

# The Evolution of E-Government in Malaysia: Institutional Mechanisms and Public Service Transformation at the Federal and State Levels

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## Abstract

The evolution of e-government in Malaysia has emerged as a cornerstone in reforming public administration since the inception of the Multimedia Super Corridor (MSC) in 1996. Over the years, the government has introduced a series of transformative initiatives aimed at enhancing service delivery, transparency, and administrative efficiency. This conceptual paper examines the historical progression, institutional structures, and services embedded within Malaysia's e-government framework. Anchored by institutions such as the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), the National Institute of Public Administration (INTAN), and the Malaysia Digital Economy Corporation (MDEC), these efforts have reshaped governance through technological innovation. Drawing from paradigms of public administration, including Old Public Administration, New Public Management, and New Public Service, this paper analyses how Malaysia's digital governance evolved from hierarchical bureaucratic practices to more citizen-centric and participatory models. While significant strides have been made, challenges remain, particularly in bridging the digital divide, fostering state-level adoption, and enhancing data security. This study concludes with reflections on the importance of institutional coordination, policy continuity, and sustained investment to ensure the long-term success of e-government in Malaysia.

## 1. Introduction

The implementation of e-government in Malaysia has become an imperative government agenda since 1996. Over the years, many initiatives and programmes have been introduced to improve productivity and efficiency in the public sector. E-government refers to the use of information and communication technologies (ICT) by government agencies to enhance access to and delivery of government services to citizens, businesses, and other arms of government (OECD, 2003). At present, the implementation of e-government exhibits significant adoption by federal, states and local government. The objectives of this paper is to covers e- government evolutions, its structures and institutions involved and types of services provided in the state and local

governments. E-government bring a lot of changes in public administration. Nur Afiah and Noreen Izza (2016), Ariwati et al. (2016), Rose et al. (2015), Kettani & Moulin (2014), McGuigan (2010) and Kaliannan and Halimah (2010) suggested that e-government could bring progress to the development of the public sector and improve its service delivery with high efficacy via the usage of IT. Besides that, according to Teerling and Pieterse (2011), e-government promotes a two-way communication between the government and the public to enhance effective interactions. Wan Abdullah et al. (2013) stated that e-government provides many services to the people where payment could be made online for certain purposes whereas Asa'd M. et al. (2016), T. Almarabeh and A. Abu Ali (2010) noted that e-government is able to promote service integration by providing all the services in one single website. According to Asa'd M. et al (2016), two factors contribute to the successful implementation of e-government namely availability and accessibility where 24 hours services are given to the people and no discriminations in the usage of the services either by the urbanites or rural dwellers in getting the services. All those services provided by the websites will lead to the effectiveness and efficiency of government service delivery to the people. Norazryana et al. (2021) and Muhammad Hafiz and Muhammad Safuan (2023) agreed that e-government and governments via social media proved to influence people's attitudes to engage in protective behaviour where it can promote positive relationship between government and people.

## 2. Evolution of E-government at Federal Level

E-government in Malaysia was officially commenced after the launch of the Multi Media Super Corridor in 1996 to develop a strong ICT base and reinventing the government system of administration. In Malaysia, the importance of e-government has been stressed by the fifth Prime Minister Tun Dr. Mahathir in his speech during the *Hari Anugerah Kualiti Pekerja* in 1997. In his speech, the significance of e-government was to transform the public sector in Malaysia. In his speech he mentioned that:

Electronic government implementation is very important as a preparation towards entering a new phase and facing challenges in the new era of information technology as well as multimedia which keep on developing.

(Translated from the speech of Tun Dr. Mahathir Mohamad during *Hari Anugerah Kualiti Pekerja* 1997).

Tun Dr. Mahathir Mohamad was very much aware on the importance of electronic government to support his new administrative reform. During this time, the country had a bureaucratic model characterised by cumbersome procedures, over towering hierarchical structures, and rigid management control. (Dr. Mahathir's speech on *Hari Anugerah Kualiti Pekerja*, 1997). The first stage of e-government implantation reflected the improvement on the Government's internal operations to enhance the processes of policy production, coordination, and enforcement of government programmes especially at the federal level. This was done to enable active interactions between government and citizens, and between government and businesses through a single door access to government (Abdul Karim and Khalid, 2003). For instance, it creates an avenue for self-service, enables the public to obtain up to date information, public registration, fee payments and other transformational services through a convenient and easy access service delivery without any constraints (Zulhuda, 2012).

