E-Procurement Adoption in the Context of Malaysian Public Sector: The Way Forward

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Abstract

The edge of the Information Age, where information has become the cutting edge of global competition, has thrust the Information and Communication Technology (ICT) into the fore front of the national socio-economic development. ICT has been recognized as a strategic enabling tool to support the growth of the economy as well as enhance the quality of life of the population. The public sector in Malaysia is going through a period of rapid change. The government's leading role in spearheading the surge forward into the information age has compelled the public sector to lead the way. The Government launched the Electronic Government (e-Government) initiative to reinvent itself to lead the country into the Information Age. Electronic Procurement or locally known as e-Perolehan was one of the projects that the government launched as part of the objective to reinvent the government in terms of service delivery through the use of ICT and to catalyze the successful development of the Multimedia Super Corridor (MSC) Malaysia with ICT as one of the leading sectors of the economy. This paper examines the overall implementation of the e-Government initiative in Malaysia, with emphasis on the electronic procurement project known as e-Perolehan. E-Perolehan was started in the year 1999 and to date it has about 180,000 enabled suppliers, 2,600 government agencies, six e-Perolehan modules and total transactions of more than RM 11 billion. The general consensus amongst the buyer and seller communities is that e-Perolehan will become a catalyst towards a new and innovative procurement process within the Malaysian public sector. It is envisioned that within the next five years, more suppliers will grab the opportunity and benefit fully from the e-Perolehan initiative in Malaysia. Nevertheless, there are several issues that must be addressed by the relevant authorities to improve the procurement process in order to realize the objective of e-Perolehan system implementation.

Key words: e-Government, e-Perolehan, Suppliers and Government Agencies.

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I. Introduction

Quality, standard, productivity and service have become key words in the lexicon of public sector reform in many developed and some developing countries in recent years. Increasing prominence is given to these terms with rising expectations and changing perceptions of customers, who constantly grave for delivery of high quality services. This in turn, exert constant pressure on public service personnel at all levels in pursuit of new ideas and innovation, especially in the context of three E's—economy, efficiency and effectiveness (Khan, 2002). Thus, there is a strong call for governments all over the world to improve the quality of their service delivery. In this regards, governments have adopted various means and methods to be more innovative and effective in order to fulfill the demands from the citizens. All the programs implemented are aimed at transforming the ability and attitude of the public officials to be more proactive and participative in their jobs and duties. Major innovations started to take place in the public sector since the introduction of New Public Management (NPM) agenda in 1994 in the US (Khan, 2002). One of the leading innovations is the implementation of Information and Communications Technology (ICT) with an objective to reinvent the way governments conduct its business.

A classic example often cited on "re-inventing government" strategy achievement was during the Clinton/Al Gore administration, when the civil service was directed to make the United States (US) work better and cost less. The achievement, as outlined below, was declared in a press release during the First Global Forum on Re-inventing Government on the 14th January 1999, organized by the Division for Public Administration and Development Management under the purview of the United Nations.

> "As a result of reinventing government initiatives led by the Vice President, the U.S. government has eliminated 250 outdated government programs, slashed more than 16,000 pages of regulations, cut more than 640,000 pages of internal rules, helped balance the federal budget for the first time in 30 years by saving more than $137 billion, and reduced the federal workforce by more than 345,000 employees, creating the smallest federal

> government—as a percentage of the total workforce—since the 1930's." (Press Release on 1st Global Forum on Re-inventing Government, Al Gore, 1999).

Governments all over the world have demonstrated the need to improve the service delivery and being able to handle issues swiftly and satisfactorily. The advent of Internet Technology has made it possible for governments to transform themselves by offering various traditional services online. The use of ICT in general, has also changed government service delivery processes, business models and the peoples' expectations of the quality and efficiency of information sharing and service delivery. Successful implementation of various Electronic Government (e-Government) initiatives worldwide (*e.g.* e-Seva and e-Bhoomi initiative in India, e-Government initiative in Singapore and e-firstgov.com in the USA) are being touted as the next wave of creating innovative procurement processes in the context of the civil/public sector worldwide.

