# Chapter 11

# Botswana Examinations Council (BEC) Readiness to Implement an Electronic Document and Records Management System (EDRMS) – Action Officers' Perspectives

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## Abstract

This chapter establishes the Botswana Examinations Council's (BEC) readiness towards the implementation of an Electronic Document and Records Management System (EDRMS). The research utilized a combination of questionnaires and interviews to gain insights into the perspectives of the EDRMS users. Both qualitative and quantitative data were collected from 123 action officers via online means. The study was anchored on factors outlined by Mukred, *et al*. (2016) and partly guided by the IRMT e-readiness assessment tool. The findings of the study revealed that BEC is not ready for EDRMS implementation due to the lack of top management support, absence of change management strategy implementation, failure to engage with users in SOUR development, non-existence of international standards on digital records management, and lack of a training programme for users. The findings also revealed that the BEC's records management programme lacks a business continuity strategy, as evidenced by the absence of a disaster preparedness plan and preservation strategy. The major recommendations arising from the study are; BEC should start by developing a change management strategy specifically for EDRMS deployment – outlining communication and training plans; Lobby for top management

support and advocate for adequate budget. BEC should consider EDRMS implementation as a major stand-alone project not a sub-project of BNEPS; there is need to develop a business case and sour documents specific to EDRMS.

**Keywords:** EDRMS Implementation, Botswana Examination Council (BEC), Change Management, User Awareness and Organizational Readiness, and Technology Readiness

## 1 Introduction

In the current world characterized by Covid-19 and the Fourth Industrial Revolution technologies, industries are being revolutionized and are undergoing through digital transformation. Despite the negative impact brought by Covid-19 on the economic development, there is a positive turn around that has forced most industries to undergo transformation as a way of reducing physical contact. In that light, there is positive impact on information and knowledge management for social, economic and political development. The attainment of sustainable development goals greatly depends on knowledge sharing and knowledge transfer. Thus, effective and efficient management and dissemination of information is crucial to inform decision making and actions that will impact on social and economic development.

Many organizations have become aware that efficient control of information flow leads to effective management, increased productivity, transparency and accountability (Alshibly *et al.* 2016). Moreover, the implementtation of Electronic Document and Records Management Systems (EDRMS) have become popular as most organisations use them to manage their records, information and knowledge assets. According to the Provincial Archives of Saskatchewan (2016: 3), an 'EDRMS is a software application that is used to manage digital information. The software provides a framework for the capture, maintenance and accessibility of records over time'. The system has the functionalities to manage both documents and records. The efficacy of these systems is appealing to most organisations compared to traditionally based methods for managing records. Therefore, ensuring successful implementation of the EDRMS is critical as the system plays a vital role in the management of records that are required by key stakeholders for decision making. For it is with timely access to the right information, in the right format, that policymakers and

relevant stakeholders are able to make informed and impactful decisions, aiding in innovations and actions that support national development. Hence, the need to establish how Botswana Examination Council (BEC), is preparing a conducive environment for implementation of recordkeeping systems that aid in increasing organization efficiency and productivity.

## 2 Motivation of the Study

Increase in the use of information and communication technologies (ICTs) in both the private and public sector has resulted in the creation and proliferation of electronic-records (Matangira 2016; Mutsagondo 2017; Sigauke 2014). In a study by Nengomasha and Chikomba (2018: 252), it was revealed that:

> President Bill Clinton transferred 20 million email records and four terabytes of e-records at the end of his administration. His successor, President George W. Bush, transferred 200 million email records and 80 terabytes of e-records .... They all, however, lament challenges in the management of these e-records with recommendations to adopt e-records management systems (ERMS) to enhance their management.

As a result, various government agencies and private sector organizations are adopting EDRMS in order to deal with the various challenges of e-records management (Manikas 2015; Nengomasha & Chikomba 2018). Richmond (2010), as cited in Manikas (2015), identified the following factors as having contributed to the implementation of EDRMS in organizations: preservation of corporate memory, supporting of better management decision-making, controlling the creation and destruction of records, reduction of operating costs, improving efficiency and productivity, assimilation of new records technologies, minimization of litigation risks and compliance to regulatory frameworks.

On the other hand, literature has revealed that many initiatives to implement EDRMS especially in developing countries have failed, despite the huge costs invested in procuring the systems (Abdulkadhim *et al.* 2015; Mosweu *et al.* 2016). The reasons for the implementation failure have been identified as resistance to change, inadequate budget, lack of required knowledge and skills, lack of policy and procedure, lack of top management support (Aziz *et al.* 2018). Aziz *et al.* (2017) revealed that in Malaysia, organizations

faced difficulties in implementing the Digital Document Management Systems (DDMS) as they were not guided by appropriate guidelines or policies resulting in the high rate of users rejecting the implementation of DDMS. In Botswana at the Ministry of Trade and Industry, Mosweu *et al.* (2016) established that negative attitudes to computers, computer anxiety, the complexity of Document Workflow Management System (DWMS) and its incompatibility with current working practices influenced employees' unwillingness to adopt and use the system. Other challenges identified by Mosweu (2016), and Shonhe and Grand (2020), were that change management was poorly handled; lack of adequate training and motivation of change champions, top management support was partially lacking; a records classification scheme was hastily developed and training of system users was inadequate.

