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Use of ICT for Effective Urban Governance and Service Delivery in India: A Selection of Cases

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1 GIS and Hydraulic Modelling for a Pilot 24/7 Water Supply Initiative in Amravati

Sector Water Utility - Water Supply

Implementing Agency Maharashtra Jeevan Pradhikaran

Objectives

- Improved water supply availability and water efficiency through piloting of a 24/7 water supply programme in two zones, Amravati through the use of GIS and hydraulic modelling

ICT Application

Geographical Information System based satellite imagery and mapping, hydraulic modelling through 'Water Gem' software.

Initiative Summary

The Maharashtra Jeevan Pradhikaran implemented 24/7 water supply in two pilot zones of Amravati using a combination of state of the art technology, dedicated programme management and citizen engagement.

Context

The population of Amravati City is around 700,000. The city was dependent on ground water as source prior to 1994 and this had resulted in periodic epidemics. To overcome this problem the city has implemented a water supply scheme with Upper Wardha Dam as surface source of water supply through Maharashtra Jeevan Pradhikaran. MJP has proposed to implement 24X7 water supply in the entire city to enhance public health benefits by adopting a hydraulic model for the entire city and then implementing 24X7 in two zones on a pilot basis. Prior to the initiative, the water supply was only for three hours a day with low pressure. The water wastage (non revenue water) was quite high as also the incidence of water borne diseases. Increasing dissatisfaction with regard to water supply provision was evident.

Implementation

In order to achieve implementation of 24/7 water supply, it was decided to use advanced hydraulic modelling tools. A quick bird satellite image with digital map of road network and properties with 0.5 resolution was procured from NRSA. The satellite image was superimposed with the GIS map and used as a backdrop for hydraulic model.For study of pressure management, a stereo paired satellite image with contours of the city was given as complementary by Digital Globe.Water supply system of Amravati was simulated by creating a hydraulic model by a software called WaterGem. A 'whole to part' approach has been adopted-that is first preparing a hydraulic model for the entire or whole city and then implementing 24X7 in part of the city.The initiative was implemented completely in house by MJP employees which is quite unique. The initiative was implemented with a low cost in a very short span of time. The scheme has employed innovative tools such as GIS maps and household surveys and hydraulic modelling quite effectively.

Governance and Service Delivery Improvements

- Reduction in NRW from 54 percent
- Reduction in staff required to operate valves in a intermittent supply
- Improving the distribution management
- Reducing the wastages from storage and throwing of stored water in an intermittent system, identifying illegal connections and reducing public stand posts
- Improving the quality and pressure
- Reducing customer complaints
- Achieving better and improved consumer satisfaction

2 Water Supply Distribution & Monitoring System: Nagpur Municipal Corporation

Sector Water Supply

Implementing Agency Nagpur Municipal Corporation

Objectives

To monitor water supply inputs and output, check water distribution losses, regulate pressure, record and monitor data

ICT Application

Web based centralized monitoring system

Initiative Summary

The Nagpur Municipal Corporation installed a centralized web based monitoring system to improve water supply efficiency, ,record data on several parameters to enable real time monitoring and corrective action

Context

Nagpur, located in the heart of the country, is the second capital of Maharashtra. The city has a population of 2.5 million and an area of 217 sq. km. Nagpur Municipal Corporation (NMC) is responsible for providing water supply services. NMC supplies over 525 mld water per day, there are about 2,25,000 connections and the distribution network covers over 2,100 km. There are huge water losses, high level of NRW and inequitable water distribution with no proper metering and where meters exist they are mostly non-functional. Water to Nagpur City is drawn from three surface sources viz. Gorewada Tank, Kanhan river and Pench canal. The major source for Raw Water is Pench Right Bank canal at Mahadula. The drawbacks of the water supply system were lack of fool proof system to handle water supply problems at the city level, inadequate monitoring system to assess inputs & outputs, no accountability for water losses, no proper measuring system for water and there was no system for data recording & monitoring. It was therefore decided to implement a centralized real time web based monitoring system.

Implementation

For the establishment and implementation of centralized water supply monitoring & distribution system, NMC has launched the project with funds from JnNURM. The implementation process involved the development of a web enabled centralized monitoring of NMC water supply & distribution system, establishment of a centralized communication centre, implementation of ESR/GSR monitoring system using three levels of information at ESRs, GSRs, MBRs levels and one level of monitoring system at central location, designing a strategy for WTP/ Pumping station monitoring to monitor the pumping efficiencies, frequency and other parameters, developing various screens on the SCADA system for remote monitoring and control of water pumping stations. NMC has set up a central monitoring system in its premises. The information from the system can be accessed by public through web enabled facility.

Governance and Service Delivery Improvements

- Centralized monitoring & distribution system helps monitoring of pump's efficiency and saving energy costs to operate the pumping station on specified benchmarks, the system supports in solving water related problems and misunderstanding among citizens especially during peak demand in summers.
- The monitoring system enables measurement, recording and monitoring the parameters like flow, level, pressure, residual chlorine of, pH, turbidity, kWh consumption, voltage, current, power factor, etc., of existing WTPs and Pumping stations.

- It is proposed to install necessary PLC, input & output signals, sensors and transmitters along with suitable Telemetry / monitoring system based on radio frequency (RF) technology.
- After the introduction of this system there is centralized communication center developed which makes the NMC officials more accountable and responsible due to transparency between ULB & user.
- Citizens can make online complaints and therefore customer grievance handling is possible with ease.

3 Off-Site Real Time Monitoring (OSRT) system for SWM, Park Maintenance and Street Lights in Greater Hyderabad Municipal Corporation

Sector Municipal Services - Solid Waste Management

Implementing Agency Greater Hyderabad Municipal Corporation

Objectives

To improve the delivery of public services like solid waste management, maintaining parks and street lights using mobile phones and GPRS

ICT Application

GPS and GPRS technologies through cell phones images

Initiative Summary

Using GPS and GPRS technologies through cell phones images are taken and stamped with time and location are put in public domain for scrutiny on real time basis. This leads to manifold increase in scrutiny.

Context

Lifting of garbage, maintenance of parks and street lights were monitored manually leaving scope for higher reporting or manipulation. The requirement for technology enabling real time monitoring led to this initiative.

Implementation

- Using GPS and GPRS technologies through cell phones images are taken and stamped with time and location are put in public domain for scrutiny on real time basis. This leads to manifold increase in scrutiny.
- Crowd-sourcing of scrutiny and monitoring using technology to put in public domain photos taken on real time basis after time and location stamping them.
- Fixed cost: Rs 48 lakh on the software package & Rs 15 lakh on cell phones.
- Recurring cost: Rs 2 lakh pm rental charges for GPRS connectivity.
- GHMC has collected Rs 27 lakh as fines for shortage in attendance, non-lifting of dumper bins and un-swept roads

Governance and Service Delivery Improvements

Parameter	Before implementation	After implementation
Attendance of workers	85%	98%
Dumper bin lifting	76%	98%
Grievance redressal time	weeks	Less than 48 hours

4 Online Water Quality Monitoring System: Surat Municipal Corporation

Sector Water Supply

Implementing Agency Surat Municipal Corporation

Objectives

Surat Municipal Corporation provides good quality water to its citizens and attains a standard of excellence in online water quality surveillance through the use of state of the art technology and quality control mechanisms.

