E-Government in India - opportunities and challenges

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ABSTRACT

E-Government is the use of information and communication technologies (ICTs) to improve the activities of government agencies. The e-readiness index of India is found to be low as compared to other countries. There are various challenges for the implementation of e-government in India. These challenges are like low literacy, low per capita income and limited financial resource. In this paper a conceptual framework is suggested for the effective implementation of e-government in India. The conceptual framework can be further validated in the real life situation. Administration requiring the application of complex legislation and regulations. Most efforts of public administration to bring transactions online have been restricted to simple transactions requiring little or no knowledge of the law, such as change of address notifications.

Successful implementation of e-Governance practices offer better delivery of services to citizens, improved interactions with business and industry, citizen empowerment through access to information, better management, greater convenience, revenue growth, cost reductions etc.

Keywords: E-Government, India, opportunities and challenges
Introduction

The “e” in e-Governance stands for „electronic“. Thus, e-Governance is basically associated with carrying out the functions and achieving the results of governance through the utilization of ICT (Information and Communications Technology). An equally important aspect is concerned with ensuring equitable access to public services and the benefits of economic growth to all. It also ensures government to be transparent in its dealings, accountable for its activities and faster in its responses as part of good governance. However, this would require the government to change itself – its processes, its outlook, laws, rules and regulations and also its way of interacting with the citizens. It would also require capacity building within the government and creation of general awareness about e-Governance among the citizens.

Electronic government or E-government refers to the delivery of national or local government information and services via the Internet or other digital means to citizens or businesses or other governmental agencies (Palvia and Sharma, 2007). World economies have recognized Information Technology as an effective tool in catalyzing the economic activity in efficient governance and in developing human resource. They have made significant investments in it and successfully integrated it with the development process, thereby reaping the benefits to their society. In India also, these developments have impacted the industrial, education, service and Government sectors and their influence on various applications is increasingly being felt of late. As the era of digital economy is evolving, the concept of governance has assumed significant importance. The e-Governance has consequently become an accepted methodology involving the use of Information Technology in improving transparency, providing information speedily to all citizens, improving administration efficiency and improving public services such as transportation, power, health, water, security and municipal services.

National e-governance Plan (NeGP) Developments: The Government of India accords high priority to improve the quality of the citizens by providing basic services at their doorsteps and has formulated a National e-Governance Plan (NeGP) covering 27 Mission Mode Projects and eight support components to be implemented at Central, State and Local levels. These would include services like road transport, land records, commercial taxes, employment exchanges, agriculture, civil supplies, treasuries, land registration, policy and education, while at Central level, it will cover areas such as insurance, central excise, National ID, pensions, e-Posts, banking, passport, visa and income tax.

Through this paper, I will attempt to provide an insight regarding:

- A definition of e-Governance to build a business case for its adoption
- A brief discussion on evolution of e-governance technologies
- Present Scenario of e-governance efforts in India
- Challenges For Development
Background

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, example by decentralisation. 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 few years. Internationally most countries are in the early stages of e-governance. A good start has been made in Europe, USA and in other Westernised countries such as Australia and Singapore. Over the coming years also developing countries and their citizens can also benefit from e-governance.

What is e Government?

e-Government is the use of information and communication technologies (ICTs) to improve the activities of public sector organisations. Some definitions restrict e-government to Internet-enabled applications only, or only to interactions between government and outside groups. Here, we do not - all digital ICTs are included; all public sector activities are included. In our definition, then, governments have been practicing e-government for more than 50 years: using that first mainframe in the Statistics Office was “e-government”. We just didn’t give it that name 50 years ago.

Definition of E-Government

“E-Government” refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.

Traditionally, the interaction between a citizen or business and a government agency took place in a government office. With emerging information and communication technologies it is possible to locate service centers closer to the clients. Such centers may consist of an unattended kiosk in the government agency, a service kiosk located close to the client, or the use of a personal computer in the home or office.
Analogous to e-commerce, which allows businesses to transact with each other more efficiently (B2B) and brings customers closer to businesses (B2C), e-government aims to make the interaction between government and citizens (G2C), government and business enterprises (G2B), and inter-agency relationships (G2G) more friendly, convenient, transparent, hospital information, libraries, and the like and inexpensive.

