

SECTION IV

e-Governance Success Stories District Initiatives

ICT Initiatives for District level e-Governance

Dr Nityesh Bhatt

Government of India (GOI) approved the National e Governance Plan (NeGP) in May 2006, with the following vision:

“Make all Government Services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man”.

To realize this vision, 27 Central, State and Integrated Mission Mode projects (MMPs) along with 8 support components were identified and approved under NeGP.

Overview of e-District MMP: e-District MMP is one of the 27 MMPs under NeGP, with the Department of Information Technology (DIT), Government of India as the nodal Department, to be implemented by State Government or their designated agencies. It aims at electronic delivery of identified high volume citizen centric services, at district and sub-district level, which are not part of any other MMP. (Source: <http://www.mit.gov.in/content/e-district>)

For delivery of these services, front-ends in the form of citizen facilitation centers are envisioned to be built at District-, Tehsil-, Sub-division- and Block-levels. Village-level front-ends would be established through Common Services Centres (CSCs). Objective of these front end and CSC are to reduce travel and interaction of citizens with Government offices and faster delivery of services.

With online submission of applications, a Citizen can also track the progress of the application/request on line.

Timelines: e-District project in each state is to be implemented in two Phases. In **Phase I** Pilots would be undertaken covering 1-2 Districts of a State and in **Phase II**, the Project would rolled out across the State subsequent to successful implementation of the pilot. Phase I would be completed within 18 months from the date of approval of the pilot project report. Phase II will be completed within two years from the date of sanction of statewide roll out. At the end of the project, all 640 districts will start offering e-District services.

A core list of six services has been identified at the national level which shall be taken up for implementation by all States which agree to participate in the eDistrict MMP. The State can also add a further 4 services, at its discretion, for implementation under the MMP. The list of core services is as follows:

- a) **Issue of Certificates** including Domicile, Nativity, Caste, Marriage, Income, Employment etc
- b) **Pensions** – Social welfare Pensions (Old age, Widow, Handicap, Destitute)
- c) **Revenue Court** – including Case listing, Case adjournment, Stay orders, Final orders, Status of execution of orders: Information, Tracking, and filing of misc. applications.
- d) **Government dues and recovery** as part of Land Revenue – including Issue of notices, Record payments, Track default processes, Updation of treasury receipts etc
- e) **Public Distribution System**, Ration Card related services –including Registration, Change of address, Addition of members, Issue of duplicates etc.
- f) **RTI services** including redressal of Grievances – (Application, tracking, monitoring, redressal, appeals etc.), Education, Electricity, Drinking Water, Panchayats, Health, Police, Revenue, Road, Treasury, Social Welfare, Irrigation, Woman & Child, Public Distribution System, Transport, Disaster Relief

In addition to these core services, discretionary services to be chosen by States include certificates, revenue, marriage services, electoral services, licenses, court services, utility services, payment of property tax, grievances, education, health, employment, police, travel, grant/loans, social welfare and industries.

By May 2011, 41 e-District pilot projects have been implemented in than 16 States under different platforms. STQC is engaged to test that under each service category for chosen services, the functionality is built securely and the e-district application so developed gives acceptable performance for a defined load. The e-district applications which will get certification from STQC will qualify for state wide roll out.

This modernization and automation project of district administration will ultimately empower the citizens. The estimated total project cost for the nation-wide rollout of e-District MMP is Rs 1663.08 crore, out of which Government of India's share is estimated to be Rs 1233.08 crore and States' share Rs 430 crore.

(Source: <http://news.nwn.in/2011/04/20/e-district-mission-mode-project-to-empower-the-citizens-in-640-districts-of-india/>)

CSI-SIGeGov & eGov in India: The Computer Society of India (CSI), the largest association of information technology professionals in India, with over 70,000 members from all domains has instituted a series of awards for recognizing the contributions made in the field of e-Governance in the country. Special Interest Group on e-Governance (CSI-SIGeGov) has been setup within CSI to focus on e-Governance activities in the country. One of its annual activities is e-Governance awards. These awards, sponsored by Nihilent Technologies are given for the efforts made in e-Governance area at the State, Department, District and Project level.

Award of Excellence - District Category: In District Category, Award of Excellence is (are) given for outstanding efforts demonstrating excellence in e-Governance during the current year at the district level. The basic objective of this award has been to recognize and appreciate the successful efforts at the district level in achieving good governance using information and communication technology (ICT). For annual CSI-Nihilent e-Governance Awards 2010-11, CSI SIGeGov received 16 district nominations for the District category. From

Rajasthan, Maharashtra, Gujarat and Kerala States two nominations were received while from Goa, Uttar Pradesh, Himachal Pradesh, Madhya Pradesh, Haryana, Karnataka, Assam and Punjab States, we received one nomination each.

Based on the response to template questions, a few nominations were considered suitable for 'Project Category' instead of 'District Category'. After two stages of screening, five districts were called for presentation in front of selection committee. Three broad evaluation criteria, that are used are: *Result Indicators*, *Enabler Indicators* and *Value Indicators*. For those nominations that were short listed for Field visits non-disguised observations as well as interaction with key stakeholders i.e. District officers (including District Collector, District Information Officers), employees and CSC owners & employees were included as a process of evaluation.

Result Indicators were comprised of Key Performance (further divided into e-Governance services portfolio and its impact, implementation coverage, future plans), and Government efficiency & improvement initiatives (in terms of time, cost, innovation and integration with other offices/ departments). **Enabler Indicators** were District Policy & Strategy (further divided into eGov vision roadmap, shared IT infrastructure and technology standardization), Process reengineering & Legal Reforms (both front end and backend), Capacity building (comprised of leadership, training, change management, program management teams and sustainability aspects) and technology (cost, maintenance, security and competence of people). **Value Indicators** was made up of e-Waste, e-Participation and digital inclusion.

Most of district projects covered a large number of G2C services like various certificates, public grievances, health Projects, land record computerization and delivery, PDS as mentioned above. Some of projects also covered G2G services like video-conferencing, treasury management, election management etc. Few projects offered G2B services also. Citizen Services Centres (CSCs) in these districts are offering many G2C as well as some B2C services also. Many districts have deployed innovative technological solutions like IP based surveillance, SMS based disaster management, SMS & GPS based PDS distribution, biometric based attendance system, touch-screen kiosks etc. In majority of cases, districts utilized their own funds for these installations. Even in some cases, private donor support was also sought.

Background & Impact of selected Districts: Interesting observation about the received nominations was that most of the districts were relatively small, less-known and backward in terms of main socio-economic indicators literacy, healthcare, employment, income etc. Some of them were facing severe naxal violence. Geographical reach is also not easier with many districts. Despite these challenges, these districts under strong and techno-centric leadership of district collector and their team could achieve significant success which was not only recognized by their State, Centre and also non-State actors like CSI but many of such initiatives were replicated in other districts or whole State. Successful implementation of various E-Governance projects in these districts have delivered tangible results in terms of employment generation, efficiency of employees, reduction in corruption, faster file processing and speedier grievance handling and intangible results in form of empowered and satisfied citizens. Passion of leadership in these districts is also reflected in accolades received in non-IT initiatives such as healthcare, literacy etc.

Determinants of Success: Based on our interaction with different stakeholders and observation of IT projects in these districts, we generalize following major reasons for their success:

1. Passionate, enthusiastic and courageous digital leadership
2. Involvement of stakeholders through effective communication and motivation
3. Constructive change management practices including training
4. Political support

Final Results: Based on comprehensive scores obtained at each stage of assessment, Nanded (Maharashtra) Pali (Rajasthan) and Ramabai Nagar (UP) were recognised for Awards in the District category.

Dr Nityesh Bhatt, Chairperson & Sr. Associate Professor – Information Management Area, Institute of Management, Nirma University, Ahmedabad; Co-Convenor, CSI Nihilent Awards, nityesh@imnu.ac.in

CHAPTER 15

*South Goa, Goa**Shri Sandip Jacques and Shri Ashutosh Apte***I) Overview**

South Goa Collectorate has implemented a DC-Suite system with a technical support of National Informatics Centre, Goa. DC-Suite is an integrated suite of applications implemented for effective district administration so that the services to the citizens can be provided timely.

DC-Suite is web-based application, developed under open source technologies. It has implemented with a minimal expenditure on the development, deployment, training and implementation components of the project. Initially, fifteen functional areas are identified under this project. It has work flow based file management system as backbone of the system and other functional modules are integrated with this to provide services to the citizens.

There are fifteen modules in the system which are integrated with the file flow management system. Modules such as Arms Licence, Certificates, Revenue Recovery, Public Grievances, Govt. Quarters Allotment, Rest House Reservation, Court Cases, Cash Receipts, Assembly Questions, Land Conversion etc are integrate with it.

System enables features such as public access, transparent administration, and service delivery to the citizens.

District Collectorate is an important government machinery at district level of the revenue department. State and Central Government policies are

implemented at grass root level through the district administration. It deals with the various subjects ranging from revenue administration, development, magisterial, disaster management etc. Every citizen is related to this department through one or other activity.

District Collectorate is headed by the Collector which is highest authority at district level. He is assisted by the two additional collectors and deputy collectors in the collectorate. Deputy Collectors/Sub Divisional Officers are heads of the sub-divisional level offices and Mamlatdars are heads at taluka level offices. Through this machinery, government policies are implemented at local levels.

South Goa District has six talukas and four sub-divisions. Dharbandora, the sixth taluka has been formed recently.

The District Collectorate functions can be broadly classified into five categories.

1. Revenue Administration.
2. Magisterial.
3. Schemes Implementation.
4. Election.
5. Personal Administration.
6. Census.

Revenue Administration

Collectorate handles various acts under Land Revenue Code. It deals with land conversion, cumeri cultivation, recovery of government dues, matters relating to agricultural tenancy and mundcar, transfer of rights by way of sale/gift, grant of government land, land records, encroachment of government land, illegal construction, mining, etc. Cases/Appeals under LRC are filed in the courts of the collector and additional collectors.

Land Acquisition Act is also implemented by the collectorate to acquire land for the public use.

Magisterial

Collector is responsible to enforce Law and Order in the district. Collector has delegated quasi judicial powers under various acts. Collectorate issues licenses under Arms Act, Cinematography Act, Explosives Act, Noise Pollution Act, Video Parlour, Sound Permission. Collectorate implements other acts such as Criminal Procedure Code, Motor Vehicle Act, Essential Commodities Act, Indian Forest Act, Indian Electricity Act, Foreign Contribution Regulation Act, Press & Registration Act, Smoking & Spitting Act, Non-Biodegradable Garbage Control Act, Child Labour Act. It issued Domicile Certificates and permission to transport dead bodies.

Development Schemes

Collectorate implements various development schemes of the State and Central Government. Schemes such as 20 point program, MPLAD, Ambedkar Awas Yojana, Old Pension Scheme are implemented by this office.

Election

Collectorate hold elections of Parliament Constituency, Assembly Constituency, Zilla Panchayat and Co-Operative bodies in the district. Collector being a District Election Officer, looks after Electoral Registration work.

Personal Administration

Collectorate has offices at district, sub-divisional, taluka and village levels. It has to maintain records of service books, leave accounts, promotions, transfers on day-to-day basis. Besides this, it has to handle matters like employee pensions, annual confidential reports, vigilance enquiries, etc.

Census

Collector is a District Census Officer. This office conducts decadal population census of the district. Also, it involves in conducting animal census and other surveys.

II) Result Indicators**1. Key Performance**

a. Stakeholder services and benefits achieved through ICT interventions**1. G2C Services**

- Acknowledgement of letters.
- Current status of files.
- Current status of an application.
- Beneficiary search.
- Government Order search.
- Public Grievance status.
- Help Desk
- Employee and office search.
- Citizen charter with detailed collectorate services.
- Application forms.
- SMS facility to enquire status of an application.
- Interface to Govt of Goa eService portal to accept applications through internet.

2. G2E Services

- Intranet to the employees.
- Notice Board to publish notices & circulars.
- E-mail messaging.
- Discussion Forum, Chat.
- Daily events, meeting dairy.
- Search of Tapals and files.
- Payslips of employees.
- Circulars.
- Meeting minutes.

- RTI Act information.
- Internal office application forms for employees.

3. G2G Services

- User-based login to other offices.
- Land records form I & XIV availability on kiosk.

b. Implementation coverage till date and during the year

DC-Suite system is implemented in the South Goa Collectorate. This system is being used by all employees of the collectorate. Citizen Facilitation Centre is setup in the office with four counters to accept the letters, help citizens to fill application forms etc.

c. Future plan with regard to geographical coverage as well as scope of services

It is planned to integrate additional functional modules such as Explosives Licence, Land Conversion, Court Cases, Land Acquisition, Land Conversion in the system. Arms Licence renewal module access can be given to police station to verify applications. It is planned to extend same kinds of services at Taluka and Sub Divisional offices.

2. Efficiency and Improvement Initiatives

a. Time and cost efficiency improvements in delivering and availing of ICT enabled services:

1. Tapals can be traced easily with a particular staff and file. It has a provision to search on tapal number, subject, receiving dates etc.
2. Searching of files and documents based on file/document number, subject has reduced considerable time.
3. Pendency of tapals and applications made available always to the staff.
4. Reduced time in generating letters and certificates.
5. Citizen problems solved considerably as they need not move table to table to locate an application.

b. Specific innovative ideas implemented in eGov area, and their impact on services:

1. Citizen Facilitation Centre is setup in the Collectorate to receive applications and assist people to fill application forms.
 2. SMS facility is setup to enquire status through mobile.
 3. Public access provided through internet.
 4. Applications are made available in the CFC.
- c. Extent to which services are integrated with other internal and/or external ICT systems within the district or outside.**

Goa State has a GBBN network through fiber optical cables. Maximum offices are networked through this network. Access to this system can be provided to other departments.

III) Enabler Indicators

1. Department Policy and Strategy

a. eGov/ICT Vision and Road Map

South Goa E-Governance Society is being formed in the district to achieve the following objectives.

1. To take all necessary steps to promote efficiency, reduce delay; enhance accountability, transparency and objectivity in the functioning of the South Goa District Administration.
2. Formulating and implementing policies, procedures and guidelines for the adoption of Information Technology and e-governance for improvement of citizen services through various government departments and agencies and ancillary activities and services. To promote and disseminate information technology culture in the district so that the common man could avail the benefit of information technology and e-governance.
3. To administer the implementation of e-Governance projects for ensuring use of information technology for masses. To lay down the necessary

administrative, financial legal and technical framework and resources for the IT-enabled citizen services.

4. List and prioritize the areas for Citizen Services in consultation with the concerned Departments and take all steps for improving Citizen Services to the use of IT. To facilitate implementation of Citizen Charters framed by the other departments through the use of e-governance and IT as a tool.
5. To workout revenue models and modalities for providing Citizen Services through use of IT on a public-private partnership model for its self-sustainability and to encourage private sector initiative in IT-related infrastructure and services. This would include working out all commercial modalities and revenue model including Franchise Model in citizen services.
6. To collect revenue and to issue receipts on behalf of the various Departments and Organizations. Such receipts shall have same legal validity as if it were an actual receipt issued by the concerned department of the organization. Transfer the revenue collected to the concerned departments and organizations. Or to authorize a suitable authority, committee, sub-committee or society for these purposes on behalf of the e-Governance Society.
7. To establish and make available connectivity and access to Information through Internet, Intranet, LAN, MAN, WAN, E-MAIL, WEB SERVERS and Websites, VSAT and other modes of communication or any other form of connectivity and regulate their use in the State. To facilitate the creation of a comprehensive State-wide Computer Networks and a State Telecom Network for use by all Government departments, institutions, agencies as also the public and private sector. Anything in excess capacity could be commercially exploited.
8. To buy, sell, let on hire, repair, import, export, lease, trade and otherwise deal and provide all IT resources and support, required by any Department for IT and e-governance applications including hiring of professionals, consultancy services, procurement of hardware and software, development of special purpose software projects involving application of Information

Technology on turnkey basis.

9. To enter into collaborations, MoUs, partnerships, agreements and contracts with Indian and/or foreign individuals, companies or other organizations for transfer, sale, purchase of equipment and for technical, financial or any other assistance for carrying out all or any of the objects of the society.
10. To enter into an agreement with any Government or authorities (municipal local or otherwise) or any corporations, companies, or persons which may seem conducive to the Society's objects or any of them and to obtain from any such Government authorities, corporations, companies, societies or persons any contracts, rights, privileges and concessions which the society may think desirable and to carry out, exercise and comply with any such contracts rights, privileges and concessions.
11. To hire professionals, consultants and other specialized agencies as found necessary for efficient handling and conduct of the business of the society.
12. To provide and/or arrange to provide all technical assistance and help to create, organise, and maintain centralised data-warehouse, departmental databases, information-repository, and software-library to be shared by all departments, institutions, agencies and wherever possible, the general public. To facilitate inter-departmental coordination in all IT-related matters and to devise modalities for information sharing so as to avoid duplication of data entry and development of software. To enable, simplify and modernize the storage, retrieval, transmission, distribution and exchange of information in electronic format. To work out procedures for data entry and its verification, validation, security, storage and updation on a regular basis.
13. To handle intellectual property rights in Information Technology and other new technology areas. All the software created in any government Department would be jointly held by the Department of IT through the Society.
14. To workout and notify the Standard of Service and Service Level Agreements in e-governance and IT for citizen services.
15. To take all means for the safety and security of data and to lay policies procedures, guidelines and rules for achieving the objectives of security

and authentication. This would include use of digital signatures and public key infrastructure.

