoperability amongst the systems themselves, and the system that OPM has

acquired is another area that warrants research. This will be particularly necessary should the Public Service of Namibia decide to go for enterprise content management.

7. This study does not go beyond recommendations for addressing problems identified. Further research could look into implementation of the recommendations as well as establishing their effectiveness.

8.7 In Conclusion

The research whose problem centred on the challenges of managing electronic records, compounded by the fact that control due to the use of certain ICTs was moving away from centralised control to individuals, set out to achieve a number of objectives, which the researcher believes have been met.

The main research question was answered through the proposed model for managing records in the Public Service, taking cognisance of the fact that the Public Service of Namibia is operating a hybrid system. The model incorporates a number of recommendations of the study. The applicability of the life-cycle and continuum theories is reflected in the proposed records management programme. The choice of individuals as units of analysis, to emphasise the human element and highlight the interaction of individuals with ICTs, reflects applicability of the knowledge management theories.

The study has a number of significant contributions. These include the testing of the applicability of the *E-Records Readiness Tool*, application of knowledge management theories to records management research and practice. The study's finding that Namibia's current e-records readiness poses a high risk that Namibia will not benefit much from e-government initiatives unless records management is improved, has major implications for policy and practice.

This research into electronic records management in the Public Service of Namibia in the context e-government has added on to research by others but there are still many other issues regarding

e-records management and e-government that require investigation. This study has highlighted some of these areas.

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APPENDICES A-I

APPENDIX A
Letter Seeking Permission to Carry out Research

P.O. Box 99522
Windhoek
Namibia

14 May 2007

The Permanent Secretary
Ministry of Foreign Affairs
P Bag 13347
Windhoek

Dear Sir

**RE: REQUEST TO CARRY OUT RECORDS MANAGEMENT RESEARCH IN THE
MINISTRY OF FOREIGN AFFAIRS**

I am a lecturer at the University of Namibia conducting research on records management. The research will involve interviewing records keeping staff, as well as officers regarding the creation, capturing, and preservation of records. It also involves an analysis of current practices regarding e-mail usage and computer generated documents.

One of the aims of this study is to establish if the public sector in Namibia is e-records ready to support e-government initiatives. An e-readiness assessment was done for the Public Service and none for e-records readiness has been done, and yet best practices recommend that these two be done simultaneously.

I seek authorisation to carry out my research in your organisation. I have the months of June and July to conduct the research whose aim is to cover all Ministries. Once permission is granted, I will make appointments with at least five officers who include an action officer, registry staff, the person in charge of records management in the Ministry and IT staff to ensure that there is minimum disruption in their daily schedules.

Please find attached a letter of support from the National Archives of Namibia with whom I collaborate with in an effort to improve records management in the country.

Thank you for your consideration.

Yours Faithfully

Cathrine T. Nengomasha

Tel: 2063649, Fax 2063806, cell 0812787617, e-mail cnengomasha@unam.na

APPENDIX B

Data Gathering Protocol

Instructions to the Researcher

This protocol will be strictly followed as written. Bolded text inside square brackets indicates instructions to the interviewer and cannot be read out loud to the interviewee.

Researcher Introduction

My name is Cathrine Nengomasha I am conducting research as part of my Ph D study on electronic records management in the Namibian Public Service in the context of e-government. I am particularly interested in establishing the current situation regarding the management of electronic records and what needs to be done by systems designers, records creators, records managers, archivists, and policy makers to ensure the creation of reliable and trustworthy records as well as the preservation of their authenticity over the long-term.

Consent

Although I have been granted authority to conduct research in this Ministry/ Department in your individual capacity, I seek your consent to be interviewed, and request you to show your consent by signing a consent form. **[Hand form for signing if they consent, if not leave and move on to another officer]**

Are there any questions that I can answer for you at this moment about my research, before I continue?

[Wait for respondent to reply. If there are no questions, continue. If there are questions, address them].

What I plan to do is go through a series of questions with you on a number of issues pertinent to this study. I would like you to try to answer me as fully as you can. It would be helpful if you go into more detail than a simple yes or no. Please do not worry if I ask you any questions that you do not know how to answer. It may be helpful if you can indicate anyone who might be able to answer the questions, so that I may also talk to them. I would also welcome any documentation

related to the issues we discuss, as they will help me in understanding further the issues under discussion.

I will be taking notes as you speak, but I would also like to use a tape recorder to help me with my note-taking and subsequent data analysis. Do you mind if I tape record our conversation.

[Wait for the respondent to reply. If respondent replies that they do not mind being tape recorded, move on, If respondent questions about the purpose of the tape recording, explain that the recording is purely voluntary and that the tapes will be kept strictly confidential and only used for by the researcher to assist with data analysis. If respondent is not comfortable being recorded, say that is fine and continue without the recording. This will necessitate the researcher taking more detailed notes].

The Interview

I would like to start asking you questions. **[For those who have agreed to tape recording]** I am just going to switch on the tape recorder.

[Switch on tape recorder and briefly test it to make sure that it is recording. Skip questions not relevant to the person being interviewed].