To achieve maximum efficiency of the EDRMS, several critical factors must be considered before and during the implementation process. This therefore, calls for an in-depth assessment of the prevailing environment in order to determine the readiness of the organisation before it can adopt an EDRMS. The operating environment must be conducive for easy adoption and adaptation of a new strategic system to achieve its intended role. Moreover, the present actions and recordkeeping practices affect access to records in the future. Similarly, the actions taken in implementing an EDRMS will affect its adoption, utilization and overall efficiency. Hence, the need for this study at BEC.

## 3 Case Description – Botswana Examination Council (BEC)

The BEC was established in June 2007 as a semi-autonomous organization and is mandated under section 5 of the BEC Act 11 of 2002 which was later amended by Bill No. 14 of 2019 to manage, conduct examinations and assessments in general education and technical, vocational education and training and to award certificates in respect of the said examinations and assessments (Botswana Examinations Council 2021). The BEC inherited the responsibility to conduct national examinations from the then Department of Examinations Research and Testing Division (ERTD) of the Ministry of Education and Skills Development. The BEC has six departments under the Office of the Executive Secretary - which are: Directorate of Examinations, Administration and Certification, Directorate of Research and Policy Development, Directorate of Human Resources, Directorate of Information and Communications Technology, Directorate of Corporate Services, Directorate of

Product Development and Standards. The establishment of BEC by the Botswana Government was aimed at improving the local national examinations processes. As a result, in the process of executing its duties, BEC creates and manages vast amount of records concerning students and the examination process as a whole. For this reason, records management has become an important part of BEC. Furthermore, there are several Botswana legislative requirements that BEC must comply with, such as the Electronic Records (Evidence) Act (2014), Data Protection Act (2018), Public Service Act (Act No. 13 of 1998), National Archives Act (No. 37 of 1978, as amended in 2007), and Cybercrime and computer related Crimes Act (2018) etc. In order to improve its records management processes and information flow, BEC found it necessary to implement an EDRMS that will enhance access and transparency to students' records and examination processes. The EDRMS is a subproject executed under the Botswana National Examinations Processing System (BNEPS).

The BNEPS programme is used for the capturing of candidate and examiner's information' and the administration of payments and receipts relating to examinations, as well as other software acquired by BEC (Botswana Examinations Council 2015). BNEPS project is being implemented in phases. Phase I includes the following subprojects; Malepa, Business Intelligence and Document Management. The Malepa application made up 90% of the BNEPS project and it is the heart of the examination processing system currently used by BEC (Botswana Examinations Council 2015). The Malepa application within BNEPS, enabled BEC to process all examinations locally and exercise more control over processes which led to reduced dependency on Cambridge International Examinations (CIE). The BNEPS Phase II project (which started in 2015) has three major subprojects; Business Process Management (BPM), Electronic Document and Records Management System (EDRMS) and Information Assurance System. BNEPS Phase II project was a continuation of BEC's efforts to attain the automation of those processes that were not automated by the introduction of Malepa (Botswana Examinations Council 2019). BNEPS Phase II aims at improving process consistency and efficiency, avail information and documents in a centralized storage for easy accessibility and increased security (Botswana Examinations Council 2019). As a result, assuring a high quality and secure examinations environment. It is no doubt that BEC took the right decision to implement an EDRMS to achieve the aforementioned goals.

As of 2019 BEC annual report, the BNEPS project status was at 71%

since the inception of the phase II. Achievements regarding EDRMS subproject are as follows; the project completion was at 53% (Botswana Examinations Council 2019). Significant progress was made in the implementation of the Document management system on SharePoint and the development of the Records policy and retention plan. In addition, to assure quality management of BNEPS processes and sub-systems, 'BEC was certified against the ISO 9001:2008 standard by Botswana Bureau of Standards (BOBS) in February 2017 and the certification expired on 22nd September 2018. Subsequent to this certification, BEC commenced work on a transition programme from the ISO 9001:2008 to the new ISO 9001:2015 standard' (Botswana Examinations Council 2019: 13).

BEC started the process of implementing an EDRMS in 2018. Yet, till to date the system has not been procured, despite the BWP6000000 initially allocated to BNEPS project in 2018 (Botswana Examinations Council 2019). According to preliminary investigation, an informal interview revealed that, since 2018, BEC has advertised a call for tenders about four times, yet the system was never procured. The main reason was that some bidders had quoted an amount which was above ICT budget. This implies that BEC was not financially ready for EDRMS implementation as this was resourced under BNEPS as the main project. Accordingly, other than financial readiness, this study sought to investigate what other factors are likely to continue hindering procurement of the system at BEC; by conducting a basic organizational readiness at a small scale level. Thus, based on the above premise, it is significant to establish what strategies have been put in place; and what actions have been taken by BEC to ensure successful implementation and adoption of the EDRMS. This includes assessing employee's awareness, involvement and training needs towards the EDRMS implementation.

## 4 Objectives of the Study

The main purpose of this study was to assess the organisation's readiness towards the implementation of an EDRMS. Consequently, the specific objectives of this chapter were:

1. To establish employee's awareness and involvement in the EDRMS implementation process.

2. To establish employee's ICT skills and training needs for the utilisation of an EDRMS.

3. To assess the current records management tools available at BEC.
4. To investigate the overall perspectives of employees on BEC records management program and its readiness status.

# 5 Literature Review

This section discusses the concept of organizational readiness and the factors that should be considered in preparing an organization for project implementation.

