

## An Assessment on Information Technology Infrastructure Readiness Towards E-waqf Property Management Initiatives

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### ABSTRACT

*The implementation of Information Technology (IT) in the daily management and administration is a very crucial and essential move for every organization nowadays. The implementation of IT in a waqf institution could help to ease as well as enhances the level of efficiency and effectiveness of the management team, especially when dealing with waqf property management. Studies that, as to date, waqf institutions in Malaysia still lack in the use of IT especially in managing the waqf property. The problems often arise in waqf property management such as information of waqf property is not centralized, data are unstructured and difficulties in data retrieval which caused it to be time consuming and inefficiency in the overall waqf property management. Thus, the implementation of an information system to manage the waqf property by the waqf institution is very crucial in ensuring the competitiveness of the organization. As part of the e-Waqf property management initiative, this study was conducted to assess the waqf institution readiness towards e-Waqf property management initiatives. A qualitative method using a case study design with a semi-structured interview has been conducted with a representative from a waqf institution in Malaysia. Assessment from the elements of readiness which focus on IT infrastructure shows a good level of readiness by the top management towards the e-Waqf property management initiative. However, the systems and communication element shows a low level of readiness. Results from this study could contribute to the e-Waqf property management readiness among the waqf institution as one of the push factors that will change the way waqf property is managed in every waqf institution. Hence, this will lead to the optimally utilized of waqf property for the benefits of the Ummah in the future.*

**Keywords:** *E-waqf, IT Readiness, Utilization, Waqf Property*

### INTRODUCTION

At present, the development of waqf management has grown rapidly and becomes more significant in line with a high level of knowledge and awareness among the community. This situation gives an advantage and maintains the sustainability among the waqf property institution in this country because it can have a positive impact on social economy (Mustafa, Muhammad Iqmal, Rosnia, Fuadah, & Aimi Fadzirul, 2020). This is due to waqf is one of the philanthropic charities that are highly determined in Islam. Through the donated waqf property, the benefit will provide to all the beneficiaries, either directly or indirectly. Thus, all waqf property should be managed and administered efficiently by the

waqf institution which is the trustee for the waqf property (Marina, Shofian, Ahmad Dahlan, & Salleh, 2020). A useful and useful waqf institution capable not only to develop but also to utilize the waqf property as it will contribute to the development of the community. This is indirectly linked to the sound management practices of the waqf institution. However, most waqf institutions facing challenges in their management practices, hence these properties are not being utilized to achieve their full impact on other beneficiaries. Among their challenge are inefficiency and not centralized in their management practices. These issues will lead to unstructured data management for waqf property. Thus the institution may face difficulties in data retrieval and time-consuming (Hasyeilla & Selamah, 2016). Therefore, the implementation of e-Waqf could be solved to retrieve the waqf property data.

The implementation of e-Waqf could provide a new dimension in waqf management in Malaysia. The implementation of e-Waqf is an essential transformation, thus involve different changes, including adopting new technologies, redesigning business processes, and restructuring management (Craig and Jutla 2001; Earl 2000; Hackbarth and Kettinger 2000; Laudon and Laudon 2004). These changes must be supported by a critical mass of stakeholders, including customers, partners, and especially employees (Benjamin and Levison 1993; Craig and Jutla 2001). In addition, organizations should also consider the readiness of employees to embrace e-Waqf since the implementation will lead to different situations that could create significant resistance to change and perhaps lead to the failure of e-Waqf. Beckhard and Harris (1987) stated three situations in managing change which is (1) when employees are comfortable with status quo, (2) when the employee does not understand why change is desirable, and (3) when they doubt about the company's ability to achieve the desired change.

Thus, members of organizations who possess a high level of efficacy, motives, and psychological maturity in dealing with changes will have a positive effect on the successful implementation of e-Waqf. Due to these factors, assessing the organization's e-readiness for change is as equally crucial as analyzing technological feasibility when implementing e-Waqf. This study was carried out primarily to assess the waqf institution readiness for e-Waqf initiatives. However, this paper focuses on the IT infrastructure as the key element as the key characteristic.

