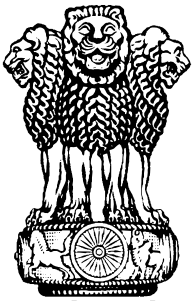
सत्यमेव जयते

Excellence in e-Governance

21st National Conference on e-Governance



Excellence in e-Governance

Department of Administrative Reforms & Public Grievances
Ministry of Personnel, Public Grievances & Pensions
Government of India

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Aadhaar Enabled Public Distribution System

NIC, APSC , MeitY , GoI & Food and Civil Supplies Department, Government of Andhra Pradesh.

1	Name of State/Ministry	Andhra Pradesh / NIC, MeitY
2	Status of the host/owner.	NIC is attached organization of MeitY, Food and Civil Supplies Dept is a depart under Govt of A.P
3	Name of host/owner organisation	NIC, APSC , MeitY , GoI & Food and Civil Supplies Dept, Govt of Andhra Pradesh.
4	Name of the Project	Aadhaar Enabled Public Distribution System
5	Name of the Contact Person	K Rajasekhar, DDG & HoG.
6	Contact Address	Centre for Data Governance, NIC, Hyderabad, Telangana, 500063
7	Telephone/Fax/Email	040-23223142, sekhar@nic.in

8 Project Summary

The beneficiaries are authenticated with Aadhaar Bio-metrics, in real-time at the Fair-Price Shops and subsequently, the entitled food items are distributed at subsidized rates. The Point of Sale automation, Supply Chain Management, Aadhaar seeding of the digital data of the beneficiaries to achieve the objectives of the Total Public Distribution System and eliminate pilferages and slippages.

9 Date of Launch of the Project

September 2015

10 Coverage

Initially entire Andhra Pradesh. After getting the e-Governance Award, now spreading to other states.

11 Beneficiary of the Project

All the Beneficiaries of TPDS, FPS Dealers, Stockists, Transporters , Monitoring officials etc.,

12 Problem Statement

1. Existence of Duplicate Beneficiaries.
2. Existence of un-authentic transactions related to ration distribution.
3. No Transparency, No real-time monitoring.

13 Project Objectives

Achieves the objectives of TPDS and implement NFSA efficiently and effectively

14 Project Scope approach and methodology.

All the beneficiaries data was digitized and digital data base was created and corrected, aadhaar seeding was done. All the Stakeholders in the project were digitally onboarded through online, or POS device or Mobile.

Training and Sensitization programme were organized.

Based on the availability of signal strength, the corresponding service provider SIM was procured to make entire operation online. UIDAI compatible ePOS devices and digital weighing machines were provided to all the FP shops. All transactions were made online mostly. Even Aadhaar enabled cardless, cashless transactions introduced successfully in collaboration with NPCI.

15 Results Achieved/ Value delivered to the beneficiary of the project and other distinct features/ accomplishments of the project

With Aadhaar Bio-metrics the ration cards were de-duplicated. Which resulted in Rs.900Cr one time savings.

Supplies to the target population ensured with Aadhaar enabled real-time distribution to the right beneficiary the food grains, which resulted in saving of around Rs.800 Crores annually. Total transparency of inventory and supply chain achieved. Even introduced for the first time in the country (AePS) Aadhaar enabled payment system for cashless, cardless transactions.

Madhya Pradesh Sharam Seva Portal (http://labour.mp.gov.in)

Office of the Labour Commissioner, Madhya Pradesh

1.	Name of the State / Ministry	Madhya Pradesh, Labour Department
2.	Name of the host / owner organization	Office of the Labour Commissioner, Madhya Pradesh
3.	Status of the host / owner organization	State Government Department
4.	Name of the Project	Madhya Pradesh Sharam Seva Portal (http://labour.mp.gov.in)
5.	Name of the Nodal Contact Person	Shri Prabhat Dube, Additional Labour Commissioner, Labour Department, GoMP commlab@nic.in
6.	Contact Address	518, New Moti Bunglow, M.G. Road, Indore, Madhya Pradesh.
7.	Telephone / Fax / E-mail	Landline : 0731-2432822 Fax :0731-2535109

8. Project Summary

Labour Commissioner Organization undertook a major task to study and analyze existing processes, work-flows, procedures, forms etc. in its public interface and then redesign them to ensure efficient, cost effective and quality services to its customers, mainly Shops & Commercial Establishments, Factories and other entrepreneurs on one hand and lacs of construction workers requiring social security benefits on the other hand.

The range of processes involved rationalization of complex Labour Laws, simplifying of forms and procedures, addressing multiplicity and duplicity of application forms and periodic returns, establishing a single window for all registrations and licenses for all entrepreneurs, principal employers and contractors, eliminating physical touch points and making the whole process paperless without need for office visits and submission of original or attested copies of documents, bringing in concept of self certification, joint inspections under all regulatory Labour Laws instead of multiple inspections, providing payment gateways to applicants for deposition of fees directly to treasuries instead of through manual bank challans and bringing all services under the domain of Public Services Guarantee Act.

9. Date of launch of Project

Started in 2014-15

10. Coverage (Geographical)

Across Madhya Pradesh
(all 51 districts of MP)

11. Beneficiary of the Project

Shops & Commercial Establishments / Factories & other Entrepreneurs / Contractors / Principal Employers / Establishments / Employers involved in Building & Other Construction Works/ Trade Unions.

12. Problem statement or situation before the initiative

- Average disposal time for applications from construction workers about 30 days.
- Delivery of Registration Certificates to shops and commercial establishments 40-45 days.
- Applicant was required to visit the office 3-4 times resulting in harassment and wastage of time and money.
- Prevalence of large number of fake and duplicate worker registration cards
- Lack of transparency and complaints of corruption.
- Involvement of agents and middlemen in service delivery.
- No sharing of information with the applicants.
- No facility of tracking of application.
- Long queues and applicant to abide by office timings
- No computerization, no regular updation hence no monitoring is possible.
- Long delay in process flow, in the manual system file had to move to many levels
- Manual system required large manpower and resources for service delivery.
- Inefficient and wasteful. Required more time and resources and led to huge drain on ghost cards.
- No customer satisfaction.
- Strenuous job for the service providing officials.
- Cost of compliance of Labour Laws and regulation was very high and stressful.

13. Project Objectives

- To eliminate the anomalies in the clumsy provisions of various labour laws.
- To provide time-bound registrations and licensing services.
- To bring the services under the ambit of Madhya Pradesh Public Services Guarantee Act
- To eliminate the role of Agents and Middlemen from the System.

- To eradicate malpractices in providing of departmental G2B services.
- Bringing in Ease of Doing Business in Madhya Pradesh.
- Making amendments in certain labour laws with the objective to achieve the purpose of simplifying the procedure and avoiding the duplicity of the provisions in the Acts and for providing the appropriate safeguards in the interest of the workmen.
- Government Process Reengineering
- Centralized portal for all services & functions of the Department

14. Project scope approach and methodology

- Identification of problems in prevalent system and legal framework
- Formulation of ideas to counter the problems
- Conceptualization of project and service prioritization
- Identification of Service Providers
- Preparation of initial draft justification
- Comparative assessment of existing and proposed system and legal framework
- Organizing of tripartite consultations with stake-holders, industry, trade unions, employer associations etc.
- Incorporation feedback and other issues
- Sending of the draft to Government for approval and seeking Cabinet approval
- Seeking presidential assent.
- Publication of Ordinance in the official gazette of MP
- Study of best practices
- Creation of centralized database
- Modular approach for development of portal
- Testing and Pilot
- Capacity Building through hands on training sessions.
- Rollout and feedback based improvements, information and awareness

15. Result achieved / value delivered to beneficiary of the project and other distinctive features / accomplishment of the project

(i) To organization

Simplification and automation and enforcement of rules, and First Come First Serve protocol

has allowed the offices to process the applications at a high pace as completeness of the application is already validated by the software.

a. Facilitation of "Ease of Doing Business" in Madhya Pradesh, The State received wide appreciation by Industry, Entrepreneurs and workers community and is now viewed as a preferred destination for doing business

b. MP is ranked among Top 5 States in India in Ease of Doing Business as per World Bank's Index.

c. Better Brand Image of Government amongst the owners of shops, firms, commercial establishments, factories.

d. Considerably more customer satisfaction

(ii) Other stakeholders ie. Shops & Commercial Establishments / Factories & other Entrepreneurs / Contractors / Principal Employers / Establishments / Employers involved in Building & Other Construction Works

The initiative has resulted in significant cost to its users and they now get all the services online without requiring visit to the office for application, follow-up and tracking

a. Applicant is not required to visit the office at all for all services

b. Online applications, less documents required, Online payment, savings of time and efforts

c. Online delivery of digitally signed Registration / renewal Certificates to shops and commercial establishments in average 7 days (instead of previous 45 days).

d. Services Guaranteed in a fair and transparent manner within a specified time frame as per the provisions of the Public Services Guarantee Act

e. Scope of Agents and middlemen in services eliminated.

f. All details are available to the applicants online and through SMS alerts.

g. Applicant can track his application online on web and using Mobile App

h. No queues and more convenient and easier processes (24 x 7).

i. Role of Agents and middlemen eliminated.

(iii) To citizen – Building & Other Constriction Workers

a. Average disposal time for applications from construction workers reduced to 10-12 days (instead of previous 30 days).

b. Online delivery of Registration Certificates to shops and commercial establishments in average 7 days (instead of previous 45 days).

c. Applicant is not required to visit the office at all.

d. Service available in fair and transparent manner.

e. Agents and middlemen eliminated.

f. All details are available to the applicants online and through SMS alerts.

g. Applicant can track his application online or using mobile App

h. No queues and more convenient and easier process (24 x 7).

i. DBT

j. Role of Agents and middlemen eliminated.

Setting up of wireless LAN in Kedar valley from District HQ up to Kedarnath temple including electronic video surveillance, Wi-Fi internet facility, V C services, hotline communication and provision of hotspots at different points on yatra route

Disaster Management Department,DDMA Rudraprayag,Uttarakhand

1	Name of State/Ministry	Uttarakhand /Disaster Management
2	Status of the host/owner.	Department
3	Name of host/owner organisation	DDMA Rudraprayag
4	Name of the Project	Setting up of wireless LAN in Kedar valley from District HQ up to Kedarnath temple including electronic video surveillance, Wi-Fi internet facility, V C services, hotline communication and provision of hotspots at different points on yatra route.
5	Name of the Contact Person	Dr. Raghav langer, IAS
6	Contact Address	Secretariat Compound, Subhash Road, Dehradun Uttarkhand- 248001
7	Telephone/Fax/Email	9557639429

8 Project Summary

In May 2015, as part of on-going post-disaster reconstruction works, District Rudraprayag undertook a project under the District Disaster Management Authority (DDMA) for strengthening of Communication network in Kedarnath valley which would serve as reliable/independent/all-weather/alternate/sturdy base network communication system which can sustain in difficult terrain and extremely harsh climatic conditions. The objective of the project was to instill confidence in pilgrims coming to Kedarnath Shrine regarding their safety and security by establishing a communication system which would provide various e-services to the pilgrims, network support to reconstruction agencies working along Kedarnath yatra route; as well as surveillance, disaster management and mitigation tools to Police/ SDRF and Civil administration.

In the same context, a robust Radio Frequency based local intranet network was established by DDMA in an unimaginable very short duration of time, using point to point and point to multi point wireless hopping technique in 2.4 Ghz and 5.7 Ghz (evacuated frequencies) from Sonprayag (at elevation of 4,500 ft) to Kedarnath Shrine (at elevation of 11,600 ft) along a foot trek route 21 Km long in extremely harsh environmental conditions, topography and the fear of the unknown. In spite of high

altitude terrain, sub-zero temperatures, heavy snowfall during winters and regular and heavy rains. The network was able to provide services like free Wi-Fi internet, hotline SIP (session initiation protocol) communication, Video conferencing services, real time Radio Frequency Identification tracking of mules, public displays screens for live feed of Shri Kedarnath temple and major points on the track, deployment of Kiosk machines for internet access and 24X7 electronic surveillance of Kedarnath yatra route using high end night vision PTZ cameras.

9 Date of Launch of the Project

20 May, 2017

10 Coverage

A robust RF based local intranet network was established by DDMA in an unimaginable short duration of time. Using point to point and point to multi point wireless hopping technique in 2.4 Ghz and 5.7 Ghz (evacuated frequencies) from Sonprayag (at elevation of 4,500 ft) to Kedarnath Shrine (at elevation of 11,600 ft) covering all intermediate yatra padaavs along a foot-trek route 21 Km long in extremely harsh environmental conditions, topography, high altitude terrain, sub zero temperatures, heavy precipitation area. Further this wireless LAN was extended to District Headquarter, Rudraprayag covering a distance of 91 kms upto the Temple. Further, this network has been extended upto District Head Quarter, Rudraprayag, thus finally connecting DHQ to Kedarnath Shrine covering a distance of approx. 96 Kms with the help of 17 base stations. An ILL drop (internet lease line) of 15 mbps has been taken from BSNL at district HQ (located approx 96 kms away from Kedarnath shrine) and with the linking up of this ILL with the already created local intranet network. The wifi-internet services along the yatra trek route is activated, something which was considered impossible to be achieved for next few years in a post-disaster scenario, by the private mobile service providers.

11 Beneficiary of the Project

- Instilled confidence in pilgrims regarding the safety and security of Kedarnath yatra.
- 3.1 Lakh pilgrims visiting Kedarnath Shrine in yatra season 2016 (equaling 60% of pre-disaster footfall).
- Has played a major role along with other reconstruction efforts in re starting the Chardham Yatra circuit & thus economy of the region.
- Approx. Rs 95 Lakh revenue has been generated this yatra season through RFID mule prepaid facility.
- Request from BSNL for 6 Mbps Bandwidth for betterment of their services. First time in the history of Shri Kedarnath yatra, TV 100 giving live Darshan of Kedarnath temple on their channel to a nationwide T.V audience.

12 Problem Statement

Being a hilly terrain, it was tough to get the earthing of these BTS to a desired value<2 ohms which further drops the 2 Mbps capacity to 256 Kbps. Thus the mobile connectivity over the last stretch of

approx. 30 Kms enroute the shrine was also not very reliable and the service provider were unable to give uptime according to the industrial norms. 3G mobile internet services of only BSNL were available to consumers that too till Phata town only (located around 41 kms short of Kedarnath temple) through a mini link based BSNL's Ground based tower located in Khat. Major Service providers were approached by administration post disaster to re-establish their communication network, services and further expand them up to Kedarnath shrine. Although, they showed some interest, however, despite all efforts, nothing materialized on ground, may be because the project was challenging and not considered economical as far as the investment and returns are concerned.

13 Project Objectives

The project featured 24 X 7 Electronic Surveillance of critical points thus keeping a strict vigil of every event happening on the yatra route. RFID Tracking of Mules of mules carrying pilgrims along the yatra route. SIP Based Hot Line Communication and Video Conferencing. Hot Spots and Internet KIOSK for free internet access. Public Display screens for live view. Connectivity support for shri Kedar Rescue Android App and Live display of the temple and aarti by TV 100 on their channel for nationwide T.V audience.

14 Project Scope approach and methodology.

A Minimum of 50 Mbps full duplex bandwidth in between any two points was obligatory to execute the different e-Services using this network as backbone. Network was to be established in such a way that the number of base stations (UBR radios) are minimum so that the factor of frequency interference can be abridged. Total 17 Base Stations were established along yatra trek route. Installation was done keeping all the Guidelines of the WPC (Wireless Planning and Coordination) intact. All the civil work like earth excavation, filling up of RCC was done on the guideline of the R&B. The Guy's Mast Installation was done at all intermediate points along the Yatra route. Earthing of each tower was done to a level of 2 ohms. Communication Cables were routed in a Managed way. An output throughput of 100 Mbps (Full Duplex) was achieved between any Two Points.

State Pension Portal: a common integrated platform to facilitate paradigm shift from conventional 'demand-based' model of governance to an all-inclusive, holistic, proactive and 'entitlement based' model of Governance

Madhya Pradesh/Social Justice and Disabled Welfare Department of M. P.

1.	Name of the State/Ministry	Madhya Pradesh/Social Justice and Disabled Welfare Department of M. P.
2.	Name of the host/owner organization	Madhya Pradesh/Social Justice and Disabled Welfare Department of M. P.
3.	Status of the host/owner organization	Mission Director
4.	Name of the Project	**State Pension Portal:** a common integrated platform to facilitate paradigm shift from conventional 'demand-based' model of governance to an all-inclusive, holistic, proactive and 'entitlement based' model of Governance.
5.	Name of the Nodal Contact Person	— Mr. Raghuraj Rajendran (IAS), Mission Director (9425925852) — Mr. Sunil Jain, Senior Technical Director, NIC (9425609696, sjain@nic.in)
6.	Contact Address	1250 Tulsi Nagar Bhopal - 462001
7.	Telephone/Fax/e-mail	0755-2556916/dpswbpl@nic.in

8. Project Summary

Article 41 of the Constitution of India directs the State to provide assistance to its citizens in case of old age, sickness and disablement and in other cases of undeserved want within the limit of its economic capacity and development. As part of its commitment as a welfare State, GoMP also strives for the welfare, social protection and social security of all families and residents of the State. This may include, but may not be limited to people living Below the Poverty Line; elderly including destitute; widows including those deserted by the families and Persons with Disabilities and other vulnerable groups.

Department runs 10 schemes to facilitate compliance of the directive of the constitution and support dignity of life for the needy and underprivileged. These schemes touch each and every village and

habitation of the State. Above 35 lac persons are being covered under these schemes. Total annual outlay of the schemes is ~1300 crores.

