Successful IT Technical Framework for E-Governance Based on Malaysian Case Study

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ABSTRACT

E-governance is more than just a government website on the Internet. But what is it exactly? What are the benefits of e-governance? What can governments do to make it work? Solutions to development issues often require changes to government processes, e.g. by decentralization. Objectives are generally to improve efficiency and effectiveness and to save costs. The driving force can also be public demand for online services and information that increase democratic participation, accountability, transparency, and the quality and speed of services. The actual positive idea to develop this model is to understand the e-governance better and at the same time this will avoid from possible problem during the period of transition. Towards introducing the new model we also will identify few unique cases of e-government. As fast as WWW (World Wide Web) concern it grows beyond the limitation line, this made a considerable attention to be focused on the adoption of web-based technology. The web technology covers business to business (B2B), business to consumer (B2C) sector, government- to business (G2B) and government to citizen (G2C).

Keywords: WWW - World Wide Web, G2C – government to citizen, B2B – business to business, B2C – business to consumer.

1. Introduction

E-governance is more than just a government website on the Internet. But what is it exactly? What are the benefits of e-governance? What can governments do to make it work? Solutions to development issues often require changes to government processes, e.g. by decentralization. Objectives are generally to improve efficiency and effectiveness and to save costs. The driving force can also be public demand for online services and information that increase democratic participation, accountability, transparency, and the quality and speed of services. The implementation and use of ICT solutions can support governance reforms. E-governance will become more and more present around the world in the next upcoming years. Internationally most countries are in the early stages of e-governance. A good start has been made in Europe, USA and in other Westernized countries such as Australia and Singapore and Malaysia and India. Over the coming years also developing countries and their citizens can also benefit from e-governance. This paper explains what is meant by e-governance and the technology involve in implementing the e-governance and also the model of framework layer in terms of technology. It starts with a definition of e-governance, and then presents a general e-governance model and several case studies and examples.

Imagine a situation in which all interaction with the government can be done through one counter 24 hours a day, 7 days a week, without waiting in lines at government offices. In the near future this is possible if

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governments are willing to decentralize responsibilities and processes and they start to use electronic means such as the Internet. Each citizen can then make contact with the government through a website where all forms, legislation, news and other information will be available 24/7.Of course, at first the front office will retain several communication channels, such as physical counters, telephone, (e-) mail and Internet to serve everyone properly, but this will change dramatically in the next few years. In develop country commercial banks already work according to this concept. Only in a few very special situations one has to go to a physical counter. Most transactions can be done at either an ATM, by mail or by the Internet, which has saved banks an enormous amount of costs. In other words, they do more work, with less people, in less time and with less and smaller offices: They use the Internet. Government, as a collector and source of information, may also follow this trend, in order to serve its customers (citizens, businesses, and other interest groups) better and to save costs by making internal operations more efficient.

Many definitions exist for e-governance. Before presenting an overall definition of e-governance, the relation between governance, e-democracy and e-government is explained. E-democracy refers to the processes and structures that encompass all forms of electronic interaction between the Government (elected) and the citizen (electorate).E-government is a form of e-business in governance and refers to the processes and structures needed to deliver electronic services to the public (citizens and businesses), collaborate with business partners and to conduct electronic transactions within an organizational entity (Shankry Nagarajan 2005). The term interaction stands for the delivery of government products and services, exchange of information, communication, transactions and system integration. Government consists of levels and branches. Government levels include central, national, regional, provincial, departmental and local government institutions. Examples of government branches are Administration, Civil Service, Parliament and Judiciary functions. Government operations are all back-office processes and inter-governmental interactions within the total government body. Examples of electronic means are Internet and other ICT applications.

While e-Government is not a digital-age panacea for government ills, it can offer a number of benefits, including better quality government services, higher efficiency, educed costs, a lower administrative burden on businesses and individuals, shorter processing times, increased citizen participation in the political process, and reduced corruption on the part of government employees. To achieve such benefits, however, projects must be carefully identified, planned and implemented. This Toolkit explores key factors that need to be addressed in order to improve the chances for e-Government success. Governments are increasingly becoming aware that, if they are to reap the same benefits that the private sector has derived from electronic delivery channels, they have to spend more on e-Government, and to integrate their front end and back end systems. Such integration reforms will necessitate building services around citizens rather than basing them on the structure of government departments or agencies.