E-Government Initiatives in India: An Overview

The Government of India kick started the use of IT in the government in the right earnest by launching number of initiatives. First the Government approved the National E-Governance Action plan for implementation during the year 2003-2007. The plan is an attempt to lay the foundation and provide impetus for long-term growth of e-governance within the country. It proposed to create the right governance and institutional mechanisms at the center, state and local levels to provide a citizen centric and business centric environment for governance. The Government has given approval in-principle to the plan and overall programme content; implementation approach and governance structure. While endorsing the plan, it was observed that: weight age must be given for quality and speed of implementation in procurement procedures for IT services; suitable system of motivating the states for quick adoption be incorporated; provision of delivery of services to the citizens through a single window should be encouraged; Out sourcing of services wherever and whenever feasible; efforts be made to promote and develop public private partnerships to utilize the full potential of private sector investments; and connectivity should be improved and extended up to the block level in the states. Apart from the action plan, the following measures have also been introduced:

- Adoption of “Information Technology (IT) Act, 2000 by the Government of India to provide legal framework to facilitate electronic transactions. The major aims of this act are to: recognize electronic contracts, prevents computer crimes, and make electronic filing possible. The Act came into force on 17 October, 2000;

- Establishment of the National Taskforce of Information Technology and Software Development in May 1998;

- Creation of Centre for e-governance to disseminate the best practices in the area of e-governance for the use by the Central and State Governments and act as a nodal center to provide general information on e-governance, national and international initiatives, and IT policies of the government(s);

- Developing e-office solutions to enable various ministries and departments to do their work electronically. Modules such as Workflow for Drafts for Approvals, e-file, e-noting, submission of reports, integrated personal information and financial accounting systems have been developed;
Setting up of a High Powered Committee (HPC) with Cabinet Secretary as its Chairman to improve administrative efficiency by using Information Technology in Government;

Designating a Joint Secretary level officer as IT manager in every Ministry/Department; and

Instituting websites by almost all Ministries and Departments and providing information on aspects such as their objectives, policies and decisions, contact persons, etc. Some of them have started their electronic newsletter for giving publicity to their activities on wider scale; and identifying departments, which have frequent inter-face with the citizens, and computerizing them on priority basis.

Thus, it can be inferred from the above that a good beginning has been made to make e-government a reality in India, but still a lot needs to be done. Sincere efforts are required on sustained basis in future also to maintain the momentum.

E-Government Initiatives at the State Level

Quite a number of state governments have initiated measures to introduce information technology and its tools in the governance process. Most of these states are using these applications for improving service delivery to their citizens. They are moving from manual processes to on-line delivery by using conveniently located service centers in public places. Counters at these service centers are manned by public/private agencies and multiple services are provided on-line at each location. Empirical evidence reveals that it has not been an easy task to implement ICT related reforms particularly at the state level and hence needs to be planned carefully for their successful implementation (Bhatnagar, 2004). In this regard, it is, therefore, of utmost importance to study and examine the various experiences for evolving effective strategies for future.

Improving Government Processes: e-Administration

e-Government initiatives within this domain deal particularly with improving the internal workings of the public sector. They include:

Cutting process costs: improving the input: output ratio by cutting financial costs and/or time costs.

Managing process performance: planning, monitoring and controlling the performance of process resources (human, financial and other).

Making strategic connections in government: connecting arms, agencies, levels and data stores of government to strengthen capacity to investigate, develop and implement the strategy and policy that guides government processes.
Creating empowerment: transferring power, authority and resources for processes from their existing locus to new locations.

Connecting Citizens: e-Citizens and e-Services

Such initiatives deal particularly with the relationship between government and citizens: either as voters/stakeholders from whom the public sector should derive its legitimacy, or as customers who consume public services. These initiatives may well incorporate the process improvements identified in section B1. However, they also include a broader remit:

Talking to citizens: providing citizens with details of public sector activities. This mainly relates to certain types of accountability: making public servants more accountable for their decisions and actions.

Listening to citizens: increasing the input of citizens into public sector decisions and actions. This could be flagged as either democratisation or participation.

Improving public services: improving the services delivered to members of the public along dimensions such as quality, convenience and cost.

Building External Interactions: e-Society

Such initiatives deal particularly with the relationship between public agencies and other institutions - other public agencies, private sector companies, non-profit and community organisations. As with citizen connections, these initiatives may well incorporate the process improvements identified in section B1. However, they also include a broader remit:

Working better with business: improving the interaction between government and business. This includes digitising regulation of, procurement from, and services to, business to improve quality, convenience and cost.

Developing communities: building the social and economic capacities and capital of local communities.

Building partnerships: creating organisational groupings to achieve economic and social objectives. The public sector is almost always one of the partners, though occasionally it acts only as a facilitator for others.