APPENDIX C
Informed Consent Form

Title of Study : A Study of Electronic Records Management in the Namibian Public Service in the Context of E-Government

Researcher : Cathrine T. Nengomasha
Department of Information and Communication Studies
University of Namibia
Tel.: 061-2063649; Fax: 061-2063806
E-mail: cnengomasha@unam.na

Information

This research aims to establish the management of electronic records in the Namibian Public Service. As the person either creating and/or using the records, your input to this study is important. All responses are **CONFIDENTIAL** and your privacy will be protected. The interview should take about 40 minutes.

Participation is voluntary, and you may choose not to participate at all. I however appeal to you to help in the success of this study through your participation.

This study will benefit both the organisation and the individual, as it will contribute to proper records keeping awareness and improved records management. The results of the study will be made available to your organisation.

If you have any questions or are dissatisfied at anytime with any aspect of this study, you may contact, anonymously if you wish – my research supervisor, Professor Kingo Mchombu, in the Department of Information and Communication Studies, University of Namibia, tel. (061) 2063641, fax (061) 2063806, e-mail: kmchombu@unam.na.

If you voluntarily agree to participate in this study please indicate your consent by signing this form.

Name:**Signature:****Date:**

APPENDIX D
Structure of interview guides

Issue to be investigated	Research questions	E-records Readiness Tool: Components
<p>1. Current situation regarding records management in the Public Service</p> <p>1.1 Records management awareness</p> <p>1.2 Record keeping procedures</p> <p>1.3 Monitoring and compliance</p> <p>1.4 Facilities and maintenance</p>	<ul style="list-style-type: none"> • What is the status of records management in the Public Service • Is Namibia e-records ready to support e-government? 	<ul style="list-style-type: none"> • Awareness of records management • Responsibilities for records management • Tools and procedures for records management • Compliance with records management policies • Resource and training for records management
<p>2. Enabling legal and regulatory environment for the management of e-records in the Public Service of Namibia</p>	<ul style="list-style-type: none"> • What is the status of records management in the Public Service in Namibia? • Is Namibia e-records ready to support e-government? • What are the legislations and regulations that guide the management and preservation of records in the Public Service in Namibia and what gaps exist, which need to be closed for these to adequately address electronic records management? 	<ul style="list-style-type: none"> • Legal mandate for the government wide management of public records
<p>3. Principles, standards, policies and model for the management of records in the Public Service in Namibia</p>	<ul style="list-style-type: none"> • What is the status of records management in the Public Service in Namibia? • Is Namibia e-records ready to 	<ul style="list-style-type: none"> • Policies for records management • Government wide e-records management

	<p>support e-government?</p> <ul style="list-style-type: none"> • What are the appropriate principles, standards, policies and model for the management of records in the Public Service in Namibia? 	<p>standards and guidelines</p> <ul style="list-style-type: none"> • Compliance with records management policies
<p>4. Electronic information systems and/or electronic record keeping systems: capturing and management of e-records</p> <p>4.1 Institutional framework and responsibilities</p> <p>4.2 Information technology (IT) systems (To be asked for each identified system)</p>	<ul style="list-style-type: none"> • What is the status of records management in the Public Service in Namibia? • Is Namibia e-records ready to support e-government? • To what an extent have records management requirements been incorporated in electronic information systems in the Public Service of Namibia? 	<ul style="list-style-type: none"> • E-records management products and technologies • Government-wide e-records management standards and guidelines • Government-wide digital preservation strategy
<p>5. Training and skills for the management of electronic records</p>	<ul style="list-style-type: none"> • What is the status of records management in the Public Service in Namibia? • Is Namibia e-records ready to support e-government? • Does the Public Service of Namibia have the necessary skills to manage e-records? 	<ul style="list-style-type: none"> • Resource and training for records management

APPENDIX E
Interview Guide for Action Officers

Instructions: Everything in bold is for the attention of the interviewer and not to be read out to the interviewee.

Part 1

Issue to be investigated:

1. Current situation regarding records management in the Public Service.

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **Does the Public Service have the necessary skills to manage e-records?**

Name of respondent	
Department	
Designation	
Number of years in the current position	

1.1 Records Management Awareness

[E-records Readiness Tool: Components: (a) Awareness of records management

(b) Responsibilities for records management]

1.1.1 Can you explain the functions of this Office?

1.1.2 What e-government initiatives if any are taking place in the Ministry/Department?

1.1.3 How have these, changed the way in which you operate?

1.1.4 What is your understanding of the term records?

- 1.1.5 Which records do you create in the course of your work?
- 1.1.6 Which records do you create using the computer?
- 1.1.7 Which records do others create and retain, which you require to carry out your work?
How do you access those records?
- 1.1.8 Are there any guidelines, instructions or manuals, which assign you responsibilities for specific records functions? **[If yes]** Could you specify the documents that assign that responsibility?
[Request for copy of such guidelines/manuals]
- 1.1.9 What Ministry has responsibility for Public Service records?
- 1.1.10 Who has overall responsibility for the management of Public Service records including electronic records in the Ministry/Department? **[Establish the existence of management position]**
- 1.1.11 Which person or office has the responsibility for the day to day management of records including electronic within the Ministry/Department? **[Establish the existence of records keeping position]**
- 1.1.12 Describe your working relationship with this office or person.