The strategic objective of e-governance is to support and simplify governance for all parties -government, citizens and businesses. The use of ICT can connect all three parties and support processes and activities. In other words, in e-governance uses electronic means to support and stimulate good governance. Therefore the objectives of e-governance are similar to the objectives of good governance. Good governance can be seen as an exercise of economic, political, and administrative authority to better manage affairs of a country at all levels, national and local. It is useful here to present objectives for e-democracy and e-government. The two main objectives of e-democracy are:

- To provide citizens access to information and knowledge about the political process, about services and about choices available
- To make possible the transition from passive information access to active citizen participation by:
  a) Informing the citizen

b) Representing the citizen
c) Encouraging the citizen to vote
d) Consulting the citizen
e) Involving the citizen

Regarding e-government, the distinction is made between the objectives for internally focused processes (operations) and objectives for externally focused services. External strategic objectives. The external objective of e-government is to satisfactorily fulfill the public's needs and expectations on the front-office side, by simplifying their interaction with various online services. The use of ICT in government operations facilitates speedy, transparent, accountable, efficient and effective interaction with the public, citizens, business and other agencies. Internal strategic objectives. In the back-office, the objective of e-government in government operations is to facilitate a speedy, transparent, accountable, efficient and effective process for performing government administration activities. Significant cost savings (per transaction) in government operations can be the result. It can be concluded that e-governance is more than just a Government website on the Internet. Political, social, economic and technological aspects determine e-governance.

2. e-Governance Model

The three main target groups that can be distinguished in e-governance concepts are Government, citizens and businesses/interest groups. The external strategic objectives focus on citizens and businesses and interest groups, the internal objectives focus on government itself. Abbreviations such as B2B (business to business) and B2C (business to consumer) are used, like in e-commerce, to shortly describe which of the main groups are interacting. The three abbreviations in the figure, G2C, G2B and G2G are explained below
Figure 1 shows The Main Groups Involve in e-Governance

	e-democracy	e-government
External		
G2c:Government to citizen	x	x
G2B:Government to Business		x
Internal		
G2G:Government to Government		x

Figure 1: Shows the Main Groups Involve in e-Governance

As mentioned before, e-governance is more than a government website on the Internet. What are the opportunities and possibilities of e-governance in the future, and what services are delivered at this moment? Gartner, an international e-business research consultancy firm, has formulated a four-phase e-governance model. This e-governance model can serve as a reference for governments to position where a project fits in the overall evolution of an e-governance strategy. *Figure 2 shows the flow of Interaction between the main groups in e-Governance*

3. Framework layers of e-government

The reason is that they are designed to support e-business and e-commerce applications. The framework is structured into four layers connected through two-direction arrows which present the hierarchical level of e-government implementation and portray the logical connection of each relevant layer that allow two-way transmission of data and services. The top level of the framework represents the access layer that illustrates who might use the government services and what are the channels of access. Throughout these channels, the e-government portal should integrate all government information and services from disparate departments and Organizations, which represent the e-government layer. In connection to the e-government layer, the e-business layer is emerged to manipulate and integrate government data sources across government bodies and make information and services available to the e-government portal in real-time. In