The advent of the Internet is poised to start a new revolution, as did the steam engine, electricity and telephone in the last century (Mathew, 2004). The Internet has opened new possibilities for the Government and its citizenry, just as it has for the businesses. The emergence of e-business, e-organization and k-economy and the corollary, e-Government, is predicted to change social governance dramatically, if not, radically (Tapscott, 1996; Castells, 1997). Over the past decade many governments have conceived and implemented programmes intended to launch the governments into the digital realm (UNDP, 2009). It is considered as a historical and technological inevitability with many implications for the government, the governance and the governed (Maniam & Ramachandran, 2009; Maniam *et al.*, 2010). While many see the power of ICT, especially the Internet, to improve, extend and diversify public service delivery systems, others view it more broadly to include the governance dimensions. The optimists view ICT and particularly the Internet as the panacea for the ailing spirit of democracy all over the world. ICT, it is argued, will rekindle the political consciousness of the citizenry and draw the apathetic masses back into the mainstream of political debate and discourse (Chadwick, 2001). The years of declining social capital and the politics-citizen disconnection can be mended, and

in fact, reversed. Other scholars, while recognizing the potential for democratic reinvigoration, are more circumscribed in their assessment of the role of ICT in the re-awakening of the political consciousness (Hague & Loader, 2001).

E-Government systems are not confined to automation of government service delivery systems targeted towards citizens' at large (G2C). E-Government platforms also include the use of ICT to streamline the procurement processes within public sectors (G2G & G2B). One of the successful e-Government projects worldwide is the implementation of Electronic Procurement (e-Procurement) project. Most countries have adopted e-Procurement system as government procurement mechanism with an aim to enhance transparency and accountability of government procurement administration. E-Procurement refers to "the use of electronic methods in every stage of the purchasing process from identification of requirements through payment, and potentially to contract management" (Chan & Lee, 2002; de Boer *et. al,* 2002; Knudsen, 2002; Tonkin, 2003; Davila *et. al,* 2003; Moon, 2005; Vaidya *et. al,* 2006; Aichholzer, 2010).

II. Essence of E-Government Strategy - Malaysia

Most governments realize the potential for e-Government initiatives to disseminate information, improve service delivery, increase transparency, decrease corruption and widen democratic participation. E-Government initiatives can be categorized as internal, which are G2G (Government-to-Government) and G2E (Government-to-Employee) or external, which are G2B (Government-to-Business) and G2C (Government-to-Citizen). E-Government transforms the governments' external relationships, whether G2B or G2C by enabling citizens directly receive government services from anywhere in the world without making personal visits or going through bureaucratic procedures. Interactions with the government can either be one-way, from government to citizen/business or two-way, which allows citizens/business to communicate to government as depicted in figure 1 (UNDP, 2006):

Figure 1: Government-Citizen-Business Relationships

The dual objectives of e-Government implementation in Malaysia is to reinvent the government in terms of service delivery through the use of IT and to catalyze the successful development of the Multimedia Super Corridor (MSC) with IT as one of the leading sectors of the economy (Othman Yeop, 1997). The vision of e-Government, in its essence entails people in government, business and citizenry working together for the benefit of Malaysia and all of its citizens; reinventing government using multimedia and IT to improve quality and productivity; perform government services electronically via Internet in an effective and efficient manner at all levels of three-tiered administrative systems and fosters the ongoing development of Malaysia's multimedia industry. The core elements needed to achieve the electronic government vision are standards, security and legislation (Othman Yeop, 1997).

Successfully realizing the vision for e-Government means fundamentally changing how government operates and implies a new set of responsibilities for public servants, businesses and citizens. The new services, information and channels for government to interact with the different constituencies will require all parties to become familiar with new technologies and develop new skills. In other words, at the implementation level the re-inventing government or civil service initiative need to address the following areas:

- Improving connectivity between all parties that deals with government be it public, inter-government agencies, private

companies, and foreign country inter-relationship. This gives better access to government.
- High quality services are expected to be assured.
- Better processes or systems are also crucial in terms of improving the government services.
- Create greater transparency and governance.
- Empowering government officers in the administration as well as the implementation level.

