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**FACULTY OF ARTS**

**ARCHAEOLOGY, CULTURAL HERITAGE AND MUSEUM STUDIES**

***AN INTERGRATED APPROACH IN RECORDS MANAGEMENT AT  
SABLE CHEMICAL INDUSTRY (2008-2016).***

**BY**

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CULTURAL HERITAGE AND MUSEUM STUDIES***

**MAY 2017**

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## **Dedications**

This work is dedicated to all my family members and friends.

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## Abstract

*The study presents an integrated approach in records management for Sable chemical Industry during the period of 2008 to 2016. An integrated approach is a system used in records management in which the combination of paper based records and electronic records work hand in hand in records keeping. The study however established that there is seemingly misplacement as and missing of files in the presents of an integrated approach of electronic and paper records. The study therefore intends to evaluate the effectiveness of the implemented hybrid system within the organization. In order for the study to address the main aim, it looks on how the hybrid system has been implemented at the organization. The research also ascertains the standard and procedures that have been used by the organization. It also makes analysis of staff competence in the implemented hybrid system. The study also makes an identification of challenges that the organization is facing in the implementation of the system. The study is justifiable as it stands as a guide and key informant to future researches. Using interviews and observations, data was collected from three departments of the organization which are the Records Section, the Human resource Department as well as the Information Technology department. A total number of 9 respondents was used which include departmental supervisors, IT experts and records Officers. The main findings of the study were also been presented in the study. The study recommends the staff to be trained in records management practices, to have policies, standards and procedures which guide management of both paper and electronic records. The study also recommends the organization to seek funds from well-wishers and donors to improve management system of records.*

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## Definition of Terms

**Records:** recorded information that is produced or created, received in contact or after completion of an institution or individual activity (ICA, 1999).

**Hybrid system:** a set of related electronic and physical records stored partly in an electronic file within the Electronic Records Management System and partly in a related paper file outside the Electronic Records Management System (MoReq, 2001)

**Records management:** the capturing and maintaining of accurate, complete reliable and usable documentation of activities of an organisation in order to meet legal, evidential, accountability and social/cultural requirements (Millar, 1999)

**Records management systems:** It is a manual or automated information system having the necessary functionality that enables it to carry out and support the various records management processes such as collection, organization and classification of records to facilitate their retrieval, distribution, use, disposal or preservation

(Records Management Practise, 2011).

**Electronic records:** Documents that can be stored in a digital format and a large volume of text-based records can be maintained in a relatively small amount of storage space

( Mazikana, 1999).

**Paper records:** These are hardcopy records that are managed manually ( Millar and Roper, 1999).

### **List of Acronyms**

ICA.....	International Council on Archives
I SO.....	International Standards Organization
HR .....	Human Resources
IT.....	Information Technology
ESARBICA.....	East and Southern Africa Regional Branch of International Council on Archives

# CHAPTER 1

## INTRODUCTION

### 1.0 Introduction

Records are created on daily basis in almost every organisation in order to achieve its set goals of the organisation. Organisations should ensure that any record created can be used to support evidence of its transactions whenever needed. Records Management Practices (2011) asserted that by being able to manage records well, concrete decisions are made based on evidence and as well enhances operational efficiency and effectiveness. Records management can thereby be regarded as a very important aspect that needs to be considered seriously. The International Standards Organization (ISO) 15489 (2001) indicated that records management is responsible for the maintenance of records from the time of creation up until the time records are disposed. Records management is very important discipline to organisations that create records. Forms of records include audio visuals, microfilms, sound recording, paper and electronic records just to mention a few. These forms of records have got various ways in which they are expected to be managed in order to enhance a sound records management practice in an organisation.

In records management there can be found a number of systems adopted by organisation that include paper records management system, electronic records management system and a combined effort of these two systems. The integrated approach in records management system is referred as a hybrid record management system of paper and electronic records. The successful implementation of any records management system however depends on the process for its initiation, a supportive technological environment as well as the level of knowledge needed to manage such technologies (Azameti and Adjei, 2013). The International Records Management Trust (2004) asserted that it is important to have objective means of assessing the strengths and weaknesses of records systems and determining whether they are capable of capturing, maintaining and providing access to records over time.

## 1.1 Background of the study

The history for the creation of records can be traced from as far as civilization (Pemberton, 1998). Duranti (1993:30) indicated that most ancient forms of memory were oral and the most ancient keepers of records were the remembrances that individuals entrusted with the task of memorizing rules and transmitting them by recitation to their juniors. Activities that necessitated records functions represented in the early records are those of commerce and clay tablets records containing literary and religious texts were also found during that time (Pemberton, 1993). Records management originated in ancient Mesopotamia where priests kept detailed records of commercial transactions that were being done in their land (Thomas, Schubert and Lee 1983:59). The last fifty years from this period, records management has emerged as a field that uses techniques from management and the information sciences to address ongoing problems with managing organizational records (Pemberton, 1998).

In the 19<sup>th</sup> century during the French Revolution countries in Europe began to acknowledge their responsibility of preserving archives and to make them accessible to citizens. As the population increased and geographical boundaries expanded, the scope of business activities increased. The population became industrialized and records were increasing in their volumes. Records continuously increased in volume and repositories for their safe keeping were established. Within these repositories records were preserved and arranged in order to facilitate their access and retrieval (Abbot 1999:2). In this period that's where records started to be managed in a way that was systematic after the National Assembly in France established what was to become the first national archives repository in any country (Hare and McLeod 1997:1). In 1934, Theodore Schellenberg of the National Archives of the USA invented the life cycle concept (Shepherd and Yeo 2003:5). This concept provided the cornerstone on which modern records management is built. This is also relevant to the current study which intended to understand effectiveness of implementing an integrated approach of paper and electronic records in the context of systematic records management. The efforts to manage records at the U.S National Archives in the 1930s lay the foundation for the emergence of records management as a discipline during World War Two. The rate of records creation increased in this period and it is also the time where American businesses consumed more business paper than in any previous decade (Pemberton, 1998). The huge logistical operations of the Second World War (WWII) were responsible for an explosion of



paperwork, in both the private and public sectors. This resulted in an increased need for individuals who could establish the requirements and devise the policies, strategies and systems so that information could be recorded and stored and made available when it was needed in an appropriate format.

The main reason that prompted the introduction of technology was the introduction of industrial revolution where businesses were increasingly put forth. Electronic storage facilities in records management firms were now used. It was also noted that the management of records in paper based format has got its own advantages and disadvantages, so as managing records in an electronic format. Burrington- Brown and Hughes (2003) argued that electronic records can complement paper based records by providing catalogue for both the access electronic record and the location of the same record on hard copy. Therefore these two forms of managing records were integrated so that they would complement each other on their flaws thereby forming a hybrid system of managing records. Widespread use of the computer for record keeping by governments worldwide developed in the 1950s (Kemoni and Wamukoya 2000). The proliferation of electronic records presents national archives around the globe with a unique opportunity for growth and development. Computers offered speed, precision, diversity, flexibility and a rich and comprehensive documentation of process, and it is no wonder that they have been so quickly embraced around the world as a critical information management and communication tool. International Records Management Trust (1999) also noted that even in highly computerized offices, paper copies and correspondence will still be printed from the electronic record. Therefore the integration of paper and electronic records management systems would somehow improve the management of records. Howard (2002) asserted that hybrid records management systems give a single point of access and a single index facilitating cross-media information retrieval. This is powerful for data protection and freedom of information enquiries, and it is vital for knowledge management.

In Europe, Australia and United Kingdom have successfully made use of the hybrid system for management of their records. At the Westminster City Council the hybrid system has been observed a satisfactory interim measure (Howard, 2002). However in the context of Africa, the archival administration was introduced as a result of colonialism after the partitioning of Africa. Records of no use were greatly ignored since no one was trained to look after records. It can therefore be noted that the system of managing records in a hybrid system has been adopted in Zimbabwe at Sable Chemicals. Sable chemical is a private

company located 16 kilometers away from kwekwe. It is one of the largest companies enjoying the monopoly in ammonium nitrate fertilizer. All the company operations are centralized at the factory site including the department of records management. It is therefore against this background that the researcher intended to evaluate the effectiveness of implemented hybrid records management systems at Sable chemicals.

## **1.2 Statement of the problem**

Records Management is often introduced in public and private organisations and it is smooth running when it is performing adequately, thus fulfilling its intended objectives. One such records management system that has been adopted in Zimbabwe from developed countries is the hybrid system. The hybrid system meet satisfactory results prior to its wide spread implementation in well developed countries. However, there is seemingly misplacement of records at Sables which may cause one to question on the performance of the system. In the context of developing countries such as Zimbabwe, little has been done in terms of making an investigation on the effectiveness of implementing the hybrid system. Most concentration was put on what the functionalities of a records management system should be, rather than on how they should be implemented practically.

## **1.3 Aim of the study**

To investigate the effectiveness of implementing a hybrid system in the management of records at Sable Chemical Industry.

