

# **e-Government Initiatives in Malaysia and the Role of the National Archives of Malaysia in Digital Records Management**

by

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## **Abstract**

The implementation of electronic government started with the initiation of Multimedia Super Corridor (MSC) by the Malaysian government. The first part of this paper is about the implementation of e-government in Malaysia, covering the status of the implementation, and the potential for growth in providing better services to the public. The next section is about the role of the National Archives of Malaysia in digital records management, as well as the challenges faced by the National Archives in preserving digital records.

## **1.0 Introduction**

In 1997, the Malaysian Government launched the Electronic Government initiative, generally known as e-Government, to reinvent itself to lead the country into the Information Age. As far as Malaysia is concerned, the implementation of e-government was initiated with the introduction of the Multimedia Super Corridor (MSC) in 1996. The implementation of e-Government in Malaysia heralds the beginning of a journey of reinventing the government by transforming the way it operates, modernising and enhancing its service delivery. E-Government seeks to enhance the convenience, accessibility and quality of interactions with the public and businesses at large. 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. (The Multimedia Super Corridor).

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 Electronic Procurement (eP), Project Monitoring System (PMS), Electronic Services Delivery (eServices), Human Resource Management Information System (HRMIS), Generic Office Environment (GOE), E-Syariah and Electronic Labour Exchange (ELX).

Besides these seven main projects under e-government flagships, several government agencies has taken initiatives to introduced online services for the public projects, aims to increase the ease and efficiency of public service to the people. Among others were 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).

## **2.0 IMPLEMENTATION STATUS OF E-GOVERNMENT PROJECTS IN MALAYSIA**

Most of the e-Government project implementations are currently in progress. The detailed objectives and status of each of the e-government implementation as at May 2007 is as follows:

### **2.1 Electronic Procurement (eP) Project**

The electronic procurement system, better known as *ePerolehan*, streamlines government procurement activities and improves the quality of service it provides. *ePerolehan* converts traditional procurement processes in the Government machinery to electronic procurement on the Internet and can be accessed at [www.eperolehan.com.my](http://www.eperolehan.com.my).

With *ePerolehan*, all suppliers can obtain tender documents and submit bids through the Internet. The suppliers are equipped with smartcards that enable them to transact with the *ePerolehan* system. Modules in *ePerolehan* system include suppliers' registration, central contract, direct purchase, tenders and contract and have been

fully functional and used by the government in its procurement exercise.

With the introduction of the *ePerolehan* system, it is hoped 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* also allows suppliers to present their products on the Internet, receive, manage and process purchase orders and receive payment from government agencies via the Internet.

This eP started in 1999 and as of April 2007, a total of 114,438 suppliers have registered themselves with the Ministry of Finance through via eP. Out of these, 75,726 supplier are eP enabled. Sum of 164,000 Direct Purchase (DP) Catalogue are upload into the system by 14,000 suppliers. In 2006 the transaction value of eP was RM2.006 billion and the target set for 2007 is RM3.0 billion. ("MAMPU: EG Progress Status: 2007)

## **2.2 Project Monitoring System (PMS II)**

Project Monitoring System (PMS) is led by the Implementation and Co-ordination Unit (ICU) as one of the e-government projects that create a mechanism to monitor project implementation throughout various government agencies and statutory bodies i.e. from project application to approval to implementation, mid-term review and completion.

PMS would also provide a platform for exchanging ideas and demonstrating best practices in project implementation. The PMS is designed to provide a mechanism for monitoring the implementation of government projects. 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, followed by the second phase in 2002.

Project Implementation has been completed at all 28 ministries and 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.

### **2.3 Electronic Services Directory (eServices)**

The next e-government project is Electronic Services Delivery (eServices). 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, interactive voice response (IVR) and 66 kiosk machines.

There are three phases of deliverables for the eServices project. The first phase includes driver licensing and summons services, *Tenaga Nasional Berhad* (TNB is the largest electricity utility company in Malaysia) and *Telecoms Malaysia* (TM) utility bill payment services. The first phase rollout is focused in the Klang Valley.

In the second phase, the contractor is granted with the opportunity to extend the rollout of driver licensing, summons services, and utility bill payments 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 been successfully completed. The third phase is currently in progress whereby the scope of vehicle registration and MOH information services Proof-of-Concept is being taken care of.