## *5.1 Organizational Readiness*

For successful implementation of an ICT solution, organizations should fully prepare the environment and organizational culture. Ensuring the organization is ready right from the pre-implementation stage increases the success rate of the EDRMS implementation. Thus, organizational readiness refers to employees shared resolve and beliefs in their capability to effectively adapt to the new changes and also the availability of a conducive environment (policies and ICT infrastructure) to transition into a new phase. According to Shea *et al*. (2014: 2) organizational readiness 'refers to the extent to which organizational members are psychologically and behaviorally prepared to implement organizational change'. Kabukye *et al.* (2019) and Weiner (2009) opines that readiness is a multifaceted and multilevel abstract construct encompassing individual and organizational aspects, which makes it difficult to assess. Hence the need to assess various readiness tools/ factors in different contexts. Additionally, the researchers are of the view that, organizational readiness is influenced by change management. This is also supported by Taiwo (2019: 26) who averred that 'organisations that successfully implement new systems control the disruption by managing the transition closely along the way, not just at the beginning or at the end'.

## *5.2 Organizational Readiness & Recordkeeping System Implementation*

Successful implementation of an EDRMS mandates an organization to be ready in different dimensions. This requires an organization to prepare numerous guiding documents such as a business case, Statement of User Requirements (SOUR), change management strategy, and updated records management tools

or policies and procedures relevant for the digital environment. However, majority of the studies show that most organizations' e-readiness status is low (Asogwa 2012; Kalusopa & Ngulube 2012; Mutula 2005). For example; Mukred *et al.* (2016) revealed that in Yemen, higher professional education institutions' ERMS readiness was low and evolving, as demonstrated by the slow adoption of ICTs, low records management standards and practices, and little integration in the national e-readiness framework. In Tanzania, Botswana and eSwatini, public sector agencies were also found to be lagging behind as their e-records readiness and efficiency levels in support of e-government were low (Kamatula & Kemoni 2018; Tsabedze & Kalusopa 2018). The major drawbacks identified in the latter studies were: weak, and disjointed regulatory framework on e-records; lack of skills; slow progress in the implementation of envisaged EDRMS, slow adoption of ICTs, and low capacity building among records management staff. Similarly, a study by Moatlhodi & Kalusopa (2016: 1) that sought to assess electronic records (e-records) readiness at the Ministry of Labour and Home Affairs (MLHA), in Gaborone, Botswana; revealed that:

> the level of e-records readiness at the MLHA included: inadequate legal and regulatory framework; average adherence to records management procedures, tools and standards; low awareness among staff of the records management programme and the national regulatory framework and on the NARMS pilot project; limited space for records management; slow progress in the implementation of NARMS and low capacity building as records management staff is rarely taken for training.

According to Jones (2008), the most significant barrier to successful EDRMS implementation is one of culture rather than cost is the acceptance of the system by the individuals and teams in an organisation who create, retrieve, and use electronic documents and records and will be the principal users of such system. Implementation of an EDRMS is vital as it can have a lasting and beneficial impact on the quality of e-records management. Therefore, ensuring organizational readiness is of outmost importance in the implementation process. As noted by Shea *et al.* (2014: 2) 'when organizational readiness is high, members are more likely to initiate change, exert greater effort, exhibit greater persistence, and display more cooperative behaviour, which overall results in more effective implementation of the proposed change'.

## *5.3 Organizational Readiness Factors Adopted in this Study*

Hamid (2018) and Irfan *et al.* (2018) opines that organizational readiness involves ensuring that people, policies and technology are all in sync during the implemenattion process. These factors were previously identified by Mukred *et al.* (2016) who proposed an ERMS readiness framework for higher professional education institutions in Yemen. The framework includes the following factors: policy, financial support, top management support, IT-Infrastrucure and training. Hamid (2018) stressed that when implementing electronic systems, policies ought to be updated so as to cater for management of electronic information. The human aspect involves training and raising awareness of the system to be implemented thereby increasing the chances of regulatory compliance and system utilization. The technology factor demands that adequate budget be solicited for improving the ICT infrastracture to meet up with the current demands. Consequently, Hamid (2018) assessed variables such as employee involvement as records management champions, training, existence of policies and availibility of resources. Thus, solidifying the need to consider these three factors (people, policies and technology) when implementing an IS project. Similar factors were earlier articulated by IRMT (2004), however, the factors were specific to e-records readiness. The factors included: (1) Policies and Responsibilities for Records and Information Management; (2) Tools and Procedures for Records and Information Management; (3) E-Records Management Products and Technologies; (4) Resources and Training for Records and Information Management Personnel; (5) Internal and Public Awareness of Records and Information Management and; (6) Compliance with Records and Information Management Policies and Procedures.

Another study by Taiwo (2019) and, Yusof and Aziz (2015) established that leadership style, funding/budget, human factors (staff resistance to change, unfamiliarity with computers, fear of computer and lower education levels) and ICT infrastructure; are organizational factors that determine their readiness to accomplish change. Cinite *et al.* (2009) and von-Treuer *et al.* (2018) further emphasizes leadership as a factor that can affect the adoption of change *initiatives.* This shows the importance of leadership commitment and support to project initiatives. In addition, a study on e-health readiness in Botswana also investigated and established that the following factors are critical components for successful implementation of any new initiative in a work place; infrastructural readiness, aptitudinal readiness, and attitudinal readiness (Mauco 2014). All these factors can effectively be managed to prepare for change only

when there is a change management strategy that lays down a clear agenda or vision for project implementation. Formulating a clear agenda or vision towards a change initiative is one of the critical aspects highlighted in change management theories such the Kotter's Eight-Stage Process for Successful Organisational Transformation (1996) as cited by Galli (2018).

