E-Government in Odisha: Development and Issues

Lopamudra Pradhan, Bibhuti Bhusan Mahapatro

Faculty of Economics, Fakir Mohan Jr. College, Balasore-756001, Odisha, India.
Dept. of Business Management, F.M. University, Vyasa Vihar, Balasore-756019, Orissa, INDIA.
Email: lopa.rishna@gmail.com, aharnis@rediffmail.com

Abstract: Information is the key to democracy. For a successful democracy, information empowerment is fundamental. The advent of Information Technology (IT) has encouraged the rapid growth of a global information society that is changing the way people live, learn, and work. Information and Communication Technology’s (ICTs) were recognized to have tremendous administrative potential. For example, ICTs could help to create a networked structure for interconnectivity, service delivery, efficiency and effectiveness, interactivity, decentralization, transparency and accountability. Electronic government (E-govt.) has emerged as a new concept in public administration to cover all of these functions. In this context, the emergence of India as a global player in software development and IT is one side of an information revolution that has begun to impact on governance and development of a domestic level in areas such as e-governance, e-commerce, and e-health. The state, private and civil sectors have invested in numerous initiatives throughout the length and breadth of India aimed at extending the benefits of the information revolution to rural and remote area. These ranges from roll out of low-cost mobile cellular phones to numerous civil society based initiatives aimed at establishing affordable access to information and knowledge (e.g., VKCs, Bhoomi Project, Gyan Ganga Project). However, despite various initiatives at different levels of government and many conferences on e-government by academicians and practitioners report shows that the experiences with e-government initiatives as chaotic and unmanageable. E-government initiatives presents a number of challenges for public administrators, such as sustaining committed executive leadership, building effective e-government business cases, maintaining a citizen focus, protecting personal privacy, implementing appropriate security controls, maintaining electronic records, maintaining a robust technical infrastructure, addressing IT human capital concerns and ensuring uniform service to the public. To help public administrators think about e-government and these organizations, this article discusses about e-government development and issues.

In this article we attempt to discuss the initiatives and developments related to e-government with a particular emphasis on Odisha. The e-governance vision of odisha aims at establishing a truly networked government that would create and manage all the four pillars of e-governance, namely e-management, e-service, e-democracy, and e-commerce.

Further, the objective of this study is to describe some current initiatives and developments related to e-government in Odisha, identify key issues that affect the success and development of e-government initiatives in the state, offer ideas, strategies, and suggestions that may assist in the future development and deployment of e-government and consider the success with which e-government initiatives are in fact improving citizen access to and use of Govt. information.
resources and services. Overall, the motive of this paper is that a critical assessment of e-government and a discussion of its development and deployment can assist future efforts in this area.

I. INTRODUCTION

Now-a-days electronic government is rapidly becoming one of govt’s critical means for the provision of seamless services for public agencies, businesses and citizens. It is the use of information and communication technologies as a tool to achieve better government; globally governments have set very ambitious goals and running costly programs for delivering public services electronically.

Electronic government refers to government’s use of technology particularly web-based internet applications to enhance the access to and delivery of government information and service to citizens, business partners, employees, other agencies, and government entities. It has the potential to help to build better relationship between government and the public by making interaction with citizen’s smoother, easier and more efficient. It should be noted that e-governance can have a profound effect on the evolution of democracy by opening up an online dialog based on direct citizen input within the role making process and by providing more sophisticated tools with which agencies can solicit, collect, and manage public comments.

Asia, the USA and the European union have warmly embraced the concept of e-government as evidenced by their significant for relevant initiatives. Some of the successful initiatives concern the development of portal like first.gov in the USA, esdlife.com in Hong Kong, direct.gov.uk in UK and oasis.gov.ie in Ireland.