ICT Application

Meters and analyzers for online monitoring were set up in all water works. Both desktop and portable systems were utilized.

Initiative Summary

Surat Municipal Corporation established a multi stage online water quality surveillance system, strengthening both the institutional capacity and technology enablement to improve water quality services and attaining new standards in service delivery with citizen accountability.

Context

The Water Supply Department of Surat Municipal Corporation undertook an exercise to revamp existing institutional set up to reorganize Departments as per Quality Management System to include Production, Water Quality ControlDesign & Development, Project Engineering & Maintenance , Electrical Engineer & Maintenance , Mechanical Instrumentation & Control, Administration and Housekeeping, Purchase and Store and Quality Control Engineering. A full fledged water quality control department has been accordingly set up and standards for testing and sampling on various parameters have been defined. To implement the standards for quality control, testing and surveillance, state of the art technology has been put in place to enable an online water quality surveillance system.

Implementation

Online water quality surveillance system was established using state of the art technology with dedicated staff. Parameters for monitoring are defined for each stage, i.e. generation, distribution and consumer level.

a. ***Multi-parameter Deployable instrument*** for river water quality monitoring – Centralized system for all source water quality monitoring

b. ***Online monitoring***; - Identical at all water works included pH analyzer(s), TDS analyzer(s),Dissolved Oxygen meter, Residual Chlorine analyzer(s) and Turbidity analyzer(s)

c. ***Desktop & Portable – Identical at all water works*** including Turbidity meter(s) (Digital), Colorimeter (Digital) for residual chlorine, pH / ISE meter(s), Dissolved Oxygen meter, COD reactor(s) Spectrophotometer(s), Centrifuge machine,BOD incubator, Microbiological safety cabinet, Autoclave, Hot air oven. Bacteriological incubator,Digital Titrator, Digital balance, Other Glass assemblies for titrametric method(s).

Governance and Service Delivery Improvements

- Results from daily monitoring are published on the website with emphasis on consumer samples .
- CPHEEO and WHO standards are adhered to completely.
- Third party quality inspection is also carried out on a regular basis.
- Efforts are ongoing to integrate the online surveillance with the complaints database, to provide for special attention for surveillance of areas where complaints on water quality originate .
- It is also planned to submit an annual water quality report to all consumers, which decidedly will reinforce citizen confidence.
- Surat Municipal Corporation is leading the way in sharing their expertise with other municipalities

5 Providing Installing, Integrating and Automation with PLC/ SCADA of existing WTP and ESR at Various locations in Pimpri Chinchwad Municipal Corporation Area

Sector Water Supply - Comprehensive Water Quality, Treatment & Distribution Monitoring & Control System

Implementing Agency Pimpri Chinchwad Municipal Corporation

Objectives

To monitor and control from a single point the water quantity, quality, treatment and distribution process in real time for the entire city.

ICT Application

Field Instrumentation with PLC based control systems for real time monitoring of various process parameters such as Ph, Turbidity, Residual Chlorine, Flow, Level, Pressure etc. city wide using WLAN, Broadband & GPRS communication for data transmission

Initiative Summary

The Pimpri Chinchwad Municipal Corporation installed a SCADA system for real time water supply monitoring of several parameters , on a city wide basis, with a view to improving water supply service delivery and efficiency.

Context

The water supply system was operated on judgmental and manual communication basis. There was absence of any quantity monitoring method. Such operation often led to miscalculations and non conformity to set targets, lower system efficiency, wastages and higher costs of running the water supply system. It also led to non availability of information regarding the day to day operation of the water supply system

Implementation

This project caters to the need for a real time water auditing, monitoring and control system for the entire city of Pimpri Chinchwad spread over 171 sq.kms with a water supply of 428 ML per day. From the point the raw water is pumped to the treatment plant to the final distribution points (85 ESRs) the system provides the city engineers data and control pertaining to the electrical efficiency, flow, pressure, level, valve operation, filter operations on a real time basis at a. raw water pumping station b. water treatment plant c. pure water pumping station and d. Elevated Service Reservoirs (ESR). It uses a spectrum of communication technologies like broadband, WLAN and GPRS to achieve the real time data transmission. The SCADA based reporting system allows the city engineers a graphical insight into the flow, level, pressure & efficiency monitoring along with insights into possible issues on a day to day basis. Use of the historical data, set benchmarks for various supply parameters with the suggested corrective measures allows formulation of corrective strategies to achieve water quality, primary and secondary distribution targets.

Governance and Service Delivery Improvements

The real time monitoring and control system offers the facility to monitor, control, plan corrective actions in case of deviations from the set benchmarks for water quality, efficiency and distribution.

6 Computerized Building Approval System: Coimbatore Municipal Corporation

Sector Municipal Services - Computerized Building Licensing

Implementing Agency Coimbatore Municipal Corporation

Objectives

The objectives of computerized building licence issue/approval was to expedite the process of providing approvals in a transparent manner in line with building rules and regulations

ICT Application

Auto DCR software application –Building Permit and Management System

Initiative Summary

The Coimbatore Municipal Corporation initiated a computerized and non discretionary system of providing building approvals through self certification. This was made possible through the development, installation and application of a building software for online approvals.

Context

Coimbatore Municipal Corporation (CMC) has recently implemented an IT enabled Building Plan Approval & Management System (BPAMS) for improving its performance in building plan approval processes. This new system has replaced a long drawn out manual system. Inspired by the example of Pune Municipal Corporation, the Coimbatore Municipal Corporation has streamlined its building approval process in a state-of-the-art manner. Prior to this initiative, building plan approval was carried out manually which resulted in considerable delays, long processing time and high levels of corruption.

Implementation

The approval process has been streamlined through 1) reengineering archaic processes and eliminating redundant steps 2) IT enabling all the processes and 3) usage of application software called Auto DCR - Automatic Development Control Regulations. Auto DCR system allows building owners/architects to submit Auto CAD drawings (as per prescribed guidelines) of the building plans to the Town Planning section of the City Corporation. The Auto DCR software reads the Auto CAD drawings and maps all the development control rules of the corporation to the drawing and produces a customized scrutiny report in minutes. The use of the software standardizes the drawing, speeds up approval time and eliminates human errors and manipulation to produce accurate reports. CMC has implemented BPAMS including Auto DCR application from July 2008.

Application in Soft copy (CD/online) for the permission of Building to be submitted to the Town Planning Department by the Architect / client. The Fee for the permit collected manually from the applicant.