Challenges For Development

In this part of the challenges of e-governance for developing countries are investigated. Four SWOT analyses are presented, with a focus on the following aspects of e-governance:
SWOT-Analyses e-governance

The SWOTs are kept at a high level. Going into detail would be a problem because situations vary for each country, for each moment and for each e-governance solution.

Political Aspects

Political aspects related to e-governance are example the formulated strategy and policy, laws and legislation, leadership, decision making processes, funding issues, international affairs, political stability.

Implementation and maintaining of e-governance solutions

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Threats</th>
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<tbody>
<tr>
<td>Combination with democratisation reforms</td>
<td>Budget</td>
<td>Raise external funding</td>
<td>Bureaucracy</td>
</tr>
<tr>
<td>Cyber laws not available</td>
<td>Slow decision making process</td>
<td>Show competitive edge</td>
<td>Piracy, misuse</td>
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<tr>
<td>No problem owner within government</td>
<td>No expertise about technology</td>
<td>Transparency causes natural change of processes</td>
<td>Corruption</td>
</tr>
<tr>
<td>Internet as pull factor</td>
<td>Slow decision making process</td>
<td>Reinvent government</td>
<td>Maintaining disorder, no transparency</td>
</tr>
<tr>
<td>Modern image</td>
<td>Hierarchy in organisations</td>
<td></td>
<td>Political instability</td>
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<tr>
<td></td>
<td>Short term approach due to elections</td>
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<td>Resistance</td>
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Social Aspects

Examples of some of the social aspects related to e-governance are people, (level of) education, employment, income, digital divide, rural areas vs. cities, rich vs. poor, literacy, IT skills.

Implementation and maintaining e-governance solutions

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<tbody>
<tr>
<td>People eager to learn IT skills</td>
<td>Basic education poor: trainers needed</td>
<td>Employment increases</td>
<td>Brain drain IT skilled people after training</td>
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<tr>
<td>Skilled people possible export product</td>
<td>No IT literacy</td>
<td>Education system improve</td>
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<td></td>
<td>Low literacy</td>
<td>People learn structural job</td>
<td>Resistance of people</td>
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<tr>
<td></td>
<td>Different languages</td>
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<td>Digital divide</td>
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<td></td>
<td>Public acceptance of self-service models</td>
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<td>Privacy</td>
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<td>Skill shortage: competition with private sector</td>
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Economic Aspects

Economical aspects related to e-governance are funding, cost-savings, business models, e-Commerce, spin-offs of e-governance.

Implementation and maintaining e-governance solutions

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<tbody>
<tr>
<td>E-Governance good argument for external funding Transparency for businesses (procurement)</td>
<td>Investors Budget control</td>
<td>Cost efficiency through e-governance New business More efficiency tax revenues</td>
<td>Corruption</td>
</tr>
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Technological Aspects

As discussed in the previous chapter, technology will be a bottleneck for e-governance in developing countries. Technological aspects involve software, hardware, infrastructure, telecom, IT skilled people, maintenance, safety and security issues.

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<th>Opportunities</th>
<th>Threats</th>
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<tbody>
<tr>
<td>Everything is new: no negative legacy</td>
<td>Shortage IT skilled people</td>
<td>2nd hand hardware available</td>
<td>Dependency of technology</td>
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<tr>
<td>Leapfrogging possible</td>
<td>High cost of internet</td>
<td>Use one standard</td>
<td></td>
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<tr>
<td>Internet as driving (pull) factor</td>
<td>Heterogeneous data</td>
<td></td>
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<tr>
<td>Lack of IT standards?</td>
<td>Lack of IT standards?</td>
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<td>Costs of software licenses</td>
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E-governance for All by 2020

Recognising the importance of e-governance, the Second Administrative Reforms Commission (SARC) has given a call for making e-governance available to all by 2020. The Commission, among other things, has recommended that “A clear road map with a set of milestones should be outlined by Government of India with the ultimate objective of transforming the citizen-government interaction at all levels to the e-Governance mode by 2020.

Challenges for e-Governance in India

There are a large number of obstacles in implementation of e-Governance in India. Different Language: India is a country where people with different cultures and different religions live. People belonging to different states speak different languages. The diversity of people in context of language is a huge challenge for implementing e-Governance projects as e-Governance applications are written in English language. And also, English may not be understandable by most of the people. Therefore, it becomes a challenge for the government to write e-Governance applications which are to be implemented for the whole nation in more than one language so that these may be acceptable to the users of a particular language.

