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IMPLEMENTATION OF ELECTRONIC GOVERNMENT IN MALAYSIA: THE STATUS AND POTENTIAL FOR BETTER SERVICE TO THE PUBLIC

ABSTRACT

The implementation of electronic government started since the initiation of Multimedia Super Corridor (MSC) by the Malaysian government. The progress and the effectiveness of e-government applications are openly discussed by the IT society in Malaysia. The aim of this paper is to discuss the implementation of e-government in Malaysia, covering the status of the implementation, and any potential for better growth as to provide a better service to the public. The discussion includes, views given by the public about the effectiveness and potential growth, and a few areas of e-government implementation. The next section of this paper will provide some comparisons with other countries such as Canada and Singapore, to help gauge Malaysia's position in the implementation of e-government applications, and to highlight the area that needs improvement. In summary, the success of e-government implementation in Malaysia is an important factor to determine Malaysia's progress towards achieving Vision 2020.

Keywords: Electronic government, policies, benefit

1.0   INTRODUCTION

Various countries, including Malaysia, are implementing electronic government, generally known as 'e-government'. The status of e-government implementation in Malaysia is widely discussed as to the potential of e-government implementation towards the public and businesses. As far as Malaysia is concerned, the implementation of e-government was initiated by the introduction of the Multimedia Super Corridor (MSC) in 1996 (Yusoff, 2002).

The e-government initiative launched the country into the Information Age ("Welcome to multimedia", 2003). It will improve the government operates internally as well as how it delivers services to the people of Malaysia. It seeks to improve the convenience, accessibility, and quality of interactions with citizens and businesses. Simultaneously, it will improve information flow and processes within the government, improve the speed and quality of policy development, and improve coordination and enforcement. This would enable the government to be more responsive to the needs of its citizens.

E-government is one of the seven flagship applications introduced in MSC. The objectives of these flagship applications are: to jump start and accelerate the growth of MSC; to enhance national competitiveness; to creation of high value jobs and export growth; to help reduce digital divide; and to make MSC a regional hub and test bed. Under the e-government flagship, seven main projects were identified to be the core of the e-government applications. The e-government projects are Generic Office Environment (GOE), Electronic Procurement (eP), Human Resource Management Information System (HRMIS), Project Monitoring System (PMS), Electronic Services Delivery (eServices), Electronic Labor Exchange (ELX), and E-Syariah. Besides these main projects, there are supporting projects such

as EG*Net (government Virtual Private Network (VPN)), EG IT Standards, Integration projects among flagships and legacy, PKI and Digital Signature, and Shared Services outfit (SSO).

Several policies and regulations have been introduced to support the implementation in Malaysia (Wong, 2004). Among the existing and future plan Cyber laws are: Communications and Multimedia Act 1998, Digital Signature Act 1997, Computer Crimes Act 1997, Copyright Amendment Act 1997, Telemedicine Act 1997, Personal Data Protection 2004, Electronic Government Activities Act (Proposed), and Electronic Transactions Act (Proposed).

The implementation of e-government would bring benefits to the public administration and Malaysian society in several ways (The e-government imperative, 2003, March). First, e-government improves efficiency since the use of information technology enables improvement in mass processing tasks and public administration operations. Hence, e-government applications can generate savings on data collection and transmission. Another form of efficiency is in terms of data sharing between government agencies. Next, e-government improves services, as the main element in reforming government operations is to adopt a customer-focussed approach. The e-government applications is developed based on best understanding of citizen requirements. These applications will provide a seamless online service and thus improve traditional government services.

Another benefit is that e-government would help to achieve specific outcomes. The Internet can help stakeholders share information and ideas and contribute to specific policy outcomes. For example, online information can boost training programme, sharing health information can improve resource use and patient care. However, this raises concern on privacy protection issue. E-government also contributes to other economic policy objectives by reducing government expenditures through more effective and efficient programmes, improving business productivity through administrative simplification and promoting the information society and ICT industry. E-government acts as a factor for reform in government. Most governments nowadays are facing the issue of public management modernization and reform such as globalization, changing society and increasing customer expectations. Thus, reform processes must continue in government operations and this is covered by the usage of information technology. Finally, building trust between governments and citizens is fundamental to good governance. ICT can help build trust by enabling citizen engagement in policy process, promoting open and accountable government and helping prevent corruption. Furthermore, the use of ICT encourages citizens to think constructively about public issues and assessing the impact of applying technology to open the policy process.