Thus, this study examined BEC's readiness to implement an EDRMS partly guided by the IRMT e-readiness assessment tool and factors outlined by Mukred *et al.* (2016). This is done based on the following factors; employee's awareness and involvement, ICT skills/knowledge, training needs and records management tools. While one may think these factors are limited, it is important to note that this paper is sequel to a study titled 'Proposal of a Framework for Successful Implementation of an EDRMS: Based on Insights from BEC Records Managers'. Thus, the current chapter presents the findings based on the action officers' perspectives whereas the sequel paper provides findings based on the critical success factors (IS CSFs: technological readiness, top management support, training and involvement, resource availability, system-related factors, and work environment and culture) from the records managers point of view.

## 6 Research Methodology

The study was conducted at BEC-Gaborone between March 2021- February 2022. The total population of the study was 205 as of April 2022. Purposive random sampling was adopted to select action officers who are involved in creation and use of records, thus leading to a total sample size of 179. Office cleaners, drivers, switchboard operators, receptionists and security guards were excluded from this study as they are not directly involved in the records creation and use of records. The case study adopted a pragmatic approach where both qualitative and quantitative data was collected using document review, questionnaires and interviews. The study utilised a semi structured questionnaire which included open and closed ended questions. An online questionnaire (Google Forms) was distributed via WhatsApp and corporate e-mail. Similarly, interviews were conducted online via Microsoft teams. Quantitative data was imported from google forms to Microsoft Excel for further analysis, whereas, qualitative data was analysed manually. In some instances, qualitative data was grouped into themes whereas other data was presented as single excerpts to support the quantitative findings. Ethical considerations such as request for

research permit, avoidance of harm, non-violation of research participants' privacy, and non-discrimination were all taken into account.

# 7 Presentation of Study Findings and Discussion

This section presents the findings based on the data collection tools. First, the participants' characteristics are presented, followed by qualitative data from interviews, then the quantitative data from action officers.

## *7.1 Respondents Demographics*

Out of 179, a total of 123 BEC employees responded to the online questionnaire resulting in 69% response rate. Nulty (2008) has cited different authors such as Babbie (1973), Baruch (1999) and Richardson (2005) who all agree that response rates above 50% are considered good. Hence, the current study' response rate is considered good and acceptable for an online survey which tends to have lower responses as compared to paper-based surveys (Shih & Fan 2009; Yetter & Capaccioli 2010).

Table 1 presents the respondents' demographic details. As can be seen from the results most (n=39, 32%) of the respondents were from the Examination Admin and Certification, followed by Product Development and Standard (n=27, 22%). This is not surprising as the two Directorates have the highest number of employees (54 and 38 respectively) in the entire organization. With regards to gender, the study findings revealed that BEC is dominated by females (n=67, 54%) than males (n=56, 46%). These findings imply that there are more females than males working at BEC.

**Table 1: Respondents' Characteristics (n=123)**

| | **Count** | **Frequency** |
|---|---|---|
| **Name of Directorate** | | |
| Office of the Executive Secretary | 9 | 7% |
| Human Resources | 6 | 5% |
| Corporate Services | 19 | 15% |
| Examination Administration and Certification | 39 | 32% |
| Product Development and Standard | 27 | 22% |

| | | |
|---|---|---|
| Information Communication Technology | 9 | 7% |
| Research and Policy Development | 14 | 11% |
| **Gender** | | |
| Female | 67 | 54% |
| Male | 56 | 46% |
| **Age** | | |
| 18-34 | 9 | 7% |
| 35-54 | 72 | 59% |
| 55 and Above | 42 | 34% |
| **Qualification** | | |
| Certificate | 0 | 0% |
| Diploma | 9 | 7% |
| Bachelor's Degree | 75 | 61% |
| Postgraduate | 39 | 32% |

**Source: Field data (2022)**

As pertaining to age distribution, majority (n=72, 59%) of the respondents were between the age of 35-54 years, whereas those above 55 years were 42 (34%). The 18-34 age category had the least (n=9, 7%). These findings may imply that BEC employees are mostly within the young adults' category, who are likely to be more active and receptive to technology. Lastly, on this section, respondents were asked to indicate their level of qualification. The findings as shown on Table 1 above indicates that majority (n=75, 61%) of the respondents hold a Bachelor's Degree, followed by those with Postgraduate degree (n=39, 32%) and Diploma (n=9,7%). None of the participants holds a certificate qualification. It is praiseworthy that the majority of the employees at BEC hold a bachelor's degree and higher. This is likely to put BEC at an advantage, as implementation of an EDRMS is likely to be accepted due to the employees' educational exposure. The following section presents and discusses the findings from the interviews.

## *7.2 Data from Interviews*

Interview data was collected from four (4) Heads of Departments at BEC. Interviewees were asked five questions and their responses are presented

according to the questions asked. The first interview question was 'What informed the decision/ motivated the need to implement an EDRMS?' Responses received were as follows:

> *Nowadays the trend is to migrate from manual systems to electronic format. BEC should not be left behind in terms of automating its processes, so that we don't lose their records because in paper format records can be easily lost.* (Interviewee 1).

> *This is the direction in which developments are heading. If we don't act, BEC will be left behind and become the laughingstock of the economy* (Interviewee 2).