A date after 7 working days of submission of application will be generated automatically for the visit of JE/AE to the proposed site. The date automatically SMS to JE/AE and to the Mobile numbers given by the applicant (Engineer/Owner/Builder)

During the site visit of JE/AE, it is entrusted to take a photograph of site in the given format (PDA) which will be integrated with the Auto CDR. The manual scrutiny of documents will also be completed simultaneously.

All the existing Building permission rules and regulations are provided in the Auto CDR. Hence the system can cross check it automatically to accept/reject the application. If the conditions are satisfied, the permission can be given in a couple of minutes time.

Even it is rejected, the details for rejection will be generated automatically which simplifies the process delay and also give clarity to the client.

Governance and Service Delivery Improvements

- This initiative has resulted in simplifying the approval process, reduced processing time, enhanced transparency, minimized human errors and manipulation and potentially eliminated the need for speed money.
- Scrutiny reports are generated in few minutes. Building plans for residential buildings (upto 150 sq m) and commercial buildings (upto 75 sq m) in the approved layouts is now sanctioned immediately without necessitating site visits.
- The new system is now available at the Head Office only. It is expected that the facility will be available shortly via the zonal offices.
- Online upload and approval processing of building plans through web based solutions are being explored as well.

7 Improving Municipal Revenues using GIS linked Property Data Base: Kanpur Municipal Corporation

Sector Municipal Revenues - Property Tax Assessment

Implementing Agency Kanpur Municipal Corporation

Objective

Augmentation of municipal revenues for financing and maintenance of municipal services and infrastructure with focus on reforms in property tax

ICT Application

Linking of Properties Database to a Geographical Information System

Initiative Summary

The Kanpur Municipal Corporation used a Geographical Information System to map and update property database combining it with reforms in property tax assessment and rent control Act, resulting in better service delivery with reference to issuing property licenses and improved revenues from property tax.

Context

The Kanpur Municipal Corporation practised the widely prevalent method of Annual Rateable Value to collect tax, whose drawbacks were that it was discretionary. The property database was also outdated and manually maintained which made it difficult to assess all properties for tax. The Municipal Corporation was also unable to keep with the rising demand for services like issue of building licenses, increase of assessment base etc . It was obvious that the database needed to be updated to improve assessment and be accompanied by reforms in the assessment method.

Implementation

It was decided therefore to map the existing properties using GIS technology with a capital investment cost of Rs 140 lakhs. A dedicated cell was established in the Kanpur Municipal Corporation to organize this exercise. Technical support was received from IIT Kanpur facilitated by the National Institute of Urban Affairs , under the Urban Reforms Initiative Fund, Government of India. A systematic mapping of properties on GIS platforms was initiated following a citizen awareness campaign. Surveys were conducted with the involvement of citizens including provision of phone booths operating twelve hours a day , for citizens to report any concerns or grievances with regard to the survey process. Simultaneously, the process of digitization was also initiated along with reforms in the assessment method of property tax, reassessment of properties based on unit rate and revision of the Rent Control Act.

Governance and Service Delivery Improvements

The improvements effected as a result include :·

- Updated property database
- Number of assesses almost doubled (274205 in 2007 to 426893 in 2009)·
- Four fold increase in Municipal revenues (Rs 3350 lakhs in 2007 to Rs 12613 lakhs in 2009)·
- Reduced number of litigation due to application of standardized method·
- Replication of the initiative in other towns like Ghaziabad, Meerut, Agra, Moradabad, Lucknow, Gorakhpur and Bareilly

8 Using Geographical Information System for Standardized Property Tax Administration at Bruhat Bangalore Mahanagara Palike

Sector Property tax - Municipal revenues

Implementing Agency Bruhat Bangalore Mahanagara Palike

Objectives

- Development of an Integrated database of properties for improved revenues through property tax
- Improved MIS on property assessment
- Provision of online services on property tax for citizen
- Standardization of property tax administration

ICT Application

Multi-purpose GIS-application based property database with customized software

Initiative Summary

The BBMP established a GIS linked property database for efficient and standardized property tax collection to provide online services to citizens on property tax assessment and payment.

Context

The Bruhat Bangalore Mahanagara Palike (BBMP) is one of the largest Municipal Corporations of India required an integrated property database as available information was scattered. Subsequent to the merger of adjoining agglomerations, the task of property assessment proved increasingly challenging and it was decided to put in place a GIS linked property database.

Implementation

Satellite imagery was used to update base maps and each property was plotted with unique identity and survey numbers. Following physical verification, the data was integrated with revenue and tax application and is able to provide online services to customers in relation to property tax assessment and payment. The system will be able to generate MIS reports both on physical attributes as well as property tax demand and collection information. It is also proposed to use the information for land use and urban planning.

Governance and Service Delivery Improvements

Availability of an integrated database for related applications .Potential to provide citizen interface to GIS linked informationTransparency and accountability to citizen with standardized assessment , valuation and corrections of discrepancyImproved revenuesPotential for full fledged online services

9 Enhancing Billing and Collection of Revenue by Online Bill Generation: Hyderabad Metropolitan Water Supply & Sewerage Board

Sector Utility revenues - Billing and collection

Implementing Agency Hyderabad Metropolitan Water Supply & Sewerage Board

Objective

- Provision of an online revenue billing and collection system for meter readers
- Quantification of performance indicators of billing agents/meter readers
- Seamless and real time integration of data with the centralized revenue application to provide a decision support system

ICT Application

A hand held Machine (mobile device) with ARM processor, Linux Operating System, GPRS connectivity aided by a custom application to communicate over internet with the Windows domain

Initiative Summary

The HMWSSB which was responsible for the supply of potable water for a population of around 700000 in Greater Hyderabad Municipal Corporation developed an online mobile bill generation and collection system for enabling efficient billing and collection of revenues , accountability of meter readers , real time data on collection as well as provision of spot billing and collection facility for consumers

Context

While the HMWSSB had introduced spot billing system in 2000, facilities for spot collection were not available. Following spot billing, data upload process was carried out separately with the meter readers carrying the hand held devices to a central location. This was obviously a time consuming and inefficient process. The meter readers remained idle during the upload process. Further collection of bill payments was through the E-Seva centres or HMWSSB cash counters which involved a unit transaction cost of Rs 5. Most importantly billing and collection information were maintained separately with no facility for updating and reconciliation of records. The need was felt to improve the performance of meter readers, enable real time data updating of both billing and collection information to optimally utilize the services of meter readers as well as to provide a collection facility to consumers at their door step. From 2009 onwards such a system was introduced involving around 630 meter readers issuing bills and collecting payments directly from the consumer and enabling real time update of this data in the central server ..

