e-Governance Initiatives in India

-- Citizens would rather be online than in line --

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Introduction

History and its timeliness testify to an oft-quoted phrase, “nothing is constant except change. This has been found to be true in all spheres of life and technology is no exception. The world of computing has traversed from mainframe systems to palmtops in almost three decade - a remarkable pace of development. One feature of modern world is the growing popularity of the Internet. Some have even cited Internet as the catalyst of the late 20th century world. Today what we see is that IT has brought about a sea change in the way we now think and act. It has contributed to significantly to the modern civilization.

The computers and Internet have completely revolutionized the world of communication. Geographical boundaries and barriers of time have lost the prominence they once enjoyed. It is but imperative that there would be some effects of this phenomenon on the governance practices also.

e-Governance has been the buzzword throughout the world for quite sometime now. However, the exact origins of the word and what it stands for, is not easy to identify. Also important is the fact that there are a couple of words going around the academic, and research community, which are being reproduced by popular media also. Some of these terms are digital governance, e-Governance, etc. If we were to try and find a definition for it then Governance refers to a process whereby elements in society wield power, authority, and influence and enact policies and decisions concerning public life and social upliftment.

The purpose of this paper is to critically examine a few prominent e-Governance initiatives in India and see what preliminary lessons can be drawn from them.

e-Governance: The Concept

e-Governance, then could be defined as an IT-led reconfiguration of public sector governance and how knowledge, power, and purpose are redistributed in light of new technological realities. To make it more simpler e-Governance or digital governance would refer to governance processes in which Information & Communications Technology play a significant role. The role played by ICT could be wide ranging: in delivery and standard of governance services; to how people access such services; and the participation of people in governance sphere. In other words, e-Government refers to the use by government agencies of information technologies (such as Wide Area Networks, the Internet, & Mobile Computing,) that have the ability to transform relations with citizens, businesses, and other arms of governments. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with businesses,
and industry; citizen empowerment through access to information; or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.

The World Bank has defined e-Government as “government owned or operated information and communication technologies (ICT) that transform relations with citizens, the private sector, and/or other government agencies so as to promote citizen empowerment, improve service delivery, strengthen accountability, increase transparency, or improve government efficiency.”

Traditionally, the interaction between a citizen or business and a government agency took place in a government office with emerging ICT it is possible to locate services centers closer to the clients. Such centers may consist of unattended kiosks in government agency, a service kiosk located close to the client, or the use of a personal computer in home or office. Although today, in most countries, e-government is mostly restricted to downloading forms to print out and mail in, and searching websites for information, tomorrow it could involve:

- Delivering government services directly to citizens in their homes.
- Using the web to purchase necessary products and services in a more timely and cost-effective manner.
- Conducting virtual town hall meetings to allow representatives to communicate with constituencies.
- Using large national networks to link agencies and share information.
- Using electronic polling and voting.
- Creating governmental networks to coordinate global issues.

A working definition of e-Governance can be taken as “e-Governance is that form of governance which seeks to realize processes and structures by harnessing the potentialities of information and communication technologies (ICT) at various levels of government and the public sector and beyond, for the purpose of enhancing good Governance”. (Katherine Reilly, 2002).

However, for this paper we have taken the definition given by (Shilubane, 2001) e-Governance as “the continuous optimization of government service delivery, constituency participation and governance by transforming internal and external relationships through technology, the Internet and the new media”.

The Government of India has defined e-Governance in a very broad sense, the Ministry of Information Technology (Government of India) defines it as "...the application of Information Technology to processes of government functioning to bring about Simple, Moral, Accountable, Responsive & Transparent governance.”

Here another distinction that needs to be understood, that is the distinction between e-Government and e-Governance. Very often, these two terms are used synonymously, however, in our opinion there exists a slight difference between the two, while the former refers to processes and structures to the electronic delivery of government services to the public. According to Gartner Consulting, e-Government involves the use of ICTs to support government operations and provide government services. This would then include the following dimensions:

- e-services: the electronic delivery of government information, programs, & services.
- e-commerce: the electronic exchange of money for goods and services, such as taxes and utility billing, renewing vehicle registration, etc.
- e-management: the use of ICTs to improve the management of government (includes improving government processes to improving the information flow within offices, departments, and agencies).