16. To take all the steps necessary to fulfill the objectives of the Department of IT, good governance any governance for the overall benefit of the citizens and public in the State of South Goa. To do all such other lawful things as may be necessary, incidental or conducive to the attainment of the above objects.
17. To obtain licenses, certificates and privileges for all purposes from all persons, local authorities and the Central and State Government, to renew the same and transfer the same in favor of any person or authorities.
18. To lend or deposit moneys belonging to or entrusted to or at the disposal of the Society or franchisees and other having dealings with the society with or without security, upon such terms as may be thought proper and to guarantee the performance of contracts by such persons or company provided that the Society shall not carry on banking business as defined in Banking Companies Regulation Act 1949.
19. To borrow and raise money with or without security or to receive money and deposit on interest or otherwise in such manner as the Society may deem fit.
20. To draw, issue, accept and to endorse discount and negotiate promissory notes, hundies, bills of exchange, delivery orders, warrants, warehouse, keeping, certificates and other negotiable or commercial or mercantile instruments connected with the business of the Society.

b. Sharing of Common Infrastructure

1. It has access to land records database to view Form I & XIV records.
2. Online applications received through Govt of Goa eservices portal are downloaded and processed through this system.
3. Interface to South Goa District website.

c. Technology Standardization

It was planned to use open source technologies to deploy this system. Software

Package is developed under Linux-Apache-MySQL-PHP(LAMP) platform.

E-Service layer is the front-end layer of DC-Suite which interacts with citizens and offers services to the citizens. The public access is provided through internet, SMS and Touch Screen kiosk.

Intranet layer is the middle layer which offers lot of collaboration services and tools. Services like E-mail, Forum, Notice Board, Daily Events are provided to the staff.

Back Office layer is the key functional area comprising of all fifteen functional modules with which the government staff will work and carry out the backend operations.

2. Process Re-engineering and Reforms

a. Major non-ICT front end Process Changes

1. Citizen Facilitation Center: It is setup to receive all kinds of applications at a single location, issue all types of forms and help to fill forms to citizens. Status of application can be traced from CFC.
2. Standardization of application forms and documents required to attach along with the application forms.
3. Standardized correspondence letters, orders for activities which are covered as modules.

b. Major non-ICT back end process changes

1. Re-arrangement of sections and seating arrangement of employees based on the public and official contacts.
2. Assigned seat names to each employee.
3. Purchase of two Linux Servers to deploy an application DC-Suite.
4. Employees' motivation and training to shift from manual process to electronic process.

3. Capacity Building

a. Leadership Support and Visibility

This project is initiated with the positive support of District Collector, South Goa District and other officers. They had arranged study tour to Kerala districts.

b. Change Management Strategy

1. *Training*

Employees were trained through N.I.C. and Education Development Corporation to operate computer systems and use windows, MS-word, Open Office tools. NIC had conducted trainings on Windows basics, Open Office, Internet and E-mail in the collectorate. Also, employees were sent to computer training programmes organized by the EDC.

2. *Workshops*

DC-Suite demo was organized to provide general awareness about package and functional activities covered in the system. Officers and Section heads were involved in it. It was arranged mainly to prepare them to shift over to a new working environment. It helped to clear apprehensions and negative attitude.

3. *Formation of a Committee*

A Technical Committee is formed to monitor the DC-Suite implementation project. It consists of Additional Collector, Mamlatdar E-Governance, Dy. Collector (Revenue), State Informatics Officer, District Informatics Officer as members. District Collector is the chairman of the committee. It meets on a monthly basis to review the progress of the project.

4. *Hiring Technical Hands*

Graduates with computer knowledge were hired to assist staff to operate DC-Suite software and attend the minor technical problems. These graduates were hired in the initial phase of the project for a period of six months.

5. *Master Trainers Identification*

Collectorate has fourteen sections to handle various matters. One Master Trainer was identified from each section to assist other staff. Master trainers were trained

thoroughly on DC-Suite. Master trainers were chosen with the following criteria

- Having a positive attitude towards the computerization activities.
- Having reasonable knowledge on computer operation.
- An aptitude to learn and develop skills.
- A helping mentality to their colleagues and ready to share knowledge.
- Energetic and ready to take challenges.

The master trainers are looking after day-to-day issues on DC-Suite implementation in their sections. They act as a link between the sections and NIC officials.

c. Training Plan Internal and External

The skills and capabilities development of the staff is an important component to implement e-governance services. Keeping this in mind, the staff was provided training on basic computer knowledge of MS Office, Open Office, Internet and E-mails.

It was planned to form batches of ten employees to train twice on basic tools and DC-Suite system. In the beginning, two trainings were given to the staff. These trainings were conducted by the NIC in the Collectorate. All employees were trained in basic computer tools and DC-Suite.

Every month on last Friday training is arranged for new employees and refresh their knowledge on computer concepts and DC-Suite.

Also, employees were sent to EDC to attend training regularly on basic tools.

NIC had conducted around trainings to implement this project apart from monthly training.

d. Program Management

Yes. Technical support is provided by the National Informatics Center, District Unit, Margao to implement the project. Also, one programmer is hired on a contract basis to develop additional modules in the system.

A technical committee has been formed to review the progress of the project. It meets on a monthly basis and discusses the technical and non-technical issues with the Collectorate section heads.

e. Sustainability of Efforts

This district is covered under e-District project. Also, E-Governance committee is being formed to implement e-services in the district.

Regular training programmes are being arranged for newly joined staff.

Training programme is conducted on the last Friday of every month to refresh knowledge.

Adequate ICT Infrastructure is made available by the Collectorate to run this project.

4. Technology

a. Give a detailed description of the Technological solution adopted [including cost of ownership, maintenance model]

DC-Suite is developed under Open Source Technologies Linux, Apache, MySQL & PHP platform. Software is web based application and citizen interface is provided through Kiosk, internet and SMS.

b. Security and confidentiality standards defined and implemented

Standards Defined

1. User authentication.
2. Firewall protection.
3. Roll-based access.
4. Module-based access.
5. Seat-based access.
6. Hierarchy-based transfer of tapals and files.

Standards Implemented

1. This system has been deployed on Linux Servers with a firewall protection.
2. Each employee has a user account and they login with login/password.
3. Users are created by granting admin, master and general permissions.
4. My SQL users are created with the necessary grants and permissions to access the database.
5. Seat-based required menus are enables in the system whether a particular employee handles functional area.
6. Dealing hands can transfer tapals or files to his next superior only.
- c. **Competence of people in technology (hardware, software, security. etc.)**
 1. All employees are made computer literate for using basic tools through trainings and re-trainings.
 2. Software is being used by all the employees of the collectorate.
 3. Data backups are taken regularly.
 4. Databases are replicated on the Server at Secretariat, Panaji.

IV) Value Indicators

1. Digital Inclusion

a. Extent to which this factor of “eExclusion/eInclusion” has been addressed

This factor has not affected implementation of this project as English language is maximum being used in daily office work.

2. eParticipation

Steps taken to address this factor

1. Review of pending tapals and files done fortnightly.
2. Module implementation done with district administration support.
3. Provided technical hands to implement the project.

3. eWaste

Steps taken to address this factor

As per the directives of Govt. of Goa, a committee has been formed to dispose obsolete ICT items. Committee consists of Dy. Collector, Accounts Officer and NIC official from district unit. Items list is prepared as per the guidelines, it is approved from DOIT. Obsolete items are disposed through buy-back or e-waste management agency.

Shri Sandip Jacques, Collector, South Goa Collectorate, Goa, e-mail: cols.goa@nic.in and Shri Ashutosh Apte, Mamlatdar E-Governance, Goa, e-mail: mam-dmegov.goa@nic.in

Singrauli, Madhya Pradesh

Shri P Narahari and Shri Avinash Pathak

I) Overview

E-governance ranges from “the use of information technology to free movement of information to overcome the physical bounds of traditional paper and physical based systems” to “the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees”. The common theme behind these definitions is that e-government involves the automation or computerization of existing paper-based procedures that will prompt new styles of leadership, new ways of debating and deciding strategies, new ways of transacting business, new ways of listening to citizens and communities, and new ways of organizing and delivering information. To monitor and judge the various government activities and policies e-governance is an inevitable step in today’s scenario. Our district administration takes various steps for the automation of different departments involved in the public welfare activities so that a better decision making foundation has been laid down. Multiple numbers of e-governance projects has already been launched and few are in pre stage of implementation for providing fast and upto the mark government to citizen services out of which Samadhan Ek Din, Jan Sunwai, and LAIIS system are the platinum ones. The key to e-governance is the establishment of a long-term, organization-wide strategy to constantly improve operations with the end in view of fulfilling citizen needs by transforming internal operations such as staffing, technology, processes and work flow management. Adding to this key Basic

Amenities and services monitoring system (PARAKH) and Land Acquisition and Industry Information System (LAIIS) has been implemented for proper monitoring of various public welfare tasks in the district. Kiosk centers have been developed for providing better Citizen Services at Block level. Every important effort needs recognition in the world. CSI-Nihiliant recognizes these efforts and honored them globally through e-governance awards in various categories every year. We also want to be a part of this great event so that we can judge our e-governance initiatives and learn with others as competition is a wonderful way of improvement.

Singrauli is the 50th district of Madhya Pradesh. It was ranked district status on 24th May 2008, with its headquarters at Waidhan to fulfill the aspirations of people of this place. Singrauli district has emerged as an ideal destination for setting up of thermal power units due to availability of coal and water in the vicinity. As many as 8 projects promoted by industrial houses like Reliance, Essar, Hindlaco, JayPee etc. are being setup in the district, with an aim to wipe out the shortage of power. District administration is entrusted with the onerous task of land acquisition for all these projects. District Administration's priorities include acquisition of land in a speedy yet humane and justified manner, to satisfy this quench e-governance is the best option as a result of which we have developed and implemented **Land Acquisition and Industry Information System (LAIIS)**. LAIIS helps in various land acquisition, resettlement and rehabilitation activities going on within the district. District administration also provides various G2C services through various **e-Nagrik Seva Kendra** Kiosks implemented at the district as well as block level. These seva Kendras works for facilitating submission of applications by the citizens for issue of certificates like Birth, Death, Caste, Residential and Income. Implementation of **State Wide Area Network (SWAN)** and the development of various **Common Service Centres (CSCs)** at the Gram Panchayat level will make the district globally connected. **Jan Sunwai System** has been extensively used by the various departments and the industries for the automation of grievance redressal mechanism. This system helps in the proper tuning of the various administration tasks & activities so that they can provide maximum benefits to the citizens. Apart from these activities a plethora of other e-governance activities also going on in the district.

II) Result Indicators

1. Key Performance

a. Service Delivered (G2C, G2B, G2G, G2E)

1. Land Acquisition and Industry Information system

• Project Brief

Singrauli district has emerged as an ideal destination for setting up of thermal power units due to availability of coal and water in the vicinity. As many as 8 projects promoted by industrial houses like Reliance, Essar, Hindlaco, JayPee etc. are being setup in the district, with an aim to bridge the shortage of power in the state and the country.

District administration is entrusted with the onerous task of land acquisition for all these projects. District Administration's priorities include acquisition of land in a speedy yet humane and justified manner.

LAIS is a web based software which is full of Graphical User Interface extensively used by various power sector companies for various land acquisition and R&R activities and citizens of the district for filing on line complaints and checking their status.

Basically this software is developed in two different phases (Using Drop wise Software Development methodology).

In the first phase of development (August 2008), a software was developed to enter the data captured from govt. records and field surveys and calculate the compensation payable to Project Affected Persons (PAP) and also generates a unique ID No for each PAP and print photo identity card for them.

In the second phase (November 2009) we developed a web based software (hosted it with a DNS of <http://www.singraulidist.org>) with an aim to bring transparency to the whole process of land acquisition, as well as subsequent Rehabilitation and Resettlement Activities.

• Project Objectives

The key objectives for this project are as follows:

a. For Project Affected Persons (PAPs)

Project affected Persons should access to accurate and reliable information such as:

- What data has been captured related to their physical assets – land, house, trees etc.
- Rates of Compensation
- What R&R benefits the company has agreed to provide to them
- In case a PAP finds some discrepancy he/she should have a complaint filing system

b. For District Administration

- Making all information available at fingertips for speedy complaint settlement
- Keeping track of all compensation payments
- Keeping a check on companies as to whether all R&R responsibilities are being executed in proper manner
- Ease in Planning due to availability of data in a comprehensive manner.

c. For Other Groups

To report the true state of affairs to media, NGOs and political parties so as to dispel any misinformation campaign.

- **Benefits of Project**

The software goes one step further than just display of information captured and allows all the companies setting up projects in Singrauli to login to the site and enter data on the following activities (Ten different data screens have been provided for it)

- Financial Compensation - Award
- Financial Compensation – Land Rate Difference

- Financial Compensation – for House on Govt. land
- Housing
- Labour/Employment
- Training
- Educational – Scholarship/Other
- Pension/Displacement Stipend
- Medical
- Other Benefits

As most of the R&R benefits are of a long term / recurring nature, projects are using them on a continuous basis and will be required to do so in future also.

This data automatically gets added to the profile of the respective PAP and when you search for any PAP you get complete details about him his family, assets, compensation paid to him/her and R&R benefits given till date.

In addition to individual reports about the PAPs project wise reports are available on demographic profile of displaced population and compensations paid to them.

- **Information / Services being provided to public**
 - a. **Based on the data entered by projects the system dynamically generates various types of reports in PDF format for public access:**
 - Updated information on compensation payment and R&R benefits given to PAPs, like house, education, medical facilities etc.
 - Detailed profile of all PAPs along with Photo, family details, assets, and upto date details of benefits given.
 - Summary Reports on demographics profile of PAPs based on education, age, sex, category, village, BPL Status etc.
 - b. **The system also makes available all Agreements, R&R policies and Award Statements, related to land acquisition, in public domain.**
 - c. **Public can also view News, Notices and Announcements posted by District**

Administration, and news updated by industrial projects.

- d. The system has a complaint form, where any complaint can be submitted in Hindi and the system generates a reference no which can be used to track the status of that complaint, online.

Complaint registration module of LAIIS (Land Acquisition and Industry Information System)

This module provides online complaint registration mechanism and after filing the complaint a unique complaint id will be generated through which he/she can check the status of his/her complaint. Details of the complaint along with action taken/response are available for everyone to see.

Table 1		
Complaints	Resolved	Pending
2814	2764	50

- **E Nagrik Seva Kendra**

Samadhan Ek Din Mein- e-Nagrik Sewa Kendra (One Day Governance-Public Facility Centre) is a very innovative and pro-people project which increases efficiency of administration. It seeks to provide around 21 certificates sought by the applicant on the same day itself. The main aim of the program is to provide all kind of services like Govt. certificates on the day of submitting application itself and under one roof. For the Administration, it reduces the corruption to a great extent, generates revenue, increases public confidence and reduces the number of pending cases. As this district was formed in 2008 so currently there is only one public facility centre established with in the premises of district collectorate and two centers are being developed at Deosar and Chitrangi block. This will help in the work flow automation of various governmental activities.

Table 2			
Year	Applications Received	Resolved	Pending
2009-10	7776	7776	0
2010-11	22598	22598	0

- **MP LOK Seva Kendra**

Recently we have launched delivery centre for various MP lok seva services in the district Collectorate premises.

- **Common Service Centers (CSC)**

Common Service Centre (CSC) is a community service centre for rural citizens at panchayat level covering about 6 villages. Currently 136 CSCs at all levels in the District cater the service needs of all the communities in the surrounding 5-6 villages. Each CSC will have computer and internet facilities. It will have both offline and online services. It will be equipped with computer, multi function printer, digital camera and networking facilities.

Following G2C Services have been provided by CSC's:

- a. Land records
- b. Vehicle Registration
- c. Issue of certificates
- d. Government schemes
- e. Utility/Telephone Bills
- f. Employment exchange
- g. Ration cards
- h. Electoral Services
- i. Pension schemes
- j. Road transport
- k. Public grievance

- **Jan Sunvai System**

This system has been extensively used in the district for the automation of grievance redressal mechanism. A separate public grievance cell is working under the Collector which is using this software for registering the grievances of the citizens came at every Tuesday (This day is declared as Jan sunwai din). Using

this system one can easily measure the density of applications comes under which department and various statistical configurations for decision making. This monitoring tool has developed enormous confidence among district people, especially with thousands of Project Affected Families.

Table 3			
Year	Complaints	Resolved	Pending
2009-10	5368	3709	1659
2010-11	11606	8239	3367

2. Efficiency Improvement Initiatives

a. Time and Cost Efficiency

- **BHU Abhilekh (Land Record System)**

BHU-ABHILEKH System has been implemented as a future step for **implementation of decisions regarding agricultural land ceiling, distribution of ceiling surplus land by removing various administrative and legal obstructions.** It is a detailed and informative database with an efficient retrieval mode. It helps in the creation of comprehensive computerized database on land records and land reforms activities. This database can help in the land tenancy, ceiling, consolidation and records maintenance activities pertaining to land reforms. We are using the Data hosting software for hosting the created data to the main server so that it can be easily accessed by the citizens. Recently we have integrated BHU Naksha software with the existing system which will generate digitized map along with khasra details.

- **Parakh (Basic Services and amenities management system)**

This software covers management of various basic infrastructure services such as drinking water (hand pumps), electricity (transformers), education, health, agriculture, veterinary services, women and child development (anganwadis) , distribution of essential commodities through fair price shops, distribution of old age and social security pension and disposal of demarcation, mutation and partition cases. Data regarding these amenities and services has been collected and compiled on monthly basis and has been used for creation of resource inventory of all the villages, better monitoring and planning and improvement in delivery of services.

- **Rural soft monitoring system**

Web-based Rural Soft is a web based solution for monitoring monthly progress reports of various rural developmental oriented schemes such as Indira Awas Yojna (IAY), Swarnjayanti Gram Swarozgar Yojana (SGSY), Sampoorna Grameen Rozgar Yojna (SGRY), Mid Day Meal (MDM), National Food For Work Programme (NFFWP), M.P.Rural Employment Guarantee Scheme (MPREGS), Backward Region Grant Fund (BRGF), Watershed Management etc. It facilitates on-line data entry and on-fly generation of monitoring, progress / analysis reports. These progress reports directly reflect the progress of poverty alleviated schemes those are executed by Zilla Panchayat.

