# The Challenges of Records' Digitization in Malaysian Public Sector

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**Abstract.** Digitization of information assests so called records are seen as a new strategy for nowadays organizations towards modern dynamic conconceptualized services. Due to this reason, initiatives towards records digitization in Malaysian public agencies are been structured accordingly to ensure it accomplishment. Nevertheless, only few have succeeded in realizing it. Thus, this paper is aims to examine the challenges of records digitization's works in Malaysian public sectors. Relevant literatures on records digitzation in Malaysian were reviewed. The article presents that technical expertise, funding and costs, lack of specialize policy and guidelines, technological issues, poor knowledge and skills, lack of training and collaborations, low understanding of digitization as well as technical issues as the impediments to digitization projects for Malaysian public sector. The discussion brought in this paper is expected to increase the awareness and the readiness of related agencies in addressing the issues on their digitization projects.
**Keywords**: digitization, records digitization, records management, information professional, Malaysian public sector

## 1    Introduction

*Background of the Problem*

Digitization has shown the emergence of new innovations that turn most organizations to be more efficient and systematic. In terms of business offering, digitization

allows the processing, storage, and transmission of data being done at equal efficiency. In the context of records management, digitization permits most modern organizations to share access and distribute their data without namely potential risk that is loss via the conversion of analogue data to the digital needed format. As a fact, the importance of digitization towards the development of sound digital resources has been greatly supported by positive feedback due to the influence of advances in computer technology. The quality of information in digital form is that by its nature, it is not fixed in the way that texts are printed on paper. Even so, digitization is a powerful way to expand access to the collections that enable their wide use for service provision, education, leisure, research, tourism, and other purposes (Manzuch, 2009).

As the technology evolves, various industries will constantly undergo change and evolution towards globalization and digital to further increase efficiency. At this point, the existence of various convergences through information technology and information systems makes the concept of digitization as one that must be done in moving towards the status of a developed country. In the context of Malaysian Public Sector, the implementation of digitization is increasing rapidly and has embarked on a slew of initiatives to spur work streams and elevate citizens' expectations across public service efficiency (Kumar, 2014). Therefore, it is important for every information profession who is involved in digitization work to be aware of the real challenges that they may encounter during the process of digitization (Nur Atiqah, Saiful Farik, Jensonray and Syahirah, 2018). Failure in react to the above mentioned advocation will lead to ineffectiveness of organizations' digitization strategy. Hence, this paper is aims to identify and discuss the challenges of records digitization's work particularly in a context of Malaysian Public Sector. The significance of this study is expected to contribute to the raise of awareness as well as better understanding of the challenges in records digitization in Malaysian Public Sector among information professionals and various stakeholders who are interested in implementing digitization in their organization. Moreover, the results of the analysis determining the challenges and finding best answers to problems are not only just drawing out the truth but also will provide a space for the technical staff, information profession and stakeholders to gain a general knowledge and information to better manage their works and resources

## 2     The Challenges in Digitization of Records in Malaysian Public Sectors

*Digitization of Records*

Records digitization refers to the process of taking recorded materials, often in printed format, and transforming them to electronic form where they may be stored and processed by a computer (Yi Chun, Witten and Bainbridge, 2003). According to Namande (2012), the benefits of digitization are numerous, includes access to information, resource sharing, space saving and preservation. With similar consensus Khan & Aftab (2015) added some points on how records digitization may benefits an organ-

ization in which by providing better ordering of accessible data storage via sounds digital preservation approach and standards.

*Digitization of Records in Malaysian public sector*

This section reviews key studies on the challenges in digitization of records in Malaysian public sector. Despite the accomplishment made by digitization, there are some hindrances leveraging in records of digitization in Malaysian public sector. As not every public agency fully transforms into digitization due to the idea of entire organizations to being digitized is a long way process. The following are some impediments to digitization projects for Malaysian public sector's information professionals in the digitization environment:

Technical Expertise: Inadequate technical expertise is prevalent. In this case a study by Harun (2010) indicated that lack of IT personnel has been identified as the most problematic issue in digitization works. Most digitization projects are often run into problems and there is a need to have flexible and compatible programs for digitization (Fabunmi, Paris, Fabunmi, 2006) and the need for technical expertise is to embark on the digitization project ensuring the process can be implemented well and successfully run (Mathias, 2003).

