

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Issue 5, May 2016

## A Study on e-Governance Initiatives in India

Nagarjuna Karyemsetty<sup>1</sup>, Kaki Leela Prasad<sup>2</sup>

Assistant Professor, Department of Information Technology, Vignana's Institute of Information Technology, Duvvada,  
Visakhapatnam, India<sup>1,2</sup>

**ABSTRACT:** Imagine a situation in which all interaction with government can be done through single edge 24 hours a day, 7 days a week (24 X 7), without waiting in queue. In the near future, this will be possible if the Governments are willing to decentralize responsibilities and processes. Each citizen can then interact the government through a web where all forms, legislation, news and other information will be available. e-Government provides a diverse range of services that touch the lives of citizens in a daily basis to improve the degree of quality of life of the citizen. Some of initiative required to establish the eGovernance in India has given in this paper.

**KEYWORDS:** Data Centers, eGovernance, G2B, G2C, Portal.

### I. INTRODUCTION

The World Bank in its report on E-Governance has defined E-Governance as:

“Use by government agencies of information technologies to improve and transform relations with citizens, businesses, and other arms of government.” [1]

Government of India is also taking many initiatives towards the E-Governance, the Cabinet, Planning Commission, Department of Administrative Reforms & Public Grievances, Department of Information Technology and other Central Ministries/Departments at the Centre and various State Governments are working towards fixing specific achievable objectives and deadlines for various processes within the Government.

One – stop government is the goal of most of the e-governance initiatives. It refers to a single window access to all public services and information and should provide services through various delivery channels such as self-service kiosks, call centers, mobile access, web portals, etc to overcome problems of digital divide.

A number of reasons are attributed to the difficulties arising in implementation of eGovernance in India.[11] The most common ones are listed below :

- Computerization is aimed at automating existing manual procedures which are alienated from business goals of e- governance.
- Inability to define business processes and non involvement of employees in the reengineering of processes.
- Lack of training of employees and IT staff
- Limited budgets for IT initiatives
- Heterogeneous platforms and software and islands of applications developed for core functions such as financial accounting, HRMS etc.

The objective of e-governance can be identified as:

- Providing services by way of adopting one window service to customers
- Provision of localization of interfaces and applications to overcome language, cultural and procedural barriers
- Integration of backend systems across all departments to ensure seamless flow of information to the user interfaces, call centres and frond end customer service centre.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Issue 5, May 2016

- Secure online transactions and confidentiality of data

The most common interactions in e-governance, Government to Citizen (G2C), Government to Business (G2B) and Government to Government (G2G), which are presented schematically in Fig 1.

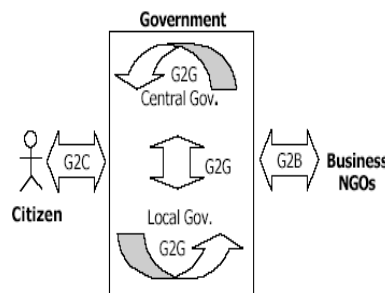


Fig 1. E-governance model

In addition to above three, some model includes Government to Employee (G2E) as separate interaction. Most governments start by delivering online information, but public demand and internal efficiency soon require more complex services.[3]

According to Gartner, e-governance will mature according to the following four phases and are shown in Fig 2.

- |                          |   |                       |
|--------------------------|---|-----------------------|
| 1) Information           | → | Presence              |
| 2) Interaction           | → | Intake                |
| 3) Processes Transaction | → | Complete transactions |
| 4) Transformation        | → | Integration & change  |

The model does not imply that all institutions have to go through all phases and all at the same time. The tax department can be in phase three, while the department of public works is starting phase.

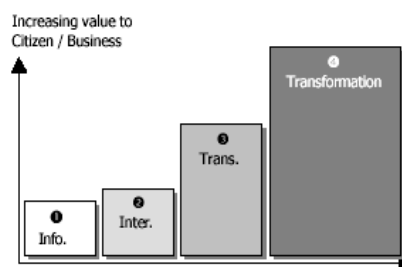


Fig 2. Phases of eGovernance

In the first phase, e-governance means being present on the web, providing the public (G2C & G2B) with relevant information. The format of the early government websites is similar to that of a brochure or leaflet. The value to the public is that government information is publicly accessible; processes are described and become more transparent, which improves democracy and service. Internally (G2G) the government can also disseminate static information with electronic means, such as the Internet.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Issue 5, May 2016

In the second phase, the interaction between government and the public (G2C & G2B) is stimulated with various applications. People can ask questions via e-mail, use search engines, and download forms and documents. These will save time. In fact the complete intake of (simple) applications can be done online 24 hours per day. Normally this would only have been possible at a counter during opening hours. Internally (G2G) government organizations use LANs, intranets and e-mail to communicate and exchange information.

