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CRITICAL SUCCESS FACTORS IN ELECTRONIC DOCUMENT AND RECORDS MANAGEMENT SYSTEMS IMPLEMENTATION AT THE MINISTRY OF TRADE AND INDUSTRY IN BOTSWANA

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Abstract

The quest by the Government of Botswana to leverage the benefits brought about by the utilization of information and communication technologies (ICTs) in the delivery of public services has seen an increase in the implementation of electronic document and records management systems (EDRMS) in the public sector. According to the Commonwealth of Australia (2011), an EDRMS is a software application that manages a range of digital information, including word-processed documents, spreadsheets, emails, images and scanned documents. It combines the features of an electronic records management system and an electronic document management system. The Ministry of Trade and Industry (MTI) implemented an EDRMS, called the document workflow management system (DWMS), for its electronic records. Literature on the implementation of EDRMS shows that certain factors are critical for the adoption of EDRMS, which are referred to as critical success factors. They include top management support, good recordkeeping awareness and practice, early development of a records classification scheme, adequate and ongoing training and support, and well thought through change management strategies. This paper reports on the findings of an empirical study that investigated factors affecting the adoption and use of DWMS by action officers and records officers at the MTI. Although the study was mainly positivistic in nature and was supplemented by an interpretivist approach, this paper reports only the findings from interviews and documentary reviews. The study revealed that change management was poorly handled; top management support was partially lacking; a functional records classification scheme was hastily developed and put to use as part of DWMS implementation; training of system users was inadequate, to mention just a few. This paper posits that the EDRMS implementation is not just about dealing with technological factors as there are other non-technological factors that are critical for its success and these need to be well understood and appreciated by organizations as they contribute to the success of EDRMS implementation.

Key words: Electronic document and records management systems (EDRMS), Document workflow management system (DWMS), Ministry of Trade and Industry (MTI), Botswana

Introduction

Many organizations across the globe, both public and private, have implemented electronic document and records management systems (EDRMS) solutions either as a product on its own or as part of a larger enterprise system (Jones 2008). This has been largely for purposes of improving organizational records management and for compliance with legislative and regulatory requirements (Nguyen, Swatman and Fraunholz 2008; Williams 2005). Mnjama and Wamukoya (2007) observe that modern information and communication technologies (ICTs) are adopted by most governments to provide effective and efficient services to citizens. The Government of Botswana has implemented ICTs in public service delivery as part of its wider e-Government Strategy, hence, the electronic document and records management systems (EDRMS) dubbed the document management workflow system (DWMS) in the Ministry of Trade and Industry

(MTI) in Botswana (Government of Botswana 2012). Prior to the implementation of the National e-Government Strategy by the Government of Botswana in 2011, a National ICT Policy, commonly known as the Maitlamo Policy, had been adopted in 2007 with the vision of making Botswana globally competitive in a knowledge and information society where lasting improvement in social, economic and cultural development is achieved through effective use of ICTs (Government of Botswana 2007). The implementation of DWMS (a type of EDRMS) mirrored the ideals of the Maitlamo Policy. The DWMS was implemented in 2008 by Consult IT (a local IT company) and its overseas partner, SQL View of Singapore, with the intention of automating records management processes at MTI (Consult IT 2012). SQL View owns the platform for the implementation of DWMS. The system platform is known by its trade name, knowledge repository information system (KRIS). The main objectives of the implementation of the DWMS were:

1. To assist MTI to improve turnaround times for responses to correspondence for both internal and external communications.
2. To improve accessibility of records or files by authorized officers, even when the Records Management Unit (RMU) was closed for business.
3. To enable timely remote access to records by authorized officers in order to reduce the cost and time taken to move files between offices.
4. To streamline RMU processes by ensuring that efficiencies brought about by automation are passed to its daily operations.

When DWMS was implemented in 2008, the first phase was the implementation of KRIS File Tracker, a module for managing physical files electronically. The second phase was to implement the KRIS Records Manager module for full automation. Although the implementation had started in 2007 (Pusoetsile 2015), EDRMS had not yet been rolled out to MTI departments by 2013 when this study was conducted, although, initially, rollout was supposed to be a one-year trial phase with the system being implemented at the ministerial headquarters only (Consult IT 2012).