### **1.3.1 Objectives of the study**

The research seeks to achieve the following objectives:

- To investigate how hybrid system is implemented at Sable Chemicals.
- To ascertain the standards and procedures used in the hybrid system.
- To analyse the level of staff competency in the implementation of hybrid system at Sables.

- To identify challenges faced in management of records within a hybrid system at Sable Chemicals.

### **1.3.2 Research Questions**

1. How is the hybrid system being implemented at Sable Chemicals?
2. Are there any standards and procedures used in the hybrid system?
3. What is the level of staff competency in the implementation of hybrid system at Sable Chemicals?
4. What are the challenges faced in the management of records within hybrid system at Sable Chemicals?

### **1.4 Justification of the study**

The study at hand is very significant and useful to the organization in that it would stand as a guide on how best a hybrid system is implemented. The research would also be important to other organizations on the problems that can be faced by implementing hybrid system. The research would identify possible solutions and recommendations for the challenges which would provide opportunity for the organization to work on the challenges. Again the study would also stand as guiding literature for other future researchers that would want carry similar researches. The study would therefore highlight the area that needs to be attended in future. This research is also important to the working staff in that it would reveal areas that require their attention in the management of hybrid records. The research is also important to the researcher in that she would also acquire in depth knowledge on how best the hybrid system can be implemented.

### **1.5 Assumptions of the study**

It is assumed that at the organisation there are experts who are well versed with the way the hybrid system is implemented. The researcher also assumed that the staff at the organisation has acquired a certain level of knowledge in relation to the current system that they are using. It has also been assumed by the researcher that there are specific standards and procedures

being followed at the organisation that in co-operate the integrated approach of electronic and paper records system. The researcher's assumption is that there are some challenges being faced by the organisation in the implementation of the hybrid system.

### **1.6 Scope of the study**

The study focused on how integrated records management systems were implemented. The research would make assessments of the system starting from the creation of records up to their disposition. It would also look at the merits and demerits that can be brought by integrating these two management systems. The researcher would also analyse the level of knowledge that the workers have concerning the implemented hybrid system. The study would also identify the problems faced in the management of records in a hybrid system. The way records are being stored and maintained, issues of access and disposal of both electronic and paper would be addressed in this study. However the study would not attempt to look on technicality of software designed in records management.

### **1.7 Chapter Summary**

This chapter has mainly focused at introducing the research that is currently undertaken. The chapter highlighted records management as an important discipline especially to organisations that keep records. A brief history of how record management came into being was also discussed. The aim of the study was to investigate the effectiveness of implementing the hybrid system at Sable Chemicals. It has also been highlighted that there is seemingly misplacement of records at Sable chemicals whilst they are using a hybrid system of managing records. The intended objectives of the study were to investigate how the hybrid system is implemented and the available standards and procedures being followed. The study also took a look on staff training and some of the challenges being faced in the implementation of hybrid system. The importance of this research is that it would reveal areas in which great attention is required and again it would stand as a guide to the organisation in regards to the implemented hybrid system. In this chapter, the researcher also assumed that the organisation under investigation has got staff that is knowledgeable enough in the implementation of a hybrid system.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

It is essential to acknowledge that quite a number of scholars did write about the integration of electronic and paper records to form a hybrid system. It is worth mentioning that the literature to be reviewed in this chapter will focus on the different views of scholars considering the expected requirements of integrated management system. The chapter will focus on providing information of existed literature starting from creation to disposition of records that are managed in a hybrid environment. The stipulated standards and procedures to be followed in records management will also be reviewed in this chapter. This will give clarity to what International Standards Organization has put forward in the management of electronic and paper records. Literature related to the level of training and knowledge in managing paper and electronic records will also be discussed in this chapter. The chapter focuses on the literature in regards to the challenges that are being experienced within the implemented hybrid system. The theoretical framework in which this study relies on has also been provided in this chapter.

#### **2.1 The Records Continuum Model**

Bantin (2002) noted that the records continuum model started in Canada and was later developed in Australia. It was around the 1980s and 1990s in which the records continuum model was started (Shepherd and Yeo 2003:9). Based on the continuum model, archivists and records managers need to be involved together with information systems designers in the creation of records keeping systems. Flynn (2001) indicated that the records continuum has got four phases which are creation or receipt of information in the form of records, classification of the records or their information in some logical system, maintenance and use of the records, and their disposition through destruction or transfer to archives. The main emphasis of the records continuum model is the participatory nature of the design phase whereby archivists or records managers and systems designers participate in the designing of the system and the involvement of both the archivists and records managers in the continuum of records keeping. The model is also based on the realization that records continue to live

after the non-current phase of the records life-cycle. In support of the participatory approach, one could also argue that without the participation of archivists and records managers in the system design stage, records may disappear in the subsystems due to a lack of records management and knowledge on the part of corporate information systems designers. Furthermore, if records management professionals are not involved in the design phase, some records might not be captured in the system. The records continuum was relevant to the present study because the model is applicable in the management of both paper and electronic records. Kemoni (2008:5) observed that the continuum model is widely accepted for managing records both in paper and electronic form. The same scenario is also being investigated on the present study in regards to the effectiveness of implemented hybrid system at Sable Chemicals. In investigating the effectiveness of hybrid records system, the research also looked on the maintenance and use of records through the storage facilities. The model is relevant to the study in the sense that it appreciates records starting from their creation up to disposal. The applicability of the continuum model considering all its phases in the management of paper and electronic records contributed to the model's adoption as a theoretical framework for this study.

## **2.2 Hybrid records management system**

### **2.2.1 Creation of Records**

Scholars of records management theory and practice agreed that, in principle, organisations should create and capture records for every activity that involves more than one party and that they should identify and record every process that generates records (Bearman 1994:300; Reed 1997:222; Shepherd & Yeo 2003:102). Therefore, records must be authentic, complete and usable. For example, even information communication technology (ICT) systems must be able to generate or capture the 'metadata' that record the contents, contexts and structures of records within the business processes. The situation seems to be the same in the public sector in Botswana. Ramokate and Moatlhodi (2010:74) conducted a micro-appraisal of public records. It showed that most records in state departments were 'chaotic and un-coordinated' and 'among the other problems there was poor classification of records, as records were created and captured haphazardly without being informed by analysis of business process or functions'. In another study at the Gaborone City Council (GCC), Tshotlo and

Mnjama (2010:23) revealed that, although it maintained a register or index in the Records Management Unit, in terms of 'physical arrangement, a larger percentage indicated their records were not arranged in any logical manner' and that they were 'in the process of developing a comprehensive file classification system'. Horsman (2000) indicated that the electronic records management system should capture and maintain metadata relating to physical records to facilitate hybrid records management functionality. This requires the creation of markers that are metadata profiles of records physically held outside the business system. Markers contain metadata required by the business system to locate and manage physical records and allocate system management controls to them. Consequently, the functional requirements include requirements for hybrid system management to include functionality for managing records and files in both electronic and physical format.

Mnjama and Wamukonya (2004) were of the view that there should be a gradual integration of the manual paper system with the computerised system by focusing on specific products to support the business process. This systematic approach has not been documented within the institutions with statutory responsibility for records within the East and Southern Africa region. The International Records Management Trust (2004) however argued that success or failure of records management practices were usually driven by success or failure to understand the nexus of paper-based and electronic systems. The study has as well intended to understand the way in which an integrated approach of electronic and paper records enhances effectiveness of records management. This would be through looking at how records are created in a hybrid environment.

### **2.2.2 Classification system**

International Standards Organisations 15489-1(2001) indicated that the timely and accurate retrieval of records depends largely on how well organised and classified the records are. This would mean that the organisations have to determine their level of classification control they require in relation to their business activities. The idea presented by the ISO 15489-1(2001) also concur with Shepherd and Yeo (2003) who also pointed out that classification schemes are based on an analysis of functions processes and activities and document the structure of a records management system. This would mean that organisations should be aware of the procedure of filing paper and electronic records in a hybrid environment. Howard (2002) and the National Archives of Malaysia (2011) are of the same view in relation to classification of both paper and electronic records in an integrated approach.

Howard (2002) indicated that hybrid records should register physical files under the same classification scheme as the electronic records, and provide for the management of hybrid files of electronic and physical records. The National Archive of Malaysia (2011) indicated that hybrid system require an electronic component to bind them to other electronic objects. An electronic records management system creates and maintains markers to create and maintain the linkages between the physical and electronic files. The marker will identify the title and unique identifier of the physical record, outline the record's content and provide location information for retrieval. MoReq (2001) also pinpointed to the same idea such as those raised by Horsman (2002) and National Archives of Malaysia (2011).

However the earliest studies in Kenya by Kemon (2007) and Nengomasha (2009) in Namibia indicated the failure of the studied institutions to have proper classification systems for the management of paper and electronic records. Kemoni (2007:296) also found that the majority of the organisation would make use of handwritten classification as most of they were not well versed with the classification of electronic records. It is also amongst the intentions of the research to take a look on how classification of hybrid records is being done at Sable Chemicals. This would enable the researcher to make comparisons with what is currently being done at the organisation.