To materialise this, several key committees and institutions have been set up. They are discussed as follows:

### 2.1 Structures and Institutions of E-Government

#### *Central Committees*

There are two key committees responsible for the implementation of e-government known as the steering committee and the Government IT and Internet Committee (GITIC). The steering committee is in charge of providing policy direction, approval for e-Government programmes and activities and while GITIC on the other hand, would monitor the progress of e-government projects including its pilot projects (MAMPU Official Website).

Besides having their own members, several key policy agencies have sent their representatives in the steering committee and these agencies are Economic Planning Unit (EPU), Implementation Coordination Unit (ICU), National Institute of Public Administration (INTAN), Treasury, Ministry of Energy Communications and Multimedia, Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), Office of the Auditor General, Public Service Department, and the Multimedia Development Corporation. These well-

organised arrangement of committees in charge of e-government development are very crucial in bringing positive changes in the public administration in terms of service delivery to the public in Malaysia (Abdul Karim and Khalid, 2003). GITIC is also responsible to facilitate and coordinate ICT development in the public sector. Other than that, there is a strategic team established to study and review the setting of Malaysia's e-government (Abdul Karim and Khalid, 2003).

#### *Multimedia Super Corridor (MSC)*

The MSC plays a crucial role in developing e-government in Malaysia. The visions and missions of the MSC as expressed by Tun Dr. Mahathir Mohammad, the Prime Minister of Malaysia at the time (1981-2003), are essentially this:

“MSC is paramount to leapfrog (Malaysia) into the 21<sup>st</sup> century and to achieve Malaysia's Vision 2020, the MSC was created to endeavour the best environment to harness the full potential of the multimedia without any artificial limits. MSC is a global test bed (hub), where the limits of the possible can be explored, and new ways of living, working and playing in the new era of the Informative Age” (Dr. Mahathir's speech on *Hari Anugerah Kualiti Pekerja*, 1997).

The implementation of e-government started with the initiation of Multimedia Super Corridor (MSC) in 1996 (Shaidan, 2008) to accelerate the objectives of Vision 2020 which is to transform Malaysia into a modern state by the year 2020 (Ibrahim Ariff & Goh Chen Chuan, 2000). MSC is the means for Malaysia to support the Internet diffusion and to be the forefront in bringing Malaysia to the informational age by enhancing the communication technology (ICT) industry to the global level (Jeong, 2007). Thus, a number of works have been introduced to realise the objective of e-government flagship applications namely National Multi-Purpose Card, Smart Schools, e-government Telehealth, Research and Development (R & D) Clusters, Electronic Business and Technopreneur Development (Mohd Zin Mohamed and John Antony Xavier, 2016). The aims of these flagship applications are to jump-start and accelerate the growth of MSC, to enhance national competitiveness, to create high value jobs and export growth, to help reduce digital divide, and to make MSC a regional hub. As shown in Table 1.1, lead agencies are assigned to oversee these flagships.

**Table 1.1:** Lead Agencies and Flagship Projects

	Flagship project	Lead agencies
1	Electronic Government	Malaysia Administrative Modernisation & Management Planning (MAMPU)
2	Telehealth	Ministry of Health
3	Multi-Purpose Card	Central Bank Malaysia
4	Smart School	Ministry of Education
5	R&D Cluster	Ministry of Science Technology & Innovation
6	Technopreneur Development	Multimedia Development Corporation
7	E-Business	Ministry of Finance

(Source: Taken from Sharifah Mariam Alhabshi, *What We Have & Have-Not: e-Government in Malaysia*, 2011)

In the early stages of MSC establishment, the focus was to find a strategic location. Mahathir chose the federal government new administrative capital which is Putrajaya in 1995, the hub of where MSC was to be developed. MSC is stretched from Kuala Lumpur City Centre to the new Kuala Lumpur International Airport in Sepang (Ibrahim Ariff & Goh Chen Chuan, 2000; Jeong, 2007). There have been many duties carried out by MSC. One of the duties is collaborating with Nippon Telegraph and Telephone Corporation (NTT) to set up research and development (R&D) operations. This is to come out with systematic plans and guidelines for improving e-government applications in terms of internet connectivity.