Electronic document and records management systems, electronic document management systems and electronic records management systems

Studies on digital records have used different terms such as electronic document and records management systems (EDRMS), electronic document management systems (EDMS), electronic records management systems (ERMS), enterprise content management (ECM) and integrated document and records management systems (IDRMS) (Nguyen, Swatman and Fraunholz 2007; Katuu 2015). Nguyen, Swatman and Fraunholz (2007) observe that a limited number of case studies in the literature about the implementation of records management systems report on the use of a variety of different names to refer to such systems, such as electronic records management systems, electronic document systems or electronic document and records management systems, and even enterprise content management systems. In this study, such terms are also used interchangeably in a similar way as they have been discussed in various academic fora (Nguyen, Swatman and Fraunholz 2007).

EDRMS implementation in developed countries

Developed nations view corporate information and records as strategic resources (Nguyen et al. 2008). The implementation of EDRMS satisfies the need to manage corporate information and records strategically (Roberts and Bretschneider 2005; Wilkins, Holt, Swatman and Khan 2007). Several case studies of EDRMS implementation in developed countries such as the United

Kingdom, New Zealand, Australia, Canada, Iceland and the United States of America have been reported in literature just to mention a few.

EDRMS projects were implemented in the United Kingdom's National Weights and Measures Laboratory, the National Health Services Purchasing and Supply Agency, the Public Records Office of Northern Ireland and the Estates Department of the British Library (Gregory 2005; Smyth 2005; Williams 2005; Maguire 2005). The main purpose of system implementation at the various organizations was to improve on their records management shortcomings and to satisfy legislative requirements. All EDRMS solutions met the functional requirements for electronic records management systems as required by the National Archives of the United Kingdom (TNA) (NAUK 2002). Central to the successful uptake of EDRMS among the organizations were factors such as top management support, user training in both basic records management and system use, user involvement from project inception and change management. EDRMS were implemented for similar reasons as in the United Kingdom. A slight difference in EDRMS implementation was reported in Australia, at the City of Charles Sturt (Nguyen et al. 2008) where an EDRMS was implemented to address email management problems, inadequate space for records storage which led to problematic retrieval of records, loss of corporate information and limited staff ability to share and track documents. Another EDRMS was implemented at the Department of Parliamentary Services. Successful uptake of the EDRMS in both cases was dependent on top management support; user acceptance; communication of the benefits of system usage; training of users, including early adopters; user involvement, both during the pilot stage and the implementation stage; and change management (Nguyen et al. 2008; Commonwealth of Australia 2011; Wilkins, Swatman and Holt 2009).

Compared to system user acceptance at the National Weights and Measures Laboratory in UK, there was greater resistance to changes in work culture brought about by system implementation at the NHS Purchasing and Supply Agency (Gregory 2005). A carrot and stick change management strategy was used to encourage acceptance of the EDRMS. Gunnlaugsdottir (2008), Australia 2011 and Wilkins et al. (2009) opine that EDRMS projects are change management projects. In Iceland, a case study of ERMS implementation in eight organizations (Gunnlaugsdottir 2009) revealed that the ERMS faced some form of resistance by users as they felt it was complex and not user-friendly. The study also discovered that factors such as visible top management support on the EDRMS project and the actual use of the EDRMS, participation of users in adapting the EDRMS to organizational needs and training of users on both records management and system use promoted ERMS system user acceptance in the successful deployment of an ERMS. Williams (2005), Vevaina (2007), Nguyen et al. (2008), Commonwealth of Australia (2011) and Yin (2014) made similar observations on the EDRMS implementation in New Zealand and Australia.

Similar factors, which accounted for EDRMS user adoption at the City of Charles Sturt in Australia, were also reported in public sector organisations in New Zealand (Yin 2014). Change management was also cited as one of the components that contribute to successful implementation of an EDRMS, in conformance with information systems project implementation (Downing 2006; ICA 2008; Adam 2008). The big bang implementation approach and complex system functionalities negatively affected EDMS implementation in New Zealand public sector organizations (Vevaina 2007). Users were overloaded with work at once, leading to employees developing an aversion for the system. The study also discovered that system functionalities were unpopular among employees. They felt it was imposed on them and even suggested that another EDMS be deployed to replace the one in use. The study in New Zealand advised that for future organisation-wide EDRMS implementation, critical success

factors in EDRMS implementation needed to be taken into consideration and mitigated in order to improve overall user experience and achieve successful implementation (Yin 2014).