- **BRISC (Bank Recovery Incentive Scheme)**

This system has been used to facilitate the user department in easy Maintenance, Management & Monitoring of Revenue recovery against Loans given under various Schemes. The basic input to the system consists of Master Directories viz., District, Tehsil, Bank, Revenue Officers, Treasuries, Schemes and the details of RRC containing the information of borrower, scheme under which Loan sanctioned, bank, Guarantor, Loan & due amount.

- **CM Visit / DM Visit Monitoring System**

This system has been used for the monitoring of various tasks/announcements that have been declared/announced by Chief Minister or District Magistrate during visits/tours to various places within the district. Using this one can easily track the progress of any announcement and its current stage of implementation.

<i>Table 4</i>			
Year	Complaints	Resolved	Pending
2009-10	312	312	0
2010-11	804	418	386

- **e-Khanij (Information System for mineral resources department)**

Following facilities has been provided by the system-

1. Submission and processing of applications for granting Reconnaissance permit (RP), Prospecting license (PL), Mining Lease (ML) and Quarry

lease (QL). Submission/ processing of application for renewal, Transfer, Termination for ML & PL.

2. Submission of Transit Pass (TP) request by lessee, its processing and issue of TP book by a work flow module. Calculation of royalty and dead rent deposit at the time of issuing of TP book.
3. Registration, processing and disposal of the cases related to illegal mining and illegal transportation.
4. This will result in the speedy disposal of various RP, PL, ML and QL related applications. Availability of accurate mine-wise mineral production may result increase in tax collection and royalty collection.

• **Forest Survey and Dwellers System**

This system is collectively used by forest and tribal department. Its implementation encompasses extensive use of innovative technologies like GPS (Global Positioning System) and the use of personal digital assistant (PDA) for conducting surveys in the forest areas. It is used for the exact calculation of land and its topographical characteristics. After conducting surveys the data will be uploaded to the site for global access. About 3600 forest dwellers have been given pattas under Forests Rights Act 2006 and been distributed.

• **NREGA MIS**

This system has the following elegant features-

1. Information on base-line data of BPL survey.
2. Password protected on-line data updation at the web-site.
3. Various on-line reports based for citizens/government.
4. Computerization of all activities of NREGS right from the registration to muster roll preparation.
5. Provides status of fund availability at district/ block/ panchayat level.
6. Facilitates data uploading on Delhi server directly.
7. 80% MIS feeding is the current position of the district.

- **Election MIS**

Assembly/Parliamentary General Elections were held under the directions of Election Commission of India. Various reports in the required formats were arranged. Polling and counting party formation was made my computerized randomization technique fulfilling all the guidelines of ECI was done by NIC, Singrauli and was found quite successful. More over to keep ready and at a glance the various elections' information of the district was profiled by the computer system. This profile made available the countless election related information then and when required. CD was prepared and sent to ECI, Delhi for uploading on ECI website "www.eci.gov.in". The counting data compilation of electors, generation of reports and transmission to ECI, Delhi, Chief Election Officer, Bhopal. The computerization as a whole was found so much satisfying and needs of the time that the district authorities especially responsible.

- **Time Limit Paper Monitoring System**

The time limit paper monitoring system helps the collector to keep track of action taken/time taken by various officers on time limit works. On every Monday a meeting has been conducted for the progress of work required and using this system collector will easily track the work progress corresponding to various OIC's. This will increase the throughput and make the work flow more efficient.

<i>Table 5</i>			
Year	Complaints	Resolved	Pending
2009-10	3417	3397	20
2010-11	5045	4714	331

- **Vidhan Sabha Question Reply Management System (VQRMS)**

This system has been used for the workflow automation pertaining to gathering of replies of vidhan sabha questions from various offices of the Departments and aid in smooth and effective management in reply to Vidhan Sabha Questions.

<i>Table 6</i>		
Total Question Received	Total Question Final Replied	No. Of Question Pending
30	30	0

- **Mobile Governance**

A quick and efficient method of governance has been adopted by District Collectorate and Zila Panchayat using the SMS service of various cellular network providers. This is helping the collector and ceo, zila panchayat in making the good network with various district and janpad panchayat officials. Using this service they have been monitored the different tasks and processes going on at different execution levels and also send the schedules and agenda of meetings on it.

- **Video Conferencing facility**

The Video Conferencing facility had been started by NIC since 2009. The facility is being used by most of the departments regularly to interact with their head offices. VC facility is proving to be very beneficial as it saves a lot of time and money involved in traveling.

- **EScholarship**

Various schools and educational institutes in the district have been using this software for online demand of scholarship and the whole procedure is monitored by Assistant Commissioner Tribal Welfare.

- **Agmarknet**

Software is supplied by NIC Head Quarter New Delhi and successfully implemented at all Agriculture Produce Market Centers.

- **LAN Backbone**

Singrauli is one of the important nodes of NICNET, a satellite based computer communication network. For accessing the web/internet/email a LAN setup is currently installed in the District Administration Centre. Using this LAN backbone various offices connected to each other and communicate through electronic mails.

- **District Website**

Website for district Singrauli has been hosted. The site contains information about the District and District Administration, various Industries, Government

Schemes, Key Contacts, Places to visit etc. for the giving the brief details to the user who wants to visit the District Singrauli or who is interested in getting some information about the district.

III) Enabler Indicators

1. Department Policy and Strategy

a. eGov/ICT Vision and Road Map

The main ambition behind all the ongoing / planned schemes above is to make Governance transparent and hence totally accountable to the normal citizen. It is intended that the citizen be made free from all cumbersome procedures and red tapism and he / she feels empowered through the use of ICT. All the projects that have been taken up have been approved by the either state or district authority. Some concepts have been borrowed from best practices in other districts but approval has been received from our state before implementation hence the software being used is uniform throughout.

2. Process Re-engineering and Reforms

a. Major non-ICT front end process changes

Creating suitable plans to deal with organizational issues that arise during implementation of e-governance projects. E-governance projects tend to redefine power equations within departments. Stakeholders outside government are also often impacted. The major front end process changes that are envisioned mainly center on the comfort of the citizen. The citizen should be able to access information anytime anywhere either through the internet or may be even through phone. This information may relate to his / her own grievance or to any developmental project of the government. Apart from this, these G2C, the G2G, G2E services should help the various departments to stay connected to reduce file work and instill more confidence in the average government employee. The major back end process change hence focuses on paperless office and quicker delivery of services.

3. Capacity Building

a. Leadership Support and Visibility

To initiate any e-Governance project, the capacities required are much more comprehensive and holistic than a conventional Software Development Life Cycle (SDLC) project. E-Governance initiatives entail policy development/refinement, Financial Management, Program Management and warrant a higher emphasis on Change Management. Establishment of district e-governance society is a step to achieve all these milestones.

Almost all eminent public representatives of the district are the member of this society and make the valuable additions in the current policies and procedures so that district administration will avail the various services to common citizen in an easy and effective way. A technical team under district Collector with the support of District Informatics Centre provides training to various government officials.

4. Technology

- a. **Give a detailed description of the Technological solution adopted [including cost of ownership, maintenance model];**

Mostly open source technological solutions have been adopted by district administration for the software development process. We develop a quality control and prediction model for improving the quality of software delivered by development to maintenance. This model identifies modules that require priority attention during development and maintenance. The model also predicts during development the quality that will be delivered to maintenance.

We try to make each and every software security complied, a team will conduct a security audit before launching of the application.

IV) Value Indicators

1. Digital Inclusion

- a. **Extent to which the project has addressed the factor of “eExclusion/eInclusion”**

As per the demographic structure of Singrauli, most of the public lives in rural areas nevertheless district administration takes various steps to improve eInclusion. Recently Singrauli has been emerged as an energy hub of India hence various

industrial houses makes the enormous task of land acquisition and as a part of R&R policy most of them along with district officials are involved in giving computer training to rural public. That's why we rate our shelf in the scale of 3(moderate).

2. eParticipation

To improve eParticipation a proper training plan has been made for various district officials which contains software specific training, basic computer skills program.

Shri P Narahari, DM & Collector, District Collectorate, Singrauli, Madhya Pradesh, Email: p.narahari@yahoo.com and Shri Avinash Pathak, District Informatics Officer, Department of Information Technology, Singrauli, Madhya Pradesh, Email: pathak.avinash@nic.in

Gadchiroli District, Maharashtra

Shri Atul Patne and Shri Meshram

I) Overview

Gadchiroli has traditionally been the most backward district in the state of the Maharashtra. On all the developmental indicators especially the HDI Gadchiroli has somehow remained worst off in the whole state. But the district administration is determined to reverse the situation.

Need of an hour Citizen oriented administration, administration at your doorstep, development administration and other such terms were coined after the phase of e-governance has become a reality in the public administration. By using the IT in the administration the efforts are being made to go from the establishment computerisation, facility centers, smart cards, web based monitoring, SMS Alert to now Social Network/Blog based administration. E-governance is expected to deliver speedy work and if possible transparency in the administration. Prompt availability of facts for decision making has been equated with prompt decision making. Beginning with the Dhar districts *Gyandoot* the project of providing citizen facilities, Karnatakas land record computerization project *Bhoomi* etc and Maharashtra's *Setu* project, etc experiments are already underway. Previously the public sector was using the e-governance. E-auction, e-tendering etc have become common now. Banks core banking was implemented as their efforts towards e-governance. But the more I think about these projects, the more

I realize that e-governance implemented in the name of making the administration citizen centric cannot actually be construed to be so. Computerisation is merely a support system of technological upgradation, but when I really think about its utility in making the administration development oriented, several objections can be raised. Let us look at some of the facets which though straightforward have seldom caught anyones fancy.....

e-governance is concerned mainly with computerization, in other words it is a related concept to the Intelligence Quotient (I.Q.). A computer cannot be a substitute to human nature, whatever good-bad use technology is put to depends upon the intentions and nature of the human beings operating. For example, same technology can be used to launch a satellite into the space and the same technology can be used to launch a deadly missile onto defenseless humans. Same satellite can be used to spy on others and same satellite can be used to predict the deadly cyclones. The examples are numerous. Similarly the citizen centricity of the administration depends on the intentions of the officers-employees making use of the medium of e-governance. Here in I visualize the need for the I-governance which is more dependent on Emotional Quotient. EQ is also dependent on IQ but is much more than it. Similarly I-governance though inseparably linked to e-governance is much broader concept. Here, I stands for Innovation.

I-governance is inclusive of e-governance. It never avers from the use of IT in the administration, it just aims to put a heart in it. To realize it is paramount to establish mechanisms which can send a message to the last levels of implementation of encouraging the employees to put their heart into their work as well as can analyze the effects and response timely.

District Gadchiroli is situated at the east and extreme end of the maharashtra state and is well known for dense forest, beautiful hills and rivers. however now a days the district came into limelight because of naxal activities. Gondia district is situated on the north side towards east shares borders of Rajnandgaon Baster District of chattisgad state; towards south it shares borders of Karimnagar, Adilabad district of Andra Pradesh. All this neighboring district are Naxal affected. Gadchiroli is tribal district it mainly includes gond, pardhan, madia, rajgond tribes. The Total Population of Gadchiroli District is 11.03 lakh and tribal population is 3.72 lakh i.e. 38.35%.

II) Result Indicators

1. Key Performance

a. Service Delivered (G2C, G2B, G2G, G2E)

Our approach will become evident in the following projects that have been undertaken in the district to bridge the gap between the popular expectation and the results of administrative exercise.

Our efforts have been based on two types of approach

1. Improvement of existing systems
2. Formulation of new systems and procedures

Following is the list of projects that are being undertaken in Gadchiroli-

Projects involving Improvement of existing systems

ICT based Disaster Management Plan- implemented by the Disaster Management Cell of the district Gadchiroli as part of its Disaster Management Programme

1. e-Flood Alert Project -
 - Control Room for constant flood situation monitoring - It consists of following innovative modules
 - CUG Mobile distribution under disaster management cell
 - SMS based Flood Alert System
 - (Includes a query module to monitor in between scheduled alerts)
2. SMS based Water level monitoring in the Observation Wells
3. SMS based Blood donor information and registration system
4. Wild life monitoring system and automatic pumping system at bore well of drinking water for wild animals.
5. e-News
- b. **Specific innovative ideas implemented in eGov area; and their impact on services:**

1. IVRS and web based seed and soil testing Information and assistance system
2. e-Vidya- Computer education and long distance education using V-Sat facilities in remote and inaccessible locations

Projects based on formulation of new systems and procedures:

- **Innovations in the Public Distribution System Implemented**

1. GPS Tracking of PDS Trucks
2. SMS based information system

Proposed

1. Mobile ration shop
2. DWAR POCH for whole district
3. Direct supply of grains from FCI godown to the FPS
4. Increase the remuneration for the truckers

- **Innovations made in the implementation of the MGNREGS:**

Implemented

1. Project e-Disha- Financial Inclusion in MGNREGS: Use of Business Correspondent Model and the biometrics
2. Call Centre
3. Adult Literacy
4. Skill development projects
5. Mobile Crèche

Proposed

1. Financial cover for the beneficiaries
2. SHGs should be allowed as a unit for NREGA work
3. Crèche under NREGS Scheme
4. Increase the sharpening charges of the tools
5. Grant of powers of Technical Sanction
6. Literacy Missions for the beneficiaries

7. Convergence of Forest Right Act 2006 with MGNREGS

Other innovative measures taken

1. Jayshree Bima Yojana and Aam Admi Bima Yojana
2. Convergence of Social Security Schemes

1. ICT based Disaster Management Plan

In the field of systemic improvement, our main focus has been to introduce the innovative use of Information technology in ensuring better efficiency and service delivery to the citizens. We have realized that the IT can be most useful in speedy information processing and dissemination. So we saw it fit to integrate most of our IT based initiatives with the district's disaster management system. Thus, the Disaster Management Cell of the district undertook various initiatives to strengthen its disaster handling capacity.

Our mission is vulnerability reduction with respect of all types of hazards, be it natural or manmade. This is not an easy task to achieve, keeping in view the vast population, and the multiple natural hazards to which this country is exposed. However, if we are firm in our conviction and resolve that the Government and the people of this country are not prepared to pay the price in terms of massive casualties and economic losses, the task, though difficult, is achievable and we shall achieve it.

Gadchiroli district is well known about tribal people and most of the peoples are farmers. Specialty of this district is the number of big and small rivers that cross through this district, so in rainy season all the rivers have huge quantities of water flow very violently and make it a very vulnerable situation for the river bank of the people. Rivers are as follows in district Gadchiroli:

Table 1:

S.No	Name of River	Affected Area
1	Wainganga	Wadasa Sawangi, Armori, Dongargaon, Wagala, Gadchiroli, Markanda, Gadaheri
2	Godavari	Somnur
3	Indravati	Somnur, Damrancha, Hindur

4	Gadvi	Vichiro, Shankarpur, Mohgaon, Aratrodi
5	Sati	Kurkheda, Manapur
6	Khobragadi	Malewada
7	Kathani	Gadchiroli
8	Pranhita	Mrudukrishanapur, Gadaheri, Sironcha
9	Parlakota	Bhamragad
10	Palamgoutam	Lahiri

Every year due to heavy rainfall, the floods cause substantial loss to people and property. Administration has to rehabilitate thousands of people to safer place. So, for the prevention from the damages arising due to natural calamities and also to reduce cost on rehabilitation of the river bank people, we have made extensive IT made interventions.

2. Introduced Technology:

1. e-Flood Alert

Control Room: An Emergency Operations Center (Disaster Management Cell) exists in collector office, Gadchiroli, which functions round the clock, to assist the divisional commissioner office in the discharge of his duties. The activities of the Control Room include collection and transmission of information concerning natural calamity and relief, keeping close contact with governments of the affected villages, interaction with other state Ministries/Departments/Organizations in connection with relief, maintaining records containing all relevant information relating to action points and contact points in state Ministries etc., keeping up-to-date details of all concerned officers at the State levels. District administration has provided the emergency ambulances in flood affected area because to provide health services immediately to the victims. Through VHF-GPS fitted in the ambulances, control room keeps track of the information about their current situation.

2. CUG Mobile distribution under disaster management cell

In Gadchiroli district, 42 villages are flood affected, so district administration has given the CUG mobile to villages people like Sarpanch, talathi, Gram Sevak. In case of emergency, villagers could be directly connected to control room or vice versa. The first step in implementing an efficient flood damage control programme is developing a fast and least error alert and information system.

District Administration implemented GSM based E-Flood monitoring system- **Disaster Management Cell** has installed and commissioned GSM based E-Flood monitoring system on 13 destinations which have been chronically flood affected. Before installing this system, DMC had surveyed the area which has been flood affected in previous years and selected most vulnerable 13 destinations for installation. The system consists of following three main modules-

- o GSM based flood monitoring equipment with solar panel
- o Flood server for collecting data of current water level through GSM module
- o Web portal for live updates of current water levels of river.

GSM based flood monitoring equipment is a completely customized one consisting of various electronics equipment integrated with the help of mobile technology. We have installed and commissioned flood detection equipments at all the destinations most of which are very remote and affected by naxal activities. Basic concept of behind this project was to give prior intimation of current water level of river on mobile through SMS. In this system, we have prepared the four water level alert like

- o River water flow is normal level : means it is safe for transportation, no need to panic
- o River water flow is above normal level: means it is safe but be alert
- o River water flow is danger level : means be alert for flood situation
- o River water flow is above danger level: Flood Alert

All of the above mentioned levels automatically fired the message through flood monitoring server. Flood GSM based equipment immediately message to the server like “Gosikhurd Vainganga River water flow is normal level”. The Server immediately blasts the alert message to desired stored mobile numbers within 5 Min. And with help of this message, concerned disaster management authority comes to know as to where to provide the help or communicate this message to all river bank area people.