> *The motivation for me stemmed from the difficulties in managing non-electronic records, especially the challenges of retrieving a specific record from hard copies. Even now, when I urgently need a record, like the letter I required yesterday, finding it became uncertain as it was filed ambiguously. However, with electronic records, a simple search function would have sufficed. For me, the ease of retrieving records serves as the primary motivation.* (Interviewee 3).

> *According to my understanding EDRMS is Botswana National Examinations Processing System (BNEPS) phase 2 project. So, I know purpose of BNEPS phase 2 project was to enhance the examination process through improved core and interfaced process with structured electronic management of documents and enhance information security. That was the aim of BNEPS phase 2 projects. And I think EDRMS is one of them.* (Interviewee 4).

Based on the responses obtained from the interviews, it is evident that the motivation to implement an EDRMS was based on the following factors; (1) Keeping up with the trend; (2) Fear of losing paper records; (3) Easy retrieval of records; (4) Improve operational efficiency and effectiveness; and (6) Enhanced information security. These findings are similar to what was presented by Manikas (2015) in which it was observed that respondents in Greek companies were of the view that the EDRMS is capable of improving efficiency, controlling costs, protecting records and improving overall company's

environment. Similarly, this is also supported by Nengomasha and Chikomba (2018), who stated that the implementation of an EDRMS in the public service of Namibia was driven by the need to enhance records management in the public service. This depicts that EDRMS implementation must be driven by a business need.

The second interview question sought to collect data relating to the budget allocated to the implementation of the EDRMS. Some of the responses received were:

> *The budget is basically inadequate from what we have seen. But in terms of figures, EDRMS was budgeted P 1.8 million, just for the records part.* (Interviewee 1).
>
> *The budget is classified; I can't tell you that.* (Interviewee 2).
>
> *If I recall, because this project started long time ago, I don't know if it is still relevant …. If I recall well, I think they were budgeted around 3 million or so. As a project of BNEPS phase 2, so I don't know how they allocated funds for different sections.* (Interviewee 4).

It is praiseworthy that BEC understands the importance of records and took the decision to implement an EDRMS. Though the overall budget for the EDRMS implementation was not clearly revealed, it is clear that records management module was put on the forefront and given a considerable budget (1.8 million out of the supposed 3million); unlike in other institutions where the IT department would be given more budget as the EDRMS implementation is usually considered an IT project only. Forgetting that, before the actual implementation there are numerous processes (business requirements analysis, developing business case and the SOUR document etc.) and other tasks that need to be complemented by records managers before IT purchases the software. On the other hand, as shown from the above interview excerpts, BEC undermined the costs of implementation, that is why the system has not yet been procured.

The third question was 'which department is responsible for the implementation of the EDRMS and why?' Responses established that BEC understands the need for assigning responsibilities to the appropriate office which is the Records Management Unit (RMU). The BEC RMU is fully responsible for the EDRMS. The interviewees acknowledged that the ICT

department is there to support and facilitate with the implementation process. Some of the response supporting the above view were;

> *The department responsible is Records [Office] which is under Human Resources, because they are the ones who are responsible for records, they are the [information] managers, and they will be assisted by the Information Communication Technology*. (Interviewee 2).
>
> .
>
> *While in my view the department that is responsible or that is supposed to be responsible is corporate services through its records management unit. For me this is like we just automating a process that is already there and it doesn't mean we need to change the process owner when automating.* (Interviewee 3).
>
> *… ICT is supposed to support so that the system is available. Get me clear, to support. After the system is implemented it will be under Human Resources. The Records Management Unit is the one to implement the EDRMS, and SharePoint will be for different directorates because they choose what to share to the whole of BEC. The EDRMS should be under records management unit as they are the rightful place, where information should be*. (Interviewee 4).

The fourth interview question sought to collect data relating to change management initiatives. For this reason, interviewees were asked to indicate the change management strategies that had been put in place to ensure that employees were on board. Responses to this question were as follows;

> *The office of Strategy Management is assisting in terms of the change management. They have put up a change management strategy, they also do what is called change Fridays, where employees are familiarised about projects. BEC also have the change champion in different directorates or units, who drives the change in those units. There is also communication strategy that we also comply with, where employees on regular basis should be or are informed about what is going on regarding the project.* (Interviewee 1).
>
> *BEC has a global way of implementing change which is managed under*

> *the strategy department. So, what this means is, once the system is identified and awarded, change agents for the system will be identified, and they will be trained and they will be able to impact change on the rest of the employee.s* (Interviewee 2).

> *So far really, they are no strategies that are in place to ensure change management. My thinking is perhaps the approach that we are taking, is that we get the solution. And when the solution is there, we take employees on board so that they see it live and probably they appreciate it from that perspective. But they were no strategies before prior to deciding to go that route.* (Interviewee 3).

> *The project began in 2014. Since then, I've gathered bits and pieces of information from various committees. Management, I believe, is informed as they receive updates from these committees. However, as an organization, we seem to lack comprehensive awareness. Employees are left uninformed; they are not kept in the loop. For instance, during a SharePoint demonstration, I inquired about the EDRMS, and I was informed that it is still under evaluation. But I've heard these words repeatedly.* (Interviewee 4).

