

E-Governance in India

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Abstract

E-Governance is the use of information communication technologies to streamline and improve government processes and enhances the internal and external communication of government. It is the generic capacity or aptitude of the public sector to use ICT for encapsulating public services and deploying to the public high quality information (explicit knowledge) and effective communication tools that support human development. Internet and Cyberspace has made the Indian Government moved into electronic world. With the mushrooming of Information technology service oriented initiatives of the central and state government of India, 'e-governance with information superhighway have become buzzwords. According to NASSCOM-Mckinsey report, the e-government infrastructure and services sector in India is a billion dollar market for IT vendors, software and training companies. The Indian Government has started a National e-Governance Plan which is a part of the National Common Minimum Programme for bringing information and government services to the doorstep of the citizens with an ambitious outlay of near 120 billion including public and private investments.

Keywords: E-Governance; Electronic government; Technology led strategy; India,

1. Introduction

E-governance is more than just a government website on the Internet. The strategic objective of e-governance is to support and simplify governance of the three parties i.e. government, citizens and businesses. The use of ICTs can connect all three parties and support processes and activities. In other words, in e-governance, electronic means support and stimulate good governance. It is a situation in which all interaction with government can be done through one counter 24 hours a day, 7 days a week, without waiting in lines. This is only possible if government is willing to decentralize responsibilities and processes, and if they start to use electronic means.

There is globalization, cut throat competition in trade and enterprise, so today a country's administration system is far more important as a competitive tool than it used to be. An administration that has the capacity to act quickly, instantly, rigorously and is accessible, plays an important role in attracting foreign investment. Besides this, the citizens are more aware, they demand rapid online services from the government as they do for the corporate sector. So in order to meet these challenges, the e-governance plays a pivotal role.

Definitions of e-government range from 'the use of information technology to free movement of information to overcome the physical bounds of traditional paper and physical based systems' (Digital Governance.org, 2003) to 'the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees'. (Deloitte and Touche Study Report, n.d)

E-Government refers to intensive utilization of information and communication technologies (ICT) for the purpose of forming public intent and rendering services at the

political and the administrative level. The Gartner report defines e-Government as, "The continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationships through technology, the Internet, and new media." (Gartner Government, 2000).

Further the Electronic Governance can also be described as the application of Information Technology to the processes of Government functioning in order to bring about Simple, Moral, Accountable, Responsive and Transparent (SMART) Governance.

2. E-Governance in India

E-governance originated in India during the seventies with a focus on in-house government applications in the areas of defence, economic monitoring, planning and the deployment of ICT to manage data intensive functions related to elections, census, tax and administration.

National Informatics Centre (NIC) efforts to connect all the district headquarters during the eighties was a landmark for E-Governance initiative in India. From the early nineties, e-governance has seen the use of IT for wider sectoral applications with policy emphasis on reaching out to rural areas and taking in greater inputs from NGOs and private sector as well. With the increasing involvement of international donor agencies such as DfID, G-8, UNDP and World Bank, India is able to provide a framework of e-governance for development.

For a huge and heterogeneous democracy like India, reaching the masses is an uphill task; however, keeping in view its capabilities and recognition in ICT outside the country, it is all achievable. The state governments and ministries of the Government of India have realized the potential of E-Governance and are now very actively trying to implement E-Governance solutions. Some of these are already in full-blown implementation and have been outstanding successes. Many more are at various stages of implementation while an even greater number are at a conceptual stage. Some of the most successful projects include Gyandoot (Madhya Pradesh), Akshaya (Kerala), Bhoomi (Karnataka), eSeva (Andhra Pradesh) and HP-Kuppam (Andhra Pradesh), RASI-Rural Access to Services Through Internet (Tamil Nadu), WARANA (Maharashtra), CARD (Andhra Pradesh), and Sukhmani (Punjab). These projects earned widespread appreciation, primarily for their ability to change the lives of citizens in the context of reduction in procedural delays, red-tapism and corruption amidst increased participation, communication, and single window clearance (E-Governance India, 2002-2007).