Simply speaking e-government means the communication between the govt. and its citizens via computers and a web-enabled presence. As defined by the United Nations and American Society for public administration (UN & ASPA) [1]:

1) “……….. utilizing the internet and the world-wide web for delivering govt. information and services to citizens”

2) Means and Schneider [2] define e-govt. as the relationship between govt.’s their customers (businesses, other govt and citizens) and their suppliers (again businesses, other govt and citizens) by the use of electronic means.

3) For Herron [3], e-govt. is “………. simply using information technology to deliver govt services directly to the customer. The customer can be a citizen, a business, or even another govt. entity”.

4) According to Garson (1999) [4], there are four theoretical frameworks within which e-government is conceptualized. The first framework involves the potential of IT in decentralization and democratization. The second framework underlines the limitations and contradictions. Third, the sociotechnical systems approach emphasizes the continuous and two way interactions of the technology and the organizational-institutional environment. The fourth framework places e-government within theories of global integration.

The state of odisha lies in the eastern side of the Indian Union practically in the lap of eastern Ghats enjoying the breeze from blue water of Bay of Bengal. It covers an area of 155707 square k.m. being situated between the parallels of 17049’N and 22034’N latitude and meridians of 81027’E and 87029’E longitudes. The Bay of Bengal forms the boundary line on the east with a coastline of about 450 kms. In the land, it is bounded by the states of West Bengal in the north east, Jharkhand on the north, Chattishgarh on the west, and Andhra Pradesh on the south. Keeping the geography in mind Odisha government should develop its ICT infrastructure in such a way that fruits can be equally distributed
to both coastal and non-coastal districts. In other words, the infrastructure which is developed for coastal belt may be more robust than non-coastal belt.

The other major factor which is to be considered at the time of building e-government in odisha is naxalite. The inaccessible hilly terrain, dense forests, lack of development, grievances of the tribals and poor and the absence of administration has been conducive to the spread of left-wing extremism in odisha. As a result, lots of sophisticated ICT based infrastructure is being destroyed. For example, Naxals serially have damaged mobile towers at different times to disrupt the information system which helps them to achieve their targets and create trouble for police. Hence, the odisha government should consider it as a major issue while developing e-government.

The 75% mobile penetration vis-à-vis 8% internet penetration in the country can give a direction of delivering, services which can be via mobile is explored. Hence along with e-governance, the government of odisha should come up with mobile governance.

E-waste is also an important issue may march along with the development of e-government. In the sequel, it can also create a pollutant environment.

The rest of the paper is organized as follows: in Section 2 the development of e-governance in odisha is discussed. Some of the state level core e-governance projects are discussed in Section 3. Section 4 includes the discussion and issues of the development of e-government in odisha.

II. DEVELOPMENT OF E-GOVERNMENT IN ODISHA

The government of Odisha [10] has been making conscious effort to develop a well planned robust and futuristic IT architecture in the state which will bring about positive changes in all walks of life and society resulting in ease and convenience in transaction augmenting employment opportunities to the educated youth and ushering higher economic growth in a definite time frame. Govt. of Odisha is convinced that the gap between the rich and poor, between the more developed and less developed, between the rural and urban population can be bridged by empowering the less privileged sectors of society by providing equality of opportunity to access information and services. Wide spread applications of IT would establish a system where the citizens will receive good governance ensuring speed of decisions from a transparent government through an effective e-governance system.

E-Governance Strategy of Odisha

The e-governance vision of Odisha aims at establishing a networked government for greater transparency and accountability in delivery of public services to facilitate moral and material progress of all citizens. Thus the e-governance vision of Odisha aims at establishing a truly networked government that would create and manage all the 4 pillars of e-governance, namely e-management, e-service, e-democracy, and e-commerce.

The e-governance vision of odisha demands that the state should:

1) localize implementation and decision making and develop core infrastructure to deliver services to the third tire of Governance.

2) Manage all ICT initiatives as capital investments that can be evaluated in terms of pre-defined goals and measurable targets.

3) Make all stakeholders capable of conceptualizing, developing and managing e-governance tools themselves.