As presented on the excerpts above, the findings show that there is divided opinion. Interviewee 3 and Interviewee 4 were of the view that change management is lacking at BEC as some employees were left lagging behind. While Interviewee 2 was of the view that change management was yet to be conducted once the system is implemented. Thus, implying that efforts towards change management are insignificant. This might be true as none of the interviewees indicated if there is prior ICT training before EDRMS implementation. Moreover, a search for a documented change management strategy did not yield any results. Nonetheless, some interviewees revealed that there are some activities conducted to ensure that employees are on board and aware of what is happening in the organization. The specific strategies employed include;

1. *Communication* – through 'change Fridays', where employees are familiarised about projects; and,
2. *Forming a coalition and User engagement* – through establishment of change champions who drives the change in their different units as narrated by interviewee 1.

The last interview question sought to establish if BEC had formulated a clear agenda for EDRMS implementation. The responses were as follows:

> *The clear agenda is there, because BEC have deliverables and milestones. So, I will say yes, there is a clear agenda because we know what to deliver to the organisation.* (Interviewee 1).

> *The problem is that it took long to award this tender, now probably it will need to be reviewed, to be aligned to current trends*. (Interviewee 2).

> *I am not aware of any formulated agenda for the implementation of this solution. This might explain why, as mentioned earlier regarding change management, it seems that the current approach involves bringing employees on board after acquiring the solution, rather than having a predetermined plan. We understand the necessity, but I have yet to come across any specific implementation agenda.* (Interviewee 3).

> *I cannot determine the clarity of the agenda as it seems to rely on various structures. I am unsure whether there is effective communication between these structures. The project has been ongoing for a considerable period, and there is a possibility that the budget might be surpassed due to unforeseen events.* (Interviewee 4).

Once again, the responses captured above show that there are divided opinions as there were three (3) interviewees who were not aware of the existence of the implementation agenda. A search for the implementation agenda yielded no results, as some documents were classified and deemed confidential. It can therefore be concluded that BEC lacks a change management strategy. If top management such as the directors interviewed in this study are not aware if there is a clear agenda for EDRMS implementation, then the implication is that majority of the employees at BEC have not been communicated to, clearly with regards to the intended changes. Lack of communication prior implementation has a negative impact on system acceptance, adoption and utilization.

The next section presents the findings from the online questionnaire (both quantitative and qualitative responses).

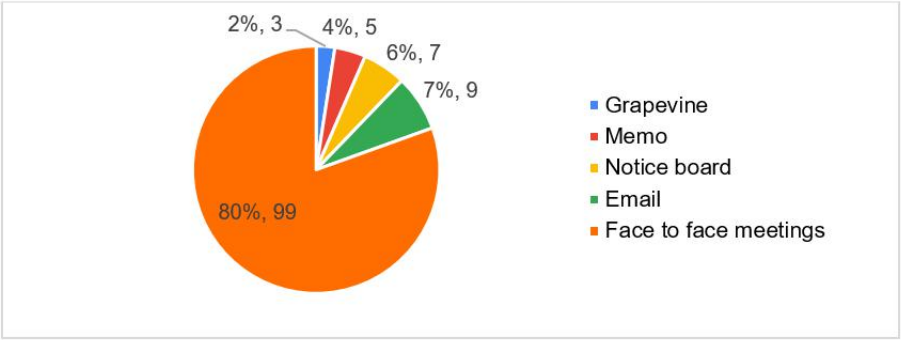
## *7.3 Data from Questionnaires*

The data presented here, aims to establish the action officers' awareness about EDRMS implementation and their perceptions towards the BEC readiness to implement the system.

### *7.3.1 User Awareness and Engagement*

A key issue that the study sought to establish relates to user involvement and engagement during the preparatory stage. Hence, the study participants were asked if they are aware that BEC is in the process of implementing an (EDRMS). Majority (n=113, 92%) said 'yes' while 10 (8%) respondents said 'No'. Respondents were further asked to indicate how they were made aware of the decision to implement the EDRMS.

**Figure 1: Communication Method (n=123)**




**Source:** Field data (2022)

The findings as shown on Figure 1 above, indicates that BEC utilizes face to face meetings (n=99, 80%) to convey important information. This is so as 80% (n=99) of the respondents alluded to the fact that they were made aware of the change initiative via face to face meetings. On the other hand, 7% (n=9) said that details concerning the change initiative was communicated to them through email, while 6% (n=7) said it was conducted through written notice boards.

Respondents were also asked if they were consulted when the Statement of User Requirements (SOUR) document was formulated. Majority

(n=96, 78%) of the respondents said 'no' whereas 27 (22%) respondents said 'yes'. Amongst those who said 'yes' that they were consulted during the development of SOUR document, they expounded that they specified the following system requirements: *The system should be user-friendly and easy to navigate with guidance available, have embedded retention/ archive requirements for records with notification automatically sent and have controlled access for confidential records* said respondent No 12.

It is commendable that BEC values face-to-face communication as it is the most effective way of disseminating information and ensuring that all the intended recipients have received the message. However, it is disheartening to note that majority of employees were not consulted when the SOUR document was formulated. This is the most critical stage of involving users in order to understand their views on the type of system they are expecting and to know their business requirements in the various units. This implies that, the system to be deployed by BEC is not based on employees' requirements as the end users were not surveyed. It was crucial for BEC to collect system requirements from the end users so as to understand how they have been interacting with current systems and what functionalities they wish to continue with. This would help BEC to properly plan for integration and customization. Failure to do this may result in the system not performing at its best, thereby failing to meet the initial intended business needs. Thus, leading to fragmented information and bottlenecks in information flow.