## LITERATURE REVIEW

### **Waqf Management**

According to the dictionary of Munjid (1986), in language terms of waqf comes from the Arabic word *waqafa* which means to hold or to stop. While in terms it means, 'hold something or property which is lawful and can be used for the benefits. According to Asmak, (2009), waqf means a form of surrender of property either sincerely or *kinayah*, in which the property is held, and only its benefits are applied for charitable purposes, whether in general or special.

The implementation of the waqf began in the time of the Prophet (SAW) where he dedicated the Quba mosque when he emigrated to Medina and was followed by the Nabawi mosque (Mohd Daud Bakar: 1999 in Razali Othman, (2013). The first public waqf was to be given seven orchards by a Jewish friend named Mukhayriq. The Prophet SAW accepted this waqf and named it Mukhayriq as the best of the Jews. However, there is also the opinion that the waqf started when Saidina Umar RA acquired a piece of land in Khaibar. Then he looked to the Prophet to find out what to do with the land. He suggested that Saidina Umar RA distribute the benefit without having to sell it, pass it on or give it to others in Rabitah, Zuraidah, & Norhidayah, (2012). In the context of the Malaysian scenario, waqf is managed by the State Islamic Religious Council (SIRC), which is the sole trustee for all types of waqf property at the state level (Surita Hartini, Zakaria, Azreen Hamiza, & Caturida Meiwanto Doktoralina, 2020). The purpose of SIRC's appointment as sole trustee of this waqf property is to ensure that the waqf is appropriately managed, efficiently so that it can generate excellent results. It is hoped that the public will use it for charitable purposes, whether or not it has been determined by the *waqif* (waqf)

donor) and other waqf stakeholders (Borhan, 2011; Nurul Fadly, Mohd Yahya, Fidlizan, Sharul Effendy, & Nursyazwani, 2017; Siti Mashitoh, 2007). Meanwhile, the establishment of Jabatan Wakaf, Zakat dan Haji (JAWHAR) dan Yayasan Wakaf Malaysia (YWM) are to streamline the rules, regulations, management and administration of all SIRC all over in Malaysia (Dahlia & Haslindar, 2013).

## E-Readiness

The introduction of information and communication technology (ICT) to support business functions provides many advantages and opportunities for economic and social development. The significant shifts in ICT have resulted in significant shifts in the organization's structures and how people work. The shift might be intimidated to certain people and caused resistance to adopting the use of ICT. In order to use ICT effectively, organizations should be ready in different aspects such as infrastructure, access to ICT and other factors that have effects on ICT implementation, thus make an e-readiness assessment as an essential aspect to consider prior to any ICT project implementation. Although e-readiness is considered as a new concept, it started to gain its forces with the rapid penetration of the internet and advance the use of IT in business throughout the world (Mutula & van Brakel, 2006). E-readiness can mean different things to different people, in different contexts, and for different purposes (Maugis et al., 2005). Thus, it is important to define e-readiness in the context of this paper. E-readiness of an organization is defined as the ability of an organization to successfully adopt, use, and benefit from information technologies such as e-commerce (Ruikar, Anumba, & Carrillo, 2006). The use of ICT generally covers the harnessing of electronic technology for the information needs of a business at all levels. It utilizes computer-based systems as well as telecommunication technologies for the storage, processing, and communication (Anderson, 1990).

An e-readiness assessment is an attempt to gauge how ready a society or an organization to adopt information technology and adapt to the changes resulted from the implementation of an information system that not only covers the aspect related to economic growth but also human capital development. An e-readiness assessment would look at infrastructure, the accessibility of ICT to the population at large, and the effect of the legal and regulatory framework on ICT use. The purpose of carrying out the assessment is to gather the information that can assist with developing a strategy for ICT implementation in Waqf institutions. Many factors promote an organization to be e-ready, for example, organizational ICT strategy, user access, ICT architecture, business process, and information systems, ICT infrastructure, and human resources (Alghamdi, Goodwin, & Rampersad, 2011).