With phase three, the degree of complexity of the technology is increasing, but customer (G2C & G2B) value is also higher. Complete transactions can be done without going to an office. Examples of online services are filing income tax, filing property tax, extending/renewal of licenses, visa and passports and online voting. Phase three is made complex because of security and personalization issues. E.g. digital (electronic) signatures will be necessary to enable legal transfer of services. On the business side, the government is starting with e- procurement applications. In this phase, internal (G2G) processes have to be redesigned to provide services efficiently. In developing countries like India, Government needs new laws and legislation to enable paperless transactions.

The fourth phase is the when all information systems are integrated and the public can get G2C & G2B services at one (virtual) counter. One single point of contact for all services is the ultimate goal. The complex aspect in reaching this goal is mainly on the internal side, e.g. the necessity to drastically change culture, processes and responsibilities within the government institution (G2G). Government employees in different departments have to work together in a smooth and seamless way. In this phase cost savings, efficiency and customer satisfaction are reaching highest possible levels.

## II. CHALLENGES , REQUIREMENTS AND INITIATIVES FOR E-GOVERNANCE

The prime objective of any technological revolution is to improve the quality of human life. Information Technology is changing the way the society functions. Internet is the biggest revolution in human history. The impact of IT can be felt in all economic and social activities in every conceivable manner. The convergence of all forms of communications on the digital playfield is opening up immense new possibilities of achieving speed, versatility and space-time independence.[8]

### 2.1.Challenges

The challenges for e-governance in developing countries like India are identified as

- 1) Political,
- 2) Social,
- 3) Economic and
- 4) Technological aspects.

Political aspects related to e-governance include strategies and policies, laws and legislation, leadership, decision making processes, funding issues, international affairs, and political stability. Social aspects of related to e-governance are people, (level of) education, employment, income, digital divide, rural areas vs. cities, rich vs. poor, literacy, IT skills. Economic aspects related to e-governance are funding, cost savings, business models, e-commerce, spin-offs of E-Governance.

Technological aspects involve software, hardware, infrastructure, telecom, IT skilled people, maintenance, safety and security issues.

### 2.2.Requirements and analysis

e-Government provides a diverse range of services that touch the lives of citizens in a daily basis. When citizens register a car, buy a house, start a business or look for information about the province's consumer protection legislation, they are accessing some of the many services, products and information offered by the Government.[7]

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Issue 5, May 2016

## 2.2.1. Requirements

Some of the requirements for implementing successful e-governance across the nation are

- e-Governance framework across the nation with enough bandwidth to service a population of one billion.
- Connectivity framework for making the services reach rural areas of the country or development of alternative means of services such as e-governance kiosks in regional languages.
- The overall architecture for e-Governance needs to ensure that the architecture components are extensible and scalable to adapt to the changing environments.
- National Citizen database which is the primary unit of data for all governance vertical and horizontal applications across the state and central governments.
- E-governance and interoperability standards for the exchange of secure information with non-repudiation, across the state and central government departments seamlessly.
- Data centers in central and states to handle the departmental workflow automation, collaboration, interaction, exchange of information with authentication.

## 2.3. Initiatives

Requirements are analysed thoroughly and The following initiatives are identified to achieve the objectives of E-Governance in India.[2][9]

- Re-engineering of administrative processes: Redefining the roles, structure, functioning and reforms.
- Standardization of IT infrastructure and Data.
- Development of Literacy in Government (Citizens and Employee)
- Development of Portal for central, state, municipalities and local authorities.
- Digitization of public domain information.
- Provide public information and facilitation counters.
- Provide the communication backbone: Fiber cables, reliable media
- Globalization of all departments and agencies at one time.
- Vertical and Horizontal integration of various Government services.
- Framework for e-Governance should be extensible and scalable as per the citizen demands and changes in society.

## III. SURVEY OF E-GOVERNANCE PROJECTS IN INDIA

In a developing country like India, a number of E-Governance initiatives have already been taken across the country. In Andhra Pradesh projects like e-SEVA (Electronic Sources), CARD (Computer-aided Administration and Registration Department), MPHS (Multi-purpose Household Survey) and Saukaryam (Civic Services in Vishakapatnam) have proved to be quite useful. Similar projects in other states include Khajane and Bhoomi (Earth) in Karnataka, Gyandoot and Maiti Shakti in Gujarat [10]. The inter-state transport system in Gujarat has been revolutionized by establishment of computerized inter state check posts which have reduced harassment faced by the Transporters while reducing the arbitrariness that existed earlier in the imposition of excise duty.

