

E-GOVERNANCE IN INDIA: STATUS, OPPORTUNITIES & CHALLENGES

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ABSTRACT

In the current era, Information and Communication Technology (ICT) has provided means for faster and better communication, retrieval of data and utilization the information to its users. e- Governance is basically the application of ICT to provide government services to the citizens via internet. In developing countries like India, where literacy level is very low and a large number of people are living below poverty line, people are not even aware about the benefits of e-Governance activities and Citizens do not use Information and Communication technologies to a much extent, there exist a number of internal departmental issues to implement e-Governance activities. This article highlights different models of e-governance, its significance, challenges faced during implementation of e-Governance across all the states of India and the recommendations to address the challenges being faced.

Keywords: e-governance, ICT, Interoperability, G2B, G2C, G2G, G2E, Deity, CCTNS, PDS, OECD, MCA 21, UID.

1. INTRODUCTION

The actual term governance comes from an ancient Greek word, kebernon, which means to steer. In current usage, to govern means to steer, to control, and to influence from a position of authority. According to Former Secretary General of the United Nations: Kofi A. Annan, "Good governance is perhaps the single most important factor in eradicating poverty and promoting development." Therefore, governance is an exercise of power for steering social systems, as well as a process by which organizations are directed, controlled, and held to account to their society. It is a set of the systems and processes concerned with ensuring the overall direction, effectiveness, supervision and accountability of an organization. E-Governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services. E-Governance is defined as "the application of information & communication technologies (ICT) to transform the efficiency, effectiveness, transparency and accountability in the working of government and to empower citizens through access & use of information". In other words, e-Governance is the implementation and delivery of government services through the information communication technology to provide Transparent, Effective, Efficient, Responsive and Accountable governance to the society. Good governance has eight major Characteristics-Participation, Transparency, Effectiveness and efficiency, Responsiveness, Accountability, Equity and inclusiveness, and Rule of Law. A conceptual model for e-Governance is shown in figure-1 which explains about the interrelation between citizens, government and the services accessed by the citizens through information and communication technology followed by the major characteristics of good governance.



Figure 1: Conceptual Model of E-governance

E-Governance aims to make the interaction between government and citizens (G2C), government and business enterprises (G2B), and inter-agency relationships (G2G) more friendly, convenient, transparent, and inexpensive.

The goals of e-Governance are:

- Better service delivery to citizens
- Ushering in transparency and accountability
- Empowering people through information
- Improved efficiency within Governments
- Improve interface with business and industry

2. MODELS OF E-GOVERNANCE

1. **G2G (Government to Government)**- This kind of interaction is only within the sphere of government and can be both horizontal i.e. between different government agencies as well as between different functional areas within an organization, or vertical i.e. between national, provincial and local government agencies as well as between different levels within an organization. The primary objective is to increase efficiency, performance and output.
2. **G2C (Government to Citizens)**- Improving the availability and accessibility of public services and the quality of services to the citizens. It gives citizens the choice of when to interact with the government, from where to interact with the government (e.g. service centre) and how to interact with the government (e.g. through internet, fax, telephone, email, etc.) The primary purpose is to make government, citizen friendly
3. **G2B (Government to Business)**- e-Governance tools are used to aid the business community (providers of goods and services) to seamlessly interact with the government. The objective is to cut red tape, save time, reduce operational costs and to create a more transparent business environment when dealing with the government.
4. **G2E (Government to Employee)**-Government is the largest employer and like any other organisation it has to interact with its employee on a regular basis. Use of ICT tools makes this interaction faster and efficient.

3. SIGNIFICANCE OF E-GOVERNANCE

- **Better access to information and quality services for citizens:** - ICT would make timely and reliable information to citizens on various aspect of governance. It will help citizens and other stakeholders to save their time, money and effort. The ultimate objective of e-governance is to reach out to citizens by adopting Lifecycle approach i.e. providing public services to citizens which would be required right from birth to death.
- **Simplicity, efficiency and accountability in the government:** - use of ICT tools would lead to simplification of complicated processes, weeding out of redundant processes, simplification in structure and change in statutes and regulation. Ultimately it would enable simplification of the functioning of government, enhanced decision making ability and increased efficiency across government.
- **Expand reach of governance:** - expansion of ICT tools like mobile telephony, internet, telephone network etc. would facilitate delivery of large number of services provided by the government. ICT tools have expanded the reach of government both spatially and demographically.
- **Enabling environment for promoting economic development:** - technology enable positive business climate by simplifying relationships with business and reducing the administrative steps needed to comply with regulatory obligations.
- **Improving service delivery:** - e-governance reduces bureaucratic hurdle and enhance the quality of services in terms of time, content and accessibility through integrated service delivery platform at the door step of citizens.