2.0 EMERGING TRENDS IN E-GOVERNMENT

A recent study conducted by Accenture, which was released in May 2004, indicated several emerging trends in e-government (Peter, 2004, May 4). The first trend is that, after a period of rapid expansion, the pace of e-government advances is slowing and many countries have hit a plateau of e-government maturity. This is showing that the e-government implementation is just making a great impact during the early stage of the implementation.

The second trend is that most of the government leaders are making tangible savings by being able to deliver enhanced government services while making operations more cost effective. Rather than realizing the public benefits on e-government services, the government leaders are more concerned on getting popular by their achievement in implementing e-government services.

The third trend is that promoting e-government is becoming a main priority in order to increase the citizen usage of e-government applications. As the study found that citizens rarely take advantage of the e-government services, promoting the services has become a priority.

The fourth trend is that the countries face new challenges in integrating the e-government services as they are growing. While some governments seek to integrate services across their own agencies and departments (horizontal integration), leaders in e-government are tackling the more complex challenges of integrating local, state, federal and even international services (vertical integration).

The last trend in e-government is the growing interest in offering personalized services to the individual citizen. By identifying and segmenting their citizen or user base, governments are able to provide citizens with relevant services and information, quicker and more cost effectively.

3.0   RECENT SURVEY FOR E-GOVERNMENT IN MALAYSIA

The recent survey about e-government adoption in Malaysia, which was done by market information group TNS, indicated that the e-government use is growing but at a slow pace ("E-government use", 2003, December 31). As shown in the study, about 15% of Malaysians have used the Internet to access online government services in year 2003 compared to 12% in year 2002.

In the survey, Malaysia's ranking is 25th out of 32 countries in terms of e-government usage growth. The Malaysians are also concerned about the security of doing transactions over the Internet and this resulted in low usage of e-government services. As far as the age group is concerned, the younger Malaysians who are under 34, are the primary users of e-government services. Also noted in the survey, households with high incomes and higher levels of education actively use the e-government services.

4.0   IMPLEMENTATION STATUS OF E-GOVERNMENT PROJECTS IN MALAYSIA

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Most of the e-government project implementations are currently in progress. The detailed objectives and status of each of the e-government implementation discussed as below:-

4.1 Generic Office Environment (GOE)

The aim of Generic Office Environment (GOE) is to introduce a fully integrated, distributed and scalable office environment that leverages use of multimedia information technology (Yusoff, 2002). This will enable efficient communication, allowing collaboration across all workers, and ensuring right information reaching the right people in a timely manner.

The GOE project consists of modules namely Enterprise-wide Information Management System (EIMS), Enterprise-wide Communication Management System and Enterprise-Wide Collaboration Management System ("Pilot Projects", n.d.). The EIMS provides a universal interface for users to manage, find, retrieve and compose the information that they need in their day-to-day operations. Via the Communication and Collaboration Management Systems, users can communicate and collaborate in a group to perform work functions. All three modules work together in an integrated fashion to provide the technical transparency for the users.

Three phases under GOE project are Pilot Phase, Operational Review Phase and Rollout Phase. In the

Pilot Phase, the system will be developed and implemented in the Prime Minister's Office, Deputy Prime Minister's Office, and Chief Secretary to the Government's Office, Cabinet Division and Malaysian Administrative Modernisation and Management Planning Unit (MAMPU). Under the Operational Review Phase, the performance of the vendors will be reviewed and for extension to all other agencies. As of now, the GOE project is undergoing the third phase (Roll-Out Phase) where the system has been roll-out to other government agencies with focus on ministries moving to Putrajaya.

4.2 Electronic Procurement (eP) Project

As for the Electronic Procurement (eP) project, the aim is to re-engineer, automate, and transform current procurement system (Yusoff, 2002). The project would cover central contract, tender, and direct purchase. Besides that, the use of eP will increase transparency, saves time and money while encourage suppliers to go electronic and join the K-Economy.

The electronic procurement project has taken off with the introduction of ePerolehan and can be accessed at www.eperolehan.com.my. It is the government's initiative to take its procurement exercises online (Alex, n.d.). With ePerolehan, all suppliers can obtain tender documents and submit bids on the Internet. The suppliers are equipped with smartcards that enable them to transact with the ePerolehan system. Two modules in ePerolehan system are central contract and direct purchase, and have been fully functional and used by the government in its procurement exercise.