Through these implementations the benefits of electronic government can be realized. The benefits can be divided into three categories:

- First and foremost, the focus will be on the benefits from government to citizens or businesses, entailing easy access between the government, citizens and private companies; availability of government information, services and products electronically; avoiding delays in acquiring any services; accessing the websites of related services or products; and creating multi-channel service delivery. Consequently, a new class of quality services will materialize, as the government system will be less complicated and therefore, better quality services are assured.
- Secondly, the benefits created in terms of intra agency, meaning communication between government departments or agencies. Business processes will be improved as the electronic government contributes to the sustainable implementation in handling the vast number of agencies that are part of the government engine. Indeed, this effort will also contribute to the human resource development. The business process improvements will help to equip government staff with skills for information age.
- Thirdly, we will see the benefits of better inter agency communications. There will be smooth information flow between agencies, best practice database and enhanced capability for information analysis through the use of ICT and multimedia tools.

There are eight projects launched to date under the e-Government Flagship since it was started in 1997. All these projects will use ICT and

multimedia technologies to transform the way the government operates, its coordination and enforcement. Table 1 summarizes the projects and its characteristics.

Table 1: Main Projects under the E-Government Flagship

Projects	Characteristics
Generic Office Environment (GOE)	Provides a new paradigm of working in a collaborative environment where government agencies communicate, interact and share information
Electronic Procurement (EP)	Links the government and suppliers in an online environment. Government agencies as buyers procure goods/ services by browsing catalogues advertised by suppliers. Aimed at best value for money, timely and accurate payment
Project Monitoring System (PMS)	Provides a new mechanism for monitoring implementation of development projects, incorporating operational and managerial functions, and knowledge repository
Human Resource Management Information System (HRMIS)	Provides a single interface for government employees to perform HRD functions effectively and efficiently in an integrated environment.
Electronic Services (e-Services)	Enables direct, online transactions between the public, the government and large service providers via electronic means.
Electronic Labour Exchange (ELX)	A one-stop centre for labor market information, accessible to government agencies, the business sector and the citizens.
E-Syariah	Introduces administrative reforms that upgrade the quality of services in Syariah courts. To enhance the Islamic Affairs Department's effectiveness-better monitoring and coordination of its agencies and 102 Syariah courts.
E-Land	To achieve an updated, effective, efficient and accurate National Land

	Administration System via utilization of Information Communication and Technology (ICT), the E-Tanah project of Ministry of Natural Resources and Environment encompasses 24 main areas in land administration including disposal, registration of titles, transfer approvals and distribution of property

Source: www.mdc.com.my

Table 2 summarizes the total allocations for ICT development projects in Malaysia for ten years under the 8th Malaysian Plan (8 MP, 2001-2005) and the 9th Malaysian Plan (9 MP, 2006-2010). At a glance there is an increase in the budget allocation for government driven ICT initiatives from RM 7.885 billion in 8th MP to RM 12.889 billion, which registered an increase of 63.5 percent. Of the initiatives listed in Table 2, all except smart school, tele-health and ICT R&D registered a lower allocation due to the fact that the system is stable and therefore requires less money for maintenance. However, allocation for computerization of government agencies doubled, which is crucial for improving the quality of civil service through improving efficiency of delivery mechanism, from the perspective of the supplier. On the demand side, the bridging of the digital divide also received increased allocation from RM 2433.1 million to RM 3710.2 million, which is a 52.5 % increase; geared towards preparing the wider mass for various ICT adoptions. This is an indication of serious commitment from the government in making sure that ICT related programmmes are implemented and monitored properly.

