

ICT for e-Governance

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Introduction to eGovernance

Government procedures, especially those used in developing countries like Sri Lanka are several decades old and generally are bureaucratic and inefficient. They rely on manual paper based work processes and procedures that are expensive in terms of time consumption and the financial overheads involved. Consequently they are not in a position to be responsive to the needs of the modern digital economy and lag behind the efficiencies expected by the private sector and the citizens in general. The idea of e-governance attempting to use technology, especially information and communication technologies (ICT) is to improve the government mechanisms with the aim of providing efficient and effective services to the citizens and other stake holders. Contrary to the popular belief, eGovernance is not simply using computers and related technologies in office. Instead it encompasses a series of necessary steps for government agencies to develop and administer strategies and processes which ensure successful implementation of electronic services to the public at large.

In general, e-governance is used for four different aspects. Government to Citizen (G2C) e-governance is concerned about the services offered to the general public and therefore usually considered as the most important aspect of e-governance in the modern era. On the other hand, Government to Employees (G2E) e-governance is concerned on services offered to the employees of the government while the Government to Business (G2B) concentrates on the interaction between the government and the business sector activities. This usually includes common services such as taxation, procurement, regulatory and legal services that are needed for different types of business functions. Finally e-governance can also occur between governments of different countries in the areas such as international trade, immigration and emigration services etc. These sectors are defined as Government to Government (G2G) e-governance.

Moving into e-governance usually evolve through four stages; commonly known as Information, Transaction, Vertical Integration and Horizontal integration. Implementation of an e-governance program usually starts with making information available in electronic form, typically through the World Wide Web (WWW) service as catalogues of common information and downloadable forms. This initial step would allow citizens to obtain the required information and forms (e.g. an application for a National ID card or a passport) from their door-steps rather than visiting the relevant agency. For instance, in Sri Lanka the citizens can obtain information on government services from the "Government Information Centre" (GIC) by dialing 1919 through a telephone or by visiting their website at <http://www.gic.gov.lk>.

The second stage of implementation concentrates on providing transactions over electronic means. For instance it would allow a citizen to submit the application for a national Identity Card or a Driving License electronically through the Internet rather than physically visiting the relevant office and submitting a paper based application form. The third stage, vertical integration extends electronic transactions further by sharing information across different sections of the same service or services offered by the same agency. This allows citizens to obtain several services through the electronic interface of the organization. At this level information furnished by citizens to one type of service offered by the agency will be electronically available for other types of services offered by the same or related agencies. Consequently the citizens will be required to furnish their details only once to obtain all other available services.

The highest level of e-governance would provide horizontal integration which links services offered by different government agencies under single electronic interface. Such interface, usually in the form of a

web-gateway would then act as a one-stop shop for all services and transactions offered by the government. Such an implementation would also require information sharing between different agencies allowing details furnished for one type of service to be used for other services as well. For instance when a citizen applies for a passport or a driving license, his personal details (such as the photograph, residential address etc.) will be fetched internally from the database associated with the National Identity Card rather than requesting the applicant to furnish them again – as with the present manual system.

Importance of ICT in e-Governance

Even though e-governance is not limited to simply using computers and automation in office environment, ICT plays a crucial role in implementation of any e-governance project. The rapid growth of ICT in the recent past has resulted in several new dimensions of e-governance possible and easy. This has become more important in a sense because connectivity between the service provider and the receiving site is the key for any e-service to happen. Development in the technologies of Wide Area Networks (WAN) like Frame Relay, Leased lines, Virtual Private Networks (VPN), Wireless networks etc have made it possible to opt for various geographical areas to deploy different cost effective technologies. Moreover the emerging trends and changes in the field of communication technologies such as mobile GSM, 3G, HSPA etc have made us to think beyond the computer networks. Among some societies in Sri Lanka for example, use of mobile services such as SMS and MMS is several fold popular compared to the use of computers and Web based services.

Measuring e-Governance Readiness

The success of e-governance projects in a country depends on a

number of factors that range from technological factors such as availability of required infrastructure, to social factors like literacy rates and people's attitudes towards using technology in day to day activities.

The United Nations Organization as a global agency supporting the implementation of e-governance, conducts an annual survey, based on which an index referred to as "e-Government Readiness Index" is generated. This index gives a comparative ranking of the countries of the world according to two primary indicators: (a.) the factors that determine the government's capacity to offer e-governance; and (b.) the factors contributing to e-participation by the citizens. Other factors considered in the computation of this composite index include e-government readiness based on website assessment; telecommunication infrastructure and human resource endowment.