### Bhoomi (Land Records) ----Karnataka[2]

The BHOOMI project of Karnataka is a Land Records Computerization System. It permits online updating of land records [1]. The major beneficiaries of the BHOOMI project [9] are farmers. They can now get a copy of the RTC from the information kiosk at the sub-district headquarters without harassment. They can file an application for affecting a mutation in the RTC and trace the status of the mutation application. Use of biometrics authentication system for updating of records has freed the farmers from worry of probable manipulation of their records by unscrupulous

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Issue 5, May 2016

officers. Access to farm credit would now be less cumbersome with the online connectivity of the system to financial institutions. Courts would be able to make use of land record database for adjudicating various civil disputes relating to ownership, possession and cultivation.

## **Stamps Registration and Archiving (SARITA)[2]**

The Stamps and Registration Department of a State is typically one of the top revenue earners for any Government. Stamp & Registration software provides efficient government citizen interface, and also enables enhanced revenue earnings for the Stamps and Registration operation. The heart of this application consists of the Registration and Valuation module. Other modules are the Networking and Scanning modules that enable exchange of information securely across departments, and "electronic copying" of the registered documents thereby enabling return of the original document within few minutes of presentation.

## **Aarakshi-----JaiPur [2]**

Aarakshi is an intranet-based system for the Jaipur City Police to facilitate FIRs, criminals records, vehicle thefts, missing person's records etc. It is like a private & closed user group accessible to only authorized personnel. Its potential users are all field level officers of the city like police station, circle officers SP and even district collector.

## **Webciti -----Punjab[2][7]**

WebCITI (Web based Citizen-IT Interface) is an e-Governance project for building citizen-IT interface for services offered by district administration at Fatehgarh Sahib in Punjab. It provides web-based interface to citizens seeking services from district administration and provides complete workflow automation in District Commissioners office. It is information dissemination system designed to facilitate public to get information about various government schemes such as eligibility criteria, procedures, contact addresses, downloadable forms etc. These include issuance of certificates such as death/birth, caste, rural area etc., licenses such as arms license, permission for conferences/rallies etc., benefits from socioeconomic schemes etc. The information about

various schemes and procedures, status of an application etc. can be found through the web Interface available at the intranet counters at developmental block/revenue tehsil and kiosks.

## **Akshaya----Kerala [3]**

As part of Kerala's ambitious e-literacy campaign, Akshaya e-Centers are being set up throughout Kerala. These centers will initially provide e-literacy to one member from every household and act as ICT dissemination nodes and ITeS delivery points in every village. All Akshaya e-Centres will have Internet connectivity and will be networked with a centralized operating center. Implementation of the first phase of the project is on in Malappuram district. The second phase involves setting up of over 6,000 e-centers in all districts, tested in two co-operative villages of Amul dairy in Kheda district.

## **GramSampark -----Madhya Pradesh [1]**

Gramsampark is a flagship ICT product of the state of Madhya Pradesh. A complete database of available resources, basic amenities, beneficiaries of government programs and public grievances in all the 51,000 villages of Madhya Pradesh can be obtained by accessing the website. Gramsampark has three sections - Gram Paridrashya (village scenario), Samasya Nivaran (grievance redress) and Gram Prahari (village sentinel). An eleven-point monitoring system has been put in place whereby programmes are monitored village-wise every month. Four more programs are under the monitoring system, which includes untouchability -eradication, women's empowerment, water conservation and campaigns for sanitation.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Issue 5, May 2016

## **Gyandoot -----Madhya Pradesh [8]**

Gyandoot is an intranet in the tribal district of Dhar in Central India connecting rural Cyber cafes catering to the everyday needs of the masses. It is a community-based, highly cost-effective and financially self-reliant approach to bringing the benefits of Information Technology to the doorsteps of tribal villagers. The objective of the Gyandoot project [2] has been to establish a community-owned, innovative and sustainable information technology project in the most poverty stricken and tribal dominated rural areas. The project is designed to cater to social, economic and development needs of the villagers through an innovative G2C model. There are around 1600 villages in Dhar district and 80 information kiosks/cyber offices (Soochanalayas). Each kiosk caters to about 25 to 30 villages. The entire network of 31 kiosks covers 311 Panchayats (village committees), over 600 villages and a population of around half a million (nearly 50% of the entire district).(approximately 20 million students) across the country in the next five years.

## **The e-SEVA project ---Andhra Pradesh [1][7][10]**

The e-SEVA project in Hyderabad provides 30 different services to citizens on a single window. These include payment of electricity bill, water bill, telephone bill, house tax, application for driving license, renewal of driving license, apply for a passport access land records, and get needed information[5].

