Conception of E-Governance Using Phased Approach

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Abstract
The significance of Information and Communication Technology cannot be overstressed, with ICT affecting all aspects of life such as education, entertainment, and the Internet. This paper deals with the steps and phases of implementing ideal eGovernment. The obstacles that can be expected during the realization of eGovernance are discussed along with the policy to address these barriers. This work provides details of a phased approach towards realizing complete eGovernance.

Keywords
E-government, Roadmap, E-commerce, Transformation

I. Introduction
E-government is defined as the use of technology, particularly the Internet, as a means to deliver services to citizens, businesses, and other entities. Operational benefits from the introduction of Internet-based e-commerce, for government and public sector companies, include the reduction in paperwork, the provision of continuous service availability to customers, a reduction in response time, and a reduction in error rate. All of these factors contribute to the general increase in the efficiency of government business[4]. E-government encapsulates a wide variety of meanings ranging from policies that foster the development of information infrastructures to particular measures for combating the digital divide. It also involves a series of measures to improve the operation of the state’s administrative functions. E-government is often now seen as a synonym, or a condition for good governance, which has been linked to the presence of democratic institutions and participation of its citizens [2].

The obvious prospects for improvement by merging government procedures with today’s Information and Communication Technologies (ICTs), leading to an enhanced governmental model, termed eGovernance, have been realized by more than a handful of nations, and the gains are clearly visible.

E-Government is the transformation of public sector’s internal and external relationship through Internet-enabled operations thereby strategically deploying ICT to optimize government service delivery and governance.

E-Governance is the development, deployment and enforcement of the policies, laws and regulations necessary to support the functioning of an eGovernment.

II. E-Government – Its Importance
E-Government is about transformation of the government structure and organization into a streamlined framework deploying the tools and mediums of the Internet, thereby helping citizens and businesses keep pace with new opportunities in today’s knowledge economy [6].

E-Governance is divided into categories or areas. Based on areas it is distinguished into, namely: e-democracy, e-service provision, e-management, and e-governance[5]. And based on interactions it is divided into three categories, namely: government and business (GnB), government and citizen (GnC), and government and government (GnG), which are further divided into government to government (G2G) and business to government (B2G), government to citizen (G2C), and citizen to government (C2G), and government to government (G2G) nationally and internationally respectively [Gha06], see figure 1 below. The later division is based on the flow of services in one direction and flow of money in the other direction. For example civil servants working in government would be considered under C2G category [3].

Fig. 1: E-Government Categories

E-Government is a tool to achieve a set of well-defined objectives that collectively work towards betterment of society as a whole. These are:

• Meeting the needs of citizens by facilitating quick procedures, ease of interaction and instant access to information. Such G2C (Government to Citizen) interactions foster the adoption of citizen-centered model.
• Improved services for businesses efficiently enabling and regulating a range of activities from international trade and commerce to agency’s procurement of goods and services. This Government to Business (G2B) interaction forms the crucial foundation for eCommerce initiatives.
• Transparency in the government’s administration, which reflects positively on anti-corruption.
• Achieving a seamless flow of information and data across the different levels of government. This is achieved through G2E (Government to Employee) interaction, where agencies provide data to employees via intranets, email and enterprise resource planning software for online management, accounting and decision-making. Along similar lines is the concept of G2G (Government to Government) interaction, with electronic interaction between national, local and foreign governments and organizations.

III. Phases of E-Governance
An effort as tremendous as complete realization of e-governance has to be addressed in phases. This approach would allow for retrospective after each phase, and the ability to retrace steps if required, within a feasible frame of time and money. The design and purpose of each step would have to serve the relevant needs of all G2C, G2B, G2E and G2G sectors.

A. Phase 1

1. Presence
This first phase calls for making the intentions and objectives of the government known. Development of an inclusive government
website, or a network of sites dedicated to different ministries and departments would set the stage for further advancements. These sites would convey the government’s initiative, providing information such as official addresses, working hours, as well as forms and applications to the public; economic reviews, corporate regulations for businesses; and budgetary allocations and spending as reference for government agencies. With this first phase, the very critical task of building the infrastructure, such as telecommunications would be undertaken.