(a) National e-Governance Plan (NeGP) of India

The National e-Governance Plan (NeGP) is part of the National Common Minimum Programme for bringing information and government services to the doorstep of the citizens. Access to information, backed with relevant infrastructure and services, can not only allow rural villagers to improve their quality of life but also support and supplement their existing incomes in a sustainable way.

The Government of India approved National E-Governance Action Plan for implementation during the year 2003-2007 in November 2003. The plan seeks to create the right governance and insist mechanisms, set up the core infrastructure and policies and implement a number of Mission Mode Project the centre, state and integrated levels to create a citizen centre and business centric environment for governance (www.mit.gov.in/plan/about.asp5).

The NeGP (Government of India) gives the following reasons for E-Governance.

- i. It minimizes distance to access
- ii. It extends access to unserved groups.
- iii. It introduces transparency.
- iv. It simplifies transaction procedures.
- v. It minimizes cost to citizens and government.
- vi. It minimizes the government revenue.
- vii. It improves the time to transact.
- viii. It offers new services.
- ix. It helps in adoption of best practices.

NeGP is formulated on the three-pillar model for delivery of these services, namely:

- i. State Wide Area Network (SWAN/NICNET) that will provide connectivity @2mbps up to the block level. It is also envisaged that SWANs will have Base Stations to enable wireless connectivity beyond block level.
- ii. National Data Bank/State Data Centres (SDC)
- iii. Common services Centres (CSC)

Access to information and services such as e-Government (birth and death certificates, payment of utility bills) micro-credit, education (e-learning), health (tele-medicine), financial services and entertainment through such infrastructure, can provide a foundation for the economic prosperity of rural India.

The Government of India spends on amount of 25 billion yearly on implementation of e-governance projects in India. The National Action Plan on E-Governance has an ambitious outlay of near 120 billion including public and private investments for the next few years. Table 1 below shows the percentage of investment for various activities in NeGP.

Table 1: Investment for Various Activities in NeGP

	Major Activities proposed in National E-Governance Programme	% of Investment
1.	Core Policies	1
2.	Core Projects	73
3.	Core Infrastructure	10
4.	Integrated Services Projects	2
5.	Support Infrastructure	5
6.	Human Resource Development/Training	4
7.	Technical Assistance	1
8.	Awareness & Assessment	2
9.	Organisational Structures	1
10.	R&D	1

The National e-Governance Plan (NeGP) has identified 27 Mission Mode Projects, which are to be implemented in a phased manner by the Line Ministries/Departments concerned at the Central and State level, as applicable, in addition to the various other e-Governance initiatives being taken by the respective States and Central Ministries. State Data Centre (SDC) has been identified as an element of the core infrastructure for supporting these e-Governance initiatives. Under NeGP, it is proposed to create Data Repositories/ Data Centres in the States so that a host of Government services can be rendered by the states through common delivery mechanism seamlessly supported by common core

Connectivity Infrastructure such as State Wide Area Network (SWAN) and CSC extended up to village level. This enables on line Government i.e. a Government whose service processes are integrated end-to-end across the Ministries, States, Districts, Talukas, Villages and with key partners, suppliers, businesses and citizens, and can respond with speed, agility & effectiveness to any citizen's demand.

The mission projects under the National E-Governance Action Plan are as shown in Table 2 below.

Table 2: Core Projects (Mission Mode Projects)