Public sector agencies in the United States of America, such as the Government Accountability Office (GAO), United States Office of the Controller of the Currency (OCC) in the Department of the Treasury and the United States Nuclear Regulatory Commission (NRC) implemented EDRMS solutions to speed up the delivery of public services (Sprehe and McClure 2005). User acceptance of the implemented EDRMS was deemed important for its adoption in all the cited case studies. According to Sprehe and McClure (2005), less intrusive, simple and easy to use ERMS without too many activities when performing records management tasks encourages users widely to accept and use them. Apart from ease of use, Young (2005) found that effective communication, user involvement in system development, as well as the closer collaboration between IT staff and records management staff, helped sway ERMS user support and uptake. Other factors found to promote successful implementation, adoption and use of an EDRMS are cited as perceived usefulness of a system, social influences, facilitating conditions, management support and good change management (Venkatesh, Morris, Davis and Davis 2003; Kwatsha 2010; McLeod, Childs and Hardiman 2011; Yin 2014; Mosweu, Bwalya and Mutshewa 2016).

EDRMS implementation in a Canadian municipality was meant to improve work productivity, promote information sharing, reduce the volume of paper records and facilitate production and maintenance of authentic and reliable electronic records (Xie 2006). Prior to system implementation, a business process analysis, which involved system users, was undertaken. This move turned out to get user buy in, which lead to the adoption of the system during implementation. Other factors that promoted system user uptake were training on records management and training on system use. The EDRMS implementation was hailed as a success as its objectives were achieved (Xie 2006).

EDRMS implementation in developing countries

Developing countries in Africa, just like their developed world counterparts, have also embraced the implementation of information systems such as EDRMS as part of the wider e-Government reforms (Mnjama and Wamukoya 2007). The implementation of EDRMS elsewhere, as in the US, UK and New Zealand within the context of e-Government, enabled governments to manage resultant electronic records as national assets and trusted information (Xie 2009). According to Bwalya (2011), ICTs have the potential and capability to leverage benefits and contribute immensely to any country's development agenda. For example, ICTs revitalized the socio-economic status of countries such as Brazil, Singapore and South Korea. Bwalya (2011) observes that, in Africa, Botswana and Zambia have positioned themselves well to accrue benefits provided by ICTs through a well laid down institutional, legal and policy framework to support its implementation.

The Office of the Presidency in South Africa (OPSA) and the Eastern Cape Office of the Premier implemented an EDRMS for various reasons (Kwatsha 2010; Munetsi 2011). At OPSA, it was done to comply with legislation, specifically the National Archives and Records Services Act of South Africa, which prescribes that public bodies should keep and maintain records, including electronic records (Government of South Africa 1996). Before its implementation, OPSA experienced problems such as loss of correspondence, misplaced files, difficult retrieval of files and duplication of documents (Kwatsha 2010), which placed OPSA at risk of not complying with the law. The study by Kwatsha (2010) mainly examined successes and failures in the implementation of the EDRMS and found that strategic, social and technical factors affected its smooth implementation. Actually, five years after implementation, only 60% of staff used the

EDRMS for official business. The Eastern Cape Office of the Premier implemented an EDRMS to ensure effective and efficient governance (Munetsi 2011). Specifically, the government wanted to use the EDRM to create a safe and secure environment capable of protecting people, property, records and information (Munetsi 2011). The study revealed that the majority of staff members resisted using the system because of a lack of adequate skills and competencies in the new technology, as well as feelings of computer anxiety. The two studies by Kwatsha and Munetsi highlighted the fact that successful EDRMS user uptake depends on end user acceptance, which happens when users have skills to use the system and when users are not intimidated by the system (Kwatsha 2010; Munetsi 2011; Katuu 2015).

In Namibia, the Office of the Prime Minister and Office of the President implemented an EDRMS in 2009 (Government of Namibia 2010). The EDRMS, known as E-Office, was customized to comply with records management requirements as set in the Archives Act (Government of Namibia 1992). The success of the E-Office implementation was due to the provision of adequate resources, change management and training of users. Its success was a huge achievement as a previous study using the International Records Management Trust E-Readiness Tool had concluded that the public service of Namibia was not ready for the deployment of an EDRMS (Nengomasha 2009). In Ethiopia, the government implemented the National Integrated Records and Library Management Information System (NIRLMIS) in order to modernize its public services. The NIRLMIS has integrated libraries, archives and records management functions (Mammo 2012). Mammo (2012) surveyed the acceptance of the NIRLMIS from seven government organizations and collected quantitative and qualitative data using TAM as a framework. Interviews were also conducted with officers responsible for the coordination of NIRLMIS nationally at National Archives and Library Administration. The study concentrated on the archives and records management component of the system. The study concluded that NIRLMIS was accepted well by the majority of its users.