Governance is a much broader term, according to Keohane & Nye:

“By governance, we mean the processes and institutions, both formal and informal, that guide and restrain the collective activities of a group. Government is the subset that acts with authority and creates formal obligations."
Governance need not necessarily be conducted exclusively by governments. Private firms, associations of firms, nongovernmental organizations (NGOs), and associations of NGOs all engage in it, often in association with the governmental bodies, to create governance.\(^9\)

**Why e-Governance?**

e-Governance, has evolved as an information-age model of governance that seeks to realize processes and structures for harnessing the potentialities of information and communication technologies (ICTs) at various levels of government and public sector and beyond, for the purpose of enhancing good governance.\(^9\)

But the critical issue that remains to be understood is why so much interest in e-Governance, the answer can be found in one of OECD reports (1997) that reported that IT is becoming the critical agent of change, the availability of a new digital infrastructure and the Internet’s impact on changing set of public expectations are overtaking fiscal pressures as the primary impetus for public sector managerial reforms.\(^9\)

A model developed to show this transformation by KPMG Consulting can be used to understand this change, wherein the most important point highlighted is the changing role of technology and the concepts of time, and potential consumers.

### Table 1: The New Service Delivery Model

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In the modern world the state or government is being constantly looked upon as a service provider and is under tremendous pressure to perform. In the process, the governments have to battle built-in dysfunctional features, which may be affecting its performance. Couple this with rapid population growth, in certain regions, has meant that the fiscal health of many governments is deteriorating. The developments in ICT have provided governments all around the world a new possibility for delivery of programs and services in their countries and regions. However, one must understand that at the very onset that the term e-Governance carries different meanings and aims in developing and developed countries. In a developing nation, it does not imply, hooking every citizen to a digital node or having access to Internet or computers, rather it could be linking of every community to information dissemination in a manner that no one is left. This linking of a village / community could be through public or private ICT node or through any other combination of the two.

Electronic governance is not only about putting governmental information online but it goes beyond it, it involves transformation from being a passive information and service provider to ensuring active citizen involvement. The evolution of e-Governance is a highly complex process requiring provision of hardware, networking, and software and more importantly re-engineering of the procedures for examination of cases and decision-making. The essence of the concept is the innovative (re-modeling) opportunities of business being offered by it. Two vital areas are efficiency and scalability,
improving efficiency is no doubt imperative but scalability is the key issue here (the reach and innovation). It is more about breadth or stretch than any other thing. The reform of administration and the provision of improved services to its citizens has long been acknowledged as a major criterion for development and today’s thrust on e-Governance can be considered a part of this wider developmental goal. e-Governance is being recognized as having the potential to change shape and character of Government-to-Citizen (G2C) relationship. The advances in ICT and particularly the Internet has made it possible to for governments to streamline their interaction with business people, private citizens, and governmental agencies, while at the same time ensuring that an improved state of affairs regarding the access to government information and services.

The ICTs can play an influential role in the process of e-Governance, which can be explained as:

* **Purely Technical**: in terms of automation of tedious or repetitive governance tasks, thereby improving the efficiency of the process, example, automated filling of tax forms, etc.

* **Facilitating/Supportive Role**: in terms of complementing the existing efforts/methods to improve governance, example information sharing, opening communication, etc.

* **Completely Innovative Role**: like involving initiating new services and mechanisms to improve levels of governance.

The countries, states, and municipalities from around the world are competing with their peers to bring services electronically to the doorstep of the citizens. The Governments are increasingly coming under pressure to restructure and reform the ICT led policies. They are initiating an array of measures to ensure that the concept of e-Governance takes root firmly. These efforts range from economically developed countries like U.S., United Kingdom & Canada to developing countries like India.