With the introduction of ePerolehan system, it hopes that the system could streamline the processes and procedures as well as improve efficiency and productivity, while lowering the government's operational cost over time. For the suppliers, it could translate into new markets, additional revenues and higher margins. Besides that, ePerolehan allows suppliers to present their products on the Internet, receive, manage and process purchase orders and eventually receive payment from government agencies via the Internet.

This project started in year 1999 and as of 2006, total active registered suppliers is 92,106 where 26,054 enabled suppliers. The Direct Purchase (DP) Catalogue increased by 33.4% and enabled suppliers increased by 193% since July 2004 ("Flagship Applications Progress Status", 2006).

4.3 Human Resource Management Information System (HRMIS)

The introduction of Human Resource Management Information System (HRMIS) as an e-government project

will provide single interface for government employees to perform human resource functions effectively and efficiently (Yusoff, 2002). Furthermore, it will help to standardize all human resource processes for federal, state, statutory body, and local authority services. The objective of HRMIS is not just for record keeping but also provide transactional functions such as leave application, loan processing, competency management, recruitment, and selection of employee.

The HRMIS project will provide a single interface for government employees to perform human resource management functions effectively and efficiently in an integrated environment. The HRMIS project is anchored by the Public Service Department (PSD). The project started in 1999 and will take 42 months to be completed ("Status Kemajuan", n.d.). However, due to much time consumed on the Business Improvement Process (BIP), the application development of HRMIS system was delayed. As such, a Supplementary Agreement is signed by Government and the application development consortium in January 2001. The Provisional Acceptance tests were conducted in PSD, MAMPU, Prime Minister's Office, and Water and Irrigation Department.

As of September 2006, all modules have been completed and approved by the Government except for Executive Information System/Decision Support System (ESS/DSS) module. Final Acceptance Test (FAT) was completed and review points rectification was handled under Helpdesk ("Flagship Applications Progress Status", 2006).

4.4 Project Monitoring System (PMS)

Project Monitoring System (PMS) as one of the e-government projects will create a mechanism to monitor project implementation throughout various government agencies and statutory bodies (Yusoff, 2002). PMS would also provide a platform to exchange ideas and to demonstrate best practices in information management and communication services. The PMS is designed to provide a mechanism for monitoring the implementation of government projects ("Pilot Projects", n.d.). The service also provides a platform for exchanging ideas and demonstrating best practices models in information management and communication services.

The overall scope of PMS covers three services: namely, Application Services, Data Services and Communication Services. Types of projects to be monitored are the e-government projects, five-year development plan projects and any special project. The first phase of implementation was in 1998. In the first rollout, PMS was to monitor some of Malaysia's Seventh Development Plan projects.

Project Implementation has been completed at federal agencies throughout the country. Post implementation activities are on going such as the assessment of additional Project Monitoring System (PMS) II capabilities: *Elektronik Sistem Perancangan dan Kawalan Belanjawan* (eSPKB) & *Pusat Khidmat Kontraktor* (PKK) Interface ("Flagship Applications Progress Status", 2006).

4.5 Electronic Services Directory (eServices)

The next e-government project is Electronic Services Delivery (eServices) (Yusoff, 2002). This project is a pilot project that allows citizens of Malaysia to engage in transactions with government and utilities payments such as telephone and electricity bill, police summons, Road and Transport Department (RTD) services, etc. The eServices is accessed via multi channel service delivery such as the Internet and kiosk machines.

There are three phases of deliverables for the eServices project ("Status Kemajuan", n.d.). The first phase includes driver licensing and summons services, and *Tenaga Nasional Berhad* (TNB) and *Telekom Malaysia* (TM) utility bill payment services. The first phase rollout is focussed in the Klang Valley and this is followed by Proof-of-Concept for duration of 3 months. In the second phase, the contractor is granted with the opportunity to extend the rollout of driver licensing, summons services, and utility bill payment nation-wide. Subsequently, the development of vehicle registration and licensing, and Ministry of Health information services are carried out in the Klang Valley. The first phase and second phases have successfully completed. The third phase is currently in progress where the scope of vehicle registration and MOH information services Proof-of-Concept is being taken care of.