the bottom level of the framework, the ICT infrastructure of e-government should be built to reach out all parts of government and hence, support the e-government operation and provide Effective and reliable e-government services. *Figure 3 show the architecture framework of e-government.*
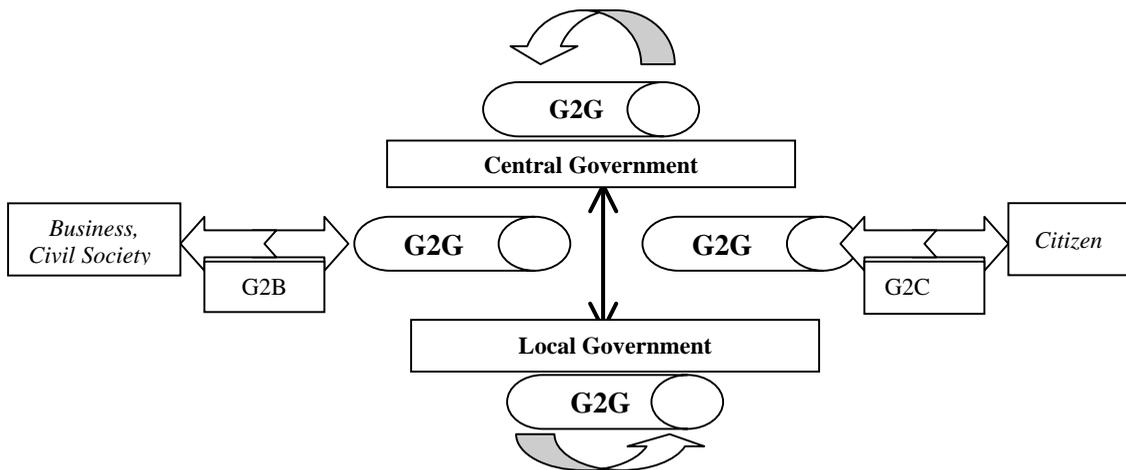

Figure 2: Shows the flow of Interaction between the main groups in e-Governance

Early adopters of web-enabled technology applications tended to automate existing business processes, with little redesign or innovation. Typical approaches involved automation of the front-end web presence so as to spark e-commerce activity, but failed to integrate and redesign the business as a whole in order to make it truly web-centric. The same was true of early e-government initiatives – there was a scramble to get as many services or web pages up with little regard to quality, service level or appropriateness for the citizenship. However, as Burn and Robins observe," Government is not just about putting forms and services online. It provides the Opportunity to rethink how the government provides services and how it links them in a way that is tailored to the users' needs". This rethinking must necessarily include disavowal of the "build it and they will use it" mentality that infiltrates much web-enabled thinking. The failure of many dotcoms to garner business, and indeed the proverbial failure of the horse to drink the water proffered, should alert governments to the risk that e-government initiatives may also go hideously wrong.

Consequently, "government must develop a far more sophisticated view of the people it is there to serve and devolve real power as an integral part of its approach to e-government And provide more freedom of information" (Burn and Robins, 2003). If the governments can achieve this radical new conception of their role, then there is the potential for e-government to transform "not only the way in which most public services are delivered, but also the fundamental relationship between government and citizen. This implies, of course, not only e-government but also e-governance – if real power is really to be devolved to citizens. There are many opportunities for e-government applications, whether they involve the provision of information, handling complaints and queries electronically, processing applications for permits/licenses electronically, paying taxes, duties, and fees electronically.

4. Improving Efficiency in the Delivery of Public Services
Citizens in developing countries often spend a significant amount of time and money to access government services. Rural populations are at a particular disadvantage in this regard. As an example, in some developing countries renewal of drivers' licenses and processing of other government documents may only be done in major cities, putting a disproportionate burden on those who live outside major urban areas. The

use of digital technology can facilitate decentralized access to services and save precious time and money for citizens who would otherwise have to travel great distances. While e-Government will not eliminate bureaucracy, it offers the opportunity to streamline and rationalize processes, reducing not only the volume of paperwork, but also the layers of bureaucracy that are involved in common transactions. By providing access to government information and services directly through the Internet and other channels of electronic communication, e-Government can save citizens and businesses time and money. Well-planned projects can promote equity in service delivery and improve the ability of government to reach previously isolated groups.

Example: Citizen Services A service in the state of Malaysia provides citizens with a wide-spectrum of services ranging from the payment of utility bills to registration of motor vehicles.