Implementation

The system was introduced in a gradual and incremental manner and expanded to all jurisdictional divisions with a capital cost of only Rs 500,000. Each sub process from billing logic, data transfer from SBM to central repository, and subsequent data transfer from repository to application and the reporting modules were independently developed and tested. Integration of sub-processes was simulated on test platform by developing a separate set of hardware for data base and application. The initial HHM model constituted of a thermal printer. The output thermal print faded away within a couple of months resulting in negative feedback from the customers. To overcome this problem, the supplying agency was requested to integrate an impact printer into the handheld machine, which outputs a stable print. An on line application with limited storage data in the HHM and instantaneous update to the Data Base Server providing transparent information to the user was implemented.

Governance and Service Delivery Improvements

- Decision support system and monitoring due to real time updating of data
- Monitoring and efficiency of meter readers
- Customer friendly services through payment and receipts at the door step resulting in 20% increase in demand collection
- Increased revenue collection [e.g. Rs 24 crores to Rs 30 crores annually in 2009)
- Direct collection of payments and billing resulted in savings of around 15,00,000 with respect to operations and manpower
- Ease of replication in other cities and sectors

10 Biometric Attendance System for Sanitary Workers in Guntur Municipal Corporation

Sector Municipal services - Sanitation

Implementing Agency Guntur Municipal Corporation

Objectives

- To establish biometric based attendance system for sanitary workers
- Streamline the payroll system and expenditure efficiency
- Ensure better delivery of sanitation services

ICT Application

Iris camera,Desk top computer with all accessories, dedicated telephone line ;IRIS attendance software and data transfer software

Initiative Summary

The Guntur Municipal Corporation introduced a system of biometric attendance for sanitary workers with a view to identify bonafide workers , rationalize expenditure and ensure better delivery of sanitation services.

Context

The Guntur Municipal Corporation employs around 2000 sanitary workers on direct payroll and through contractors to manage sanitation services-chiefly comprising malaria control, solid waste management of 350 MT per day , street sweeping of 1175 km of road and maintenance of 1500 km of drains. While expenditure on staff salaries both direct and via contractors increased , a corresponding improvement in sanitation services was not realized. One of the reasons was inadequate maintenance of workers' database resulting in the presence of bogus workers. In order to resolve the issue, a biometric attendance system was introduced .

Implementation

Biometric attendance system was introduced through public private partnership arrangement. The total cost of the hardware and software was Rs 30, 00,000 with a monthly recurring cost of Rs. 1, 30,000. Biometric kiosks were installed in all 26 sanitary divisions. Biometric information based on iris recognition is maintained in the central server. Iris recognition is a one- time activity and is noted for its reliability. Attendance recording is carried out twice a day- at 5.00 a.m. and 2.00 p.m. respectively and is completed efficiently in only 20 minutes. Based on the attendance information, the remuneration to contracts works is transacted online. The day to operations are taken care of by the private partner.

Governance and Service Delivery Improvements

- Elimination of middle men and protection of bona fide workers
- Improved transparency and work ethics resulting in better service delivery
- Savings of around Rs 18,40,000 in four months
- Centralized payroll system with facility for computation of salaries and online transfer of salaries to workers' accounts

11 Enterprise Resource Planning Software for Better Services: Chennai Metropolitan Water Supply and Sewerage Board

Sector Water Supply - Customer Services

Implementing Agency Chennai Metropolitan Water Supply and Sewerage Board

Objectives

- Integrated ERP solution for better MIS, Governance and Citizen services

ICT Application

Oracle Enterprise Resource Planning system

Initiative Summary

The Chennai Metropolitan Water Supply and Sewerage Board migrated to an ERP platform to integrate discrete modules and enable MIS and citizen services for complaints, billing and collection and procurement leading to efficiency and transparency of operations.

Context

CMWSSB provides water supply and sewerage services to the people as per the demand in all 10 Area offices. Computerization of accounting, billing and collection were extended to all the areas and other unit offices but was off-line. The data was transferred to the head office through floppies. An Interactive Voice Response System (IVRS) was introduced along with the consumer cards to have an easy access of the board. A round-the-clock complaints receiving counter was functioning at the Head office where the complaints were manually entered. Under this backdrop, it was proposed to improve the system by networking the computers in the depot offices, area offices, head office etc. and making available the data online.

Implementation

An online billing and collection was taken up at Area V office, 19 depot offices and financial accounting section in head office and store accounting. The payments made are immediately updated in the central server at Head office and the reports could be generated either at Area V office, stores or head office. These areas have been connected through leased telephone lines with the Head office server. All the financial accounting systems were integrated using Oracle ERP and various stages of bill processing and payments of bills were also integrated through LAN at head office. Online complaints monitoring system has also been implemented in head office, area office-V and its depot offices. Between head office and area V office, VSNL and BSNL lines and between area office and depot offices ISDN lines were installed. After gaining knowledge in pilot project, the same was replicated in other 9 Area offices and respective depot offices. All the billing and collection records were migrated to the Oracle ERP system. Grievances with regard to water tax and charge are also received online from the consumers and are redressed immediately. Complaints monitoring system under the Oracle ERP system is established to escalate the complaint to the next higher officer automatically if the complaint is not addressed within the specified time limit. Hence the senior officers would view the complaints.All the stores have been interlinked with the Central Server at head office using Oracle Inventory module which enables them to know the availability of the stock position (age wise analysis, ABC analysis etc.) and can plan to purchase accordingly. All the bill passing sections such as supplies, contract and expenses at area offices and head office have been interlinked using the Oracle ERP system – Accounts payable module. Apart from this, the assets conversion details can be known using Oracle assets module.More importantly, all the tender documents, schedules and drawings are uploaded in Government Tender Portal site periodically. The prospective suppliers and the contractors can download the tender documents from the web site free of cost

Governance and Service Delivery Improvements

- Due to interconnectivity, the consumers can pay at any of the 161 collection points or 19 areas offices, head office irrespective of the location of the property of the consumer.
- The outstanding dues of the consumers in respect of water supply charges and taxes can be viewed at any place and also in the board's website.
- Besides cash, cheque, demand draft, credit cards, VISA/Master cards can be used to make payment of their water taxes and charges.
- Procedures such as billing, collection, complaints, tendering simplified and can be easily monitored.
- More accountability and transparency in operation
- Reduced the paper work and stage of bill could be monitored at any time.

12 Advanced Billing and Collection Utility System: Kerala Water Authority

Sector Water Supply - MIS

Implementing Agency Kerala Water Authority

Objectives

To develop an online MIS for Billing and Revenue Application and Consumer Services

ICT Application

Oracle based web enabled centralized software application

Initiative Summary

The Kerala Water Authority developed a comprehensive online application for MIS support for billing and revenue applications as well as consumer services, the ABACUS (Advanced Billing and Collection Utility System)

Context

The Kerala Water Authority jurisdiction is state wide. To develop an effective MIS system for billing and revenue collection and to provide consumer services, the KWA along with the National Informatics Centre developed the ABACUS utility.

