E-Governance in India: Prospects and Threats

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Abstract: Information and communication Technology is playing important role in Public and Government sectors. These sectors are using ICT tools to deliver more efficient and cost effective services. The technology and methods are used in Government projects for efficient services and transparency purposes. E-Governance is considered as a high significance itinerary in India. These days "Digital India" Programme is a leading programme of Government of India with a vision to transform India into a digitally empowered society. The main vision of this programme is to develop the Digital infrastructure as a core utility to every citizen, providing good governance and efficient delivery of services to the citizens and provide the digital empowerment to citizen of India. Ultimately mission and vision is providing good governance through e-governance to people of India. The major threats to this governance is not shaded and totally overlooked. Major challenges are like privacy and security, information illiteracy, unawareness any many others, which may be a major hindrance for the successful implementation of Digital India Campaign. I will highlight major prospects and threats and their remedies in this paper.

I.   INTRODUCTION

The actual term governance comes from an ancient Greek word, kebernon, which means to steer [1]. Electronic governance or e-governance is the application of information and communication technology (ICT) for distributing government, exchange of information communication transactions, integration of various stand-alone systems and services between government-to-customer (G2C), government-to-business (G2B), government-to-government (G2G) as well as back processes and interactions within the entire government framework [2]. Generally four basic models are available government-to-citizen (customer), government-to-employees, government-to-government and government-to-business[3]. In India e-government has been initiated in nineties with the propagation of World Wide Web. In 1970 Government of India establishes a department of Electronics [4]. The major step towards the information and communication by India government was, the establishment of NIc (National Information center) in 1977. In the early 1980s, use of computers was limited to very few organizations.   With the advancement in communications technology resourcefulness of computer reach to many Government departments and they startusing ICT for a number of applications like tracking movement of papers and files, monitoring of development programmes, processing of employees' pay rolls, generation of reports etc. By the launching of NICNET in 1987 the national satellite-based computer network Center government launch the District Information System of the National Informatics Centre (DISNIC) programme to computerize all district offices in the country and also offered free hardware and software Governments.

In May, 1998 National Task Force on Information Technology and Software Development was established [5]. This task force suggested the launching of an 'Operation Knowledge' intended at universalizing computer literacy and distribution the use of computers and IT in education.Union Ministry of Information Technology was created in 1999 and 12-point minimum agenda for e-Governance was acknowledged by Government by 2000 [6]. In 2001, Tax administration department was the first department to use ICT to improve their internal working. During 2006 the Government of India officially launched its National e-Governance Plan (NeGP) [7].

II. PROSPECTS OF E- GOVERNANCE

2.1 Transportation: Computerization of transport department started 10 years ago with the accomplishment of VAHAN and SARATHI along with computerization of all the managerial functions of the Transport Department [8]. The Purpose of VAHAN is to establish National Register e-Services of Registered Vehicles, in which data from the different State Registers situated at State Data Centers flow to the National Register. Selected information will available to fetch at the national level. The National Register will act as a central storehouse of all crucial data and information. This will also enable users to avail the service on "Anywhere Service" basis. National Register will provide information to DoRTH, RTO/DTO/MLO/SDM, inter-state check post, police department and other G2C Services [9].The Purpose of SARATHI is to develop a National Register of Driving License. This portal enables the services like applying online driving license and enabling the online queries regarding driving license [10].

2.2 Agriculture: In 2004, National commission of Farmer has been setup to recommend, accelerate and expand the agricultural development to reduce the rural poverty and raise the standard of living of farmers. The ministry of Agriculture is now consisting of three departments.

(a)**Department of agriculture and Farmer Welfare:** Which has its official website http://agricoop.nic.in . The purpose of this portal is toaware the farmers about the new schemes, their right and the government subsidies provided to them.

(b) **Department of Agricultural Research and Education:** The Department of Agricultural Research and Education (DARE) has official website: http://dare.nic.in and this department coordinates and promotes agricultural research & education in the country. DARE provides the necessary government linkages for the Indian Council of Agricultural Research (ICAR), the premier research organization for co-ordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences in the entire country. With 100 ICAR institutes and 71 agricultural universities spread across the country this is one of the largest national agricultural research systems in the world.

(c) **Department of Animal husbandry and Dairy:** The official website of this department is http://dahd.nic.in. The purpose of this portal is to aware the farmers about the new schemes like PashudhanSanjivani, Advanced breeding Technology, E- PashudhanHaat, National Genomic Centre etc. The major activities they covered likeAnimal identification and traceability using polyurethane tags with unique identification number (UID), Upgrading Information Network on Animal Productivity and Health (INAPH) to National Data Base, uploading data on national database on regular basis, creation of dedicated helpline for delivery of services at farmers' doorstep.