Table 1.1 shows the flagship project under e-government and their respective agencies, carried out by MAMPU (Sharifah, 2011). MSC has been assigned to monitor the infra and infostructure of the Malaysian government in its telecommunications and logistics network. Seven pilot projects were constructed under MSC known as Project Monitoring System (SPP), Human Resource Management Information System (HRMIS), Generic Office Environment (GOE), Electronic Procurement (EP), Electronic Services (E-Services), Electronic Labour Exchange (ELX) and E-Syariah. These all are meant to improve the convenience, accessibility and quality of interactions among the people and government in terms of information flows (Multimedia Super Corridor, 2012). Therefore, the initiatives illustrate the use of digital technology in administering government activities and resources under government policy. Furthermore, the initiatives also indicate the potential contribution of internet technologies to the openness and accountability of government.

*Malaysian Administrative and Management Planning Unit (MAMPU)*

MAMPU was established in 1977 as an agency responsible in reforming and modernising public administration in Malaysia (Jeong, 2007). During the development of e-government in Malaysia, MAMPU’s jurisdictions have been revised to monitor the progress of e-government at federal level (MAMPU Official Website, 2017). Originally, MAMPU was established from a study conducted by Professor John D. Montgomery and Milton J Esman on ‘Development Administration in Malaysia’. The report published by the study revealed that there is a need to upgrade professionalisms in the public service by organising course and training programmes (MAMPU Official Website). MAMPU’s functions was later evolved in terms of its jurisdiction as indicated in Table 1.2.

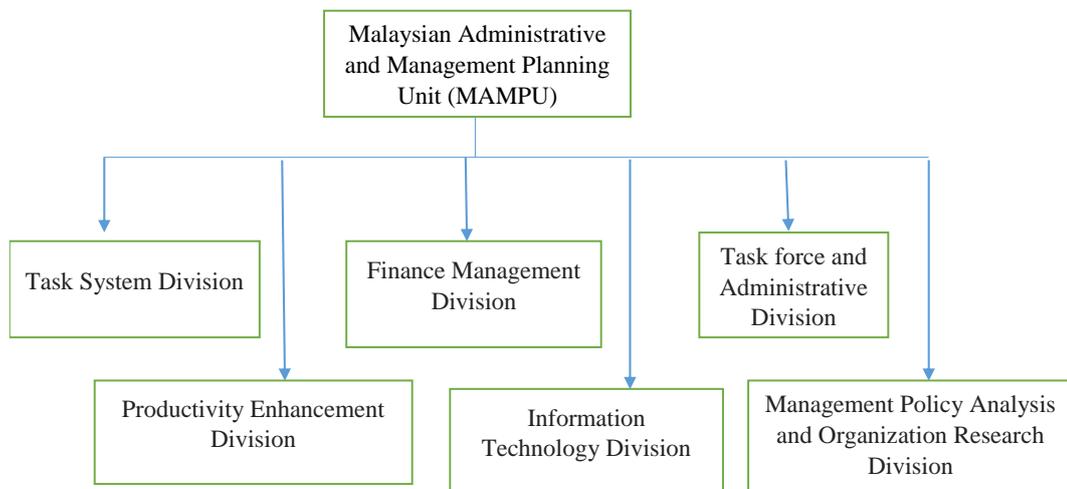
**Table 1.2:** Evolution of MAMPU in Malaysia

Year	Name	Functions
1966	Development Administrative Unit (DAU)	Spearhead administrative reforms in the Government.
1977	Implementation Coordination Development Administrative Unit (ICDAU)	Coordinating the planning and development of human resources
1986-Present	Malaysian Administrative Modernisation and Management Planning Unit (MAMPU).	Reassigning the role of human resource planning to other agencies for the betterment of the administration and modernisation of public sector.

(Source: From author based on the information provided by MAMPU Official Website)

MAMPU is divided into six (6) divisions namely Task System Division, Productivity Enhancement Division, Finance Management Division, Information Technology Division, Task force and Administrative Division, Management Policy Analysis and Organisation Research Division. In general, the functions of MAMPU is to assist various governmental organisations at the federal, state, and local government levels, on matters pertaining to modernisation of the public sector, especially that of administrative reforms and the implementation of e-government (MAMPU Official Website, 2017).

**Figure 1.1:** Malaysian Administrative and Management Planning Unit Divisions



(Source: MAMPU Official Website)

MAMPU’s roles in developing e-government is very significant. For instance, this organisation had established a foundation for an electronic government system to function effectively. To ensure successful implementation, MAMPU has published directives to guide public officials on the proper use of e-government. One important edition was known as “*Arahan Teknologi Maklumat*” or “Information Technology Instruction”.