4) Aim at service oriented approach and create an integrated, modular and scalable framework of governance.
5) Utilize policies, structures and frameworks to bring about transparency in various functions.

2.2. Frameworks for e-Governance in Odisha

Government of India has suggested an indicative institutional framework for all the state governments to utilize in their respective e-governance plans. This is presented in Figure 1.

![Institutional Framework for Govt. of Odisha](image)

**Figure 1: Institutional Framework for Govt. of Odisha**

**State e-govt. Council** should be set up ideally under the chairmanship of the Chief Minister to provide overall vision, direction and guidance to the state e-governance program.

**State Apex Committee** headed by the chief secretary, should be responsible for providing the policy framework, overseeing states e-governance program and for ensuring inter-departmental co-ordination to achieve the vision as defined by the apex committee.

**State e-Governance Mission Team (SeMT)** should support the apex committee and function as the secretariat and full time advisory body for providing overall direction, standardization and consistency through program management in all e-governance initiatives in the state.

**Project e-Governance Mission Teams (PeMTs)** would be constituted at departmental levels to own and manage the execution and implementation of all e-governance initiatives for their respective departments.

**District Information Services Councils (DISC)** would oversee and monitor progress of various e-governance projects across different sectors being executed within their respective districts.

2.3. Process Re-Engineering Framework

Reengineering is fundamental (fundamental because reengineering begins with the fundamental question of why any organization does and what it does) and radical (radical because it is not about improving or modifying but rather about reinventing the processes) re-design of processes to achieve dramatic improvements in performances. The reengineering exercise in Odisha should aim at returning the focus to processes via a state level reengineering framework. In accordance to this framework following should be the basic outcomes of the reengineering exercise in the state.

A consolidated repository should be created to contain, manage and serve all the data from various departments.

All the departments and agencies within the government need to collaborate more closely with each other while transacting various processes.

The delivery of various govt. services would be done via a consolidated set of channels that would be developed and deployed throughout the state on priority basis.

Localization of implementation and decision making process in accordance with states e-governance vision. This localization implies empowerment of institutions of local governance across the state and transfer of mandates from various departments to the entities. Figure 2 illustrate the importance of e-governance and its effective service.
2.4. Capacity Building Framework

Capacity building framework would basically addresses the following:

- Setting up appropriate institutionalized framework for e-governance.
- Identification of people and skill set for augmenting existing capacities.
- Leveraging internal capacities of people within the government.
- Training needs assessment.
- Involvement of private sector to complement government capacities.

The blueprint of e-governance in Odisha is given in Figure 3.

The objective of the core area of the structure is to provide an overall direction, standardization and consistency across all initiatives.

Service delivery channels would form a part of the core infrastructure in the form of urban and rural service centers, web portals which would efficiently deliver various govtal services to citizens and businesses across the state both in urban and in rural area. These delivery centers would simultaneously cater to a number of departments.

The next layer comprises of integrated applications interfacing with more than one department of the state. These applications would be in the form of scheme management system, knowledge management, secretariat workflow, grievance redressal system and works management system.

The final layer would comprise of the departmental intranets. As per the diagram departmental intranets for 14 departments would form the outermost layer of the e-governance architecture of the state.

III. STATE LEVEL CORE E-GOVERNANCE PROJECTS

A number of core and departmental e-governance initiatives have been taken up in the state. Some of these include:

Odisha State Portal: The official website of state government currently provides a host of Govt. information, policy and procedures, tenders and forms, etc. Services such as payment of utility bills, filling of various kinds of returns etc. are being added and the aim is to deliver multiple citizen services through multiple channels like internet, IT kiosks, mobile phones, etc.

9x9 Program: 9x9 program (or transparency and accountability program) aims at development of information systems and access of information to citizens at panchayat, Block and district levels for 9
departments (Women and Child Development, ST and SC development, Food Supplies and Consumer Welfare, health, School and Mass Education, Panchayat Raj, Agriculture, Rural Development and Water resources) across 9 districts (Koraput, Malkangiri, Navarangpur, Rayagada, Ganjam, Mayurbhanj, Angul, Cuttack, Kalahandi) in the state.