In the context of Botswana, developments in the ICTs have enabled the government of Botswana to introduce ICTs in most of its business value chains (Mosweu, 2014). The National ICT Policy of Botswana and the National e-Government Strategy provide a policy framework for the deployment of ICTs in the delivery of public services (Government of Botswana 2007; 2012). The potential benefits of ICTs are increased efficiencies and effectiveness, reduction in cost of service delivery, and reduction of corruption, among others (World Bank/IRMT 2000). Records are essential to the smooth operation of public sector organisations in the performance of their mandate (Public Records of Northern Ireland 2009). When records, whether paper or electronic, are not managed properly, organizations find it difficult to carry out their core business and struggle to account for decisions made.

The National Archives and Records Management System (NARMS) was a computerized archives and records management system that was implemented by Botswana National Archives and Records Services (BNARS) for purposes of overcoming challenges and limitations of the paper-based records management systems, improving the accuracy of information, promoting speedy information retrieval and generally for improving productivity in the delivery of archives and records management services (BNARS 2003; Moatlhodi 2015). It was implemented in phases in 2008 by Secure Data Content, a South African company. The first phase involved software system implementation at BNARS HQ and the Office of the President. The second phase involved the implementation at the Ministry of Youth, Sport and Culture and the Ministry of Labour and Home Affairs and the third phase involved the remaining government departments (Moatlhodi 2015). The software solution for NARMS used HP TRIM (Hewlett-Packard – Total Records and Information Management) solution, which was developed by an

Australian company, Trim Tower Software. The envisaged benefits of NARMS were never realized as the project was suspended indefinitely before it was rolled out as planned.

The Court Records Management System was deployed by the Department of Administration of Justice (AOJ) to improve case management and, consequently, the delivery of justice in Botswana (Mosweu 2012). It was developed and supported by an American company called ACS of Kentucky. The system is widely used in American courts to manage case records. The solution was implemented by a local company called Bytes Technology Group. It has the capability to capture, store and retrieve accurate and up-to-date case files and secure them for future reference (Motsaathebe and Mnjama 2009). The system was piloted at Lobatse High Court in 2004 before having been rolled to magistrate districts across the country. Mosweu (2012) assessed CRMS's status in the delivery of justice in the Gaborone Magisterial District and concluded that CRMS brought improvements to the management of information and court records. The system was declared a success as it enjoyed wide user acceptance. It was hailed for contributing to improved delivery of justice in the judiciary.

Methodology of the study

This study investigated factors that affected the adoption of an EDRMS, named the DWMS at the MTI in Botswana. The study was anchored on a modified Unified Theory of Acceptance and use of Technology (UTAUT) (Venkatesh et al. 2003). Data was also collected using documentary review and interviews. Interviews were conducted with five senior officers at MTI, a senior manager at BNARS and records management expert who was formerly the Head of Records Management Services at BNARS and was a consultant in the provision of archives and records management services at the time of the study. This study reports only the findings of the study emanating from interviews and documentary reviews. The quantitative findings have been reported in an earlier article (Mosweu, Bwalya and Mutshewa 2016), hence their exclusion. Data was analysed according to lines suggested by Ngulube (2015).

Findings of the study

The findings reported in this study were derived mainly from interviews and documentary reviews. The following factors that influenced the implementation of DWMS, an EDRMS implemented at MTI, have been referred to as critical success factors in EDRMS implementation in several studies (Nguyen et al. 2008; Nguyen et al. 2009; Northumbria University 2010; Commonwealth of Australia 2011; McLeod, Childs and Hardiman 2011; Yin 2014). Gates (2010) defines critical success factors (CSFs) as the handful of key areas in which an organization must perform well on a consistent basis to achieve its mission. CSFs can be derived through a document review and analysis of the goals and objectives of key management personnel, as well as interviews with those individuals about their specific domain and the barriers they encounter in achieving their goals and objectives. The said factors are presented in the next section.

Top management support and leadership

Top management support has been cited as a success factor in EDRMS implementation (Ellis 2005; Nguyen et al. 2008; Yin 2014). EDRMS implementation is bound to fail without the constant support and commitment of top management. Nguyen et al. (2009) argued that the involvement of senior management ensures funding for the project and enhances employee awareness of the importance of EDRMS adoption. Interviews revealed that, although top management was committed to the implementation of DWMS through the funding of the

project, when it came to actually the system, senior managers were found wanting. When one interviewee was asked about the challenges of EDRMS implementation, he said:

> Some senior officers seem reluctant to use DWMS. They prefer to use the manual system. If more leaders used the system, then everyone else will follow.