- *How it works e-Flood System*

GSM based flood equipment is installed and commissioned on a high point from river bed like bridge, structure of irrigation department besides the river bed or on the top of well besides the river. Height of equipment from the river bed has been calculated by using measuring instruments and decided the water level like, if total height of equipment from the river bed is 10 meter then

- o Normal level is set on 2.0 Meter
- o Above Normal level is set on above 2.0 to 5.0 Meter
- o Danger level is set on above 5.0 to 7.5 Meter
- o Flood Alert More than 7 Meter

As per the above mentioned levels format, water sensor has been commissioned to desire destinations. In rainy season, if water flow of river increases and touch the first water sensor, sensor immediately response to the equipment and equipment searching the network and send immediately request to the flood server which is situated at disaster management cell.

Server takes the request from the remote flood system and generates SMS like. **River flow of water is on normal level** and sending to stored mobile numbers. If the water level decreases then sending the SMS like **River flow of water is below normal level**.

We have designed the special server for message data collection and generate SMS notification and send to the stored numbers. We have collected the cell no. list from divisional commissioner office, Nagpur; police department, Gadchiroli; and BSNL. With help of this list, we inserted cell no. of district administration officers of 6 districts, police departments, Gadchiroli and also gram Sevak, talathi, NGO who works in Gadchiroli. About 7 thousand numbers have been stored in flood server for the purpose of sending flood alerts.

One more add-on technology we have adopted here, this server is attached to the SMS gate way server, if you want any information about the water level of Specific River, we have made separate server number with specific number. Some key words are:

- o WL Mark (Markanda Vainganga)
- o WL Gadv (Vichora Gadhavi)
- o WL Sati (Kurkheda Sati)

- **Benefits**

3. Date of 5th, 29th, 30th August 2010 and 05th to 7th September 2010 due to heavy rainfall flood situation was occurred and communication, transports services was hampered that time due to this system, people got pre-alerts SMS for flood situation and with the help of disaster management cell, rehabilitation team reached the place and moved people to safer destination, supplied the foods, motor boats, life jackets and good swimmer teams were deployed on flood locations.
4. In rainy season, 42 villages were covered by E-Disaster Management Cell
5. In rainy season, within 15 days 51000 No SMS was blasted from the server at various locations and people got the information on their mobiles and controlled the situation before any disaster came through heavy rain.
6. GSM based Automatic Water Level Measurement System on Observation Well through Mobile SMS

It is again very important innovation made which works on the reverse principle of the flood alert system. While the flood alert measures the rise in the river water level, this equipment measures the sinking of the water level. Thus it can be very useful in sending out the warning regarding an impending drought. If the water levels sink dangerously low, the situation will be reported to the district administration in real time, thus enabling us to make necessary relief provisions to address any situation of water scarcity immediately.

This project is first of its kind in India, which is implemented in the district of Gadchiroli. This is a GSM based equipment and tailor made mechanism as per the conditions of the installation site. In Gadchiroli most of the OB wells are very far from the district headquarters because area of Gadchiroli is 14412 sq. km. and 80% is under dense forest cover. So in summer or rainy season, when it is not easy to go to the OB well, this innovative mechanism comes in very handy.

Whatever be the water level it is sent by way of an SMS by the GSM based equipment fitted inside the OB well.

- **Benefits**

- GSDA installed and commissioned this system at various 10 destinations which are in very interior area.
- From this system, GSDA are getting the reading on live server.
- From only one SMS, every can get the observation well reading on there mobile
- From this system, they saved time, money

7. E-News system for daily updates of flood, wild life reports to the local people of Gadchiroli, district administration and media person of district and state level

District administration has launched E-news project under disaster management cell. Project features are as follow

1. Launched web portal www.e-warta.org, in this portal district administration upload the latest news of Gadchiroli.
2. Started E-SMS system, collected the cell no. data from BSNL and subscription facility on web portal, up till now more than 10000 cell no. have been stored and daily short news updates or various types of messages can be broadcast on behalf of the district administration through SMS.

As mentioned earlier we tried to develop an integrated system with the help of IT interventions. In this setup to fully exploit the potential of SMS based information management system, we further developed an important module to maintain an inventory of the information about the potential blood donors. As Gadchiroli does not have any significant blood bank facility this information bank can prove life saving in times of need. Following is the description of this facility.

8. SMS based blood donor information and Registration facility

This, essentially, is a mobile based application using the SMS facility to provide information on the blood group donors in the district.



District administration develops following two systems for the citizens of Gadchiroli which is very helpful for providing instant health services to victims of any accident, requirement of blood and eye.

- Blood Donor Information System through Mobile SMS
- Registration of Blood and Eye Donor through Mobile SMS

Blood Donor Information System: This system is completely web based customized solutions and integrated with SMS gate-way server. Up till now we have collected database of blood donors more than 1500 of various blood groups and it is randomly selection process in web based software. Whenever anybody sends the SMS for blood that time web based software selects the three numbers randomly and sends reply to request mobile number.

- *Benefits*
- This blood donor SMS system is very much helpful for citizens of Gadchiroli, they are getting instant information blood donors immediately on their mobile.
- Uptill now 3679 people have got benefit from this system.

- 1500 eye registrations have been done on server.

9. IVRS and SMS based soil testing information and assistance system

Gadchiroli is spread over an area of almost 15000 sq kms. From North to South the distance is around 350 Kms. There is only one soil testing laboratory which is located at the district headquarters in Gadchiroli. For any kind of seed or soil testing the farmers have to travel great distances and go through a lot of inconvenience. To ameliorate this situation we decided to automate the whole procedure of soil testing.

The samples of soil are collected by the Agricultural assistants in the villages and a PNR number is issued to the farmer and affixed on the soil sample. This sample is then taken to the central soil testing laboratory. Along with the soil sample a whole lot of information is taken from the farmer regarding his farming practices. A user account of the farmer is opened and all the information relating to him is stored in this account. All this information is fed into the central database. After testing of the soil sample the results are uploaded in the user account of the farmer. The farmer can access these results from anywhere over the internet or by simply dialing the contact number of the IVRS based system which is programmed to operate in local languages like Hindi, Marathi, Madia etc. The website for accessing the results online is www.seedsoiltesting.com

- **Benefits**
- Farmers of Gadchiroli getting their soil result at taluka level through TAO (Taluka Agriculture Officer)
- Also getting report of soil testing through internet
- From this system, agriculture department is saving money on transportation, saving time.
- This system increased the efficiency of work.
- **Replication:**
- Agriculture Commissioner, Govt. of Maharashtra is going to start this project all over Maharashtra

- e-Vidya Computer education and long distance education using V-Sat facilities in remote and inaccessible locations
- *Executive Summary:*

The project of e-Vidya has been implemented on a pilot basis in the two Naxal infested and remote talukas of Dhanora and Kurkheda in the Gadchiroli district. This is an endeavour to take education to the remotest and most deprived parts of the district. The project envisages the education of computer through computers to the students in these talukas. To overcome the handicap of connectivity, we have installed V-SATs at all the sites not covered by any kind of connectivity.

10. Use of breakthrough technology for quality education

Through this project we are empowering the students and the youth by giving them quality education through access to the best of teachers imparting subject classes through a VSAT network. To implement this, we have established Audio Visual Labs and Virtual class rooms in the Schools spread across the district.

11. Imparting Vocational Training through these labs and studios

We understand the importance and the need for vocational education for increasing the employability of the rural youth. The gap between the requirement and availability of skilled manpower can thus be reduced through structured training using the studios and establishing such labs in ITIs and Polytechnics.

12. Soft skills and Employability enhancing skills for the unemployed youth

These labs can also be used for the training the unemployed youth in soft skills, language proficiency, skill development and other employability enhancing skill sets thereby addressing one of the key concerns of the masses.

Background & Objective of the project

The project was conceived to meet the unmet demand of quality education on modern lines in the backward and interior regions of Gadchiroli. Our objectives are

- To fulfill the primary objective of the department, in providing quality education for the grades 1 to 12 in regional language or Hindi or English medium.

- To enrich the education process with the help of the latest technology.
- To improve the students' performance uniformly across the schools, thus improving retention and quality of education.
- To help and assist teachers through regular training in utilizing technology and developing new methods of teaching.
- To impart vocational training to the youth, thus increasing their employability skill sets.
- Use of this infrastructure for multifarious uses like imparting health awareness, timely inputs for increased agricultural output, rural development, governance etc.

Current Challenges faced by District Administration**Field of Education**

1. Shortage of quality teachers resulting in limited assimilation of subject matter.
2. Use of out dated delivery mechanisms, adversely impacting the quality of education.
3. Poor infrastructure in most schools.
4. High dropout rate of students due to waning interest in studies.
5. Resultant unemployment and thus easily attracted towards organizations inimical to the interests of the State.

Vocational Training

1. Inadequate dissemination of knowledge and skills in institutions like the ITI and Polytechnics.
2. Low conversion ratio of such youth from student to employment.
3. Industry specific skills to be imparted by quality instructors are lacking.
4. Resultant unemployment and thus youth easily attracted towards organizations inimical to the interests of the State.

Governance

1. Lack of means to disseminate forecasts/ information/ market intelligence to farmers and discuss issues affecting them.
2. As vast majority of rural population are mainly agrarian, this is a big void which needs to be plugged.
3. Inadequate means to spread health awareness campaigns and timely calamity warnings.
4. Insufficient interactions between the District and Panchayat authorities leading to divergence of views.

Strategy Adopted By District Administration:

The solution to the above problems is using technology which is cutting edge and at the same time affordable, in improving the teaching and learning capabilities, skill development, vocational training, imparting health awareness and critical agricultural inputs, real-time and transparent interactions between the authorities at various levels thereby making a difference where it matters – substantial increase in quality of education and imbibing skill sets required for higher employability quotient, renewed trust in the governance systems and a hope for the future.

VSAT Studio

As per directives from the district administration, implementing agency has set up state of the art VSAT studios at the district headquarters. The studios are equipped with all the necessary hardware to broadcast the class through the network. The implementing agency Everonn Ltd is appointed fully trained and qualified manpower to operate these studios and provide necessary satellite link up and connectivity for seamless transmission.

Virtual Classrooms and Audio Visual Labs

In the first phase, as per directives of district collector, implementing agency has established VSAT labs in the schools in the district. These labs are equipped with computer, projector, webcam, VSAT equipment, mike, speakers, requisite

furniture, UPS etc. The classes are conducting from the studios located at District headquarters by the best available subject matter experts of the schools. Implementing agency has provided one Technical assistant in all these VSAT labs to assist in operating the lab. It would initially train the teachers at the studio to teach the students on camera. The time table is being scheduled by studio manager in consultation with the school.

In the second Phase the above solution can be taken to the ITIs and the Polytechnics in the district for improved vocational training, skill development etc.

Multifarious Uses of this Studio

The studio can be used for other multifarious uses like imparting health awareness programmes, timely inputs to farmers for increased agricultural output, rural development, governance etc.

- **Benefits**
 1. E-Vidya is turnkey project for district Gadchiroli. Through this project students can get digital and distance academic education.
 2. Tribble students are getting the computer education through this project.
 3. Due to this project, strength of student in the school has increased and reduced the percentage of absence in school.

Virtual Classrooms



1 : Many
Classroom Mode

4. In Gadchiroli district 60% population are below poverty level, they don't have enough money to give computer education to their children, in this scenario district administration has started the revolutionary project and fulfill the dreams of poor students to give the computer education through E-Vidya project.
5. Gadchiroli district two NGO's are working there
 - a. Search Foundation, Chatgaon which is run by Mr. Abhay Bang
 - b. Lokbiradari, Bhamragad which is run by Mr. Prakash Amte

These NGOs are conducting training and awareness program through the E-Vidya project.

- *Achievement*

E-Vidya, Gadchiroli has got eWorld Education Summit Award 2011 at New Delhi which was organized by Department Telecommunication, GOM.

- c. Implementation coverage till date and during the year (geographical areas covered under pilot, roll-out)



Area	14412 sq. kms
Area under Forests	1184000 Hectares
Latitude	18.43 to 21.50 North
Longitude	79.45 to 80.53 East
Temperature	Min. 11.3 °C; Max. 47.7 °C
Average Rainfall	1410.2 mm
Population	970294 (2001 census)
Population Density	67 per sq. kms.
Literacy Rate	60.10%
Sex Ratio	976 females per 1000 males
Languages	Gondi, Madiya, Marathi, Hindi, Telugu, Bengali
No. of Subdivisions	3
No. of Tehsils	12
No. of Villages	1688
STD Code	07137

Above mentioned all project has been implemented throughout complete Gadchiroli district. Every citizen is the beneficiary of district administration projects.

All mentioned projects have started in August 2009 and still running properly in Gadchiroli district.

d. Future plan with regard to geographical coverage as well as scope of services.

- District administration has done two year agreement with implementing agencies for running the projects.
- Award winning projects proposal is sent to govt. for replicating all over state.

2. Efficiency and Improvement Initiatives

a. Time and cost efficiency improvements in delivering and availing of ICT enabled services:

As per the time concern, all projects are innovative IT based projects

1. E-flood alert system,

- Disaster management cell are giving all the water level positions of the Gadchiroli district rivers, within a minute to particular river bank living people get the message of water level on their mobile, in this case DMC can provide the rehabilitation services to victims and other resources.
- This solution is very cheap solution, awarded agency has developed their own mechanism and assembled it. One installation of the cost of Rs. 1,57,500/- (Including tax)

2. Automatic Water Level Measurement System on Observation Well through Mobile SMS

- GSDA (Geo-water survey and development agency) has installed the automatic water level measurement system in interior area which is not easy to travel there time to time, through this installation they are getting the water level of OB well at their own office hence they saved our time and cost of transportation.
- They can update their ob well data web portal. Due to this system Govt. cost has reduced on the survey of Observation well.

3. IVRS and SMS based Soil Testing Result system

- Before implementing this system, all the taluka soil samples were coming at District Soil Testing lab, Gadchiroli and registered the form of soil testing result and also coming at district place for collecting the result of soil testing. In previous system govt expenditure was highly paid on transportation and stationary material. But due to this system following advantages are obtained.
 - i. Only one time visit at district place for giving the sample of soil.
 - ii. Registration of soil by farmers can be registered at their own office at taluka level (TAO).
 - iii. After registration, taluka farmer is getting the PNR number of soil.
 - iv. After the soil testing, district soil testing laboratory staff enters the details of soil on the web portal.

- v. Through internet, with help PNR no, farmers can use IVRS system or send SMS for soil result or taking print receipt of test result through website.
 - vi. With the use of technology, we can save the money and cost of their expenses on transportation and stationary material.
- b. Specific innovative ideas implemented in eGov area; and their impact on services**
- All innovative ideas are implemented in eGov area and from this district administration has got tremendous trust from the citizens.
 - Last under the e-Flood Monitoring system, 51000 No SMS blast from the server within 1 and half month during the rainy season, due to this district administration done wonderful rehabilitation work in flood area at Bhamragad.
 - GSDA (Geo-Water Survey and development agency) are getting the water level of OB well at their own office and due to this system they are very thankful to district administration for introducing this technology to their department. Also GSDA has sent the proposal to Govt. for taking initiative to install this equipment to all GSDA departments in entire state.
 - E-Vidya project is the turnkey project in Gadchiroli district. Tribal and poor students are getting the education of computer through the distance learning concept through V-SAT.
 - Recently E-Vidya project has got e-World Forum Summit Award 2011 at Delhi.
- c. To what extent the services are integrated with other internal and/or external ICT systems within the district or outside.**
1. E-Flood Monitoring system and Automatic Water Level measurement system has got 14th National Conference Award which was organized by Government of India-New Delhi and also going to replicate this system to all over Maharashtra
 2. IVRS and SMS based Soil Testing Result System is going to replicate in entire

state. Proposal of IVRS and SMS based soil testing System in Commissioner level, after approval commissioner, it will be ready to launch to entire state.

3. E-Vidya project is the turnkey project in Gadchiroli district. Tribal and poor students are getting the education of computer through the distance learning concept through V-SAT.
4. Maharashtra Govt. is going to start this project in Maharashtra.
5. Recently E-Vidya project has got e-World Forum Summit Award 2011 at Delhi.

III) Enabler Indicators

1. Department Policy and Strategy

a. eGov/ICT vision roadmap for District and its current status

The entire mentioned project running successfully in the district with the keen interest of District administration and committed to run all implemented projects at district level.

1. Technology is used for other district, state and national also but infrastructure cannot share because it to every place and situation.
2. Some technology can be shared and used common infrastructure like IVRS and SMS based soil testing result.
3. Technology standardization policy and its implementation.

All technology has been developed by awarded agency, developed technology is the combination of IT, Electronics and Mechanical based used materials are solely purchased by District Administration and doing implementation by contract awarded agency.

