

# **Electronic Governance: Lessons from Experiences<sup>1</sup>**

**Prof. T.P. Rama Rao**  
**Center for Electronic Governance,**  
**Indian Institute of Management, Ahmedabad**

Electronic Governance (e-Governance) is the use of Information and Communication Technologies (ICT) for the planning, implementation, and monitoring of government programmes, projects, and activities. E-Governance is expected to help deliver cost-effective and easy-to-access citizen services, and improve processing of transactions both within the government, and between the government and other agencies. The stakeholders in e-governance include government officials, legislators, regulatory agencies, citizens, voluntary organizations, technology consultants and vendors, academicians, researchers, funding agencies, and the media. In short, anybody interested in the application of ICT for governance.

A recent NASSCOM report puts e-Governance in India as a rapidly growing segment with three southern states (Andhra Pradesh, Karnataka, and Tamil Nadu) making significant progress. It however, suggests that to achieve desired benefits, several pro-active steps need to be taken by governments to address the operational, economic, personnel, planning and implementation issues, which are the bottlenecks to effective implementation of e-Governance.

The studies conducted by the **Center for Electronic Governance (CEG) at Indian Institute of Management, Ahmedabad**, indicate that the governments are enthusiastic in adopting e-governance. There are many examples of e-Governance projects, which have won international and national awards. However, a more focused and comprehensive approach is needed to ensure their sustenance- they sustain and that citizens derive true benefits from such investments. Many government services need to be re-engineered to benefit from the emerging ICTs. There is an inherent distrust in citizens on the service delivery mechanisms. This image needs to be improved with confidence building measures. Since the governments do not have adequate resources, private participation will have to be facilitated to bring in the expertise, to share the

---

<sup>1</sup> Presented at National Seminar on Computer in Rural Development, Computer Society of India, Vallabh Vidyanagar, February 2003.

cost, and to offer better value proposition to citizens. The governments will have to seriously address the tasks of identifying and preparing project champions, ensuring appropriate tenures, and work towards the development of sustainable solutions and their ownership by all the concerned employees.

This paper presents the experiences, in the past three years, of the CEG-IIMA in the design and implementation of proof-of-concept applications, evaluation studies, and knowledge dissemination activities.

### **Center for Electronic Governance (CEG) at IIMA**

The Indian Institute of Management, Ahmedabad, together with the support of Oracle Software India Limited, Compaq Computer (India) Pvt. Ltd., SCO, and CMC Ltd. set up, in October 1999, the Centre for Electronic Governance (CEG) as a research project.

In its three years of existence, the CEG has executed two proof concept projects, two evaluation studies, and two major training programmes, and knowledge portal activity.

### **Proof-of-concept Projects**

The proof-of-concept application projects are those in which the CEG works with the concerned department extensively, in designing, developing, and implementing the applications involving the use of emerging ICTs.

Two projects, one in Dairy Sector and the other in the District Administration were undertaken by the CEG to demonstrate the power of connectivity and back-end computer processing in empowering citizens.

## **Dairy Information Services Kiosk (DISK) and Dairy Portal**

The dairy sector project was aimed at enhancing the computers connected to the milko-tester machine at the daily milk collection centers of the milk cooperative societies to function as a 'Dairy Information Service Kiosk'. A database of the members and their cattle was created on the PC at the milk collection center. A modem was provided with the PC to facilitate its connectivity to Internet through the ISPs (Internet service providers). The Internet connectivity was used to provide two way asynchronous communications between the society and the dairy. Individualized messages concerning the services to members are printed in the regional (Gujarati) language on the milk pay slip, which, the dairy farmer receives at the time of pouring the milk. In addition a Dairy Portal, created by CEG-IIMA, provided information on various dairying practices and offered a forum for exchange of views and commercial transactions to the members of cooperative societies of the union.

CEG-IIMA involved a private vendor in supplying the hardware, testing the software, building the database and in maintaining the system (hardware and application) at the milk cooperative society level. Two milk cooperative societies and a Dairy Union in Gujarat participated in the project by deputing the personnel. The project demonstrated the power of databases and connectivity in improving the transparency and enhancing the quality of service to the dairy farmers through the cooperative system.