There are several websites and kiosks that have offered eServices application. For example, *Rilek* services allows members of the public to access general information and information on their outstanding summons through specially built touch screen infokiosks or through the www.rilek.com.my website ("Easier Payments", 2003). These website and kiosks allow the public to make online payments to the Road Transport Department (RTD) or the Police by credit card. Other than that, the public can also enquire about and pay their TNB and TM utility bills online via the *Rilek* service. The government also allows the public to take their driving theory tests at approved *Rilek* centre.

4.6 Electronic Labor Exchange (ELX)

The main objective of the Electronic Labor Exchange (ELX) is to improve the mobilisation of human resources

and optimise work force utilisation through systematic matching of job seekers to job vacancies (Yusoff, 2002). As such, this would enable the Ministry of Human Resources (MOHR) to be a one-stop centre for labour market information that will be accessible to the public.

The ELX project initially started in November 2000 and was expected to complete in fourteen months ("Status Kemajuan", n.d.). Until February 2005, about 11,086 job seekers and 466 employers were registered. Of a total vacancies posted, 3,447 resulted in 21,320 jobs matched. This project is fully rolled out for *Kementerian Sumber Manusia* and all state district offices of Manpower and Labour Department at 105 sites ("Flagship Applications Progress Status", 2006).

4.7 E-Syariah

The main objective of implementing E-Syariah is to improve the quality of service in Syariah courts ("E-syariah", n.d.). This will eventually enhance the Islamic Affairs Department's effectiveness through better monitoring and co-ordination of its agencies and improving the management of its 102 Syariah courts. The E-Syariah application consists of Syariah Court Case Management System, Office Automation System, E-Syariah Portal, Syarie Lawyers Registration System and Library Management System.

The E-Syariah project launched in April 2002 and expected to be fully operational in 2005 ("Money Game", 2003). Via the system, the Syariah judges are able to get access to past cases and have all the information they need for a particular case quicker than before.

The overall E-syariah project is 92% completed and the E-Syariah Portal was launched on 31st March 2005. The User Training and System Performance Acceptance Test/ Final Acceptance Test (PAT/FAT) activities for Syariah Court Case Management System (SPKMS) have been completed and the system is fully implemented at all fourteen states where it covers 110 courts ("Flagship Applications Progress Status", 2006).

4.8 Other Applications

Another e-government application launched by the Internal Revenue Department (IRD), is companies online tax ("Technology to Take", 2004). By using MyKey digital signature, which was offered by MSC Trustgate, these companies are able to digitally sign their C form and submit the document electronically to IRD.

In 2005, individuals were expected be able to file their taxes online to IRD using MyKey. MyKey is a digital signature embedded into an individual's MyKad. It identifies and authenticates MyKad holders over the Internet, providing the capability to sign digitally a document or transaction. The Malaysia Digital Signature Act 1997 governs the MyKey.

5.0 SOME COMPARISONS WITH CANADA AND SINGAPORE

The annual ratings on e-government implementation and acceptance done by Accenture, and published in May 2004 show that Canada and Singapore are the first and second country respectively (Chabrow, 2004, May 6). These two countries are rated above other countries in the e-government implementation due to several important factors.

5.1 Canada

Many people are concerned about how Canada managed to list their country as number one in e-government implementation for four straight years. The main challenge that most countries face, that Canada was able to overcome is to get the federal, state, and local governments to jointly offer services through a single Web portal (Chabrow, 2004, May 6).

Next, Canada's e-government action plans, is to build on a foundation of facts based on information from its customers. The Canadian government is asking the Canadian citizens on what they want rather than doing something that the government wants. Furthermore, Canada regularly surveys citizens and businesses about their attitudes and needs. The idea is to reach out to customers and proactively see what they want.

Other than that, Canada is actively marketing its e-government services. The marketing strategies include advertisement on television and radio, advertisement in airline magazines and newspaper. This is just to get the citizens and businesses to use its portal.

One of the interesting e-government initiatives in Canada is its wireless portal that gives citizens mobile access to information, e-mail, and personal services. The wireless portal provides Canadians access to information on border wait times, government news and economic indicators. Furthermore, the government portal lets user create their own customized page and offers alternate versions of its main site.

The core of the technical infrastructure that supports e-government in Canada is a secure channel to deliver safe high-speed access to government online services ("E-government for Canadians", 2004). For online transactions, Canadians use the *epass* as a digital signature. Besides that, the Canadian government also launched a helpdesk service that provides first level support to the government servants.

5.2 Singapore

In order to achieve the Singapore government's vision on e-government outcomes, it has set aside S$1.5 billion for information-communication initiatives in the public sector ("The Singapore e-government", 2000, September 14).