2. Capacity Building

a. Leadership support & visibility and current status

1. Leadership support for implementing innovative projects from the most dynamic and innovative idea's maker district collection Mr. Atul Patne, I.A.S. District Collector, Gadchiroli. Presently Mr. Atul Patne is the Director of Textile Corporations, Nagpur

2. No change management strategy defined and implemented
3. Implemented projects are mainly man less projects, very few time got in touch with this system. Development agency is giving maintenance and support of any details about traning, reports or any other consultation to district administration.
4. Does the full time Program Management Teams (District officials/ consultants) exist?
5. Development Agency: Yes
6. Maintenance and support is increased for 2 year from the district administration

3. Technology

- a. *Give a detailed description of the Technological solution adopted [including cost of ownership, maintenance model];*

We have used all embedded technology to implement this project

1. E-Flood Monitoring system :
 - Microcontroller which has customized by development agency
 - GSM module
 - GSD modem
 - Solar Panel
 - Water Sensors
 - Database Server
 - Linux server for data management
 - GPRS modem for blasting SMS
 - Cost of per installation 1,57,500/- with 20% maintenance and support cost

2. GSDA-Automatic Water Level Measurement System through Mobile
 - Same technology is used in GSDA, only difference, we have used mechanical based gear system for water sensor probe.
 - Cost per installation 1,57,500/- with 20% maintenance and support cost
3. IVRS and SMS based soil testing result system
 - This is the web portal and developed SMS server which is used by GPRS modem and also developed IVRS (Integrated Voice Recording System)
 - This site is hosted on lynx server
4. E-Vidya: This project is completely based on V-SAT
 - District Administration set up on V-SAT server room at ITI college
 - Audio-Visual room set up at every schools
 - Provided Computers, Projectors
5. Security and confidentiality standards defined and implemented
 - Maintaining one database server with highly secured by Firewall and also maintaining one backup server.
6. Competence of people in technology (hardware, software, security etc)
 - All the security of software, hardware is doing third party agency.
 - As per concern about the installation of Flood Monitoring system and GSDA automatic water level measurement system, we have given responsibility to their local authorized people or staff.

IV) Value Indicators

1. We have provided the services to their local languages like Marathi, Hindi, English, Madia and Gondi.
2. Our IT services is not bound for particular stakeholders, it is for every human being in this district and for live things. Because Flood disaster and Health services must in entire earth.

Shri Atul Patne, I.A.S, Director, Textile Corporation, Nagpur (MS), Textile Corporation, Nagpur, Maharashtra, was the Ex Collector Gadchiroli District, email: dhanankur@gmail.com and Shri Meshram, Resident Deputy Collector, District Administration, Gadchiroli, email: dhanankur@gmail.com

*Nanded, Maharashtra**

Dr. Shrikar Pardeshi and Shri. Rajesh D Bhusari

I) Overview

The Nanded district administration has been actively involved in promoting e-Governance initiatives since last 10 years. It has been proactive and at the forefront of implementing National e-Governance Programme (NeGP) and other e-Governance projects in association with the State and Central Governments.

There are three main reasons for which we are applying for this prestigious award:

1. To endorse authenticity to the efforts put in by all stakeholders and the results achieved thereby
2. We would like to submit our projects for replication at a National level, as it has been recently identified for replication within the state of Maharashtra vide Government resolution dated: 13th April 2011
3. Provide a boost to all stakeholders, Government, private operators and citizens as we continue to adopt various reform projects.

In the recent Economic Survey of 2010 – 11, published by Government of Maharashtra, Nanded district is ranked in the bottom 5 districts in terms of per capita income. In this context, it is extremely important that Governance in the district is enhanced to the maximum extent possible using e-Governance to its full potential to help the citizens of the district in their day to day lives. Hence,

* Winner of CSI-Nihilent e-Governance Awards for the year 2010-11.

while it is likely that some of the initiatives mentioned have been implemented earlier, at a District level, we believe it is very important to embrace the initiative and implement it so that the citizens can avail the benefits of the results.

Summary

Nanded covers an area of 10,422 Sq. Kms. As per the provisional figures of 2011 census, the population of the district is 33.56 Lakhs. The district has a population density that is lower than the national average with only 28.29% of its population living in the urban areas. Nanded district has been divided into 4 revenue subdivisions which include 16 talukas consisting of 80 revenue circles. The revenue circles are further divided into 457 Talathi Sajjas which include the 1572 revenue villages of this district.

Objectives

Nanded district administration aims to promote e-Governance with the following objectives:

1. To ensure greater quality, accountability and speed in citizen centric services.
2. To provide single window clearance for all Govt. Services at District Level.
3. To create a user friendly interface in order to eliminate middlemen.
4. Transparency in administrative operations.
5. To facilitate cost effective services.

Services

The District Collector is in charge of the Revenue administration within the district and co-ordinates the functioning of all other departments of the state Government within the district. It offers **136 services to the citizens** and undertakes various functions like Revenue collection, Land acquisition, Supply of essential commodities, and implementation of various Govt. schemes etc.

With the above objectives in mind, the Nanded district administration has following two key initiatives, amongst other initiatives, which are being submitted for evaluation in this nomination:

1. **PARADISE (Setuonline) – Powering the Maha e Seva Kendra (CSCs):**
Nanded is one of the first districts to provide its own web based application software to implement G2C services in the CSCs and support them with the required enablers of process reengineering through standardization and introducing mutually beneficial accounting of revenue.
2. **PDS reforms (PDS Nanded):** Given the economic situation of the district and with majority of the population living in the rural areas, the District has used e-Governance, including m-Governance to empower people with information pertaining to PDS distribution in the district.

II) Result Indicators

1. Key Performance

a. Service Delivered (G2C, G2B, G2G, G2E)

1. PARADISE (SetuOnline) – Powering the Maha e Seva Kendras (CSCs):

Background

Nanded was a pioneer in implementing citizen service centers way back in 2001, known as SETU centers and further decentralizing in year 2008 in Maharashtra. Nanded District SETU Samiti, under the chairmanship of the Collector, in association with NIC Nanded developed an application **PARADISE**

(Processing Applications, Registration and Delivery Information System Electronically) in 2008. Over the years, the initiative was nurtured and improved upon gradually.



The rollout of CSCs as part of NeGP in 2009 – 10 was the perfect platform that Nanded district required to rollout its application, PARADISE to offer G2C services through the Common Service Centers (CSCs) – named as Maha e Seva Kendras in Maharashtra.

The scheme envisages 1 center per 4-6 villages with following objectives



- Cut down the travel cost (loss of wage, travel, food etc)
- Easy reach either by walk / cycle
- Employment opportunities for the computer literates from rural areas
- Eliminate transaction costs by providing transparency using e Governance solution

Services

One of the major hurdle in the implementation of CSCs was lack of backend computerization to offer services through the CSCs. Nanded District has tackled this problem by running its home grown Internet based application PARADISE through the CSCs. Earlier only few B2C services were offered through the CSCs. District Administration then entered into an arrangement with the SCA to run PARADISE through the Maha e Seva Kendra (CSCs). Currently **136 G2C services** are offered through PARADISE. The complete list of these services is provided on website www.setuonline.in (option-kiosk) through PARADISE in the Maha e Seva Kendras (CSCs). In summary, these services are:

- Acceptance of application forms (with receipt having token number for tracking)
- Providing photo based computerized affidavits
- Generation of Certificates
- Online status monitoring for the applications (KIOSK)
- Downloading of Forms – available free of cost at the centers and over the Internet.

A major innovation that was conceived and implemented earlier by Nanded District has subsequently been implemented in the CSC centers in Nanded in 2010 – 11 viz. **Prepaid Accounting**. This has been explained later. Seeing the success of this practice, the SCA of CSC has incorporated this feature in his application for rollout in other districts.

As the District Administration has completely computerized the Land Records of the District, the CSCs also offer the 7/12 extract (land record certificate) and

the 8A extract (land holding certificate), which are by far the most frequently used services by the farmers. Nanded is the only district in the state which has completely banned the manual issuance of land records by the Talathis (Patwari).

Report of Computerized 7/12 (LAND RECORDS) Distribution in Aurangabad Revenue Division in the year 2010-2011

Table 1								
Month	Latur	Beed	Jalna	Parbhani	Hingoli	Osmanabad	Aurangabad	Nanded
Population (lakhs)	24.55	25.85	19.58	18.35	11.78	16.60	36.95	33.56
April-10	10103	0	21852	NA	15654	9216	7289	54989
May-10	NA	0	29377	NA	22270	8220	7543	69245
June-10	16185	0	40415	NA	NA	10773	9900	107988
July-10	20284	0	43804	54692	NA	12376	7759	95617
Aug-10	12326	0	32484	30774	NA	9631	7759	56785
Sept-10	9092	0	15099	14538	18309	7905	10219	23754
Oct-10	15715	0	NA	11459	12501	9395	13153	25159
Nov-10	NA	0	NA	NA	NA	NA	NA	26103
Dec-11	16743	0	17098	NA	NA	11050	28803	30124
Jan -11	13407	0	20368	10937	14691	9239	34721	50323
Feb-11	NA	0	NA	NA	NA	NA	NA	42724
March-11	NA	0	NA	NA	NA	NA	NA	45692
Total	103752	0	169268	122400	45501	70369	112314	415853

Total Transactions through Maha e Seva Kendras in the Year 2010-2011

Table 2		
Year	Transactions through PARADISE	Distribution of record of rights (Land Record)
2010-11	3,29,472	7,57,355
Total Transactions – 10,868,27		

Benefits

The Benefits this initiative has brought to the District is summarized for the following three stakeholders:

- Citizens
- Village Level Entrepreneurs with average income Rs. 4000 per month
- District Administration (Government)
- Citizens

The citizens have gained the following benefits:

- a) **Services in the neighbourhood:** All the centers are outside Government offices. Therefore, to avail these 136 services, the citizens do not have to travel to Government offices. Further, they can avail the services close to their home as a total of 282 Maha e Seva and Setu sub centers are presently working across the entire district.
- b) **Easier tracking:** The centers have displayed the service levels i.e. **turnaround** times of delivery of the services. Hence, citizens now know the time taken and they can track their request based on the token number they get while applying for any service. This token number can be tracked online on Internet or at the CSCs.
- c) **Standardization of service:** This initiative has enforced standard forms and standard support documents requirements across the district, providing the citizens with more predictability of requirement from them to obtain the service.
- **Village Level Entrepreneurs -**

Earlier process and its problems: The Village Level Entrepreneur (VLE) would collect service charges from the citizens and deposit the same with the Govt. VLE would then submit an invoice for its share to the Government. The VLE would have to make many rounds to get his payment released and this process bred corruption and delayed the cash inflow for the VLE.

Innovative process implemented in Nanded District: The VLE first deposits money in advance with the District Headquarters. Thus, the Government's share is received in advance. This amount is 'loaded' as credit into the VLE's account in the online application PARADISE used at the CSCs. Then, as each transaction is made in PARADISE by the VLE to provide the service to the citizen, this account gets debited. The VLE can continue

to provide services as long as there is a balance in their account. Therefore, the cash collected by the VLE from the citizen as service charge remains with the VLE and he does not need to deposit it with the Government.

Benefits: The VLE has obtained the following benefits –

- a) **Faster receipts of his due share:** The VLE now gets his share in real time as soon as the citizen avails the service as the citizen has to pay the service charge upfront.
- b) **Minimizing interaction with the Government:** Apart from the periodic reloading, the VLE does not require to visit Government offices to obtain his share of service charges.
- c) **Predictable cash flows:** The VLEs are now aware of the seasonality of their volumes and hence, reload their accounts accordingly. Therefore, their cash flows, both inwards and outwards, are more predictable.
- ***District Administration (Government) –***

This initiative has provided the District Administration with the following benefits:

- a) **Standardization:** The District Administration used this opportunity to rollout standard forms and documentary requirements from citizens. This has helped the Departments in processing the requests more quickly. Nanded is the only district to ban issue of manual land records by talathis (patwaris) in Maharashtra and to mandate issuance of only computerized 7/12 (land record certificate) and 8A (land holding certificate).
- b) **Initial scrutiny performed by the VLEs:** The VLEs perform the initial checks on the citizens' requests, thereby filtering out incomplete requests from the citizens.
- c) **Less rush at District administration Offices:** As all centers are outside District Administration Offices, this has significantly reduced the rush at the said offices. This allows the District officials and officers to concentrate more on their work as citizen interaction has been optimized.
- d) **Implementation Coverage till date:** The total number of Maha e Seva Kendras has gone up to 282, which are spread all over the district. The

State Government has adopted this model and declared to replicate it in other parts of State vide government resolution dated 13/04/2011. Department of IT has conducted independent assessment of this project via SPV members. This model will be replicated under Maha online, an ambitious project of Govt. of Maharashtra.

Future Plans

There are two aspects to the future plans:

- a. Increasing the number of centers: The District Administration plans to complete its target of commencing a total of 453 Maha e Seva centers in the District.
- b. More services: The District Administration will add about 30 more services by the end of September 2011 to the CSCs to leverage more from the successful experience and impetus provided by the Government.
- c. Using online banking: NIC Nanded is helping the District Administration to explore usage of online banking for the VLEs to reload their accounts.

2. PDS Reforms (PDS Nanded):

Background

The PDS system is plagued with leakages at various points in the supply chain because of the subsidized essential commodities, which are priced lower than market prices. On the ground, this diversion and pilferage results into various problems.

Two commonly occurring problems that the District Administration aimed to solve were:

- a. **Citizens not having any visibility of commodities available at the Fair Price Shops (FPS):** Especially in the rural areas of the District, the FPS owners would drive away the citizens citing unavailability or non-delivery of essential commodities from the District godowns.
- b. **Citizens being denied their benefits of various Government schemes due to lack of their awareness:** Depending on which ration card a citizen holds

i.e. for APL, BPL or Antyodaya, a citizen is entitled to specific quantities of essential commodities and at specific prices. FPS owners would maximize their gains by offering lesser quantities and / or at prices of higher schemes. There are cases, when the FPS owners would take away and keep the ration cards of the villagers with him.

Services

Nanded District Administration has started the following two services in September 2010 aimed at addressing the above two problems. These services are:

a. SMS information of grain dispatch to citizens:

The District has 23 warehouses from where the food grains are dispatched to the FPS. As soon as food grains are dispatched to a FPS, the information is entered onto a web application, which then sends out SMSs to the members of Village Vigilance Committee who are the key individuals of the village where the FPS is located. These individuals would be the Sarpanch and other office bearers. The SMS summarizes the food grains, their quantities, name of the FPS and the date of dispatch. Besides, on the website (www.pdsnanded.com), any citizen can enroll his / her name to receive SMS alerts for any FPS they choose.

b. Display of ration card holders list at FPS:

Another initiative undertaken by the Department is to computerize its 5.47 lakh ration card holders. Based on this computerization, at each FPS, the District Administration has mandated that Display Boards be put containing the following information:

- List of all ration card holders, scheme wise i.e. APL, BPL and Antyodaya.
- Details of entitlement, scheme wise along with the price rates.

This list of ration card holders or beneficiaries is also available online at the above mentioned website. The District Administration has issued an order that has mandated the FPS owners to provide essential commodities to citizens even if they do not have the ration cards as long as their names appear on the Display Board.

This initiative by the Nanded district administration aims at achieving a more transparent and well monitored PDS system through participation of the citizens. After running a pilot for 2 / 3 weeks, all 1935 FPS were covered under this initiative. A total of more than 2.9 lakh SMS have been sent since July 2011

Benefits

This initiative has brought benefits to the citizens as well as to the administration.

- *Citizens -*

The Citizens come to know of delivery of food grains to the FPS in their locality almost at the same as when the food grains reach the FPS. This increases transparency and **empowers villagers with information to exert pressure on the FPS** for distribution of the essential commodities. Further this service is available to citizens at zero cost as incoming SMS is free.

The citizens now **cannot be denied any essential commodity available at the FPS due to reasons of non-availability or mutilation of their ration cards**. They now also know their entitlements and the rates at which they should be procuring the essential commodities based on the scheme under which names fall.

- *District Administration (Government)*

By increasing the transparency in terms of release of food grains to the FPS and openly displaying entitlements, the **overall lifting of food grains has dropped** as diversions or pilferage has become more difficult.

By enhancing the transparency of the system by having SMS sent to the citizens, the District Administration has tried to redress the grievances of citizens regarding the PDS system. Their initiative to aid the entitlements of the citizens through the Display Boards is **viewed as a citizen friendly change**.

2. Efficiency Improvement Initiatives

a. Time and Cost Efficiency

1. PARADISE (SetuOnline) – Powering the Maha e Seva Kendra (CSCs):

The pre-paid accounting has added cost efficiency into the CSC initiative. The

Government also gets its share in advance. The VLE also receives his share sooner. This reduces the cost of capital.

Standardization of the forms and requirements of documents have reduced the time it takes for the VLEs / their operators and the District officials to check process requests of the citizen.

2. PDS reforms (PDS Nanded):

By incurring a small additional expenditure of about Rs.8 lakhs on the **SMS system**, the District has saved pilferage of food grains worth Crores of rupees. The demand for food grains has fallen as avenues for diversion of pilferage have reduced. This has been responsible for the efficient utilization of food grains, as for Nanded, the state has to part away with lesser food grains without any drop in number of beneficiaries. District Administration could identify 28,262 bogus ration cards which were cancelled during the initiative.

Comparative statistics of actions against FPS based on inspection					
Year	No. of Shops Inspected	License Cancelled	License Suspended	Deposit forfeited	Amount seized (Rs.)
Sept 2009– Aug 2010 (Before reforms)	951	18	30	40	60,000
Sept 2010– Aug 2011 (After reforms)	659	29	37	36	98,000

b. Innovative ideas Implemented

The use of following innovative ideas has helped the citizens, in a District with over 71% of the population living in the rural areas:

- Using of SMS medium of information i.e. m-governance for disseminating food grain delivery related information
- Publishing names of ration card holders / beneficiaries using simple Display Boards.

Both these innovative ideas are the very backbone of the PDS reform initiative.

c. Integration with Other Systems Within and Outside

The PARADISE application has been completely integrated with the CSC initiative. PARADISE application has been used to provide the application for offering G2C services through the physical setup of the CSCs.

The Land Records related system is also made accessible through the CSCs, thereby ensuring convergence of the 2 key applications of the District under the CSC initiative.

III) Enabler Indicators

1. Department Policy and Strategy

a. eGov/ICT Vision and Road Map

The Nanded district administration aims to promote e-Governance with the following objectives:

- To ensure greater quality, accountability and speed in providing services and information to the people of Nanded.
- To provide single window clearance for all G2C Services at District Level.
- To create a user friendly interface in order to eliminate middlemen.
- Transparency in administrative operations.
- To facilitate cost effective services.