	Mission Mode Projects	Line Ministries/ Departments responsible
Central Government		
1	Income Tax	Ministry of Finance/Central Board of Direct Tax
2	Passport Visa & Immigration Project	Ministry of External Affairs/Ministry of Home Affairs
3	MCA21/ DCA21	Ministry/Department of Company Affairs
4	Insurance	Dept. Of Banking
5	National Citizen Database	Ministry of Home Affairs/Registrar General of India (RGI)
6	Central Excise	Department of Revenue/Central Board of Excise & Custom
7	Pensions	Dept. Of Pensions & Pensioners welfare & Dept. Of Expenditure
8	Banking	Dept. of Banking
State Government (tentative, to be finalized in consultation with the States)		
1	Land Records	Ministry of Rural Development
2	Road Transport	Ministry of Road Transport & Highway
3	Property Registration	Department of Land Resources
4	Agriculture	Department of Agriculture & Cooperation
5	Treasuries	Ministry of Finance
6	Municipalities	Ministry of Urban Development and Poverty Alleviation
7	Gram Panchayats	Ministry of Rural Development
8	Commercial Taxes	Ministry of Finance
9	Police (UTs initially)	Ministry of Home affairs
Integrated Services		
1	EDI (E-Commerce)	Ministry of Commerce and Industry
2	E-Biz	Department of Industrial Policy & Promotion / Department of Information Technology
3	Common Service Centres	Department of Information Technology
4	India Portal	Department of Information Technology / Department of Administrative Reforms and Public Grievances
5	EG Gateway	Department of Information Technology

(b) India Portal Project

India Portal Project is identified as one of the Mission Mode Project in the integrated service category under the National eGovernance Plan (NeGP) of GOI. This Portal is envisaged to provide a single window access to the information and services of the Indian Government at all levels from Central Government to State Government to District Administration and Panchayats for the Citizens, Business and Overseas Indians.

The beneficiaries are broadly categorized as citizens, corporate organizations, both in State and non-state sectors, the Government itself (Central, State and Local body level), media and the world at large.

This portal attempts to provide comprehensive, accurate, reliable and one stop source of information about India and its various facets. The information in the Portal has been well classified into distinct modules, which are also interlinked at relevant places to provide the visitor with a holistic view. The portal address is <http://india.gov.in/>.

(c) National Database on e-Governance Projects

The Government of India has taken an initiative with the cooperation of all implementing agencies, a live, dynamic, comprehensive database of all major E-Governance applications in the country accessible over the web. This is expected to have multiple benefits and serve multiple objectives. The database puts on display all that we have to offer to others as well as to ourselves. It will be using Java Server Pages as Front End tool for development and SQL Server 2000 as Back End. It has been already initiated and can be browsed at <http://www.egovdatabase.gov.in/>

(d) NIC and E-Governance in India

National Informatics Centre (NIC) is a premiere S&T institution of the Government of India, established in 1976, for providing e-Government or governance Solutions adopting best practices, integrated services and global solutions in Government Sector.

The Central Government nucleated a high priority plan project "National Informatics Centre (NIC)" in 1976, and later on with the financial assistance of the United Nations Development Programme (UNDP). NIC was set up initially under the purview of Information, Planning and Analysis Group (IPAG) of the then Electronics Commission / the Department of Electronics (DOE). In 1987, it was shifted to the Union Planning Commission and in October 1999, to the newly formed Central Ministry of Information Technology, which later became Department of Information Technology of the Ministry of Communications and Information Technology.

NIC has emerged as a "prime builder" of e-government / e-Governance applications in government sector (national, state and local districts) as well as promoter of digital opportunities for sustainable development, during more than a quarter century period. NIC has institutional linkages through its ICT Network "NICNET", with all the Departments/Ministries of the Central Government, 28 State Governments, 1 National Capital Territory of Delhi, 6 Union Territories, and about 600 District administrations of India. NIC has been instrumental in steering e-Government / e-Governance applications in Government Ministries/Departments at Centre, States, District and Blocks, facilitating improvement in government services, wider transparency, promoting decentralized planning and management, resulting in better efficiency and accountability to people.

NIC has been an active catalyst and facilitator in "informatics-led-development" programme of the government (could also be termed as an e-Government programme, an e-Governance Programme), enabling it to derive competitive advantage as well as to 'reach out into India' by implementing ICT applications in Social & public Administrations.