Bhasa Project: Resource center has been established at OCAC for development and promotion of oriya language based application. Tools such as word processor, treasurers, e-mail application in oriya, trilingual word processor (English-Oriya-Hindi) have already been developed. An MoU was signed with Microsoft to provide oriya language functionality in Windows and Microsoft Office.

Odisha Telemedicine Application Network: A telemedicine network in collaboration with Indian space research organization has been established to connect Sanjaya Gandhi Post Graduate Institute of Medical Sciences,Lucknow with medical colleges at Cuttack, Berhampur and Burla through V-SAT network for delivering of healthcare from experts at remote locations.

Bhulekha (Land Records Computerization): Directorate of land records and surveys has taken up computerization of land records to facilitate maintenance and updation of changes occurring due to consolidation of land holdings, transfer of ownership, land acquisition, etc. and to provide accurate copies of records of rights to the landowners all across the state. The initiatives involve two issues- record of rights and digitization of cadastral survey map.

ORIS (Registration Office Computerization): Revenue department is implementing ORIS for computerized registration of deeds, endorsement of documents and issue of encumbrance certificates. 13 DSK/SR offices have already been computerized and made operational under ORIS.

e-Shishu Project: School and Mass education department and odisha primary education programme authority have initiated creation of a comprehensive and authentic database of all children below 14 years for MIS and planning purpose.

Treasury Automation: This project involves automation of all the processes at district/special treasuries including payment of bills, payment of pension bill, receipt of challans and other accounting activities. Modules for receipt of challans and other accounting activities have been implemented at 16 district/special treasuries.

Computerization of Commercial Tax: This involves the automation of various processes of commercial tax, such as disposal of registration application, quick information or tax collection, quick identification of defaulters and non-filers of returns.

PRIASOFT: Web based application for monitoring funds flow in the Panchayat Raj Department. 30 DRDAs, 314 Blocks, and 6234 Gram Panchayat’s use PRIASOFT.

PAMIS: Web based desktop application for monitoring various accounts of the Panchayat Raj department. PAMIS is being used by 30 DRDAs and 314 Blocks.

RURALSOFT: Web based application for monitoring physical progress of projects/schemes under various poverty alleviation programs.

GRAMSAT: it would provide connectivity to all DRDAs/Blocks and would facilitate dissemination of government information, monitoring of fund utilization, and bring about transparency in various projects getting executed at Panchayat/Block levels. 128 kbps link has already been established up to DRDA and Blocks in each district utilizing the satellite communication provided by ISRO.
State Wide Area Network (SWAN): SWAN is being established to support VoIP, Video conferencing, teleconference, FAX and Web enabled and WAN based applications for the Govt. employees, citizens, businesses across the state. A 2 Mbps data link from the secretariat to the districts has already been established through NIC Net and connectivity to sub-divisions, blocks and Tehsils will be provided in partnership with BSNL.

Secretariat LAN: To connect all the computers in various departments at the state secretariat, a 1000 Mbps fibre optics network backbone with 2 Mbps network connectivity has been established. The office of Chief Minister, Cabinet Ministers, Secretaries, Directors and all the Department computer centers have already been provided with connectivity. This is being extended to cover all the remaining offices and all sections of various departments in the secretariat.

Information Kiosk: Information kiosks are being set up throughout the state particularly in the urban and semi-urban areas through self employment mode. A variety of services would be offered by the kiosks like email, internet browsing, computer education, DTP work and PCOs. An e-Seva type of model is being explored in the areas of agriculture, animal husbandry, and for utilities bill payment.