The eServices can be accessed through three websites, namely [www.eservices.com.my](http://www.eservices.com.my); [www.rilek.com.my](http://www.rilek.com.my); and [www.myeg.com.my](http://www.myeg.com.my). As of April 2007, a total of 11 services are offered by eServices, with 454,750 transactions recorded for Road Transport Summon Status; 822,889 for the driving theory tests at approved *Rilek* centres; 234,884 transactions for LDL Licences; 16,200 for Police Summon payments and 86,329 for enquiring DBKL summons enquiries. (MAMPU: EG Progress Status: 2007)

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

The introduction of Human Resource Management Information System (HRMIS) as an e-government project will provide a single interface for government employees to

perform human resource functions effectively and efficiently (Yusoff, 2002). The objective of HRMIS is not just for record keeping but also to provide transactional functions such as leave applications, loan processing, competency management, recruitment, and selection of employees.

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 all modules have been completed in September 2006.

As of April 2007, 443,175 service data and 337,568 government employees' personnel data from 523 agencies were kept in the HRMIS database.

## **2.5 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. 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 also 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. (MAMPU)

Three phases under GOE project are Pilot Phase, Operational Review Phase and Rollout Phase. In the Pilot Phase, the system was developed and implemented in the Prime Minister's Office, Deputy Prime Minister's Office and Office of the Chief Secretary to the Governments, Cabinet Division and Malaysian Administrative, Modernisation and Management Planning Unit (MAMPU). Under the Operational

Review Phase, the performance of the vendor was reviewed before the service was extended to all other agencies- As of now, the GOE project is in the third phase (Roll-Out Phase) where the system has been rolled-out to 22 government agencies with focus on ministries moving in the Putrajaya Administrative Centre.

## **2.6 Electronic Labour Exchange (ELX)**

The main objective of Electronic Labour Exchange (ELX) is to improve the mobilization 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 until April 2007 about 405,530 job seekers and 62,255 employers were registered. Out of total 898,856 vacancies posted, 877,052 jobs were matched with suitable candidates.

## **2.7 E-Syariah**

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

The E-Syariah project was launched in April 2002 and is expected to be fully operational in 2005. Via the system, the Syariah judges are able to have access to past cases and all the relevant information needed for a particular case quicker than before. As of April 2007, the e-Syariah has been implemented at all 110 Syariah Courts in Malaysia.

## **2.8 Other Applications**

Besides the seven flagship applications, several government agencies introduced

online services for the public project aims to increase the ease and efficiency of public service to the people. Among the most notable accomplishments of the government was the launch of the latest iteration of the Public Service Portal (or, myGovernment Portal), in February 2005, with all core portal modules completed and “live” in May 2005. MyGovernment is the single gateway to information and services provided by Malaysian Government agencies on the Internet. To date, myGovernment links 900 websites across federal, state and local authorities and the Malaysian Civil Service Link. The portal will continue to grow in scope and reach as departments and agencies continue to make more services online. Other important planned enhancements include an online payment gateway, ubiquitous access through various mobile channels and single sign-on capability.

Another e-government application launched by the Internal Revenue Department (IRD) is companies' online tax. Since 2005, individuals were 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.

### **3.0 The National Archives (NAM) Response to eGovernment (EG)**

The introduction of EG indicates the volume of electronic records created or will be created in Malaysia, thus leaving an impact on recordkeeping particularly electronic records. As government agencies or public offices are involved with electronic records, the NAM reacted in positive and proactively manner to the new challenges it has to face after EG implementation. Three major steps taken by the NAM was the establishment of a new management called the Electronic Records and Information Technology Management (PRETM), amended the National Archives Act 1966 to include electronic records as public records and the e-SPARK (e-Strategy for Preservation of Government Records and Archives) Project.

#### **3.1 Electronic Records and Information Technology Management (PRETM)**

A new management called the Electronic Records and Information Technology Management (PRETM) was established in 2001, under the reorganization of the

NAM. PRETM is responsible for implementing activities related to the government electronic records. Among its prime duties are identifying and transferring government electronic records for permanent storage, formulating standards and guides in the management and preservations of electronic records. PRETM was also responsible for upgrading the NAM information system in making the dissemination of information and access easier, in line with the advancement of information and communication technology.

The activities of this Management were carried out by its five divisions comprises of the Electronic Records Divisions of the Socio-Economic Sector, Administration and Safety Sector, Advisory and Publicity Services Division, Standard and Inspectorate Development Division and Information Technology Division.

The Electronic Record Divisions of the Socio-Economic Sector and Administrative and Safety Sector are largely responsible for the preparation and implementation of the, strategic plans of the Electronic Records Management Division. These divisions are also responsible for the planning of the Electronic Records Management programmes such as the preparation of Segregation Schedule and the conservation of electronic records and access facilities for Government agencies.