In order to ensure a strong growth of e-government in Singapore, several strategies were being adopted (Abissath, n.d.). The Singapore government has put in place a National Information Infrastructure as the backbone for e-government services delivery. This strategy, Public Service Infrastructure (PSI), has three types of infrastructure: Physical Infrastructure, Technology Infrastructure, and Authentication Infrastructure. In the Physical Infrastructure strategy, the Singapore government has provided Internet access points in convenient places such as public libraries, shopping malls, government offices, hospitals, subway stations, clubs, and relevant public places for the citizens to use free of charge. Next, in the Technology Infrastructure strategy, the Singapore government has provided computers, servers, networks (broadband and wireless), mobile devices, smart cards as well as technology standards that are open and scalable such as Java, XML and Web services. In the Authentication Infrastructure strategy, the Singapore government has provided e-government user ID and password for all its citizens. Thus, it made it easier for every citizen to know how to log online and access, government information and services.

Once the infrastructures for e-government services are in place, the Singapore government's next strategy is to adopt the enactment of relevant rules and regulations, and policies that govern the implementation of the e-government programme. Some of the major regulations are meant to safeguard privacy and information security; data protection, data privacy, computer misuse, legal recognition of electronic transactions, official control of cryptography, security audits, and standard and certification of security practices.

After the ICT infrastructures, and legislation and policy are in place, the Singapore government's final strategy is to develop a website called E-Citizen Portal. This portal enables citizens to ask questions and receive answers, and provides specific electronic services (e-government) deliveries. The government also provides national campaign and awareness programmes. Computer literacy or computer education begins right from the primary school. In the poor and rural communities, the Singapore government provided free computers and Internet access points and put officers who know how to operate the equipment to assist the illiterates to benefit from the e-government services.

Interestingly, Singaporeans have to apply for Passport and Birth Certificate online and the government will reward the citizens for doing this. If the citizens personally go to the relevant office for the services, there is a penalty imposed. After paying the penalty, the citizen must use the provided computers in the office to apply for the documents.

6.0 E-GOVERNMENT AS A POTENTIAL FOR BETTER SERVICE TO THE PUBLIC

The implementation of e-government services will bring benefits to the public, businesses and the government itself. As for the public, saving time and money are the primary reasons to use the e-government services. In order to ensure the success of e-government implementation, the governments should market their offers, improve citizen's awareness of the benefits and increase take-up of online services.

6.1 Barriers Impeding the Development of E-Government

Implementing a successful e-government project is not without any barriers during the process. Hence, adopting good strategies are crucial in order to overcome these barriers. Four main barriers could affect Malaysia's e-government implementation (The e-government imperative, 2003, March). They are as follows:

6.1.1 Legislative and Regulatory Barriers

In order for e-government services to gain widespread acceptance, they must have the same standing as the equivalent paper processes and ensuring the privacy and security before advancing the online e-government services. Confusion over what exactly should be in the law is also a problem. Some need further clarification on what they can and cannot do. Thus, a good law should be emplaced for good governance of the e-government services.

6.1.2 Budgetary Framework

Some governments are not recognizing ICT expenditure as a potential future investment. Hence, it is important for the government to realize the potential benefits of adopting e-government services. To finance seamless government services and shared infrastructure, budgetary regulations should facilitate co-operative funding mechanisms such as co-coordinated bids for new funds and the

pooling of funds. In short, treat ICT expenditure as an investment by recognizing future benefits and providing a sense of certainty for future funding. This would focus ICT spending on developing cost-effective solutions.

6.1.3 Lag Behind Technological Change

Governments face the challenge of fostering the development of e-government while there is still great uncertainty regarding technological change and negative impact. Since technological developments are moving very fast, it is very difficult to anticipate future impact in detail. Broad approaches for adapting to emerging technologies include technology neutral legislation and regulation, flexibility within broad regulatory frameworks and adaptation of current laws to a digital world, performance requirements rather than technical specifications when procuring new technologies, and increasingly looking to international co-operation to harmonise approaches to transborder issues.

6.1.4 Digital Divide Impedes the Benefits of E-Government

Online access has advantages that are impossible to replicate offline. Generally, the most disadvantaged have the lowest levels of access, yet they also often have high levels of interactions with the government. If these individuals cannot access e-government services, they will lose the benefits of e-government. Improved online access will increase the pool of potential users of e-government services. This justifies that, it is required to pursue policies to reduce the digital divide.