1.2 Records keeping Procedures

[E-records readiness Tool: Component: Tools and procedures for records management]

1.2.2 How do you organise the records, which you receive and/or create, including e-mail and other computer records so that you can find and retrieve them easily?

Establish the following:

- **Use of central registry.**
- **Mini registries**
- **Use of classification scheme, standardised or not.**
- **Foliation of documents in files or sequential number for computer records**
- **Functionally arranged directories, folders, sub folders and files.**
- **Records stored on computer not available anywhere else.**

1.2.2. How do you keep track of a record removed from storage?

[Request to be shown record of a record out of storage]

1.2.3 Explain circumstances if any, of records, which could not be located or were damaged.

1.2.4 Explain cases if any of delayed or wrong decision or complaints from clients as a result of loss or absence of records.

1.2.5 In cases where records cannot be found, how are you able to prove that they exist?

[Establish existence of registers for recording incoming and outgoing documents]

1.2.6 **[In cases where records are kept in offices and computer]** How are other officers who need any records, paper or electronic maintained by you able to access them?

1.2.7 How do you deal with records, which are not being used or not required?

[Establish records transfer procedures to storerooms and archives. Request to see any documentation of transfers. Establish if records can be identified and retrieved].

1.2.8 What guides you in determining, which records/files to destroy or keep?

[Establish existence of retention schedules and if any request for a copy and establish how up to date they are]

1.2.9 How do you destroy records/files?

1.3 Safety, Security and Confidentiality of Records

1.3.1 Can you explain how you ensure the safety and security of paper or electronic records?

[Establish the following:

- **Existence of an institutional system to safeguard records**
- **Staff being held responsible for loss or damage of records in their care**
- **Security for records in store rooms**
- **Damage and protection from natural and biological factors**
- **Protection against unauthorised access, alteration or disposal]**

1.3.2 In the event of a fire, flood or other disasters, can you explain how the records would be safeguarded?

[Establish presence of fire precaution measures and disaster preparedness plan, which includes records.]

1.4 Compliance and monitoring

1.4.1 Are you required to follow any standards in carrying out your work?

[Establish if standards include records management. Request for a copy of standards.]

1.4.2 Who conducts audits to evaluate record keeping practices against accepted standards?

[Establish if audits are by internal or external body and how often they are carried out. Request for any audit reports]

1.5. Resources, facilities and maintenance

[E-records readiness Tool: Component: Resources for records management]

1.5.1 What resources and facilities are required so that the Ministry/Department or you in particular can manage records effectively?

[Establish adequacy of records storage facilities including for back-up disks and tapes, equipment, and materials to meet existing and future needs. Request to see facilities].

1.5.2 Explain delays if any in getting records requested from the registry?

[Establish the causes including staff shortage]

PART 2

Issue to be investigated

2. Enabling legal and regulatory environment for the management of e-records in the Public Service of Namibia.

[E-Records Readiness Tool: Components: (a) Legal mandate for the government wide management of public records (b) Policies for records management (c) government wide e-records management standards and guidelines (d) compliance with records management policies]

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **What is the appropriate model, and standards for the management of records in the Namibian Public Service?**

- **What are the legislation and policies that guide the management and preservation of records in the Public Service of Namibia and what gaps exist, which need to be closed for these to adequately address electronic records management?**

2.1 What legislation guides the work that you do?

[Establish if it requires certain types of records to be created and maintained]

2.2 What is the law that specifically regulates records management in the Public Service?

2.3 What guides you in the management of records i.e. both paper records and electronic records?

- **[Establish the following:**
- **Is there a procedures manual for the management of records throughout the life-cycle?**
- **Does it include electronic records?**
- **Is it continuously updated?**
- **When was the last issue update?**
- **[Request for copies of any policies, guidelines or procedures manuals]**

PART 3

Issue to be investigated

3. Training and skills for the management of electronic records

[E-records readiness Tool: Component: Training for records management personnel]

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **Does the Public Service of Namibia have the necessary skills to manage e-records?**

3.1 Is there an induction programme for new employees joining the Ministry/Department? Did you go through that induction? Did it include records keeping practices in the Ministry/Department?

3.2 What other training have you received in records keeping?

[Establish awareness training on use of manuals etc. including electronic records, provider of training and duration and establish the following about the training]:

- e-mails and e-mail attachments
- file naming, folders, directories, version control etc.
- back-ups
- records disposal

Last Question: Are there any comments you would like to make regarding records management in the organisation and what can be done to improve the situation?

This is all I had to ask you. Is there anything you would like to ask me or comment about this interview?

Thank you for your time and contribution to this research.

APPENDIX F
Interview Guide for Head of Records Function

Instructions: Everything in bold is for the attention of the interviewer and not to be read out the interviewees.