4. EVOLUTION OF E-GOVERNANCE IN INDIA

Recognizing the increasing importance of electronics, the Government of India established the Department of Electronics in 1970. The establishment of the National Informatics Centre (NIC) in 1977 was the first major step towards e-Governance in India as it brought 'information' and its communication in focus. In the early 1980s, the advent of personal computers brought the storage, retrieval and processing capacities of computers to Government offices. By the late 1980s, a large number of government officers had computers but they were mostly used for 'word processing'. Gradually, with the introduction of better software, computers were put to other uses like managing databases and processing information. Advances in communications technology further improved the reach of computers, and many Government departments started using ICT for a number of applications like tracking movement of papers and files, monitoring of development programmes, processing of employee's pay rolls, generation of reports etc. However, the main thrust for e-Governance was provided by the launching of NICNET in 1987 – the national satellite-based computer network. This was followed by the launch of the District Information System of the National Informatics Centre (DISNIC) programme to computerize all district offices in the country for which free hardware and software was offered

to the State Governments. NICNET was extended via the State capitals to all district headquarters by 1990. In the ensuing years, with ongoing computerization, tele-connectivity and internet connectivity, came a large number of e-Governance initiatives, both at the Union and State levels. A National Task Force on Information Technology and Software Development was constituted in May 1998 recommended the launching of an 'Operation Knowledge' aimed at universalizing computer literacy and spreading the use of computers and IT in education. In 1999, the Union Ministry of Information Technology was created. By 2000, a 12-point minimum agenda for e-Governance was identified by Government of India for implementation in all the Union Government Ministries/Departments.

5. E-GOVERNANCE INITIATIVES IN INDIA

The policy-makers in India tend to justify the adoption and expansion of e-governance on the grounds that it costs less, reduces waste, promotes transparency, eliminates corruption, generates possibilities to resolve rural poverty and inequality, and guarantees a better future for citizens.

1. Government to Citizen Initiatives:

- **Computerization of land records:** In collaboration with NIC. Ensuring that landowners get computerized copies of ownership, crop and tenancy and updated copies of Records of Rights (RoRs) on demand.
- **Bhoomi project:** Online delivery of Land Records. Self-sustainable e-Governance project for the computerized delivery of 20 million rural land records to 6.7 million farmers through 177 Government-owned kiosks in the State of Karnataka.
- **Gyandoot:** It is an Intranet-based Government to Citizen (G2C) service delivery initiative. It was initiated in the Dhar district of Madhya Pradesh in January 2000 with the twin objective of providing relevant information to the rural population and acting as an interface between the district administration and the people.
- **E-mitra project in Rajasthan:** e-Mitra is an integrated project to facilitate the urban and the rural masses with maximum possible services related to different state government departments through Lokmitra-Janmitra centres/Kiosks.
- **E-seva (Andhra Pradesh):** This project is designed to provide 'Government to Citizen' and 'e-Business to Citizen' services. The highlight of the e-seva project is that all the services are delivered online to consumers /citizens by connecting them to the respective government departments and providing online information at the point of service delivery.

2. Government to business(G2B) initiatives:

- **E-procurement project in Andhra Pradesh and Gujarat:** To reduce the time and cost of doing business for both vendors and government.
- **MCA21:** By the Ministry of Corporate Affairs. The project aims at providing easy and secure online access to all registry related services provided by the Union Ministry of Corporate Affairs to corporates and other stakeholders at any time and in a manner that best suits them.

3. Government to Government(G2G) initiative:

- **Khajane project in Karnataka:** It is a comprehensive online treasury computerization project of the Government of Karnataka. The project has resulted in the computerization of the entire treasury related activities of the State Government and the system has the ability to track every activity right from the approval of the State Budget to the point of rendering accounts to the government.
- **Smartgov (Andhra Pradesh):** SmartGov has been developed to streamline operations, enhance efficiency through workflow automation and knowledge management for implementation in the Andhra Pradesh Secretariat.