Implementation

The ABACUS utility supports a comprehensive customer database with facilities for online updating , billing and revenue receipts information, reading sheet printing, centralized billing for local bodies, centralized billing for water tankers, monitoring of meter reading routes, disaggregated data on revenue and customer parameters, billing for faulty meters, consumer ledger for revenue receipts. The ABACUS also supports database on meter replacement, service line alteration and consumer category change, disconnection, reconnection etc. Consumers can view and print information related to their transactions.

Governance and Service Delivery Improvements

- Tracking of Consumer History Online
- Revenue Collection Enhanced
- Effective Revenue Monitoring and Control
- Checking of Unauthorized Consumption
- Mapping of Supplied and Billed Quantity
- Improved Consumer Satisfaction Level
- To be integrated with epayment gateway
- To be integrated with the Customer Complaint Redressal System module

13 Tulana : Online Application Software for Service Level Benchmarking

Sector Municipal Services Service Level Benchmarking

Implementing Agency Directorate of Municipal Administration, Govt of Karnataka

Objectives

- To develop objective and standardized criteria for service level measurement of Urban Local Bodies
- Decision making on resource allocation to be based on indicator values for service levels

ICT Application

Web server, application server and database server and software application.

Initiative Summary

The Directorate of Municipal Administration, Govt of Karnataka designed and developed an online application software, Tulana , to objectively assess the service level performance of urban local bodies across the state. This application has become an important decision making tool for investments and identification of priority areas.

Context

The Directorate of Municipal Administration, Government of Karnataka has been making investments under the 'Nirmala Nagara Yojana' programme, to improve service performance of ULBs. However to measure the performance of the investments in terms of service improvement, standardized systems were not in place. To rationalize decision making on allocation of resources ,it was decided to introduce a standard online performance tracking tool of ULB performance. Key sectors covering water supply, waste water/sanitation, solid waste management, roads and street lights, disease control and development of parks and gardens and finances were covered. 'Tulana' was developed as an online application software and monitoring tool for service level benchmarking

Implementation

Tulana was conceptualized as an online application covering key service sectors to rationalize decision making, Improve accountability and transparency, allocate resources in an equitable and efficient manner, prioritize investments/development plans and encourage competitive spirit by comparison. The key features included web based application, facility to capture data online from 213 ULBs, inbuilt data validation, generation of MIS reports, inbuilt formula and automated ranking generation based on indicator results.

Centre for Performance Measurement in 2004-5 housed in City Managers Association with Advisory & Resource Panel. Indicators were finalized for each sector and criteria for evaluation of performance of a ULB based on a weightage system against each indicator and scoring assigned. Ranking follows from the scoring. This exercise carried out quarterly and annually.

The state provided:

- Support on technical and performance related queries of ULBs
- Data collection templates , user manual, technical manual
- Pilot testing and development of online application
- Protocol for access and authentication of data [user id and password, authentication system)
- Training on the use of Web based application
- Provisional report released- modified before final report

Governance and Service Delivery Improvements

- Enthusiastic participation of all ULBs in service level monitoring
- Monitoring of participation of ULBs as well as performance standards
- Data was used to make decisions on allocation of resources and performance of investments
- Integrates decision maker, data base and ULB performance
- Standardization of procedures and processes in reporting across ULBs

14 E-Seva : Government to Citizen Services of Municipal Services in Hyderabad.

Sector Municipal services - Citizen services

Implementing Agency Government of Andhra Pradesh

Objectives

- Provision of multiple Government to Citizen services under one roof
- Integrated database
- Provision of transparent and citizen friendly services saving time and money

ICT Application

- Developed on 3-tier architecture with clients at first tier, Central Server at second tier and Departmental Server at third tier.
- Clients and Departments are connected to Central Server through Leased Line and ISDN as backup

Initiative Summary

The Government of Andhra Pradesh has developed a successful business model for the provision of a range of Government/Service Provider to Citizen services in a single window system

Context

Conventionally citizens are required to visit multiple offices with restricted timings and varying distances to avail services, remit payments, receive approvals etc. The E-Seva business model was introduced to provide system driven citizen friendly single window services through effective use of ICT for citizen interface and back end processes.

Implementation

Clients and Government Departments are connected to a central service through a lease line and ISDN as back up. The E-Seva model involves a three tier architecture to facilitate the provision of services through a single window approach. Charges from the citizen for each service are structured to include a transaction charge of between Rs 2 to Rs 5 for utility bill payments and Rs. 10 for Certificate services with the service provider obtaining 20% from transaction charges as its share.Services provided comprise utility bill payments including property tax, utility connections, Issue of Certificates, Registration, renewal of licences, obtaining permits from Labour, Health Departments, Transport Department services, Passport applications receipt, Information services on procedures of Departments, Ticket reservation for buses, water tankers, tourism, internet services, services and Police Services. A Bank to Citizen service is also planned. E seva centres are located at various key points.

Governance and Service Delivery Improvements

- Multiple services at single point saving cost of travel and time
- Better ambience and friendly services and flexible hours
- Online updation of database
- Transparency in services
- Increasing number of transactions per day (e.g Hyderabad 40,000 transactions)
- Increased revenues (e.g. Hyderabad Rs. 60 million per day)

15 M- Governance : An Efficient way to meet Citizen Expectations: Rajkot Municipal Corporation

Sector Municipal Services - Government to Citizen services
Implementing Agency Rajkot Municipal Corporation

Objectives

- To provide quick service to the citizens with less cost, with good quality and with customer satisfaction by M-Governance

ICT Application

Mobile phone technologyA fully automatic service retrieves data from live server.For Short Messaging Services, GSM MODEM is used.

Initiative Summary

The Rajkot Municipal Corporation used mobile phone services to deliver information and services to citizen for effective and speedy service delivery and improved revenues

Context

In the conventional system, citizens had to wait in lines even to get information about dues. Despite call centres, citizens had to use different numbers for different services whose timing was rigid. Status of applications etc were also difficult to assess. Transactions were not transparent; neither did higher officials have access to an MIS on income/expenditure details. It was therefore decided to provide citizen friendly services through the use of mobile technology and short messaging services, covering the following services: Property Tax, Water Charges, Birth and Death Certificates, Town Planning, Drainage System, Theatre and Vehicle Tax, Estimation and costing, Profession Tax, Financial Accounting, Personal Information System, Legal Management System, Marriage Registration, Right to Information, Food and Industrial, License Grievance Management System, Misc Collection.

Implementation

The m-Governance initiative was implemented using a combination of technology and process simplification. A single point contact number of a newly established 24/7 call centre was provided to citizens for information requests as well as complaints. Weekly monitoring of requests and complaints ensured that they would be resolved within 72 hours. On sending an SMS, citizen receives relevant information on mobile phone. Following transactions related to payments,citizen receive an alert acknowledging the payment. SMS is sent to relatives following birth or death registration. A vaccination reminder system ensures reminder messages to young parents. Further officials receive a daily income/expenditure statement and are able to monitor service and information requests, complaints etc.