Nanded district has been driven these objectives and has achieved significant progress with CSCs as its means for delivery G2C services. Today 136 services are already offered through the CSCs and 30 more are planned to be launched by September 2011.

Nanded district's experience with PARADISE will help it to embrace the recently launched e-District initiative under the NeGP.

b. Sharing of Common Infrastructure

The District administration believes in using common infrastructure to the fullest extent. Therefore, all its initiatives that have interaction with the citizens are routed through the CSC initiative.

c. Technology Standardization

Nanded district has been consistent in its adoption of Unicode. Applications like PARADISE, PDSNANDED are developed using known standards. These applications make use of Unicode for data to be entered. Even office correspondence in local language is done in Unicode only.

For whatever e-Governance initiatives that Nanded District has undertaken, it has been conscious of using open source technologies. LAMP platform is used for the application development, saving cost of proprietary software.

2. Process Re-engineering and Reforms

a. Major non-ICT front end process changes

The following major non-ICT front end process changes were planned and implemented to support the e-Governance initiatives:

- **Standardization of forms:** While implementing PARADISE, the team realized that various Tahsils were using different forms for the same service. Before developing the application, an exercise was first done to **standardize the forms and the supporting documents that were required from the citizens.**

The State Government of Maharashtra has recognized the District's efforts and has passed a Government Resolution dated 03/06/2011 **instructing all other districts in the state to follow suit.**

- **Order for issuance of only computerized 7/12 and 8A forms:** As far as the most commonly used G2C service i.e. issuance of 7/12 extract (land record certificate) and 8A extract (land holding certificate) is concerned, the District Administration has passed an order that only computerized land record / holding certificates would be issued to ensure uniformity in the disbursement while universalizing the same.

To complement the above change, facility is also provided in PARADISE over

the Internet that allows any individual to key in the issued certificate details and ascertain if the certificate was indeed issued from the system. This service is offered without compromising on the confidentiality of the certificate, by providing only a confirmation or denial of the authenticity of the certificate.

Lastly, to strengthen the processes followed at the Maha e Seva Kendras, **the District Administration got 10 centers in Nanded City ISO9001:2008 certified.** The processes followed at these centers have been replicated across all centers. The audits that are done under ISO9001:2008 certification help in doing a periodic check on the adherence of the processes.

b. Major non-ICT back end process changes

To enforce PDS reforms, the District Administration passed an order that mandated the FPS owners to issue essential commodities to the citizens even if they did not physically possess the ration cards, provided their names appeared in the list of the beneficiaries on the Display Boards. The names could also be verified by any citizen over the Internet as well.

3. Capacity Building

a. Leadership Support and Visibility

For the good part of the year, the Chief Minister of the state was from the Nanded District. This lent very good visibility and support for the e-Governance initiatives. It was the then Chief Minister who inaugurated the issuance of computerized land records through Maha e Seva and the Display Board initiative in the District.

b. Change Management Strategy

Following two specific interventions were planned and have been implemented towards change management:

- **Camps:** The PARADISE application that is accessed over Internet at the CSCs can also be accessed on laptops / PCs using wireless data cards. The present Collector personally wrote to Head Masters (580) of all High Schools (580) in the district and had mobile camps conducted for the children and their parents. More than 32,000 certificates pertaining to caste, domicile etc. were prepared and distributed in schools itself.

- **Communication:** Regular briefing of the print and electronic media has helped in dissemination of the vital information about the progress of the mentioned initiatives. Apart from this, simple brochures prepared for the citizens were distributed to important offices and in villages for awareness.
- **Training:** Various trainings have been conducted to help the VLEs operate effectively in the Maha e Seva Kendras. A total of 10 such training sessions were conducted in 2010 – 11. The training sessions covered the topics of
 - Online Software (PARADISE)
 - Business development for village level entrepreneurs
 - Communication skills
 - CSC accounting

District Collector has also initiated best VLE scheme based on their performance in CSC scheme. The periodicity for this scheme is presently 1 year, which Administration will revise to half year in coming days. The best VLE is felicitated by the Collector with a cash prize of Rs. 500/-, certificate and garland. Best VLE selection is done on following criteria

- Number of G2C transactions done
- Conformance with the principles laid down to run the CSC
- General indicators like ambience of CSC, communication skills etc.

c. Training Plan- Internal and External Plan Status

Training is an ongoing activity for this project as new enrollments of VLE, transfer of Officers / clerks is a continual process. Specifically trainings are conducted to following audience.

Training Audience			
Sr. No	Audience	Type	Sessions Conducted
1.	Village level entrepreneur	External	6 sessions conducted and in all 282 persons are trained
2.	Certificate issuing authority	Internal	6 sessions and 16 Officers trained
3.	File processing staff	Internal	10 sessions and clerical staff trained

d. Program Management Teams

Under the supervision of the Collector's office and the SETU Samiti, which is also chaired by the Collector, NIC Nanded provides full time program management oversight for the initiatives. The SETU Samiti has nominated few retired District officials to support NIC Nanded in the day-to-day program management.

e. Sustainability of Efforts

To ensure sustainability of the various e Gov efforts, the Nanded District Administration has undertaken the following initiatives:

- The District Administration has proactively worked to reduce its share to help the VLE obtain double their share to help sustain the Maha e Seva Kendra:

Stake holder	Dec 2009	Nov 2010
VLE	Rs. 3.90/-	Rs. 7.80/-
CMS (SCA)	Rs. 2.10/-	Rs. 4.00/-
Setu Samiti	Rs. 9.00/-	Rs. 6.00/-
Total Service Charge (to the citizen)		
6	Rs.15.00/-	Rs. 15.00/-

- By making issuance of only computerized certificates mandatory, the District Administration has ensured that the setup does not fall back on earlier manual systems to ensure that the initiative sustains.
- The cost of implementing the described PDS reform initiative is very less (about Rs. 8 lakhs). The revenue from the District share of the PARADISE initiative can easily fund the PDS initiative.

4. Technology

a. Technological Solution Adopted

The software is developed using PHP on front end and MySQL at backend. The operating system used was RHEL 5.0. Due to open source adoption cost of proprietary software was saved. Afterwards the application software was hosted on private shared server at a cost of Rs. 18,000 /- per year. Maintenance of software

is being done in-house while, for larger scale development, manpower is hired as per requirement.

b. Security and confidentiality standards defined and implemented

It was ensured that the software conforms to standard web security aspects also the security issues related with open source environment are taken in to account.

c. Competence of people in technology (hardware, software, security etc)

282 direct centers (CSC operators); Officials from 20 offices and Citizens are making use of this software. The software is developed keeping the audience in mind, it can be said, based on feedback received, that this is real user-friendly application.

IV) Value Indicators

1. Digital Inclusion

a. Extent to which the project has addressed the factor of “eExclusion/ eInclusion”

Digital Inclusion has been rightly considered while implementing the mentioned initiatives. During the period from 2001 to 2008, the Setu Centres were restricted only to Collectorate and Tahsil Offices. However, since 2009, there has been active promotion of Maha e Seva Kendras at the doorstep of the citizens. It was decided that rather than calling the applicants and giving service at office end, the Govt will go to the doorstep of applicant by establishing centres nearer to their residing place. That is the reason that Maha e Seva Kendras have been consciously kept out of office buildings of the District Administration and have been spread all across to the District so that the citizens can access it nearer to their home. Secondly to bridge the digital divide both the portals www.setuonline, www.pdsnanded.com have been developed in local language i.e. Marathi. All the centres are ready to serve the poorly educated as well as the illerates, helping them to assist in filing applications. Citizens are empowered for the usage of portal to get optimal information about citizen centric services. For the PDS reforms, by providing the required information through ubiquitous technology like mobile phones, it

has become very easy for citizens to obtain the desired information. Simultaneously the display boards, with the names of all the beneficiaries under all categories, for subsidized food grains, in front of all the fair price shops has given them confidence about their monthly entitlement of food grains.

2. eParticipation

Setu Samiti is apex body for the project. Officials from all fields are nominated as members of the Samiti. Apart from this, in the initial stage local NGO was involved for better delivery of the services. It is now proposed to call noted social activists with a background of citizen centric services in the Setu Samiti meetings so that the project can benefit from their experiences. Setu Samiti always believes that reforms and inclusion are a continuous process. This commitment has led to ISO9001:2008 certification for the Setu Samiti Centres which acts as third umpire in the present scenario.

3. eWaste

For the initiatives been submitted, e Waste is not applicable due to the following reasons:

1. *PARADISE:* As the initiative of Maha e Seva Kendras is run in PPP, the PCs used belong to the VLEs and the prerogative on deciding its redeployment or discarding would lie with the VLEs.
2. *PDS reforms:* These use mobile phones, which are personal properties of the citizens and its discarding, would be the citizen's prerogative with the District Administration not having any specific role.

Dr. Shrikar Pardeshi, IAS, Collector & District Magistrate, Revenue Department, Government of Maharashtra, Email: shrikarpardeshi@gmail.com & Shri. Rajesh D. Bhusari, District Informatics Officer, National Informatics Centre (NIC), Maharashtra, Email: mahnan@nic.in

Pali District, Rajasthan*

Shri Niraj K Pawan and Shri H S Yadav

I) Overview

For recognition of contributions, made in the field of e-Governance, in the Pali district of Rajasthan. Primarily for recognition and replication of the successful initiatives of the district, in achieving good governance using ICT. It gives an insight to all stakeholders in e-governance and shares the critical success factors in the implementation process. To show that e-Governance is a tool to ensure equitable and easy to avail good governance.

Pali district is situated in western Rajasthan. District Pali of Rajasthan is a land of opportunities embedded in its vast mineral resources; close proximity to the northern and western markets of India; educated and skilled labour force; and investor-friendly attitude of the State Government. Pali district is blessed with varied climatic conditions ranging from arid western region to humid region, such that it is able to produce a wide variety of products. It is a leading producer of mustard, bajra, barley, maize and cotton. It has a large livestock population. It, being a pre-dominantly agrarian district with about 70 per cent of the total population depending on it, offers numerous opportunities for development of agro-based industries. These industries include solvent extraction, floriculture, tomato processing as well as other processing industries based on fruits and vegetables. Industries based on herbal and medicinal plants, poultry products and non-edible oil have bright export prospects. Pali district is famous for its exotic beauty, rich cultural heritage, wild life and safaris, forests and bio-diversity.

* Winner of CSI-Nihilent e-Governance Awards for the year 2010-11.

It is endowed with ancient forts, carved temples, museums, archaeological sites, etc. Some of the important places of tourist interest in the district are Ranakpur, Nadol, Jojawar etc. Besides, fairs and festivals of Rajasthan have assumed international prominence. All these make the district Pali a favourite destination for tourists the world over. Given this, the Government has taken several steps for promoting investment in the tourism sector. Accordingly, a tourism policy has been designed to make tourism truly a people's industry. This policy aims at ensuring optimum utilisation of rich resources of the district; generate employment; develop a ready market for the traditional handicrafts; and thus accelerate the contribution of tourism industry in socio-economic development of the district. The district has shown significant spurt in industrial activity, based on the exploitation of its agriculture and rich mineral deposits. It is manufacturing a wide range of products, which include synthetic and cotton yarn, cement, marble and granite slabs, edible oils, chemicals, rubber and plastic based items, electrical and electronics goods, ceramic and glass, etc. In addition, its diverse and beautiful landscape has made tourism in the district, a preferred sector for investment. The District Administration is making all efforts to leverage the benefits of IT for improving the quality of life of the people. It has undertaken several steps for promoting Pali as an attractive location for investment in the IT industry.

II) Result Indicators

1. Key Performance

a. Service Delivered (G2C, G2B, G2G, G2E)

1. SMS based Public Grievances Redressal:- Using latest SMS based technology, the District Administration tries to redress public grievances in an efficient manner.
2. GPS based Public Distribution System Kerosene route monitoring:- With the help of GPS technique, the District Supply office keeps track of the movement of Kerosene tankers, so that black-marketing of kerosene is minimized.
3. Web Conferencing for SDO's:- This technology is used by the District Collector and all the nine SDO's, so as to interact as and when needed, for on-line appraisal of situation etc. Through this facility any person can

interact directly with the District Collector, Pali from the Sub Division officer's offices located in the district.

4. **Common Service Centre(s)-** The CSC is a strategic cornerstone of the National e-Governance Plan (NeGP), to introduce e-governance on a massive scale. The CSCs would provide high quality and cost-effective video, voice and data content and services, in the areas of e-governance, education, health, telemedicine, entertainment as well as other private services. A highlight of the CSCs is that it will offer web-enabled e-governance services in rural areas, including application forms, certificates, and utility payments such as electricity, telephone and water bills. The Scheme creates a conducive environment for the private sector and NGOs to play an active role in implementation of the CSC Scheme, thereby becoming a partner of the government in the development of rural India. The PPP model of the CSC scheme envisages a 3-tier structure consisting of the CSC operator (called Village Level Entrepreneur or VLE); the Service Centre Agency (SCA) and a State Designated Agency (SDA) identified by the State Government responsible for managing the implementation over the entire State
5. **e-Mitra Project** is aimed at providing various citizen-centric services of various government departments in integrated form through service & information delivery centres.
6. **RPSC On-line Application Filling :-** For the benefit of rural and urban youth, Rajasthan Public Service Commission has started on-line application filling facility. This facility can be availed at e-Mitra/CSC kiosks on payment basis.

b. Implementation Coverage

1. **SMS based Public Grievances Redressal:-** This system is aimed at lodging of public grievances using SMS from any part of the district or from anywhere. So far more than 6000 complaints have been lodged and sent to their respective departments for an early redressal.
2. **GPS based Public Distribution System Kerosene route monitoring:-** To keep track of distribution of kerosene under Public Distribution System, this system is implemented throughout the district.

3. Web Conferencing for SDO's:- For on-line discussion on important matters and for appraisal of any information, this facility is being implemented for all the nine SDO's of the district Pali.
4. Common Service Centre(s):- So far 79 Common Service Centres have been operation in the district to cater to various needs of the public for different services.
5. e-Mitra :- In district Pali at present 27 e-Mitra counters are operational
Future plan with regard to geographical coverage as well as scope of services
1. SMS based Public Grievances Redressal:- In future this system will be expanded and in addition to district headquarter level monitoring, block/tehsil level monitoring would be started.
2. GPS based Public Distribution System Kerosene route monitoring:- To cope with numbers of kerosene tankers, foodgrain trucks etc. the number of vehicles fitted with GPS based equipments would be increased.
3. Web Conferencing for SDO's:- For on-line discussion on important matters and for appraisal of any information, this facility would be implemented for all the Block Development Officers and important District Level Officers of the district Pali.
4. Common Service Centre(s) & e-Mitra: More and more services would be included for the benefit of common man of the district.

2. Efficiency Improvement Initiatives

a. Time and Cost Efficiency

1. **SMS based Public Grievances Redressal:-** This system is aimed at time and cost efficiency. With the help of this system, grievances may be lodged from any part of the district or from anywhere. Then lodged grievances are sent to their respective departments for an early redressal.
2. **GPS based Public Distribution System Kerosene route monitoring:-** To improve vigilance and time & cost efficiency, this system is devised, so that keeping track of distribution of kerosene under Public Distribution System may be monitored smoothly and effectively at any time and from anywhere.
3. **Web Conferencing for SDO's:-** Time and cost efficiency improved drastically by using Web Conferencing for on-line discussion on important

matters and for appraisal of any information. Using this facility the SDO's can save their precious time.

4. **Common Service Centre(s):-** Common Service Centres have been in the operation in the district to cater various needs of the public for different services, thus improving time and cost efficiency in public services for common man.
5. **e-Mitra :-** Time & cost efficiency has been improved in services provided by the e-Mitra centres being operational in the district.

b. Innovative ideas Implemented

1. **SMS based Public Grievances Redressal:-** This system is implemented by using SMS. This idea aimed at time and cost efficiency.
2. **GPS based Public Distribution System Kerosene route monitoring:-** The basic idea is to improve vigilance and time & cost efficiency. Keeping this idea in view, this system is devised, so that Public Distribution System Kerosene route has been monitored smoothly and effectively at any time and from anywhere.
3. **Web Conferencing for SDO's:-** To use the on-line web based conferencing, with improved time and cost efficiency, this idea is implemented. This in turn, improved various aspects drastically by using Web Conferencing for on-line discussion on important matters and for appraisal of any important information.
4. **Common Service Centre(s):-** To improve the services rendered to common people by using ICT in eGov area, these Common Service Centres has been in the operation in the district to cater various needs of the public. Thus improving time and cost efficiency in public services for common man.
5. **e-Mitra :-** This innovative idea has improved efficiency in eGov area and simultaneously provided services in the district.

c. Integration with Other Departments

1. **SMS based Public Grievances Redressal:-** This system is implemented at district headquarter by using input from SMS from anywhere, inside or out-side of the district. ICT systems are using latest technology to cater

public needs and early solution of public grievances.

2. **GPS based Public Distribution System Kerosene route monitoring:-** The GPS technology is used to improve vigilance and time & cost efficiency. With this technology effective and smooth monitoring has been possible, at any time and from anywhere.
3. **Web Conferencing for SDO's:-** This system uses web technology to facilitate real-time web based conferencing. Presently all the nine SDO offices are connected through this system, they can interact, using their credentials, from any part of the district or outside.
4. **Common Service Centre(s) & e-Mitra:-** With the help of these systems, use of web based ICT applications, from designated Common Service Centres/e-Mitra kiosks, across the district and connected to the state server, to improve the services rendered to common people by using ICT in eGov area has been successfully implemented.