6. SOME OTHER MAJOR E-GOVERNANCE INITIATIVES

- **UID:** The unique identification project was conceived as an initiative that would provide identification for each resident across the country and would be used primarily as the basis for efficient delivery of welfare services. It would also act as a tool for effective monitoring of various programs and schemes of the government.
- **e-office:** The Government of India has recognized the need to modernize the Central Government offices through the introduction of Information and Communications Technology. e-Office is aimed at increasing the usage of work flow and rule based file routing, quick search and retrieval of files and office orders, digital signatures for authentication, forms and reporting components.
- **Crime and Criminal tracking network & system(CCTNS):** Crime and Criminal Tracking Network & Systems (CCTNS) MMP aims at creating a comprehensive and integrated system for enhancing the efficiency and effective policing at all levels and especially at the Police Station level through adoption of principles of e-Governance, and creation of a nationwide networked infrastructure for evolution of IT-enabled state-of-the-art tracking system.

- **Public distribution system(PDS):** Computerization of the PDS is envisaged as an end-to-end project covering key functional areas such as supply chain management including allocation and utilization reporting, storage and movement of food grains, grievance redressal and transparency portal, digitization of beneficiary database, Fair Price Shop automation, etc.
- **National land record modernisation programme(NLRMP):** A Project for Computerization of Land Records (CLR) was launched in 1988-89 with the intention to remove the inherent flaws in the manual system of maintenance and updation of Land Records. In 1997-98, the scheme was extended to tehsils to start distribution of Records of Rights to landowners on demand. The focus of the entire operation has always been to employ state of the art information technology (IT) to galvanize and transform the existing land records system of the country.
- **Direct cash transfer:** To facilitate disbursements of Government entitlements like NREGA, Social Security pension, Handicapped Old Age Pension etc. of any Central or State Government bodies, using Aadhaar and authentication thereof as supported by UIDAI.
- **Aadhar enabled payment system(AEPS):** AEPS is a bank led model which allows online interoperable financial inclusion transaction through the Business correspondent of any bank using the Aadhaar authentication. This has helped in financial inclusion.
- **Digital India program:** This programme has been envisaged by Department of Electronics and Information Technology (Deity). The vision of Digital India aims to transform the country into a digitally empowered society and knowledge economy. The programme will be implemented in phases from the current year till 2018. The Digital India is transformational in nature and would ensure that Government services are available to citizens electronically. It would also bring in public accountability through mandated delivery of government's services electronically, a Unique ID and e-Pramaan based on authentic and standard based interoperable and integrated government applications and data basis. The program aims at providing digital infrastructure as a utility to every citizen as well as high-speed internet as a core utility in all gram panchayats. The overall scope of this program is "to prepare India for a knowledge future", "to make technology central to enabling change" and "to become an umbrella program covering many departments".

7. CHALLENGES IN E-GOVERNMENT SERVICE DELIVERY SYSTEM

1. Environmental and social challenges:

- **Low level of literacy**
- **Low IT literacy-** most of the citizens who are literate also are not aware about the usage of information technology.
- **Language as a barrier-** people in India come from different background speaking different languages. People with regional languages face challenges as most of the IT application are either in the Hindi or English language.
- **Lack of expertise-** expertise are not available in different department of government for immediate repair of hardware/networking.
- **Struggle to change-** there is hesitation in the mind of citizens to move from manually maintained system to automated based system.
- **Lack of integration-** majority of the e-governance services offered by the central or state government are not integrated with each other. Lack of interoperability among the different department of the government is major challenge.
- **Lack of awareness among the citizens:** most of the citizens are not aware about the benefits of the e-governance services.

2. Economic Challenges:

- India being developing country suffer from limited financial resources to implement various e-governance programmes.
- **Low per capita income-** India's per capita income is much lower than countries in west that is why people here couldn't afford services available on internet/web provided by the government.
- **Cost-** In developing country like India cost is one of the most important obstacle in the implementation of e-governance services as majority of the people live below poverty line. A large amount of money is required for the implementational and operational work.
- **Maintenance of Electronic devices-** as the information technology evolves very fast, adapting to the current standard of IT software and hardware is bigger challenge.