Governance and Service Delivery Improvements

- Single point Communication 24/7
- Hassle free complaint registration and status notification
- Lesser response time, reduced search time
- Search time for service is reduced,
- Reduced queuing up- 200 to 20 a day
- Elimination of middle men
- Equal quality of service regardless of social or economic status
- Cheapest transaction cost (as low as 1 paise/transaction)

16 ICT enabled Strategy for Citizen Services: Municipal Corporation of Greater Mumbai

Sector Municipal Services - Government to Citizen Services

Implementing Agency Municipal Corporation of Greater Mumbai

Objectives

- To put in place facilities for citizen services and improving efficiency in delivery of services

ICT Application

The ICT applications are available to more than 260 citizen services and to a population of 12 million. There are 24 Citizen Facilitation Centers and 80 Cyber Facilitation Centres. The MCGM portal is updated and is user friendly. In addition mobile phone services are expected to play a significant role in the future. Mobile phone and internet technology are also utilized.

Initiative Summary

The Municipal Corporation of Greater Mumbai has put in place various ICT enabled facilities for citizen services and governance. In size and scale of operations these comprise one of the largest in the country.

Context

The MCGM has been delivering more than 260 services to citizens through 24 ward offices. To avail these services, citizens were required to physically visit their respective ward offices during the working hours from 9.00 a.m. to 3.00 p.m. The key deficiencies of the earlier system were that it required physical visit to the same ward, multiple visits, long waiting periods and lack of transparency.

Implementation

In phase I, Citizen Facilitation Centers (CFC) were set up in all 24 wards and processes were computerized. However, these CFCs were not integrated with single and online database and hence citizens were required to visit their respective wards. In phase II, on line database was developed and operationalized in April 2007 connecting all 24 wards. MCGM tied up with Cyber Facilitation Centres in phase III, which would enable the citizens to access the service at any time without requiring to visit the ward offices. Any citizen can visit the nearest CFC at any point in time and avail the services. This has greatly improved the convenience to the citizens. The next step was the introduction of internet based services Phase IV, enabling the citizens to avail the services from their homes from any part of the world. However, this required computer literacy and online banking knowledge. Hence, MCGM has introduced payment of services through mobile phones through SMS and by availing smart cards. Thus MCGM has put in place a comprehensive ICT enabled strategy for delivering citizen services. The entire system is web enabled and operated through MCGM portal and linked to SAP, which allows for real time data and operations. The ICT strategy has utilized the advantages of wide variety of tools such as portal, internet and mobile phones. This can be considered as the most complex and wide range of system application given the size of operation of MCGM with more than 260 services including health, education, transport etc., covering a population of 12 million, which are not present in any ULB in the country. The initiative required ICT application and business process reengineering and also working with SAP. MCGM has around 1,20,000 employees and at least 50 percent of them required some familiarity and understanding with the new system. Thus the support of employees as internal stakeholders was critical and the same was obtained through workshops and contact programmes.It was also necessary to create awareness among the citizens and this was achieved through a well designed publicity strategy, which included information dissemination through display boards in wards, printing behind bills and demand notices and portal and news papers. The entire initiative has been implemented at an approximate cost of Rs 60 crores.

Governance and Service Delivery Improvements

- The ICT applications are available to more than 260 citizen services and to a population of 12 million. There are 24 Citizen Facilitation Centers and 80 Cyber Facilitation Centers. The MCGM portal is updated and is user friendly. In addition mobile phone services are expected to play a significant role in the future Setting up of on line data centre which can access real time data from anywhere
- Data updation on a real time basis
- Setting up and operationalization of 24 CFC and 80 Cyber centers
- Internationally acclaimed and user friendly portal
- Improvement in collection ratios from around 80- 90 percent of octroi tax, property tax and water charges all of which are ICT enabled.
- Increased convenience to citizens
- Increased transparency and accountability
- MCGM has developed the necessary professional and managerial capacities to sustain the system.
- A separate IT department is set up to over see the activities. MCGM being the corporation with largest budget in the country has adequate resource base to sustain the initiative.
- The initiative has huge potential for replication and ULBs in Maharashtra and other states have visited and studied the initiative for replication. The state level Urban Development Department recognized the potential for replication and advocating the same across the state.
- A major benefit is in the form of convenience and service delivery improvement to citizens as well as increased transparency and accountability.
- The initiative has enhanced the capacities of the employees and the benefits of the initiatives have created a sense of ownership among them. The employees now look at the initiatives with a great sense of pride.

17 Improving Citizen Services and Governance in Jabalpur Municipal Corporation

Sector Municipal Services - Government to Citizen services

Implementing Agency Jabalpur Municipal Corporation

Objectives

- To improve service levels and citizen satisfaction by leveraging earlier IT initiatives and financial reforms

ICT Application

MIS related software application custom developed for Jabalpur Municipal Corporation

Initiative Summary

Jabalpur Municipal Corporation one of the pioneers of using IT in the state of Madhya Pradesh , have initiated several ICT enabled activities to improve service levels and citizen satisfaction through deploying necessary software modules and process changes.

Context

The Municipal Corporation wanted to leverage its experience in computerization and initiate ICT enablement in carrying out reforms related to updating information/database, improve assessment of properties for taxation, reward programmes for tax payers, performance management system for tax collectors , user friendly, increased accountability of JMC staff.

Implementation

Several initiative have been initiated by JMC to improve service levels and citizen satisfaction, which are described below:

1. Refining of Tax Records
2. Vehicle Tracking Management System :
3. File Tracking System
4. Citizen Mobile Van :
5. E-library (http://www.jmcelibrary.com/)
6. Record Management
7. Performance Management

1. *Refining of Tax Records*

In 2007-08 JMC introduced a software driven Management Information System(MIS) Which recorded new connections, corrections in the database, and all transactions. As soon as database was available, JMC started printing computerized bills. As a result of many discrepancies in the sent bills people came in large numbers for rectification. In order to achieve a refined database and prompt grievance redressal of the consumers delegation powers were delegated to officials for prompt redressal grievances related to payments. Bills can be paid online or at 13 Zonal offices/5 additional tax collection centers or at 54 Kiosks of MPONLINE.

2. *Vehicle Tracking Management System*

Jabalpur Municipal corporation is using Vehicle Tracking System for efficiently managing the utility services like Garbage Disposal and Water Supply. Fitting the Vehicle Tracking System is helping Jabalpur Municipal corporation in increasing the number of trips by spotting the idle time of Garbage Collector or Water Tanker. It also helps the municipalities in improving the fuel consumption of the vehicles since Diesel issued can be linked to the distance travelled. The routes for water supply tankers are being optimised as per seasonal requirements. One of the biggest advantage of this system is that water Tankers are being monitored and in case any water taker does not go to its destination it comes to the notice of concerned officer.