The initiative involves effective use of various available ICT technologies eg. Data Mash-up, Web, Mobile App, SMS, GPS, Aadhaar, QR codes, predictive computing for adoption of proactive & entitlement based model governance so as to ensure transparent & effective implementation of various social security pension and other schemes in Madhya Pradesh. The IT platform, MIS, Resident Database, seamless integration with other databases like database of PwD's, Database of BPL Families facilitates predicative computing. Further, the system also allows rule-based identification of the people eligible for benefits and facilitates sanction of benefit of schemes proactively by deputing the concerned officials for completing the formalities with minimal interventions and sanction of the benefits on the date of eligibility. The system also facilitates online requests for benefits, online verification, automated switching to schemes with higher benefits on the date of eligibility. The system facilitates DBT and may be considered as an example of "Minimum Government and Maximum Governance"

9. Date of launch of Project

14/08/2014

10. Coverage (Geographical)

National level – No of State covered	1
State/UT level- No of Districts covered	51
District level- No of Blocks covered	696 (313 Rural Local Bodies and 383 Urban Local Bodies)

11. Beneficiary of the Project

a. 35 lac pensioners that include

- Old Age Persons
- Persons with Disabilities
- Widows
- Deserted Women
- Mentally Retarded People
- Persons with Multiple Disabilities
- Parents with ONLY Girl Child

b. G2G

- CEO and Pension Section OIC of 313 Janpad Panchayats
- Commissioner, Nagar Nigams, CMO, Nagar Palikas, Nagar Panchayats
- Dy. Director, Social Justice Department of 51 districts

12. Problem Statement of situation before the initiative

- The implementation of these schemes was being carried out by Local Bodies and other offices in manual and isolated manner based on the demand of the people for the benefit of the scheme.
- The manual system allowed discretion in decision making and scope of corruption.
- The manual system of implementation of these schemes suffered from several procedural gaps resulting in delay in sanction of pensions to the eligible, monthly payment of the pension amount, person not getting the benefit of the best schemes as per his eligibility, ghost, dead and duplicate beneficiaries, miscalculations etc.
- Furthermore, it was difficult to know about the status of the payment of the pensioners.
- The overall system was extremely slow, error prone, discretion-based and ineffective and was not able to deliver the intended services in an effective, rule-based and transparent manner.
- The citizens, who are mostly from weaker/underprivileged sections of society, found **it complex & difficult to understand the processes, rules and entitlements** of schemes and were not able to get the intended benefits as per their entitlements in a simple and hassle free manner.
- Old Age / widow/ Deserted/ PwDs / Destitute persons were required to have interface with more than one office & were subjected to repetitive verification and submission of documents.
- Delay in payment of monthly pensions: - Because of manual and complex system of preparation of pension bills, the officers used to prepare the pension bills of three months in one go. Thus, the payment of monthly pensions used to be delayed and got distributed on quarterly basis.
- Delay in sanction of the benefit of pension schemes to the needy and eligible due to manual and individual specific discretionary approach.
- Non – existence of integrated and dynamic database of pensioners, pension bills etc.
- No check on a single beneficiary getting benefit of more than one pension schemes unlawfully by taking advantage on manual operations.
- No process for automated discontinuation of pension as soon as the pensioner becomes non-eligible for a scheme eg. Widow pensioner getting re-married, pensioner is dead; Pensioner is no more BPL etc.
- No reliable process existed for sanctioning the benefit as soon as the person became eligible for it
- No DBT facility
- No facility was available to automatically switch the pensioner to a better pension scheme with higher entitlement on the day s/he became eligible.
- Poor fund utilization and management:- The pension fund was withdrawn from treasury and parked & blocked in the bank accounts of the DDOs. It was surrendered by the DDOs at the last moment if not utilized.

Challenges :-

- To bring about the change in the mind-set of the field offices and functionaries so that they appreciated and adopted the proactive & entitlement based model of governance in place of demand-based, reactive model of governance.
- Motivate pensioners to get their Aadhaar numbers and switch to core banking branch.
- Collection and digitization of detailed profile of families and residents and creation of a common integrated database specially with the attributes which decide the eligibility and entitlement of a person for various schemes and facilitate the DBT.
- Develop and design a simplified system for automation of eligibility & entitlement calculation, sanctioning and bill/order generation process for timely payment to beneficiaries and monitoring at every level.
- Continuous updation of the database for generation of list of probable eligible beneficiaries or those who are likely to be eligible in coming 1-2 months.
- Design and develop a reliable mechanism for auto-switching facility to a better pension scheme without manual intervention.
- Monthly distribution of Pension Amount on regular basis.

Constraints:

- The department did /does not have any **DIRECT CONTROL** on the offices i.e. RLBs and ULBs and GPs who are key stakeholders and responsible for the effective implementation of social security schemes.
- Over the last two decades, the workload of the ULBs/RLBs and GPs dealing with Social Security schemes has increased manifold without corresponding increase in the quantity and capability of the supervisory manpower. Limited manpower is overburdened with work related to implementation of numerous schemes that are related developments. **Social Security scheme was not considered as a priority sector and often took back seat.**
- Non-availability of the bank branch in the 5 KM radius of the village.

13. Project Objectives

Use of various available technologies for Design, Development & Implementation of an Application and Database Platform to facilitate proactive and entitlement based governance and ensure the following:

- to transform the processes involves in the sanction and implementation of social security pension schemes and make them beneficiary oriented.
- facilitate rule-based, error-free, effective & transparent implementation of social security pension schemes in a holistic manner
- Analyze various databases, predict and identify residents who are prima-facie eligible for Pension schemes.

- Analyze various databases, predict and identify the residents Persons that are likely to become eligible for pension schemes after two months. These lists are used by the concerned for verification and sanction of benefits as per eligibility.
- to facilitate **Door-Step-Delivery of services by** proactive identification of potential beneficiaries and ensuring that the individual gets benefit of pension scheme on the day s/he becomes eligible
- to ensure ALL needy, deserving & eligible get benefit of best possible social security schemes as per their **eligibility** & **entitlement** in a **hassle-free manner**
- to ensure that pensioner is **automatically switched to a better pension scheme** with higher entitlement on the day s/he becomes eligible
- to ensure that pension amount is provided to the pensioner **EVERY MONTH** by **DBT**
- to minimize need of persons to visit various offices for application/follow-up & eliminate need to repetitively provide documents for scrutiny and migration to a better scheme
- to facilitate faster, error-free and efficient preparation of sanction orders and bills by process automation and elimination of repetitive work, to check Miscalculation and overpayment
- to Identify & weed-out duplicate, fake and non-eligible pensioners
- to ensure effective utilization of budget and financial resources

14. Projects scope approach and methodology

a. The project has allowed the paradigm shift from conventional **Reactive & Demand based Model of Governance to Proactive and Entitlement based Model** of Governance.

- **Mash-up, Integration and Convergence of databases and systems:** the system has leveraged the data of population register and following online databases
  - **State Register of BPL families**
  - **State Register of Person with Disabilities (PwDs)**
  - **State Population Register (that records deaths and marriages)**
  - **State Register of Pensioners**
- The mash-up of these databases on key parameters like Age, Disability Status, BPL status, Marital Status has allowed proactive identification automated and rule-based generation of lists of beneficiaries for appropriate action as per the following cases:
- Mash-Up has allowed automated identification of Persons who are prima-facie eligible for benefit of social security pensions.
- Mash-Up has allowed automated identification of the women belonging to BPL families who have become eligible for widow pension as death of their husband has been reported in the population register and triggering of the process for time-based sanction of the benefit of the widow pension scheme.

- Mash-Up has allowed identification of persons **who will become eligible for benefit of social security pensions after two months.**
    - Beneficiaries who are to be switched to another pension scheme with higher pension amount as they have become ELIGIBLE for the better scheme (attained the age, reported higher Disability percentage, change in marital Status)
    - Beneficiaries whose benefit of pension scheme has to be discontinued as they have become NON-ELIGIBLE for the scheme as they have lost the BPL Status / Widow Status on account of re-marriage / reported dead
    - Fake, Ghost, Duplicate and Non-eligible beneficiaries who do not qualify for the pension as per the rules and their profile.
- The field functionaries and offices can now initiate focused action on the known target beneficiary and his known requirements. These lists allow the field functionaries to personally visit the potential beneficiary and undertake the required verification and complete the formalities and sanction the benefit of pension scheme on the day s/he becomes eligible.

Online Request for pension and sanction of benefit

- Facility for Online submission of Application for benefits has been provided public domain.
- The simplified web interfaces allows an individual to enter his Aadhaar no / Samagra ID, mobile number and upload his/her photograph and identity proof for the registration of the application.
- Facility to track the status of application has also been provided in public domain.
- All applications that are received offline are also registered on the portal for processing by the concerned local body
- Pension section of the Local body processes all the application on the portal and sanctions/ rejects the application as per the rules.
- System Generated Pension Sanction order is auto-generated and displayed in public domain on the portal
- SMS alert is sent to the beneficiary on sanction / rejection. Enforcement of timeline for processing the case as per the provisions of the Pubic Services Guarantee Act.

Process Automation:

- Capturing the bank account details of all beneficiaries
- Automated switch of the beneficiaries to other schemes in each month.
- Automated generation of the pension proposals by the local bodies for various schemes for the month as per the scheme-rules.

- Verification of the proposals by the local body.
- Online submission of the proposals by the local bodies to their DDOs for bill generation and disbursal
- Generation of the monthly head-wise sanction orders for various schemes for each of the Localbody. 12 Separate bills are generated for each scheme at each DDO level. Nearly 54 bills are auto-generated by the system for each DDO.
- Disbursal of the pension amount in the accounts of the pensioners through treasury
- System also generates the list of officers / offices that have not sanctioned the pension bills in time and hence the disbursal of pension is likely to be delayed for effective and continuous monitoring at State and district level.
- **Mobile App 'M-Pension Mitra'** has also been launched to allow the Gram Panchayat Secretary, the beneficiary and public to avail various services, information using their smart phone.
    - The Pensioners can view the profile, pension passbook online
    - Public can apply online for pension using App.
    - The App uses the GPS-tagged images of the beneficiaries for yearly verification of each and every pensioner.
    - The App support offline operations
    - Public can also report non-eligible BPL families

15. Result achieved / value delivered to beneficiary of the project and other distinctive feature/accomplishments of the project

a) The initiative has facilitated convergence, process simplification, automation, DBT, Financial Inclusion etc in a holistic manner and is thus equally helping all stakeholders i.e. Government departments and functionaries and residents.

b) **Proactive Governance:** The system now throws list of potential beneficiaries that are prima-facie eligible for schemes as per registered profile on portal.

- List of widows, old age persons belonging to BPL category and PwDs that will become eligible for pensions after two months.
- **Automated benefit to pensioners:** The system identifies the persons that are now eligible for other schemes that will offer them higher pension amount. Software triggered switch from one pension scheme to other scheme with higher pension entitlement.
- List of pensioners that have to be auto-switched from one pension scheme to other scheme with higher amount on attaining age specified for the scheme that offers higher pension amount.

- Such analytical reports are used by the concerned local body officials to take up proactive action and initiate the process to verify and confirm the eligibility of the individuals and sanction the pension as per the entitlement.

Impact:

a. The project involves a series of initiatives and innovations that have have simplified and transformed the processes involved in the sanction of pensions, payment of pensions and upgradations of the pensions and the transformed processed and approaches have resulted in tremendous savings in effort, time and cost incurrent by the pensioner in seeking the benefits of the pension schemes on the day he/she becomes eligible for the scheme.

b. The system uses data mash-up tools and use the integrated and verified database of the families, Population register, Online BPL register, Online PwDs register to confirm the eligibility and entitlement of any resident for the pension schemes and ensures that each and every person who is eligible gets the benefits of schemes s/he is eligible for.

c. Thus system ensures that the benefit of the pension is sanctioned to the eligible on the day s/he becomes eligible without any cost and effort.

d. The potential beneficiaries can register his request for pension online at **"Pension Portal"** or using Mobile App. He is only supposed to provide Samagra ID or Aadhaar Number to seek the benefit. Online application has also resulted in significant reduction in effort and time and has enforced accountability on the field functionaries for timely sanction of cases.

e. The auto-generated applications based on the online requests received on the Pension Portal/ m-Pension Mitra are made available in real-time to the concerned RLB/ULB for sanction. The applications are made available to the concern RLB/ULB for physical verification. The designated officer processes the applications and sanctions or rejects the application online. The sanctioned & rejected applications are published on the Pension Portal /m-Pension Mitra Mobile App with reasons.

f. Monthly pension bills are also being calculated and generated by the software as per the eligibility and of the individual. The software has automated various functions and drastically reduced the manual work and minimized discretion in decision making.

g. Data mash-up allows calculation of eligibility of the pensioner for better schemes every month. It automatically switches the pensioner to better scheme with higher entitlement without involving any formal application, supporting documents, certificates and other manual work. It may be noted that, previously switching to the better scheme was a tedious task as it involved formal applications, supporting documents and several verifications and manual processes. Switching was done after receipt of formal and fresh application from the applicant (if he was aware that the facility). Due to need for fresh applications and manual intervention, it was observed that pension upgradation was not done properly and regularly and most of the pensioners were getting the benefit of pension schemes with lesser amount, even if they were eligible for better scheme with higher pension amount.

h. System-triggered auto-switch feature of the system has tremendously benefitted the user as it has eliminated the need of applying for upgradation and have saved effort, time and cost involved in the upgradation to better scheme.

Benefits

- Streamline and automate the back-end processes for efficient and reliable and timely service delivery.
- Standardization and rationalization of schemes, involved processes and benefits being offered & will be offered by various departments/boards.
- Simplification of schemes and its application and benefit delivery procedures.
- Identification and verification of the target groups for various schemes.
- Bring about convergence of schemes and single service delivery point for similarly placed schemes under one nodal department for hassle-free delivery.
- MIS to facilitate continuous and effective monitoring and quick and informed decisions and sanction of benefits, track the previous benefits.
- Eliminate frauds and bogus beneficiaries.
- Prompt and proactive services to the eligible beneficiaries.
- Person/specific monitoring in place of number based monitoring.

(i) To organization/Government

- Streamline and automate the back-end processes for efficient and reliable and timely service delivery.
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- Identification and verification of the target groups for various schemes.
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- MIS to facilitate quick and informed decisions and sanction of benefits
- Eliminate frauds and bogus beneficiaries
- Prompt and proactive services to the eligible beneficiaries
- Person/specific monitoring in place of number based monitoring
- Transparency and digitized information of beneficiaries.
- Better monitoring, control and implementation

(ii) To citizen

- Entitlement based model of governance facilitates an institutional mechanism for setting high standards of services and results in making the public delivery systems compassionate, efficient and corruption free.
- The citizen has been relieved from approaching different offices of different departments and submitting individual and complicated application forms for each scheme along with Xerox copies of all supporting documents. He now needs to fill in a simple unified form for the scheme and submit it to the nodal dept that will ensure the processing in a time bound manner.
- The citizen also need not submit the Xerox copies of the documents each time to prove his identity and credentials. System records the credential at the time of the first benefit ands then sanctions the benefits in subsequent years on the basis of the earlier data.
- The citizen need not know the details of all schemes of various categories. He simply needs to fill in a simple unified form; the system will allow him the benefit of the scheme that offers him highest amount as per his entitlement, without any human intervention.
- Entitlement based Model of governance allowed the citizen to be sure of his dues/benefits
- **Auto Switched:** The system identifies the persons that are now eligible for other schemes that will offer them higher pension amount. Software triggered switch from one pension scheme to other scheme with higher pension amount.

IGKV-MIS (Indira Gandhi Krishi Vishwavidyalaya - Management Information System)

Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh

1.	Name of the State/Ministry	Agriculture Ministry, Chhattisgarh
2.	Name of the host/owner organisation	Indira Gandhi Krishi Vishwavidyalaya, Raipur, Chhattisgarh
3.	Status of the host/owner organisation	Government Body
4.	Name of the Project	IGKV-MIS (Indira Gandhi Krishi Vishwavidyalaya - Management Information System)
5.	Name of the Nodal Contact Person	Dr. Ravi R. Saxena, Associate Director Research, IGKV, Raipur
6.	Contact address	Indira Gandhi Krishi Vishwavidyalaya, Raipur Krishak Nagar, Raipur, Chhattisgarh - 492012
7.	Telephone/Fax/e-mail	0771-2444228/drravirsaxena@gmail.com

8. Project Summary

Indira Gandhi Krishi Vishwavidyalaya, Raipur was established on 20th January, 1987. This is the only Agricultural University in Chhattisgarh serving in all the 27 districts of the state. The role and responsibility of IGKV is vital. There are 31 UG (government and affiliated both) colleges, 8 Research Stations and 23 KrishiVigyan Kendra (KVKs) under the umbrella of the university. Teaching, Research and Extension are the three mandates of IGKV. Earlier during the year 2012, IGMIS concept was conceived as a framework incorporating ICT based solutions consisting of Education, Research, Extension, Examination, Establishment, Finance, Library and Web Portal intended to develop an Enterprise Resource Planning (ERP) in collaboration with NIC. Now, IGMIS is web enabled, role and work flow based software solution for the universities/ educational institutions to accomplish enrolment, registration and examination task which offers better solution to improve the productivity and efficiencies of the manpower and for the entire system. At the end, we have developed IGMIS – a tool for all activities.

9. Date of launch of project

August 12, 2014

10. Coverage (Geographical)

(i) Comprehensiveness of reach of delivery centers:

IGMIS is web enabled, role and work flow based software solution for the colleges (constituent and affiliated), research stations and krishi vigyan kendras to accomplish task related to education,

examination, establishment, research, extension and finance which offers a better solution to improve the productivity and efficiency of the manpower and for the entire system covering every branch of the univeristy. Most of the colleges, research stations and krishi vigyan kendras are situated in tribal dominated area. IGMIS can be accessed from there on internet.

(ii) Number of delivery centers:

There are 31 UG (constituted and affiliated both) colleges, 5 Post graduate colleges, 8 Research Stations and 23 Krishi Vigyan Kendra (KVKs) under the umbrella of the IGKV.

(iii) Geographical

(a) National Level – Number of states covered : **29** (All agriculture/agriculture engg students can access IGMIS)

(b) State/UT level – Number of districts covered: **27**

(c) District level – Number of blocks covered: 146

(iv) Demographic spread (percentage of population covered):

Indira Gandhi Krishi Vishwavidyalaya, Raipur was established on 20th January 1987 after bifurcating from Jawaharlal Nehru KrishiVishwavidyalaya, Jabalpur. This is the only agricultural university in Chhattisgarh in the most tribal dominated and naxal affects belt and therefore the jurisdiction area of IGKV is entire Chhattisgarh comprising of 27 districts. In fact, the role and responsibility of IGKV is vital, because it has to cater the needs of socio-economically resource poor, relatively illiterate and tribal people. There are total 31 UG colleges, 8 Research Stations and 23 Krishi Vigyan Kendra (KVKs) comes under the Indira Gandhi Krishi Vishwavidyalaya, Raipur.

11. Beneficiary of the Project

Students and Employees of this University.

12. Problem statement or situation before the initiative

- Tremendous administration efforts were involved in handling lacs of application for sorting, checking and dispatch of admit cards and processing of results within stipulated time frame, on the other hand students and parents were afraid of postage delays and losses of documents and consequently rushing to the university office for getting duplicates.
- The system of examination in the IGKV was semester system, and therefore frequency of examination is more. Earlier, Results Semester Report Card preparation was being managed through DOS based software in FoxPro/FoxBASE. The old software runs on standalone computers causing delay in data compilation and not accessible over the local area network. Over the time the university has evolved effective coding and decoding system for fair evaluation of answer sheets, but it was manual in nature and therefore delays in evaluation and declaration of results.
- The educational activities of the university like student admission, fee collection, registration in colleges, course notification, course selection by students etc. were performed through manual process.

- Nearly, hundreds research and extension projects of different crops were managed manually which leads confusion in drawing inference and resulting less recommendation for the farmers of C.G.
- Purchase, inventory and pay bill work of nearly 2500 employees of IGKV was done by DOS based software and other works were being done manually. The information was not stored in central database and so was not directly accessible to all users.

It was cumbersome and difficult to consolidate and analyse data for required reports by the administration and dissemination of information to the concerned person.

13. Project Objectives

1. Enabling Constituent and affiliated Colleges with ICT based e-Governance to cater the Education, Examination, Establishment, Research, Extension and Finance related activities.
2. Role based solution for each unit of the agriculture University to perform the assigned activity in effective and efficient manner.
3. Creating centralized database and integrated system so that any changes made in one module can be easily made to reflect to all related modules.
4. To develop a dynamic web portal for the benefit of Student, Scientists, Farmers and Employees of the University.
5. To bring 100% transparency in conductance of entrance test and allotment of seats for undergraduate, postgraduate and Ph.D courses of university.
6. To minimize human interference in processign of results and preparation of inter-se-merit.
7. Online availability of required information addressing queries,generate of reports at different levels.
8. Secured and Controlled data access at different level.
9. Low cost solution for everyone.