The assertion by the interviewee was consistent with findings in several other studies (Gregory 2005; Smyth 2005; Williams 2005; Koga 2007). Top management controls resources and provides leadership in an organization. Users of DWMS expected to be led in the usage of the system so that they could follow, but the leadership did not lead by actually using the system, although they are the people who use many files in the day-to-day business transactions. Fuzeau (2005) indicates that when top management support is demonstrated right from the start, it provides guidance and direction. It also motivates staff to maintain interest in the project and this will possibly result in an improved recordkeeping culture, as well as a more efficient implementation of the EDRMS project.

End-user support and training of system users

According to Yin (2014), the complete implementation of EDRMS does not necessarily guarantee continued users' adoption of the system. This is because EDRMS implementation may span over several years. In the absence of no ongoing and refresher training and timely user support, there is a real risk that users will stop using the system and adoption rates may fall. Therefore, continued ongoing support and customized training that matches with users' responsibility become critical for the system to succeed. Di Biagio and Ibiricu (2008) opine that effective training helps individuals to overcome the natural resistance to the change brought about by the EDRMS. Interviews at the MTI over the implementation of DWMS revealed that system user training was handled poorly, hence, the poor adoption and use of the system. In addition, the DWMS assessment report by the implementer of the solution (Consult IT) also revealed that training was done, but then system implementation was delayed. The company recommended that sensitization and continuous training be done and further advised that once training had been completed, all manual records management processes should be discontinued in order to ensure that users use the system to conduct organizational business. Training of system users is an integral part of EDRMS implementation as it gives users new skills required by the new system. Continuous training on system use improves the adoption and use of an EDRMS as users eventually become comfortable with using the deployed software (Williams 2005; Lorenzi, Kouroubali, Detmer and Bloemrosen 2009; Nguyen et al. 2009; Kwatsha 2010; Mosweu 2012; Yin 2014; Mosweu, 2014). This study discovered that end-user support was made available in order to assist DWMS users when the need arose (Consult IT 2012). Unfortunately, such support was eroded when users who were conversant with the system left the ministry to take up other employment. Technical support for EDRMS end users proved to be an ingredient for the successful adoption of an electronic CRMS, which was implemented to improve the delivery of justice in the Gaborone Magisterial District in Botswana (Mosweu, 2012). A records officer highlighted that:

> IT officers are always available to assist me when I have some difficulties in using the system. They really help. Even consultants from Consult IT are ready to assist whenever I experience some challenge in the system.

Di Biagio and Ibiricu (2008) also opine that system end-user support is critical in helping end users to overcome feelings of uncertainty regarding new work practices brought about by the introduction of an EDRMS.

Project management approach

Effective project management is considered the key to success for EDRMS projects. Most EDRMS projects fail because they are not delivered on time, within budget or they do not meet business requirements (Jeffery-Cook 2005). A formal project management methodology is suggested in EDRMS projects as it brings a "more structured framework of governance, budget management and scheduling" (Ellis 2005). Consult (2012) in its assessment of the DWMS usage report found that the system had been piloted for five years and full implementation had not commenced, contrary to expectations. IT Consult (2012) acknowledges the importance of phased implementation of projects, which was the original plan with the implementation of the DWMS. It was also revealed that the project governance structure collapsed before project closure and this led to poor ownership of the project by senior managers. An interviewee from the IT Department who also served in the project governance structure as head of the project implementation indicated that it was a mistake for the project to be led by IT and not by the process owners. Pusoetsile (2015) also reiterated this point when presenting a paper entitled *Ministry of Trade and Industry (MTI) e-Records Implementation Lessons for Public Sharing*. He is of the opinion that it was an oversight for the project management aspect of the DWMS (an EDRMS implemented at MTI) to be spearheaded by IT. He indicates that "project management must be taken away from IT to process owners" (Pusoetsile 2015:8). Studies by Williams (2005), Kwatsha (2010) and Nguyen (2011) have also concluded that good project management contributed to effective EDRMS implementation.