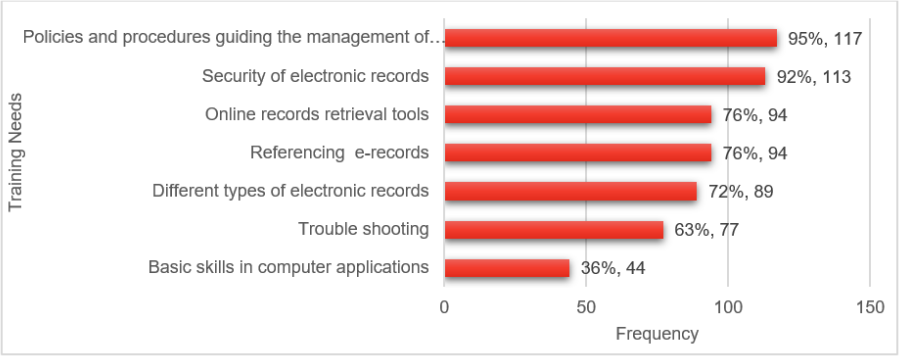
### *7.3.2 Skills and Training*

Another aspect that the study sought to establish was whether respondents had adequate technological skills needed to create, name and share electronic records. The findings as shown in Figure 2 below revealed that 76%(n=93) of the respondents have basic skills to interact with e-records whereas 24% (n= 30) said they don't have.

Secondly, on skills and training, the study sought to identify the areas which employees felt they need more training. Therefore, respondents were further asked to indicate the areas in which they would like to be trained in, so as to improve their technological skills with regards to e-records.

As shown in Figure 2 below, the results indicated that BEC employees have basic skills in computer applications as only 36% (n=44) highlighted the need for training in this area.

**Figure 2: Skills and Training Needs of Employees at BEC**




**Source:** Field data (2022)

Nevertheless, the majority of the respondents indicated that they need training in the following areas:

(1) Policies and procedures guiding the management of e-records (n=117, 95%);
(2) Security of electronic records (n=113, 92%);
(3) Online records retrieval tools (n=94, 74%);
(4) Referencing e-records (n=94, 76%);
(5) Different types of electronic records (n=89, 72%); and
(6) Trouble shooting (n=77, 63%).

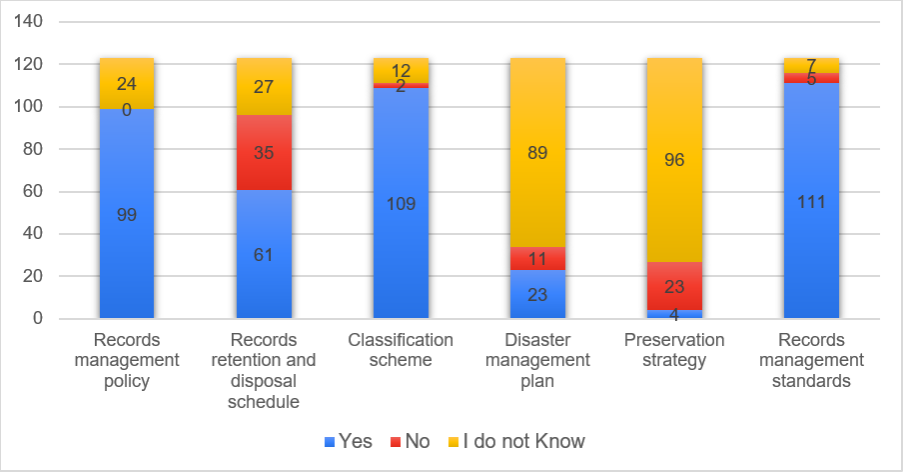
### *7.3.3 Records Management Tools*

The study further sought to establish if BEC is ready for an EDRMS implementation, especially with regards to policy documentation guiding both physical and digital records management. The respondents were asked to indicate the records management tools that are in place at BEC. Majority of the respondents indicated that the following are available:

(1) Records management standards (n=111,90%);
(2) Classification scheme (n=109,89%);
(3) Records management policy (n=99,80%); and
(4) Records retention and disposal schedule (n=61, 50%).

On the other hand, majority of the respondents indicated that there are not aware of the availability of preservation strategy (n=96, 78%) and disaster management plan (n=89, 72%). On the negative side, only a few respondents indicated that there was no retention and disposal schedule (n=35, 28%) and preservation strategy (n=23, 19%). These findings are demonstrated in Figure 3 below.

**Figure 3: Records Management Tools at BEC**




**Source:** Field data (2022)

A document search for the above records management policy documentation was done to ascertain their existence at BEC. The search revealed that the Records Management Policy (RMP) was available and it was implemented in 2019. This RMP makes provision for both physical and electronic records. Additionally, no other standards were found related to digital records management or EDRMS implementation. On the other hand, document review established that a retention and disposal schedule was still under development, while searching for the preservation strategy and disaster management plan yielded no results. Finally, document review also established that the Business case and SOUR document were not specifically developed for the EDRMS, rather they were developed for a main project called BNEPS.