14. Project scope approach and methodology

IGMIS Framework:

IGMIS as a framework incorporating ICT based solutions consists of Education, Research, Extension, Examination, Establishment, Finance, Library, Web Portal and Mobile Apps. The modules are fully secured and can be accessed by a authorized person using Username and password. The features of different modules are dealt below:

a) Web Portal: "https://igkvmis.cg.nic.in"

IGKV web is a comprehensive web based content management system (CMS) based on the content architecture designed by the university. The web CMS follows work flow management i.e. student and employee can submit a content but it is not published until web manager

approves it. IGKV web CMS easily integrate with other technology and platform, significantly decrease development costs. It follows decentralized maintenance, user friendly web CMS, fully responsive device independent, multilingual support, role based authentication, consistent design and centralized content storage system. The vibrant website of IGKV has been designed to meet the user to explore the website. Navigation scheme has been designed to access the content in minimum number of clicks. The home page image is used for highlighting a particular event or destination.

The Salient features of web portal are:

- Student corner,
- Contain search facility ,
- Employee corner,
- Job seeker and provider,
- News and notification,
- Events,
- Tutorials – Video, Manuals,
- Rules and regulations of IGKV,
- University Site Map,
- Social site links viz., FB, G+, twitter,
- Archives,
- Data Dashboard and
- Complaint Registration form.

Till date about 459916 visitors visited the site and took the advantage of the system.

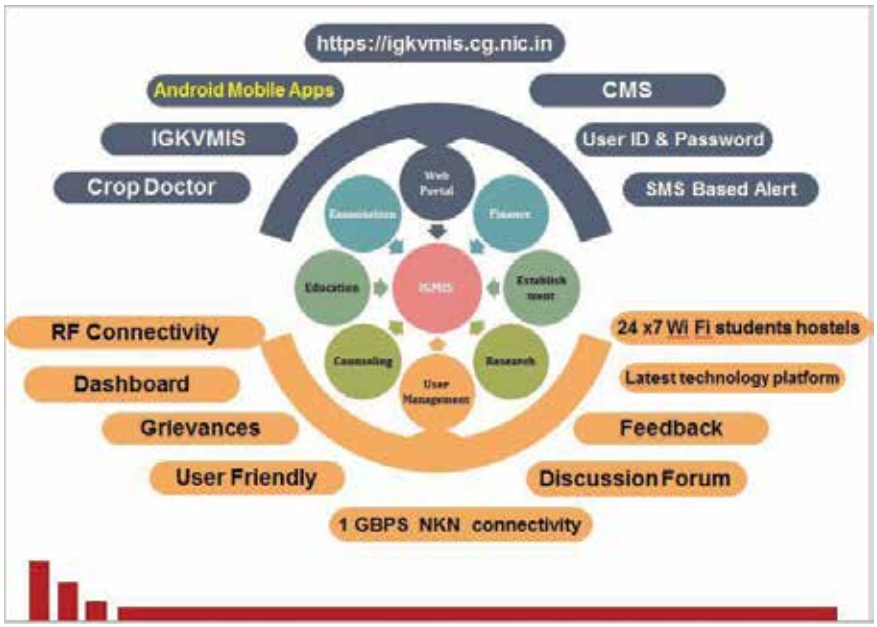


Fig.: Features of IGMIS web portal.

b) E-Counselling module :

The system aims to streamlining the processes in all phases like entrance examination, counseling - post counseling and providing 100% transparency in the admission process. Seat allocation is done as per the merit, reservation policies and choices exercised by the candidates. The Chhattisgarh state government conducts PAT (Pre Agriculture Test) through VYPAM (State Government agency) for admissions in under Under Graduate Degree Program of IGKV. For UG the candidates have to apply online for counseling and deposit the fees through SBI payment gateway and finally they seek their admission as per the rules. For PG and PhD degree program, the university conducts Common Entrance Test (CET) every year. The Salient features are:

- Online registration of UG, PG and PhD candidates
- Online payment through SBI payment gateway
- Allotment of exam centre, admit card generation
- OMR Answer booklet preparation, attendance sheet generation, scanning and reading of OMR answer booklet
- CET result declaration and merit list preparation.
- SMS based alert system.
- Verification of certificates
- Seat allotment
- Admission letter
- Seat matrix, Vacant seat position, Know your status, Notifications etc.

Approx. 2.00 lakh students application have been processed and approximately 8000 students admitted since 2014 to 2016 and UG, PG and Ph.D.

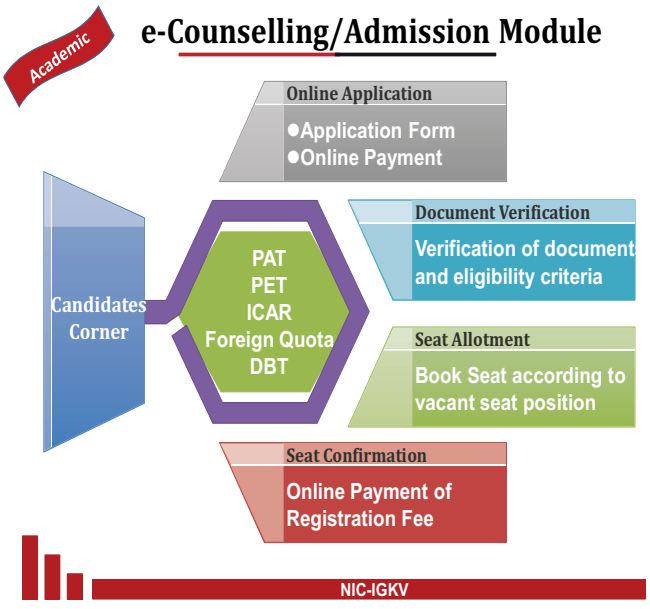


Fig.: Flowchart of Admission process through IGMIS.

c) e-Education and e-Examination Module

The e-education and e-examination modules are user friendly. Once the student is admitted in the degree program, all the details related to the student are maintained through IGMIS.

University admission form, Student fee collection through SBI payment gateway, Course and Faculty allotment, Student course registration, College ID and UEID allotment, Fee receipts and Registration card are the major activities of the module.

To enable the Director Instruction/Controller of Examination to monitor all the semester examinations, various processes related activities carried out for all the constituents and affiliated colleges of the university effectively viz;

- Capturing the complete detail of every UG, PG and PhD students, Registering students for semester examinations academic standing
- Assigning subjects chosen by the students,
- Capturing the periodical course attendance,
- Generation of time table,
- Capturing the internal assessment marks,
- Generating the admit cards,
- Allotting the examination duties to the faculty members,
- Disseminating UG, PG and PhD semester examination results through web and android mobile app.
- Semester Report Card
- OMR answer booklet generation for regular, revaluation, clearance examinations

About 2 lakh students have been processed for UG admission. Approx. 15000 students profile of UG, PG and Ph.D. students have been uploaded. Near by one lakh OMR sheet generated for the under graduate examinations.

d) e-Finance module :

e-Finance is an Integrated Financial Management System (IFMS). In this, the accounts are mainly bifurcated as payment and receipt section. The system describes the workflow of the bills submitted by the DDO for the expenditure towards the bills. The external system interfaces are also covered in it. The main purpose is to know the accurate and factual position of receipts at any given point of time.

For standardization and acceptance of the IGMIS across the state, standard online applications have been developed for various functions and implemented to achieve the online financial reporting and exchange of data, which has immensely benefitted the employee of Vishwavidyalaya salient features of modules are:

- Information of Budget grant

- Online budget estimation, preparation, automatic generation of Supplementary Budget
- Online budget distribution to field functionaries
- Online tracking of budget allotment, payments and expenses for DDOs
- Online tax and non-tax payment facility
- Online availability of annual salary, GPF and pension statements
- Standardization of DDO codes, designation codes, forms
- Centralized solution for salary,
- Online compilation of accounts and reconciliation
- Eliminating redundancy in data entry
- MIS/DSS Reports available for use of all administrative departments, HODs, Budget Control Officers, and DDOs
- Bills preparation-Pay bill, Medical, TA, AC bill.
- Bill passing through online files channelling.
- Grant Order, Allotment Order, Employee pay slip
- Generate all types of schedules like GPF,NPS, LIC, home Loan, Consumer Loan etc.
- Expenditure report and Balance sheet

IGMIS processed approx. 46,000 different kinds of bills till date. This feature is being used by the employees of IGKV all through CG including remote and tribal locations.

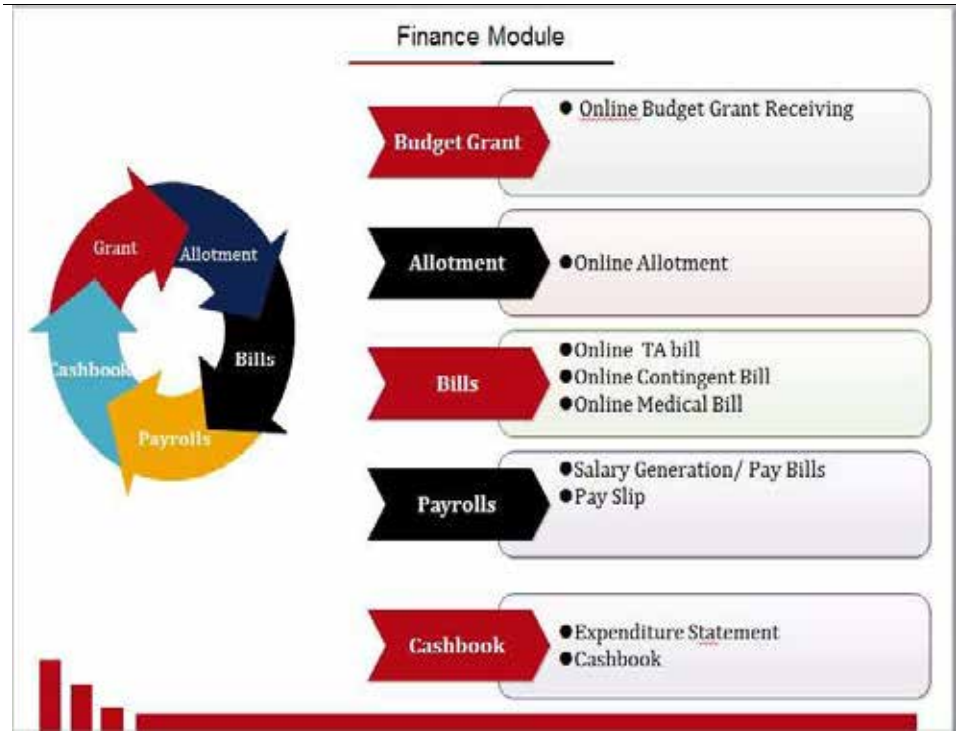


Fig.: An overview of finance module.

e) e-Research module

This system provides the facility to submit research proposals online through specific Performa (Research Proposal Format) designed by the university. Website is designed to assist in preparation, submission and management of research proposals. These proposals are then forwarded to the controlling officers and lastly presented before the Research Council for final approval.

Salient features of the module are:

I. Research Proposal format (RPF-I) – online submission of research project by employee and students with following details

- Basic details
- Investigator profile
- Technology details
- Budget estimation

II. Research Proposal format (RPF-II) – Annual Report Submission of project with following detail

- Progress of work
- New recommendation, technologies, process, products knowledge developed for farmers.
- Technology assessment
- Success stories

More than two hundred research projects were submitted online for university funds. In all, 900 projects including All India Coordinated Projects of ICAR, DST, DBT and International Projects were submitted through IGMIS.

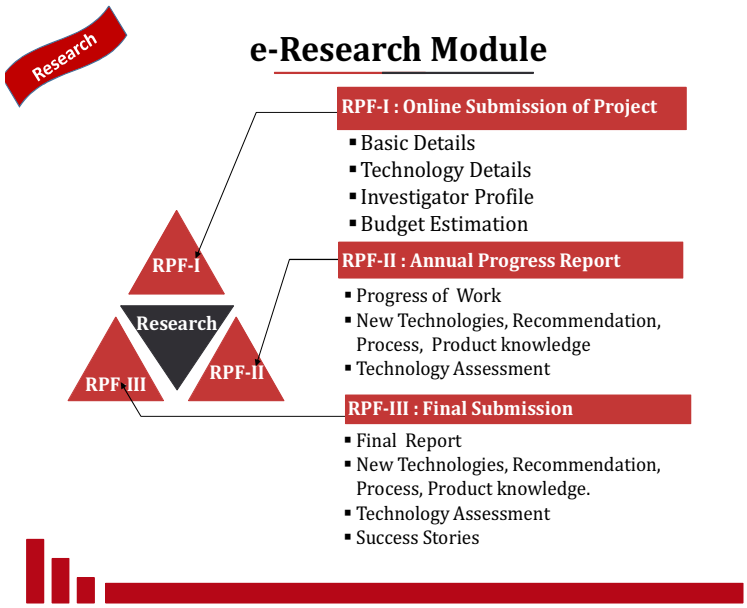


Fig.: Flowchart of Research Module.

f) E- establishment Module

It maintains the information about the employees of the university. Complete employee wise information are stored in the system.

Salient feature of the module are:

- Employee profile
- Employee pay data
- University setup module – sanction and filled post of contractual and regular employee
- E-service book
- Transfer and promotion module
- Inventory and stock management module

Service details of about 2500 employees are processed till date.

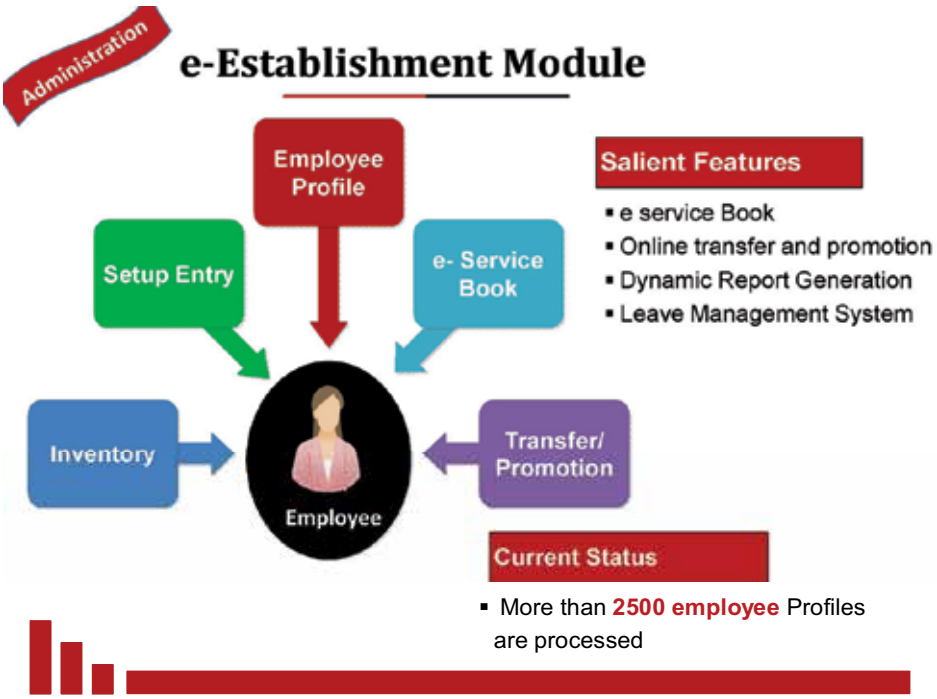


Fig.: Flowchart showing the process of establishment module.

g) File Management System:

The File Management System (FMS) is developed with a view to improve transparency in the movement of files and documents within the university. E-files according to needs come into the inbox of the officials and are displayed in the order of its receipt system helps in.

- Quick disposal of approvals

- File movement is transparent
- Status is quickly known
- Desk free of physical papers and files
- Decrease in stationary cost
- Increase in speed, 24 x 7 file movement

Nearly 15000 different kind of files (including bill and projects) have been processed till date.

h) Dashboard:

To know the data on tips, a facility of Dashboard is created for varies modules. These dashboard provides the information to higher authorities for managing various activities of V.V.

- Counselling Dashboard
- Education Dashboard
- Examination Dashboard
- Research Dashboard
- Finance Dashboard
- Establishment Dashboard

i) Mobile App:

IGKV introduces the next generation experience through IGMIS Mobile Application to enhance quality and effectiveness of education and learning on favourite mobile/ tablet devices. IGMIS mobile app rpvides the information related to:

- Student profile
- Registration card
- Fee receipts
- Result notification
- Employee corner

About 5000 students of IGKV have used this Mobile App from all over Chhattisgarh state and India.

Fig.: IGKVMIS Mobile app developed for students.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

- It is highly beneficial for students as implementation of IGKMIS software at Colleges/ University level enables the Colleges/University to conduct admission in time and issuance of various certificates within stipulated time.
- Most importantly, almost 100% error free result processing in time makes the other activities to carry on smoothly.
- Students proper information management is another aspect where this IGMIS software plays a vital role as any kind of information of a student can be retrieved online quickly.
- Transparency in entire pre and post examination processes.
- Unique user ID and password for all students to explore the student history for entire enrolment of registration process.
- An integrated and centralized data base for entire system has been created.
- ICT infrastructure created/improved in most of the colleges, research stations, and krishi vigyan kendras especially in the rural /semi urban areas.
- E-governance increased the awareness among the students and even in the parents of students. Now the parents are also seeing the performance of their son/daughter on web.
- Employee of V.V is also getting all the benefits like online medical, TA bill submission and getting faster claims.
- All the payments are being routed through SBI payment gateway SBIMOPS. Students are showing faith in online submission of fee.
- In order to promote Government of India guidelines on cashless transaction, IGMIS is integrated with SBI MOPS page of online SBI and the university is availing facility for online collection of funds through all banks, debit and credit cards and challan. Funds related to different colleges/establishments/DDOs are being settled in their respective accounts online. To fulfill the requirement of settlement of funds with respective DDO's account. Separate MIDs (Merchant ID) in the name of various DDOs have been allotted. Web portal which is fully secured with SSL certificate.
- The android based mobile app "IGKVMIS" has now reached to every student to provide information like Registration, Admit Card, Fee, Receipts, Latest News and Notification and job opportunity. It has significantly reduced the cost of travel to approach the Colleges and Vishwavidyalay. The process has minimized the office burden and human interference significantly.
- Crop based information system is accessible from all KVK's and Research Station and system provided the remedies for Diseases, Insects and Nutrient deficiency Excess symptoms for most dominant Crops. Earlier, the technology was demonstrated by distributing Pamphlets,

Banner, and Lectures. Now research information is being disseminate in digital farms. Nearly, 2000. Crop based decision support system increased the efficiency of transferring the technology to the farmers of Chhattisgarh. The effectiveness of outcome have been increased significantly.

Huge cost benefits on account of resource mobilization by the University. Most of the activities are paperless which reduces the cost of stationary. It saved travel cost of students and parents due to travel involved in reaching out different colleges.