The directive was made mandatory for government agencies to adhere to in achieving the minimum requirement for the implementation of electronic government act (Zulhuda, 2012). The directive emphasised the importance of ICT to support e-government and the way the agencies could monitor and protect their e-government system from any misconducts and malfunctions. It also explained in detail about the responsibility of the head of the agencies to follow the guidelines set. It can be seen later that the importance of e-government began spreading to across all government agencies and helping them to deliver various services to the public which previously was done through the service counter.

Another significant publication by MAMPU is "Electronic Government: Continuous Success", which was released in January 2007. The publication dealt with setting up the direction and future of e-government in Malaysia related to service delivery, performance measurement and focus on human capital development in IT (Information Technology Instruction, 2007). In 2015, the publication of a bulletin; Digital Government reaffirmed the importance of e-government in public administration. Some of the issues entailed in the bulletin is the government's focus on data that need to be shared by others and how to be treated effectively. It also talked about safe computing tips and software protection (Digital government Buletin, 2015).

#### *Malaysia Digital Economy Corporation (MDEC)*

The Multimedia Development Corporation (MDC) which was later known as Malaysia Digital Economy Corporation (MDEC) in 1996 has been set up to oversee the implementation of MSC. MDEC acts as a platform to build an inclusive digital future. The aim is to mobilise a future generation that is equipped with relevant skills to thrive in a digital era and can fully utilise the website created by the government for betterment in terms of service delivery (MDEC Official Website).

MDEC is also involved in the study and analysis of the efficiency and ranking of e-government across the globe obtained from various sources, for instance, United Nations. In one of the survey, United Nations ranked Malaysia in the top-twenty category in Asia and 52nd in 2014 in e-government initiatives across all 193 countries in the UN (UN E-Government Survey, 2015).

#### *National Institute of Public Administration (INTAN)*

The National Institute of Public Administration (INTAN) is the training arm of the Public Service Department, Malaysia. It began as a modest training centre at Port Dickson in September 1959 and known then as the Staff Training Centre. This centre provided training to officers regarding land administration, financial administration, office management and local government administration (INTAN Official Website). Various publications by INTAN have helped to educate the importance of e-government and equip civil servants with knowledge on new technology in the e-government so that they are up to date with the latest technology and software. For example, in its publication in 2008, "A Report on Public Sector ICT Management Review", importance of e-government seven flagships have been highlighted so that the civil servants are aware with the current technology used in e-government (INTAN Official Website).

MDEC has been assigned to collaborate with INTAN to give training to civil servants on digital training. Some of the training that have been carried out by them are National ICT Conference (NICT) on 2009. In 2012, another program has been carried out known as National Digital Conference (NDC) until 2014. Training on managing public sector data also has been given starting from May 2015 until June 2016 to the civil servants to enhance their skills in using the websites. In 2016, INTAN organised another program known as Web Based Portal Development Program (LPPWP) to help the government website to evaluate their website progress. The latest project carried out by INTAN on e-government is in 2018 known as Digital Leadership Exchange (DLE) where citizen experiences and feedbacks in using the websites are taken into considerations for the benefit of digital government (INTAN Official Website).

To recapitulate, as discussed above, the establishment of the structures involved in the development of e-government in its early stage plays a significant role by coming out with various programmes on e-government. Roles played by these institutions in monitoring the e-government have contributed in making the idea of Tun Dr. Mahathir Mohammad a reality. The strong foundations created by MSC and MAMPU have led to the implementation of the e-government in the right direction. However, these achievements are meaningless without support from competent staff which are trained by INTAN and MSC. Thus, a combination of efforts by various institutions has made the implementation of e-government in Malaysia systematic and efficient.

## **2.2 Types of Electronic Services (E-Services)**

The larger part of e-government constitutes what is known as Electronic Services Delivery or 'e-Services'. The e-Service provides a platform for the government to deliver various services to citizens without constrains. This was in fact among the earliest projects under e-government that allows citizens to move away from the

conventional way of dealing with government agencies to using government website for various kinds of services provided. The implementation of e-Services system will make the government more responsive to the public (The Multimedia Super Corridor) by providing various kinds of services in both federal and state levels.

In the beginning of its implementation, four government bodies have been assigned to be part of the e-services implementation. They were namely Road and Transport Department (JPJ), the Ministry of Health, the National Utility Company (TNB) and the Malaysian Telecommunications Company (TMB) where payments and inquiries can be made online as well as matters related to license renewal and online registration (Wan Abdullah et al, 2013). Various kinds of e-Services provided in these government bodies are able to perform multiple delivery channels where all the services are available 24-hours via online. (Wan Abdullah et al, 2013; Mohd Zin Mohamed and John Antony, 2013).

