

ICT: A Powerful Tool to Facilitate e-Governance

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ABSTRACT

Electronic Governance (e-governance) aims at providing simple, moral, accountable, responsive and transparent government services to the citizen. Over the past decade or so the government of India has been implemented various e-governance initiative in the country. The success of these initiatives, inter alia, depends on the well organised use of information and communication technologies (ICTs) in these initiatives. ICT is a powerful media to transmit information and knowledge to the citizens. This paper identifies the pivotal role of ICTs for successful implementation of e-governance projects in India.

1. Introduction

e-Governance is the realization of good governance through the effective use of information and communication technology (ICT) to improve governance and government Service delivery.¹ The World Bank defines e-Governance “as the use of information and communication technologies by government agencies to transform relation between citizen, business, and other arms of the government. It involves information technology enabled initiatives that are used for improving (i) The interaction between government and citizens or government and business i.e. e-Services. (ii) The internal governmental operations i.e. e-Administration. (iii) External interactions i.e. e-Society.”² In the 1990s, there was an attempt throughout the world to reinvent government through intensive application of Information Technology and New Public Management. Information Technology is a result of the combination of a number of technologies of computer, communication, control and instrumentation. Information Technology deals with the use of computers and computer software to convert, protect, store, process, transmit and retrieve information securely. Recently it has become popular to broaden the term to plainly include the field of electronic communication so that people tend to use the abbreviation ICTs.³

Over recent years there has been an enormous development of Information and Communication Technology (ICT) systems towards e-governance applications. Similarly, governments have also considered ICT as a powerful tool that can change the ways to conduct and deliver services to citizens and how citizens can interact with the government.⁴ According to World Bank, “ICT consist of the whole range of

technologies designed to access, process and transmit information: hardware, network, and media for collection, storage, processing transmission, and presentation of information in the form of voice, sound, data, text, and images.”⁵ The Organisation for Economic Co-operation and development (OECD) defines ICT as a tool used by governments to facilitate the full range of government functions.⁶

The Government of India too has over the years acknowledged the pivotal role that ICT has played in bringing government services to the doorstep of the people. It is apparent that that the last decade has seen e-governance drop roots in India. ICT has enabled the delivery of government services as it caters to a large base of people across different segments and geographical locations.⁷ The integration of ICTs in these processes can greatly enhance the delivery of public services to all citizens and thus, the overall objective of improving the performance of governance systems at all levels, as well as increase the citizen’s participation in the society at large.⁸

It may help to government in such a way that new innovative arrangements can increase instead of traditional institutional arrangements. Such successful initiatives will deliver benefits to citizens and improve the efficiency of government and governmental agencies.⁹ The purpose to adopt ICTs is to give an opportunity to citizens, so they can get involve in decision making process as well as to provide better access, accountability and efficiency in the delivery of government information and services¹⁰ and it become as the

¹ Arunoday Bajpai, ‘Significance of e-Governance in Public Administration’, *Pratiyogita Darpan*, Vol 1, No. 9, (March, 2007), p. 1537

² <http://documents.worldbank.org/curated/en/527061468769894044/pdf/266390WP0E1Gov1gentina1Final1Report.pdf>, p.7.

³ T. Sadashivam, ‘E-Governance : A Changing Role of Governance Towards Good Governance in ‘Good Governance and Politics: An Indian Perspective’, (ed.) by G. Gopal Reddy, Research India Press, New Delhi, 2012, pp. 277, 278

⁴ Geoffrey Karokola and Louise Yngström, ‘Discussing e-Government Maturity Model For Developing World – Security View’, *Information Security for South Africa, Proceedings of the ISSA 2009 Conference*, p. 82. Also Available at <http://icsa.cs.up.ac.za/issa/2009/Proceedings/ISSA2009Proceedings.pdf>

⁵ Stefan Detschew, *Impact of ICT in the Developing Countries on the Economic Growth*, pp. 28,29, 2008.

⁶ N. Vijay Kumar, ‘Role of ICT in e-Governance Impact of Cloud Computing in driving new initiatives’, *Setlabs briefings*, Vol. 9, No. 2, p. 43, 2011.