Study participants were also given an open -ended question to state their view about the current records management programme at BEC. Some respondents indicated that the programme is good as they are able to retrieve files and also there are records management policies in place. However, most of the participants indicated that the programme needs improvement as there were problems in the following areas:

a. **Delayed or inefficient retrieval of records:** this is evidenced by respondents who noted that the records management programme is still manual and goes against Covid-19 protocols. Respondent 112 further explained that *the current system is cumbersome as it is so manual. Sometimes files cannot be located for a long time*. In addition, *... it is not secure as files are always lost ….*

b. **Lack of management support:** respondent No. 76 highlighted that *there is need to implement an electronic system to deal with the current problems we have in our manual system, however, the implementation progress is very slowly, …. and there seems to be less interest from some people who are supposed to be in the forefront embracing the program*. This comment indicates the likelihood of lack of support by some top managers in the organization. As already indicated from the interviews above, some top managers interviewed were not certain of the implementation strategic vision or agenda and the budget allocated to the project. This shows lack of engagement on their part.

c. **Problematic tracking of files:** respondents lamented that the current records management programme entails manual processes which makes it difficult to track files. Respondent No.14 alluded that *tracking of files is still problematic,* while respondent #34 added that *the current system is labour intensive and too difficult to trace a file*. Respondent No. 56 further concluded that *our hope is in the new system*.

Finally, respondents were asked to indicate their views towards BEC's readiness to implement an EDRMS. There were mixed opinions with regards to this statement. Some respondents said 'yes' that BEC is ready as it has the necessary resources, produces a lot of e-records and has adequate policies and procedures in place. Respondents No. 112 stressed that 'I believe so because

the idea has been welcomed and the solution is seen as a necessity so I believe BEC is ready. The timing is also appropriate as BEC is transforming … and records cannot continue to be managed manually'. Respondent No. 45 also believes that BEC is more than ready for the EDRMS implementation. The respondent confidently argued that,

> *Yes BEC is very ready to implement [an] EDRMS because Covid-19 has taught us that e-records are very important. Hence, the fact that the organization is already producing a lot of electronic records it is a sign that it is ready for an e-records management system.*

On the other hand, participants who felt that BEC was not ready for EDRMS implementation, were of the view that BEC is still facing challenges with the current manual system and lacked required skills. This is evidenced by respondent No. 33 who noted that,

> *If the manual system is giving us so many challenges what more of the electronic one. Personnel in charge of the manual system is reluctant to assist fully and procedures in place are often not followed. Where areas for improvement are identified no action is taken. Infrastructure is also another challenge for implementation of the system.*

In addition, respondent No.12 also alluded that *BEC is not yet ready, because there has been no change management conducted yet,* while respondent #16 also alluded that *I don't think [BEC] has the resources to carry through this assignment; in terms of finances and (Internal) requisite skills needed to progress this project*. Lastly, respondent No. 91 opined that *I am not sure if the office has the right skills required, it really depends how the new system will be resourced*.

## 8 Conclusions

This study aimed at assessing organizational readiness and to analyse the employees' perspectives towards the implementation of an EDRMS at BEC. Overall the study established that BEC is lagging behind in its preparations. This is evidenced by lack of top management support, lack of a clear implementtation agenda, lack of training, lack of user involvement and lack of documented

change management strategy. BEC failed to plan financially for the EDRMS as the business case that would have projected the actual costs required for the implementation was never done. BEC depended on the SOUR and Business case developed for a bigger project called Botswana National Examinations Processing Systems (BNEPS). This explains why, BEC has failed to procure the system till date because they have been considering EDRMS implementation as a sub-project. In addition, BEC's records management programme lacks a business continuity plan as the organization is yet to develop a preservation strategy and disaster management plan. BEC's records management environment is not fully prepared for an EDRMS. Because, challenges in the physical environment will definitely be escalated in the electronic environment. If this happens, then information flow, effective control of records creation, service delivery and job productivity will be affected. Lack of proper information management in organization indirectly affects socio-economic development. For the basis of sustainable development is partly based on the ability to access the right information, at the right time, in the right format so as to make informed decisions. Therefore, this study findings serve as a benchmark for other organizations and influence policy and decision making relating to EDRMS implementation. Based on the findings of this study, BEC may be able to avoid cost implications arising from implementing systems without considering all the necessary factors necessary for successful implementation.

Finally, it is praiseworthy employees' opinions depict a positive and receptive mind towards the implementation of the EDRMS. Employees see the need for the systems and seem to be willing to move into the digital era so as to avert problems such as delayed access to information and problematic file tracking. However, BEC has failed to satisfy employees needs by denying them training and not implementing the system at the time employees are eager and looking forward to the new solution. Thus, despite the fact that majority of the respondents indicated that they have basic technological skills needed to create, name and share electronic records, many are still yearning for further training in areas pertaining to policies, security, retrieval tools, referencing techniques, types of e-records and trouble shooting skills. This shows that BEC has not put much effort in preparing the employees for the EDRMS, especially in terms of training. This finding therefore, concurs with the interviewees opinion that change management is lacking. The EDRMS not only offers a new concept of document and records management but also instigates a cultural shift within the affected businesses. Hence, it is important to note that lack of skill to use the

systems produces laggards. This study therefore, concludes that BEC is not yet ready for an EDRMS implementation.

## 9 Recommendations

Based on the above findings, the researchers recommend that BEC strategy development office should develop the change management strategy specifically for the EDRMS project, raise awareness to employees and ensure that the action plan is followed. Though the system has not yet been procured, BEC need to engage end user in vigorous training to prepare their minds and equip them with the ability to operate and interact with e-records especially with regards to the areas of training indicated above. The Records Management Division also need to undertake thorough research on the international standards and policies relating to EDRMS implementation, then embark on reviewing of current records management tools and policies to pave way for successful EDRMS implementation. Lobbying for top management support is also critical as it enables provision of adequate resources for the project. Lastly, BEC should formulate a specific SOUR and business case directed to the EDRMS implementation.

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