**Initiatives in India**

Like governments in other part of the world, Government of India and a number of state governments’ too have been introducing measures to improve standards of governance in their designated areas of influence. In fact the very early traces of using electronic media for governance in India can be traced back to the 1970s when the erstwhile government
developed in-house applications in the areas of defence, economic monitoring, planning and ICT for managing data intensive function in elections, census, tax administration, etc. However it was only in the mid 1990s that e-Governance received the attention. There have been a number of initiatives, in the field of e-Governance in India in the past couple of years, some of them are:

- IT Vision 2020 foresees an information society based on convergence of telecommunication, broadcasting and computers.
- National Task Force on Information Technology & Software Development, 1998, has developed a plan of action to make India an IT super power in the world.
- The focus on All India Council for Technical Education (AICTE), and other institutions like Indian Institutes of Technology, Indian Institutes of Management, and Indian Institute of Science, National Institutes of Technology; in imparting state-of-art knowledge in the field of IT has been noteworthy.
- Ministry of Information Technology (MIT) has been formed in 1999 by merging Departments of Electronics (DoE), National Informatics Centre (NIC) & Electronics & Software Export Council.
- Couple this with the fact that during the last decade the Indian IT industry was recognized the world over and it had an accelerator effect which has now resulted in establishment of newer and better institutions and popularity of IT as a career which has subsequently given a boost to innovation in designing of products and service, application of some of which are in area of e-Governance.

Another important factor has been the role played by the international donor agencies like DFID, World Bank, and UNDP. The thrust in various initiatives in India, both at the Central and State levels, has been varied from some focusing on enabling the citizen interface for different services and the others giving more emphasis on bettering the livelihoods. According to a study by Economic Times, last year government in India is emerging as one of the fourth largest vertical spender on IT. According to NASSCOM the government in India would spend close to Rs. 15,000 crores in the next 5 years to computerize its operations. And it includes expenditures on e-Governance projects. This can also be looked from another angle, it is not only the pressure to be with the tide, so to speak, but that loans to governments from multinational organizations have now become contingent to stringent conditions of having proper transparency in treasury management system, so as the lending institution is kept informed about the utilization of funds. This is not always possible in the traditional form of treasury operations, hence a much more pragmatic reason for the change.

Another motivation for governments to shift to this IT led posture is the success of a few initiatives which have not only improved the efficiency and the service delivery levels but have also become self-sustaining, there-by a good sign for the concerned government. In this paper we will be discussing four of the successful projects in the field of e-Governance in India with the aim of drawing lessons for future e-Governance projects. These projects are fairly well spread in India.

1. **Gyandoot Project**

The Gyandoot Project was launched in the Dhar district, of Madhya Pradesh, province in central India in January 2000. Dhar is a district of 1.7 million people, with almost 60% living below poverty line. Dhar is spread over an area of 8195 sq. km and is divided into 13 developmental blocks, 668 Gram Panchayats, 10 Urban areas, and 1543 villages. It is an Intranet based Government-to-Citizen (G2C) service delivery model. It started with installation of low cost rural intranet covering 20 village information kiosks in five blocks of Dhar. Gyandoot was started with the aim of creating a cost-effective, replicable, economically self-sustaining and financially viable for poverty stricken tribal area of Dhar, with low literacy rates. The idea was to establish Kiosks to take information technology to the group, which had been marginalized for a long time. The Gyandoot kiosks, known as Soochanalaya, are located in the land or building provided by the Local Panchayat.
(Local Village level elected governing body). There are two models of ownership of these kiosks, first, in which the Panchayat invests in land, hardware, and other infrastructure, which is then operated by a trained person, called as the Soochak (Informer, in hindi). The regular maintenance costs of electricity are borne by the Panchayat, the Soochak bears the telephone and other sundry expenses. The Soochak is also expected to remit 10% of his/her earnings to the Panchayat. The Panchayat does not pay any salary or stipend to the Soochak. This is known as Panchayat model. The second, is the case of a local entrepreneur who has applied and got registered as a kiosk owner, and made all the investments (may have taken a loan from the government). Such Soochaks are expected to pay Rs.5000 to Gyandoot Samiti every year. This is known as the entrepreneurial model. The Gyandoot is managed by a society called the ‘Gyandoot Samiti’, which is registered under the Societies Registration Act. The District Collector is the President of the Society, the CEO of Zilla Panchayat, an IAS Officer acts as the secretary. Along with it the Samiti has a team of Project Managers, Asst. Managers to help it. The services offered at the kiosk are spread across a number of departments like civil supplies, regional transport office, etc. The services presently being offered are Issuance of Income Certificates, Caste Certificates, Mandi (local market) Prices, Landholders Record/Certificate, Board Examination results, Driving License applications, Domicile Certificates, Employment News, and Government Schemes information and forms. These services are charged as:

- Agricultural Produce Auction Centre information: charge Rs.5, and now the information on volume of incoming agricultural produce, previous rates, etc is also available on demand.
- Copies of Land Records: charge Rs.15. All these record documents obtained from kiosk reaccepted by all banks in the district, approximately 0.2 million farmers require these in each cropping season.
- Income/Domicile/Caste Certificates: Charge Rs.10. Takes only one trip to the kiosk.
- Online Public Grievance Redress: Charge Rs. 10, per complaint filed.

But the more than that the kiosks offer some add-ons as the Gyandoot Samiti does not put any restriction on the operator on offering any additional services. They are also allowed to determine the working hours of the kiosks as per the local demand conditions. It has been seen that some kiosks have added photocopying facilities, matrimonial advertisement services, etc as per their local markets.

The initial response to Gyandoot was very encouraging; it was also conferred with the “TCS-CSI” award and the “Stockholm Challenge Award” for being the best IT usage for rural areas. However, Gyandoot’s journey has not been a static one, because there were some services that were very well received like Mandi rates, and subsequently lost its sheen due to increasing usage of mobile phones, driving license applications had been well received, but a recent IIMA conducted study has revealed that it has lost some popularity due to resistance from local RTO officials.

One the whole however, the study revealed that the cost advantage is there in a number of services namely, driving license, grievance redressal, domicile certificate. There are some areas of concern like the same study also highlighted that as these kiosks were having a mix of connectivity, some with WLL and some with dial-up, the WLL connectivity was perceived to be better. In all Gyandoot is a success story.

2. e-Sewa

The Andhra Pradesh government had launched a TWINS Project for the Twin Cities of Hyderabad and Secandrabad, in Andhra Pradesh. The experimental pilot project had aimed to deliver 16 electronically enabled services. Later on in August of 2001 the project was re-launched as an improved version and christened as e-Sewa, its total implementation when all public services were converted to “Online Services”. e-Sewa is a G2C initiative of state government of Andhra Pradesh. The aim here is to provide a one stop, under a single-roof contact point for availing a wide spectrum of services from a
number of different departments. e-Sewa at present offers a host of services to citizens in a seamless fashion. Payment of public utility bills, like water, electricity, telephone, submission of passport applications, booking tickets, etc. Its on-line manifestation, the www.esewaonline.com, offers information on issues of interest and also provides downloadable forms and external links. However, what makes it unique is the offline manifestation of e-Sewa, it has also established around 44 e-Sewa centers (with over 280 service counters) spread over the twin cities and Ranga Reddy district. These are computerized Integrated Citizen Service Centers (ICSCs). They connect the twin cities and the Ranga Reddy district. These centers service nearly 12 million people in the area. What is important is the fact that no jurisdiction is imposed on the citizen and hence he/she is free to access any center at will. A marked improvement, over the earlier system, where each citizen had to go to his/her designated local area office to pay utility bill or lodge a complaint.