During the beginning of its early implementation in 1997, the e-government projects under e-services are Electronic Procurement (eP), Project Monitoring System (PMS), Human Resource Management Information System (HRMIS), Generic Office Environment (GOE), E-Syariah and Electronic Labour Exchange (ELX) (Shaidin, N.A). The implementation of e-government marks the transformation phase of public administration system in Malaysia by making positive changes in the way it operates, modernises and enhances its service delivery so that e-government at the federal level is capable of enhancing the convenience, accessibility and improve the quality of interactions with the public and business at large and to the local government (Shaidin, N.A). The details of each of the services provided are as below.

#### *Electronic Procurement (e-procurement)*

E-procurement (Ep) which was introduced in 2000 is known as the main pillar of e-government in Malaysia to promote efficiency and prevent power abuse by the civil servants by making the purchasing process more transparent (Hui et al., 2011, Muhammad Rais and Nazariah, 2003). All the information will be recorded by electronic means starting from the process of order tracking, delivery status and invoicing matters (Muhammad Rais and Nazariah, 2003). The purpose of introducing this system is to reduce cost of the government by having a proper system of administration.

#### *Human Resource Management Information System (HRMIS)*

Human Resource Management Information System (HRMIS) is one of the systems introduced by the government after establishing the MSC to strategically handle staffing, human resource management data, enhance better communication and to promote flexibility and openness among all the civil servants (Maniam et al., 2012). Some of the successful works have been implemented under this system are manpower planning, recruitment and training, promotion of the staffs, retirement and pension, salary and others.

#### *E-Syariah*

E-Syariah started its services in 2002 (Shaidin, N.A). The objective of having this service is to make matters pertaining to Muslim affairs more organised due to the court system that has been labelled as inefficient and ineffective (Ramli, 2012), the government took an initiative to be more responsive to this service by embracing the application of ICT. Many aspects have been adjusted and improvised to make e-syariah system more efficient namely in the Syariah Court Case Management System, Syariah Lawyers Registration System, Office Automation System and others (Wan Abdullah et al., 2013). E-Syariah supports the smooth running of the Syariah (Muslim) court administration.

#### *E-land*

E-land is known as one of the successful government projects under the seven flagship projects where it serves as a platform for the public to lodge a complaint on the poor quality of the ministry's service delivery due to unnecessary cumbersome processes and procedures as well as bureaucratic processes. Therefore, in order to tackle the arising problem, this service has been introduced to develop a comprehensive user-friendly land management and administration to ensure the quality in terms of service delivery (Ramli, 2012). A study has been carried out to know the level of significance of e-land services and the result showed positive feedback given by the public as this system is able to improve land management in Penang (Ramli, 2012).

#### *E-courts*

In 2004, many unorganised and long delays cases have been detected by the government which jeopardised the efficiency of the court management and administration in handling cases. Therefore, starting from 2011, a complete court ICT based has been implemented consisting of four components namely a video-conferencing

system, queue management system of lawyer's attendance, e-Filing of cases via online and community and advocacy portal to enhance communication between courts and the public (Wan Abdullah et al, 2013).

### *Business Licensing Electronic Support System*

Other than the public sector, the government is concerned in private sector businesses. In 1993, under MAMPU, Business Reengineering (BPR) programme has been initiated. Through this system, Business Licensing Electronic Support System (BLESS) has been introduced where applicants need to undergo several processes to apply for licenses and permits to start their business in Malaysia. This is to expedite business licensing processes by reducing redundancy and increase efficiency (MAMPU, 2013). This initiative by MAMPU was successful when BLESS effectively assisted almost 7000 users by 2011. Almost 600 businesses were registered in this system (Wan Abdullah et al., 2013).

As what has been aforementioned, there are various types of e-services that have been designed and organised in line with the e-government project. After the establishment of these programmes, several more services via online have been implemented namely Public Services Portal (myGovernment), e-Tanah, e-Consent, e-Filing, e-Local Government (e-PBT), e-Kehakiman, Custom Information System (SMK), Pensions Online Workflow Environment (POWER), and Training Information System (e-SILA) with the same mission, to enhance the services delivery to the public effectively (Shaidin, N.A).