Nation's First Intelligent Transport System with Mobile App at Mysore City

Karnataka State Road Transport Corporation (KSRTC)

1.	Name of the State/Ministry	Karnataka
2.	Name of the host/owner organisation	Karnataka State Road Transport Corporation (KSRTC)
3.	Status of the host/owner organisation	Public Sector Undertaking, Govt. of Karnataka
4.	Name of the Project	Nation's First Intelligent Transport System with Mobile App at Mysore City
5.	Name of the Nodal Contact Person	Mr. K.S. Vishwanath
6.	Contact address	General Manager (Traffic), Karnataka State Road Transport Corporation (KSRTC) Central Offices, Transport House Post Bag No. 2778, K.H.Road, Shanthinagar, Bangalore-560027
7.	Telephone/Fax/e-mail	Telephone- 080-22108513 Fax-080-22237465 Email-gmtraffic@ksrtc.org

8. Project Summary

Karnataka State Road Transport Corporation (KSRTC) has implemented Intelligent Transport System (ITS) project with support from Ministry of Urban Development-Govt. of India, State Government of Karnataka and World Bank at Mysuru City. The ITS project is popularly branded as MITRA (Mysore Intelligent TRAnsport).

Implementation of Intelligent Transport Systems (ITS) at Mysore City is a pioneering effort by Karnataka State Road Transport Corporation (KSRTC) to accelerate modal shift from personal use of vehicles to public transport system and lowering pollution levels, by offering high-class services through state-of-the-art technologies. KSRTC's ITS project is a demonstrative project and the first of its kind in India covering entire fleet of City bus services in Mysore.

ITS has been successful in providing attractive, convenient, comfortable, value added services to encourage the usage of bus services against individual personal vehicles. Increase in modal share and remarkable growth in service delivery are recorded. ITS has enabled commuters to make informed

choices on travel modes. KSRTC has been able to optimize its operations, improve fleet utilization and vehicle availability with accurate information.

9. Date of launch of project

Launch – November 17, 2012

Conditional Acceptance – September 16, 2014

Operational Acceptance – October 01, 2015

10. Coverage (Geographical)

The project is implemented in Mysore City.

11. Beneficiary of the Project

Around 10 lakh population of Mysore city, tourists to Mysore City and 2000 staff Mysore City Transport Division of KSRTC are benefitted by this project besides other stakeholders including Traffic Police, Local Administration, NGOs, Urban Planners, students etc.

12. Problem statement or situation before the initiative

The City of Mysore needed to achieve a modal shift towards public transportation. The ITS project is aimed at offering - Real-time monitoring and tracking of buses and help reduce road congestion and other transport issues; Dynamic passenger information system (PIS) based on Geographical Positioning System (GPS); Advanced display and communication technologies, Central Control Station (CCS) and intelligent display boards. Overall, the ITS project improves passenger safety, fleet efficiency, services and traffic situation through transmission of real time information.

The core proposition is to improve the usage of ITS information, thereby gaining new users from private transport and retaining existing users. Provision of easily accessible relevant travel information to passengers before and during their journeys through mobile application is seen as a major basis for increasing attractiveness of the public transport offer. With this background, KSRTC introduced the Mobile Application for Intelligent Transport System Project at Mysore City conforming to Standard Practices addressing commuter requirements related to bus services.

Prior to introduction of ITS, the situation was characterised by:

- Inadequate Infrastructure
- Very rapid increase in motorization
- Substantial increase in traffic congestion
- Relative decline of public transport usage and services
- Increased Waiting Time, Unpredictability & Uncertainty
- Increased Fuel Consumption and Emission
- Increased Operational Costs

- Higher Traffic Congestion
- Decline in Economic Productivity
- Non availability of Real Time Information for Passengers about Bus Arrival and departure
- Lack of Decision enabling MIS Reports
- Limited control over bus operations
- No monitoring system of bus operations, control room was not there
- Absence of Two-way communication between bus driver and control room
- No system to Inform commuters about the bus routes and arrival timings of buses at the bus stops/terminals and notify commuters about schedule changes through appropriate display systems; Expected Time of Arrival (ETA) and Expected Time of Departure (ETD) information to passengers in real time was not available for passengers to plan their trips and reduce the waiting time.
- Manual dispatch of buses
- Bunching of buses, no system to cross check the public grievances/complaints
- No tools for schedule rationalisation available
- Digitalisation of transport operational records not available
- No system to track the dynamic status of bus operations nor on GIS map
- Absence of Mobile App with value added feature to aid commuters for trip planning.

13. Project Objectives

Key Objectives identified to address the business needs are:

- To establish an intelligent system to improve quality & convenience of public transport system in Mysore city and ensure the delivery of safe, fair, reliable and environment-friendly transport system
- To promote use of sustainable transport modes and enable commuters to make informed choices on travel modes by developing an integrated network in an effort to reduce passenger wait times

To optimize operations, improve fleet utilization, schedules, and vehicle availability with accurate information

14. Project scope approach and methodology

The sub-systems of the project include – (a) providing information of Expected Time of Arrival (ETA) and Expected Time of Departure (ETD) in real time through various modes- SMS, IVRS, Passenger Information System Display Boards, Commuter Portal and Mobile App; (b) In-vehicle display system with automated announcement system; (c) State of the Art Central Control Station; (d) Advanced

Software Application Systems including value added MIS Reports. The system provides facility to track the bus on real time and provide accurate information about location, speed, time, driving behavior etc.

Project scope include 500 buses, 2400 plus bus stops, 193 passenger information displays (Terminals, Bus platforms, Bus stops & special locations). ITS facilitate aids in case of vehicle break downs /Accidents and other incidents through incident and Emergency Management System. Besides informing commuters about the bus routes and arrival timings of buses at the bus stops/terminals; notify commuters about schedule changes through appropriate display systems.

Project Components:

1. Real Time Passenger Information System - The unique selling proposition (USP) of the project is to provide Expected Time of Arrival (ETA) and Expected Time of Departure (ETD) of buses in real time. Currently, these information is provided through:

   (a) SMS – The SMS system will provide real-time bus arrival information and scheduled bus availability for the convenience of customers. Commuters can send SMS to 3 digit Code 161 with prefix MITRA to get the bus stop code, routes going through bus stop, bus stop names on a particular Route in a given direction, time of arrival at a given Stop, time of arrival for a particular route for a given Stop etc.
   [Visit http://mitra.ksrtc.in/MysoreMBus/sms.jsp for details].

   (b) IVRS - The Interactive Voice Response System (IVRS) will provide responses to the KSRTC bus customer queries through pre-recorded messages/operator. The system will provide information in Kannada and English specific to Mysore bus operations and is accessible from mobile or landline phones. Currently, Commuters are calling tollfree no.1800-425-5220 and 0821-2520070.
   [Visit http://mitra.ksrtc.in/MysoreMBus/ivrs.jsp for details].

   (c) Passenger Information System Display Boards - 193 nos. of Passenger Information Display Boards commissioned at 111 locations including bus shelters, bus stations, tourist places & prominent places accommodating 2/4/8/10/16 lines of information in both Kannada and English.

   (d) Commuter Portal – mitra.ksrtc.in/ is the bilingual commuter portal providing host of information to commuters which include information on usage of various subcomponents of ITS, track the bus on GIS map, time table, route details, fare, KSRTC bus services etc.
   [Visit http://mitra.ksrtc.in/MysoreMBus/index_e.jsp for details].

   (e) Mobile Application – (MITRA-KSRTC-Official APP) Mobile App (selected through rigorous process) through Appathon exercise involving more than 90 students of engineering college. The App provides valuable features like journey planner between any origin-destination pair, facility to track bus on map facility, women's safety feature (two numbers can be stored. When activated, a pre-configured text alert is sent to the two numbers along with the location), alert facility for commuters, time table schedule, tourist information, service details, fare etc.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

Project Impact

ITS has brought about:

A] **Discipline and Efficiency in bus operations -** Considerable reduction in incidents of bunching of buses cancellation of schedules, reduction in rate of Accidents, staff & crew ratio and improvements in driving behaviour. Cost benefits on account of savings due to benefits of ITS is estimated at Rs 5.85 cr.

B] **Reduction in Passenger Wait Time** from 20 minutes in 2012 to 12 minutes in 2016.

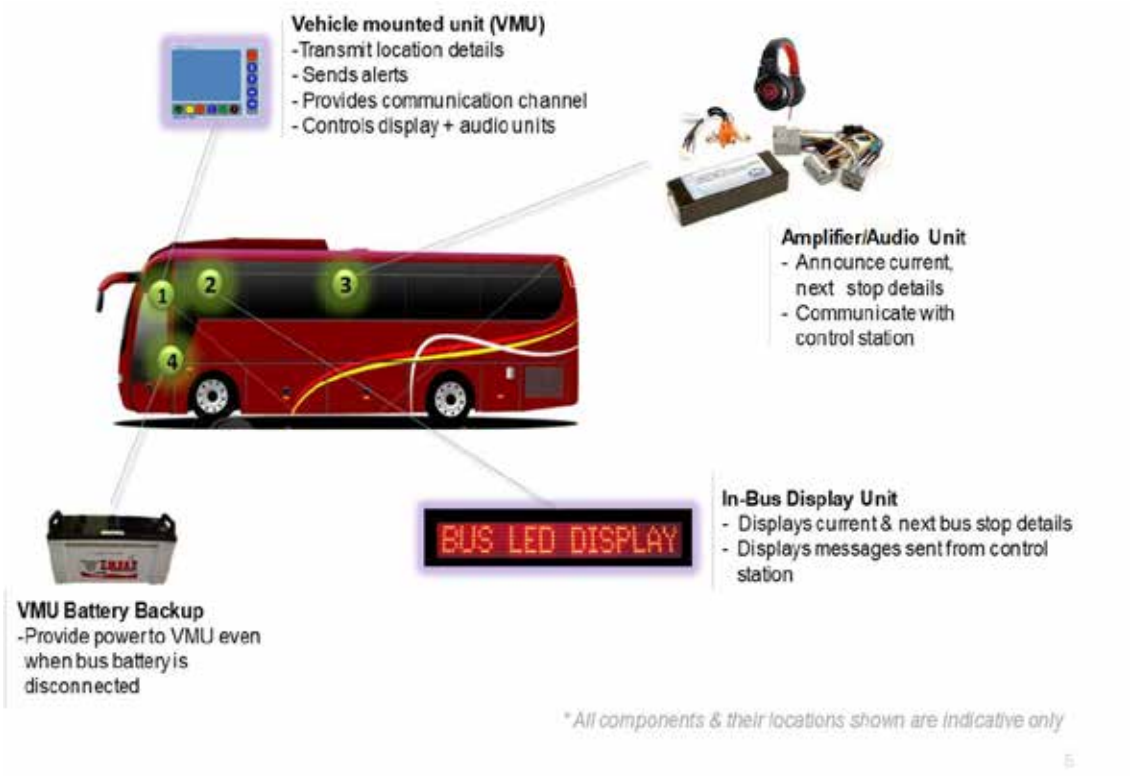
C] **Improvement in modal share of KSRTC buses -** increased from 39.8% in Mar-2013 to 42.2 in Feb-2015.

D] **A demonstrative, sustainable and replicable model**

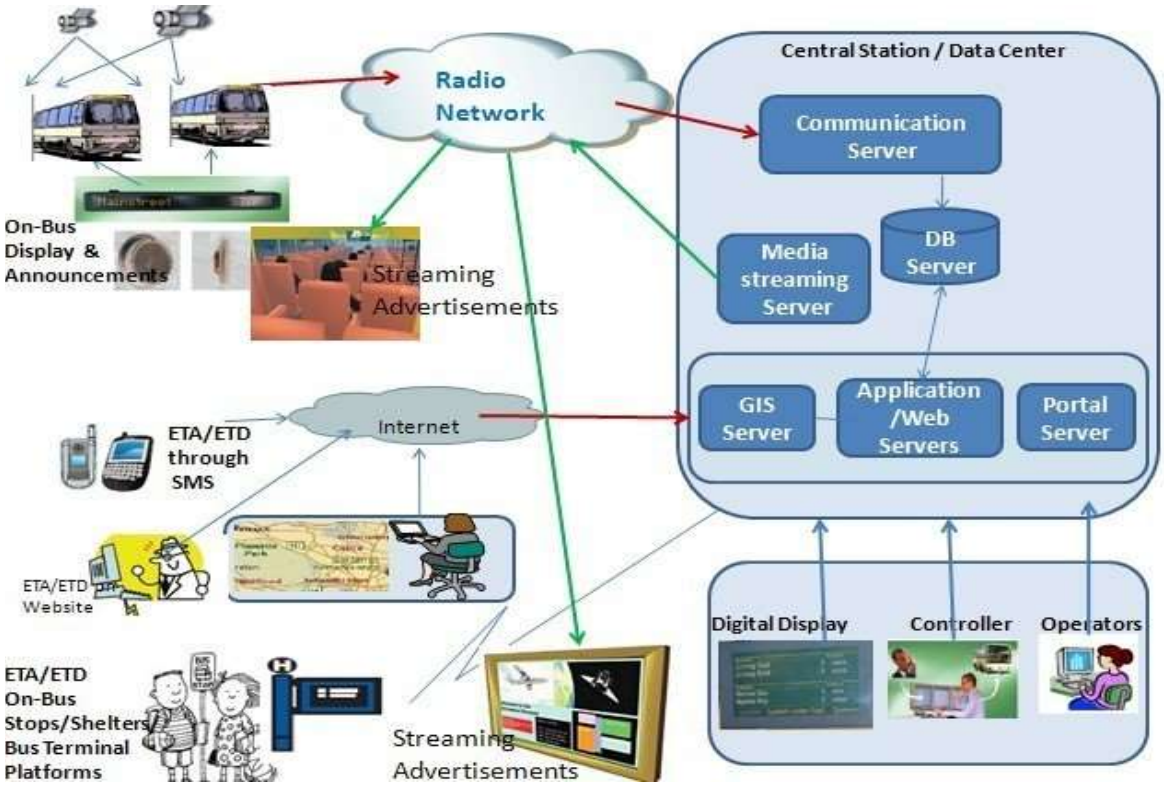
- Organised Knowledge & Experience Exchange Workshops; Over 200 officials across India studied ITS functioning; CIRT trained 167 officials on Mysore ITS
- MoUD estimates that post implementation of ITS in Mysore, there will be direct reduction of 46347 tons of CO2 and indirect reduction of 197839 tons of CO2 by 2023.
- Based on the success of Mysore ITS, GoI has sanctioned financial assistance covering 25000 buses in the country to operate ITS enabled buses.
- KSRTC implemented Vehicle Tracking & Monitoring System (VTMS) in 2000 buses; ITS enabled buses in 1739 buses across 37 cities in Karnataka and plans to rollout VTMS in 16000 buses.
- Mysore ITS project featured in "What Makes a Sustainable City?" – A sampling of Global Case Studies published by World Bank Group.

  (Visit https://openknowledge.worldbank.org/handle/10986/23580/)
- SUTP Newsletter – March 2016 edition (http://sutpindia.com/skin/pdf/SUTP-Newsletter_Mar_2016.pdf) covered article "Dr.HumeraAiman shifted to Public transport because SMS Services instilled confidence".
- KSRTC is in the process of Launching Public Outreach & Communications program to further popularize the usage of ITS services.
- KSRTC will soon be launching its Data Sharing Policy
- World Bank has organized National Media Visit to Mysore on 23-02-2017 to demonstrate the project and provide wide publicity so that other cities emulate the project.
- Mysore ITS won National eGovernance Gold Medal in January 2017
- Project has won many National and International Awards

Photographs:



(Schematic Diagram of ITS Components- Inside the Bus)



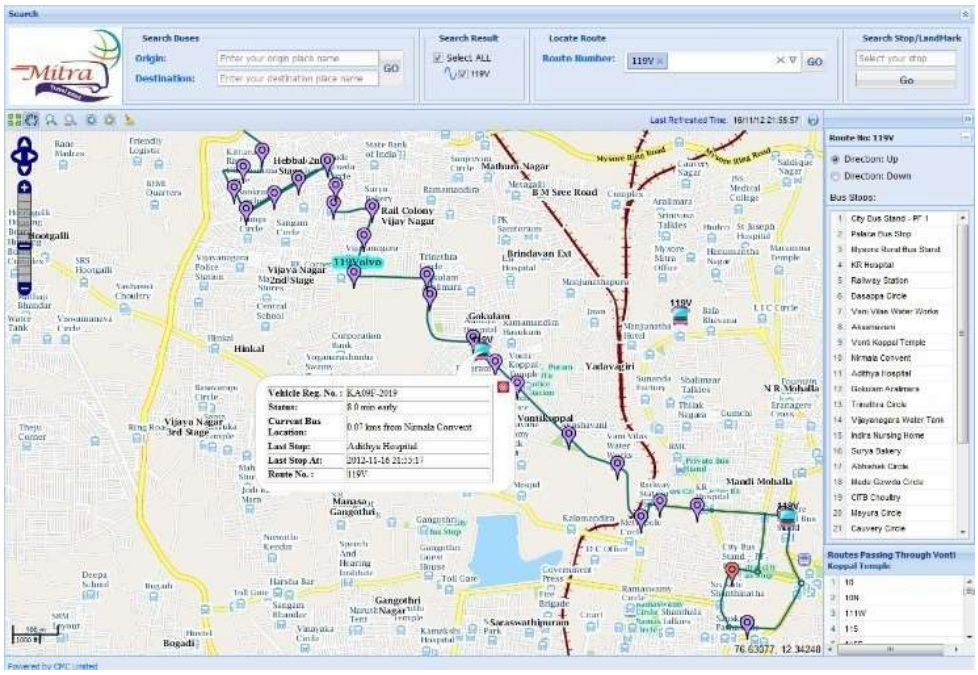
(Schematic Diagram of System Architecture)

(ITS Control Room in Mysore City)

(Tourists viewing Passenger Information Display Board at Bus Station)

(16 lines Passenger Information Display Board at Bus Station)

(Training to Staff and Crew on Functioning of ITS)



(Commuter Portal with GIS Map facility to track the bus)

MITRA – ITS Brandname with Logo

HAWK-EYE Mobile Application

State Home Ministry, Telangana State Police, Hyderabad City Police.

1.	Name of the State/Ministry	HYDERABAD CITY POLICE, STATE HOME MINISTRY, TELANGANA STATE.
2.	Name of the host/owner organization	Shri. M. Mahendar Reddy, IPS., COMMISSIONER OF POLICE, HYDERABAD CITY POLICE.
3.	Status of the host/owner organization	State Home Ministry, Telangana State Police, Hyderabad City Police.
4.	Name of the Project	HAWK-EYE Mobile Application
5.	Name of the Nodal contact Person	Shri. K. Srinath Reddy, Inspector of Police, IT Cell, Hyderabad City Police. Email Id: sreenath.kareddy@hyd.tspolice.gov.in sreenath.kareddy@icloud.com
6.	Contact address	O/o of The Commissioner Of Police, H.NO: 3-6-329, GOVERNMENT BUILDING, HYDERAGUDA ROAD -BASHEERBAGH, HYDERABAD -500029
7.	Telephone/Fax/e-mail	+91 40 23227546/040-27854840

8. Project summary

Hyderabad Police recognized the potential of smart mobile technology for broadening its adoption to a more transparent, cooperative and beneficial relationship between police and citizens. It has enabled to transform the ongoing police services delivery through citizen-centric interactive mobile app. Hyderabad City Police launched its mobile app “HawkEye” on

31st December, 2014 for its citizens.