2.3 **Finance & Taxes:** Ministry of Finance has departments like
(a) **Economic affair**: This department provide the E-Governance services like Aid, Accounts & Audit Division, Administration Division, Bilateral Cooperation Division, Budget Division, Capital Market Division, Economic Division, Currency and Coinage Division, IES Division, Infrastructure And Energy Division, Investment Division, Integrated Finance Division, Middle Office (Debt Management), Multilateral Institutions Division, Multilateral Relations Division, Press Relation Information Division, Office Of Chief Controller Of Accounts etc [11] .

(b) **Expenditure:** The Department of Expenditure is the nodal Department for overseeing the public financial management system in the Central Government and matters connected with State finances. The principal activities of the Department include pre-sanction appraisal of major schemes/projects (both Plan and non-Plan expenditure), handling the bulk of the Central budgetary resources transferred to States, implementation of the recommendations of the Finance and Central Pay Commissions, overseeing the expenditure management in the Central Ministries/Departments through the interface with the Financial Advisors and the administration of the Financial Rules / Regulations / Orders through monitoring of Audit comments/observations, preparation of Central Government Accounts, managing the financial aspects of personnel management in the Central Government, assisting Central Ministries/Departments in controlling the costs and prices of public services, assisting organizational re-engineering through review of staffing patterns and O&M studies and reviewing systems and procedures to optimize outputs and outcomes of public expenditure [12].

(c) **Revenue:** Under E-governance this department has official website http://dor.gov.in and provide the services like Income Tax, Custom House Agents, Importers/Exporters, Excise and Service Tax, Duty calculator to the customers.

Income Tax	http://www.incometaxindia.gov.in
Custom House Agents	https://www.icegate.gov.in
Importers/Exporters,	https://www.icegate.gov.in/expimport.html
Excise and Service Tax	https://www.aces.gov.in/
Duty calculator to the customers.	https://www.icegate.gov.in/Webappl/

(d) **Financial services:** The mandate of the Department of Financial Services covers the functioning of Banks, Financial Institutions, Insurance Companies and the National Pension System. The Department is headed by the Secretary, (Financial Services) who is assisted by an Additional Secretary, four Joint Secretaries and two Economic Advisers [13]. The official E-Governance site is http://financialservices.gov.in.

(e) **Disinvestment:** The main vision of this department is Promote people's ownership of Central Public Sector Enterprises to share in their riches through disinvestment. This department is providing the e-services like List all profitable Central Public Sector Enterprises on stock exchanges, Services for the Improvement in corporate governance and Adding market discipline to the functioning of Central Public Sector Enterprises etc [14]. The E-governance site is http://www.divest.nic.in

1.4 **Health:** Ministry of Health and Family Welfare had four Departments [15]. These departments has initiated many E-governance program like
   a) **Online Vaccination Appointment for International Traveler** : Citizen centric application for the purpose of vaccination of the persons proceeding abroad and issuance of International Health Certificate
   b) **SMS based Integrated Disease Surveillance System**: It is an SMS based Integrated Disease Surveillance System facilitates to report the occurrences of disease, number of persons affected from the area of occurrences immediately to the concerned authority.
   c) **Hospital OPD Appointment:** Hospital OPD Appointment System is another welfare measure undertaken by State Administration to make life of citizens simpler.

Department of Health and Family Welfare	http://mohfw.gov.in/index1.php?lang=1&level=2&sublinkid=2633&lid=2029
Department of AYUSH	
Department of Health Research	http://dhr.gov.in/
Department of AIDS Control	

III.   Challenges: The Major Challenges for E-Governance expectations are

3.1 High Information Technology illiteracy levels: The modern world is known as Information Technology. Information technology skills facilitate ahuman being to use computers, software applications, databases, and apply associated technologies to accomplish a wide variety of academic, work-related, and personal goals. Among these are information literacy focus on content, communication, analysis, information searching, and evaluation. Though India has reached the literacy rate 74.04% according to census report 2011 [16]. But having low information Technology literacy level.But India has the highest population of illiterate adults at 287 million, the report published by United Nations Educational, Scientific and Cultural Organization said. The report further said that the richest young women in India have already achieved universal literacy but the poorest are projected to only do so around 2080, noting that huge disparities within India point to a failure to target support adequately towards those who need it the most. There is a immense need of digital literacy in India. Digital Literacy plays a vital role in the mediation or bridging of common people and E-Government together. The ICT mediate as a tool to achieve better governance between these two. The technologies bridge each other and help to create a more transparent government. If required, it can be used for an opinion poll in implementing new policies, allowing voters to immediately evaluating their representation in the policy making, administerial decisions and ultimately the E-Governance [17].