The e-Sewa ICSCs have the following features:

- Integration of IT: By providing real time online transaction.
- Flexibility in the mode of Payment: payment can be made through cheque, cash, demand draft and credit card.
- Operating Schedule: the centers operate from 0800-2000 hours on all working days and 0900-1500 hours in Saturdays and Sundays, an improvement over the regular 9-5 schedule of the erstwhile office hours.
- Facility of Direct Debit System: e-Sewa has an agreement with five prominent banks of the region; any one registering at www.esewaonline.com can utilize the e-payment facility, provided he/she has Internet banking account with their respective banks.
- Validity of e-Sewa Receipt: Receipt taken at any center is taken as a valid proof of transaction.

Another feature different of e-Sewa is that it is Government organization built with Public-Private Partnership. The Technical partnership is with CMC Computers Ltd. and M/s Ram Informatics Ltd. The A.P. Government is providing the premises, furniture and counter operators while CMC provides the hardware and Ram Informatics is responsible for software. The private players are paid transaction charges, which are sustained stream of revenue, and also acts as motivators for increasing the number of transactions. The recurring costs are to be borne by the private players as is the expenses on power, consumables, stationery, and security. The initiative had a lukewarm response from the public but later on has caught the fancy of the masses. In the initial stages in August 2001 it had netted Rs. 43 lakhs, which went up to Rs. 2,000 crores in February 2003, a testimony to the fact that the system has been accepted by the public. The project was built on the Build Operate and Transfer (BOT) model and currently handles around 24,000 transactions per day. Today besides offering the 22 basic services, it also offers customized services like online mandi rates, tele-agriculture, and common accounts of Self Help groups (SHGs). However, it has to be understood that even though e-Sewa centers collectively have processed more than 10 million transactions since inception, the total number of epayments is still at four thousand transactions, highlighting that there is still some apprehension about safety in online transaction, coupled with the usual low penetration of credit and debit cards and low computer literacy.

3. Project Akshaya

Akshaya is an initiative of the Government of Kerala, a southern state in India. The basic aim of the project is to develop computer literacy to the tune of at least one person per household. The project aims to impart basic IT literacy to at least one member of each of the 65 lakh families in the state. The second aim is to convert this initiative into a service delivery system, which would then continue as a IT dissemination node and service delivery point providing locally relevant information and services.

Kerala, situated on the western side of India besides the Arabian Sea, is a state with an area of 39,000 sq. km and a population of 31,838,619 persons. The Government of Kerala, decided to launch a e-literacy program in which ICT had a
The government decided to bridge the digital divide through this program and also establish a framework, which would subsequently become viable, and sustainable service delivery mechanism for the ordinary citizens. The project was started in Malappuram district, a backward and remote district of Kerala state, it area is 3,350 sq. km and it has a population of 3,629,640 persons. The district is administratively divided in 14 blocks and has 135 villages. For achieving the objective of ensuring e-literacy to at least one member of each family the content was developed in the local language, Malayalam and a large number of ICT centers (Akshaya centers) were to be set up with private participation and the implementation would be through the Panchayati Raj Institutions (local elected governing body). The project uses the local community organizations and a socially progressive network in the state, thanks to the fact that Kerala enjoys a very high literacy rate in the whole of India.

Each Akshaya center is equipped with computers, facsimile machines, printers, phones, and broadband Internet connection (as a large chunk of Kerala’s population is residing or working overseas). A total of 6000 such centers were envisioned and it was decided that each center would cater to approximately 1500 households.

The following were the objectives of Akshaya:

• Ensuring broad-based access to information & communication technology.
• Providing basic functional skill (e-literacy).
• Making available content relevant to local populace in their language, i.e. Malayalam.

To ensure achievement of the above approx. 6000 such centers all over the state are being developed, each roughly covering two wards of the local body. The program is expected to provide around 25,000 jobs to people (at the rate of 5 persons per center). The local language content has been developed by local experts and is a 15 hours module. Malappuram has 552 centers and is enjoying a very encouraging reception to the initiative. The masses have taken to the project, and some new services are being implemented in the second phase of the program. The other G2C services now being introduced are distribution of application forms, payment collection, e-courier services, & audio-video and CD libraries, etc.