6.2 Factors for a Successful E-Government Implementation

Several factors will lead to a successful implementation of e-government in Malaysia. These factors relate to the public, businesses and the government itself (The e-government imperative, 2003, March).

6.2.1 E-Government Challenges Existing Ways of Working

E-government project is not mere computerization of government. It involves the effort of re-inventing processes, standards and technologies (Mohamed, 2000). ICT needs to incorporate into a package of modernization, related changes, and reforms that challenge public administration's current internal governance frameworks. E-government coordinators should use ICT as a tool to facilitate change and should not attempt to restructure public administration around current technology.

6.2.2 E-Government Requires Leadership

The leadership and enthusiasm of individuals and organizations has driven many e-government advances. Leadership requires vision, commitment and actions that are consistent with the message. Leadership is required at the early stage of e-government to be able to gain acceptance of concepts and benefits. At more advanced stage, leadership is required to manage change and sustain support for the e-government project. Indeed, leadership is required at all levels, from the political to the administrative. Political leadership makes e-government a priority and guides transformation by putting it in a broader context. Within administration, leaders help translate political vision into an action plan.

6.2.3 Seamless Government Services Will Draw Agencies Closer Together

Seamless e-government services require different agencies to work closely together. The collaboration must not only involve technical but also shared customers. E-government coordinators should facilitate planning for seamless services, clarify data sharing arrangements, and address accountability issues. Approaches adopted to deal with collaboration issues include peer reviews, standards and frameworks, inter-operability, shared infrastructure, and evaluated pilot project.

6.2.4 Managers Need E-Government Skills

The implementation of e-government increases the need for ICT-related skills in government. The skills required are not only technical but also in term of decision-making skills. The managers must be able to lead the organization's IT department and outside partners, and must be able to integrate the organization's ICT strategy with its broader goals. Furthermore, it is a need to update and strengthen traditional management skills, to deal with the impact of e-government. Thus, the government should take steps to identify and ensure the skills needed for effective e-government.

6.2.5 E-Government Involves Public-Private Partnerships

The implementation of e-government involved cooperation between the government, private sectors, and e-government coordinators. With procurement authorities and key agencies, it should develop an e-government public-private partnership framework. Transparency of skills between the two sectors enables new product development through high-level creativity and innovation efforts (Mohamed, 2000). As part of this framework, an examination of audit and accountability arrangements covering ICT partnerships would be helpful.

6.2.6 Implementing E-Government Can be Risky, Expensive and Difficult

Implementing e-government can be risky, expensive and difficult, and requires change. Current practices tend to resist pressures for change, leading to wasted opportunities and unnecessary expenditure. The problems in the development of e-government implementation such as ineffective project management, technology failures, funding discontinuity, and unrealistic political demand. A solution is required for these issues in order to have a successful e-government project implementation.

6.2.7 Monitoring and Evaluation Are Essential to Effective E-Government

E-government implementers should articulate the impact and benefits of a programme, in order to justify continued political and public support. Assessment should be realistic and done within time frames that are useful to decision-makers with priority to the assessment of demand, benefits and service quality. Assessing demand remains a major weakness in e-government programs. As services become more complex and expensive, it is increasingly important to assess this demand and incorporate user feedback.

7.0 CONCLUSION

In Malaysia, the internal processes for human resources, procurement and funding rank second in the hierarchy of challenges ("Key priorities for e-government", 2004, May 18). The main challenge in e-government in Malaysia is the technological challenge, which includes issues like standards, data integration, legacy maintenance and privacy and security. The key priority in Malaysia now is to improve the core government applications and integrating more services across agencies. At the same time, market the e-government services to the public and businesses.

Generally, new technologies are forcing governments to be particularly attentive to time. Unlike other aspects of government, technologies evolve very quickly and equipment rapidly becomes out of date. Economic development in this competitive, rapidly changing world will be penalized by delays in implementing e-government reforms.

In order to make the right decisions and avoid falling behind, governments must identify and resolve the different issues that have arisen from the transition period during which traditional and e-government co-exist. Rather than just focusing on introduction of ICTs, government should decide on, guide and control the transformation of government into e-government. The use of ICT to strengthen the involvement of citizens and businesses in public decision-making must progress at the same time. In short, implementing good strategies must be addressed carefully. Otherwise, e-government will remain a misleading, cosmetic operation.

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