III) Enabler Indicators

1. Department Policy and Strategy

a. eGov/ICT Vision and Road Map

Application of Information Technology, in the processes of district level administration, to ensure timely services to the common people. For this district administration is trying its best to ensure in providing with the benefits of using Information and Communication Technology to common people. Work processes, decision making and interactions within government will be improved significantly with the help of ICT.

b. Sharing of Common Infrastructure

Initial efforts were local by using shared resources. Subsequently state government allocated funds for new infrastructure. Still few applications are using common infrastructure/resources whereas some are standalone.

c. Technology Standardization

ICT tools used in these applications confirms to the standards, as latest tools were deployed under the close vigilance of district ICT officials.

2. Process Re-engineering and Reforms

a. Major non-ICT front end process changes

Registration, monitoring and intimation of disposal related details of the public grievances received through the system.

b. Major non-ICT back end process changes

1. Communication of grievance details to the concerned officer
2. Regular monitoring to make the whole system effective
3. Systematic operational changes/improvements required for strengthening the system for effective delivery of public services.

3. Capacity Building

a. Leadership Support and Visibility

Adoption and promotion of useful innovation, for the benefit of common people, in every possible manner.

b. Change Management Strategy

Believed in the spirit of team building and promoted the collective responsibility culture for the decision taken during the course of action in good faith. For this many a times new ideas, methods and innovations are cross checked, tried and documented.

c. Capacity Building Plan and its Implementation

With the availability of skilled technical experts, various in-house training were conducted from time to time to cater to the needs of the house. Sometimes state level trainings were attended by the staff deputed/posted in these projects to improve their skills.

d. Program Management Teams

District administration has appointed nodal officer(s) for smooth functioning of these projects and to handle any problem occurred during day-to-day functioning of these ICT applications.

- e. **Efforts to ensure sustainability of various eGov efforts, in addition to the few mentioned above.**

As mentioned above, nodal officer(s) were made responsible and accountable to handle problems occurred related to these projects. Their work has been regularly monitored during weekly meetings.

4. **Technology**

Technological Solution Adopted

1. **SMS based Public Grievances Redressal:-** This system is implemented using latest .NET technology, integrated with SMS facility to cater public needs and early solution of public grievances.
2. **GPS based Public Distribution System Kerosene route monitoring:-** This application uses GPS technology to improve vigilance and time & cost efficiency. With this technology effective and smooth monitoring has been possible, at any time and from anywhere.
3. **Web Conferencing for SDO's:-** This system uses web technology to facilitate real-time web based conferencing. Presently all the nine SDO offices are connected through this system, they can interact, using their credentials, from any part of the district or outside.
4. **Common Service Centre(s) & e-Mitra:-** This is a web based ICT application, being accessed from designated Common Service Centres/e-Mitra kiosks, across the district and connected to the state server, to improve the services rendered to common people by using ICT in eGov area has been successfully implemented.

- b. **Security and confidentiality standards defined and implemented**

Security and confidentiality standards are well defined and are being implemented in all the e-Government initiatives been implemented in the district.

- c. **Competence of people in technology (hardware, software, security etc)**

For the e-Government initiatives, been implemented in the district, technical aspects are managed by technical experts posted in the district, under the

directions of the state government and local district administration received from time to time. Hardware, Software and Security standards/aspects are as per government norms/standards and are being monitored regularly.

IV) Value Indicators

1. Digital Inclusion

a. Extent to which the project has addressed the factor of “eExclusion/eInclusion”

In the district, implementation of e-Government initiatives has increased use of information and communication technologies to broaden and deepen citizens participation, by enabling citizens to connect/interact with district administration for improved service delivery. This also includes all stakeholders in decision-making processes and not only citizen related top-down government initiatives. Thus digital inclusion in the form of eInclusion has been implemented successfully.

2. eParticipation

Steps taken to address this factor:

“ICT-supported participation in processes involved in government and governance” has been ascertained by active participation of stakeholders at all levels. eParticipation is closely integrated to e-government and (e-)governance participation. This has also emerged as citizen benefits and values that have often received less attention in e-government development than those of the service providers. Also the role of citizen and customer has become clearer.

3. eWaste

NA

Shri Niraj K Pawan, District Collector, Pali, Rajasthan, email: dm-pal-rj@nic.in & Shri H S Yadav, ADM, Collectorate, Rajasthan, email: rajpal@hub2.nic.in, adm_pali@yahoo.in)

*Ramabai Nagar, Uttar Pradesh**

Shri. Chandra Prakash and Shri. Mayur Maheshwari

I) Overview

Governance today, is incomplete without the crucial word “E”. E-Governance has been adopted internationally, as an effective tool to facilitate G2C interface, trickle down the effects of development and investment for weakest links of society and ensure transparency and accountability in governance. Last decade has been witness to tremendous efforts being made in e-governance initiatives in India as well. However, there has been a duplication of these efforts in many cases and gaps in many others because of lack of interactive platforms to debate and discuss these efforts at national level. In this background, CSI-Nihilent E-Governance awards has emerged as a powerful platform for dissemination, sharing and discussion of e-governance initiatives at the national level. It has been a forum whereby the best of e-governance initiatives across the nation, in different categories have been presented and awarded, helping future better projects to come up and deliver effective services for all.

It is with this very objective of being able to get a platform for the projects running in district Ramabai Nagar of Uttar Pradesh i.e. Aarogyam, (which has also won this year’s National E-governance Award 2011(Silver ICON)), and E-Samwad (which won e-World Award 2011) that the district has been nominated herein. Aarogyam, initiated in Uttar Pradesh, is country’s unique end to end digital mapping and pioneer pregnancy tracking system which uses ICT to empower all sections of society, at their doorsteps. CSI-Nihilent award can help in further dissemination and adoption of this project in other states of the nation, and contribute in better health care

* Winner of CSI-Nihilent e-Governance Awards for the year 2010-11.

delivery for all and especially, mothers and their children. E-Samwad is another unique initiative whereby with use of ICT, sitting at district Headquarters, top officials can monitor performance of all government developmental schemes at the village level. CSI-Nihilent awards is a key forum which would help in dissemination of these beneficiary oriented G2C projects across the nation. Hence, the nomination.

District Ramabai Nagar is centrally situated in Uttar Pradesh with the population of 17.95 lakhs having sex ratio 86.2 and literacy rate 77.52. The District has five tehsils as administrative units and 10 blocks as development units. Area wise district spread is at very high side hence ICT initiatives are needed to address the citizens living at the distant places like Rasulabad (55 Km from District Headquarters) and Sandalpur (60 Km from DHQ). 98% of the citizens in this district live in the rural area and the transportation is still a problem in the rural areas. Hence the initiatives like Aarogyam and E-Samwad are a boost for such type of terrain. So these type of initiatives help the citizens to get effective services in time.

II) Result Indicators

1. Key Performance

a. Service Delivered (G2C, G2B, G2G, G2E)

In Ramabai Nagar district of Uttar Pradesh, two major initiatives were launched in February, 2011 and both the initiatives are giving the G2C services to the Rural citizens of the district. As most of the population resides in the villages hence these two applications are widely used by them and they have improved their living quality. **First of these is the health initiative-Aarogyam-Doctor in pocket.**

1. Aarogyam

Mothers and children constitute a significantly large proportion of the country's population. This group is exposed to the risk of child bearing in case of mothers and growth, development and survival in case of infants and children. Therefore, it is a high risk group requiring special care and attention.

In this backdrop, the Purpose of Aarogyam is to develop a digital health mapping program to ensure:-

- a. 100% immunization for children in 0-5 years of age group.
- b. Tracking each pregnancy with the help of a technology based monitoring system
- c. Complete reproductive and child health care including early registration of pregnancy, Ante-natal/post-natal care, institutional delivery (promotion of Janani Suraksha Yojana(JSY)), pulse-polio immunization etc.
- d. Development of a replicable model of technology based Pregnancy tracking and Child immunization system to achieve the Millennium Development goals for various health indicators
- e. Generation of awareness in community about health services by providing information to citizens at their doorsteps

With above specific priorities, the project uses ICT and mobile phones as a tool to generate telephone calls, sms (in Hindi for wider appeal) to the families of target group on/before the due dates of immunization schedule. Hence, the model has **“Knowledge is power” as the underlying theme** wherein, have-nots are converted to haves through information dissemination. It therefore becomes a **potent vehicle for people living in low socio economic brackets to access healthcare at their doorsteps through the feedback mechanisms inbuilt in the system.**

Aarogyam works on a **four pronged approach of Proactive, Reactive, Interactive and Educative interventions among the community.** It can be thereby visualised in terms of following two modules:-

- a. Pregnancy tracking and monitoring module (Proactive and Reactive)
- b. **Proactive-** Aarogyam keeps citizens at the centre of the health model and uses an Interactive Voice Response System (IVRS), which generates **automatic family specific reminder calls/SMS in Hindi encompassing the following areas:**
 - Immunization details for children from 0-5 years informing them about the place and date of vaccination.
 - ANC/PNC details of pregnant and lactating mother based on the due date for TT, IFA tablets etc.

- Institutional delivery and benefits of Janani Suraksha yojna (JSY).
- c. **Reactive-** In case of pendency the reminder calls are sent to the concerned family and village pradhan for ensuring the service delivery, ANMs are also sent reminder calls for all uncovered families per village. This enables Aarogym to ensure that all beneficiaries receive the desired services.
 - **Services delivered**
- d. Enabling the digital health mapping and pregnancy tracking system.
- e. Outbound IVR/ Hindi SMS disseminating personalized information w.r.t mothers and children for - BCG, DPT, Polio, Measles vaccines etc.
- f. Audit Trails - Regular pendency reminder calls to family, ANM, Pradhan (Village Heads) for ensuring 100% immunization, ANC, PNC etc.
- 2. **Grievance Redressal and Information dissemination module (Interactive and Educative)**
 - a. Interactive – Aarogyam allows beneficiaries to interact with the system whereby through in-dial option on a helpline number, one can gather maternal and child health care information e.g. child vaccinations, antenatal care, postnatal care, institutional delivery, birth preparedness, and Janani Suraksha Yojna (JSY) among other topics. A beneficiary can also lodge specific health related complaints using the in-dial facility.
 - b. Educational- Aarogyam provides educational support to various health campaigns such as Directly Observed Treatment Short Course for Tuberculosis (DOTS), pulse polio campaigns, gender-equality, anti-epidemic (i.e., cholera or dengue fever) campaigns, Prenatal Diagnostic Tests (PNDT), JSY, and the burden of disease in a particular region among others. In addition to this Aarogyam sends periodic Behavior Change Communication (BCC) messages to the beneficiaries.
 - c. **Services Delivered**
 - Inbound Information retrieval of Health parameters and schemes
 - Complaint lodging and redressal

- Community Broadcasting

Apart from the above, Aarogyam provides web-interface for service providers as well as citizens through its web portal www.aarogyam.co.in. Herein, the project objectives/strategy/mode of operation is made clear for use of citizens. Apart from that, various MIS reports which are an integral component for review of online system as in :

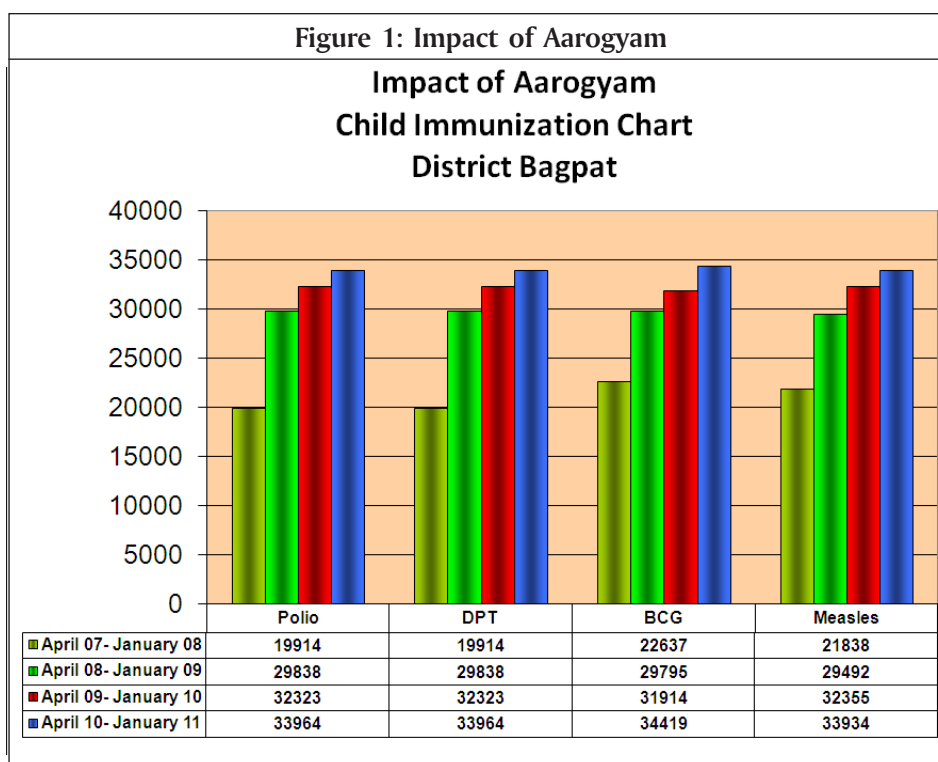
- Mother report, Pending child immunization
- SMS report
- ANM/Pradhan Call report
- Polio report
- Complaint reports etc.

are uploaded for effective monitoring by district level officers right from District Magistrate to chief medical officer.

Benefits obtained from above services for different target groups are elucidated below :-

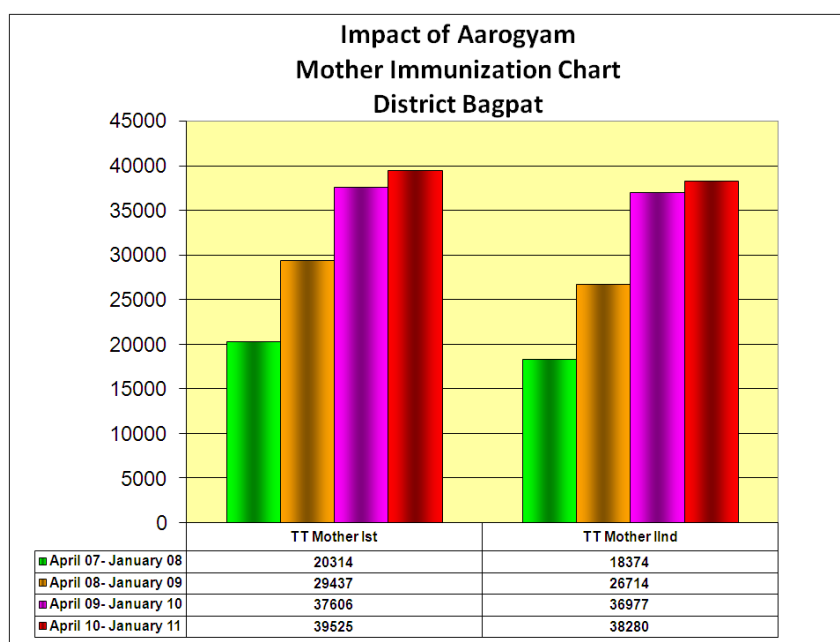
1. **Improved responsibility and accountability of service providers:** Instant messages and calls to service providers have made them (ANM/MOs) more responsible and accountable. **The web based monitoring portal (www.aarogyam.co.in)** gives a snapshot of achievers and underperformers. This helped to ensure the timely delivery of health care services to the communities.
2. **Improvement in measurable indicators of health for children and pregnant mothers:** So far as measurable indicators are concerned, there is a positive trend over a period of time. Across the board in figures wrt child and mother immunization, we are seeing positive trends emanating with the implementation of Aarogyam. For District Bagpat, there has been commendable improvement over a period from Jan 2008 to Jan 2011:-

Table 1		
Immunization	Apr-2007 to Jan 2008	Apr-2010 to Jan 2011
Polio	19914	33964
DPT	19914	33964
BCG	22637	34419
MEASLES	21838	33934
TT Mother -1	20314	39525
TT Mother -2	18374	38280
from 18374 to 38280		



3. The project has provided a specific health database with respect to measurable indicators of the target group and each individual therein. Having access to this, our entire future strategy in disease control can be planned and thereby made highly focused.

Figure 2: Impact of Aarogyam



4. The best result has been in terms of knowledge empowerment of the henceforth left-outs, economically/socially impoverished families. Sitting at home one gets specific knowledge about one's health profile, and this has resulted in a tremendous hike in demand for health related services especially wrt immunization.
5. The model has helped health department to refocus its strategy and change to Preventive Medicare whereby on the basis of demand generated and complaints lodged in, one can immediately take corrective steps and achieve results.
6. User friendly approach: It follows a user friendly approach in which an illiterate person can also take initiatives to update himself/herself on health service provisions and status. It is also easier for health department to inform their community level workers (ANMs, ASHAs) on health gaps and priorities.

7. Community feedback: It was evident during several field visits of health and other officials that community's response on the idea is very enthusiastic. Their feedback on technology based information and monitoring system was positive and they are looking forward to get more benefits from the technology based system.
8. Effective Planning: Better planning of community level health programs especially ANC/PNC checkups and immunization drives are possible with the system e.g. ANMs can be now informed of the number of beneficiaries to expect at the each session, this will not only result in reduced waste of vaccines but also more accurate head count.