The major highlight of this project is the fact that local language has been given an important place in the implementation stage and the G2C services platform has evolved through a collaborative effort with the local community rather than the government imposing it. The model is also open to more modification as regards to addition or deletion of services offered as per local requirements.

The project has also been recognized internationally, it has been chosen as one of the finalist in The Stockholm Challenge awards, 2003/2004.

4. Bhoomi Project

Under this ambitious project Government of the State of Karnataka, has embarked on computerizing the entire records related to land ownership, transfers, and the like in the state of Karnataka.

Land records form the very basic records for the purpose of revenue collection in my country, state or locality. Still these are some of the neglected areas of governance open to corruption and delays causing anguish to millions of persons. The Bhoomi project undertaken by Government of Karnataka, aims to do away with the traditional manual system of maintaining land records in the state. Land records, the term includes all such things as Register of lands of Khetwar Patrika, Records of Rights, Tenancy and Crop inspection register (RTC)- Form 16; Khata Register - Form 24; Disputes cases register- Form 8; and the like.

The RTC is a very important Revenue record as it contains all possible data relating to lands held by an individual or group of individuals such as, area, assessment, water rate, classification of soil, number of trees, nature of possession of the land, whether acquired by registered or unregistered document, by succession, partition, mortgage, liabilities, tenancy and
details of crops grown, land utilization, area under mixed crops, etc. These RTC are of extreme importance to the farmers especially as the document is needed for many tasks like obtaining bank loans, crop insurance, etc. Earlier this was issued through the Village Accountant who in the manual system used to maintain these records, with a duplicate copy with the Taluk headquarters. This system was open to innumerable delay and corruption, but the problems were not only delay of corruption, there were things like delay in updation and errors. To summarize the manual system, Land records in the custody of the Village Accountant were not open to public scrutiny. Over time, several inaccuracies crept into the old system through improper manipulation by the Village Accountant, particularly with respect to government land. In practice, it could take 1-2 years for the records to be updated. The time to provide RTCs used to take 3 to 30 days depending upon the importance of the record for the farmer and the size of the bribe.

To overcome this Government of Karnataka embarked upon a project in 2002 under which the entire land records in Karnataka were to be computerized and made open to public. In all nearly 20 million records belonging to 6.7 individuals records were digitized in 176 taluks on the state. The system works with a software called ‘Bhoomi’ (meaning Land) designed by National Informatics Center, Bangalore. Government of India primarily funds the project but the State government funds certain critical components.

With the records being computerized, in all taluks, manual records are illegal, so as to have regular updation, as the Bhoomi software provides for instant online updating facilities. The landowner can see this and can go back satisfied. It incorporates the state of the art bio-logon metrics system, which authenticates various users on the Bhoomi software on the basis of fingerprints. This ensures that no body can hack the system by imitating other users. This software also has the provision of scanning of original mutation orders of the revenue inspector (who is the authorized person to pass orders in the mutations in the field) and notices served on interested parties. Both documents are scanned to ensure that not only responsibility can be fixed on officials by showing the original documents signed by them but also to ensure that the interested parties do not claim in the court that they were not served with the notice before effecting the mutation.

The system has some built-in advantages, which make it unique in comparison to all other e-Governance initiatives, some of the features are:

- A fully online system.
- Use of fingerprint biometrics ensures tighter security.
- Facility of public interface of each land record center in every taluk office.
- Provision of touch-screen kiosk at taluk office (to ensure that the application is more user friendly and can be utilized by even persons with very limited e-literacy).
- Another benefit of this is that the district database can be linked to a state level database, which then can be used to planning purposes.

All the Taluk offices are having online Bhoomi kiosk where an individual can obtain RTCs at a payment of Rs 15 only. Besides this the farmers can also get to meet the Village Accountant in these kiosks; whenever a change in ownership takes place the same can be corrected here.