The Advisory and Publicity Services Division is responsible for offering advisory services in electronic record management to Government agencies which include the development of electronic records programme. This Division also organised IT (Information Technology) awareness and literacy programmes by means of various methods like brochure/pamphlet publications, demonstrations, software and hardware promotions and advisory service visits.

The Standard and Inspectorate Development Division meanwhile is responsible for carrying out studies, determining and establishing the standards and practices of record management in Government Agencies. It is also responsible for enforcing the implementation of the National Archives Act and the auditing and monitoring of the implementation of record management and destruction practices in the Government agencies.

The Information Technology Division is the backbone in offering technical expertise and support services to the National Archives. It is responsible for managing the department's Information System and applications as well as other aspects of



information technology. All these are made possible by the presence of well-trained officers and the use of suitable software for the department as well as the effort in ensuring security and quality control in the implementation of information technology programmes at the National Archives.

### **3.2 The National Archives Act 2003**

The NAM had amended the National Archives Act 1966 to include any form of records created electronically to be considered as public records. The new National Archives Act was passed in 2003.

The new act renders the definition of records as:

***"records" means materials in written or other form setting out facts or events or otherwise recording information and includes papers, documents, registers, printed materials, books, maps, plans, drawings, photographs, microfilms, cinematograph films, sound recordings, electronically produced records regardless of physical form or characteristics and any copy thereof;***

This new Act also mandated the National Archives (NAM) to be responsible for current records management which was formerly under the Malaysian Administration, Modernisation and Management Planning Unit (MAMPU) jurisdiction. The new mandate is important because the findings from surveys conducted a few years ago, showed that a complete record life cycle management (from its creation to disposal) is crucial and critical in the electronic environment.

With this new mandate the National Archives of Malaysia has to assume a leading role in governing the management of electronic records from creation till disposition in the public sector. It has to take several measures and initiatives taming the wild frontier.

### **3.3 e-SPARK Project**

e-SPARK (e-Strategy for Preservation of Government Records and Archives) is a special research project supported by the highest authority to promote good record keeping in the entire public sector. Its implementation was carried out in two phases. First phase concentrated on preparation of working tools such as guidelines,

procedures and system specification. Second phase is dedicated to system development and system integration - ERMS (Electronic Records Management Systems) and AMS (Archival Management Systems).

### **3.3.1 e-SPARK Project Phase I**

The e-SPARK Project Phase 1 (e-Strategy for Preservation of Government Records and Archives) was approved by the Government Information Technology and Internet Committee (GITIC) in March 2003 and the project completed in 2004.

It focused on the study regarding solutions on how to manage electronic records in government agencies in Malaysia as well as the e-Archives Management for the National Archives of Malaysia.

Although the project was about records management requirements within the country, we also looked at requirements and trends in the area of records management. It is for this reason that the International Records Management Trust (IRMT) was engaged as advisors for the project.

The objectives of e- SPARK Project Phase I:

- To conduct an assessment of the current status of electronic records and archives management implementation within the Public Sector in Malaysia.
- To weigh Malaysia's current initiative with other internationally adopted policies and procedures implemented pertaining to electronic records and archives management.
- To identify and recommend strategies to reposition electronic records and archives management in Malaysia to support the Electronic Government objectives.
- To identify and develop policies, guidelines, processes and procedures to preserve electronic records in the public sector.

The main deliverables of this project are electronic records management standards, guidelines, procedures and system specifications as below:

- i. Electronic Records Management Policy
- ii. SOP - Archives Management Framework for Electronic

## Records

- iii. SOP - Archives Management of Electronic Records
- iv. SOP - Appraisal Management for Electronic Records
- v. SOP - Guidelines for the Management of Electronic Records in Public Offices
- vi. Guidelines on Electronic Records Management
- vii. Electronic Records Management System Specification
- viii. Electronic Records Management Training and Education Guidelines

Besides those standards, guidelines and procedures, e-SPARK Project Phase I also produced the Arkib Unified Model which was decomposed into High Level Business Process. This model proposed close collaboration between NAM and agencies. Top level management in all agencies is needed to make this happen. Therefore a total of 30 agencies were selected to participate representing various federal ministries and state governments dealing with different types of records. Each agency is requested to send 2 representatives consisting of IT manager and officer in charge records. They are constantly updated with e-SPARK progress and development. The idea of having this pilot group is to groom them as agents for change in the future in their own establishment.