B. Phase 2

1. Interaction
This phase would allow for basic interaction with the government. Besides hosting search engines on the sites for easy navigation, information detailing social records and job application forms for the public; permit and license documentation for businesses; and census details, submission of requests and approvals to the center by local government offices would have to be provided. The task of building the underlying infrastructure would have to be sustained throughout these two stages, allowing for rapid implementation of advanced applications as endorsed by the consequent phases.

C. Phase 3

1. Transaction
This phase onwards would signify direct interaction of the government and relevant entities. With the infrastructure in place, complete online service suites can be put forth for the public, businesses and governmental agencies. Services for the public such as bill and fine payments, license renewal, aggregating opinion etc; online procurement, tax returns etc for businesses; cooperative budget preparation, tax records etc, for governmental agencies can be envisaged here.

D. Phase 4

1. Transformation
This final phase would strive to achieve the true vision of e-government. A single point of contact to constituent entities would provide an integrated platform for government services and organization totally transparent to citizens and businesses. Focus on ‘virtual agencies’ where government information is readily available to all allowing a seamless interface to respective agencies involved in the transactions. State-of-the-art Intranets linking government employees in different agencies, extranets allowing seamless flow of information thereby facilitating collaborative decisions among government agencies, NGO’s and the public. An underlying effort to setup and upgrade the following critical infrastructure facilities throughout these phases should be sustained:
- Upgrading the Government Information Infrastructure (GI).
- Establishment of a certification authority & Public Key Infrastructure (PKI) encryption system.
- Establishment of an e-payment gateway, and reliable postal addresses for residences/businesses.

IV. Show Stoppers
An undertaking as tremendous as realizing true eGovernance is not without its wide-ranging share of obstacles and barriers.
1. Infrastructure or rather the lack of it is one of the major obstacles that plague the implementation of information technology into daily lives.
2. Lack of political will and leadership is probably the main cause for most undertakings to be abandoned incomplete, or turn out to be far less than their expectations.
3. Skepticism and lack of awareness among the public.
4. Resistance to change by the governmental agencies, businesses and employees. For example, the idea of eGovernance could easily be misconstrued by employees as the simple automation of jobs and procedures, thereby leaving them vulnerable to downsizing attempts of the government and corporations.
5. Inadequate funding and budgetary resources.
6. A flawed pre-implementation study of the eReadiness of the government, businesses, the public and the economic climate for accepting and realizing eGovernment.

V. Success Factors
Looking at the obstacles and barriers that hinder eGovernance, it has to be understood that management of technology in the public sector is a difficult task to say the least. Given that most government IT projects fail due to poor management and self-evaluation, a detailed list of criterion and factors in addition to the need for a concrete set of goals and objectives are discussed below:

A. Improve E-Readiness
Self-assessment of the government is mandatory to measure the readiness aspect in e-governance. These include human resources, budgeting resources, inter/intra departmental communication flows, etc. Factors to measure society’s readiness include national infrastructure, economic stability, education, public/private sector, etc. are important as it will help in assessing, how prepared a society is for e-governance[9]. Other key factors for readiness that demand consideration are:

B. Telecommunication Infrastructure
Certain e-government applications require considerable investment in national IT infrastructure. However, the level of this infrastructure depends on the type of projects at issue.

C. Current Connectivity
This will help in understanding the government’s readiness in managing the projects, as well as, if the global standards are met.

D. Governmental Human Resources
Apart from the human resources in private sector, sufficient number of skilled personnel within government is required. Accordingly, changes in the management issues need to be addressed.

E. Budget Resources
It is necessary to ensure the availability of the existing and expected budgetary resources, in order to achieve these goals. Also, crucial is the location of funds, i.e. centralized or not & allocation, i.e. a single agency or many departments.
F. E-Business Atmosphere
With respect to E-Business, the criteria for assessing readiness include legal framework and security of the information.