### **2.2.3 Storage of Records**

According to ISO 15489-1(2001) records irrespective of their formats, require high quality storage and handling. Organisations should also store records in media that ensure their usability, reliability, authenticity and preservation for as long as users need them. The dominance of paper and electronic record is similar to the findings of Moloji (2006:58) and Keakopa (2006:218) for the public sector in Botswana. Keakopa (2006:218) confirmed that, in all government agencies, there were records in both paper and electronic formats with 'the bulk of the records usually in paper format'. Keakopa (2006:218) states that although 'paper was a common medium of transmission and storage of information, electronic records were slowly becoming more common'. In other words it means storage facilities for both paper and electronic records should be available for proper management of all formats.

Nengomasha (2009:167) found that there were prevailing cases of records being lost because of misfiling by the records staff, wrong reference numbers that action officers used and



failure to manage the classification in an electronic format. The same has also been indicated by Moloi (2006:58) who revealed that in Botswana they encountered recordkeeping problems, amongst them being 'lost or missing files due to poor storage of records. Saffady (2003) supported the fact that in hybrid concept, strength of one document management strategy compliments the limitations of the other. By taking advantage of the strength of each document management strategy a system that meet specific life cycle requirements in the most economical manner can be designed. Electronic formats do not render paper obsolete, but they certainly do reduce needed paper significantly. A hybrid approach that relies heavily on tapping into the advantages of paper and electronic formats may offer the best records management solution in a cost effective manner (Saffady, 2003). Taking for instance, an electronic record may be used to enhance access, and use paper for preservation purposes. Each of these options has benefits and drawbacks that should be evaluated carefully before an agency commits its resources. The reviewed literature is linked to the current research in that there is need to make assessment on how records are being stored at the organisation. This would enable one to give a conclusion as to whether the integrated approach of paper and electronic records has been implemented rightfully or not.

#### **2.2.4 Retrieval and Access of Records**

Effective retrieval systems that reflect the different levels of aggregation and formats are necessary. In paper systems, access is to a specific item in the file (or to the whole file). In the electronic environment, users require metadata at all levels (Shepherd & Yeo 2003:217). Electronic records systems should include and apply controls for access to ensure that the integrity of records remains uncompromised. ISO (15489) also requires that organisations record the movement of records to ensure that users can locate the records whenever they need them. This study reviewed that, there is need for easy retrieval and access of both paper and electronic records when operating in an integrated approach. This can also be relevant to the study which intended to see the way retrieval and access of hybrid records at Sables are being implemented so as to investigate its effectiveness.

### **2.2.5 Disposition of Records**

In terms of Section 8.3 of ISO 15489-1 (2001), records systems should be able to facilitate and implement decisions about retaining or disposing of records. Therefore, the effective management of records requires that there are procedures for the timely disposal of records that organisations no longer need to support current business or those that they do not need to retain for legacy purpose. The IRMT (2003:5) showed that, amongst other challenges, there were no records retention and disposal policies in the ESARBICA region. Studies by Ngulube and Tafor (2006:62) confirmed this trend in Kenya, Namibia, South Africa, Tanzania and Zimbabwe. Other studies that Mutiti (2001), Ngulube (2004), Wamukoya and Mutula (2005) conducted in the ESARBICA, that Kemoni (2007:317) conducted in Kenya and that Nengomasha (2009) conducted in Namibia, all confirm the absence of records retention and disposal policies. The research also needs to assess if the organisation is following any disposal schedule for records that are no longer of use to them. It would also enable the researcher to investigate the effectiveness of implementing an integrated approach at the organisation.

### **2.3 Importance of implementation the hybrid system**

Ambrose and Paine (2000) asserted that the integration of electronic and paper records promotes systematic and well planned access as well as control over its collections and information. However on the other hand they alluded to the fact that having an integrated approach at hand may necessarily meant that it will solve all the problems encountered in using the system. In one way or the other it is costly in terms of maintenance and operations. Burrington-Brown and Hughes (2003) are of the view that electronic records management systems can complement the manual system by providing electronic catalogue on the internet. They however also argued that in the case of developing countries, they can be limited in terms of their resources. Therefore it may be difficult for the expected audience to receive their services efficiently. Horsman (2002) indicated that hybrid records management system reduces the duplication of effort to ensure that consistent classification, security, access controls, and retention policies are applied across the board. It also gives a single point of access, and a single index, facilitating cross-media information retrieval. This is powerful

for Data Protection and Freedom of Information enquiries, and it is vital for knowledge management.

The International Records Management Trust (2004) alluded to the fact that the level of integration between paper-based systems and electronic systems should therefore be assessed adequately in an organisation as it is critical to understanding. Keakopa (2006) concurs and alludes to examples of the Department of Public Enterprise (DPE) in South Africa that have implemented such a hybrid system. Keakopa (2006) however, cautions that such “kind of system can only be successful if alliances between professionals in the two environments are formed since IT experts will be needed by records managers to help in the design and maintenance of the new systems”. More recent studies in South Africa found the same principle relevant in a hybrid environment (Katuu, 2015) and (Ngoepe, 2013). The mentioned scholarly views will however help the researcher in seeing whether or not the integration of electronic and paper records at Sable Chemicals is largely beneficial.

## **2.4 Standard and procedures for integrating records management in hybrid system**

### **2.4.1 Creation**

The ISO 15489-1 (2001) indicated that when creating a record in a hybrid environment, it is supposed to be linked to other records. The techniques for the record creation include classification and indexing, arrangement in logical structure and sequence, registration and systems which profile and template the actions. According to the ISO 15489-1(2001) the classification and indexing required in creation should allow appropriate linking, grouping, naming, retrieval and identification of a record. It has also been indicated that whether the file is electronic or physical, the created record is supposed to be created in logical and sequence which facilitate subsequent use and reference. Registration of that record should also be considered which provides evidence of the existence of records in the records system. Systems which profile or template the actions undertaken in doing business which provides metadata describing the business context, evidence of where a record is located and identify who accessed that record ISO 15489-1 (2001). Archive and Records Management Policy (2011) also added on that, records that when creating records it is vital to maintain completeness, accurateness and capturing of every record into the recordkeeping system.

### **2.4.2 Classification**

The International Council on Archives (2011) pinpointed that each record shall be assigned a unique reference number arranged under a consistent and logical classification scheme for easy retrieval and systematic disposal according to the records retention and disposal schedules drawn. McKenzie (2003) asserted that in records classification there is introduction of an appropriate registration, classification and indexing scheme for both electronic and physical records. Cornwell Management Consultants (2004) also stressed that MoReq specifies the need of classification on disposition schedules and other related issues in both electronic and paper-based records. ISO 15489-1(2001) concurs with the views mentioned above however it stressed on that the shorthand method of referencing records by means other than the title are commonly used. The allocation of numbers or codes is usually undertaken for an aggregation of records. The above mentioned fact can also help the current research in trying to assess the situation on the management system used to manage the hybrid system at Sables.

### **2.4.3 Access and retrieval**

Archives and Records Management Policy (2011) indicated that the location and movement of records should be controlled and updated to ensure that the records can be easily traced and retrieved when needed. Therefore for easy access and retrieval to happen, the Archives and Records Management Policy (2011) asserted that for any recordkeeping system, whether manual or electronic, must include rules for classification, titling, security and retention and disposal requirements. These requirements should be included at the design stage of any such systems. ISO 15489-1 (2001) added on access and retrieval that records should be released to the people who are authorised to see them.

### **2.4.4 Storage**

According to ISO 15489-1 (2001) there is supposed to be appropriate environment and media to be considered when designing the records system. Storage is essential for managing records because it ensures that records are secure, intact and accessible for as long as users need them (Shepherd & Yeo 2003:173). ISO 15489-1 (2001) states that records require storage conditions and handling processes that take into account their physical and chemical properties. Records, irrespective of their formats, require high quality storage and handling. Organisations should also store records in media that ensure their usability, reliability, authenticity and preservation for as long as users need them. Some of these findings concur with those of Kemoni (2007:309), who found that the most common storage equipment in the public sector in Kenya was steel cabinets and that there were problems, with the inadequacy of storage equipment. Other studies, like those of Wamukoya and Mutula (2005:75) in the ESARBICA and Nengomasha (2009:209) in Namibia, confirm the pattern.

#### **2.4.5 Disposition of records**

Records system should be capable for facilitating and implementing decisions on the retention or disposition of records ISO 15489-1 (2001). It should be possible for the decisions to be made at any time in the existence of records, including during the design stage of records systems. According to the ISO15489-1 (2001) for physical records, destruction should always be authorised. Records pertaining to pending or actual litigation or investigation should not be destroyed for both electronic and physical records. Records destruction should be done in a way that preserves the confidentiality of any information they contain. All copies of records that are authorised for destruction should be completely destroyed.