Table 2: Development Expenditure and Allocation for ICT Programmes, 2001-2010

Programmes	8th Malaysian Plan Expenditure (RM million)	9th Malaysian Plan Allocation (RM million)
• Computerization of Government Agencies	2 125	5 734.2
• Bridging the Digital Divide	2 433.1	3 710.2
- School	2 145.1	3 279.2

- Communications Infrastructure	254	150
- Telecentres	18.1	101
- ICT Training/Services	15.9	180
• ICT Funding	1 125.6	1 493
• MSC Multimedia Applications	1 153.1	1 100.5
- e-Government	537.7	572.7
- Smart School	363.9	169.8
- Telehealth	91.8	60
- Government Multipurpose Card	159.7	296
• MSC Development	320.8	377
• ICT Research & Development	727.5	474

Source: Ninth Malaysian Plan (2006-2010)

III. Implementation of E-Perolehan

The e-Perolehan system streamlines government procurement activities and improves the quality of service it provides. It was officially launched in 1999 as one of the Electronic Government Flagship projects. E-Perolehan converts traditional manual procurement processes in the government machinery to electronic procurement on the Internet. The new procurement system allows the government ministries to electronically select items to be procured from the desktop, initiate an electronic approval process and also create, submit and receive purchase orders, delivery orders and other related documents electronically. The e-Perolehan system's vision, mission and objectives are as follows:

Vision: Improve and ensure an effective and efficient electronic procurement management system.

Mission: To make e- Perolehan as a main procurement mechanism to be used by the Government agencies and suppliers.

The objectives of e-Perolehan:

- To ensure accountability and transparency in all government procurements.
- To ensure best value for money for Government procurement.
- To ensure suppliers receive faster and more accurate payment.
- To increase collaboration between the business sector and the government.

E-Perolehan deals with the G2B relationship. On the supplier's side, e-Perolehan allows them to present their products on the World Wide Web (WWW), receive, manage and process purchase orders and receive payments from government agencies via the Internet. The supplier showcases its product catalogue, which can be viewed from any desktop with a web browser. The supplier is able to submit quotations, obtain tender documents and submit tender bids through e-Perolehan. E-Perolehan allows suppliers to register or renew their registration with the Ministry of Finance (MOF) through the Internet. Suppliers are able to submit applications, check application status and pay registration fees through e-Perolehan.

By subscribing to the e-Perolehan system, suppliers will be able to participate in the procurement exercise by the government. Upon final implementation of the e-Perolehan system, full services will be available to all four types of procurement processes spanning two phases: (i) Phase 1 – Supplier Registration, and Central Contract; and (ii) Phase 2 - Direct Purchase, Quotation and Tender. Table 3 depicts the e-Perolehan modules.

Table 3: e-Perolehan Modules

No	Module	Commencement
1	Supplier Registration	October 2000
2	Central Contract	October 2000
3	Direct Purchase	Mei 2002
4	Quotation	Mei 2005
5	Tender	Mei 2005
6	Ministry Contract	October 2005
7	e-Bidding	September 2006

Source: www.cdc.com.my

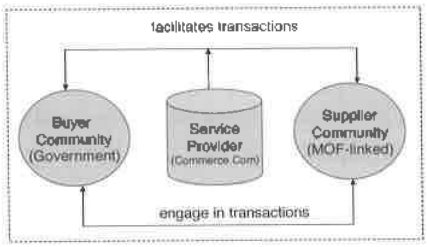
E-Perolehan will be the single point of registration for the suppliers. All approvals of the application for registration remain with the Registration Department of MOF. Services available in the supplier registration module include the following (www.cdc.com.my):

- Supplier registration can be done online via the Internet using the e-Perolehan website.

- E-Perolehan routes all successful suppliers' applications for online approval by the relevant authority upon full submission of completed documents.
- E-Perolehan facilitates generation of certificate for registered and successful supplier.
- The supplier registration module supports online renewal of registration by the suppliers.
- The supplier registration allows online application for registration of additional category or "bidang".
- E-Perolehan supports online suspension or termination of the supplier registration.