3. Technological Challenges:

- **Inadequate infrastructure**- many government offices do not have proper IT infrastructure to cater needs of people. Large number of panchayats do not have broadband internet connectivity which hampers service delivery at the grass root level. Power cut in the villages also act as barrier to service delivery.
- **Lack of human resources**- dedicated hardware & network engineer or workforce are required to solve operational challenges but we lack large human resource.
- **Lack of strategy and policy**- most of the government departments lack regular and centralized backup.
- **Privacy and security**- Indian people are user of outdated software's and become victim of various cyber frauds. various sensitive personal information is available on the internet which raises question mark on the privacy rights of people.
- **Inter-operability**- majority of the government projects lack interoperability, they work in silos leading to wastage of resources and duplication of work. Similar government projects should be integrated.

8. RECOMMENDATIONS TO ADDRESS THE CHALLENGES IN PROVIDING CITIZEN CENTRIC E-GOVERNANCE

Dr. APJ Abdul Kalam, former President of India and a visionary in the field of e-Governance has aptly summarized the basic challenge lying before the country in this regard:

“e-Governance, has to be citizen-friendly. Delivery of services to citizens is considered a primary function of the government. In a democratic nation of over one billion people like India, e-Governance should enable seamless access to information and seamless flow of information across the state and central government in the federal set up. No country has so far implemented an e-Governance system for one billion people. It is a big challenge before us.”

The implementation of e-Governance would require the administrative measures mentioned below –

1. Building a Congenial Environment –Building a congenial environment is a sine qua non for successful implementation of e-Governance initiatives. This should be achieved by:

- Creating and displaying a will to change within the government
- Providing political support at the highest level
- Incentivising e-Governance and overcoming the resistance to change within government
- Creating awareness in the public with a view to generating a demand for change.

2. Identification of e-Governance Projects and Prioritisation- The Organisation for Economic Co-operation and Development (OECD) has defined four stages of e-government Projects. These are:

- Information: Putting information on web-sites
- Interaction: Allowing citizens to enquire about services, procedures etc. and filling up forms and submitting them online
- Transaction: Allowing payments online
- Transformation: A mix of all the above and allowing the citizen to participate in governance through ICT.

3. Capacity Building and Creating Awareness-The success of an e-Governance project would depend on building human capacities in terms of necessary knowledge and skills to conceptualize, initiate, implement and sustain e-Governance initiatives across government as also on the ultimate use by citizens of the facilities created.

- Capacity building efforts must attend to both the organizational capacity building as also the professional and skills upgradation of individuals associated with the implementation of e-Governance projects.
- Each government organization must conduct a capacity assessment which should form the basis for training their personnel.
- A network of training institutions needs to be created in the States with the Administrative Training Institutes at the apex.
- State Governments should operationalise the Capacity Building Roadmap (CBRMs), under the overall guidance and support of the DIT, Government of India.
- Lessons learnt from previous successful e-Governance initiatives should be incorporated in training programmes.
- The recommendations made by the 2nd ARC in its Second Report entitled ‘Unlocking Human Capital’ should be adopted for creating awareness among people with regard to e-Governance initiatives.

4. Developing Technological Solutions-Ideally the technological solution should ensure the following:

- Accessibility (at the citizens' doorsteps)
- User-friendly interface
- Cost-effectiveness (e.g. making use of open source software)
- Efficiency
- Flexibility
- Scalability
- Sustainability
- Reliability and security

5. Monitoring and Evaluation-

- Monitoring of e-Governance projects should be done by the implementing organization during implementation in the manner in which project monitoring is done for large infrastructure projects. Even after the project has been implemented, constant monitoring would be required to ensure that each component is functioning as per the design.
- Evaluation of success or failure of e-Governance projects may be done by independent agencies on the basis of parameters fixed beforehand.

6. Public-Private Partnership(PPP)-

- Financial and managerial resources are critically required for successful implementation and more so, the sustainability of e-Governance initiatives. While the normal preference for any reform initiative is through exclusive use of in-house resources, the merits of inducting the private sector resources into the e-Governance sector have now been appreciated and accepted by policy-makers in Government.
- The private partner should be selected through a transparent process. The roles and responsibilities of government as well as the private partner should be clearly laid down in the initial stage itself, leaving no room for any ambiguity.