Low Literacy:

Literacy can be defined as the ability to read and write with understanding in any language. A person who can merely read but cannot write cannot be considered as literate. Any formal education or minimum educational standard is not necessary to be considered literate. Literacy level of India is very low which is a
huge obstacle in implementation of e-Governance projects. Illiterate people are not able to access the e-Governance applications; hence the projects do not get much success

**Low IT Literacy:**

Much of the Indian people are not literate and those who are literate, they do not have much knowledge about Information Technology (IT). Most of the people in India are not aware about the usage of Information Technology. So, in India, having such low level of IT literacy, how can e-Governance projects be implemented successfully?. We can say that IT illiteracy is a major obstacle in implementation of e-Governance in India. So, first of all Indian people must be made aware about the usage of Information Technology.

**Recognition of applications:**

Recognition of the e-Governance facilities by the citizens is another huge challenge. It is a challenge to have all the citizens well aware of the facilities offered by the e-government and have them to trust in it, so that citizens should be ready to accept these facilities.

**User friendliness of Government websites:**

Users of e-Governance applications are often non-expert users who may not be able to use the applications in a right manner. Such users need guidance to find the right way to perform their transactions. Therefore, government websites must be user friendly so that more and more people can use them easily. Hence, these websites can be more effective. If government websites will be designed in an easier format only then these will be more usable for the users who are not expert users of IT.

**Services are not accessible easily:**

The concept of e-Governance is claiming for increased efficiency and effectiveness of the government, but these goals will be achieved only if the service will be available to the 100% of the citizens. So, every service should be accessible by anybody from anywhere and anytime. Even if the users of Internet are growing but still there is a major part of Indian population which is not able to access e-Governance activities for variety of reasons, e.g. some people may have limited access to Information and Communication Technologies and devices. Therefore, government has to provide internet access through public terminals as a part of their universal access efforts.

**Confidence on technologies provided by government:**

The implementation of public administration functions via e-Government requires that the user must be confident and comfortable while using the technology. He must also trust that technology that he/she is interacting with. Even the government should provide the measures so that the users can trust the technology provided to them. The government has to make a balance between ensuring that a system prevents fraudulent transactions and the burden that extensive checks can take place on people who are honest.
Separation:

The separation that exists between the individuals, communities and International Journal of Pure and Applied Mathematics Special Issue165 businesses that have access to Information Technology and those that do not have such access. Economic poverty is closely related to the limited information technology resources. People who are living below poverty line cannot afford a computer and internet connection for themselves to take the benefits of the e-Government and other on-line services. Economic poverty is not the only cause of this separation; it may also be caused by the lack of awareness among the people. In India even some of the economically stable people do not know about the scope and services of e-Governance. Indian government has to take some actions to narrower this separation to effectively implement the e-Governance projects. Citizens, employees and businesses can all have their biases with respect to how transactions should be processed. Government entities and public policy administrators cannot ignore the changes that occur as a result of the implementation of the ICT. Education about the value of new system is one step towards reducing some of this struggle.

Population:

Population of India is probably the biggest challenge in implementing e-Governance projects. As population is considered to be an asset to the country but it also offers some other challenges e.g. establishing person identities. There is no unique identity of individuals in India although Indian government is making efforts for providing unique identity to its citizens. Apart from this, measuring the population, keeping the database of all Indian nationals and keeping this database updated and then providing the e governance services to the whole population are major challenges.

Lack of integrated services:

Most of the e-governance services which are offered by the state or central government are not integrated. Lack of communication between different departments of government may be its major cause.

Lack of awareness in people:

Most of the Indian people are not aware of the benefits of e-Governance services. Even the government does not pay much attention to make the people aware about e-Governance activities. Unawareness is a major challenge in the implementation of e-Governance projects.
Conclusion

As the usage of Information Technology is growing very fast, Indian government is making many efforts to provide services to its citizens through e-Governance. Although Indian government is spending a lot of money on e-Governance projects but still these projects are not successful in all parts of India. Unawareness in people, local language of the people of a particular area, privacy for the personal data of the people etc. are main challenges which are responsible for the unsuccessful implementation of e-Governance in India. Government must take some actions to make the people aware about the e-Governance activities so that people may take full advantage of these activities.

Every small step thus taken should be used to learn about hurdles and improve upon the next steps, both in terms of direction and magnitude. The change in the mindset to develop and accept the distributed and flat structured e-governance system is required at the top level system to beat the inertia.

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