There is need to make a clear policy on the process and conditions for selection of an appropriate record management system, maintenance of the record management system, maintaining a hybrid system, records disposal plan in the existing record management system and Security regulations for the record management system in place. Lappin (2010) indicated that very few researches conducted in the field of records management concentrated on the management of hybrid records in an era of digital transition. It has been observed that focus was either on the paper-based office or on its digital counterpart. Even if great efforts have been made in terms of standardization, records managers have to deal with multiple standards and best practices that seem difficult to apply to a mix of paper-based and electronic records.

## **2.5 Training and relevant skills**

### **2.5.1 Staff Training**

Studies that the IRMT (2003:5) conducted in the ESARBICA region showed a lack of core competencies in managing records. Nengomasha (2009:178) also cited the lack of training as one of the factors that led to poor recordkeeping in the public service in Namibia, where only 20% of the ten heads of the recordkeeping functions reported that they had attended some records management training or awareness course. Mazikana (1999) also supports the idea that records staff are not well trained and of low calibre. He goes further indicating that there are only a few countries with records training schools. In some cases, such as Zimbabwe, a vibrant training school has been closed temporarily. The morale of registry staff is reported to be quite low in most countries and they operate without recognition and some of the basic necessities. Africa lacks adequate training facilities for professional and technical staff. However on the other hand, Keakopa (2006:178), asserted that Botswana had done quite well in training a records management cadre although a challenge remained in terms of training in electronic records and generally inadequate staffing in the public sector.

On the survey conducted by Kalusopa (2011) in Botswana respondents indicated that most of the staff lack relevant training and a few had whilst others had low awareness of electronic records management. Keakopa (2006) also found this very prevalent in the public sector in Botswana where there was a preference to deal more with paper records separately from electronic records. Keakopa (2006) cited the lack of skills and knowledge in electronic records and cautioned against the over reliance on the use of paper-based system by stating that “although personal knowledge of the physical layout of a manual records unit may lead to quick retrievals, this is greatly impaired where storage covers a wide expanse of space, well designed computer systems will, however, retrieve information more quickly”. The researcher in this study is therefore intending to take a look on training that they have in regards to the way hybrid records management system is operated.

### **2.5.2 Knowledge on managing electronic and paper records**

Kalusopa (2011) observed that labour organisations in Botswana tend to organise electronic and paper record separately and systems seemed to operate in a disparate manner and they appeared content with this. There was clearly de-linkage between the management of paper-based and electronic records management in relation to their integrated approach. These issues were not generally taken into account when planning new information systems. As the study has established, the major reason for this was the lack of depth in knowledge and skill in records management Kalusopa (2011). As earlier observed, the need for staffing and professional training in records management emerged as one of the critical areas in understanding the depth and breadth of electronic records management. The International Records Management Trust (2004) concurs with the findings of Kalusopa (2011) where he eluded to that success or failure to understand the nexus of paper-based and electronic systems was usually driven by success or failure of electronic records management. by The International Records Management Trust (2004) cited that lessons learned in Ghana, Tanzania and Uganda had conclusively shown that automated systems cannot simply be overlaid on dysfunctional or chaotic paper-based

Gumbochuma (2009) however indicated that the staff lacked adequate manpower development courses to upgrade their knowledge in relation to the advancement of technology. He also noted that quiet a larger number of staff did not have a formal training therefore they would acquire knowledge from refresher courses which they do once in a year. Akotia (2000) further noted that the Ministry of Uganda had no capacity for requirements for managing electronic records; and accurately documented policies, standard operating procedures and formal methodologies for managing e-records. The basic elements of an electronic records programme including: staff who understood the functional requirements for record keeping and had the competencies and skills required to manage electronic information delivery systems. The study also wants to take a look on the knowledge attained by the staff particularly for the management of records in the implemented integrated approach.

## **2.6 Challenges faced in the management of records within a hybrid system**

Mnjama (2004) examined some of the issues that confronted public and private organizations in their efforts to manage records and information. He suggested that to a large extent many

of these problems were due to lack of policies and procedures, inadequate storage facilities and lack of well trained and competent staff. Akotia (2000) and Mutiti (2001) noted that in the Ministry of Finance in Uganda on the management of financial records the staff had no capacity for managing the basic elements of an electronic records programme. The staff could not understand the functional requirements for record keeping and had the competencies and skills required to manage electronic information delivery systems, legal and administrative requirements for managing electronic records and accurately documented policies, standard operating procedures and formal methodologies for managing e-records. The reviewed literature above indicated that the management of records electronically is lagging behind due to lack of training in management of electronic record. Standards and procedures as well as challenges being faced are also important aspects that need to be evaluated at Sables which is using hybrid management system.

Mazikana (2001) noted that first priority in the allocation resources is not given to records management departments which also affect how integrated management system performs. In many countries the larger part of the budget is consumed by staff salaries, leaving very little for recurrent expenditure. Cases of organisations in Botswana where funds are insufficient even to allow for upgrading of machines and purchasing of file racks have been prevailing. The research conducted by above mentioned scholars indicated that most problems are emanating from failure of the staff members to comprehend the functioning of electronic records which also make up the integrated approach to be more complicated to them. The current study would also point out challenges being experienced which are similar to what existing literature has already eluded to.

## **2.7 Chapter Summary**

The chapter focused on reviewing literature in relation to the implementation of the integrated approach of electronic and paper records. The Scholarly views indicated that for a system to be referred to as hybrid, electronic records system must be able to capture and maintain metadata relating to physical records. This means that there should be creation of markers that are metadata profiles of records physically held outside. Issues of training of the staff have also been looked in the literature review. Most emphasis on training that was



produced by the reviewed literature indicated that there is lack of training and in depth knowledge in the management of records. This becomes a challenge in the management of integrated approach since the system is made up of the combination of paper and electronic records. In terms of standard and procedures for integrating records management system, the ISO 15489-1 pointed out the creation, classification, retrieval and access, storage as well as the disposition schedule. The mentioned aspects were clearly stipulated in the chapter considering the way they are expected to function in records management. It has however been indicated that for every implemented system of management, policies, procedures and standards must be well documented and distributed to all participants. The unavailability of resources that maintain the implementation of hybrid records system has also been looked by scholars as one of the challenges being faced in the management of records within a hybrid system. Gaps that the researcher intended to fill were discussed in relation to the objectives of the study.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter focuses on the methodology applied in conducting the current study. It outlines the research design employed in this research. The chapter also outlines data collection instruments used, study population, sampling and sampling techniques as well as ethical considerations and chapter summary.

#### **3.1 Research Design**

A descriptive research design was used in this study. It is because this research design is able to explore and interpret people's views as well as explaining the actual way in which the integrated approach functions. The descriptive research design was used to understand the way in which an integrated approach of electronic and paper based records system has been implemented at Sable. Descriptive research design has been appropriate for this study in that it enabled the researcher to obtain in depth information from interviews and observation in relation to the implemented hybrid system. The descriptive research design also helped the researcher to obtain a clear picture on how the staff perceived their experience in regards to the implemented hybrid system. Through description research design it would give the researcher real life experiences of the staff being designated in the actual context. The context is the way in which records are being managed starting from creation to disposal in regards to implemented hybrid system.

#### **3.2 Study Population**

The targeted population comprised of a total of (9) nine individuals from three departments namely Records, Information Technology and Finance Departments. In records department (5) five people were interviewed which comprised of the departmental supervisor and (4) four records assistants. The personnel from records section were targeted because they are responsible for managing records within the context of implemented hybrid system. The records department is also the central point in which records are managed in the organisation

therefore they provided first-hand information to the researcher on the implementation of hybrid records system. In Human Resource Department 2 individuals were selected which include the head of department and one senior human resource officer. The Human Resource Department was vital in this study to ascertain issues surrounding the way of recruitment of their staff members in terms of training levels in the records department. They could also help this research by providing information on how they also work with the integrated records management system within their departments. In Information Technology another 2 individuals were selected which are the head of department and one senior individual from the department. The Information Technology Department also contributes to the study in that they have requisite knowledge on the management of digital information.

### **3.3 Sampling and sampling techniques**

A purposive sampling technique was used in the research. This means that participants are selected because they are likely to generate useful data for the project by providing information basing on the experience that they have in working with electronic and paper records management systems. Purposive sampling was used because it was aimed at getting as more relevant and valuable information for the research as possible. It can therefore be noted that the researcher assumed that in the records section she will obtain specific information needed in this study. In human resources and Information Technology departments, judgemental sampling technique was employed. In judgemental sampling you decide the purpose in which you want the informants to give you. This was done by selecting the subjects in which the researcher thought that they satisfy the requirements of the research. This is because there were specified representatives from the departments that the researcher thought to have an overall say on every aspect that take place within their departments. They provided information that would help the researcher to know the way integrated approach for electronic and paper records has been implemented.