To recap, all the programmes mentioned is none other than to improve the interaction among three tiers of government with other bodies namely government-to government (G2G), government to citizen (G2C) and government to business (G2B). Other transformations such as the permissibility of government departments to cross access their databases with other departments make the implementation of e-government more widespread such as the Immigration Department can swipe information more fluidly with the Registration of Births and Deaths Department, and the Road Transport Department can compare notes with the Police Department more autonomously. By having such access, those shared databases allow people to access multiple services through one-stop centres. (Mohd Zin Mohamed and John Antony Xavier, 2016). Thus, these efforts have been done in order to bring all the services under one roof known as e-government services.

### **3. E-government Evolution in State Level**

The development of e-government at state level occurs in sequence. After installation of a strong foundation of e-government at the federal level, the state government becomes the next focus. A lot of efforts have been carried out to improve the e-government system in its infrastructure and network to have effective functioning. For instance, National Symposium on e-government in Kuala Lumpur was conducted on 19 December 1997 to discuss prevalent issues pertaining to infrastructure management of e-government and how to utilize state website to deliver services to the people (Utusan Malaysia, 20 December 1997). This includes developing laws relating to cyber security, network, personnel, and other related efforts. It shows the government's commitment in upgrading the infrastructures so that they can start adopting this technology gradually and constantly with systematic approach (Utusan Malaysia, 20 December 1997). Besides, by having good infrastructure, it will simplify and speed up government activities and services delivery to the people (Schuppan, 2009). In time, by ensuring and securing the privacy and confidentiality of online user's personal details, many official matters such as bill payment, license application and submission planning will gain online relevance through the state government websites.

E-governments at state level aim to provide efficient and high-quality administrative services online to the people. Such service delivery through the Internet creates value to the populace by enhancing convenience, accessibility and speed of its services; not to mention making the government more responsive to the needs of its citizens (Mohd Zin Mohamed and John Antony, 2013). This is because the government at the state level is closer to the people compared to at the federal level.

In developing e-government at state level, many challenges need to be tackled systematically. A paper presented by Datuk Tham Nyip Shen, Deputy Chief Minister of Development and Industrialisation of Sabah on the challenges of electronic government on human resource development discussed about Sabah's initiative in facing the challenges as they are the pioneer of the state website during the beginning of e-government implementation. In the presentation, he mentioned about the implications of being digital. The paper explains Sabah's strategic approach. Sabah state government has established the Sabah IT Council chaired by the Chief Minister to spearhead the development and deployment of IT in the state. Besides that, the state government formed the Science and Technology Unit to act as the lead vehicle to transform Sabah into a scientific and technology-based society. This symposium was very beneficial because it provided information to the government on what are the challenges faced by the state government websites in implementing the e-

government system at state level and what are the solutions that can be taken gradually to overcome those challenges discussed.

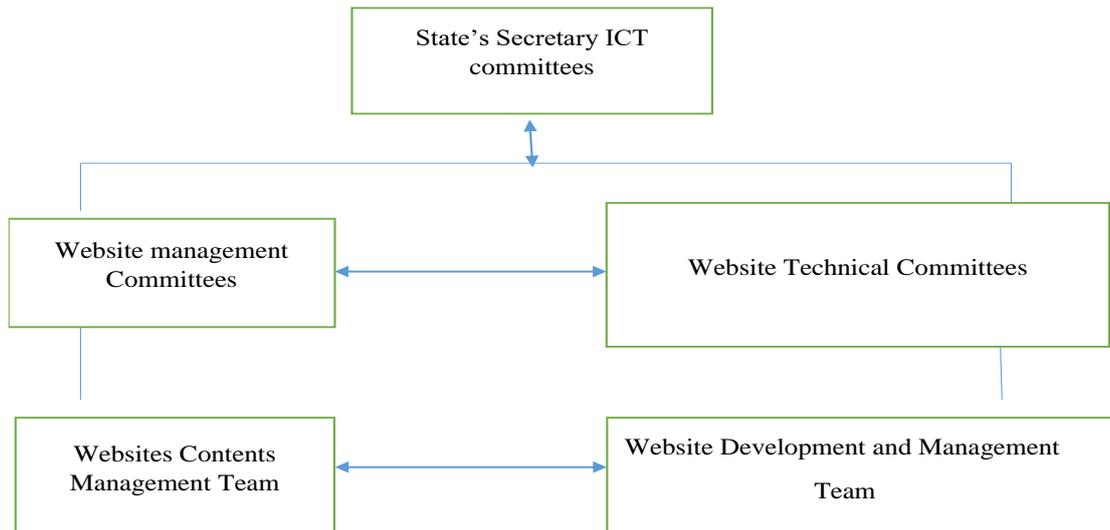
Various features have been implemented in the websites to promote effective communications between government and citizens. For example, in 2015, focus was given to promote equality to all the people to visit and use the website facilities without any discrimination. For instance, there are many interactive features for disable people known as Disability Accessibility to use the website without any hitch (MAMPU, 2015). To achieve the objective, MAMPU came out with a guideline known as “Pekeliling Kemajuan Pentadbiran Awam” in 2015. The guideline informs the state the strategies to maximise the usage of the websites by providing interactive features namely World Wide Web Consortium (W3C) Disability Accessibility for disable people, advanced search engine, Mobile site, e-Participation and open data (MAMPU, 2015). These features are significant to the successful reform in e-government as it shifts the state government website from new public administration to new public service.