G. Start Small and Simple
As outlined in the phased approach above, initially a fairly simple portal should be implemented. With development of infrastructure and acceptance of eGovernance among the various entities, functions can be added in stages.

H. Involve Top Leadership
A strong leadership that firmly espouses the benefits of eGovernments has to exist. Given the risks and losses, the leaders should firmly believe in the larger sphere of achievable gains. Strengthened with the necessary monetary and political influence, the leadership’s belief and conviction have to be passed down the hierarchy of the government, and into the public.

I. Promote Awareness
Employees have to be convinced of the importance and potential of eGovernance and the fact that it wouldn’t endanger their jobs but through retraining and skill developments, the employees can be reassigned new roles. Actively promote awareness of new services and how the user community can benefit from them.

J. Encourage and Support Departments
The government should encourage and support its departments to make use of the Internet in their everyday work. An incentive based policy, in which employees and departments efforts are acknowledged should be setup.

K. Maintain Consistent Implementation
A consistent deployment speed should be sustained. Such implementations help maintain the participants interest and momentum in the process and system.

L. Monitor Assessment
As we move into more sophisticated phases, providing deeper interaction, each milestone crossed should be an opportunity to reassess the gains achieved, the losses and reassert the objectives.

M. Ensure Security
To win the trust of the public and businesses in their transactions with the government, a national level security mechanism has to be instituted to combat cyber-crime and fraud. As part of this policy, a body of security professionals should be setup to respond to threats and breaches. Also the need for a certification authority and a Public Key Infrastructure (PKI) encryption system has to be given top-priority.

N. Encourage Private Sector
Government should play the role of facilitator and encourage private sectors to participate in eGovernment development and implementation. However it must protect the consumer privacy and security.

O. Plan Nationally
The government’s evolution into eGovernance should be part of a larger comprehensive IT framework creating a common drive towards integration of technology.

P. Involve Stakeholders
The process of achieving eGovernance would require the government to bring in external stakeholders such as high-tech companies, software houses, the banking sector etc. Doing so would serve to reduce the initial resistance as well as integrate much needed input.

Q. Think Globally
Plan locally first, but keep the global user community in mind. Sample customers would be other governments, multinational companies, tourists, etc.

R. Standardize
The government should adopt established Internet standards and protocols, minimizing customization thereby reducing the risks of software and compatibility problems. Also outsourcing of software application development and training allows for standardization.

1. Work Plan to Implement E-Government Projects
Once the vision and priorities are established, a detailed work plan helps maneuver the agencies and officials for implementing e-government projects. Some of the key elements on which the work plan should focus are:

(i). Content Development
These include development of applications, local language interfaces, and e-learning materials.

(ii). Competency Building
Training personnel for human resource development must be implemented at all levels.

(iii). Connectivity
Intranet/Internet connections must be established across related agencies.

(iv). Cyber Laws
Providing legal framework to support objectives of e-government policies.

(v). Citizen Interfaces
Establishing a delivery channel to ensure accessibility & affordability of e-government by the citizens.

(vi). Capital
Identifying revenue sources to help achieve a financial equilibrium.

VI. Conclusion
Internet is a tool that is equally and easily accessible both by the poor and the rich. This tool also facilitates the development and transformation process coexisting with participation, transparency, and accountability. As President Bill Clinton said, “The Internet has the potential to strengthen our democracy and to make government more open, efficient, and user-friendly”. Developing countries need to tap the vast potential – employment, trade, and services – that the ICT sector offers in addition to bringing greater transparency and ease. The utilization of the surging potential in the ICT sector is crucially linked with transforming governmental functions to e-governance albeit in phases and with pilot projects. The technology available is neither
expensive nor complicated. Development of e-services does not require complicated processes either. A functioning e-government is feasible. This paper has been an attempt in this direction. In this paper a phased approach is presented and a work plan has been discussed.

References

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