9. Date of launch of project

31-12-2014

10. Coverage (Geographical)

Can be downloaded across the Globe

11. Beneficiary of the project

ORGANIZATION:

This tool emphasizes police to achieve its primary function / objective to respond to Citizen's reports/ complaints for assistance in emergencies in the shortest possible time with appropriate resources. Efficient and timely action / response are critical in building up the confidence and courage in Public. Though, a common man every day comes across several petty crimes / issues, violations etc, they don't tend to report to Police, as they feel it is a cumbersome and time consuming process.

CITIZENS:

- Police Services available at finger tips through smart devices for the stakeholders to instantly report any Service Request, report incidents and know the up-to-date statuses without visiting the police stations and direct interactions with the police.
- The App based services have built the trust and confidence on the police; also provided transparency to the police on the citizen reported requests / incidents with transparency and visibility to listen to the citizen and prioritize for resolution
- Any service request or incident reaches in the police net instantly the moment it is reported for quick action with central monitoring
- This service has provided women an option of reporting their movements while travelling in a public transport for the safety and security.
- Also SOS option has boosted the confidence for women in case of distress / panic situation as the information floats to various police authority layers for immediate action to avoid any unwarranted situations by tracking the crime incidents and criminals.

OTHER GOVERNMENT ORGANIZATION :

GHMC, RTO, TSRTC, ELECTRICITY.

12. Problem statement or situation before the initiative

Major Bottlenecks/ Challenges that have been identified prior to this are as follows:

- Immediate response to general public, through a streamlined integration of Police Communication Network,
- Collaboration between Public and Police for achieving smart Hyderabad
- Response to Citizen Report/ complaint for assistance in emergencies,
- Streamlined workflow mechanism for tracking complaint such as crime against women, Traffic violations, information regarding occurrence of crime etc.
- An automated citizen friendly responsive system to ensure safety of women while travelling.
- Instant transfer of information with respect to SOS in case of any distress or panic situation

- Making a common man to serve the society for general policing services
- Instant information on Traffic violations/congestions, processions etc.,

BASELINE STUDY DONE:

1. Study done to identify the best possible methodology for instant Information exchange between Police and Public has been taken up on top priority,
2. Identification of best means of direct communication to the Citizen.
3. Identify the best possible solution to achieve quick response from Police in case of distress or panic,
4. Immediate hand on information availability to a common man with respect to traffic updates and alerts etc.,

PROBLEMS IDENTIFIED:

1. No instant information exchange model available except dial100
2. Missing of streamline workflow mechanism for internal monitoring of complaints, instant information exchange, ready response by concerned officers and also monitoring by higher officials.
3. No instant service is available for Women safety in case of distress or panic,
4. One to one communication with respect to traffic alerts, violations, diversions etc.,
5. Trend analysis and follow up

13. Project objectives

With the advent of mobile technology and its reach to the general public, it is imperative to innovate Citizen Services delivery through Mobile App. Hyderabad City Police Department has envisioned Citizen Services Delivery through Mobile Technology which in turn resulted into an end product called “HawkEye”.

The unique feature of Hawk Eye is integrating the Police communication network system for prompt response to citizens. It also serves as a tool in improving the operational efficiency of the Police and in enhancing collaboration between Public and Police, especially for establishing a Safe and Smart Hyderabad City.

This tool emphasizes police to achieve its primary function / objective to respond to Citizen’s reports / complaints for assistance in emergencies in the shortest possible time with appropriate resources. Efficient and timely action / response are critical in building up the confidence and courage in Public. Though, a common man every day comes across several petty crimes / issues, violations etc., they don’t tend to report to Police, as they feel it is a cumbersome and time consuming process.

The key objectives of the Hawk Eye Mobile App is multi-fold to:

- Enhance the access to Citizen services delivery for core services
- Access to Police by the Citizens for quick and effective response, improved visibility and transparency.
- Instant responsiveness to Citizens at any point of time
- Improvement of Citizen services and throughput time on services delivery
- Disseminate information regarding citizen services;
- Adoption and effective use of technology that helps directly to the Citizens.
- Interactive App to log, track and monitor various services and information by the Citizen

14. Project scope approach and methodology

In view of the above, it is essential to facilitate access to Police using a Streamlined Work Flow embedded **Mobile Application through their smart phones and tablets** to file complaints such as Crime against women, Traffic Violations and any immediate information regarding occurrence of crime etc., and also for posting information relating to women safety while on travel, servants/workers/ tenants, enrollment of citizens as Citizen Police Officer for Community Policing, violations by police, etc. Hawk Eye was a result of this thought.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project

Citizen Centricity:

Prompt Response from Police to Citizens who are in any distress situations through Hawk Eye SOS feature.

Report of any violation to Police as observed by the Citizens for a prompt police action resulted in building confidence and trust.

Crime Notifications and Traffic updates are direct benefit to the Citizens for their awareness and bias for action.

- A Freely Downloadable Interactive and Secured Android & IOS Mobile App for Citizens to directly contact Police Officials
- Can be downloaded from Google Play and IOS AppStores
- Innovative Solution for Instant Information Exchange and Immediate Response.
- Streamlined Work Flow Mechanism for internal Monitoring

Aadhaar Integration for checking Tenants and Utility service providers credentials

Feedback/grievance redressal mechanism:

- Briefly describe the impact and value addition thru adaption of Social media platforms for the project.
- Facebook and Twitter integration led to wide spread awareness in general public about the usage
- The feedback and suggestions posted by the users gives a value addition and helps the department in analyzing the effectiveness of the initiative

Citizen centricity and relevance, user convenience, cost to user, sustainability, number of users and services, appropriateness of context & localisation of best practice, enhancement of efficiency, innovation, e-Inclusion etc.

Design, Develop & Implement web based GIS Application along with GIS database at Surat Municipal Corporation

Surat Municipal Corporation, Surat

1.	Name of the State/Ministry	Urban Development Department, Gandhinagar, Gujarat.
2.	Name of the host/owner organisation	Surat Municipal Corporation, Surat
3.	Status of the host/owner organisation	Elected Local self-government under the law
4.	Name of the Project	Design, Develop & Implement web based GIS Application along with GIS database at Surat Municipal Corporation
5.	Name of the Nodal Contact Person	Mr. C Y Bhatt and Mr. Debasish Basak
6.	Contact address	Dy. Commissioner, Town Planner & Executive Engineer, South Zone, Surat Municipal Corporation, Surat
7.	Telephone/Fax/e-mail	+91- 9724345008 +91- 9724345219

8. Project Summary

Surat Municipal Corporation has enormously harvested the Information Technology sector in order to provide robust e-governance to bring the citizen closer to the Government. Information Technology (IT) services would enable the municipal corporation to provide an effective, prompt and cost effective response to the citizen needs, in a manner that takes care of the citizen's individual needs and convenience.

Being a local government at the city level, Surat Municipal Corporation (SMC) provides a wide range of services to citizens. IT enabled systems have been put in place in SMC to enable standardizing the processes, obtaining timely and accurate information and reducing the response time.. Almost every services delivered by the SMC have geographic/ location based attributes attached to it. GIS based decision support system helps in closer integration of these services and enable the Corporation to plan ahead for introducing, implementing and enhancing these facilities.

GIS is the cutting edge technology, used for the intelligent decision making system for the administrative

purposes by various civic bodies. SMC has developed a web based GIS portal for its administrative and engineering decision-making purpose.

The Web based GIS application encourages association for simple support and checking of the usefulness and for overall population the simple access to the data.

The task was conceptualized, created and executed according to the NUIS rules, covering the total area of 326.52 square kilometres. This gives a Land Information System (LIS) door for town planning, advancement and building consent administration for effective organization. This web based GIS application is available to public at http://gis.suratmunicipal.org/.

Users can register using a mobile number and a valid email address to access the services.

9. Date of launch of project

3rd January 2015

10. Coverage (Geographical)

Total city area includes 326.52 sq km

11. Beneficiary of the Project

Beneficiary of this GIS project are government organization like Surat Municipal Corporation, Government of Gujarat, Government of India & General citizens.

12. Problem statement or situation before the initiative

All records related to Town Planning Schemes and the plot numbers were stored physically. The utility network drawings and details were kept manually in the department, and people interested in real estate had to come to the municipal corporation for the search of sanctioned details like building permission or BUC of the buildings. The tax assessments were also not automatically fetched after the approval of plans. There was no particular geo-referenced base map of the Surat city before the initiative. Budget proposals were monitored on the data available and not spatially. Thus, lack of transparency and accountability led to the conceptualization of the GIS initiative.

13. Project Objectives

The broad objective of the work was to develop a comprehensive web based GIS Application for Surat Municipal Corporation for planning, management and governance in context of entire functioning of the organization. The expectation of SMC to execute a Web based GIS application was to provide a platform in the right bearing in its try to set up the city for determining the difficulties postured.

14. Project scope approach and methodology

Scope of GIS application includes customized Web based GIS application for planning, management and effective governance of entire functioning of Surat Municipal Corporation. Land Information System which carries spatial as well as non-spatial details of Town Planning Schemes, Development plans etc. GIS mapping for utility system like Water supply, Sewerage network, Storm water, Road network, Street light poles and Solid Waste Management. Mapping of around 14 lakhs properties

& linking of property attributes with Base map. Integration of existing physical features like Road network, Water bodies, Railway, Worship places, Embankments etc. The system have flexibility of integrating existing as well as other Third Party Application Development of User friendly and easy to use Interface for Citizens and for departmental users.

Design of the project: During this phase entire project was designed as per the requirements of SMC. It included in-depth conversations with department officials in order to prepare SRS, data model etc. Preparation of GIS Base map: Image processing, geo-referencing, digitization, and incorporation of departmental maps, utility networks and other existing maps. Base map was prepared for total city area (326.51 sq km) using high-resolution Quick bird images in 1:5000 scales.

Data Collection: The dedicated teams worked for the departmental data collection, field survey, property survey& verification as well as total station survey for slum area.

Series of stakeholder consultation was done in order to understand department specific requirements. Continuous meetings, study of existing situation &bottlenecks, conceptualization of the project and preparation of Software requirement specification etc. were time consuming. Data preparation and collection from various departments specifically property tax data 1.4 million household was a magnanimous job.

For web GIS application High resolution Quickbird satellite image with 0.6 m resolution has been used for preparation of Surat city base map. SMC GIS Application has around hundred layers with spatial and non-spatial database. The GIS Data Model includes all the relevant information of various departmental layers, types, attributes and source of the data.

There are various modules and layers of web based GIS application which can be beneficial to SMC, citizens as well as other stakeholders like urban authority, police department etc. as per their needs.

The Town planning module delivers facilities such as plot search for a particular town planning scheme or a village, generate redistribution and valuation statements.

Additional data and plans related to Zones, Wards, Town Planning schemes and villages are also made available in the portal. Total 128 Town planning schemes digitized and integrated in to the base map of Surat City. Under the Town development module, the details related to building plan approval, building usage permission for plot numbers, developer's name and their details related to various plots, status of various building permissions issued are made available. Details of shops & establishments have also integrated.

Utility Modules include water supply, sewerage, and storm water includes transformation of all network like pipelines, Valves, Junctions, chambers etc. into digital format. Roads, traffic signals, street light, bridge etc. includes in road network along with around 30000 street light poles plotted on GIS base map.

The Property Tax module offers locational information of the individual house hold including all tax related like outstanding, tax receipts and other details within few clicks.

The Slum MIS module provides slum maps about each slum pocket along with slum Socio economic house hold information as per RAY guidelines.

GIS Application for the city has been implemented using indigenously developed GIS Technology – Integrated GIS and Image Processing Software (IGiS). Integrated GIS and Image Processing software (IGiS) is a seamless Geomatics application with both single and multiple user platform support including functions for GIS, Image Processing, advanced modules using big data analytic, business intelligence and innovative algorithms for analyzing, visualizing and processing of spatial data.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

SMC has experienced numerous benefits of web based GIS application viz. Paper less Governance, Improved asset management and decision making. All the departments of SMC can now easily access the centralized GIS database through web based GIS application. The revenue realization has improved with Geographical representation of Tax defaulters and departmental tax details in one geographical entity. There has been efficient Planning and Decision Making, Master Plan Creation, Urban Sprawl Study.

Tangible Benefits of web based GIS Application include Centralized GIS based MIS system for successful governance, Efficient revenue generation by identifying the un-assessed property using satellite Image. It improved Urban Planning and Management using GIS system on click Map related information for citizens and departments. Citizen can get authorize plot map information and building permission using internet which saves time and money. GIS based Building plan approval & Building usage permission, minimize dependency among the departments using centralized Geo-referenced base map. GIS map can be accessed by other external department using OGC web services. Geo-referenced Map enables monitoring of real time data capturing form ground using GPS/Mobile technology.

SUGAM- Collectorate (Services Using eGovernance Applications on Mobile)

Revenue Department, Junagadh,Government of Gujarat

1.	Name of the State/Ministry	Gujarat
2.	Name of the host/owner organisation	Collector Office, Junagadh
3.	Status of the host/owner organisation	Revenue Department, Government of Gujarat
4.	Name of the Project	SUGAM- Collectorate (Services Using eGovernance Applications on Mobile)
5.	Name of the Nodal Contact Person	Atul Khunti, DIO NIC, Junagadh
6.	Contact address	Collector Office, Jilla Seva Sadan , Behind Sardar Baug, Junagadh 362001, Gujarat
7.	Telephone/Fax/e-mail	Tel: (0285)2636100, 2630100 Fax: (0285) 2635599 e-Mail: collector-jun@gujarat.gov.in, gujjun@nic.in

8. Project Summary

SUGAM is an android base Mobile App as well as Web portal which provides a one stop ICT interface that offers a multitude of services to citizens by bringing citizen centric services, Govt. scheme and benefits, public grievances redressal and developmental activities together under one umbrella. As a part of m-Governance, with help of NIC, this "SUGAM" Application has been prepared for collector office. This application was also demonstrated to the Hon. CM, Gujarat and launched by Hon. Minister for Information Technology in presence of Chief Secretary, Gujarat State during the National mGovernance Seminar held at Gandhinagar in 2014.

This SUGAM is designed in such a way that, apart from, services covered under SUGAM so far, some other new citizen-oriented services can also be included as and when required. It is hosted on State Data Server. Any android user can download this SUGAM (Collector office, Junagadh) App on mobile from Google Play Store or SUGAM web portal.

9. Date of launch of project

October 2014

10. Coverage (Geographical)

a. Comprehensiveness of reach of delivery centres:

Geography coverage of the system: All villages of the district, Government departments / agencies of the district and citizens.

b. Number of delivery centres

No. of users : 8000+ (All villages, Blocks, Govt Depts. and Mobile App users)

Geographical

i. National level- NA

ii. State/UT level- Number of District covered : 1 (Junagadh)

iii. District level- Number of Blocks covered : 10

Number of Town covered : 8

Number of Villages/eGram covered : 521

Number of Govt. offices covered : 80+

c. Demographic spread (% of population covered)

As per census 2011, Total population of the district is nearly 15 Lac. Looking to the statistical data, more than 1 Lac beneficiaries are covered under umbrella of services offered through SUGAM. Thus, 10 % of population covered in a one year.

11. Beneficiary of the Project

SUGAM aims to bring transparency in the system, inform and educate people, reduce time in delivery system, build capacity among rural/urban target groups, build coordination between government departments and strengthen e-Governance & m-Governance in efficient manner by using information and communication technology.

G2C: Various stakeholders, beneficiaries, all BPL families, Farmers, Lawyers, Students and Physically challenged are considered most important consumer and getting benefited of Govt. schemes and services. Outcome of G2C attribute is enormous.

G2G: Timely implementation and monitoring of various schemes can be done easily using this system. Government machinery including district level line departments are able to review the developmental activities, status of services being provided and redressal of public grievances through this system.

Citizens:

- Can get details of applications/ grievances registered under “LOK DARBAR” and “VILLAGE VISIT”.

- Can get status of ration card application and details of ration card.
- Can submit complaint related to cleaning issue online.
- Can get the details of benefits to be given to Poor families under Garib Kalyan Mela.

Applicants:

- Can submit and get status of Swagat Application/ Lok Fariyad.
- Can get status of his/her revenue case and date of next hearing as well.
- Can know online status of file & application being processed in the office.
- Can know about remaining stamp duty to be paid & details of notice and order issued.
- License holders can get information about his license and its validity period.

Lawyers:

- Can know the date of next hearing and download the copy of judgment of Revenue Cases.

Farmers:

- Agri. Land holder can get Land Records for VF7 Survey No. & VF8A Khata details.
- Can get status of Mutation entry (VF6) and 135D Notice generated for Agriculture land.

Voters:

- Can get details from electoral and Information about Polling station, Location and BLO with contact number.

FPS holders:

- Can verify list of ration cards issued and permissible qty under PDS.

Students:

- Can get results of various exams through links provided in the application.
- Can get recruitment details and related information.

Sportsman:

- Can submit and get information related to Khel Mahakumbh, Mountain Climbing and sport events.

Government:

- Municipal Corporation, Municipalities and Panchayat authorities can know about questions / complains registered under its jurisdiction.

- Implementing Officers can process online any proposal received under planning department.
- Police department can verify details of arms license online.
- Stamp Duty & Valuation authority can perform speedy disposal of pending STAMP DUTY 32K CASES.
- State level higher authority can get information online about Long Term Visa applications
- Government Departments can access department-wise or schemewise No. of beneficiaries and its amount sanctioned Under GKM.

Village Panchayts:

- Can get details of any developmental works sanctioned, expenditure incurred, name of agency, implementing officer, date of grant/sanction and status with photographs.
- Villagewise list of beneficiaries with details of name, equipment, amount etc.
- Infrastructural works of all departments & village asset register is available.
- Can have complete details of work with photographs.

Public Representatives:

- MLAs / MPs can submit proposal of developmental work online for district planning works and can check progress online.

Village President / Taluka & District Public representatives can also submit any grievances online and can know status of it.

12. Problem statement or situation before the initiative

- The present system for implementation of various schemes, developmental projects and dissemination of information does not attract much curiosity and delays the whole process.
- There was a delay in getting any letter or copy of judgment of revenue cases as it was being sent through post. People have to approach district collector office physically for getting status of revenue cases.
- How to submit the proposal and status of Developmental work/ scheme was not known to public. Process of carrying out any development work by planning division of collectorate was not computerized. It was very difficult to manage and track the physical and financial progress over the work.
- There was a lack of transparency in implementation of developmental works. No any such system was in existence to avoid duplication of work.
- To get benefits of government schemes, there was no any full proof effective mechanism for covering all eligible poor people 100% for issuing the benefits of the scheme. Such information and knowledge was limited to government department only.

- It was very difficult for administration to manage and monitor grievances and suggestions received from villagers during Village Visit and LoK Samvad Setu programme.
- Need of IT based solution or mechanism for registering complain or grievances related to cleaning issues (Swachh Bharat Mission) was extremely required.