Example: e-Procurement: Online government procurement is one application that has been successfully implemented in several countries, with a range of benefits. Malaysia e-Procurement system is often cited as a success. It is credited with making government procurement more transparent, reducing businesses' transaction costs, and reducing opportunities for corruption

Example: On-line Land Records: In this service it can automated land records since its inception in yielding benefits to farmers, financial institutions, and public officials. Farmers, for example, can quickly get their land records from kiosks and are protected from harassment and extortion. Whereas getting records formerly entailed a delay, with the e-governance established farmers now get their records in less than 2 minutes. In this as in other e-Government projects, benefits include not only increased efficiency but also reduction in opportunities for corruption: Making government services available to citizens in a transparent and efficient manner can also empower them against corrupt and arbitrary bureaucratic action.

5. A Note of Caution on Costs Savings to Government

The changes that can be realized through adoption of ICTs will not be realized overnight. Moreover, while citizens and businesses may realize cost savings, evidence to date suggests that governments in LDCs should not expect to significantly reduce their own costs through e-Government initiatives. The implementation of e-Government initiatives is a time consuming and costly endeavor and requires a serious commitment to capacity building, in terms of the infrastructure, personnel, and education and training that are required to maintain and use the new systems effectively. While improved processes for tax collection, for example, may eventually lead to higher tax revenues, it is likely to take time, especially while public Internet access remains low and citizens and businesses lack trust in both government and in digital technologies. Revenue gains in moving toward e-Government do not necessarily offset the investments, at least in the short run. Furthermore, the track record of e-Government to date, like that of e-development in general, has been short, complex and difficult to measure. Difficulties in measuring progress include the potential time lag between project implementation and the moment when benefits are realized. Given the opportunity cost of investing in ICT-based projects, rigorous evidence on impact and good practices is urgently required to guide future initiatives.

6. E-governance in developing countries

Implications of e-governance are slightly different for developing countries. Whereas Public sector reforms or the NPM movement in industrialized countries was internally Driven (as in the UK, USA, etc.), in most developing countries the public sector reforms Were externally driven, through the World Bank and other donor institutions (McGill, 1997) in some countries such as Turkey, there were no pressures to accept these reforms (Sozen and Shaw, 2002). Consequently, in spite of economic restructuring in many developing countries, such as India, public administration in developing countries still continued to remain highly bureaucratized and extremely centralized (Saxena, 2005). Another difference between e-governance in