### **3.4 Data collection instruments**

The research employed a primary source of data because there was the need to obtain information at first hand from the selected respondents. Primary data sources enabled the researcher to collect information for the specific purpose of the study. Face to face interviews

and direct observations were used in this study. These were the research instruments that would help the researcher to have a direct interaction with the respondents and direct observation of the implemented system. In relation to the study, interviews would provide the researcher a close interaction with respondents which would make them express their mind in regards to the subject under investigation. Observations would however allow the researcher to have a close look on the way hybrid records are being managed from creation up to disposal. The purpose of using the above mentioned data collection methods were to acquire detailed information and gain understanding on the way an integrated approach is being implemented.

### **3.4.1 Interviews**

Interviews are regarded as one of the widely used and powerful method in which researchers try to understand their respondents (Hartman 2011). The study aimed to obtain individual views especially on the aspect of the staff competence in relation to the implemented hybrid system thereby using personal interviews. Personal interviews were chosen for this study because they gave room to the researcher to understand how the hybrid system is implemented through probing on questions that needs clarification. A semi- structured interview guide was used in the research. This is when an interview guide approach and the standardised open-ended interview for the face-to-face interviews were used. Through the semi- structured interview guide, the research got the change to probe and determine when it would be appropriate to explore certain subjects. Specific information was required by the researcher from all respondents concerning the challenges being faced in managing records within a hybrid system. Interviews enabled the researcher to explain, clarify and give detailed information where necessary.

### **3.4.2 Observations**

The availability of markers that link paper and electronic records in an integrated management system needed to be observed. Direct observation helped verify some of the information gathered from the interviews. Through observation the researcher collected data on activities and processes carried out in the management of records using an integrated approach. Observations enabled the researcher to pick up several issues in regards to the

implemented system which the researcher would not have done through interviews. Using observation the researcher also gathered information in regards creation of electronic and manual records, retrieval and access, classification and indexing using the hybrid system. Observations enabled the researcher to be able to locate some of the items that are expected when using an integrated system approach.

### **3.5 Limitations of the study**

One challenge to be faced by the researcher is that of not getting enough information due to the fact that some of the respondents who had information required in this research have been retrenched at the organisation. The fact that some of the records personnel in the records section could not know their job description limited the researcher in obtaining some of the information required. Electronic records management is one component that makes up the integrated approach under investigation however the researcher was limited in acquiring as much information as needed since the records personnel were not very much experienced in such a system.

### **3.6 Reliability and Validity**

Methods used by the researcher were reliable and valid in that pilot testing was done where some expert individuals tried to answer questions structured for the interviews. The techniques used by the researcher were credible, reproducible, systematic and transparent to the respondents so that if one could use the same guides they generate same information. The researcher also made sure that content validity was achieved by ensuring that questions formulated addressed the set objectives. The use of both the interviews and observation in this study also ensured reliability and validity of the findings of the study. This would be achieved as the two would complement each other to strengthen confidence in the validity of the study. The fact that the researcher managed to obtain the total number of targeted population ensured reliability and validity of the information obtained. This is because the researcher was able to have enough comparison of responses given by the interviewees.

### **3.7 Ethical Considerations**

The researcher was first granted permission to carry out her research at Sable Chemicals and she carried on with the research after given permission. The purpose and intentions of the study were made clear and the need for the staff's participation in the research. There was no force used for participants to disclose information that they were not comfortable to disclose. Further they were informed that the information obtained from the research would not be used for purposes other than the research without their consent. The researcher gave assurance to the respondents that data collected was to be used for study purposes only. This included not revealing their names in the research, just mentioning the departments from which they belong. No one other than the researcher will know who provided the information.

### **3.8 Chapter Summary**

In this chapter the researcher highlighted methods that were used in obtaining data at Sable. The chapter also indicated that the research used a qualitative research design which is descriptive in nature and enabled the respondents to explain their responses in detail in regards to the way the integrated system in being used at their organisation. The population that was studied include the department of records, human resource and the financial department. The simple reason being the fact that there is a decentralised records unity therefore records are managed in these three departments. This can make them contribute more in regards to the way they maintain their records. The sample size which adds up to nine people has also been selected in this study. This would enable the researcher to spend enough time for interviews. It has also been indicated in the chapter that the study used interviews and observations as instruments of collecting data. The way in which data collection instrument were used in this research has been discussed in detail in this chapter.

## **CHAPTER 4**

### **DATA PRESENTATION, INTERPRETATION AND ANALYSIS**

#### **4.0 Introduction**

This chapter focuses on presentation, analysis and interpretation for data gathered for this study. Data collected was presented in regards to the requirements of the objectives and it was accompanied by explanatory interpretation. The chapter also focuses on presenting

results that the researcher gathered from the interviews and observations contacted. The way in which the hybrid system is being implemented will be shown in this chapter by presenting and analysing data collected. This chapter will also present and analyse standards and procedures that the organisation follow from creation up to the disposal stage in the management of electronic and paper records. The level in which the staff that is managing records at Sable Chemicals will also be presented in this chapter. The challenges that the records section is experiencing in managing records in a hybrid environment will also be presented and analysed.

#### 4.1 The Response Rate

Out of a total of 9 respondents targeted, 5 were records personnel, 2 HR Officers and also 2 IT experts. The response rate of the targeted population

<b>Departments</b>	<b>Targeted Population</b>	<b>Actual Respondents</b>	<b>Percentage</b>
Records	5	5	100%
Human Resources	2	2	100%
IT	2	2	100%
Total	9	9	100%

#### Table 1 showing response rate

Table one shows the interview response rate of the targeted population where the researcher managed to interview all 5 staff members targeted from the records section making it 100%, 2 targeted individuals from Human Resources and another 2 targeted individuals from Information Technology also made a 100% response rate. The presented data on table 2 showed that the researcher that a total response rate of 100% from the targeted population was obtained. The analysis from the interview response rate can therefore indicate to the researcher that information obtained from the interviews is reliable and valid enough since the researcher was able to get various point of views from all the targeted population.

## **4.2 Implementation of a hybrid system**

### **4.2.1 Creation**

The interviews made by the records supervisor confirmed that the creation of electronic records at the organisation involves entering the heading of the document, date in which the document was created, type of the document and the version in which the record is created. However the records supervisor also pointed out that for the creation of electronic records, they are mostly helped by the IT experts since most of the staff are not well versed with management of records in the electronic format. A senior records assistant pointed out that when creating records electronically, the most important aspect that they consider is to save the heading of the record in form of a Microsoft word or PDF which is much easier for them. However the two interviewed IT experts indicated that they have got basic knowledge on how records can be created therefore they make use of the record heading, the date of creation, the type of record as well as the version in which the record is found. However for the creation of paper records, another records officer confirmed that they make use of reference number and indexing. This is when they provide each record by a unique code or number generated within the organisation and the records are registered in such a way that they provide metadata describing the function of the record. It is clear that the way in which hybrid records are created do not show any link that is expected for electronic and paper records operating in a hybrid environment. Therefore the analysis can conclude to the fact that the staff does not have requisite knowledge on the creation of records when using hybrid records management.

### **4.2.2 Indexing**

The interviews and observations revealed the indexing format required for an integrated records system is not available at the organisation. Two records Officers confirmed that they make use of numbers and codes in regards to indexing of their paper records. The senior records assistant indicated that she is not familiar with how indexing of electronic records is done since they confirmed that the easiest way for her to locate an electronic record is by searching the title. However the records supervisor pointed out that they have got the indexing format that is done manually but electronically they make use of metadata profile.



The records section is using indexing mostly for paper records than in electronic records. The presented data has also shown that there are no computerised indexing tools that facilitate electronic retrieval of records. This gives a remark that the actual requirements expected in the management of both paper and electronic records in a hybrid system are not being followed therefore the indexing is not being done well.

#### **4.2.3 Classification system**

The observations made by the researcher confirmed that employment records are arranged according to the codes given to the staff by the organisation which is internally generated. The Human Resource Supervisor also indicated that for the employees' records each individual code is electronically generated in their data base which helps them to identify each record when needed for use. The researcher observed that physical records related to staff employments are stored in alpha numerical order where numbers are arranged in ascending order. Three of the records officers indicated that the classification system that they are currently using, are organisation generated classification system for their hard copy and electronic records. The presented data showed that the organisation is using the numerical for electronic records and alphanumeric system of classification for paper records. The presented findings enabled the researcher to conclude that that there is no coordination that is expected for records to operate in a hybrid environment under the same classification system.