These deliverables were developed with expert advice from IRMT resource persons namely from U. Kingdom, USA, Canada, Netherlands and Australia. Reports on findings and deliverables from this research projects were tabled in GITIC. GITIC agreed that the whole public sector needs standardized approach in records and information management practice as recommended by the National Archives via the e-SPARK project.

By adopting e-SPARK recommendation, NAM has given the responsibility on record preservation partially to the creating agencies. However NAM will continue to provide periodical supervision. This offer was very well received by agencies. In addition, agencies are also encouraged to employ professional records managers based on the cabinet decision made in December 2005.

### 3.3.2 e-SPARK Project Phase II

The e-SPARK Project Phase II was commenced on 21 December 2006 and scheduled to be completed by the end of 2007. This phase is dedicated to system development and system integration - ERMS (Electronic Records Management Systems) and AMS (Archival Management Systems). The project was aimed at:

- Developing a Digital Archival Management System at the National Archives of Malaysia for the preservation of electronic records of permanent value that will be transferred by government agencies;
- To enable the digital archives collection stored in the Digital Repository be accessed online by the public;
- To enable the electronic records to be managed and maintained accordingly and can be easily accessed when needed.

The system consists of two components that are the ERMS and the Digital Archives System.

#### **a. Electronic Records Management System (ERMS)**

Several ERMS application software was tested during the Phase 1 of the e-SPARK Project. TRIM Context and File Net Records Manager were the two systems that fulfilled the requirements set out in the National Archives of Malaysia's Electronic Records Functional System Specifications. However, TRIM Context was chosen finally for implementation at in the National Archives of Malaysia in managing the creation or receipt, maintenance and use and disposition. It will also act as a prototype in managing electronic records before it can be rolled-out to all the government agencies in Malaysia.

#### **b. Digital Archival Management System**

The Digital Archives Management System which includes technical infrastructure and a Digital Repository is important for managing and providing access to digital objects and their associated metadata.

The National Archives of Malaysia has acquired a system called Tesella SDB developed by Tesella Scientific Centre, UK as its Digital Archives Management System. This system fulfills the OAIS model and has the following six functional entities:

**"Ingest:** This entity provides the services and functions to accept Submission Information Packages (SIPs) from Producers (or from internal elements under Administrative control) and prepare the contents for storage and management within the archive.

**Archival Storage:** This entity provides the services and functions for the storage, maintenance and retrieval of AIPs [Archival Information Packages].

**Data Management:** Provides the services and functions for populating, maintaining and accessing both descriptive metadata which identifies and documents archival holdings and administrative data used to manage the archive.

**Administration:** This entity provides the services and functions for the overall operation of the archives system.

**Preservation Planning:** This entity provides the services and functions for monitoring the environment of the OAIS and providing recommendations to ensure that the information stored in the OAIS remains accessible to the Designated User Community over the long term.

The ERMS would ensure standardized creation, capture, maintenance and disposition of e-records, whereas the AMS would provide for the long term preservation and access to e-records of permanent value.

#### **4.0 Change Management**

Changing from traditional paper based office into paperless office sounds unrealistic. Less paper office sounds more reasonable. However changing the mind set is not an easy task but it needs to be done, the proactive policy in records management and preservation has to have extensive promotion in the most persuasive manner. Good communication and negotiation skill are helpful in building up partnership and networking with creating agencies. More talks and training seminar needs to be done to improve their understanding and increase awareness. Sharing the records management responsibilities will create better sense of ownership and accountability among the agencies. NAM hopes to see agencies giving their full commitment and to start positioning records management in the mainstream as national and development

agenda in Malaysia.

On the other hands, in order to remain relevant NAM has shifted its paradigm to start re branding itself from just custodian of records to information or content provider. Human resource needs to realign and structure needs to be reviewed. New skill and competencies need to be acquired and training module has to be upgraded.

## **5.0 Conclusion**

NAM as the custodian of the national heritage is prepared to assume the lead to establish the governance and long term preservation of electronic records. As we are in the early stage of the electronic records programme, we foresee problem may arrive from records created in the legacy system which do not conform to the NAM system specifications. There will be more problems and issues when the transfer of electronic records actually taken place.

As the risk of losing information is higher in EG system and the challenge is even greater compared to paper environment, therefore change and risk management must be in place to ensure information available overtime. NAM needs to develop partnerships and to share recordkeeping responsibilities with the creating agencies.

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