The business model that is used for the implementation of e-Perolehan is an end-to-end model (MAMPU, 1997; Maniam & Halimah, 2006, 2007). Procurement requires a complete integration of services from the buyer to the supplier and vice-versa. To ensure the success and consistency of procurement services, the responding organization shall provide an end-to-end solution. In this model, there are three distinct communities, namely the supplier community, the buyer community, and the procurement service provider. Figure 2 illustrates the three core entities involved in Malaysia's e-Perolehan initiative.

Figure 2: e-Perolehan Model



A. *Supplier Community*

The supplier community consists of suppliers who have registered with the MOF to provide supplies and services to the government. There are more than 180,000 registered suppliers (Commerce Dot Com, 2011) supplying goods under four categories *i.e.* Central Contract, Direct Purchase, Quotation and Tender purchase. These suppliers bear the

responsibility to coordinate with the procurement service provider and register onto the new system with the Government Procurement Management Division, within MOF. All suppliers are required to provide and update the necessary information regarding the items that they supply online.

B. *Buyer Community*

The government is the buyer community. The Malaysian government is expected to spend about RM 11 billion on procurement for the year 2010 (Commerce Dot Com, 2011). The cost of processing and managing this process is extremely high with increasing expectation from the supplier side for the government to be more efficient. It is the responsibility of the buyer *i.e.* government to have the necessary information in place to be able to accept and respond to the supplier electronically in the process of procurement.

C. *Service Provider*

Incorporated on 21 June 1999 as an e-commerce service provider, Commerce Dot Com Sdn Bhd (CDC) was granted by the Government of Malaysia the exclusive right to implement and operate the Government's electronic procurement system. CDC provides the electronic concept solution which enables the full transaction of the procurement process between the buyer and the seller. The end-to-end model requires the service provider to provide a total solution to both the supplier and the buyer community. This includes application, hardware and software if necessary and more importantly the capability to exchange business documents between the communities *e.g.* Purchase Orders, Request for Quotation, and Request for Tender Document *etc.* The security and confidentiality of this document shall be ensured so as not to compromise the confidence of both communities. The service provider shall also adhere to all necessary government procurement policies and legal requirements. However, Commerce.Com can provide advice and give suggestions to the government if necessary with the aim of improving the current processes in order to enhance the efficiency and to lower the cost of operation for the government. Figure 3 illustrates the e-Perolehan

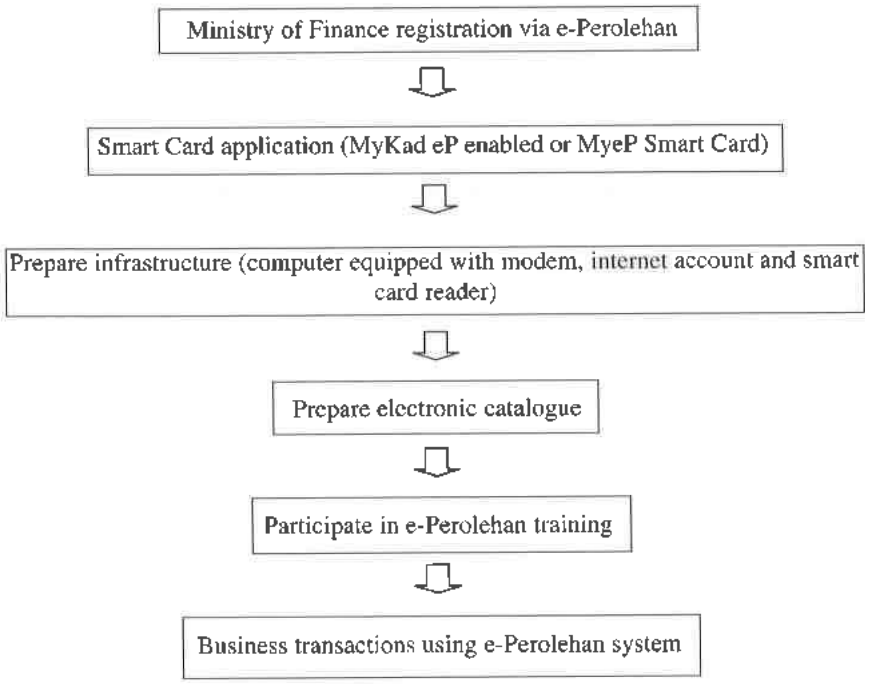
process in general and Table 3 indicates some of the important e-Perolehan milestones.