Change management

A well-planned change strategy is one of the CSFs for EDRMS implementation, which highlights the importance of communication with end users through customized ways. A well-planned change management strategy is a CSF for EDRMS implementation (Yin 2014). This is because introducing an EDRMS leads to changing or re-engineering established business practices and the success of the EDRMS partly depends on users using the system to create or capture records of their businesses (State Records Authority of New South Wales 2012). According to Creasey (2007), change management refers to the process, tools and techniques used to manage the people side of change to achieve the required business outcome. It incorporates organizational tools that can be used to help individuals make successful personal transitions, resulting in the adoption and realization of change. Commonwealth of Australia (2011) argues that EDRMS implementation is a major change management exercise which does not only involve a shift from paper to digital records but also that senior management should champion how business information will be managed across the agency. Unless such change is managed effectively, user acceptance of and buy in to the deployed EDRMS remains a pipe dream.

The current study revealed that poorly handled change management contributed to the low adoption of DWMS by Action Officers and Records Officers at MTI. The MTI DWMS System Assessment Report (SAR) undertaken by DWMS implementers showed that DWMS suffered from underutilization (Consult IT 2012). The report suggested that a generic change management approach be executed to promote uptake of the system. The transition from manual records to electronic records systems affected procedures for creation, preservation, disposal and accessibility of information (Meijer 2001). Poorly managed change was also found to have negatively affected the implementation of EDRMS projects in the Botswana and South African public sectors (Kwatsha 2010; Mosweu 2012). The study in South Africa concluded that change management was helpful in reducing EDRMS user resistance (Kwatsha 2010). In Botswana, good change management partly contributed to the successful uptake of the implemented CRMS. Lack of proper change management has also been reported to have negatively affected the implementation of information systems (Nguyen et al. 2008; Ciric 2010).

According to Mullon (n.d), the fact that many organizations have a poor history of records management, the change from manual systems to electronic records meant that users had to practice good records management practices through system use. That demanded a change in work practices, which does not occur naturally, but requires a focused strategy on how it is implemented.

Development and implementation of a records classification scheme

A records classification has been shown to be one of the prerequisites for the implementation of an EDRMS. Nguyen et al. (2009) opine that the early development of a business classification scheme (File Plan) or records classification scheme was a key factor for the success of developing an enterprise-wide electronic records management solutions. Yin (2014), Nguyen et al. (2009) and Biagio and Ibiricu (2008) observe that when a records classification is developed early during the implementation of an EDRMS, it becomes a CSF, especially when users were involved in its development prior to its implementation, particularly at the stage of business analysis. The International Records Management Standard, ISO 15489-1, advocates for the implementation of functional records classification schemes (ISO 2001), which is a key part of EDRMS implementation. However, it is important to get the classification from the onset, as changes after implementation can be costly.

Interviews with action officers indeed revealed that a record classification scheme borne from an analysis of business processes at MTI was developed with the assistance of Botswana National Archives and Records Services, as also advocated by Yin (2014) and Nguyen et al. (2009). According to Yin (2014), this is particularly true during the business analysis (design phase) of the system. This is because user representatives are in fact expected to provide the EDRMS implementation team with the detailed information on the business of their units and on the processes leading to the creation of records (Di Biagio and Ibiricu 2008). Interviews revealed that the development of a records classification to be configured into the system was done hastily and left some business units with a poor grasp of the association between records and their locations in the system. This led to continued use of the old method of requesting files by means of telephone calls, although the same could be done through the DWMS. One of the action officers summed it up by saying:

> I find it a bit difficult to go through the system, request a file and submit the request to records officers. It is much easier and quicker to request a file using a telephone, using the old classification scheme.

Williams (2005) and Nguyen et al. (2009) argue that the development of a business classification scheme (also known as a File Plan or Thesaurus) before EDRMS implementation is crucial to ensure that staff understands the association between records and to assist them in becoming familiar with record locations.

Conclusion

It is apparent that EDRMS implementation is a complex undertaking and can suffer from slow uptake if the most CSFs relevant for the successful uptake of the system are not fully taken into consideration prior to, and during the implementation stage of the project. A number of success factors such as top management, change management, education and training, attitudes and an inappropriate project implementation have been shown to be critical for the successful uptake of an EDRMS. This article has explored the critical success factors in EDRMS implementation at the MTI and reached the conclusion that factors such as top management support in the form of leading the way by using the system, poorly handled change management, system user

unfamiliarity with the classification scheme and poor project management led to unsuccessful implementation, which translated into poor user uptake. Poor user acceptance of the system meant that the expected return on investment was not realized. Experiences in both developed and developing countries show that such factors need to be considered before actual implementation of the EDRMS in order to guarantee a higher degree of success.

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