Part 1

Issue to be investigated:

1. Current situation regarding records management in the Public Service.

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**

Name of respondent	
Department	
Designation	
Number of years in the current position	

1.1 Awareness Records Management

**[E-Records Readiness Tool: Components: (a) Awareness of records management
(b) Responsibilities for records management]**

1.1.1 Can you please explain the functions of this Office?

[For Ministry Head Office, establish if their role of heading records function extends to Departments of the Ministry]

1.1.2 What e-government initiatives if any, are taking place in the Ministry/Department?

1.1.3 How have these changed the way in which you operate?

1.1.4 What is your understanding of the term records?

- 1.1.5 Which records do you create in the course of your work?
- 1.1.6 Which records do you create using the computer?
- 1.1.7 Which records do others create and retain, which you require to carry out your work?
How do you access those records?
- 1.1.8 Are there any guidelines, instructions or manuals, which assign staff responsibilities for specific records functions to all grades of staff. If yes specify the documents that assign that responsibility.
[Request for copies]
- 1.1.9 Who has overall responsibility for the management of Public Service records including electronic records?
[Establish if they are aware of the role of the National Archives]
- 1.1.10 Within the Ministry /Department what is the highest post that oversees records management?
- 1.1.11 Which person or office has the responsibility for records keeping including electronic records within the Ministry/Department?
- 1.1.12 Describe your working relationship with this office or person.

1.2 Records keeping Procedures

[E-records readiness Tool: Component: Tools and procedures for records management]

- 1.2.1 How do you organise the records, which you receive and/or create including e-mail and other computer records, so that you can find and retrieve them easily?

[Establish the following:

- **Use of central registry.**
- **Mini registries**
- **Use of classification scheme, standardised or not.**
- **Foliation of documents in files or sequential number for computer records**
- **Functionally arranged directories, folders, sub folders and files.**
- **Records stored on computer not available anywhere else**

1.2.2. How do you keep track of a record removed from storage?

[Request to be shown record of a record out of storage]

1.2.3 Explain circumstances if any, of records which could not be located or were damaged.

1.2.4 Explain cases if any of delayed or wrong decision or complaints from clients as a result of loss or absence of records.

1.2.5 In cases where records cannot be found, how are you able to prove that they exist?

[Establish existence of registers for recording incoming and outgoing documents]

1.2.6 **[In cases where records are kept in offices and computer]** How are other officers who need any records, paper or electronic maintained by you able to access them?

1.2.7 How do you deal with records, which are not being used or not required?

[Establish records transfer procedures to storerooms and archives. Request to see any documentation of transfers. Establish if records can be identified and retrieved].

1.2.8 What guides the Ministry/Departments in determining, which records/files to destroy or keep?

[Establish existence of retention schedules and if any request for a copy and establish how up to date they are]

1.2.9 How do you destroy records/files?

1.3 Safety, Security and Confidentiality of Records

1.3.1 How does the Ministry/Department ensure the safety and security of paper or electronic records?

[Establish the following:

- **Existence of an institutional system to safeguard records**
- **Staff being held responsible for loss or damage of records in their care**
- **Security for records in store rooms**
- **Damage and protection from natural and biological factors**
- **Protection against unauthorised access, alteration or disposal]**

1.3.2 In the event of a fire, flood or other disasters can you explain how the records would be safeguarded?

[Establish presence of fire precaution measures and a disaster preparedness plan that includes records]

1.4 Compliance and monitoring

1.4.1 Are you required to follow any standards in carrying out your work?

[Establish if standards include records management. Request for copy of standards].

1.4.2 Who conducts audits to evaluate record keeping practices against accepted standards?

[Establish if audit is by internal or external body and how often carried out. Request for any audit reports]

1.5. Resources, facilities and maintenance

[E-records readiness Tool: Component: Resources for records management]

1.5.1 What is required for the Ministry/Department or yourself in particular to manage records effectively?

[Establish adequacy of records storage facilities including for back-up disks and tapes, equipment, and materials to meet existing and future needs. Request to see facilities].

1.5.2 Explain delays if any in getting records requested from the registry.

[Establish the causes including staff shortage]

PART 2

Issue to be investigated

2. Enabling legal and regulatory environment for the management of e-records in the Public Service of Namibia.

[E-Records Readiness Tool: Components: (a) Legal mandate for the government wide management of public records (b) Policies for records management (c) government wide e-records management standards and guidelines (d) compliance with records management policies]

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **What is the appropriate records management model, and standards for the management of records in the Namibian Public Service?**
- **What are the legislation and policies that guide the management and preservation of records in the Public Service of Namibia and what gaps exist, which need to be closed for these to adequately address electronic records management?**

2.1 What legislation guides the work that you do?

[Establish if it requires certain types of records to be created and maintained]

2.2 What is the law that specifically regulates records management in the Public Service?

2.3 What guides officers in the management of records i.e. both paper records and electronic records?

[Establish the following:

- **Is there a procedures manual for the management of records including electronic?**
- **Is it used?**
- **Is it constantly updated?**
- **When was the last issue updated?**

[Request for copies of any policies, guidelines or procedures manuals]

PART 3

Issue to be investigated

3. Training and skills for the management of electronic records

[E-records readiness Tool: Component: Training for records management personnel]

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **What skills are required to manage electronic records and does the Public Service have the necessary skills?**

3.1 Is there an induction programme for new employees joining the Ministry/Department? **[if yes]** Did you go through that that induction? **[if yes]** Did it include records keeping practices of the Ministry/Department?