Looking to the aforesaid constraints, district administration decided to provide quick, transparent and accurate services under one umbrella and inform / educate public at large and as a result the "SUGAM" has been conceptualized.

Challenges faced before deployment of the project

- All backlog of pending applications, files and proposals to be cleared before putting system in use.
- To replace manual system with computerized system.
- Timely updation and process of data by the user departments.
- Create awareness among people about online services available on SUGAM mobile and web portal and educate them to avoid physical visit of the office.

13. Project Objectives

Idea behind developing such solution is to provide maximum citizen centric services pertaining to district administration through single and unique SUGAM application. Citizens need not to visit office for submitting and getting information and status of cases / applications / complains. Some objectives are listed below.

a. To Provide instant information of Govt. schemes & status of works.

b. To build Co-ordination between line depts.

c. To bring transparency in implementation of developmental work/scheme, hearing of revenue cases and processing of applications.

d. Monitoring of developmental / field level works.

e. To provide Interface directly with citizens for submission of application and complains.

f. To ensure quick disposal of citizen centric application and grievances.

14. Project scope approach and methodology

This solution has a diversified features which covers area of development, public grievances and citizen services/ benefits. Modules for Planning Work and Samanvay are meant for implementation of development works, Shuchita Junagadh,RCMS, Village Visit and Lok Samvad Setu modules offer redressal of public grievances while Garib Kalyan Mela, ATVT Jan Seva Kendra etc. are for providing services and scheme benefits to citizens.

All major citizen centric areas covered and service being delivered are:

1. Revenue Cases
2. District Planning & ATVT Works
3. Long Term Visa (LTV)
4. Arms Licensing
5. Garib Kalyan Mela (GKM)
6. Lok Samvad Setu (Lok Darbar)
7. Village Visit (Gram Mulakat)
8. Samanvay (Village Asset Register)
9. Stamp Duty 32K Cases
10. Shuchita Junagadh (Clean Junagadh)
11. Ration Cards
12. Land Records (e-Dhara)
13. Jan Seva Kendra (ATVT) Applications
14. Registry & File Tracking
15. Name Search in Electoral
16. SWAGAT Applications / Grievances
17. Vikas Path – Panchayat Schemes
18. Record Digitization and Monitoring
19. e-Dhara Land Records

- All major services are also covered under SUGAM web as well as Mobile platform.
- Citizens are also informed through SMS once application or proposal is processed.
- All applications for developmental works / grievances or availing any benefits or services are workflow base and processed electronically.
- Database is digitized and hosted in state data server.
- Apart from this, manual legacy record totaling 35000+ files are also scanned and digitized and copy of any record available in digitized format.
- Service delivery of aforesaid all modules are completely electronically online.

Strategy Adopted

Details of base line study done:

District administration has a special focus on effective implementation government schemes and provide quick delivery of citizen services. To achieve this task, district administration has decided to use e-Governance as well as m-Governance in areas of development, grievances redressal, citizen services and sharing information by preparing a common single ICT tool.

After having rigorous exercise in co-ordination with all department, district administration has prepared strategic approach minutely by incorporating task like studying of benefits/services and its scope, type of benefits needed for people.

District Collector, chalked out the plan and put a "SUGAM" project in place by involving all line departments of the district to ensure that district administration must give all applicable benefits and services to the people of the district through common ICT platform of SUGAM.

This SUGAM is designed in such way that it offers 15+ different modules (web applications) which are hosted on the central server. Citizen centric part of all these module made available on mobile through SUGAM app.

Problems identified:

- To bring transparency in implementation developmental work/scheme, hearing of revenue cases and processing the application.
- To ensure quick disposal of citizen centric application and grievances.
- To fulfil and become a part of government's ambitious Mission Mode Project of Digital India and Swachh Bharat. SHUCHITA module which is prepared to implement Swachh Bharat Mission project also forms a part of SUGAM application. Citizens can submit their complain of cleaning through mobile app.

Roll out :

This application is designed such way that it can be implemented in any district of the state. Since it is prepared by NIC and hosted on State Data Centre, it does not cost extra as well as no any issue would arise for point of maintenance. Module like District Planning, Revenue Case Monitoring System, Vikaspath, Garib Kalyan Mela etc are already got implemented in many districts of the state.

Communication and dissemination strategy and approach used:

Looking to the feedback and demand received from the people, social media linkages for Facebook page and Youtube channel of collector office have also been provided in the SUGAM.

To provide basic information and facility other than citizen service modules covered so far, like details of contacts, news/bulletin, download of application forms and documents, details of new initiatives, User guide etc. are also included in the SUGAM application.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

Results achieved:

Name of Service / Module	Year 2015-16	Type of Transactions
GKM-Garib Kalyan Mela	69294	Beneficiaries
District Planning	2467	Works
Long Term Visa (LTV)	30	Applications
Arms Licensing	1757	Licences
Samanvay	347	Works
Lok Darbar- Lok Samvad Setu	978	Grievances
Stamp Duty 32K Cases	10751	Cases
Village Visit (Gam Mulakat)	910	Questions
File Tracking /Registry	64203	Files
Records Digitization	36102	Files
Shuchita-Swachh Bharat Mission	168	Complains
ATVT/Digital Gujarat-Services	176100	Applications
Vikaspath-Panchayat Schemes	2306	Proposals
Revenue Cases -RCMS	1694	Cases
TOTAL	367107	

Looking to the above statistics, major district level govt. offices are using this system. Other than above mentioned transactions, many other services like Contacts, Day to day News/Alerts and information is being accessed by the citizens through SUGAM mobile app.

Value delivered to beneficiaries:

Revenue Cases (RCMS) :

- One can know the date of next hearing.
- Citizen, Lawyer and officials can get hearing board online.
- Copy of any order /judgment issued can be downloaded.

iOjN – District Planning Works:

- Workwise details for Taluka, Village and any Scheme is available.
- Details of expenditure incurred, name of agency, implementing officer, date of grant/sanction and status with photographs is also made avalable.

Arms Licensing:

- Any licensee can get information about his license.
- Police department can verify details online.
- Validity & expiry of license can be known.

Long Term Visa (LTV):

- It provides a status of visa application.- where it is lying
- It shows date of visa expiring and not applied for extension.

AnyROR – Land Records:

- Any farmer / land holder can check Land Records, VF7 Survey No. & VF8A Khata details
- Status of Mutation entry (VF6) and 135D Notice can be available.

Garib Kalyan Mela (GKM) :

- Departmentwise or Schemewise No. of beneficiaries and amount can be available.
- Villagewise list of beneficiaries with details of name, equipment, amount etc. is made online.
- Details of feedback for beneficiaries alongwith photographs is uploaded.

Lok Samvad Setu ("Lok Darbar"):

- Any citizen can get details of applications/ grievances registered under " LOK DARBAR".
- Action taken details is also known to applicant.
- Implementing officer can know about questions pertaining to his/her department.

Samanvay:

- Infrastructural works of all departments carried out & village asset register is avaialble .
- Total works,amount spent in specific scheme/taluka/village is available.
- One can get complete detail of work with photographs.

Ration Card –PDS:

- Details of Individual Ration Card, List of ration card holders (FPSwise) and permissible quantity of commodity going to be distributed under PDS is made public.

Registry & File Tracking:

- Applicant can get online status of file & application being processed in the office.

Stamp Duty 32K Cases Disposal:

- Help authority in speedy disposal of pending STAMP DUTY 32K CASES.
- Applicant can know about remaining stamp duty to be paid & details of notice, chalan and order issued.

Name Search in Electoral:

- One can get Voter's details from electoral by providing EPIC Number or Name.
- Information about Polling station, Location, Name of BLO with contact number is also available.

Jan Seva Kendra (ATVT):

- Online submission and Status of any applications related to certificates and affidavits registered under ATVT is made possible.

SWAGAT Applications / Grievances:

- One can also know the Status of Swagat Application/ Lok Fariyad registred.

Shuchita (Clean Junagadh) / SBM Module:

- Any citizen can submit complaint online through Mobile.
- On submission of complain, concerned authority will receive SMS alert.
- On disposal of complain, citizen will also get SMS from authority.
- Citizen can upload Photographs of location of cleaning complain and authority will also upload the Photographs after the action taken.

Village Visit ("Gram Mulakat"):

- Villagers able to submit grievances/proposal on the spot during visit of village by the district level team.
- Status of grievances and progress made w.r.t. proposal is available online.
- Inspection of government office, on going developmental works by the team.
- Helps in preparation of village level development plan.

Record Room Management:

- All legacy records digitized and easily available.
- Ensures safety and easy retrieval with authorized credentials.
- Reduces unnecessary visit to record room for getting physical copy.

Features:

- More than 15 Service modules are covered.
- Developed for both Mobile and Web Platforms
- Dynamic feature of adding any new service.
- Local language support
- Implementation / monitoring of Swachh Bharat Mission (SBM)
- SMS alerts
- Facility of uploading Photographs of Location / Work

- Available on Google Play Store.
- Prepared & Maintained In-house.

Some other facilities provided through the system are:

- Important Contact Numbers of district officials made available.
- Bulletin / Notice Board (News) to broadcast messages among the users.
- Initiatives / Achievements / Success Stories of the governments made available.
- Links of important websites also provided.
- User manual (User Guide) is provided online for how to use different services.
- Download Forms section provides application form/documents to be downloaded.

District administration has launched an official page on Facebook to ensure better connectivity with citizens of the district. To showcase the work of the government to help increase transparency and accountability YouTube channel has also been launched. These both social media components are integrated with the Mobile app.

SUGAM is a dynamic solution, so that any services can be added easily in future. Most of the services offered by the district administration are covered under this system. We are also exploring the activities of other line department where some more citizen centric services can be included in this SUGAM app.

Accomplishments:

- SUGAM has been rated amongst the 'Top 20 Governance Projects in India' for the year 2015 and awarded **"Skoch Order of Merit"** certification on 21st Sept 2015.
- SUGAM has been awarded CSI – Nihilent e-Governance Awards in December 2015.

Some Important Events Captured :

Launching of SUGAM by Hon. Minister (IT, Education , Food, Civil Supplies and Panchayat) Shri Bhupendrasinh Chudasama on during mGovernance Conference at Mahatma Mandir, Gandhinagar.

District Collector resolves issues of villagers on the spot during Village Visit Programme

Training on SUGAM Application to various stakeholders at District Collectorate

Receiving National eGovernance Sliver Award 2016-17 at Vishakhapatanam.

Loan Charge Creation Module (LCCM)

Revenue Department of Andhra Pradesh

1	Name of the State/Ministry	AndhraPradesh
2	Name of the host/owner organization	Sri. Anil Chandra Punetha, I.A.S. Chief Commissioner of Land Administration
3	Status of the host/owner organization	Revenue Department of Andhra Pradesh
4	Name of the Project	Loan Charge Creation Module (LCCM)
5	Name of the Nodal Contact Person	N. Tej Bharath – PD- CMRO
6	Contract address	D.No- 22-19, Floor- II, Block A, Jasthi Towers, Sai Puram Colony Road Gollapudi Vijayawada 521225
7	Telephone/Fax/e-mail	Pdcmro.ap@gmail.com,ascmro.ap@gmail.com. 9959475677

8 Project Summary

Loan charge creation module is developed to curtail bogus loans and fake pattadar passbooks. It also created a comprehensive Loan charge database for the state. Access for centralized and digitally signed land records database was provided to all bankers and Primary Agricultural Societies in the state. Subsequently, a provision to create a charge for a bank loan taken against a particular piece of land was also provided to all financial institutions. Financial institutions like Banks, DCCBS and PACS (Primary Agriculture Cooperative Societies) and 78 Lakh Farmers across the State of Andhra Pradesh are the stakeholders of this project. Registration database was also integrated with Loan Charge Creation Project to prevent registrations on agricultural land under mortgage. All the lands in which agricultural loans were issued were highlighted in separate color to avoid multiple loans over same agricultural land. Once the loan is paid back, the charge will be removed in the module. Government of A.P. has succeeded in regularizing the loan process and making it convenient to both credit agencies and farmers to easily deal with Agricultural Loan Process.

9 Date of launch of project

01/04/2015.

10 Coverage (Geographical)

Loan charge module is being used across all the 13 districts of the state by 61 banks having around 6000 branches.

11 Beneficiary of the Project

Nodal department: By Curtailing bogus loans by verification of online records through banker login. There is so much saving to the government exchequer in terms of amount of bogus loans.

Bankers: Genuine Farmer can be easily identified and benefited by this mechanism. Details of loans issued on the same parcel of land can also be identified.

Other stake holders: As on 01.09.2017, 15 Government departments are using this data in real time for availing benefits to public in various benefit schemes.

12 Project statement or situation before the initiative

There were difficulties in preventing Multiple loans on same land; Ensuring crop loan on the exact crops sown; Preventing impersonation in getting loans and Eradicatingon Multiple Registrations; Identifying genuine Pattadar; Curtailing Bogus loans and Eradicating Fake Pattadar Passbooks was the main issue.

13 Project Objectives

- Creation of Loan database.
- Continuous updation of Land and Loan databases.
- Identification of Genuine Pattadars.
- Curtail bogus loans.
- Providing farmer, land and crop details to banks.
- Integration of Registration, Loan and Land record databases

14 Project scope approach and methodology

Government process re-engineering was done to improvise overall efficiency for service delivery.

In order to curtail the fake, bogus and multiple loans, "Loan ChargeCreation Project" has been launched and successfully implemented in the state of Andhra Pradesh. Using Loan Charge Creation module, Bankers can verify the land details in Adangal and ROR-1B copies. They can identify the farmer by Aadhar Number, Photograph and land usage, Crop pattern etc.

Online real-time access of details regarding farmer, extent, crop sown, charges on land, e-PPB verification, location of land parcel and other details are provided to the Banks (to verify Adangal, ROR 1B,e-PPB) along with a facility to create or release loan charge against a Survey Number.

The re-engineering process included Integration of Aadhar number of the farmer in land records (Aadhar Seeding), e- title deed cum passbook System and e-crop Booking. It also included Loan Charge Creation Module for Bankers, Integration with Registration department database and Amendments to the A.P Record of Rights 1971 act and Rules to provide legal Sanctity to electronic Land Records database and Loans entered by the Banks.

1. **Aadhaar seeding:** For identification of genuine Pattadars, Land records of all the pattadars were seeded with their Aadhaara.

2. **Electronic Pattadar Passbooks:** Electronic Pattadar Passbooks with 13 Security features were introduces which helped in avoiding fake loans.

3. **e-Crop Booking:** Enumeration of season wise Crop details were done across the state for identifying Crop information for each land parcel. The exercise stated ground reality in crop information which in turn benefitted for issuing genuine crop loans.

4. **SRO- MRO integration:**

   Webland data is shared with registration department and it is designed such that Registrations will be done based on Webland data which avoided fake registrations.

5. **ROR Amendment ACT:** An amendment has been made to the A.P. Record of Rights 1971 act and Rules to provide legal Sanctity to electronic Land Records database and Loans entered by the Banks.

The data after reengineering the existing procedure is shared with all the stake holders for utilising the same in various benefit schemes.

15 Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project

The banks are issuing loans to the farmers, land owners, Cultivators for various purposes. Nearly 78 Lakhs of farmers, 2.25 Crores Survey Numbers of the State covered under the project.

As on 01.09.2017,
Number of loans – 28.42 Lakh
Number of farmers – 29.01 Lakh
Extent covered – 205 Lakh Acres
Survey Numbers covered – 96.42 Lakh
Loan Amount – 21,844.58 crores.

The banks are issuing loans to the farmers, land owners, Cultivators for various purposes. Nearly 78 Lakhs of farmers, 2.25 Crores Survey Numbers of the State covered under the project.

As on 01.09.2017:

Number of loans	34.90 Lakh
Number of farmers	36.08 Lakh
Extent covered	226.03 Lakh Acres
Survey Numbers covered	117.40 Lakh Loan
Amount	30,393.28.15 crores.

Huge financial Savings to the exchequer in terms of curtailing bogus, fake and multiple loans. Duplicity is minimised in debt redemption, crop subsidy and other schemes. Aadhar enabled Servicers for Seed

and Fertilizer Distribution and other Bank linked Schemes. Fake passbook cases detected in districts and criminal cases were filed against culprits the cases were drastically reduced. Centralized Loan database for various purposes. Increased transparency and accountability in government institutions. Through this approach, G2C and G2G services are enhanced so that the benefits to the genuine beneficiaries are delivered in the mean time without any manipulation.

This initiative is unique in the entire country and there is a scope for further improvements in future by implementing Online transfer of Loan data (CBS) to loan charge module and Land hub (including Urban lands) access to the Bankers & PACS.Integration of debt relief crop subsidy, crop insurance data for online transferring of the benefits to the farmers through the banks. Creation of Bank HUB for processing Loans data of all banks from one node.

The initiative has been awarded Category in 20th National e-Governance conference held at Vishakapatnam on 10th January 2017.

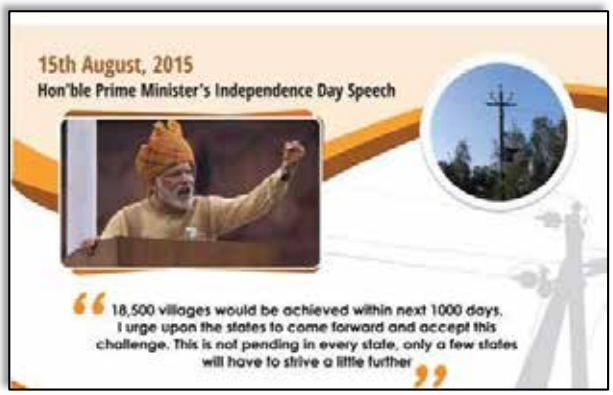
Grameen Vidyutikaran

Rural Electrification Corporation Limited, Ministry of Power

1.	Name of the State/Ministry	Ministry of Power
2.	Name of the host/owner organisation	Rural Electrification Corporation Limited
3.	Status of the host/owner organisation	Public Sector Undertaking
4.	Name of the Project	Grameen Vidyutikaran
5.	Name of the Nodal Contact Person	R.K. Gupta
6.	Contact address	REC, Core-4, Scope Complex, Lodhi Road, New Delhi-110003
7.	Telephone/Fax/e-mail	+91-9899899318

8. Project Summary

With the evolution and increasing affordability of technology and internet, the power of digitalization has become an important component for fulfilment of objectives for any institution or entity. Use of Information Technology offers a powerful and dynamic support system to achieve the goals in the most quick and responsive manner.



A similar model is being followed by Rural Electrification Corporation Ltd. in monitoring the implementation of Deen Dayal Upadhyay Gram Jyoti Yojna (DDUGJY) – the flagship program of Ministry of Power, Govt. of India for rural electrification in the country.

One of the key objectives of the scheme is electrification of remaining un-electrified villages in the country. As on 1st April 2015, we still had 18,452 un-electrified villages in the country, which were duly addressed by our honorable Prime Minister Shri Narendra Modi in his Independence Day speech

and target of 1000 days was set for electrification of these 18,452 villages. But looking at past pace of village electrification and difficulty involved in working in these villages, the electrification of these 18,452 villages would have taken at-least 10 years. This was indeed a job so challenging, that it required an overly innovative approach and a skilful strategy to accomplish such a mammoth task. Therefore an innovation project monitoring mechanism leveraging the latest mobile technology for milestone based monitoring and supported by trained manpower was evolved which came to be known as GARV.