The project generated high level of enthusiasm in the dairy sector. Several Unions have expressed interest in adopting it. While significant level of application design and software development resources have been invested by CEG-IIMA in carving out an application like this, the issues before its replication and sustainability are:

### **1. Funding arrangements**

The dairy cooperative societies are looking forward to an inexpensive packaged solution with some funding arrangement. Organizations like NDDB will have to examine possible options and advice the unions and societies.

2. Preparedness of the Unions.

The daily milk collection data goes to the unions on day-to-day basis through Internet. Unions will have to be geared up to process such data and advise the societies in addition to improving their own operational planning based on this data.

3. Content management of the Dairy Portal

Dairy unions will have to engage domain experts and take the responsibility of managing the contents of the portal.

4. Private Participation

The only way to service the remote rural areas, in which milk collection societies are located, is through participation of private entrepreneurs. A large number of them are looking forward to rolling the model. They need to compose an inexpensive solution including the licenses for various software and application components. Mechanisms will have to be evolved to facilitate the same.

### **Citizen Services Portal (CSP)**

The second proof-of-concept project is in the area of district administration. The objective of the project is to offer the rural citizens an improved access to information on government schemes and services and also facilitate the process of applying for the same from their villages, through an Internet portal and PC based information kiosks. The portal is expected to enhance transparency in government functioning and offer scope for improved service delivery.

The project enjoyed the support of a very dynamic and enthusiastic District Collector. The Collector involved the various departments at the Collectorate and the concerned agencies in the state capital of Gandhinagar and ensured their cooperation. CEG-IIMA interacted with various government departments, community leaders, elected representatives and the common man. The voluminous data received from the departments was categorized and converted to easily understandable local language format and hosted on the portal.

At the time when CEG-IIMA delivered the Citizen Services Portal (CSP) to district collectorate for professional packaging and replication, the portal contained about 130 forms, 45 schemes and 700 pages, cutting across 13 departments. It provided online applications like national old age pension scheme and grievance redressal, and easy to use search engines and feedback sections. Small private entrepreneurs, STD booth operators, and cooperative societies, interested in registering themselves as information service providers were trained to offer the services to citizens using the internet-connected (for on-line transactions) as well as stand-alone CD-ROM based systems.

Currently the portal is re-packaged as mahitishakti.net - meaning Information is Power by a private entrepreneur and is being used by a large number of information service providers in the district of Panchmahals in the state of Gujarat. It is being considered for statewide replication after evaluation.

This project also generated considerable enthusiasm in the district administration. The district collector facilitated its deployment through private participation. The service delivery is completely through private STD booths, provision stores, and cooperative societies.

Following are some issues of significance in this project:

1. Project coordination:

The district collector (project champion) contributed significantly to the concept development and in providing necessary linkages with related government departments. CEG-IMA provided extensive research, training and software development inputs in the project. The collector involved a private party for packaging, rolling and maintenance.

2. Private Participation and funding:

Through the society mechanism (e-Governance Trust), several private parties were invited to offer the delivery of services to the citizens. Each member is charged a fixed

amount as registration fee to offer the services. The members were offered easy loans to acquire PCs to offer this service.

### 3. Value for Citizens

The Gujarat Government has several schemes to offer to the rural poor. Thus, with the implementation of the project, citizens find it worthwhile to visit a kiosk to know about the schemes and obtain forms to apply for the same. Sustainance of this model depends upon the efficacy of the backend services. If the backend services (announcement of schemes as well as processing of applications) do not match upto the expectations, the kiosks may degenerate into expensive forms vending machines.

The portal is packaged with several other services in the areas of education, health, agriculture, forestry etc. The e-Governance Trust will have to ensure that the contents are updated and put special effort to market the services.

### 4. Connectivity

Although options are provided to offer the services through stand-alone mode, Internet connectivity could become a bottleneck for online applications. These problems have to be monitored and alternate solutions have to be worked out to keep the kiosks attractive for the citizens and to ensure that they are economically viable.