Funding and Cost: Digitization is expensive due to enormous funding for migrating hardware and software. Zuraidah (2007) mentioned insufficient funding is one the challenges in implementing digitization in local cultural institutions, Zuraidah and Aliza (2010) indicated cost of migrating system influenced the implementation in digital resources in cultural institutions Malaysia. Digitization requires sophisticated technology and trained manpower which require additional budget to train and manage the digitization process, nevertheless, lack of funding may cause the digitization project to be hampered (Rahman & Mezbah, 2012). Digitization work towards records and archives need additional funds to support the complete project, which includes improving the automation of hardware and software, as well as the expense of subscribing to all items in terms of electronic and databases (Aim et al., 2018)

Lack of Specialize Policy and Guidelines: A policy is a guiding statement that is essential to support the process of digitization works. As a fact, a policy and guidelines serve as a working tool for the stage of planning and post records digitization project. Nevertheless, the importance of this working tool is not at par. According to Zuraidah (2007), it was revealed that the cultural institutions tend to agree most strongly that lack of national standards and guidelines are the main reason the institutions are not implementing digitization. At this point, Nur Atiqah, Saiful Farik, Rayson Clinsmund and Syahirah (2018) asserted that there are number of policies have been developed nationally an internationally, however those policies and guidelines are purposely created within a context of legal and ethics for the management of libraries and archives, hence, there is still a need for some modifications on the existing policy and guidelines that suit the needs of governments departments.

Technological issues: The continuous changes in technologies in computer hardware and software makes some public sector do not turn to digitization as Veerankutty, Ramayah, and Ali, 2018; Hadi and Baskaran, 2021, revealed challenges

in technological issues due to innovation causes the loss of the information in digital form. In this case, rapid changing hardware and software makes the existing technology become backward and fragile (Rahman & Mezbah, 2012).

Lack of Knowledge and Skills: The issue with lack of knowledge and skills are very common in every agency as not all employees with IT profession background. Lack of knowledge and skills to handle digitization projects has been mentioned by Zuraidah (2007) as one of the challenges in digitization projects. Veerankutty, Ramayah, and Ali (2018) revealed in the development hindering digitization project is due to the IT division itself where underutilisation of system function caused by lack of knowledge. Digitization required different skills and knowledge to perform various tasks and the study found a lack of skills in digital management because employees are not with an appropriate qualification background in the field of IT management (Netshakuma, 2021).

Lack of Collaborations: A lack of collaboration within organisations can bring a negative impact on the success of the project. According to Zuraidah and Aliza (2010), lack of collaborative effort and holistic approach are the critical issues to be concerned in digitization projects. From the findings of study, the governance structure for digital resource management is still in the critical steps as the digitization project in Malaysia is implemented gradually and some management may not have facilitated the digitization project. According to Jordan (2010), lack of collaborative efforts in the digitization project specifically also became one of the reasons why the digitization project could not be carried out due to lack of financial resources to support the digitization project. Thus, collaboration efforts potentially encourage organizations to work together to get additional funding.

Lack of Training: The need to embrace digitization of learning has become critical success because to understand the concept of digitization is very important in project digitization. Veerankutty, Ramayah, and Ali (2018) in their study found that lack of training as one of the causes that hinders the digitization projects among Malaysian public sectors. Moreover, poor basic digital skills in digitization can cause the failure for the agencies and become lagging behind digital technologies. Thus, it is essential for leveraging training and education for employees to be more adaptable and flexible to keep up with rapid technologies (Forrest, 2017).

Inadequate Infrastructural Facilities: Adequacy of infrastructural facilities is another most important element to support the digitization project. In this case, poor infrastructure significantly impacts the digital project as the resources to implement digitization must be enough to digitize a large volume of records. Studies from Zuraidah, 2007; Zuraidah, 2008; Hadi and Baskaran, 2021; agreed that inadequate infrastructure has become one of the challenges in digitization projects. Inadequate infrastructural facilities makes the digitization project greatly hampered due to necessary equipment and others as well as digitization requires a complete resource of facilities to ensure the project can be run in effectively (Akter & Begum, 2016). At this time, sufficient and sound infrastructural facilities are still depending on the financial resources availble in the agencies.

Technical Issue: The technological requirements such as types of technical equipments with high demand of maintenance and care of handlings to ensure its continu-

ous quality namely picture quality, resolution, bit depth, image enhancement techniques as well as its performance is another identified challenge to be considered for digitization works in the departments (Zakaria et al., 2018). In this regards, the decision of the agencies are crucial for the selection of appropriate technical equipemnet for their digitization project for instance advance technology scanning machines.

## 3 Discussion & Conclusions

It was found that only a few public sectors have gone into digitization of their information assets in Malaysia. The challenges discussed above is expected to assists the public sector to be more sensitive to the problems that been encountered. At the same time, to help them to increase the level of readiness to be more proactive in addressing the digitization issues. As digitization is a new phenomenon, which will be the choice of every organization that wants to create a modern conceptualized service featuring with more advanced features as well as optimal use of the latest information technology. Therefore, organizations that implement digitization in their working management can facilitate all the working operations, including being able to facilitate the work of employees to be more efficient, especially in improving services to the public and meet the diverseand constant information needs of the stakeholders. In this context, the discussion available are hope to be able to become a supporting source of reference for the information professions, the administrators of public agencies as well as any organisation that aware of the challenges in the digitization of records. After all, towards the end may facilitate them to form a systematic record digitization management strategy, quality and in line with advancing technological development.

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