⁷ Anil Kumar Jha, *Right to Public Service*, Axis Book Pvt. Ltd., New Delhi, 2013, p.28.

⁸ Gianluca C. Misuraca, *e-Governance in Africa: From Theory to Action*, Africa World Press, New Jersey, 2007, p. 3.

⁹ V.S. Rana, ‘An Innovative Use of Information & Communication Technology (ICT) in Trade Facilitation in India, *BVICAM’s International Journal of Information Technology (BIJIT)*, Vol. 4 No. 2, p.1, 2012.

¹⁰ Sanjay Tejasvee et. al., ‘A Model to ICT and E-Governance for Intermediate Organizations in India’, *Indian Journal of Computer Science and Engineering*, Vol.1, No. 2, p. 119. (119-124).

most reliable medium to closing the bridge between the citizen and the government.¹¹

Introduction of the new Information and communication technology (ICT), electronic media and above all, internet has modified the relationship between man and machine.¹² The logic behind the power of internet is very simple. It increases your resources exponentially. By networking people and organisations across the globe, it enables extensive transactions and information exchange. It is essentially a protocol that makes communication possible among disparate networks/computers.¹³ It can help govt. agencies and private organisations to communicate with the public, business and with one another. The anytime, anywhere character of the internet allows information and services from the government to the people with greater convenience and lower cost to customers.¹⁴

2. Implementing ICT for e-Governance

Information and communication technologies (ICTs) today have impacts on virtually every aspect of society and every corner of the world in information or digital age fostering commerce, improving education and health care, and facilitating communications among all stakeholders.¹⁵ However, communication technology itself is not the determining factor. It is rather efficient management and implementation of the technology – i.e., policy, which determines a nation's competence and development for the specific sectors including telecommunications.¹⁶ ICT's greatly facilitate the flow of information and knowledge offering various services to the peoples. It is a critical tool to tackle development issues in developing countries and most effective instrument to empower the local communities.¹⁷

ICTs and e-governance are very helpful for development of our country. Without the help of government it is impossible to implement technologies in rural areas. Government empowers the organizations for implementing the technology and various other services to the citizens for rural and urban area through internet or other media. It covers various kinds of services like markets, health, education, and transport and empowers the poorer by expanding the use of government

services. Application of ICT processes governance is divided into two broad categories i.e. improving governmental process and second bounding interaction within civil society.¹⁸ With the advent of globalization, free markets, technological change and the Internet revolution there is a transformation from traditional business and social paradigms to new paperless and electronic paradigms. The ICT has expanded from local, to regional, to international and its operations are governed by new policies. Many in the development community are looking to the Internet and related ICTs (information communication technologies) as a universal remedy for decades of economic stagnation and social ills. Whether it is to deliver better health services, promote political transformation, or generate new economic enterprises, experts argue that ICTs open up new opportunities for the developing world to catch their futures to the Global Net. It can help government agencies and private organizations to interact with the public, businesses and with one another.¹⁹

Government should not only utilize the potential of information and communication technology for improving governance, but also as means to enhance the standard of living of the people. It can be done by enhancing the delivery of government services, which will lead to a very responsive and transparent administration and also to the empowerment of the people. Therefore the full potential of ICT's need to be tapped and harnessed in the following fields : 1. Education, 2. Health, 3. Banking, 4. Tax administration, 5. Water and Power supply, 6. Transport system, 7. Export and Import, 8. Ports and Docks and Shipping Administration, 9. Traffic Control, 10. Immigration, 11. Public Distribution system, 12. Law and Maintenance, Security, etc, 13. Criminal Justice Administration and 14. Environmental Protection. Thus the society has reached a stage wherein the people are demanding accountability from governments, and which appears to have coincided with the explosive growth of Information and Communication Technology.²⁰ The term Governance in ICT is used as a means of gaining control and knowledge in ICT, ensuring greater transparency in strategic management.²¹

3. Implementing ICT for e-Governance in India

Developments in ICTs are transforming the society in dramatic ways. These developments are creating hitherto unimaginable opportunities and possibilities; even they pose new challenges for a society as ours. ICT's have opened up the possibilities of radically different information exchange patterns by facilitating faster and more efficient dissemination of information. It can play a vital role in sustaining the democratic ethos of the Indian society and ensuring a high

¹¹ William Akotam Angangiba, Millicent Akotam Angangiba, 'E-governance justified',

International Journal of Advanced Computer Science and Applications, Vol. 4, No. 2, p. 225, 2013.