The project has some private participation also, each district has been provided with a consultant to act as a bridge between the data entry agency and the district administration as the revenue department officials found it to be too cumbersome to do all the data entry by themselves.

The advantage to the society at large is that now, the judicial system can make use of this land data to settle civic disputes (there are always a large number of these); the financial institutions can now utilize this data to have more accurate forecast and formulate their farm credit policies than before; it would also help in revenue administration in the banks; the private sector can also utilize this data to work with regarding their marketing strategies.
The other benefits arising out of this successful launch is that now there is discussion of how better to use these kiosks like in lists of destitute and handicapped pensioners, families living below poverty line, concessional food grain card holders, mandi rates, weather information, etc. Some of these are being made available under a pilot project in some of the taluk kiosks.

However, a study conducted by Public Affairs, Bangalore has pointed some flaws also, like there have been instances of faulty land records being digitized, or that a large number of users (66%) reported that they did not get receipts of the fee of Rs15.

But there are some good findings too as almost all (85%) rated the behavior of kiosk staff as good; and also that there were only very less reported instances of giving bribe in Bhoomi user, namely, 3% whereas in the manual system the same figure was 66%.

Conclusion

To conclude it has to be understood that India cannot replicate the e-Governance models of the western countries, as the diversity, complexities inherent in India are too much to taste success with such implementation. However, each of the projects discussed has highlighted one thing that localizing content and having user-friendly technology in pace can ensure success in such ventures. The success of these projects can and is being replicated in other parts of the country too, with other states following suit, notable among the projects are:

- The Dairy Information System Kiosk (DISK) being implemented with aid of Indian Institute of Management, Ahmadabad, Gujarat.
- Computer Aided Administration of Registration Department (CARD) in Andhra Pradesh.
- Gram Sampark, in Madhya Pradesh.
- e-Suvidha, a combined project for the Seven States in the North-East part of India.
- HALRIS, project in Haryana.
- Vijaywada Online Information Center (VOICE), a municipal service delivery initiative in Vijaywada district.

Another fact that needs to be understood is that there are some serious challenges to smooth transition towards e-Governance in developing countries. Some of them are:

- Technophobia, which primarily results from low levels of literacy and e-literacy.
- Lack of Financial Resources, this however, has been relegated to a back burner with the role of international donor agencies.
- Deep rooted corruption, while has seeded to all levels of governance makes it difficult to implement changes.
- Difficultly in ensuring Cross Agency Functioning is a great barrier, characterizing developing counties.
- Lack of Leadership, this has been exemplified by the success of the States like Andhra Pradesh & Karnataka, both having dynamic and techno savvy Chief Ministers.

But this should not dissuade us from objectively evaluating these initiatives; there are still some areas of concern like low instances of online payments in case of e-Sewa; errors in Bhoomi records; and the rest. Another area, which requires attention of researchers and practitioners is the fact e-Governance initiatives cannot be evaluated in stand alone fashion especially when the technology is changing very fast. There has been suggestion about using the Wireless technology can be more useful especially in projects targeting rural areas, as the experiences of some projects, like Sustainable Assess for Rural India (SARI), a joint project in Tamil Nadu, by MIT Media Lab, the Harvard Center for International Development & the IIT Madras, shows that not all requirements of rural ICT services rely on real-time connectivity, but rather on affordability and basic interactivity. This study involved collection of data about communication needs, habits, and costs in
hundreds of rural Indian household to find out desire for and perceived affordability of household communications. What is needed is the understanding of challenges of not only of technological nature but also the attitudinal, both in internal and external stakeholders. Because it has been found that sometimes more attention is given to short-term goals and low pain areas & recourse is taken to easy to implement tools in the domain of Information Technology. Also important in case of e-Governance initiative is the fact that the implementing agency whether government or otherwise should have a customer centric view, otherwise there is a possibility of situation arising when the service offerings become obsolete as today the technological cycle is really fast and the expectations of consumers are very high and changing.

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