Literature shown that there are over fifteen different e-readiness assessment tools are currently available, and the assessments use a range of questionnaires, statistical methods, reports of best practice, and historical analysis. Some tools look specifically at the e-economy and how ICT's can be used to improve the economy, whereas others are concerned with the broader picture, and try to measure the emergence of an e-society, and assess how ICT's are improving social equality (Durek, 2016; Mutula & van Brakel, 2006; Ruikar et al., 2006; Tan, Tyler, & Manica, 2007). The use of these assessment tools allow organizations to have an easily quantifiable set of indicators that provides an overview of an organization's situation, and can easily form a basis of comparison and future planning.

## METHODOLOGY

This study uses qualitative method with a case study design approach. This study uses purposive sampling with the respondents for this study are the IT managers from a waqf institution in the center region. The criteria for selecting the sample participant experienced which is the respondent have five years of experience working with the institution. Moreover, the involvement with the IT projects in the institutions since has IT education background, the influence, and position related to *waqf* property management. The participants were acknowledged in their respective institution as experts in the

management of *waqf* property and were able to spare their time to share their experience and transmit their tacit knowledge and experience freely and accurately.

The semi-structured interview has been conducted with a document review was implemented to gain more information. The interview session setting was at the respondent's office, where this is to ensure the convenience of the respondent. The interview session was recorded using a digital recorder to gain information. During the interview session, the respondent needs to assess the IT infrastructure in the *waqf* institution.

## FINDINGS AND DISCUSSIONS

This section discussed the findings of this study. The characteristics of the IT infrastructure are adapted from the maturity model, as suggested by Mustafa & Mohammed Arif, (2012). The IT infrastructure is divided into two attributes which are (1) top management perception and (2) systems and communication. Each attribute has its characteristics to describe the two attributes with the assessment level from level 1 until level 6, where level 1 indicates the lowest level of readiness and level 6 indicates the highest level of readiness. The evaluation of the e-Waqf assessment is based on the characteristics of the key elements and is shown in Table 1 below.

**Table 1: The Characteristics of the IT Infrastructure**

Attributes	Characteristics	Assessment Level
Top management perception	Describes top management's (business executives) strategic thinking and direction towards the development and utilization of IT in their organization.	Level 1 – Level 6
Systems and communication	The development and utilization of applications and the organizations' direction and strategic plan.	Level 1 – Level 6

From the findings, this study shows that, for the first element, which is the top management perception, the assessment on the elements of readiness, which focus on IT infrastructure, shows that it is a good level which is at level 4. It shows that the top management team is readily and begins to consider the long term development of IT with attempts to align with their business strategy and IT strategy. Thus, the top management perception is significant in the implementation and strengthening of IT infrastructure among the organization members. This will lead to success in their business strategy by increasing employee awareness, where the top management can analyze the potential gains and losses associated with the implementation of the new IT infrastructure in the whole institution. Besides that, it also can be successful if the top management did a formal and informal discussion within departments or the institution to reduce their negative beliefs and thought such as fear, anxiety, and uncertainty towards the usage of IT. Moreover, top management can use policy announcements to explain further related to what will be changed and how the changes will affect the whole systems and how it planned to the employees as well.

Furthermore, to implement IT infrastructure more successful, proper training, sharing session and collaboration with the experts can be done to all the workers, especially to those critical and relevant departments and employees. For this purpose, the top manager can make use of learning techniques, no matter individual or organizational learning, to change employees' or organization's mindsets. Learning, acquiring knowledge or skill, can be categorized into two levels: operational and conceptual. The former means the acquisition of skill or *know-how*, which implies the physical ability to produce some action, the later means the acquisition of *know-why*, which implies the ability to articulate a conceptual understanding of an experience where both of them are important.