NIC has vast core expertise and experience in the design, development and operationalisation of various e-Government projects in the areas of Public Administration and Governance viz., Agriculture & Food, Animal Husbandry, Fisheries, Forestry & Environment, Industry, Health, Education, Budget and Treasury, Fiscal Resources, Transport, Water Resources, Court Management, Rural Development, Land Records and

Property registration, Culture & Tourism, Import & Exports facilitation, Social Welfare Services and Micro-level Planning. (<http://home.nic.in/>)

As a major step in ushering “e-Governance”, NIC has been involved implementing “e-Governance agenda” of the Central Government with respect to:

- i. Internet/Intranet Infrastructure (PCs, Office productivity tools, Portals on Business allocation) upto Section officers levels;
- ii. IT empowerment of Officers/Officials & Capacity Building
- iii. ICT Enabled Services (G2G, G2E, G2C and G2B)
- iv. ICT Plans for Sectoral Informatics Development;
- v. Business Process Re-Engineering

(e) CDAC and E-Governance Initiatives

With its national importance and capitalizing on its skills and technologies developed, over the years, CDAC has taken major initiatives in this area of eGovernance offering solutions and services as follows (<http://www.cdac.in/HTML/egovidx.asp>):

- i. Online Management and Monitoring System (OMMS) for PMGSY (Pradhan Mantri Gram Sadak Yojana)
- ii. Decision Support System based on Data Warehousing for multipurpose household data for Andhra Pradesh
- iii. Computerization of: Electoral Rolls, Maharashtra, Land Management and GIS based Planning, Document Management Process, Department of Archives, Maharashtra etc.
- iv. Hospital Information System (Sanjay Gandhi Post Graduate Institute for Medical Sciences, Lucknow and Guru Teg Bahadur Hospital, New Delhi)
- v. Laboratory Automation for Central Power Research Institute, Bangalore
- vi. Networking in institutions to enable enterprise-wide data exchange
- vii. Consultancy for developing framework for information system planning for Gujarat and Madhya Pradesh
- viii. Portfolio Management Solution
- ix. Turnkey solution provider (TSP) for states of Maharashtra, Kerala and Punjab.
- x. MoU for promoting eGovernance in Goa and Madhya Pradesh
- xi. Telephone Revenue Billing (Pune Telecom)

3. Present E-Governance Scenario in India

Though India has achieved many milestones many more benchmarks are to be set in the area of E-Governance. India has still a long way to go to reach the standards that South Korea, Taiwan, Singapore and the US have. Seoul, South Korea is top in the world for e-government, according to a survey from Rutgers University's e-Governance Institute and the Global e-Policy e-Government Institute at South Korea's Sungkyunkwan University (Swartz, 2007) and according to the fourth Annual Global E-Government Study, Taiwan, Singapore and the US are in lead in overall E-Governance performance.

India's experience in e-Governance / ICT initiatives has demonstrated significant success in improving accessibility, cutting down costs, reducing corruption, extending help and increased access to un-served groups.

Presently e-government initiatives have reached millions of people belonging to various sections of society. Improved access to information and services has provided economic

and social development opportunities, facilitated participation and communication in policy and decision-making processes and empowerment of the weakest groups.

Eventually, India intends to reach a point where "anyone anywhere can go online anytime, not only to get the information they need but also to actually receive services, complete transactions, communicate with their elected representatives and even to vote" (Verton, 2000).

Table 3 below shows the Projects/ Programme Proposed to be taken under National E-Governance Action Plan in India (2004-2005 to 2006-2007) (India, Ministry of Communications and Information Technology, 2005-2006)

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Table 3: Projects/ Programme Proposed to be taken under National E-Governance Action Plan in India (2004-2005 to 2006-2007)

Projects/Programmes	(Rs. Crore)		
	2004-05	2005-06	2006-07
State Wide Area Network	175	500	175
State Data Centres	5	30	50
Integrated Service Delivery Centres	5	30	50
E-Portal/Service Delivery Gateway	1	15	30
Awareness & Assessments	1	10	10
UNDP	8	7	5
Horizontal Transfer of Successful e-Gov Applications in Land Records, Land Registration and Transport	10	10	10
HRD	1	10	20
Technical Support	1	10	15
Others	10	10	15
Total	217	632	380

Source: Annual Plan, 2005-06, Ministry of Communications and Information Technology, Government of India.