3.2 What other training have you received in records keeping?

[Establish awareness training on use of manuals etc. including electronic records, provider of training and duration and establish the following about the training]:

- **e-mails and e-mail attachments,**
- **file naming, folders, directories, version control etc.**
- **back-ups**

▪ **records disposal**

3.3 What qualifications do records keeping staff in the Ministry/Department have?

3.4 What other training have records keeping staff received?

[Establish training opportunities including workshops, conferences, short courses etc.]

3.5 What are the levels of records keeping positions in the Ministry/Department? Are these levels capable of providing an effective records management service to the Ministry/Department?

3.6 Is there high staff mobility among records keeping staff? **[If yes]** What are the causes?

Last Question: Are there any comments you would like to make regarding records management in the organisation and what can be done to improve the situation?

This is all I had to ask you. Is there anything you would like to ask me or comment about this interview?

Thank you for your time and contribution to this research.

End of Interview

APPENDIX G
Interview Guide for Information Technology (IT) Staff

Instructions: Everything in bold is for the attention of the interviewer and not to be read out to the interviewee.

Issue to be investigated

**Electronic information systems and/or electronic records keeping systems:
capturing and management of e-records**

[E-Records Readiness Tool: Components: (a) E-records management products and technologies (b) Government wide e-records management standards and guidelines (c) Government wide digital preservation strategy]

Research Questions

- **What is the status of records management in the Public Service of Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **To what an extent have records keeping requirements been incorporated in electronic information systems in the Public Service of Namibia?**

1. Institutional/Organisational framework and Responsibilities

1.1 Could you please briefly describe the functions of this office?

1.2 What is your understanding of the term records?

1.3 What e-government initiatives if any are taking place in the Ministry?

1.4 Who is responsible for the strategic development of IT resources and systems within the Ministry/Department or Public Service as a whole? **[Establish if there is a centralised body for Public Service as a whole and its responsibilities and relationship to client offices (e.g. controlling, advisory)]**

1.5 What are the electronic systems currently running in the organisation?

[These could include e-mail systems, web-technology systems, database management systems, individual software for creation of official records, and smart systems.

Establish if the organisation has an ERMS]

1.6 Explain these systems e.g. for database management systems, the transactions, which they support. **[OTPS, DSS, EDMS, ERMS]**

1.7 What types of records result from these transactions?

1.8 How can one new to the system know, which records are available?

1.9 Who is responsible for overseeing the design and implementation of electronic information management systems (e.g. project board, IT committee, etc)?

1.10 Explain the relationship of this design body with the person in charge of the records management function.

1.11 How is compatibility of systems and exchange of data ensured?

[Establish government interoperability standard. Request for a copy]

2 Information Technology (IT) Systems (To be asked for each identified system)

System Description:

2.1 Design and Implementation

2.1.1 What is the system architecture; e.g. standalone P.Cs, client -server, Web based?

2.1.2 What is the language, in which the system is programmed?

[Establish if the system is programmed in a common language, e.g. Oracle, Sybase, and SQL; or if the data is in a proprietary format].

2.1.3 What original data sources were used to populate the system (either paper or electronic)?
[Establish accuracy of the input data in order to establish credibility of the data that constitute the system's records].

2.1.4 How were these sources verified for accuracy?
[Establish the quality control mechanisms system e.g. reporting functions that verify the accuracy of data or procedures for flagging data anomalies. If possible request for demonstration]

2.1.5 What is the metadata standard used by the system? **[XML Style sheet, RTF, SGML]**

2.1.6 How are vital records within the system identified?

2.1.7 Can you describe the audit trail function of the system?
[Establish if the system can detect unauthorised actions]

2.1.8 How are records linked to transactions or activities?

2.2 System Operations and Maintenance

2.2.1 Who is responsible for the daily administration of the IT system?

2.2.2 What functions does the system perform?

2.2.3 What system documentation is available and where is it kept?

2.2.4 Have any system upgrades been conducted since implementation? **[If yes]** When were they carried out and what did they entail?
[Establish data conversion and impact on data and structure of records]

2.2.5 Describe the data migration process through system upgrades.

[Establish:

- **If the migration process was documented**
- **If there a policy guiding data migration and if this policy is Ministerial or Government wide]**

2.2.6 What other strategies are used to ensure readability and accessibility of electronic information overtime?

2.3 Capacity and User Support

2.3.1 Who is responsible for providing support for users of the system?

[Establish number of users and institutional capacity to support daily use of the system]

2.3.2 What are the problems, which users encounter?

[Establish problems, which could impact on records creation and maintenance.]