3. ***File Tracking System***

The File Tracking System has been installed at the office of the JMC, Jabalpur and is being used by all the departments of the JMC. Officials of all the departments are using the system. The key features of the system are as follows:

- Every file is provided a bar-code for easy access.
- Access of file at every stage using the bar code readers.
- Citizen gets a bar-coded acknowledgement for his/her application / grievance and is able to see the status of his application online.
- The status of each and every application can be viewed on the Net.
- The officers get updated executive summaries – hence tracking, monitoring is effective
- Transparency in the work process has been achieved.
- As the file is tracked at every stage the accountability of the employee has increased.

4. ***Citizen Mobile Van :***

The municipal corporation purchased two vehicles equipped with computer which is linked with central database and has internet facility ,display system so that citizen can see the transaction details , printer and power backup and manned by staff to enable payment of property tax, Water tax payment ,Bazaar and shop license payment and certificate issuance ,Issuance of Birth and Death Certificates ,Issuance of Mutation certificates ,Legalisation of illegal water connection ,Building permission sanctions

5. ***E-library***

An effective web based digital library of various documents relevant to officers of JMC and common citizens was developed. The Jabalpur Municipal Corporation handles a variety of documents differing in their sizes, content and quality. Some of these are available in word format. These have been converted in to PDF/A format, indexed and stored. Some of the documents are in paper form; the information contained in the specified documents is being keyed in into a specified database format. The data entered in the database is printed out and verified by comparing with original documents.

6. ***Record Management***

In order to improve it systems JMC has started implementing Record management. In the Record Management System, JMC has streamlined its records using 5 S Japanese management techniques .All old and unused records have been disposed off and files have been properly indexed and maintained.

7. ***Performance Management***

A system of performance management was evolved in which Tax collectors/Revenue inspectors and Zonal officers were judged on 8 different parameters and the best performers were rewarded as well as the poor performers were issued warnings.

Governance and Service Delivery Improvement

- As a result of updating database, it was possible to identify and formalize the illegal connections by matching the property tax data with the water tax data.
- Earlier system of annual bills are replaced by half yearly bills due to better efficiency
- Meters were installed for all bulk users.
- All the ledgers and bill details have been uploaded on website i.e. jmcjabalpur.org and are updated on real time basis so that citizens can view their tax details , their details of their last tax payments online which has resulted in more transparency.

18 JUSCO Sahyog Kendra: An Initiative Towards Customer Satisfaction

Sector Citizen Friendly services

Implementing Agency **JUSCO**

Objectives

To improve performance in internal efficiency and customer service with respect to specific service delivery standards

ICT Application

JUSCO(Jamshedpur Utilities and Services Company Limited) Sahyog Kendra-IT enabled 24/7 single window call Centre and Customer database

Initiative Summary

JUSCO Sahyog Kendra is an initiative established with a view to provide and track customer service performance based on service level standards

Context

The broad functions that came under the scope of the Town Division of Tata Steel include ensuring planned development, maintaining service level of water supply, power supply, road maintenance & sewage system, providing & maintaining comfortable accommodation for employees of Tata Steel, social up-liftment of communities through 16 community development centers, maintaining high level of cleanliness, health & hygiene through an effective Public Health Service, preventing encroachment in the city and maintaining & further beautifying the townshipThe services offered were of a wide range, yet the customer redressal mechanism / the complaint management system were not robust as there was no customer database, there were multiple contact points for customers, customers were expected to remember the numbers of the different services, registers were used to take down customer grievances, the redressal had variation in response quality & timelines, there was no follow up mechanism and no method to escalate complaints that were left pending.The complaint redressal and weakly defined service standards were ineffective. A manual and decentralized complaint management system was in place, supported by 15 different customer help numbers dealing with different units handling varied services. As a result, the data obtained from this system could not be collated for managerial decision making and subsequent improvements in the practices. Moreover the service did not have any specific service delivery standards to track the degree of quality or response time for resolution of complaint. Under these conditions the JUSCO realized the need to improve internal efficiency & improving customer service. With this came JUSCO Sahyog Kendra, a 24x7 call center, an initiative towards customer satisfaction.

Implementation

JUSCO Sahyog Kendra (JSK) is a 24X7 single window request logging and follow-up system to provide greater care to the residents of Tata Steel command area. JSK undertook an extensive service level expectation (SLE) survey and captured the real needs & expectations of the customers. Based on the results of the survey & the capabilities of the service delivery mechanism, SLGs (service level guarantee) were decided for all activities. The SLGs were also tightened according to performance and survey results. The Complaint Management system thus laid down explicit service delivery standards, which are time bound & measurable.

The complaint management system changed from multi points to 24x7 single window inter face (phone number 66 – 46000). The features of the JSK include:·

- Consisted of eight counters to register customer complaints / requests 24x7.
- On an average 800 to 1000 calls are received at JSK
- Repeat and escalated complaints are given special focus.

- With performance measurements indicating an improvement in the internal capability to match Service Level Guarantee (SLG), the JSK agents communicate the expected time for completion of job. This created a transparent & easy interface with customers
- Agents take feedback from 10% of closed cases every day to revalidate the real response from the customers.
- This perception acts as an independent and reliable mechanism to ensure quality of services provided by the executing agencies
- The system gives a comprehensive summary (MIS) of complaints at department levels that are drilled to a micro level
- MIS to review the performance of the contractors.
- MD, JUSCO personally reviews the performance of all the services based on the data generated by JUSCO Sahyog.

Governance and Service Delivery Improvements

- Involvement of stakeholders, consumer organizations and citizen groups are taken in the formulation of improvement plans.
- Reduction of service centers - the multiple contact points have been merged into one & the overheads have been absorbed in different departments which otherwise require more staff.
- Cost benefits are measured with constant monitoring on timeliness, quality, wastage & repeat complaints.
- With transparency & reliability of data, budget allocation, job distribution etc are better organized.·
  Single point contact – 24x7 @ 66-46000
- Creation of zones – entire operating area divided into 7 zones & 22 job printing stations
- Standards of service delivery – Complaint management system lays explicit service delivery standards that are time bound, accurate, measurable & specific Complaint / Request registration process- complaint registration mechanism is computerized in which all service nodes are connected to a centralized server, ensuring all complaints / requests are integrated & mapped.
- Job prioritization to facilitate compliance of complaints within SLG.
- Transactional Feedback
- Capturing Customer Perception – Jusco engages a third party AC-Neilson, ORG Marg, for conducting annual satisfaction, dissatisfaction survey. Gaps are identified & actions are taken accordingly.
- Bench Marking Service Level – In association with ORG Marg, JUSCO has evolved a bench marking process to measure satisfaction level of its major municipal & civic services with Chandigarh
- Customers now have one number to contact for all their grievances 24x7
- Customers are provided with complaint numbers & are also informed about the SLG.
- At any point customers can demand to know the status of their jobs
- Instant information on bill query

19 Traffic Information System Initiative: B-TRAC, Bengaluru

Sector Municipal Services - Traffic and Transportation

Implementing Agency Traffic Police, Bengaluru

Objectives

Operational Objectives :--

- Reduce traffic congestion by 30% in central area
- Reduction in Pollution
- Reduction in accidents by 30%
- Improved parking management
- Set up accident reduction and trauma care system

Institutional Objectives :--

- Co-ordinated and planned traffic management
- Robust revenue model based on traffic fines
- Legal and institutional reforms
- Capacity Building - modern Traffic Training Institute
- Strengthening of traffic police by augmenting infrastructure

ICT Application

Blackberrys, GPS, Pan Tilt Zoom (PTZ) camera system

Initiative Summary

To manage the rapid increase in traffic in the city of Bengaluru, the Bengaluru traffic police have initiated the B-TRAC, an intelligent real time information system on traffic and safety. Various Surveillance cameras are installed across the city. Variable Message boards are set up giving information about the traffic jams in the city, seeing which citizens can change their route. Also enforcement cameras have been set up to traffic rules violators and an auto receipt is generated. This project won the National e Gov award.