7. Protecting Critical Information Infrastructure Assets-There is need to develop a critical information infrastructure assets protection strategy. This should be supplemented with improved analysis and warning capabilities as well as improved information sharing on threats and vulnerabilities.

9. CONCLUSION

E-Governance offers an opportunity for government organizations to re-invent themselves, get closer to the citizenry and forge closer alliances with varied communities of interest, practice, expertise, conviction and inter-dependence within the context of national development agendas. As an emerging practice, e-governance seeks to realize processes and structures for harnessing the capabilities of ICTs at various levels of government and the public sector and beyond, for the purpose of establishing good governance. The route to e-governance is only now emerging, as governments and citizens across the world try and learn to exploit, new media and the new information technologies.

E-Governance evolves new way of leadership, debating, deciding strategies, using services, new ways of doing business transactions, new ways of accessing education, new ways of listening to citizens and diverse communities and new ways of organizing & delivering information. As a concept, e-governance can be perceived to be inclusive of e-Democracy, e-Government and e-Business. Government Process Re-engineering using IT to simplify and make the government processes more efficient is critical for transformation to make the delivery of government services more efficacious across various government domains and therefore needs to be implemented by all Ministries/ Departments.

10. REFERENCES

- [1] Subhash C. Bhatnagar, Nupur Singh (2010), Assessing the Impact of E-Government: A Study of Projects in India, Research Article, Indian Institute of Management
- [2] Kumar, P., Zaidi, A., Srivastava, A. and Jain, G. (2015) Evolving Sentiments towards E-Governance Using Opinion Mining. IJCA Proceedings on International Conference on Distributed Computing and Internet Technology, ICDCIT 2015, 24-27.
- [3] Sanjay Kumar Dwivedi, and Ajay Kumar Bharti (2005), E-Governance in India – Problems and Acceptability, Journal of Theoretical and Applied Information Technology
- [4] Verma R.K., Kumari (2010) —E-Governance at Grassroots Level in South Asia: A Study of Citizen-centric e-Panchayats in India. Asia-Pacific Journal of Rural Development Vol. XX, No. 1
- [5] Abrahams L, Newton-Reid A (2008). e-Governance for Social and Local Economic Development: Gauteng City Region perspective; Link Public, Policy Research Paper No.9, November 2008.

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- [6] EIU (Economist Intelligence Unit) (2007). "The 2007 E-readiness Ranking", The Economist Intelligence Unit, The Economist.
 - [7] Everitt, B.S., & Dunn, G. (1991). Applied multivariate data analysis. New York: Halsted Press.
 - [8] OECD e-book Citizens as Partners - Information, Consultation and Public Participation in Policy-Making [<http://www.oecd.org/publications/ebook/4201131E.Pdf>]
 - [9] Yadav K.P. Singh 2001 'Cover Story: Can Indian Villages be Logged on to Infotech Highway?', Down to Earth.
 - [10] Norris, Pippa 2001, Digital Divide? Civic Engagement, Information Poverty and the Internet in Democratic Societies. Cambridge: Cambridge University Press.
 - [11] Deepak Ghaisas, 2007, [<http://egovindia.wordpress.com/2007/04/22National-Policy-on-egovernance-required>]
 - [12] Intranet in Tribal District of Dhar State Government of Madhya Pradesh [<http://www.gyandoot.nic.in/>]
 - [13] E-Governance at Regional Transport Offices in Tamil Nadu, 2007, National Informatics Centre Tamil Nadu State Centre [<http://www.tn.nic.in/tnhome/projectfiles/brochure-transport.pdf>]
 - [14] Ministry of Information Technology (MIT) 2001 'Electronic Governance — A Concept Paper', Ministry of Information Technology, India. [<http://egov.mit.gov.in/>]
 - [15] Upadhyaya, R. 2000 'E-governance and Computer Applications', Position Paper. Ottawa: International Development Research Center.
 - [16] Automation of Land Records State Government of Karnataka [<http://www.revdept-01.kar.nic.in/>]
 - [17] Hariharan, Venkatesh 1999 Information Poverty: India's New Challenge', Information Technology in Developing Countries. [<http://www.iimahd.ernet.in/egov/ifip/april99.htm>]