¹² Baffour Kojo et al., 'Information and Communication Technologies (ICT), Internet as a Tool in the Developing World, Challenges and the Way Forward', *Pakistan Journal of Information and Technology*, Vol.2, No.3, p. 204, 2003.

¹³ Kiran Bedi, Parminder Jeet Singh & Sandeep Srivastva, *Government @net: New Governance Opportunities for India*, Sage Publication, New Delhi, 2001, p. 302.

¹⁴ Baffour Kojo et al., 'Information and Communication Technologies (ICT), Internet as a Tool in the Developing World, Challenges and the Way Forward', *Pakistan Journal of Information and Technology*, Vol.2, No.3, p. 204, 2003.

¹⁵ Ajmal Edappagath, 'Cyber-Laws and Enforcement,' *Information Technology in Developing countries*, IIM Ahmadabad, Vol. 14, No. 3, 2004, p.3.

¹⁶ Eun-Ju Kim, 'ICT Policies of Asia and the Pacific in the Interdependent Information Society', *Information Technology in Developing countries*, IIM Ahmadabad, Vol. 3, No. 15, 2004, p.7.

¹⁷ Shahid Uddin Akbar, 'ICT and Social Transformation in Rural Bangladesh', *Information Technology in Developing countries*, IIM Ahmadabad, Vol. 3, No. 15, 2004, p. 16.

¹⁸ Ankur Mani Tripathi et al., 'Information and Communication Technology for Rural Development', *International Journal on Computer Science and Engineering*, Vol. 4 No. 05, p. 824 May 2012

¹⁹ Baffour Kojo, Asiedu and Lu, Song Feng, 'Information and Communication Technologies (ICT), Internet as a Tool in the Developing World, Challenges and the Way Forward', *Pakistan Journal of Information and Technology*, Vol. 2, No. 3, p. 202-204, 2003.

²⁰ T. Sadashivam, 'E-Governance : A Changing Role of Governance Towards Good Governance in 'Good Governance and Politics: An Indian Perspective', (ed.) by G. Gopal Reddy, Research India Press, New Delhi, 2012, p. 278.

²¹ Alexandre J. H. de Oliveira Luna et al., 'AGILE GOVERNANCE IN INFORMATION AND COMMUNICATION TECHNOLOGIES: SHIFTING PARADIGMS' *Journal of Information Systems and Technology Management*, Vol. 7, No. 2, 2010, p.312.

level of transparency in governance. In almost every sector of socio-economic ranging from industrial production to education and public healthcare, ICT now plays an important role in optimising the processes, thereby improving the quality and efficiency of human endeavour.²²

It is in advance stage in the developed countries whereas governments in developing countries particularly in the Asia region are only in the initial phase of adopting ICT. ICT has proved benefits for governments in developing countries to improve management, information and reporting, simplify the delivery of government services, enhance communication with the citizens, and serve as a means for empowering citizens to interact with the government. The U N Development Programme considers that ICT is a powerful tool for developing countries to progress. In India, the shift towards technology based development, especially associated with ICT, was witnessed in 1984 under the leadership of Mr. Rajiv Gandhi. He assumed power and adopted informatisation of Indian society as an effective route to development, with a massive programme of computerisation launched in the public sector as well as in the commercial undertaking and administrative departments.

The computer policy of 1984 gave further push to software development by underlying the need for institutional and policy support on a number of fronts. Again in 1986 a precise policy was announced identifying software as one of the key sectors in India's agenda for export promotion and underlying the importance of an integrated development of software for the local and export markets. In the same year, the department of education established ERNET (Education and Research Network) as one of the earlier internet projects.²³ Further the national policy on education 1986, as modified in 1992, emphasised the need to employ educational technology to improve the quality of education. This policy statement led to centrally sponsored scheme ICT at schools in 2004.²⁴