9. Date of launch of project

1st April, 2015

10. Coverage (Geographical)

India

11. Beneficiary of the Project

Villagers residing in 18452 UE villages.

12. Problem statement or situation before the initiative

At the time of independence, only 3,060 villages of the country had electricity and there has been the continuous emphasis on village electrification. Over the years India's rural electrification program has passed through several stages and focus of Rural Electrification also shifted as per the need.

Year	Focus Area	Outcome
1950-66	Village Electrification	More than 45,000 villages covered
1966-91	Village Electrification; Pump sets Energization	More than 2 lakh villages & 1 crore pump sets energized
1991-2003	Villages Electrification; BPL connections	More than 2.64 lakh villages electrified and around 43 lakh pump sets energized

Focus of Electrification programs of Govt. of India

In 2004, it was estimated that around 1.25 lakh villages were still to be electrified, which were mainly from the states: UP – 40880, Jharkhand – 21695, Bihar- 19224, Odisha-9326, West Bengal- 6205, Assam- 5604, Meghalaya- 2468, Uttaranchal- 2550 and Arunachal Pradesh-1314 villages. However, state DISCOMs were not inclined towards village electrification program due to various reasons primarily: poor financial health of DISCOMs, electrification of villages not being a profitable venture as it only contributed to increase in AT&C losses, the remaining UE Villages were located in far flung/ difficult areas and it was very uneconomical to extend electricity infrastructure to these villages which were located in the far flung areas of the country.

In order to boost village electrification, Govt. of India launched a program "Accelerated electrification of 1 lakh villages and 1 crore Households" in January 2004. The program was subsumed under RGGVY in March 2005. The focus of both programs was electrification of un-electrified villages and providing access to rural households along with free connections to BPL families. On implementation of these

two programs, a total 109685 villages (Mainly of UP (27809), Bihar (23277), Jharkhand (18294), Odisha (14442), Assam (8334), West Bengal (4185)) were electrified till March 2015.

But even after these efforts during the 69 years of independence, 18,452 villages still remained unelectrified. Most of these villages were in remote and inaccessible areas having challenges of dense forests, isolated deserts, tough & hilly terrain (in 3177 villages), frequent floods (in 1077 villages), Naxalite violence (in 4903 villages), adverse weather conditions and terrorism etc.

13. Project Objectives

The Prime minister's statement soon turned into an expeditious mission - A mission called 'Grameen Vidyutikaran'. This mission under Deen Dayal Upadhayaya Gram Jyoti Yojana aims to electrify every un-electrified village in the country. However, electrification of all 18452 villages in rural India was indeed a tremendous task to accomplish. With the objective of achieving the mission well before the target, along with transparency and accountability a new monitoring mechanism 'GARV' was set up. The key objectives of the project were:

1. To electrify all remaining UE Villages on mission mode within the given timeframe.
2. To bring in accountability and transparency through dissemination of information to general public at large and creating awareness.
3. To speedily implement the electrification works through micro management, involving all stakeholders – Ministry of Power, State governments, State DISCOMs, District administration and general public.
4. To facilitate better decision-making, with regular field-level updates of milestone-based progress by the Gram Vidyut Abhiyanta (GVA) which are reflected in real-time on the Dashboard

14. Project scope approach and methodology

various other unprecedented challenges which could not be predicted such as Right of Way (ROW), railway clearances, forest clearances etc, hence causing delays.

Strategy to overcome challenges: Rural Electrification Corporation is nodal agency for implementing the Central Government's rural electrification programs in the country. The company has rich experience

ID	Milestone
M1	Awarded
M2	Receipt of poles in the villages and enroute of villages for 11KV LINE & LT Line
M3	Erection of poles for 11KV line & DTR substation and earthing
M4	Erection of poles for LT line
M5	Receipt of line material including conductor and cable
M6	Conductor Stringing of 11KV line
M7	Conductor/cable Stringing of LT line
M8	Receipt of distribution transformer substation at site
M9	Erection of distribution transformer substation equipment (DTR,LTDB,LA,AB switch,cablesmeter,fuse,earthing)
M10	completion of electrification works in village including BPL service connection
M11	Energisation of village including BPL service connection
M12	Handing over villages

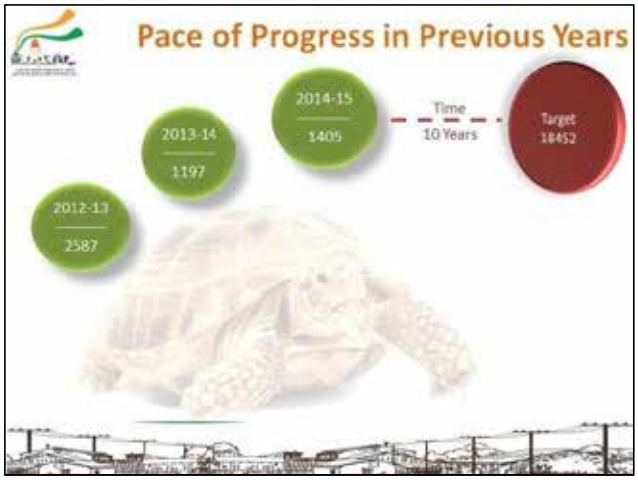
regarding the technical, financial and implementation aspects of establishing distribution infrastructure in rural areas. The inspiration for milestone based monitoring has been derived from the Swach Vidyalaya Abhiyan under which Rural Electrification Corporation had successfully built 13,000 toilets within given time lines. The quality and pace of work was ensured by milestone based independent monitoring through extensive field visits by trained civil engineers supported by photographs of each stage/ milestone of the work.

To meet the ultimate goal of electrification of these villages well ahead of target given by Honorable Prime Minister, a comprehensive project monitoring mechanism has been developed to monitor and micro manage the electrification works in these villages. This unique monitoring mechanism GARV leverages the mobile technology and empowers all stakeholders viz. Central Government, State Governments, Distribution Companies and general public at large. The strategy involves: (a) Development of innovative progress verification mechanism to micro manage electrification process in 12 milestones. (b) Appointment of approximately 400 trained Graduate Electrical Engineers called Gram Vidyut Abhiyantas (GVAs) to independently capture the progress of electrification works in GARV App. (c) The GVAs visit these villages on regular basis to monitor the progress of works in terms of milestones achieved, supported by photographs. Along with the progress of works, GVAs also capture reasons for delay (if any), the information about the distribution infrastructure created and the villagers' feedback. (d)This entire information captured is made available for public through dashboard of the GARV App. This has brought transparency and accountability for timely completion of works. (e) The interactive dashboard of the GARV App provides complete information about status of electrification like ongoing/completed/not started/delayed works etc. for each and every village covered under the mission. (f) Single platform for all stakeholders to monitor the progress of works and for speedy resolution of issues if any. This has sensitized the entire system and efforts have been synchronized to achieve the target well ahead of schedule.

Challenges:

The major challenges faced in electrifying the UE villages:

1. **Pace of Electrification:** The past pace of village electrification was extremely slow where only 1405 and 1197 villages were electrified in the year 2014-15 and 2013-14 respectively, with this pace electrification of these 18452 villages would have taken another 10 years.

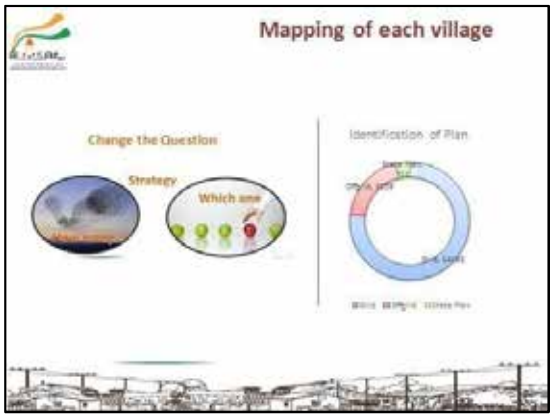


2. **Difficult Villages:** The high inaccessibility of the target areas due to bumpy hilly terrains, densely forested areas, areas charged of left wing extremism etc. Unprecedented challenges which could not be predicted such as Right of Way (ROW), railway clearances, forest clearances etc, hence causing delays.

3. **Time Limitation:** To electrify 18452 villages in 1000 days needs to maintain the pace of 19 villages per day.

4. **Transparency:** Setting up of a transparent and an accountable system within such a deep rooted, complex and an extensive project. Replacing the earlier process i.e. manual progress reporting system into an innovative transparent way.

5. **State's Disinclination:** State DISCOMs were not inclined towards village electrification program due Poor financial health of DISCOMs, Electrification of villages tends to increase AT&C losses, Remaining UE Villages were located in far flung/difficult areas, it was uneconomical to electrify these villages etc.



Overcoming the Challenges:

The implementation of new Project Monitoring System "GARV" was done to overcome all the weaknesses of the earlier system in terms of use of technology, milestone based reporting, deploying trained manpower, transparency, teamwork and involvement of all stakeholders to achieve the ultimate goal well ahead of given timeline. The new strategy involves:

1. **Changing Question from "How many to which One":** This was indeed a major question in front of the authorities. Earlier the progress of village electrification was sent in figures by the state Discom's making it difficult to reconcile and estimate the actual status of village electrification. The GARV App acted as an independent mechanism resulting marking electrification status of each village.

2. **Mapping of Villages:** All the 18452 villages in GARV were mapped with plan of electrification like Grid, Offgrid resulting in reduced time and effort in planning of electrifying a village.

3. **Milestone based approach:** Development of innovative progress verification mechanism to micromanage electrification process in 12 milestones. Milestones are stages of village electrification, such as receipt of survey report, dumping of poles, erection of poles, stringing

of LT, HT lines, etc. Milestones are not quantitative indicators, but are also used for qualitative monitoring of ongoing works.

4. **GVAs:** Appointment of approximately 400 trained Graduate Electrical Engineers called Gram Vidyut Abhiyantas (GVAs) to visit the villages and independently capture the progress of electrification works in GARV App.

5. **GARV APP:** The interactive dashboard of the GARV App provides complete information about status of electrification like ongoing/completed/not started/delayed works etc. for each and every village covered under the mission. The entire information captured is made available for public through dashboard of the GARV App. This has brought transparency and accountability for timely completion of works.

6. **Rigorous Monitoring:** Rigorous Monitoring is done at REC Level, State Level with the support of MOP. Ministry of power conducts a monthly RPM meeting under the chairmanship of power secretary which is attended by state Discom's. The electrification progress is being reviewed and solutions are provided for issues faced by the states.

About GARV App:

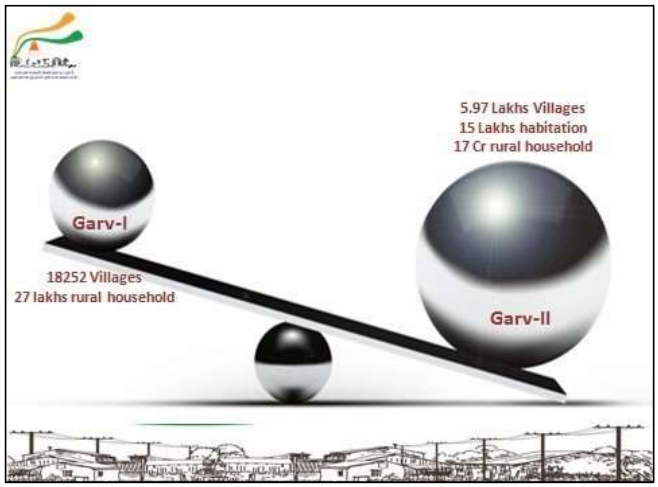
Mobile App "GARV" under Grameen Vidyutikaran mission providing real-time updates on electrification status of each village was developed. The App was launched by Hon'ble Power Minister on 14th Oct, 2015. The main features of GARV App:

- **Transparency:** GARV is an App for the people. The entire information captured is made available for public through dashboard of the GARV App. To encourage participation of the general public and to promote greater transparency, the GARV App is available for download on the Google Play store, and App store. The GARV portal has been visited by more than 23 Lakh people and the App has been downloaded by more than 93642 users. The App is supported by a dedicated social media team resulting in 16300+ followers in Twitter, more than 576000+ Likes in Facebook, and 1000+ social media interactions comprising of feedbacks, queries and grievances.

- **Accountability:** The transparency provided by App has increased public participation through social media which in turn has increased accountability. Samvaad feature also been added in the App so that citizen queries can directly be addressed by District Superintending Engineers. The more accountability has resulted in expediting electrification works in the villages and facilitated faster resolution of issues.
- **Dashboard:** The dashboard shows the entire information about various stages of electrification of 18452 villages covered under the mission. It shows the status of electrified villages, to be electrified villages etc. on real time basis at State, District and Village level. The information is represented on dashboard in different categories, viz. Milestone based progress, Weekly progress, Progress in grid & off-grid villages and under different plans, details of villages found uninhabited during survey, UE villages where 100% DT Capacity has been created and UE villages visited by GVAs etc. The dashboard also provides GVA's contact details to make the reporting process transparent and making them accountable for their visit reports.
- **Impact Assessment:** Once the electrification work is over, the village is again visited after 2-3 months to see the impact electricity has brought in real life of villagers. On GARV app, all details like installation of Atta Chakki, opening of shops, purchasing of TV & Fridge by villagers, hours of supply etc. are captured and made available on dashboard. Even dashboard also provides name of villagers and mobile number in each village to ensure the validity and integrity of the data collected. This has further strengthened the accountability of DISCOMs for providing quality power in these newly electrified villages.

The Road Ahead

Gaining experience from village electrification mission, we are now moving ahead with this zealous approach to our new mission of **"100% Household Electrification"** focusing on providing electricity in all **17,89,68,026** households in India. As on date 13,59,07,412 (76%) Households have already been Electrified. With GARV we are now a few steps close towards the ultimate mission of ensuring 24x7 power supply to all electricity consuming entities including households, Industries, Commercial purposes by the FY 18-19.



15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

GARV App has been a successful endeavor in electrifying 18452 villages of India. It is an App which shows minute to minute information of electrification works in remote corners of India and has successfully incorporated maximum transparency & accountability in govt. working. Though the electrification of 18452 villages located in the toughest terrain seemed an unachievable target, The GVA's acted as ground soldiers and with this innovative yet unique monitoring mechanism "GARV" we were successful in maintaining transparency and accountability. As on 31.08.2017 under village electrification programme, electrification works in 123315 (96%) Un-electrified villages, Intensive electrification in 441265 (57%) partially electrified villages have been completed and free electricity connections to 268.52 Lakh BPL households have been released. Total subsidy released under the village electrification programme until now is Rs. 46374.57 crore. The magnificent achievement in village electrification has also been captured by NASA. The latest nighttime images of India shows the actual increase in progress achieved in electrification of villages in 2016 as compared to 2012.

g Triangulation

Department of Science & Technology, Government of Haryana for Remote Sensing and GIS applications

1.	Name of the State/Ministry	Haryana
2.	Name of the host/owner organisation	Haryana Space Applications Centre (HARSAC)
3.	Status of the host/owner organization	Department of Science & Technology, Government of Haryana for Remote Sensing and GIS applications
4.	Name of the Project	g Triangulation
5.	Name of the Nodal Contact Person	Shri T L Satyaprakash, IAS
6.	Contact address	Deputy Commissioner, Gurgaon Mini Secretariat First floor, Gurgaon Haryana-122001
7.	Telephone/Fax/e-mail	Email.Id- satyaprakashias@gmail.com Ph -1242303333 Mob-9999178178

8. Project Summary

This unique methodology was tried and tested on several test cases by validating and revalidating the results obtained by digitally ortho-rectifying high-resolution satellite data as well as by measurements conducted on sites.

The objective was to link all databases end to end. Textual records of land parcels are available in the form of Haryana Land Record Information System. Similarly land transactions reflected in Haryana Registration Information. Geo-spatial imaging was done through unmanned aerial vehicle with a resolution of 5 cm was superimposed on cadastral map and repositioned by correcting them by comparing and matching parcel to parcel data at village level, tehsil level, district level and finally state level. The idea was to seamlessly link all the three databases to allow public to procure the land records online in dynamic manner. Key objectives include:

- Value added services and Direct Benefit transfers are possible once land owner
- Parcel to parcel analysis of villages in Manesar provides perspectives for repositioning entire land records system
- To remove information asymmetry by connecting geo-spatial imaging to textual records available in the form of Haryana land records information system

- Refine all major errors that crept in since 1958 by way of matching the ROR records with GIS imageries

9. Date of launch of project

10th March, 2015

10. Coverage (Geographical)

During Todarmal era there were 512 reference points, across the district of Gurgaon, which were named Burzis, sehadda (bi-junction of the villages) and tri-junction of villages. As these reference points were dislodged in majority of the places, the demarcations were done using "convenient reference points". Such ad hoc and arbitrary methodology led to cascading of litigation as different demarcation exercises used to give different results and multiplicity of efforts. If not repositioned across the country, the team is of the view, that the land records will lose their sanctity. Every record about a land parcel without a reference can better ensure only an imaginary and fictitious title.

In second step, we have attempted to use GIS methodology to refine and update the land records at the level of individual land parcels. This was necessary as several errors and anomalies crept in during last half a century. Some of these were deliberate by revenue functionaries and some innocuous omissions and commissions. Any land record management system without correcting these issues at best can be a "Garbage in –Garbage out" system. Entire gamut of services related to land records can be provided. This is creation of a different set and quality of public good for the purpose of public consumption kept at public domain. The idea is to provide a framework where in every information related to every parcel of land is available to everyone in the business of land. An effort is made to keep precise updated information about every parcel of land, both in time (since 1958) and space, in public domain

When the allegation of encroachment of public land related to a seasonal rivulet emerged between two prominent builder-developers the administration conducted demarcations that yielded multiple results. Annoyed by this paradoxical situation the National Green Tribunal directed the Deputy Commissioner to create a fool-proof land records-document. Out of 512 reference points spread across the district hardly 100 were available. Several demarcations found that land of Haryana extended in territory of other states that explained cascading of errors across space. Problems relate to vanishing reference points, corrupted land records due to path ascendancy issues and lack of regulatory capacity to monitor malpractices by various land record functionaries in time and space.

11. Beneficiary of the Project

Benefits to the organization: This is a HARSAC - Dept of Revenue Department Joint Venture with outside support of Science and Technology Park, Pune. Originally funded by District Innovation Fund leverages the framework of NLRMP. Hitherto Haryana was Known for Haryana Land Record Information System (HALRIS) but linking GIS capability will make it not only comprehensive but also will lend highest level of credibility to land records. The clients include government agencies, private agencies in the business of land, individual land owners, communities etc. Credibility rendered will impact economy as whole.

We arecreating a public good which has a widespread ramification for landowners in particular and

economy as a whole. The current exercise renders all land transactions secure. Further, results of parcel to parcel analysis of villages in Manesar provides perspectives for repositioning entire land records system by comparing the area as per Rights of Records and actual area on field. Interestingly in almost every village the actual area is in excess of the area as per Rights of Records. This has made demarcation exercises credible and also has enabled the authorities to remove the errors in revenue records that emerged during various points of time. Once we link all three databases and place the same in public domain we are approaching zero information asymmetry. That will enable the state to underwrite the title registration.