The two studies described above have demonstrated that it is possible to develop and deploy innovative and cost effective ICT solutions to enhance citizen services through the collective participation of government, e-governance research centers, and private entrepreneurs.

## **Lessons from Evaluation of some e-Governance Projects**

CEG-IIMA has conducted comprehensive evaluations of two e-Governance projects and studied several other projects. The two projects, which were evaluated comprehensively, are very

celebrated ones and have won international awards in the area of IT applications in government. This section presents a summary of our observations.

1. One of the projects is related to extending of government services to the rural poor at their doorstep. The other project is related to improving the revenue collection by minimizing manual intervention at Highway check posts.
2. Both the projects were conceptualized and implemented by highly motivated administrative officers. The project champions have very good understanding of the ICT and the application domain.
3. Resources for the projects were mobilized by the special efforts of the leaders. They got the software developed rapidly through the involvement of private parties.
4. Private entrepreneurs were associated in the deployment of services and maintenance of technology. PPP (Public Private Partnership) model seemed to have worked well in both the projects.
5. In both the projects, the concerned government employees were extensively involved and given training on motivation and understanding of ICT.
6. Citizens appreciated the transparency offered by the systems
7. Citizens appreciated the efficiency of processing offered through the connectivity and computer processing. These systems have increased the awareness of ICTs and their applications among the rural youth.
8. In one application, the revenue realized by government went up 10 folds from Rs.30 crores to Rs.300 crores. In the other application, the citizens of a remote tribal belt were highly satisfied with quick responses from the government without the need to go to district/taluka head quarters.
9. Both the applications slipped in acceptance as well as performance soon after the project leaders were transferred. Following are some identified problems:
  - a. In the rural citizen centric application, citizens noticed slippage in response times to their applications.

- i. Connectivity and power supply often became serious constraints. Possibly some services could have been designed not to use these technologies in such environment.
  - ii. The backend systems required re-engineering, computerization and networking. This is the most challenging task and needed more efficient and strongly motivated project leaders.
  - iii. Since the applications related to the employment generation and livelihood did not get attention, poor rural citizens gradually withdrew from using the kiosks.
  - iv. The kiosk operators did not find it remunerative to run the services due to very low volume of transactions with the existing services. Many service providers have closed down their centers. Perhaps such low volume services need to be augmented with revenue generating activities like job work (data entry or minor desktop publishing), training and Internet surfing.
- b. In the improved revenue collection application at the check posts, transporters encountered the following difficulties:
- i. Since manual collection of cash was not totally eliminated at the check posts, drivers continue to feel harassed. They feel that the 100% overload checking capability facilitated by technology, is being misused to collect more speed money than before. As there was no close monitoring at the check posts, drivers have started losing confidence in the transparency of the system.
  - ii. The maintenance contract ran into problems of renewal. The long delay in settling this has put the systems out of gear (to the advantage of vested interests). Many technologies, which were meant to minimize manual interventions in the collection process, were bypassed causing harassment to the transporters.
  - iii. The high potential that existed with the technology could not be utilized due to the government's inability to place a project champion who is

required to pursue further work on the project. If this continues, the expensive technology is likely to become obsolete even before deriving complete benefit.

## **Summary**

The e-Governance projects have very high potential of offering cost-effective, improved and easy-to-access services to citizens, and improved processing of transactions both within the government and between the government and other agencies. The planning, implementation, and monitoring of government programmes, projects, and activities can be significantly strengthened by these applications.

Successful e-Governance projects involved, in the design process, all stakeholders such as government officials, legislators, regulatory agencies, citizens, voluntary organizations, technology consultants and vendors, academics, researchers, funding agencies, and media. The benefits derived from such projects are very significant as seen from the above case studies. However, the government as well as project champions need to pay attention to the sustenance problems faced by these projects. Proper planning is needed in working out revenue models, ensuring the full implementations through appropriate tenure appointments of project champions, ensuring effective monitoring and maintenance of systems.