These initiatives suggest that a significant beginning had been made in setting new ICT priorities and organisational development in different sectors. Since the mid 1990's India has also took up ICT for development in rather big way and sought to transform India into a "Knowledge Society". An IT taskforce and an IT action plan from Planning Commission and MIT respectively are major policy initiatives towards this end. Even though India has been able to establish Considerable ICT national capacity in the context of market-oriented globalisation, the same cannot be said about India's ICT capacity for addressing pressing needs and demands of the underprivileged sections. By 1999, a separate ministry of information technology was created and in May 2000 the Information and Technology Bill was passed in Indian

parliament to foster widespread use of ICT in the day to day lives of the people.²⁵

The report of study group on the convergence and e-governance 2002-07 suggested institutional framework including a central body for the proper development of e-Governance in India. The study group felt the need for transforming administration from passive provider of information to a forum for active involvement of citizens. National e-Governance plan has been put in place with these core elements, data centres, state wide area networks and common services centres. The plan aims at bringing about transparency and citizen centric approach in the functioning of administration. The Department of Information Technology is the nodal agency to implement the National e-Governance plan.²⁶

The purpose of these provisions is to provide peoples a system of government which is simple, moral, accountable, responsive, and transparent. Over the past decade or so, the government of India has been initiated several of e-Governance projects at the national, state, district and even block-level. Some of them have been highly successful and are suitable for copying. A need was therefore felt for taking a comprehensive view of the several e-Governance initiatives implemented across the country. The National e-Governance Plan (NeGP) has been framed by the 'Department of Information Technology' (DIT) and 'Department of Administrative Reforms & Public Grievances' (DAR&PG). The Union Government approved the National e-Governance Plan (NeGP), consisting of 27 Mission Mode Projects (MMPs) and 10 components on May 18, 2006.²⁷ National Informatics Centre has been established to implement these plans by using ICT infrastructure at national, state and district level. NIC, through its ICT Network, "NICNET", has institutional linkages with all the Ministries /Departments of the Central Government, 35 State Governments/ Union Territories, and about 625 District administrations of India. NIC has been instrumental in steering e-Government and e-Governance applications in government ministries and departments at the Centre, States, Districts and Blocks, improving government services, wider transparency, promoting decentralized planning and management, resulting in better efficiency and accountability to the people of India.²⁸

4. Conclusion

The use of Information and Communication Technology plays a key role in e-governance. Governments all over the world have considered e-governance as a powerful tool in the public service deliveries and how citizens can interact with their governments. The Government of India also realised the pivotal role of ICT in bringing government services to nearer to the people. The objective of bringing ICT in the government process is to improve the performance of government at all levels. However Indian experiences with ICT projects have been mixed. Some of the project has been successful whereas

²² Jaijit Bhattacharya, e-Gov. 2.0 – Policies, Processes and Technology, Tata Mcgraw Hill Education Pvt. Ltd, New Delhi, 2012, pp.94, 95

²³ Xing Hou Yo, Encyclopedia of Developing Regional Communities with Information and Communication Technology, Idea Group Inc(IGI), 2006, p. 420.

²⁴ Preamble to National Policy on Information and Communication Technology (ICT) in School Education, Department of School Education and Literacy, Ministry of Human Resource Development Government of India, 2012, p. 3.

²⁵ Xing Hou Yo, Encyclopedia of Developing Regional Communities with Information and Communication Technology, Idea Group Inc(IGI), 2006, pp. 420-421.

²⁶ *Pratiyogita Darpan*, Vol.9, No.1, (March 2007), p. 1538.

²⁷ 11th Report of Second Administrative Commission of India on Promoting e-Governance Chapter 7, pp. 106, 108-110.

²⁸ <http://www.nic.in/node/41>

some projects are failure. Government of India has formulated various polices and laws for implementing ICT in government process. National e-Governance plan has been passed in 2006 which lays down comprehensive provisions about the implementation of data centres, state wide area networks and common services centres with the help of Information and Communication Technology. The main aim of this National e-Governance Plan is to bring transparency and citizen centric approach in the functioning of administration. The purpose of

these provisions is to provide peoples a system of government which is simple, moral, accountable, responsive, and transparent. This purpose can be achieved by effective implementation of means of information and communication technologies. India has also implemented various ICT models in different part of the country. However there is a big success gap between urban and rural area in implementation of these models.