Table 3: e-Perolehan Achievements

Year	Total Registered Suppliers for e-Perolehan	Total Registered Government Agencies for e-Perolehan Nationwide	Total Volume of Transactions
2010	183,029	2,601	RM 11.04 Billion
2009	167,723	2,509	RM 9.09 Billion
2008	150,585	2,098	RM 6.01 Billion
2007	133,654	n.a	RM 3.53 Billion
2006	103,752	1,058	RM 2.06 Billion
2005		781	RM 1.08 Billion
2004	28,258	n.a	n.a
2003	20,600	n.a	n.a

Source: www.cdc.com

Figure 3: e-Perolehan Registration Process



IV. Discussion

The e-Perolehan initiative is expected to provide significant benefits to both the buyer (government) and supplier communities. The system firstly, offers more effective and efficient procurement processes in line with the country's transformation to a knowledge based economy (K-Economy). E-Perolehan is a vehicle for the government to leapfrog into the new economy and promote the widespread adoption of e-Business in the country. The system is also stated to lower the operational cost for the government over time. In addition, the government will be able to reduce administration and operational costs through the usage of e-Perolehan as business processes are reduced and streamlined. From the government's perspective, the e-Perolehan system provides latest product information and pricing available on-line. E-Perolehan will always be up to date with the latest information that will help the buyer to make more accurate procurement decisions.

A government buyer would have immediate access to a wide variety of products and services available to them via e-Perolehan, which will make them a better informed buyer. Overall, the government will benefit from improved purchasing control, scale economies and greater accuracy in the ordering and billing process. Off-contract and uncontrolled purchases that drive up product cost and reduce negotiation leverage will be minimized. It also prevents corruption by eliminating gate keepers and reduces abuse of discretion and other opportunities for corruption (UNDP 2005 & 2006). Besides that, information such as status of back orders and delivery status will be up-to-date and available electronically. This will help the government agencies in planning and budgeting. The government ministries will also still maintain the freedom and responsiveness of decentralized purchasing, given the relevant information on the products and specification.

For the suppliers, the benefits cited from adoption of the e-Perolehan system include greater accessibility to government buyers, provides an opportunity to transition into e-Business, providing an entry point for e-Business capability, and also enable adoption of e-Business concept more rapidly, through the usage of e-Perolehan system. The system also proffers faster and more cost effective advertising for suppliers, as through the

Internet platform, suppliers would virtually have a borderless advertising channel at a very low cost. In terms of process, the system simplifies the overall procurement process for the suppliers by reducing administrative and operational costs. Through e-Perolehan, almost all the business operations will be automated, thus not only leading to lower operational costs, but as will as faster turnaround time to the buyer. Suppliers would also be able to receive payments faster through electronic payment. Supported by a highly secured network infrastructure, suppliers would be able to receive payments for goods and services in a shorter period. Through the e-Perolehan system, the suppliers are able to use a single electronic catalogue for all government ministries while extending a global reach electronically to existing and new customers on the service (www.eperolehan.com). Suppliers shall also benefit from improved information accuracy, increased productivity and reduced operational cost with the electronic retrieval and submission of quotation and tender information. Efficient processing on both supplier and buyer community will also translate to faster payment turnaround time.