However, for the systems and communications element, the study shows that readiness is at level 1 which is low level. This is because most of the computers currently available in the waqf institution are small, stand-alone, single-user and independent of each other. There is no centralized system available in the institution. Furthermore, there are no network resources available that allow the sharing of resources. Software used are mostly off-the-shelf packages and built or purchased in isolation from other IT located in the institution built or purchased in isolation from other IT located in the organization or even in the same group. The summary of the findings is presented in Table 2 below.

**Table 2: The findings of the assessment level of the IT Infrastructure**

<b>Attributes</b>	<b>Assessment Level</b>	<b>Description of the Assessment Level</b>
Top management perception	Level 4	The management begins to consider the long term development of IT with an attempt to align business strategy and IT strategy.
Systems and communication	Level 1	Most of the systems are small, off-the-shelf financial packages which tend to be independent of each other and built or purchased in isolation from other IT located in the organization or even in the same group

To make sure that the institution is ready to implement the e-Waqf initiative, the institution needs to improve the elements which have a score during the assessment. In this study, the system and communications element that score low must be improved. This would help the institution to implement the e-Waqf and subsequently support the growth of waqf institutions. The areas that could be improved under the systems and communication would be IT Infrastructures such as computers and networking systems. Apart from that, the institution could also look into the security of the system, backup and disaster recovery, cloud readiness and also the scalability and capability to cope with business growth.

Even though the top management element score above average, there is still an area that could be improved to ensure the institution's readiness in implementing the e-Waqf initiative. Thus, in order to improve the current level, the management should play an essential role in enhancing the system and communication level in their organization. The management should be constructing an overall and comprehensive picture of the whole system, and the network is more explicit throughout the organization as suggested by (Pekkola, 2013). The reason for doing this system through the eWaqf initiative will enhance the waqf management and administration more effectively and efficiently. Furthermore, by doing this, it gives a clearer picture and comprehensive information in all aspects related to the waqf property. Moreover, all those waqf information is essential for increasing the understanding and knowledge of the organization operations, and it helps to get a more realistic picture of the waqf operations. One example is the waqf financial system, waqf information management system, and comprehensive building information system, information system based on geographic information system (GIS) system where this can be implemented to an overall and comprehensive picture of the network is clearer.

Apart from that, the manager also needs to be more creative and proactive in their management style. This is to encourage and gain their staff intention in implementing the e-Waqf initiative. The management team makes an introductory phase related to the system to all the staff related to the e-Waqf system. The management should implement the necessary control activities where they need to segregate duties in their daily task.

Moreover, the institution can make a benchmark for other internal control practices in other institution as already implemented and practices the e-Waqf system successfully. By doing this, it can open up and increase the staff readiness to the e-Waqf initiative as it can be implemented more successfully in their organization. Thus, internal communication between the management and the operational staff is necessary to enhance the

## CONCLUSION

Based on the previous findings and discussion, it clearly shows that the implementation of the e-Waqf initiative it is concluded that the existing approaches are taken by this institution positively contributed to the development of the administration of waqf lands. It is clearly shown that the perception of top management related to e-Waqf is a good indicator. Besides, the readiness and openness to implementing the eWaqf initiative are open wide in their institutional management system. Even though their system and communication at a lower level, but this can be increased by doing several strategies and initiatives in their waqf operational system such as constructing a comprehensive overall system towards waqf property management. Besides, the management team also needs to be creative and innovative in order to encourage all the operation staff to take part in the successful implementation of e-Waqf. Overall the training and development are the crucial elements that need to be tackle to these issues. By implementing this Waqf initiative, hopefully, it can enhance the administration and management of waqf property in the institution and indirectly will enhance the sustainability of waqf property as it can give benefit to the community and ummah.

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