2.3.3 What training did the administrator(s) receive?

[Establish competence in the hardware and software, for which they are responsible.]

2.3.4 How are system users trained?

[Establish content, duration of training and user manual]

2.4 System security and back-ups

2.4.1 Can you explain system users' identification and levels of permission?

[Establish use of such identification with other controls e.g. audit trails, authorisation to create, modify/and or delete records]

2.4.2 What are the procedures and processes in place to ensure continued business operations in the event of a system failure?

[Establish protection against loss of records have records been lost due to system failure or power outage?]

2.4.3 How are systems records maintained and restored in the event of a disaster?

[Establish if the system is included in disaster recovery planning]

2.4.4 What provisions are in place for back-ups?

[Establish the following:

- **Back-up server or back-up tapes**
- **Frequency of backing up person/s responsible**
- **Storage format and location**
- **Location of back-up server**
- **Labelling of tapes access to back-up tapes overwriting tapes –guarding against record loss]**

2.4.5 How does the system control and limit the duplication of records?

2.4.6 How is the transmission of data made secure?

[Establish if the system is linked with any other systems, accessible to users in different locations e.g. WAN, Web-access, types of users including members of the public]

Last Question: Are there any comments you would like to make regarding electronic information systems in the organisation and their capability to manage records or records management in general and what can be done to improve the situation?

This is all I had to ask you. Is there anything you would like to ask me or comment about this interview?

Thank you for your time and contribution to this research.

End of Interview

APPENDIX H
Interview guide for National Archives (NA) Staff

Instructions: Everything in bold is for the attention of the interviewer and not to be read out to the interviewee.

Issues to be investigated:

- **Legal mandate for the government wide management of public records and information**
- **Government wide digital preservation strategy**
- **Policies and responsibilities for records management**
- **E-records management products and technologies**
- **Resource and training for records management**
- **Internal awareness of records management**
- **Compliance with record management policies**

Research Questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **To what an extent have records keeping requirements been incorporated in electronic information management systems in the Public Service of Namibia?**
- **What is the appropriate records management model, and standards for the management of records in the Namibian Public Service?**
- **What are the legislation and polices that guide the management and preservation of records in the Public Service of Namibia and what gaps exist, which need to be closed for these to adequately address electronic records management?**
- **Does the Public Service have the necessary skills to manage e- records?**

Name of respondent	
Department	
Designation	
Number of years in the current position	

1. Explain the mandate of the National Archives and its relationship with Ministries and Departments.

[Establish:

- **adequacy of guidance/monitoring**
- **any other body championing records management including electronic records in the Public Service?]**

2. Describe the status of records management in the Public Service in Namibia.

[Establish strengths and weaknesses including:

- **Following records management standards**
- **Awareness amongst management and action officers**
- **Reports of loss or damage to records**
- **Resources**
- **Skills of records keeping staff to manage records**

3. How is records management regulated in the Public Service?

[Establish:

- **Regulatory environment – e.g. legislation, records management related policies.**

[Request for copies of any standards, legislations, policies, instructions and manuals]

4. How is compliance with standards, policies and regulations monitored?

[Establish supervision of record keeping staff on a day to day basis, internally in the Ministries and Departments and supervision of Ministries and Departments by the National Archives]

5. What e-government initiatives are you aware of taking place in the Public Service?

[Establish impact they have on National Archives' records management provision strategies].

6. How is the National Archives preparing the Ministries and Departments to meet the challenges of e-government?

[Establish:

- **Any plan of action/road map for e-records management**
- **Training programmes and manuals**

Request for any copies]

7. Who is in control of the main electronic information systems running in government?

8. What is the relationship between the National Archives and this body?

9. Are there any ERMS running in the Public Service or in the process of being acquired?

[Establish:

- **Any consultation between NA and acquiring Ministries and Departments**
- **Software specifications/guidelines**
- **Standard system]**

Request for copies of any specifications and or guidelines

10. Where there are no ERMSs, what systems exist for the management of electronic records generated in the electronic information systems?

11. What is the current practice regarding non- current records, both paper and electronic?

[Establish:

- **Transfer to records center facility, and/or National Archives and disposal**
- **Practice regarding electronic records**
- **Digital preservation strategy**
- **Written policies (Request for copies if any]**

12. Does Government have a disaster management plan and does this encompass records management?

[Establish overall digital preservation strategy for the Public Service]

13. What is the level of records keeping positions in the Public Services?

[Establish entry requirements, educational and professional qualifications, seniority of position including capability of persons these positions attract to effectively provide records management services]

14. What records management training programmes exist in the country?

[Establish:

- **National Archives' own programmes**
- **Public training institutions and other private companies' programmes**
- **Suitability and adequacy of these training programmes**
- **What the National Archives would like to see in place]**

Last Question: Are there any comments you would like to make regarding records management in the Public Service of Namibia and what can be done to improve the situation, highlighting any future plans?