References

1. Agangiba William Akotam, Agangiba Millicent Akotam, 'E-governance justified',
2. Akbar Shahid Uddin, 'ICT and Social Transformation in Rural Bangladesh', *Information Technology in Developing countries*, IIM Ahmadabad, Vol. 3, No. 15, 2004, p. 16.
3. Alexandre J. H. de Oliveira Luna et. al , 'AGILE GOVERNANCE IN INFORMATION AND COMMUNICATION TECHNOLOGIES: SHIFTING PARADIGMS' *Journal of Information Systems and Technology Management*, Vol. 7, No. 2, 2010, p.312.
4. Bedi Kiran, Singh Parminder Jeet & Srivastva Sandeep, *Government @net: New Governance Opportunities for India*, Sage Publication, New Delhi, 2001, p. 302.
5. Bhattacharya Jaijit, e-Gov. 2.0 – Policies, Processes and Technology, Tata Mcgraw Hill Education Pvt. Ltd, New Delhi, 2012, pp.94, 95
6. Detschew Stefan, *Impact of ICT in the Developing Countries on the Economic Growth*, pp. 28,29, 2008.
7. Edappagath Ajmal, 'Cyber-Laws and Enforcement,' *Information Technology in Developing countries*, IIM Ahmadabad, Vol. 14, No. 3, 2004, p.3.
8. Gianluca C. Misuraca, *e-Governance in Africa: From Theory to Action*, Africa World Press, New Jersey, 2007, p. 3.
9. *International Journal of Advanced Computer Science and Applications*, Vol. 4, No. 2
10. Karokola Geoffrey and Yngström Louise, 'Discussing e-Gvoernment Maturity Model For Developing World – Security View', *Information Security for South Africa, Proceedings of the ISSA 2009 Conference*, p. 82. Also Available at <http://icsa.cs.up.ac.za/issa/2009/Proceedings/ISSA2009Proceedings.pdf>
11. Kim Eun-Ju, 'ICT Policies of Asia and the Pacific in the Interdependent Information Society', *Information Technology in Developing countries*, IIM Ahmadabad, Vol. 3, No. 15, 2004, p.7.
12. Kojo Baffour et al., 'Information and Communication Technologies (ICT), Internet as a Tool in the Developing World, Challenges and the Way Forward', *Pakistan Journal of Information and Technology*, Vol.2, No.3, p. 204, 2003.
13. Kumar Jha Anil, *Right to Public Service*, Axis Book Pvt. Ltd., New Delhi, 2013, p.28.
14. Kumar N. Vijay, 'Role of ICT in e-Governance Impact of Cloud Computing in driving new initiatives', *Setlabs briefings*, Vol. 9, No. 2, p. 43, 2011.
15. *Pratiyogita Darpan*, Vol.9, No.1, (March 2007), p. 1538.
16. Preamble to National Policy on Information and Communication Technology (ICT) in School Education, Department of School Education and Literacy, Ministry of Human Resource Development Government of India, 2012, p. 3.
17. Rana V.S., 'An Innovative Use of Information & Communication Technology (ICT) in Trade Facilitation in India, *BVICAM's International Journal of Information Technology (BIJIT)*, Vol. 4 No. 2, p.1, 2012.
18. Sadashivam T., 'E-Governance : A Changing Role of Governance Towards Good Governance in 'Good Governance and Politics: An Indian Perspective', (ed.) by G. Gopal Reddy, Research India Press, New Delhi, 2012, p. 278.
19. Tejasvee Sanjay et. al., 'A Model to ICT and E-Governance for Intermediate Organizations in India', *Indian Journal of Computer Science and Engineering*, Vol.1, No. 2, p. 119. (119-124).
20. Tripathi Ankur Mani et al., 'Information and Communication Technology for Rural Development', *International Journal on Computer Science and Engineering*, Vol. 4 No. 05, p. 824 May 2012
21. Xing Hou Yo, *Encyclopedia of Developing Regional Communities with Information and Communication Technology*, Idea Group Inc(IGI), 2006, pp. 420-421.
22. 11th Report of Second Administrative Commission of India on Promoting e-Governance Chapter 7, pp. 106, 108-110.
23. <http://www.nic.in/node/41>