Besides these, a number of other initiatives have also been taken up by other departments and area under implementation. These include e-procurement human resource management system, tourist information and reservation system, RFID based food grain delivery monitoring system (for WCD and food supplies and consumer welfare departments), web enabled scheme monitoring system (for WCD and ST & SC development departments), land survey and settlement using GPS, Odisha online project and e-district project. Further, monitoring of the departments have their official websites for providing a variety of information to the citizens and some of these sites also facilitate online transactions and form-submission.

It should be noted that majority of on-going e-government projects in the state are driven through committees or teams, which are formed on task basis and not by an institutionalized team or task force. Due to a lack of an institutionalized framework for e-governance projects face stiff challenges on grounds of ownership, implementation and roll out both at the state level and at the department level.

IV. DISCUSSION

Currently, e-government initiatives in Odisha are rapidly evolving but many challenges are still to be met. Among these challenges, the following issues are fundamental ones as government has to take into consideration if it want to evolve into efficient and effective e-government in support of citizens demands: 1) universal access, 2) privacy and confidentiality, and 3) citizen focus in government management.

1) Universal access: The omnipresent nature of the internet may be misleading in that any service can be accessed by anybody from anytime. Though the internet population has grown exponentially recently, there is a portion of the who may not be able to access e-government for various reasons. Though the concept of e-government is very persuasive in increasing efficiency and effectiveness of govt. service should be available to hundred percent of citizens for e-govt. initiatives to be successful. However, universal access is still a mirage. It is necessary that uniform connectivity is established across the state (up to the villages) to provide various facilities such as VoIP, video conferencing, teleconferencing, FAX, Web enabled applications and WAN based applications to citizens as well as govt. employees. In order to effectively manage and maintain the SWAN, the state network management
center should be established in Bhubaneswar and District network management stations should be established at all the 30 district headquarters across the state.

2) Privacy and confidentiality: Another critical obstacles in realizing e-government is the citizens concern on privacy of their life and confidentiality of the personal data they are providing as part of obtaining govt. services. The word of mouth guarantee by government will not suffice unless accompanied by technical solutions, transparency of procedures and possibly independent auditing. Privacy and confidentiality has to be highly valued in establishing and maintaining web sites. Data should be collected in a secure fashion, privacy notices on web sites will be mandatory and independent auditing groups composed of citizens representatives will also help in soliciting participation of citizens.

3) Citizen focus in government management: Practical realization of e-government requires reconceptualization of government. As e-government becomes more and more prevalent, the public sector organizational structure will change accordingly and it will happen in two aspects: internally and externally. The focus of change will be on internally, the system efficiency and externally, the citizens internally, the power conflicts over departmental boundaries and control of services will surface as integration progresses. Externally, govt. processes will be organized for citizens convenience instead of the convenience of the govt. In other words, the integration should not be driven by efficiency and effectiveness alone. Focusing on efficiency and effectiveness will lead the e-govt. initiatives into a “big brother” govt. if it loses citizens focus. It may be necessary to allow citizens to have the option of deciding whether or not they want information to go to another agency beyond the one with which they are dealing. A check-off box might be a good enough solution. Similar to the current concept that asks user if they do not want advertising from other governmental agencies to access the information entered. As systems are becoming more and more integrated, citizens review board may be established in order to review and observe how system integration occurs and its impacts.

E-government is perfectly suited for surveillance purposes, for extending governmental informational efficiency. It is in principle also a means for citizen participation in the making of social change. The realization of this objective is however, dependent on the willingness of citizens to fight for substantive forms of e-governance.

The potential need of the hour of Odisha is to move from the phase of information dissemination to interaction and transaction. Collaboration and cooperation at local, regional and national levels as well as between public and private organization are absolutely essential elements in the e-governance development process. A high level of participation by citizens and knowledgeable civil servants backed with strong leadership at the political and administrative level is necessary to take e-governance to the grass root level.

Furthermore, scholarly review and assessment of e-govt. initiatives in the state can better inform how such programs might better evolve. In addition there is a need to understand the policy environment that affects e-government deployment. Also additional though is necessary regarding the scalability of e-government programs among local state and national level initiatives.

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