One of the main challenges for an e-Perolehan project is the establishment of an appropriate and context tailored strategy. Every project or initiative needs to be rooted in a very careful, analytical and dynamic strategy. This seems to be a very difficult task, requiring a focus on many aspects and processes, a holistic vision, long-term focus and objectives. Many public institutions limit their activities to a simple transfer of their information and services online without taking into consideration the re-engineering process needed to grasp the full benefits. The government must have a clear strategy to overcome the barriers to change. Part of the strategy is to engage in a rigorous assessment of the current situation, the reality on the ground and the inventory of projects, articulate costs, impacts and benefits of programme as well as continuously monitor and evaluate the project upgrading. Borrowing a lesson from the private sector, e-Procurement must be customer-driven and service oriented. Table 4 highlights some of the challenges faced by the users of the e-Perolehan system *i.e.* government and suppliers.

Table 4: Issues and Challenges of e-Perolehan

Issues & Challenges from the Government	Issues & Challenges from the Suppliers
• Application Hiccups • Limited commitment and ownership to support and push e-Perolehan implementation at Ministries/Agencies • Ministry's local area network (LAN) and firewall posed additional unexpected dependencies to the rollout team • Ministry/Agency IT Dept was not involved directly from the beginning of the implementation • Successful interfacing to eSPKB for budget check is reliant on external factors - EG*Net, availability of IB Gateway and LFEP servers, etc • Intermittent EG*Net connectivity issues	• Suppliers are adopting a *wait-and-see* attitude on e-Perolehan enablement • Low IT literacy amongst the Suppliers • Perceived high cost of enablement (PC, Smartcard, Smartcard Reader, Digital Certificate) • Suppliers contact information not up to date • Ignorance over the importance of electronic catalogue • Lack of confidence over information security and confidentiality

The e-Perolehan initiative in Malaysia is pretty much at an infant stage, albeit significant time, money, and efforts already invested into the project. To ensure the true potential and benefits of e-Procurement is realized by all parties involved, emulating success stories from e-Procurement initiative such as in West Australia, Taiwan, Singapore, Canada and in Andra Pradesh, India, is a must for the Malaysian government. For a start, significant change to the mindset of the traditional suppliers is required. This can be done via active and continuous promotion and education of e-Perolehan and the benefits it brings to the supplier community, and also to the government. In addition, the service providers, namely, Commerce Dot Com Sdn. Bhd., should reconsider reducing the cost of training and purchasing of the smart card, particularly for the small scale suppliers. Lastly, the federal government should craft out policies that are favorable and non-conflicting with the policy

objectives and implementation plan inherent within the e-Perolehan initiative.

The implementation of ICT in the public sector management is seen as an innovative and creative way to improve the quality of its service delivery. Therefore, in order to ensure a successful planning and implementation of e-Government programs, a proactive strategic planning is needed besides active participation from the parties involved. Some of the improvement highlights are as follows:

- Change Management Programme – awareness, promotion and training.
- Enforcement - Ministry's e-Perolehan taskforce, Treasury Instructions and Circulars.
- Monitoring-auditing, reporting mechanism, benefit capture study, Ministry's e-Perolehan Implementation Committee.
- Support Service - helpdesk, e-Perolehan centers, Ministry's e Perolehan Coordinator.
- Continuous Infrastructure & Application Enhancement - system application, technology, infrastructure and system integration.
- Setting SMART Target - Specific, Measurable, Achievable, Realistic and Time-Bound.
- Determine optimum work processes to meet customer needs
- Enhance delivery mechanism at district level administration
- Provide efficient and various Customer-Government channel
- Enhance infrastructure capacity to support Interoperability, horizontal, services
- Review licensing and regulatory needs
- Draft standard and effective guidelines
- Institute work culture that is responsive to change

V. Conclusion

In summary, the success of e-Government and particularly e-Perolehan rides heavily on a comprehensive development and implementation programme that touches all aspects of government. It requires new processes, systems, structures, training to develop new skills and shared values. Following the principle of "Think Big, Start Small and Scale Fast", once pilot projects have been undertaken, expanding with time to

a wide ranging rollout programme embracing all government departments and services at the federal, state and local levels.

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