#### **4.2.4 Storage facilities**

Observations showed that current paper records are stored in steel cabinets, adjustable shelves and wooden racks. One of the records officers indicated that the equipment for storage was sufficient for them. However two records officer indicated that they used equipment that did not sufficiently cater for easy records storage. The senior records assistant indicated that they do not have enough file folders and computers to store their records. The records Supervisor and the IT officer also confirmed that for electronic records, they have got a data base in their desktop computer found in records section in which they store their records. The IT expert further confirmed that the electronic records are also backed up by the use of a data sunny five system, a device that they use in their organisation to track files stored electronically. The storage facilities in which the records department is currently using

gave the researcher a final conclusion that there are great challenges being faced for the management of paper records due to insufficient storage equipment. However from the data presented, electronic records appear to be more convenient in terms of storage than paper. It can therefore be analysed from what has been presented that the storage facilities for integrated records are inadequate. There are not enough storage facilities for both electronic and paper records.

#### **4.2.5 Retrieval and Access**

The records supervisor in an interview confirmed that when it comes to retrieving paper records, they took minutes to retrieve information when they needed it, whilst the Human Resource Officer indicated that for paper employment records in which they keep in their department, they took much time to locate information. The senior assistant indicated that there is an organisational classification system in which they use to locate paper records quickly. Two respondents from the records department indicated that electronic records are usually retrieved and accessed if only you have acquired enough details of the needed record which enables one to search for the record. However the HR Supervisor confirmed that in their section they have got great challenges in retrieving records that belong to the former employees of the organisation when they come to claim their benefits. He indicated that those records are not easily retrievable and accessed simply because most of them are not in current use therefore many cases of missing records have been witnessed. The analysis of the researcher on the retrieval and access of electronic and paper records concluded that retrieval and access are being problematic. This is due to inaccurate inventory of records which covers information as record heading, reference number and storage location for both electronic and paper records.

#### **4.2.6 Disposition of records**

Consequently, interviews conducted aimed to establish if the organisation had disposal tools and procedures for electronic and paper records. The records supervisor and two records assistants indicated that they had some form of retention and disposal programme. One records officer indicated that, just like paper records currently there are no clear rules and procedures that authorise the disposal of the data the electronic system holds. Another records officer indicated that records that they think are no longer of use they just remove them and

place them in other rooms. The presented data makes the researcher to conclude that there is no proper disposal of records being done at the organisation. This would also mean that the creators and users of records would find it possible to delete data at their own discretion without any regard for the evidential value of the records.

### **4.3 Standards and procedures implemented for electronic and paper records**

#### **4.3.1 Creation**

The records staff was asked if they are following any standards in their records creation. The first records officer to respond indicated that for electronic records he is not even aware of any standards and procedures that are followed in records creation. The other two records officers indicated that they name the record and create a folder of that record in a computer. The senior records assistant indicated that electronic records do not need any logical sequence to be followed in their creation therefore the record is just created by typing its main heading and save in the computer. The records supervisor however indicated that for creation of paper records there are standards and procedures stipulated by the Legislative Council on Archives which instruct one to take note of all the information regarding the record to be created. The findings obtained showed that the staff is not aware of the standards or the procedures to be followed for both management of electronic and paper records. It is therefore the researcher's analysis that there are no clear documented standards that are being followed in regards to the creation of hybrid records.

#### **4.3.2 Classification**

In regards to the interviews conducted, the records supervisor indicated that they are using classification scheme. The senior records assistant confirmed that a copy of filing system and classification of records is there but the staff does not usually consult it simply because there is a lot to be followed. Two records officers revealed that they are not even aware of the procedures for filing paper and electronic records, although they had developed some form of classification within their organisation. When the researcher asked two records officer on how they organise their paper records, one indicated that they classified their records alphabetically whilst the other said they use alpha- numeric. 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 research established that classification schemes are not being used effectively as required in the hybrid environment. The analysis of the researcher concluded that the organisation do not have stipulated standards and procedures that are supposed to guide the classification systems of hybrid records.

#### **4.3.3 Retrieval and Access**

The records staff was asked if they have formal guidelines regulating people who are permitted to access and retrieve records and the circumstances in which they should retrieve and access the records. The records supervisor indicated that records in both paper and electronic format are accessed and retrieved by the authorised persons only. He further indicated that only the HR supervisor has got authorisation in accessing and retrieving records that relates to staff history. However the other three records officers had no idea as to whether there are standards or procedures that guide them in retrieving and accessing records or not. The presented data showed the researcher that the organisation does not have any clear documented standards and procedures in which they follow in hybrid records management system.

#### **4.3.4 Storage Facilities**

In regards to storage facilities the researcher asked for the records staff if they are adhering to any form of standard and procedures in the management of electronic and paper records. The records supervisor indicated that due to shortage of storage facilities some of their cabinets used to store paper records are not up to standard. The shelves that they have are not enough to sustain the hardcopy records. Observations by the researcher also showed that in records office they use one desktop computer to manage their electronic records. The analysis of the researcher from the findings can conclude that the organisation does not meet the stipulated International Organisation Standards expected in storing paper and electronic records in an integrated approach.

#### **4.3.5 Disposal of records**

The researcher intended to find out if there are standards and procedures being followed in the disposition of records in hybrid records management system. The first records assistant replied that records that are no longer used are taken to their organisational archive located at the organisation. Another records officer indicated that they have a policy that guide them in disposing paper records in a systematic manner. However there was no one who indicated that they just destroy the records. For electronic records they indicated that they only delete records that they think it is no longer of use. Officers would not hear of destroying paper records, but they have no problems in destroying the electronic records. When the IT expert was interviewed he indicated that the record can be retrieved on the exchange server therefore the record will have been only deleted on the machine. It can be analysed from what was presented that the standards and procedures stipulated by the ISO (15489-1) are not being followed by the organisation as required.

#### **4.4 Staff competency in implementing hybrid system**

##### **4.4.1 Training on management of both paper and electronic records**

Interviews with records personnel revealed that they are not even trained in the field of records management. Two records officers revealed that they are not well versed with the management of records in an electronic format since they just have been trained on how computers are operated. The records supervisor confirmed that the only training avenues that were mostly utilised by records staff included workshops and refresher courses. However the one other records officer indicated that the information on records management courses comes and we request but we receive no response to our request to attend such courses. Shortage of funds has been cited by another records assistant as the reason why they cannot be sent for training for proper management of records more often. The senior records assistant indicated that they were being discouraged by some of the comments that they receive from other departments. Comments such as “Records Management is not a specialised area that requires better qualifications ...” also shows the low status accorded to

records management section. It can be analysed that the staff in records section are not trained in the management of paper and electronic records.

#### 4.4.2 Knowledge on management of records in an integrated approach.

**Table 2 showing records personnel qualifications**

<b>Records Department</b>	<b>Qualifications</b>	<b>Experience</b>
Records Supervisor	Diploma	5 years
Senior records assistant	Certificate	2 years
Records Officer 1	Not trained in records	2 years
Records Officer 2	Not trained in records	1 year
Records Officer 3	Certificate	6 months

The table above showed that the records supervisor has obtained a diploma in records management and is 5 years experienced. The table is also showing that two individuals from the records department have got certificates in records management field, the senior records assistant having 2 years working experience and another records officer having 6 months working experience. Two records officers showed that they are not qualified in records management at all.

The study intended to assess the level of knowledge in which the staff has in managing both electronic and paper record in a hybrid environment. Two records officers indicated that they have not acquired any knowledge in regards to records management. Therefore they are just working in the records section but without qualifications that are specifically for records management. Interviews revealed that records personnel managing the registry have low level qualifications. The records supervisor has got a diploma as his highest professional qualification in records management. The HR supervisor claimed that they mostly recruit attachment students who are currently studying records management. These attachment students provide knowledge to permanent records assistants in the management of electronic records. It has also been confirmed by one other records officer that he has a certificate in records management with six months experience. However students on attachment in records section assist them with knowledge that they have from their first two years of academic learning in records management. Senior records assistant claimed that she does not bother acquiring knowledge on the management of both electronic and paper records. The reason is

that as long as they are in records they are regarded as nothing by other departments. Other departments do not take their office seriously. The respondent therefore pointed out that nothing pushes one to develop in this field. “I am just here to earn a salary”. The data presented can enable the researcher to provide an analysis that the people who are managing records at Sable Chemical are not managing records well due to lack of knowledge in the management of records as indicated by their qualification.

#### **4.5 Challenges faced in the management of records in a hybrid system.**

##### **4.5.1 Lack of training**

Two of the records officers revealed that they have attended workshops related to records management therefore they just gained basic knowledge by working with records. One records officer pointed out that he was recruited to work in the records section with a records management certificate that he obtained. However the senior records assistant indicated that ever since she obtained a certificate in records management, she does not bother acquiring more knowledge since records management is regarded as useless by other departments. The researcher from what was presented can conclude that the records staff has inadequate training in managing an implemented hybrid records management system.

##### **4.5.2 Lack of equipment**

It has been revealed in the interviews that the records section has got two computers in their records section for electronic records management, the one that is in their records section and the other one in the records supervisor’s office. The senior records assistant also stressed that for paper records they do not have enough file folders to create new records. It has also been indicated by another records officer that in their department they do not have a shredding machine for paper records that are supposed to be permanently destroyed; they have to go to other department whenever they need to use the machine. The fact that the department of records does not have enough computers to manage their electronic records as well as shredding machines for paper records indicated lack of equipment from the department. The analysis made by the researcher concludes that lack of equipment made the department to lag behind in performing the expected duties in an integrated approach.