Another challenge of the successful implementation of interactive features is digital divide. This is supported by Mohd Zin Mohamed and John Antony Xavier (2016) and Wan Abdullah et al (2013) where internet penetration is still low in some parts of the state. Based on the statistics carried out by Malaysian Communications and Multimedia Commission (MCMC), only 19.8 per cent households are using internet for e-government purpose. This is not surprising as many reports observed the reluctance of government agencies to enhance IT training and instil IT knowledge to the staff for the maximum delivery of e-government services (Ramli, 2012; Basu, 2004). According to Wan Abdullah et al (2013) education and training as well as accessibility of the e-government website need to be enhanced and upgraded from time to time.

### 3.1 Structure and Institutions of E-government Involved at State Level

At the state level, the structure of state government committees has been set up in order to supervise the implementation of e-government in state website especially in monitoring the ICT development.

**Figure 1.2:** Administration Structure of State Website



(Source: Taken from *Pekeliling Kemajuan Pentadbiran Awam*, 2015)

Based on the table above, all the committees and team mentioned above are in charge for specific tasks given to monitor e-government implementation in all states in Malaysia. Each of the states has this structure and they monitor their state website progress and development and to make its implementation updated from time to time based on the latest technology and services. Specifically, the tasks of the website management committees are to ensure the website supports strategic planning and services offered, and to ensure the contents of the website is up to date and valid. As for the Website Technical Committees, they are entitled to aid in the technical aspect of website administration to ensure the website's privacy and security from any harm at the same time come out with new features for the websites. On the other hand, the Websites Contents Management team takes care of the maintenance of the contents of the websites and ensure that the contents appeared on the website are the up to date and reliable. This team oversees editorial tasks, writing tasks and

updating the contents of the website. They also study the users' satisfaction of the website usage. Website Development and Management Team is responsible to develop the website in terms of its arrangement, graphic and its contents arrangement, improvise it from time to time and at the same time ensure the website is working and functioning (Pekeliling Kemajuan Pentadbiran Awam, 2015).

Generally, the institutions involved in charge at state level are the same at federal level of government, however, MAMPU is the leading institution that have been assigned to monitor the progress of state website (Wan Abdullah et al, 2013). The discussion on the roles of MAMPU in state government are as below:

#### *Malaysian Administrative and Management Planning Unit (MAMPU)*

At the state level, all the state governments have their own websites to deliver their services to the people. MAMPU made an effort by creating check lists for a website. In other words, what are the features needed to be included in every state website have been mentioned specifically based on its thematic categorisation. The state websites will be ranked by MAMPU together with MDEC based on the check list and they categorise these states based on their abilities to fulfil all the criteria needed. The state websites are assessed yearly and are ranked based on a star-rating. Generally, it can be observed that all the guidelines given by MAMPU are not in accordance with the paradigm of public administration. Hence, this study is very crucial as the researcher came out with a model of e-government based on the paradigm of public administration namely old public administration, new public administration and new public service.

Four key elements have been highlighted by MAMPU namely website development, privacy and security of the website, website contents and website administration (Pekeliling Kemajuan Pentadbiran Awam, 2015). For website development, state websites have to ensure that they are able to safeguard the functionality and maintain the contents of the website in accordance with MAMPU's checklist. All the features created by the state website must be in line with all those key elements given to ensure a well-organised e-government. Furthermore, efforts carried out by the ICT Committees and MAMPU roles as been discussed above are undoubtedly making state government aware on the importance of being digital. This is supported by A. Mahizhnan and N. Andiappan (2008) that state government needs to focus in establishing strong foundations of e-government in order to handle with specific issues happening in their state and identify the problems that hinder the successful implementation of e-government.