### Services Offered by E-Seva

E-Seva [7] offers a wide spectrum of citizen-friendly services that will save citizens the bother of running around various departments.

Payment of Utilities Bills, Electricity bills, Water and sewerage bills, Telephone bills (BSNL & TATA Tele Services), Property Tax, Sales Tax, Certificates : Registration of births / deaths, Issue of birth / death certificates  
Registration Department : Issue of encumbrance certificates, Issue of Caste/Nativity Certificates, Labour Department Permits / Licenses, Medical and Health Department: Renewal of Drug Licenses, Issue / renewal of trade licenses, Transport Department Services (available at Banjara Hills Centre at Hyderabad only), • Change of address of a vehicle owner. Transfer of ownership of a vehicle, Issue of learners' licenses, Issue / renewal of driving licenses (non-transport vehicles), Registration of new vehicles, Information, Transport Department Procedures, Registration Department: Market value assistance Reservation, Reservation of APSRTC bus tickets, HMWSSB: Reservation of water tanker, Tourism: Reservation of tickets/ accommodation, Other Services at E-Seva Centres, Sale of passport application forms, Receipt of passport applications, Receipt of applications for new telephone connections. Registration Department: Sale of non-judicial stamps, Registration Department: Document writing service, Collection of small savings, Internet Services, Internet-enabled electronic payments, Downloading of forms and Government Orders (GOs), Filing of applications on the web, Receipt of complaints or requests in connection with citizen services, B2C Services, Cell Phone Bill Payments.

## **e-Choupal--- Madhya Pradesh, Uttar Pradesh, Karnataka and Andhra Pradesh[3]**

Started by ITC's international Business Division as a cost-effective alternative supply chain system to deal directly with the farmer to buy products for exports is getting transformed into a meta market for rural India. The tobacco giant has already set up over 700 choupals covering 3,800 villages in four states — which include Madhya Pradesh, Uttar Pradesh, Karnataka and Andhra Pradesh — dealing with products ranging from soya bean, coffee, aquaculture and wheat.

## **Media Lab Asia [10]**

The Media Lab Asia project of the Government of India is the result of an agreement between two MIT's, the Ministry of Information Technology of the Government of India and the MIT of the U.S.A. The project is aimed at bridging the digital divide between the 'haves' and the 'have-nots'. Its principal concern therefore is to create devices



# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Issue 5, May 2016

that will enable an illiterate to make use of computers. The thrust areas to be taken up in the project are health, education/learning, employment and microentrepreneurship.

## IV. CONCLUSION

World economies are recognized Information Technology as an effective tool in catalyzing the economic activity in efficient governance and in developing human resource. Any kind of development leads to change - in institutional operations, people's lifestyle and attitude.

E-Governance acts as the catalyst or tool to accentuate the growth of the community. The e-Governance is consequently become an accepted methodology involving the use of Information Technology in improving transparency, providing information speedily to all citizens, improving administration efficiency and improving public services such as transportation, power, health, water, security and municipal services. And E-Governance is also provides better government services, which are delivered to the citizens in a more efficient manner, improved government interactions with the business and industry, citizen empowerment through access to information and more efficient government management.

## REFERENCES

- [1] Promode Murugavaleu, "E-Governance in India" ,National University of Juridical Sciences, Kolkata, V Year
- [2] MAIT "POLICY AND GOVERNMENT" [www.mait.com](http://www.mait.com) Vol. 9 ,January, 2014
- [3] Michiel Backus "E-Governance in Developing Countries" IICD Research Brief- No 1 , March 2013
- [4] Jagdish.C. Kapur, "IT and Good Governance" XLVI Indian Journal Of Public administration 386, 2001
- [5] Randeep Sudan, Towards " SMART Government : The Andhra Pradesh Experience", XLVI Indian Journal of PA 300 , 2015
- [6] Dr.S.Tauseef-Ur-Rehman and Muhammad Sulayman, "E-Government Strategy – A Proposed Infrastructure" Faculty of Applied Sciences International Islamic University Islamabad,2014
- [7] INFORMATION TECHNOLOGY POLICY 20 ( Government of Haryana )
- [8] P.A Mittal M Kumar, MK Mohania and M.Nair A framework for eGovernance solutions" 2013
- [9] Neeta Jalta "Eclipse Based Framework for e-Governance" JP Publications,2012
- [10] e-Seva project <http://www.ap.gov.in/aptourism/home.html>
- [11] <http://www.e sevaonline.com>
- [12] The Gyandoot Project <http://gyandoot.nic.in>
- [13] The BHOOMI Project <http://www.revdept-01.kar.nic.in>
- [14] Ty Lund "Business plan 2006-09", Minister of Government Service February,2016