This is all I had to ask you. Is there anything you would like to ask me or comment about this interview?

Thank you for your time and contribution to this research.

End of Interview

APPENDIX I
Interview Guide for Records Keeping Staff

Instructions: Everything in bold is for the attention of the interviewer and not to be read out to the interviewee.

Part A

Issue to be investigated:

1. Current situation regarding records management in the Public Service.

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **Does the Public Service have the necessary skills to manage e-records?**

Name of respondent	
Department	
Designation	
Number of years in the current position	

1.1 Records Management Awareness

**[E-records Readiness Tool: Components: (a) Awareness of records management
(b) Responsibilities for records management]**

1.1.1 Can you please explain the functions of this Office?

1.1.2 What is your understanding of the term records?

1.1.3 Which records do you create in the course of your work?

1.1.4 Which records do you create using the computer?

- 1.1.5 Describe any guidelines, instructions or manuals, which assign you responsibilities for specific records functions
[Request for copy of such guidelines/manuals if not already requested for from other respondents]
- 1.1.6 Who has overall responsibility for the management of Public Service records including electronic records?
- 1.1.7 In the Ministry /Department what are the highest posts that “oversees” records management?
- 1.1.8 Which person or office has the responsibility for the day to day management of records including electronic within the Ministry/ Department?
- 1.1.9 Describe your working relationship with this office or person.

1.2 Records keeping Procedures

[E-records readiness Tool: Component: Tools and procedures for records management]

- 1.2.1 How do you organise the records, which you receive and/or create so that you can find and retrieve them easily?

Request to physically check for the following:

- a) Files and when last documents were filed in them**
- b) Use of classification scheme, standardised or not**

- 1.2.2. How do you keep track of a record removed from storage?

[Establish frequency of requests for records by action officers. Request to be shown record of a record out of storage, file movement card etc.]

- 1.2.3 Explain circumstances, if any of records, which could not be located or were damaged.

[Establish frequency of such cases and any factors due to the fact that records are kept by officers in their offices or on computer]

1.2.4 Explain cases if any of delayed or wrong decision or complaints from clients as a result of loss or absence of records.

1.2.5 In cases where records cannot be found, how are you able to prove that they exist?

[Establish existence of registers for recording incoming and outgoing documents]

1.2.6 **[In cases where records are kept in offices and computer]** Do you receive requests from officers of records kept by other officers? Please explain.

[Establish frequency of such requests and accessibility of these records]

1.2.7 How do you deal with records, which are not being used or no longer required?

[Establish records transfer procedures to storerooms and archives. Request to see any documentation of transfers. Establish if records can be identified and retrieved. Request to see storerooms]

1.2.8 What guides you in determining, which records/files to destroy or keep?

[Establish existence of retention schedules and if any request for a copy and establish how up to date they are]

1.2.9 How do you destroy records/files?

1.3 Safety, Security and Confidentiality of Records

1.3.1 Can you explain how you ensure the safety and security of the records?

[Establish the following:

- **Existence of an institutional system to safeguard records**
- **Staff being held responsible for loss or damage of records in their care**
- **Security for records in store rooms**

- **Damage and protection from natural and biological factors**
- **Protection against unauthorised access, alteration or disposal].**

1.3.2 In the event of a fire, flood or other disasters, can you explain how the records would be safeguarded?

[Establish presence of fire precaution measures, fire extinguishers, any history of fire, and disaster preparedness plan]

1.4 Compliance and monitoring

1.4.1 Who supervises you and how?

1.4.2 Do you follow any set guidelines/instructions in carrying out your work?

[Request for copy of guidelines]

1.4.3 Who checks to see if you are following these guidelines?

[Establish if audit is by internal or external body and how often carried out. Request for any audit reports]

1.5. Resources, facilities and maintenance

[E-records readiness Tool: Component: Resources for records management]

1.5.1 What is required for the Ministry/Department or yourself in particular to manage records effectively?

[Establish adequacy of records storage facilities including for back-up disks and tapes, equipment, and materials to meet existing and future needs. Request to see facilities].

1.5.2 Explain delays if any in getting records requested to the action officers?

[Establish the causes including staff shortage]

PART 2**Issue to be investigated**

2. Enabling legal and regulatory environment for the management of e-records in the Public Service of Namibia.

[E-Records Readiness Tool: Components: (a) Legal mandate for the government wide management of public records (b) Policies for records management (c) government wide e-records management standards and guidelines (d) compliance with records management policies]

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **What are the legislation principles and policies that guide the management and preservation of records in the Public Service of Namibia and what gaps exist, which need to be closed, for these to adequately address electronic records management?**
- **What is the appropriate model, and standards for the management of records in the Namibian Public Service?**

2.1 What legislation regulates the work that you do?

[Establish if it requires certain types of records to be created and maintained]

2.3 What guides you in the management of records i.e. both paper records and electronic records?

[Establish the following:

- **Is there a procedures manual for the management of records?**
- **Does it include electronic records?**
- **Is it continuously updated?**
- **When was the last issue updated?**

Request for copies of any policies, guidelines or procedures manuals and check if they follow any recognised records management standards]

PART 3**Issue to be investigated****3. Training and skills for the management of electronic records**

[E-records readiness Tool: Component: Training for records management personnel]

Research questions

- **What is the status of records management in the Public Service in Namibia?**
- **Is Namibia e-records ready to support e-government?**
- **Does the Public Service of Namibia have the necessary skills to manage e-records?**

3.1 Is there an induction programme for new employees joining the Ministry/Department? **[if yes]** Did you go through that that induction? **[if yes]** Did it include records keeping practices in the Ministry/Department?