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e-Governance readiness of Sri Lanka

According to the 2008 survey of the e-governance readiness, Sri Lanka was ranked as 2nd in the South Asian region and 101th on the global index. Compared to a similar survey done in 2005, Sri Lanka's readiness index grew from 0.3950 in 2005 to 0.4244 in 2008 [Figure 1] but the global ranking went down from 94th position to 101th position over the same period of time. The increase in the index is mostly contributed by the activities done through the Information and Communication Technology Agency (ICTA) (<http://www.icta.gov.lk>) under its e-Sri Lanka initiatives.



Figure 1: Change of e-Governance Readiness Index from 2005 to 2008

Challenges in implementation

Broad-based e-governance projects require new paradigms of thinking, behavior, interaction, and accountability among all the stake-holders involved. It generally requires difficult policy reforms and institutional transformations to realize the benefits from ICT investments, which are far from assured. Applying ICT to government processes demands coordination, collaboration, change of management, and institutional learning. Harnessing ICT for development requires a holistic approach, and effective implementation of policies, institutional capability, ICT skill development and strategic investment in information infrastructure.

e-Governance initiatives in Sri Lanka

While some of the factors in Sri Lanka are favorable for implementation of e-governance projects several other factors still remain otherwise. Sri Lanka is a country which has highest literacy rates (approx. 94%) in the South Asian region. However, when computer literacy rate is considered ranking is much lower with the rate being below the 20% mark. Access to Internet, especially in rural areas remains at even lower levels. Yet it should be noted that initiatives such as introduction of ICT in to school curriculum and several community based ICT projects, have made this rate to increase considerably. On the other hand, the country is known to have the highest penetration of mobile phones and services in the region. However, a number of initiatives from the government of Sri Lanka had enabled offering more eServices to the citizens of the country.

Majority of the e-governance projects in Sri Lanka are implemented as part of the e-Sri Lanka initiatives under the Information and Communication Technology Agency. The five year plan of e-Sri Lanka initiatives launched in 2005 concentrates on the following four major objectives:

- a. Creating a more effective, citizen-centered, and business-friendly government
- b. Empowerment of the rural poor, women, and youth through greater and more affordable access to ICT tools
- c. Skills and leadership development in ICT
- d. Creation of employment through the ICT industry, business process outsourcing, and greater competitiveness of user industries and services

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In moving towards the above objectives, e-Sri Lanka initiatives have launched several projects in both the public and private sectors. These include the following:

1. eHRM & ePensions projects: Automation of public sector human resource management and retirement benefits management at the Ministry of Public Administration and Home Affairs
2. eBMD, eHHL and ePOP projects: Automation of birth, marriage and death certificate registration, and creation of a centralized population registry under the Ministry of Public Administration and Home Affairs and other stake holder departments.
3. Lanka Government Network (LGN) and Lanka Gate initiatives: An infrastructure development for providing back-end network support and electronic transaction services to other e-government projects.
4. Government Information Centre (GIC) – GIC is the central government call centre and a web portal to provide information about government services to citizens



Figure 2: President launches government's first ever online Information Centre (GIC) on 24th August 2006



Figure 3: NODES Access Centre, Nawala

In addition to the above there are also numerous linked projects of different scales that provide horizontal integration to these key information sources.

Apart from the e-Sri Lanka initiatives, there are also several other projects executed by the government with the aim of providing the environment support to ICT development in general. Among the most prominent include the following:

- a. National Online Distance Education Service (NODES): Implemented as part of the Distance Education Modernization Project (DEMP) under the Ministry of Higher Education for delivering online educational programs to citizens.
- b. Schoolnet: Implemented under the Secondary Education Modernization Project (SEMP) under the Ministry of Education with the objective of providing Internet access, electronic communication services and other e-services to the school community.

Conclusion

E-Governance initiatives provide a framework for integrating ICT into development strategies by placing ICT interventions within a broader development context and making them meaningful to policy makers. An e-Governance framework allows opportunities for tapping potential synergies, building cross-sectoral links, and leveraging entry points. While one needs to understand stakeholders and engage them as enablers, partners, and implementers.

Short-term quick wins for political sustainability need to be balanced (or if possible avoided) with long-term investments for economic sustainability. Also, centrally driven programs need to be complemented by bottom-

up initiatives, innovative partnerships, and grassroots empowerment.

Finally, the need for flexibility and adaptability in e-Governance demands an emphasis on social learning, user-driven innovation, and participatory monitoring and evaluation.



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