industrialized and developing a country is in the available ICT infrastructure. The e-governance movement in industrialized countries was largely triggered by the availability of internet technology, through which it became possible to access government agencies remotely and inexpensively. But, for their internal operations, government organizations were already using ICT-based systems. However, in the case of developing countries, ICT use in the public sector was very small, and therefore they had poor ICT infrastructure, if any (Bhatnagar and Bjorn-Andersen, 1990; Yong, 2003). Consequently for developing countries, e-government's first stage was the
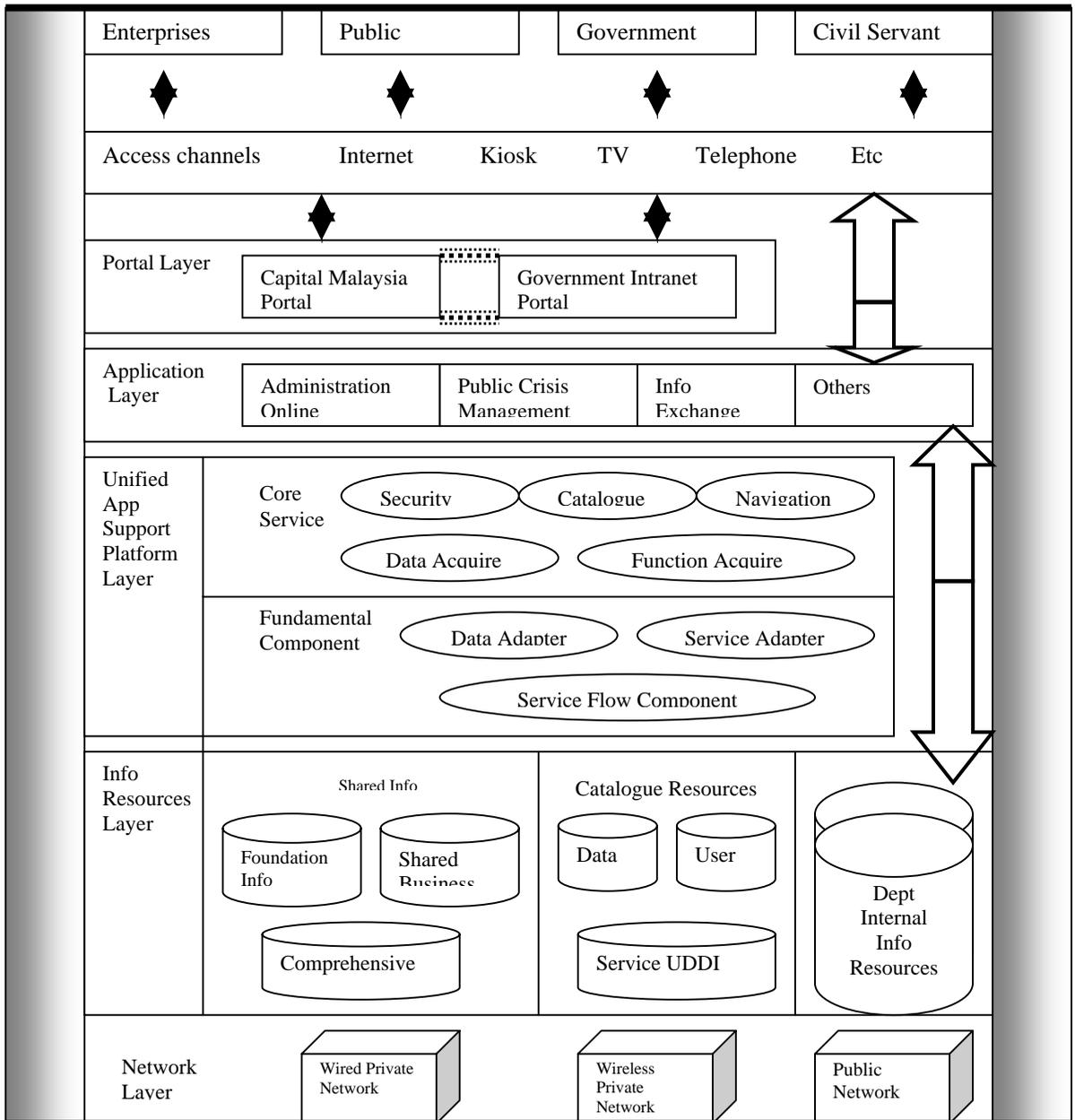

Figure 3: Show the architecture framework of e-government.

Table 1: Analyses of E-Government Limitation Concept

Dimension	Examples
Operational cost	Cultural issues Resistance to change by high-level management Time consuming for reengineering business process in public organizations Operational cost Main supply come from central government Shortage of financial recourses in public sector organizations High cost of IT professionals and consultancies IT cost is high in developing countries Cost of installation, operation and maintenance of e-government systems Cost of training and system development
IT infrastructure	Shortage of reliable networks and communication Inadequate network capacity or bandwidth Lack resources standards and common architecture policies and definitions Existing systems are incompatible and complex Existing internal systems have restrictions regarding their integrating capabilities Lack of integration across government systems Integration technologies of heterogeneous databases are confusing Lack of knowledge regarding e-government interoperability High complexity in understanding the processes and systems in order to redesign and integrate them Lack of enterprise architecture Availability and compatibility of software, systems and applications
Organizational	Lack of coordination and cooperation between departments Lack of effective leadership support and commitment amongst senior public officials Unclear vision and management strategy Complex of business processes Politics and political impact
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Computerization of internal operations and services. Thus, for many government departments, "e-governance" was a significant, expensive, infrastructural change, as they had to plan switching from totally paper-based systems and services to totally computer- and internet-based systems and services. But e-governance is not a shortcut to economic development, budget savings or clean, efficient government. Instead, e-governance is an evolutionary process and often a struggle that presents costs and risks, both financial and political (Pacific Council on International Policy, 2002). These risks can be significant (Heeks, 2003). Therefore, if e-government initiatives are not well conceived and implemented, they can waste resources, fail in their promise to deliver useful services, and thus increase public frustration with government. Moreover, e-government in developing countries must accommodate certain unique conditions, needs and obstacles (Heeks, 2001). For instance, developing countries may have poor infrastructure, corruption, weak educational systems, and unequal access to technology.