### **3.2 Types of Services**

#### *E-participation*

E-participation is one of the medium provided to engage citizens with government in policy making and decision making through the use of Information and Communication technologies (ICT). In Malaysia, the e-government implementation started in 1997 with the aim to deliver services and information effectively and efficiently, and to achieve a fully developed country in the year 2020. It is therefore essential that citizens must be able to use the Information and Communication Technologies (ICT) to assure a nation-wide e-participation besides improving channels and contents of public service deliveries on the part of the government. E-Rakyat is one of the column provided by the state websites where a lot of information provided pertaining to citizens. For instance, in almost all state government website, there is a column where people can leave their comments or feedback so that the government can take into consideration. Other than that, according to United Nations framework, information should be made accessible to the people so that they are aware on current news, information and any important date of application. For instance, basic information that are supposed to be provided by the website are namely latest news on state government, emergency contact numbers, calendar, state government information, scholarship announcement and any latest announcement.

#### *E-payment and E-forms*

At the state level, state government websites came out with another initiative to minimise time consumption by providing payment services via online to the public. Services like payment of quit-rent and assessment rent have been provided via online by almost all state websites. Zakat payment also has been made via online. MAMPU came out with guidelines on website privacy and security to ensure all the details of people are kept confidential (MAMPU, 2015). In these guidelines, personal data of any individual making payment in the website, payment details, data protection will be secured by MAMPU in protecting individual rights.

Many initiatives have been done by the government to secure the people's personal information especially for transaction. In supporting the e-government initiatives, the Malaysian parliament had gradually introduced legislation such as Computer Crimes Act 1997, Telemedicine Act 1997, Digital Signature Act 1997, Copyright (Amendment) Act 1997, Communications and Multimedia Act 1998, Electronic Commerce Act 2006,

Electronic Government Activities Act 2007 and Personal Data Protection Act 2010 (M. Rais and N. M. Khalid, 2003; Zulhuda, 2010). E-forms is also one of the initiatives made by state government to encourage people to apply any kind of application via online. For instance, Perak state website encourages people to apply for “*Rumah Prima*” project via online and check the status via online as well. All the personal information given in the forms are private and confidential as rules and regulations are there to secure people’s rights.

#### *E-mobile*

E-mobile or also known as M-government is one of the latest ICT innovations that have been done by the government to create Informative Society by 2020 (Wan Abdullah et al, 2013). The mobile web has been created to ease people having access to the state government information from their smartphones. Besides that, many other interactive features have been created namely Really Simple Syndication (RSS) which assists the user with the latest information promptly and effectively, Quick Response Code (QR Code) where users can surf the state Government Official Portal via handphones or PDAs (Smartphones) using the QR code provided by the website through the guidelines given. Another initiative made in e-mobile is “MySMS” where citizens will remain connected with government news and services if they install the application. Some of the information that can be made informed to the people are matters pertaining to traffic summons, payments and renewal of driving licenses. Furthermore, in Penang state website, there is one application where mobile users can stay connected with the government’s latest information on weather and traffic congestion (Penang Official Website). These are one of the good efforts made by state governments because all the information now can be accessible by the public at anytime and anywhere without the need to seat in front of the computer.

Based on the explanations above, the government’s continuous efforts in emphasising the importance of electronic government is something that should be proud of. The federal government has put a lot of efforts to have new public administration through a more organised and systematic administration to be followed by the state government websites. For instance, at the state lever over-layered hierarchy could be reduced to manage effectively, not all files have to be passed from one officer to another officer. This will lead to transparency in administration and will jeopardise any attempts of misuse of power and corruption. Therefore, this will lead to a shift from traditional service to another phase without the need to go through time consuming steps and cumbersome procedures.

## **4. Conclusion**

Pursuant to the above discussion, the government has begun to adapt more features listed under new public service so that the government can able to deliver services to the citizen with high levels of efficiency and effectiveness. Now, it can be noted that many ideas have been generated by MAMPU in order to fulfil the e-government mission. From the Malaysian Public Sector ICT strategic Plan of 2016-2020 published by MAMPU on citizen centric digital services, more concern and attention given to ICT to make the e-government system more efficient. Key elements like citizen centric, data centric, reliability and assurance are crucial to gain confidence and trust from citizens will be improved from time to time so that the establishment of e-government in the state website can be a constant success. To recapitulate, in making the e-government implementation a success, efforts should be carried out continuously and gradually by revising each of the agencies involved in developing e-government and more services should be provided in line with the latest technology.

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## **Conflict of Interest**

Authors declare that there is no conflict of interests regarding the publication of the paper.

## **Author Contribution**

Both authors were directly involved in the writing of this journal.

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