3.2 Non-availability of user friendly interfaces: Many E-governance applications are deficient on this dimension. Most of the applications had weak back-end support systems which were not adequately re-engineered and connected to the front-end. Typically, the concerned departments did not process the applications on time. The backend systems required re-engineering, computerization and networking. Many successful urban ICT applications and rural projects like "Bhoomi" have exploited the developments in the server, network, and software technologies, to improve the processing of back-end processing applications.

3.3 Inadequate power supply in rural areas: India is the fifth largest producer and consumer of electricity in the world; however, 24x7 power supply still remains a dream unfulfilled. Despite an ambitious rural electrification programme, India is facing frequent blackouts. While 84.9% of Indian villages have at least an electricity line, just 46 percent of rural households have access to electricity. Electricity grids in the developed markets expect losses below 15%, but the losses by India's state utilities, over the past five years, were as high as 30% equal to about 1.5% of the country's GDP [18]. Power supply required to run the kiosks in the rural areas is unstable and often interrupted by load shedding. Although, most of the exchanges are being converted to digital, they have not reached most of the rural locations. That is why connectivity problems plagued most of the rural ICT applications. System up time was very low either due to lack of power supply (load shedding) or due to poor connectivity. Alternative power supply (solar) and connectivity (wireless) solutions are being experimented. At this point of time these technologies are too costly in relation to the volume of transactions handled [19].

3.4 Lack of awareness of e-Governance initiatives: There is general lack of awareness regarding benefits of E-Governance. Campaigns should be conducted regarding e-government services through organizing exhibitions, conferences and seminars and awareness should be spread through bulletin,TV, radio and press interviews. About 65% of population of India is lack of awareness of e-government services, essentially a lack of knowing about the benefits to be gained, and of how to use the services. During a study by Nassir and Yakoob (2014) [20] , Data collected from 75 respondents in a district of Kerala about 10 e-governance services about the awareness of the respondents about these services and found that average non aware percentage is 48.4%. Non awareness average percentage for 5 out of 10 services is 74.8%. According census, 2011 literacy rate in Kerala is 93.91%. This is a big problem; to generate the awareness in the citizens of India is great challenge. Initiatives like Marketing and publicity should be used to spread the awareness about electronic government. Marketing efforts should focus on creating awareness of the online presence. Using traditional media methods and outlets to create the right image for this new delivery channel can accomplish this awareness. One strategy is to use an advertising agency. This is how the customer would learn to identify a particular slogan or message with e-government activities. The Government needs to campaign for e-governance, increase people's awareness towards e-governance. Government can only encourage people to go online if it can make people feel comfortable with e-governance. This can be done through educating the people about the advantages of e-governance over physical governance. This can also be done through raising awareness of the leaders who can motivate the people to go online.

3.5 Privacy and Security: There will be three basic levels of access exists for e-government stakeholders: no access to a Web service; limited access to a Web-service or full-access to a Web service, however when personal sensitive data exists the formation of the security access policy is a much more complex process with legal consideration. With the implementation of e-government projects, effective measures must be taken to protect sensitive personal information. A lack of clear security standards and protocols can limit the development of projects that contain sensitive information such as income, medical history, land record etc. There is immense need of defined set of security methodology and standards, which should be strictly followed during e-governance projects. For e-governance, basic technologies are not sufficient because of the security concerns of sensitive data/information. Therefore, e-governance websites have to maintain standards.

IV.   CONCLUSION

Instead of poor infrastructure, Information illiteracy, language dominance and all the other reasons India has number of award winning e-governance projects like Platinum Award was bagged by Passport Seva Project, followed by National Safai Karamchari Finance Development Corporation and National Institute of Open Schooling winning the Gold and Silver award respectively and in the newly instituted Open Data Champion category Platinum Award was won by Office of Registrar General & Census Commissioner, The Planning Commission and Ministry of Statistics & Program Implementation won the Gold Award. The Silver award was bagged by the Ministry of Water Resources during the Third Web Ratna award 2014 ceremony was held on 25th March, 2015 at Stein Auditorium, India Habitat Centre, Lodhi Road, New Delhi [21]. Effective promotion schemes by the Indian government is and will also a boosting factor to provide quality services to their citizens which means there is huge potential for the development of e-governance in various sectors in future.

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