### **4.5.3 Technological obsolescence**

The Records Supervisor indicated that they usually face challenges as a result of their computers that at times become absolute. He indicated that machines sometimes do not work due to lack of upgrading of computer hardware and software. This greatly affects the management of records in an integrated system. The records supervisor indicated that this is mainly caused by continuous technological advancement. Therefore the advancement would leave the computers that they use to manage electronic records not compatible enough to manage electronic records. The presented data has shown that the records section is facing a great challenge of technological obsolescence due to failure of hardware and software to function. The analysis by the researcher can conclude that technological obsolescence is affecting the implemented hybrid records management.

### **4.5.4 Financial constraints**

The records supervisor revealed in an interview that as an organisation, they are failing to send their records staff to attend records courses and refresher courses simply because they do not have enough finances to consider training. The records officer indicated that they are not able to purchase some of the equipment required for use. They also fail to acquire folders that are used for the creation of paper records as well as acquiring more computers due to inadequate funds. One records officer noted that the records section is not given much value at the organisation like other departments such as Human Resources and Accounting departments. Therefore they do not usually receive funds for purchasing equipment needed in their department. Financial constraints are one of the challenges faced in implementing the hybrid system.

## **4.6 Chapter Summary**

This chapter mainly focused on data presentation and analysis of information obtained from the interviews and observations conducted. The data presented in regards to how the hybrid



system is being implemented at Sable Chemical showed many different views of the staff in regards to records to how records are created, classified, stored, accessed and retrieved as well as disposed. The analysis that has been drawn from all these aspects presented indicated that the hybrid system being implemented at the organisation is totally different from what is expected of hybrid records management. The chapter has also presented information obtained in regards to the standards and procedures being used at Sable Chemical in the management of electronic records. The findings showed that the staff is not adhering to stipulated standards by the International Standards Organisation 15489-1. The findings have proved that the staff is not even aware of the standards. The information that was gathered in regards to staff training has also been presented in this chapter. Some of the respondents highlighted that they are not trained in managing records and others indicated that they have just attended refresher courses and workshops in order to gain knowledge of records management. The presented data showed that there is lack of knowledge and training that is expected in order to be capable of managing records in an integrated approach. The presented data has also shown the challenges in which the records section is facing. Challenges raised include lack of training, lack of equipment, technological obsolescence and financial constraints.

## **CHAPTER 5**

### **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter presents the discussion, conclusion and recommendations of the study. The discussion was presented based on the findings of the previous chapter. It is useful to compare the research findings and draw conclusions on how much and in which manner, the goal has been achieved. The conclusions were drawn based on the findings of the study. The recommendations were also presented as well as area for further research.

#### **5.1 Discussion**

##### **5.1.1 Implementation of hybrid system**

With regards to how hybrid system has been implemented, records created in a hybrid environment do not have incorporate defined rules for creating and capturing records. It can be concluded that the usability and completeness of records created physically do not tally with the one in an electronic format. The classification, indexing, records retrieval, storage facilities as well as disposition of records appear to be different from what has been advocated by the International standards Organisation. Moreq (2001) indicated that hybrid files will consist of an electronic file and a physical file. The electronic records management system must allow a physical file which is associated as a hybrid with an electronic file to use the same file title and numerical reference code, but with an added indication that it is a hybrid physical file. The link that is expected to be there between paper and electronic records which in terms of indexing, classification and retrieval of records is not being done well. However, records creation, classification, indexing, retrieval and access, storage and disposal practised at Sable Chemicals is divorced from what the existing literature has advocated.

According to Moreq (2001) the electronic records management system must allow a different metadata element set to be configured for physical files and electronic files. The physical file metadata must include information on the physical location of the physical file. The electronic records management should support the printing and recognition of indexing or mark outs so as to support other tracking systems for physical files.

Howard (2002) supported that accessing files and records, and then viewing records will require a flexible and broad range of searching, retrieval and rendering functions to meet the demands of the different types of user. Although this can be thought of as not being classically a records management function, the required functionality is described here on the grounds that an electronic records management without good retrieval facilities is of limited value. The electronic records management system must provide at least two naming mechanisms for electronic files and classes in the classification scheme, a mechanism for allocating a structured numeric or alphanumeric reference code. That is an identifier which is unique within the classification scheme to each electronic file should be available.

Moreq (2001) cited that electronic records management in order to operate in a hybrid management environment should be able to register physical files under the same classification scheme as the electronic records, and provide for the management of “hybrid files” of electronic and physical records. The electronic records system must be able to define

in the classification scheme physical files and volumes, and must allow the presence of physical records in these volumes to be reflected and managed in the same way as electronic records. In a hybrid environment, electronic records management system must define in the classification scheme files which (logically) contain both electronic and physical records, and must allow both kinds of record to be managed in an integrated manner. However this can be a different scenario on the records managed at Sable Chemicals since classification system of physical records were found separate to that of their electronic records. The electronic records management system must ensure that retrieval of a hybrid file retrieves the metadata for both electronic and paper records associated with it (Moreq 2001). The electronic record management system in a hybrid environment must include features to control and record access to physical files, including controls based on security category, which are comparable to the features for electronic files. It can be noted that the hybrid system at Sables is not being implemented well as compared to what scholars say.

### **5.1.2 Standards and procedures implemented for electronic and paper records**

The organisation does not have documented standards and procedures that guide them in the implemented hybrid system. There are several studies that revealed the challenges that relate to effective legislative and regulatory frameworks for managing records, regardless of their formats, in countries in the East and Southern Africa Regional Branch of the International Council on Archives (ESARBICA) (IRMT 2008; Keakopa 2006; Nengomasha 2009). Mnjama and Wamukonya (2004) were of the view that the gradual integration of the manual paper system with the computerised system by focusing on specific products to support the business process has not been documented within the institutions with statutory responsibility for records within the East and Southern Africa region. The above findings also proved that there are no standards and procedures set for paper and electronic records (integrated approach) which can therefore greatly affect the management of records at the organisation. Riley (2003) asserted that records management procedures relating to records management system found in organisations are generally flouted and not followed.

The interviews conducted at Sables indicated that the organisation does not have any documented standards and procedures in the management of their hybrid records at the organisation. Wamukonya and Mutula (2005) also supported the fact that absence of legislation, policies and procedures to guide the management of both paper and electronic records are being experienced in organisations. The main problem of missing records being experienced at the organisation can be caused by failure of the organisation to have standards and procedures that stipulates different duties for the staff. The records management standard ISO 15489-1 (Section 6.3) recommended 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 records management standard ISO (15489-1) (2001) emphasises the importance of assigning responsibilities for records management, stating that: responsibilities should be assigned to all employees of the organisation. These include 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 (ISO, 2001).

### **5.1.3 Staff competence in implementing hybrid system**

The findings of the study have indicated that the majority of the staff working in the records section does not have requisite knowledge in the management of records in a hybrid system. This makes one to wonder if the hybrid system is being implemented well. It is mainly because they lack training in managing both electronic and paper records. Nengomasha (2009) cited that skills for managing records in general are inadequate. Most people managing records do not have formal qualification in records management and their level is low to be able to manage the more intellectual aspects of records management. The fact that the staff that is managing records are not trained well on the use of electronic records as well as the area of occupation is affecting management of records in an integrated approach. Mazikana (1999) also confirmed that most vibrant training schools for records management in Zimbabwe were temporarily closed. This therefore makes most of the registry staff to operate in records sections without the necessities needed. Kalusopa (2011) supported that staff in records management is lacking relevant training skills whilst others had low awareness of electronic records management. Lack of training in electronic records management as discussed has been proved to be a major aspect that is standing as a limiting factor in proper management of records in an integrated approach. 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 at Sable Chemical Industry should therefore recognise the importance of training and skills for records management.

Lack of training in the management of records especially in an electronic format concurs with the findings of Wamukoya and Mutula (2005) in regards to 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 within the organisation. It has been indicated from the findings obtained that skills for managing electronic records as well as records in general at the organisation are not well developed. There is a lack of professionally qualified registry staff in charge of the records. None of the registry personnel interviewed has indicated a professional qualification beyond records management certificate. Training for most of the staff has been in the form of refresher courses and two to three-day workshops. As the study has established, the major

reason for failing to manage records according to the required standards was the lack of in depth knowledge and skill in managing records in an integrated approach. Keakopa (2006) also found this very prevalent in the public sector in Botswana where there was a preference to deal more with paper records separately from electronic records. He eluded to the lack of skills and knowledge in electronic records and cautioned against the over reliance on the use of paper-based system by stating that “although personal knowledge of the physical layout of a manual records unit may lead to quick retrievals, this is greatly impaired where storage covers a wide expanse of space well designed computer systems will, however, retrieve information more quickly”. Lack of competence of the staff is affecting the management of records in a hybrid system. This is also contributing largely to the misplacement of records due to the lack of comprehensiveness in merging electronic and paper records in records management.