3.2 What training have you received in records keeping?

[Establish professional training – receipt of certificate, training on use of manuals etc. including electronic records, provider of training and duration]

3.2 What is the career path for records staff in the organisation?

[Establish staff turnover, staff morale]

Last Question: Are there any comments you would like to make regarding records management in the organisation and what can be done to improve the situation?

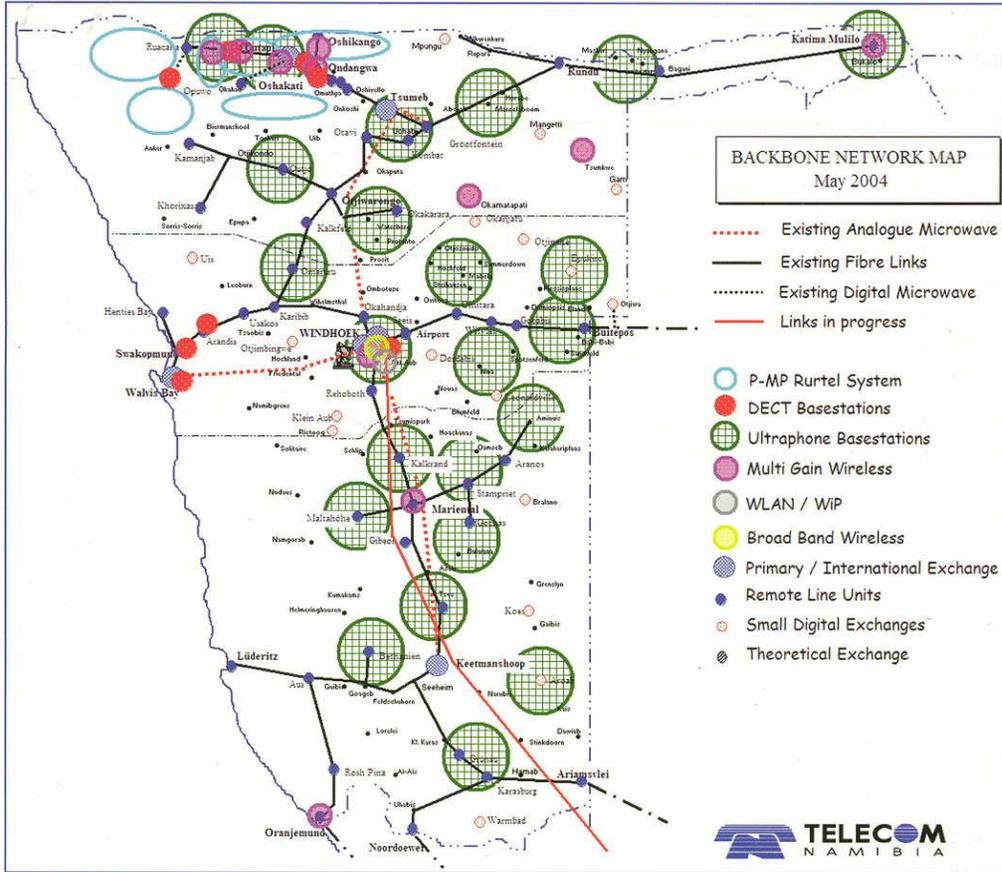
This is all I had to ask you. Is there anything you would like to ask me or comment about this interview? Thank you for your time and contribution to this research.

End of Interview

APPENDIX J
ERMS Requirements Checklist

Observation checklist for analysing electronic records management systems (ERMS) (An analysis to be carried out for each ERMS running or in the process of being acquired)	
Ministry/Department	
Name of system	
Other pertinent details	
Requirement	Observation
1. Capturing records	
2. Implementing file plans	
3. Controls and security	
4. Retention and disposal	
5. Transfer export and destruction	
6. Searching, retrieval and rendering	
7. Administrative functions	
8. Changing, deleting and redacting records	
9. Support for use of metadata	
10. Management of non electronic records/hybrid system management	
11. Document management	
12. Workflow	
13. Electronic signatures	
14. Encryption	
15. Electronic watermarks	
16. Interoperability and openness	
17. Legislative and regulatory requirements	
18. Long-term preservation and technology obsolescence	

APPENDIX K Backbone Network Map of Namibia



*Backbone Network Map of Namibia as at May 2004 – Source: Telecom Namibia
Reproduced with permission*

APPENDIX L MTC Mobile Cell phone Coverage