4. Challenges to be Encountered

- i. *Lack of IT illiteracy and awareness of benefits:* In India there is lack of awareness regarding benefits of e-governance as well as the process involved in implementation of projects like G-C, G-G and G-B. The present administrative structure has not geared for maintaining, storing and retrieving the governance information electronically (Basu, 2004)
- ii. *Lack of Integrated Services:* Most of the E-governance Services being offered by state or central governments are not integrated. This can mainly be attributed to lack of communication between different departments. So the information that resides with one department has no or very little meaning to some other department of Government.
- iii. *Underutilization of existing ICT infrastructure and Lack of Key Persons:* There is underutilization of the computers and technology peripherals in terms of their use in data mining for supporting management decisions. In addition to this E-governance projects lack key persons, not only from technological aspect, but from other aspects as well.
- iv. *Population:* This is the biggest challenge India is facing, apart from being an asset to the country it offers some unique issues. One important among it is establishing Person Identities. There is no unique identity of a person in India.

Apart from this, measuring the population, keeping the database of all Indian nationals and keeping it updated is one of biggest challenge.

- v. *Attitude of Government Departments:* The government servants/ officials have derived their sustenance from the fact that they are important repositories of government data. Thus any effort to implement DMS and workflow technologies or bringing out the change in the system is met with resistance from the government servants. The local government employees will have to be schooled on how to help citizens prior to their going online (to explain how information can be accessed) as well as responding to follow-up questions. (McClendon, and Letcher, 2000)
- vi. *Lack of Infrastructure for sustaining e-governance projects on national level:* Infrastructure to support e-governance initiatives does not exist within government departments. The government departments are not equipped to be in a position to project the clear requirements nor are there any guidelines for involving private sector. The use of connectivity options provided by govt. agencies like NICNET etc. are used in a very limited manner for data transmission purpose between various locations viz. District, State and Centre, and is mainly utilized for e-mail and Internet purpose only.
- vii. *Different Languages:* India has a multicultural and and multilingual background. It has more than 85 languages and that many religions approximately. The languages change from region to region. One can see a change in the way the language is spoken after every 300 kilometers. So it is a major challenge due to the diversity of the country. It enforces need to do governance in local languages. Ensuring eGovernance in local language is a big task to achieve.
- viii. The success factors of e-Gov projects in are 10% Technology, 60% Process, 20% Change Management and rest is luck

5. The Authorship Pattern

- i. Cooperation between the different layers of government is required.
- ii. There should be coordination between Research and Development on the one hand and production of practical and beneficial e-series on the other.
- iii. Adequate funding arrangement should be made.
- iv. The cooperation between public and private sector should be exploited to the fullest in developing electronic services.
- v. To ensure interoperability, the Government of India should set up a committee for issuing regulations and recommendations on standards for e-communication among the various stakeholders, Government agencies, private sector and citizens. The focal areas where there is need for common standards are electronic identification and signature, storage and labeling of information, quality norms for agencies websites.
- vi. Awareness campaigns for senior civil servants, political executives should be undertaken for highlighting the importance of e-governance.
- vii. It is also important that Central Government formulates and implements policies for data security and privacy for accelerating the speed for successful implementation of e-governance.
- viii. Basic infrastructure for the speedy deployment of e-governance applications needs to be extended to all important rural areas in the country.
- ix. Mobile technologies can be used to avoid breakdowns in the physical channels of communication, wider coverage and for reduced cost of maintenance. At the same time, the focus on commitment can lead to self propelling mechanism for sustainable e-Government mechanism.

6. Conclusion

Being the largest democracy and having one of the largest government set-ups in the world, India offers a vast potential for effective implementation of e-governance. India intends to achieve the goal of making its society a knowledge society by 2020, so it needs modern innovative transparent accountable administration, which can communicate and cooperate effectively with citizens and businesses and between each other.

The public administration is undergoing a radical transformation and information communication technologies are a sine que nom for this process. This transformation is a gradual, long term process which requires immense tenacity perseverance and creativity. The public administration has already made rapid strides, now the needs of the hour is to cooperate and coordinate our efforts in sharing knowledge and models of good practices. In a digital democracy reinventing de-centralized administration by e-governance through speedy, correct, and truthful IT application is the main process.

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