Context

Bangalore's road network is primarily radial and converging at the centre leading to unwarranted entry of traffic to the centre.Ring Roads are inadequate and need more flyovers, Arterial Roads are congested and Sub-arterial Roads are congested and have parking pressure.The city has 1000 Sq. Kms of area,4500 Kms of Road,40,000 Intersections,330 Signalized Intersections and 600 Manned Intersections.The public modes of transport, mainly the buses, are vying for road space and have to compete with other modes of vehicles like autos, two wheelers, cars etc

Implementation

Several technology-based initiatives such as use of BlackBerry devices to check traffic rule violations, installation of GPS on buses, centralised traffic signal management, etc, have been launched under the project, bringing in transparency and accountability in the system.

More than 30000 road-side signages have already been installed. All signals to have highly reflective direction boards. Overhead gantries to indicate directions for better lane discipline.4. Reflective tubular cones, median markers, hazard markers, road studs etc for better lane discipline & safe driving. Reflective thermoplastic road markings are used as a means of controlling and guiding mechanism of traffic for smooth flow along the guided paths of travel. A Video Traffic Surveillance and monitoring system was commissioned in Bangalore City to enable better traffic management, law & order, management of the special event like public gatherings, processions

etc. incident Management, information dissemination to road users. The system collects real time video from the specified locations by using Pan Tilt Zoom (PTZ) camera system transmitting these to the Traffic Control Centre through a IP network. The system therefore comprises of outstation equipment installed at the various location in Bangalore city and complementing equipments installed at the Traffic Management Centre.

Governance and Service Delivery Improvements

- More traffic violations detected- from 35% in 2009 to 61% in 2010
- Total fine collected increased- from Rs 19 cr in 2007 to Rs 48 cr in 2010
- Reduction in number of road accidents- from 8426 in 2007 to 6483 in 2010
- It is also planned to set up nearly 400 signals which will be be vehicle actuated, networked, adaptive and controlled/monitored by the Traffic Management Center (Area Traffic Control).
- Further it is planned to install 400 cameras, a state of the art Traffic Management Center (TMC), Traffic Enforcement Cameras, Centrally Automated Traffic Enforcement Systems, Traffic Police Mobility, Process, Communication, Modernisation and Capacity building through the development of modern Traffic Training Institute.
- It is also planned to install Variable Message Signboards to inform the motorists about diversions due to natural calamities like flooding, water clogging, fallen trees, electrical poles etc, man made diversions like strikes, road blocks, agitations etc, safety Messages and Road incidents like accidents. This information would help motorists to plan their route better.

20 Green Kerala Express: Towards a Sustainable Future

Sector Municipal Services - Sanitation and sustainable development

Implementing Agency State Sanitation Mission

Objectives

To showcase the achievements of local governments in sustainable development, assess the gains achieved and create a momentum for further improvements

ICT Application

Media and communication technology- television, website, SMS mobile services

Initiative Summary

The Green Kerala Express initiative is a social reality show modelled along the lines of the conventional television reality show- with a difference. The competition was on sustainable development and the competitors were elected leaders, officials and other functionaries of local governments. This television programme awakened an interest in development issues as many positive stories emerged and unexpected champions were made. The programme contributed much to encourage popular interest and engagement in development issues.

Context

The Green Kerala Express initiative was a social reality show, which encouraged Local Governments to showcase their achievements in sanitation and sustainable development and compete with each other as in a conventional social reality show. The concept evolved from 'sanitation' –scope extended to include holistic and sustainable development. The Green Kerala Express constitutes an innovative first time initiative for development communication as opposed to political reporting and was initiated by the State Suchitwa (Sanitation) Mission, Dept of Local Self Government, Govt of Kerala with collaborative support offered by Centre for Development of Imaging Technology, Doordarshan-Thiruvananthapuram and the Kerala Institute of Local Administration. The Green Kerala Express involved a daily 40 minute interactive show involving all LSG institutions (999 rural and 58 urban) from March 2010 to July 2010.

Implementation

Subsequent to a screening process, local government officials were invited to the live television show where they presented their initiatives with the Chairperson/Mayor led the presentation. Videos based on their development stories were screened. A six member jury (five constant and one celebrity) would pose questions and announce scores. The television audience invited to SMS their preference. Final ranking was carried out based on weightage to jury scores and audience support. Simultaneous uploading of show on youtube channel embedded in the Green Kerala Express portal with blogs and comments invited on the portal –also featured news, updates, related links, interviews, helped to enthuse all potential audience types. Cash awards and mementos were presented to the winners and runners up in a state wide ceremony which was telecast live.

Governance and Service Delivery Improvements

- Government was able to reach out interactively to a state wide audience (estimated to be around 65,00,000 households including 1200000 households who have access only to Doordarshan)
- Positive stories on development initiatives by LSGs were reported to be motivating
- The initiative served as a "Social " auditing by putting up development initiatives up for public scrutiny
- It helped bridge the gap between elected leaders and officials on one had and the people through live and attractive presentations
- It captured the imagination of the state's population , given that television rating for the programme was second only to news
- Over 200000 SMSs received which further reinforces the popular nature of support for the programme
- Peer learning and exchange of good practices in a competitive environment
- Knowledge bank of "green" and "sustainable development" initiatives now housed in the Local Government Training Institute, setting new standards for future local governments.

NOTE

The selection of cases have been compiled from our database which including those we documented ourselves and from entries submitted by Urban Local Bodies/Utilities/State Governments. The cases have been selected to highlight the varied possibilities of using ICT enablement for efficient governance and service delivery. For more information please write to us at url@asci.org.in.

The selection has been compiled by Mr K. Lavan Kumar, Mr D. Karthik Reddy and Mr Ranjith Sriram with inputs from Ms. Vijaya Venkataraman. Prof Srinivas Chary Vedala, Dean and Director, Centre for Urban Governance at the Administrative Staff College of India and Mr Prakash Kumar, Director, Global Public Sector Practice, Internet Business Solutions Group, Cisco provided guidance and support.

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