#### **5.1.4 Challenges faced in management of records in a hybrid system.**

Data obtained from the interviews indicated challenges that are being faced at the organisation in records section. Some of them are lack of equipment and financial constraints. InterPARES (2002) also supported that lack of adequate equipment to effectively manage electronic records in public tertiary institutions is a major indictment on the commitment of managing records using any system available. This is because adequate equipment and human capacity form the bases for effective record keeping. Mnjama and Wamukoya (2004) also supported the fact that absence of budgets dedicated for records management is a great challenge affecting most organisations. This can be critical especially in the maintenance of a hybrid system which may be cost effective. Wamukoya and Mutula (2005) further pointed out that absence of budgets dedicated to records management amongst records management problems facing ESARBICA countries. There is no separate budget for records management. Records management is catered for under general services and is usually marginalised. The challenges presented are not very different from those that were found from other organisations in Botswana as eluded by Mampe and Kalusopa (2013) as well as Mazikana (2009). It has also been noted by Mazikana (2001) that in many countries the larger part of the budget is consumed by staff salaries, leaving very little for recurrent expenditure

The issue of training has also been a major challenge in the management of records in a hybrid system as indicated under the preceding discussion on the competence of staff. Staff

lacks skills to manage records since records management personnel do not have the same opportunities to go for training as those in other disciplines. Another issue that was raised by records staff in terms of managing their records using integrated approach was the issue of computer obsolescence. This is when computers may fail to work well and need continuous upgrading. Millar (2004, p. 4) indicated that records management is accorded low status which is also true of the Sable Chemicals Industries. Taking for instance it has been indicated by the respondents that most of them operate without a post specifically assigned the functions of records management.

## **5.2 Conclusions**

Lack of knowledge and staff training in the management of integrated paper and electronic records can be concluded in the study. The findings obtained indicated that there is no incorporation of records keeping requirements in electronic information systems. There are no required standards and procedures in a hybrid environment in which 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. Skills for managing electronic records which is one element making up the hybrid system is lagging behind. There is a lack of professionally qualified registry staff in the management of implemented hybrid records. The highest qualification in the records department is a diploma obtained by the records Supervisor, however some have got certificates and others do not even have any qualifications in records management. Therefore it can be concluded that lack of training and requisite knowledge in management of records is to a larger extent affecting the whole management of records at the organisation. This is because knowledge forms the basis of effective and efficient way of managing records and without it, there consequences are poor records management.

The study can also concludes that the organisation does not have any documented standards and procedures that are guiding them in managing their implemented hybrid system. It has been clearly shown by how the records staff managed their records starting from creation to disposition. The research has also concluded that there are challenges such as lack of equipment, financial constraints, technological obsolescence and lack of training that the organisation is experiencing. The researcher identified that the problems mentioned are just common to those that have been already noted by various scholars in different countries such

as in Botswana and Namibia. It can also be concluded that misplacement and missing of records are being caused by failure of the organisation to follow the required way of managing paper and electronic records in an integrated approach. This has been evidenced by a number of things such as inability to create, classify, store and dispose integrated paper and electronic records well. Unavailability of standards and procedures to guide the implemented hybrid system also contributed to failure of the system to function as expected. It can also be noted that lack of staff training and knowledge also contributed to the missing and misplacement of records being managed in a hybrid environment.

### **5.3 Recommendations**

#### **5.3.1 Creation of records**

There were no recognised procedures and standards for titling, indexing, classifying and describing records so that organisations could organise them systematically and retrieve them easily. Therefore it is recommended that organisation should make policies which guide the requirements for capturing, registering, classifying, retaining, storing, accessing records and disposing of both paper and electronic records. The policies and procedures created should stipulate to the organisational staff what is required in the creation of records in a hybrid environment. This will help to reduce the rate of information loss and delays in retrieving records.

#### **5.3.2 Standards and Procedures**

The study found that there are no documented standards or procedures being followed. The findings did not provide detailed guidance that is currently in use about the policies and practices. Therefore, for the organisation to be informed about the regulations of managing integrated records, there is need to develop and introduce a range of internal policies, standards and procedures to enable them to fulfil the statutory obligations and to improve their operational efficiency. They could also make use of other countries like Australia and the United States of America (USA) as well as South Africa as models for benchmarking their policies. The models from these countries focus on responsibilities and obligations and specify monitoring and compliance mechanisms. The best of these models also recognise the



interdependence between paper and digital records and the need to integrate and co-ordinate the management of records in all media.

### **5.3.3 Staff training**

Records management is a field that needs to be run by experienced professionals who will know what has to be done. It is therefore necessary for the organisation to recruit records management staff that has got relevant qualifications in records management. Training of records management staff in electronic records management system is vital. This is one of the factors that showed a great effect in managing records using integrated system since the majority of the staff lacked knowledge in operating the system. The staff needs to be trained and retrained in the new skills and competencies for effective operation in the new technology. The staff should be equipped with competencies and skills that relate to management of records in an integrated approach.

### **5.3.4 Knowledge of records management**

The quality of any records management programme is directly related to the quality of the staff that operates it. Without knowledgeable 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. There is need to acquire knowledge and understanding on the aspects that are expected for management of both paper and electronic records referred to as an integrated approach. This will help the working staff to be able to know the requirements of such a system. It is recommended that for management of both electronic and paper records there is supposed to attend continuous refresher courses and even design programmes that sensitise staff to managing records and good recordkeeping practices and conduct them regularly.

### **5.3.5 Storage Facilities**

The study revealed that there is lack equipment which also encompasses storage facilities like computers and shelves. The study also noted that in regards to preservation strategies and practices between paper- based and electronic, there is poor storage of electronic versions of records, poor migration strategies to newer hardware and software technologies, poor control of access as well as using defective storage media. It is thereby recommend that the Sable Chemicals develop programmes for preserving digital materials. Detailed studies on needs and the reorganisation of analog systems for identifying, selecting and classifying materials for digitisation should precede them.

### **5.3.6 Lack of equipment**

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. As part of the records management programme there would be need to assess the current resource provision. The Records management does not have a budget of its own in the Organisation. 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.

### **5.3.7 Financial constraints**

It is recommended that the organisation seeks funds from well-wishers and donors specifically for improving the management system of records especially for records that are being managed in an integrated approach.

## **5.4 Suggestions for further research**

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. An evaluation of the current electronic information management systems in

order to establish effective management system of managing records in an integrated approach should also be taken into consideration for further research.

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## **Appendix 1**

### **Interview guide for records department**

1. What system of managing records is the organisation using?
2. What do you understand by an integrated records management system?
3. Do you have any guiding framework that governs you in the management of paper and electronic records?
4. What level of training do you have in records management?
5. How are you integrating the paper and electronic management system in your organisation?
6. Have you ever experienced missing of records at this organisation?
7. How do you ensure that records are easily retrieved and accessed?
8. How are you maintaining both paper and electronic records in the organisation?
9. How do you create your records from creation to disposal?
10. Do you have adequate resources to facilitate proper management of electronic and paper records?
11. What are the major challenges that are being faced in integrated records management?
12. What do you think should be done to improve management of electronic and paper records management?

## **Appendix 2**

### **Interview guide for Human Resources**

1. What records do you store in your department?
2. How are records organised and stored in your department?
3. How do you access and retrieve them when needed for use?
4. Do you face any problems or challenges in retrieving records?
5. How do you ensure that your records are maintained and used?
6. How have the registry people assist you in maintaining your records?
7. Have you considered level of training of the records people when you recruited them?
8. What challenges do you usually face in retrieving and accessing records in your department?

## **Appendix 3**

### **Interview guide for Information Technology**

1. What do you understand by electronic records management?
2. Do you create electronic records in your department?
3. How are you maintaining electronic records management?
4. Do you have standards or procedures that guide you in management?
5. Do you face challenges in retrieving and accessing records in your department?

## Appendix 4

### Observation Guide

#### Creation

- Markers for electronic records
- Availability of document heading, date of creation and the version in which it is viewed for both paper and electronic records.

#### Indexing

- Availability of unique numbers that link the electronic and paper records.

#### Classification

- Use of alpha- numeric, numeric or chronology for paper records
- Use of markers that are metadata profile for electronic records and at the same time have a link to paper records.
- Markers that identify the document heading, outline the record content and provide information for retrieval.

#### Storage facilities

- Availability of cabinets and shelves for storing paper records
- Availability of file folders that are used for creation of paper records.
- Quantity of computers used to manage electronic records.

#### Retrieval and access

- Availability of metadata that allow easy retrieval and accessing of electronic records
- Arrangement of paper records that is used which facilitate easy retrieval and access of records.

#### Disposition

- Availability of disposal schedule used in records disposal.