7. Issues of excellent e-governance (e-governance)

Excellence in organizations has been perceived to have the following attributes (Emersen and Harvey, 1996) purpose-driven (i.e. goal-centric) Customer (i.e. citizen)-centric. Process-oriented and Structure-supported. To some extent this is confirmed by the definition of "e-government" used by the Ministry of Labor and Government Administration (1999) that defines excellence in governance in terms of fulfillment of the following goals. Efficient and result-oriented administration Government administration shall, to the greatest extent possible, achieve "results" in accordance with stipulated goals, and these goals shall be attained without any unnecessary use of resources. Thus, excellence involves goal-centricity or is purpose-driven.. Provide user (citizen) oriented administration Government administration should acquaint itself with the needs and desires of the users (citizens), and adapt its way of working whenever possible in accordance with their desires. Open and democratic administration under the rule of law Government administration under the rule of law shall contribute to ensuring predictability and equal treatment, and emphasizing openness and the right of access to information or decision-making in government activities.

This statement again ensures that in addition to being purpose-driven, this purpose itself should be governance-centricity to have excellence. Politically manageable administration Government administration shall be an adaptable and flexible tool for implementing Government's policies. Though not explicitly, but this statement attempts to ensure that the processes and the structure of government (which constitute "administration") should support implementation of Government's policies, i.e. should be "outcome-driven". Thus, excellence in e-governance is characterized by exploitation of governance processes, structure and technology to provide an administration, which is efficient, effective (outcome-driven), politically manageable, and open and democratic (governance-centricity). This is essentially what we have called as "governance-centric" e-governance.

Bringing a governance-centric focus, though very much desirable, is often difficult as it requires addressing a number of critical issues, some of which are given below. Defining a citizen-centric or governance-centric vision for the e-governance projects. Often e-governance projects lack a clear vision in terms of their effectiveness focus, and are treated merely as "computerization" projects for service efficiency. Developing a process-oriented view of government work. Government work is generally performed through vertical and rigid "silos" of departments (or agencies), that get on with their jobs without any collaboration between them. Such a fragmented view of government work results in mere computerization of individual or a few of the activities in individual departments rather than of the end-to-end integrated work process which is necessary to promote effectiveness and governance-centricity. Developing a performance management system for efficient and effective service delivery, which continuously measures and monitors service performance. Since such a measurement system also focuses on service effectiveness, it also ensures that the service outcome is aligned with the governance-centric vision. Defining a flexible technology architecture that is secure, provides easy access to users, and is scalable for high-volume operations as well as being cost-effective for the government. Many of the vendor-driven solutions for e-governance are rigid and/or poor in one or more of these dimensions and therefore not appropriate in the long run. Thus, implementing "excellent e-governance" is a reform process, and not merely the computerization of government operations. Only in this way will it contribute to building an "information society" in which the lives of citizens are empowered and enriched by access to information and the social, economic and political opportunities that it offers. Consequently excellence in e-governance is rapidly becoming a key national priority for all countries, rich or poor, developed or developing.

8. Concluding Remarks

Even thought in this paper, we have illustrated few concepts to archive successful IT technical framework on e-government transition process. This incorporates a number of preferred and less preferred transition strategies. We suggest that future research should assess the extent to which this model is validated by e-government reality, in particular the way in which e-government develops from initial rhetorical intentions through strategic planning, systems development, integration and finally transformation. It may well be that a post-transformation stage will emerge, since strategic planners are unlikely to be content with any current position it is in their blood to be generative, to conjure up new services, new dynamics, and new forms of transformation, new ways of involving citizen participation. Such innovations may well change government as we know it today, though this may be little more than wishful thinking in the case of the more authoritarian governments that do not tolerate political opposition. Nevertheless, we expect that the increased dissemination of information that is inevitably associated with e-government can only have a positive.

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