It is wrt above mentioned benefits that project has won accolades at national as well as international levels. **Aarogyam has won various awards at national and international levels as in:-**

1. WINNER : National E-Governance Award 2011-Aarogyam won the prestigious Silver Icon award in the Citizen Centric Service Delivery category at National E-Governance Conference held at Aurangabad.
2. WINNER : NASSCOM Social Innovation Honours-2010 – Organised by NASSCOM for recognising and awarding pioneering work in various fields of e-governance. The Honours were adjudicated by an eminent jury consisting of Mr. Narayan Murthy (former chairman of Infosys Ltd), Mr. Jerry Rao (founder of Mphasis Ltd) and Mr.T Ninan (former Editor of Business standard) etc.
3. WINNER :- FIEO Telecom Technology Award 2011 by Ministry of Commerce in 2 categories - "Amazing Social Media Initiative" and "Jury Choice" award
4. WINNER : M-billionth awards south-Asia 2010 Supported by Digital empowerment foundation
5. Finalist- Stockholm Challenge Award 2010
3. **Second initiative is E-Samwad**
 - a. **E-Samwad** With the initiatives of District Magistrate Ramabai Nagar, Shri Mayur Maheshwari, IAS, the last mile connectivity at Ramabai Nagar has been

achieved. District Magistrate calls his E-Samwad Team and every body is ready for a trip to a remote village inside the district with all the logistics in a Bolero Vehicle. He sits with some senior officers at the District Headquarter and then Video Conference starts from the remote village.

Villagers start telling the problems and the real governance takes place. It is great to watch the villagers getting satisfied with their queries and the district level officers there itself are told to solve the problem on the spot. Some of these district level officers are informed just an hour before and they also go to the remote village and hence the various services are offered to the villagers at their door steps. This way the villagers have the win-win situation. The villagers do not have to travel, hence they are saving the travel cost, do not have to pay the speed money to somebody for their work and so many advantages are there to adopt this nice facility of Video Conferencing. E-Samwad has made the villagers more informative about the schemes which are running in the district. As when this conference takes place the ½ hour is given for the information about the various government schemes. Their long awaited problems are redressed. They are in front of the DM and then they tell the real situation at their village. The concerned government employee is also at the village and DM instructs about the gaps if any about the services.

b. Implementation Coverage

Since its inception in March 2009, the project has been benefitting around 2 lac families in four districts of UP i.e. Baghpat, JPNagar, Gautam Buddha Nagar and Ramabai Nagar. The project is easily replicable-

1. An integral component of the project, Pregnancy Tracking System, has been taken up in all 72 districts of the state of UP as mentioned in the NRHM PIP.
2. Secretary Health GOI has seen and highly appreciated the project.
3. Joint Secretary, Health, GOI, and Director NIHFV, have visited both the districts and have recommended scaling it up on a national level.
4. Already the program is running in four districts (Bagpat, J.P. Nagar, Gautam

Buddha Nagar, Ramabai Nagar) catering to around 70 lakhs population. Project funds have been sanctioned in NRHM PIP for all districts of Moradabad Division (Moradabad, Rampur, Bijnore, JP Nagar), where it has been initiated.

5. Teams of Health Departments of Punjab and Rajasthan have visited the districts and evinced keen interest in replication of Aarogyam in their states.
6. Different NGOs like Intra Health Foundation (A Bill and Melinda Gates Foundation), Rotary Foundation, Public Health Foundation of India, etc. have visited the project and are keen to replicate key approaches/practices from this project in their own fields.

c. Geographical Coverage

1. Aarogyam

As it is a well known fact that despite being aware of the benefits of the health services uptake for a pregnant woman and children, regular hammering is required to change behaviour of the community. Therefore..

- a. We can increase spectrum of the services ranging from pre pregnancy to child immunisation and family planning after delivery such as-
 - First child after 20 years of age – for adopting some family planning method – OCP/Condom (may only for ANMs of concern village)
 - Importance of early registration of the pregnant woman (message/ call will go in pre pregnant state)
 - Importance of 3 ANC check up and call alerts for pregnant women
 - Importance of breast feeding
 - Home visits for PNC care to ANMs to follow up with ASHAs
 - Family planning methods after 1st child- spacing and after 2 children- permanent. Same message to ANM for follow up.
- b. We would like to achieve the following other immediate possibilities for the project –
 - Integration with other departments like Panchayati Raj for Total Sanitation Campaign, with ICDS implementing agencies, Education etc

- Database to be used as a Community Broadcasting Tool in different aspects as in case of a Calamity/Disaster for effective and speedy relief/evacuation/forewarning, voter ID registration.
- Link up with emergency transport and 24*7 medical facility for emergency patients.

2. Efficiency Improvement Initiatives

a. Time and Cost Efficiency

Aarogyam-Improved efficiency of process and effectiveness of outcome:

Awareness can be created in no time and there is no need to have too many people to spread a message. At the field level the efficiency of workers has been improved as they are being informed about their duties on phone on regular basis. At the district level, top officials are now better equipped to monitor the progress as well as coverage through web monitoring system. Field Officers are found to be more efficient in data analysis and compliances of complaints.

e-samwad - Time and cost efficiency improvements in delivering and availing of ICT enabled services:

By the application of this system, timely information is spread to the masses and at least one village is completed in one conference. As the information is delivered by senior officers hence the specific and timely information is shared. Sitting at district headquarters, one can come to know of the field situation, and review performance of developmental works. It is especially important for repeat assessment and review of works done in a village and to assess performance vis-a-vis instructions passed on earlier. Hence it is a great saving of time and cost, as one can in a day cover many villages/areas.

b. Innovative ideas Implemented

Aarogyam is a unique Mobile-Governance health initiative. Its innovativeness is in its being :

- The first outbound IVR application in government health care delivery mechanisms.

- It is also a pioneer in terms of establishment of a scientific and comprehensive pregnancy tracking system.
- The digital database so captured makes it a powerful community broadcasting medium for various educative campaigns not only in health like pulse polio and JSY, but also in public welfare schemes of other departments like Total Sanitation Campaign, Education, Flood/Epidemic alerts etc.
- The inherent advantages of Integrated Voice Response Technology, add to its innovativeness in terms of following factors:-
 - **Ease of access:**-Easily accessible to anyone who knows how to receive a call.
 - **Wide range of people covered:**-Wide range of people can be reached to, who hold phone/mobile.
 - **Use of Vernacular to spread awareness**
 - **Applicable to illiterate people:**-No need to have any writing/reading skills, only listening ability is required.
 - **Zero cost to people:**-As this is an out dial voice call, there is no cost for receiving a call all over India.
 - **Fast:** Awareness can be created in no time. Hence there is less time lag as compared to visiting a remote village.
 - **Less human Endeavour:**-No need to have too many people to spread a message, hence greater efficiency can be ensured.

As far as E-Samwad is concerned, it is the **only application where we have reached up to the masses at village level to review their developmental concerns, without them having to come to various offices for effective redressal. Innovativeness of project lies in-**

- Usage of video conferencing equipments to address the rural citizens
- The reach is the last mile reach

- The Government is going to the door steps and the citizen is not coming to the Collectorate or Tehsil office.

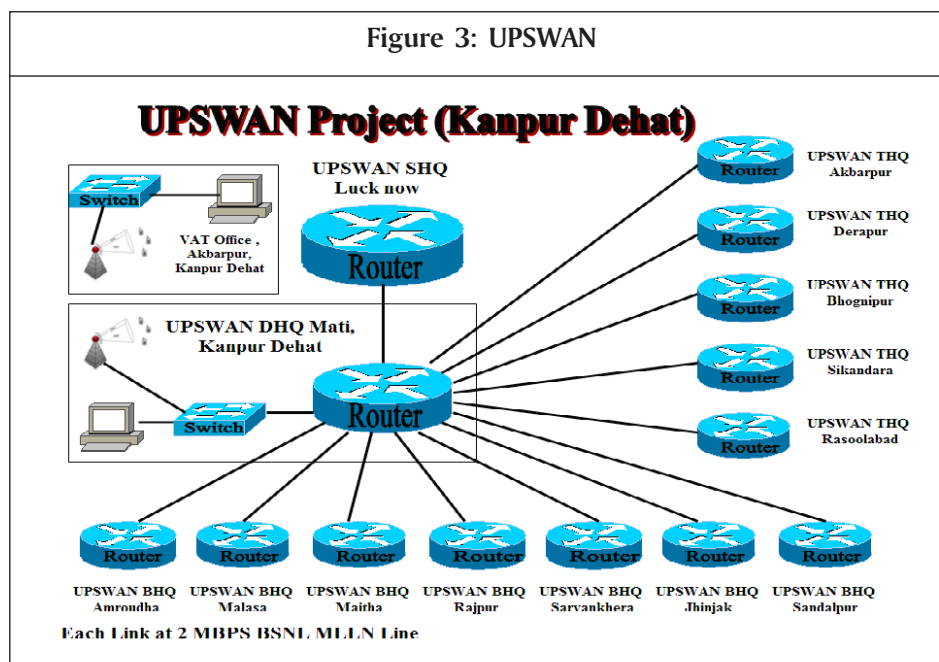
III) Enabler Indicators

1. Department Policy and Strategy

a. eGov/ICT Vision and Road Map

With the advancement of ICT and the upcoming Internet technologies the District headquarter is connected to the five tehsils with the 2 MBPS line and the ten blocks are also connected to the district headquarter. Some of the major offices have the fibre optic network from the district headquarter like DRDA, Treasury, Local bodies and many more. We have a State Wide Area Network Center at the district Headquarter. Still the District Level health, education, transport and other departments have to procure the Routers and then the Network of the Department will be complete.

Figure 3: UPSWAN



b. Sharing of Common Infrastructure

Aarogyam and e Samwad shared the same backbone which is used by the district level projects. The information collection and the dispersal is being done with the help of the government given Internet facility hence a lot of cost is saved due to sharing of the resources.

c. Technology Standardization

The locally developed formats on the web are used to get the data from the field level and the standardized performas approved from government are used to get the data from the field staff hence the redundancy is avoided and the integrity is maintained.

In aarogyam and e samwad the Booklet of the forms is made and was made available to the citizens.

2. Process Re-engineering and Reforms

a. Major Non-ICT front end process changes

The mode of transformation for Aarogyam can be visualized in various phases wherein various front and back end ICT and non ICT plans have been implemented as in:

Phase-1 Baseline Study

A comprehensive baseline survey of district with respect to family health indicators like age, gender, class, parity, immunization details of children, database of pregnant mothers and their expected date of deliveries (EDD) was conducted, with interdepartmental coordination especially Health and ICDS Department. The survey captures village wise database encompassing all crucial determinants of health.

Phase-2 Implementation Phase

- The above information forms the master database, which is then fed in a customized software and linked to Integrated Voice Response System (IVRS). The technique uses analogue/digital card to read all the uploaded data and devolve it to the beneficiaries.

- Next step is establishment of multiple phone lines and initiation of health helpline for the citizens to get an update on health services and to register their complaints.
- Establishment of required institutional mechanisms at district (central server) and block level, ensuring updation at CHC level and linkage with the master database.
- Capacity building/training of service providers and data entry operators on the software, with clear delineation of their roles, responsibility and accountability.
- Awareness generation through IEC/BCC (Films, Songs, Nukkad Natak, Pamphlets, Hoardings) about the project.

3. Capacity Building

a. Leadership Support and Visibility

Under the guidance and motivation of the Chief Secretary, UP, the DM Ramabainagar (Mr Mayur Maheshwari) and MD KESCO, then DM-JP Nagar (Ms. Ritu Maheshwari) have demonstrated excellent leadership qualities to conceptualize and implement the innovative model. They ensured the participation of different departments and stakeholders and motivated them enough to work and perform together. It is their leadership quality which resulted in successful implementation of approach and also a consistent growth in health indicators in very small span of time. From the state government also we get a lot of support in terms of hardware, software and the training programs for the senior officers. In Feb 2011 state Government has organized 7 days training program for SDMs, Tehsildars and Revenue staff at the Division level which was inaugurated by the Commissioner Kanpur Division. So we have a lot of support from the government and from the Senior Officers.

b. Change Management Strategy

Development of a **web based monitoring portal** www.aarogyam.co.in which reflects total disposal of grievances, officer-wise complaint pendency, status of call alerts and sms sent on a daily basis, pendency calls generated etc. This portal is regularly accessed by key officials including CMO and District Magistrate (DM). Similarly

e-samwad can be accessed on distric website www.kanpurdehat.nic.in/e-samwad. Also, continuous training program for the health, rural development and the revenue department staff is planned and being implemented since 1st of April 2011. 11th batch training is in progress which is undertaken by NIC having support from the above said departments. The use of SMS, IVRS system is also demonstrated at the different function like Krisi Mela and other government related Melas.

c. Training Plan Internal and External-Plan and Status

As far as aarogyam is concerned, a major challenge has been in terms of technical training/inputs as anms were not aware of the new survey formats or data collection sheets. Similarly data entry operators were not well equipped to handle loads of health were not well equipped to handle loads of health information daily. Hence continuous weekly rounds of training were conducted for both anms and data operators, whereby they learnt the feeding of survey formats, data collection sheets as well as the process of continuous updation/uploading of data.

Apart from above, for all e-governance projects, At the District Level we have a training calendar which is followed and the Officers and the lower staff both are trained from time to time. This financial year, two training programs have already been completed and two more are proposed. In these training programs officers and the staff are trained about the Internet Usage, email, SMS, use of IVRS System, Internet Browsing, How to get data from Internet, How to See the Judicial Statements and many more.

d. Program Management Teams

A full time team is in place for effective monitoring of the project. Two key features of management and monitoring strategy are:-

- Development of the cadre of trained and skilled staffs for data interpretation, entry, analysis and documentation. Under ambit of NRHM, data entry operators have been engaged, and trained for feeding, updating and uploading the database both at central server as well as PHC level.
- District level review committee continues to monitor the progress with supportive supervision

e. Sustainability of Efforts

The project cycle is chosen so that it is not officer dependent but it is process dependent. Most of the other district projects like SWAN, e-tehsil (Certificate generation work are running for last 4 years, which tells that we are generating the sustainable systems.) Aarogyam and e Samwad also have a very strong feedback system where the feedbacks are taken care of and integrated in the system if they are found useful by the feedback committee.

4. Technology

Technological Solution Adopted

The software applications have been developed via out-sourcing. A comprehensive baseline survey of district wrt family health indicators was conducted, with **Interdepartmental coordination** esp Health-ICDS Department wherein family details concerning all health indicators were collected. These include, name, address and age of family members, immunization details of all children wrt their expected dates as well as actual dates of immunization/pregnancy, details of pregnant mothers wrt ANC status and PNC coverage, location and phone no of each family and finally assigning a unique family ID to each family. This whole information was then uploaded on a specially designed software to have health indicators of each family on computer. The details have been uploaded on IVRS. The technique uses analogue/digital card to read all the uploaded data and devolve it to the beneficiaries through **AUTOMATIC FREE OF COST AUTO-DIALERS AND SMS**. The kinds of SMS/calls devolved are demonstrated below:

Costing of the project has been purely through utilization of available funds/ grants under National Rural Health Mission, provided by the Government. Costs incurred on the project can broadly be seen in two aspects. One time costs i.e. costs incurred, initially at time of project start up & recurring costs i.e. yearly running costs of the project :

- **One time costs**

1. Baseline Survey	Rs. 1,70,000
2. Awareness Generation	Rs. 3,60,000

3. Training and capacity building	Rs. 80,000
4. Technology setup at district & Block level	Rs. 10,00,000
Total One time costs:-	Rs. 16,10,000
• Recurring costs:	
5. Monitoring and documentation	Rs. 30,000
6. Stationery and miscellaneous costs	Rs. 1,00,000
7. Human resources:-	Rs. 4,80,000
Total Recurring costs:-	Rs. 6,10,000
Total Expenditure (per year per district)	Rs.22,20,000

b. Security and confidentiality standards defined and implemented

Though the data in Aarogyam and e-samwad is from the people and for the people, there are three security objectives for information and information systems:-

- **CONFIDENTIALITY:** Preserving authorized restrictions on information access, which is implemented by operating system, data base management system (DBMS) as well as physical and administrative control on information system.
- **INTEGRITY OF data** is validated at different layers in organization through field staff as well as administrative level.
- **AVAILABILITY** Ensuring timely and reliable access to and use of information by preventing service disruptions due to power outages, hardware failures and system problem by round the clock supervision of IT systems.

c. Competence of people in technology (hardware, software, security etc)

The district has an IT wing which takes care of the hardware, software and other related issues of network and security. They are well versed to tackle the day to day problems and address them effectively.

IV) Value Indicators

1. Digital Inclusion

- a. Extent to which the project has addressed the factor of “eExclusion/ eInclusion”**

Language plays a key role in e-inclusion. In this perspective, Aarogyam seeks to disseminate useful information to all stakeholders by sending vernacular sms and call alerts i.e. in Hindi. Another factor key to involvement of all stakeholders is **ease of access of the initiative**. Access may be limited because of geographical/ cultural/ gender/class related limitations. Since Aarogyam ensures free of cost, family specific outbound calls for all families with a landline/mobile number, the barriers of geography, culture/caste/class/gender are totally eliminated. Once all beneficiaries are identified and their data uploaded on central server, software automatically sends specific information to every family. Secondly, since it also has an inbound call facility, one not registered on the system or left out by field staff because of any kind of bias can dial in, and lodge a complaint and register himself/herself on the system. A key factor herein is the availability of phone to a particular family. It is significant to mention herein that teledensity in India is growing at a very impressive pace, being more than 60 at present. Still, for those families left out of the loop, calls are sent to the village pradhan so as to ensure all round participation at village level.

2. eParticipation

The project has well integrated **interactive model**, which ensure e-participation. Aarogyam has firstly, the in-dial helpline numbers and secondly, online portal **www.aarogyam.co.in**, wherein one can dial-in/log in and lodge complaints/ suggestions, which are automatically forwarded to the concerned officials for their effective redressal/incorporation. Hence, it ensures participation of different stakeholders in the decision making process.

Shri Chandra Prakash IAS, Joint Secretary Labor and Employment, Principal Secretary IT and Electronics, Government of Uttar Pradesh, Email: cphardoi20@gmail.com and Ms. Ritu Maheshwari, IAS, DM Ramabainagar, Government of Uttar Pradesh, Email: :mayurmaheshwari@yahoo.com/ catch_ritz@yahoo.com