Benefits to the citizen: This secures the title for land owners and reduces litigation. If linked with AADHAR it can be an easy way of providing direct transfer of benefits to all farmers/ land owners.

Benefits to other stakeholders: Land being one of the primary factors of production in economy there are several stake holders like bankers, developers, various industrial houses etc will be immensely benefitted. Even the courts would find it easy to adjudicate land disputes.

12. Problem statement or situation before the initiative

During Todarmal era there were 512 reference points, across the district of Gurgaon, which were named Burzis, sehadda (bi-junction of the villages) and tri-junction of villages. As these reference points were dislodged in majority of the places, the demarcations were done using "convenient reference points". Such ad hoc and arbitrary methodology led to cascading of litigation as different demarcation exercises used to give different results and multiplicity of efforts.

13. Project Objectives

This project is in line with the vision of present Prime Minister to provide conclusive title to farmers. This project currently is G2G and shall be made G2C shortly. World's first insurance in the form of conclusive title was as early as 1831 in California which went bust in three years. Probably, a credible GIS-HALRIS system will not only protect the interest of land owners and farmers but also revive the interest of insurance, banking and other stakeholders. There are millions of cases in various judicial forums only on account of improper documentation and management of records. If present exercise is scaled up or replicated these cases are redundant. Removal of information asymmetry would lend credibility to land market transactions which hitherto is considered opaque, complex and full of corrupt practices.

14. Project scope approach and methodology

Technology platform of Open source platform with databases procured from Survey of India, District Revenue Records, High Resolution Unmanned Aerial Vehicle Imaging (UAS/UAV based mapping) was used and it is for the first time that Unmanned Aerial Vehicles were used for imaging the land parcels. The images have 5 cm resolution with a maximum error of 15 centimeters. This makes the new records compliant with land record manual which allows a sub meter error in documentation. First time a district unit has acquired an in-house capability to image and map. High level of interoperability can be achieved subject to appropriate security systems. The interlinking of the three databases i.e. Haryana Land Records Information System (HALRIS), Haryana Registration Information System (HARIS)

and GIS database are held up due to map policy and cyber security issues. Easily replicable model but needs high degree of commitment both at political and executive level. National Land Records Management Project attempts a similar exercise. The exercise under discussion is an improvement by using high-resolution map and analytics at individual parcel level.

The Triangulation exercise to re-establish reference points was done for entire state. The same was leveraged for further applications for the District Gurgaon. Additional applications are created for Manesar tehsil. The exercise establishes a framework for land record validation defies regular model of delivery centre oriented g-Governance. It is oriented towards development of error free documents at best can be described as quality public good. It is a web based platform and the documents available in Haryana Land Record information System is refined, updated and delivered through CSCs (Citizen Service Centres) across the district.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

In present exercise the historical records available since 1958 is not only refined but also made error free. This is also enabling us documenting and linking various databases providing comprehensive validation of land records. In the process of creating documents almost every revenue functionary is trained and his knowledge is updated about the technology. The error free records are going to boost the confidence of the clients.

E-Filing Project of Income Tax

The Income Tax Department is governed by the Central Board for Direct Taxes (CBDT) and is part of the Department of Revenue under the Ministry of Finance.

1.	Name of the State/Ministry	Ministry of Finance
2.	Name of the host/owner organisation	Income Tax Department, Government of India
3.	Status of the host/owner organisation	The Income Tax Department is governed by the Central Board for Direct Taxes (CBDT) and is part of the Department of Revenue under the Ministry of Finance.
4.	Name of the Project	E- Filing Project of Income Tax
5.	Name of the Nodal Contact Person	Shri Ramesh Krishnamurthi
6.	Contact address	Director of Income Tax (Systems) ARA Center Jahandawalan Extension New Delhi-110055
7.	Telephone/Fax/e-mail	Email Id- ramesh.krishnamurthi@incometax.gov.in

8. Project Summary

The Digital India programme of the Government of India conceptualised a vision to transform India into a digitally empowered society and knowledge economy. With the penetration of internet and its availability on wide range of devices, delivery of information and services to the citizens across the country becomes critical. In line with the overall objective of the Government, it has been the constant endeavour of the Income-tax department to make compliance simpler for the taxpayer through use of technology, thereby providing better services to the common citizen. Accordingly, three incremental innovations in its existing e-filing process were introduced namely, Electronic Verification Code (EVC), e-vault and e-sahyog.

9. Date of launch of project

27 July, 2006

10. Coverage (Geographical)

India

11. Beneficiary of the Project

almost 95% of the taxpayer population

12. Problem statement or situation before the initiative

Filing of return of income being a legal process, required the taxpayer to verify the correctness of the facts mentioned therein by affixing his/her signature before its submission. The persons responsible to verify return is also laid out by the Income Tax Act. In the electronic form of submission, this was a challenge. To begin with, the taxpayers were given the choice to digitally sign the return using DSC [Digital Security Certificate] or submit a single paper verification sheet [namely ITR-V] before the designated Income Tax Authority verifying the correctness of the electronic return uploaded. As the years progressed, verification of the electronic return using DSC was made compulsory for all corporate and high volume taxpayers. However, the compulsory DSC verification category formed only about 5% of the 4.5 crore taxpayers. That means, there remained more than 4 crore taxpayers who are required to verify their return through paper mode and submit to the department within 120 days of electronic upload of the return data. The uploaded return data would be treated as legally filed only upon receipt of the paper verification sheet [ITR-V]. Though return filing was called electronic, there still remained a part to be done in paper mode.

This paper verification mode and its submission had various inherent short comings such as. The taxpayer did not send the ITR-V, thereby leaving the process of e-Filing incomplete. Even if the ITR-V was sent, it did not reach the department due to postal mishandling at various levels. ITR-V could be sent only by ordinary or speed-post and addressed to a post box number. Considering the volume of such papers, it was not possible for acknowledging the receipt personally. Thus the sender did not get any acknowledgement for having reached the designated office.

There were ITR-V quality issues such as Paper quality, Print, Signature, Overwriting, multi-folding etc. Authenticity of the Signature was another issue. Verification compliance process for Non-Resident also posed major challenge. The process incurred compliance Cost of verification for both taxpayer and the government. There was a long delay in authentication of digital data of return and in its processing. There was a requirement to send multiple reminders to the taxpayers who did not send the ITR-V even though the compliance time provided is only 120 days as reflected in the table- below

ITR-V Pending Statistics

AY	Total e-Filed	DSC	ITR-V	Pending ITR-V
2014-15	3,01,38,700	27,65,003	2,47,88,836	25,84,861
2013-14	3,04,93,413	27,51,208	2,57,88,182	19,54,023
2012-13	2,28,03,845	26,58,010	1,89,24,971	12,20,864

The main challenge faced by the department in electronic filing of the return was to ensure compliance to the legal requirement of verification process of the return by the taxpayer themselves. Though in filing of electronic return, there is in place requirement of the taxpayer in registering giving specific duly verified identifiers of themselves, the same could not be relied upon as the true identity of the taxpayer as many of them had compromised with their login credentials to their tax consultants/professionals etc. for their convenience. Under such circumstances, there was no certainty of the return data flowing into the department to have been truly originated from the taxpayer themselves. Through unique, the taxpayer's login credentials could not be validated as true legal verification by the taxpayer.

The other alternative to the Income Tax Department was to upload the return using DSC, compulsory for all types of taxpayers. However, the challenge was in obtaining DSC as it costs Rs.600/- upwards, for one year validity. Expecting all taxpayers to invest that amount for once a year, compliance requirement was too much of an expectation. It would have resulted in a social unrest or even boycott of the very process of return filing. Alternatively the government should have borne the cost of DSC on behalf of the taxpayer. This would have resulted in huge burden on exchequer and also a Herculean task on the administration in implementing the scheme considering the demographic spread of the taxpayers. Also with the technical complexities, it is too much to expect all tax payers use Digital signature.

13. Project Objectives

To address these issues, the Income Tax Department leveraged the Information and Communication Technology developed and implemented by various external Stakeholders in identifying the Authenticity of the person uploading the Return. They are Unique Identification Authority of INDIA [UIDAI], National Securities Depository Limited [NSDL], Central Depository Services (India) Limited [CDSL], Banking Sector and National Informatics Centre [NIC].

With stringent Know Your Customer [KYC] norms in place with the above authority and by leveraging the Information and Communication Technology developed and implemented by these external Stakeholders in storage of such data, the Department came with an alternate verification process namely Electronic Verification Code [EVC], where the user is provided a unique Code to e-Verify the return.

14. Project scope approach and methodology

Electronic Verification Code (EVC) is the technology driven initiative launched by the Income-tax department to promote the concept of e-governance. The idea behind the concept is to make the online transactions simple, safe and secure so that more and more people can use the technology to make interaction with the Income Tax Department easy and fast, thereby reducing the compliance cost.

The legal provision of section 3A of Information Technology Act that enables issuance of Electronic Signature based on principles of attribution, non-repudiation and integrity of an e-document paved the way for introduction of a simple and effective verification process that could substitute the ITR-V process while submitting the Income Tax return electronically. Accordingly, The Finance Act, 2014 amended section 140 of the Income Tax Act, and the CBDT notification amended Rule 12 of Income Tax Rules. A techno legal proposal in this regard was prepared by the Directorate of Income Tax (Systems) and vetted by the CERT-IN under Ministry of Communication & Information Technology. Accordingly, the Electronic Verification Code [EVC] was introduced in e-Filing effective from 13th July, 2015.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

The concept used in all the above three initiative of the Department is leveraging data available using ICT of multiple other organizations coupled with the Department in respect of a same person. The dependence on specific organizations or its technology is fully nullified. It is always not necessary

for creation of independent infrastructure for Government delivery of services. The services can be delivered more efficiently and in a simple manner by leveraging the existing infrastructure of other entities.

All agencies, be it government or otherwise, can replicate this process in their functionality which mandates verification by the user or for securing of their user account or for shepherding its user towards error free voluntary compliance of process. The response from the banking sectors has been overwhelming. EVC amounts to extending an additional service for its customer. More and more banks are entering into an agreement with the department to extent the service of ATM & Bank Account EVC generation facility for its clients. UIDAI has even extended its services for leveraging of its demographic and bio-metric data so that maximum governance can be achieved with least direct intervention. The Taxpayers have wholeheartedly accepted the e-sahyog initiative of the department as evident from their response received to this initiative.

SAMRTH (Supply Accounting Management & Reporting Tech. Hub)

Club Infotech, Punjab

1.	Name of the State/Ministry	Punjab
2.	Name of the host/owner organisation	Club Infotech
3.	Status of the host/owner organization	Club Infotech, Punjab
4.	Name of the Project	SAMRTH (Supply Accounting Management & Reporting Tech. Hub)
5.	Name of the Nodal Contact Person	Shri Loveleet Koti
6.	Contact address	Shri Loveleet Koti Managing Director, Club Infotech Q/No. 20, Near Power House G. E west Pathankot 21 Sub area – 145001
7.	Telephone/Fax/e-mail	Email.Id- loveleet@live.com Ph. No- 9988609709 Mob. No- 9872722297

8. Project Summary

Supply Accounting Management & Reporting Tech. Hub, abbreviated as **SAMRTH** is a project made by **Club Infotech** specially designed for an Indian army to manage their supply related operations. It is a government resource planning (GRP), customised automation solution and built on the fundamental of demand & supply which can be used by any govt. institution who deals in supply management. Indian army is the third largest army and the largest importer of military goods in the world. It's having around 47 lacks personnel in active, reserve and paramilitary forces. One of the tasks of Indian army is to fulfill the daily essential need of troops and associates. They handle the biggest management of demand & supply in nation and the organisation responsible for this is an **Indian Army Service Corps (IASC)**.

9. Date of launch of project

15th June, 2015

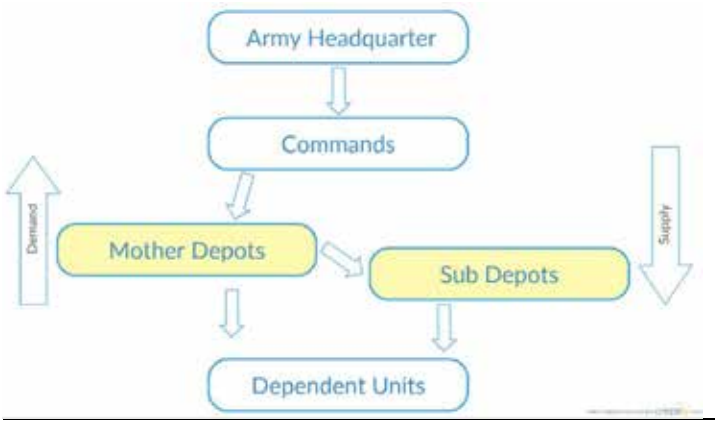
10. Coverage (Geographical)

IASC handles logistic related operations. It comes under services part of Indian Army and responsible

for the procurement, provisioning, managing and distribution of the essential supplies like ration, fresh & dry eatable items, fuels, oils, lubricants, hygiene & chemical, water, ammunition and items of hospital comforts to combat arm, support arm, services institutes and to air-force, navy and paramilitary if required.

The operation of Mechanical Transport except first line transport and fighting vehicles and the provision and operation of first and second line Animal Transport is also the responsibility of the ASC. The other responsibilities include carriage and distribution of ammunition including mines, forward of the Corps Maintenance Area in the field in case of plains, and forward of Divisional Maintenance Area in case of mountain formation, packing of commodities for supply, loading of aircraft and ejection of loads, training and provisioning of clerks for all branches of staff at formation headquarters and the training and provisioning of catering staff in the army.

11. Beneficiary of the Project



12. Problem statement or situation before the initiative

The **Army Headquarter** at the top handled the demand and supply, central procurement management, tendering management, accounting of every purchase and foresight the demand & supply. The **Commands** are responsible for forecasting, penetrating demand and supply, catch up target to complete supply in time, instruct functions to below belt, regular check on progress and audit related activities.

Mother depots and **Sub Depots** generally perform same tasks but functionally and operationally they have huge differences. The mother depot provide supply to their sub depots which further they distributes the commodity to their respective dependent army units. Mother depots can set the local tender for sub depots and also function as the sub depots for their local dependent units. It maintains three stock accounts; one is of mother depot, second as a sub depot and third as a dependent unit.

Mother and sub depots are responsible for accounting, transportation, logistics, forecasting, ground work, tendering, handling, issuing, receiving, auditing, quality check, packaging, warehousing, managing estimated self-life, dry supplies, fresh items supply, records maintenance, forward reporting, ledger maintenance, vouchers maintenance, inventory, vendor management, set demand for forward units, maintenance of stock demand return statement, accounts of book debit units.

Dependent Units are the actual consumers who receive supply of commodity from their respective

Depots. They apprise the depot initially about their consumption requirement and then receive it to consume.

13. Project Objectives

14. Project scope approach and methodology

There are 3 type of institutions in the functional hierarchy of IASC. **Head**, the first category includes Army Head quarter and Commands, mostly have paper work, foresight, reporting and flow of data and information. **Hub**, theSecond category contains Mother Depots and Sub Depots. The upper part is involved in receiving reports and work for flowing information and data between entities, similarly the lower part- consumer is busy receiving, consuming and setting the demand but the Hub at the middle level connects both.

The sections of this institution who enters the data from various sources have a great task and require a best tool which save time and feed quality of data to the system to have best results further. With the expounded data/ information, the ASC makes fine reports and can satisfy further linked entities. This institution has a vital role in structure, they work on a ground, work as a distributor/vendor/consultant, they directly linked with **Supporting Entities** like military transport units, logistic cells and station headquarter some of which are directly or indirectly involved in supply chain system.

Consumer, the third Category Includes dependent unit of troops serving on forward locations as **field units**, as a backup, as a **peace**, assisting units like **book debits** etc. Unlike peace and book debit units the accountability of field units according to set standard of scale is the core responsibility of their respective depots. Supporting entities are the institutions under ASC who work together in order to complete the supply related operations.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

The Below picture depicts the difference made and time and resources saved from all tasks. It shows the results achieved improvement in efficiency and productivity.

TASK	TRADITIONAL		SAMRTH		SAVING	
	(HRS/MINS)	RESOURCES	(HRS/MINS)	RESOURCES	(HRS/MINS)	RESOURCES
Masters	10	3	00:11	1	9:49	2
Forecasting	17:30	2	00:20	1	17:10	1
Local purchase	8:15	5	00:33	2	7:42	3
Stock-In	5:15	7	00:18	3	4:57	4
ESL	2:36	4	00:09	2	2:27	2
Stock-Out	7:08	8	00:50	4	6:18	4
Others	1:42	6	00:12	2	1:30	4
Total	52hrs 23mins	35	2hrs 33mins	15	Saved 49hrs 50mins	Saved 20

NREGASoft

Ministry of Rural Development, Government of India

1.	Name of the State/Ministry	Ministry of Rural Development
2.	Name of the host/owner organisation	Joint Secretary (Rural Employment)
3.	Status of the host/owner organization	Main Ministry
4.	Name of the Project	Mahatma Gandhi National Rural Employment Guarantee Act
5.	Name of the Nodal Contact Person	Sh. Prashant Mittal (HoD, NIC-DRD)
6.	Contact address	380- A, Krishi Bhavan, Dr. Rajendra Prasad Road, New Delhi - 110001 INDIA
7.	Telephone/Fax/e-mail	9717868279

8. Project Summary

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) aims at enhancing the livelihood security of people in rural areas by guaranteeing hundred days of wage employment in a financial year to a rural household. The government hails this statute as "the largest and most ambitious social security and public works program in the world." In its World Development Report 2014, the World Bank termed it a "stellar example of rural development." The principal purpose of MGNREGA is to create durable assets (such as roads, canals, ponds, wells) while providing employment within 5 km of an applicant's residence for which minimum wages are to be paid. If work is not provided within 15 days of applying, applicants become entitled to an unemployment allowance. Thus, employment under MGNREGA is a legal entitlement.

Implementation of such a massive program across States, Districts and three tiers of Panchayati Raj Institutions demand for robust and comprehensive e-Governance system, which can facilitate all stakeholders including users and citizens, and support processes critical for successful implementation. A web enabled MIS called “NREGASoft” was developed, for which tag line “Anything, Everything, Anytime, except HR Payroll” fits very well. NREGAsoft is a local language enabled workflow based e-Governance system to capture all the activities under MGNREGA at Center/State/District/Block and Panchayat level. It has been developed and deployed at http://nrega.nic.in by NIC in collaboration with Ministry of Rural Development. Each stakeholder can access any relevant information through

this portal anytime and anywhere. MIS also handles wage, material, and admin expenditure payments through its eFMS/NeFMS module. NREGAsoft provides information to the citizen in compliance with right to information Act (RTI Act). It also makes available all the documents like Muster Rolls, registration application register, job card/employment register/muster roll issue register, muster roll receipt register which are hidden from public otherwise.

9. Date of launch of project

2 February, 2006

10. Coverage (Geographical)

NREGASoft caters to the extensive breadth coverage of MGNREGA, which spans through 34 States & Union Territories, 682 districts, 6860 blocks and 262251 Gram Panchayats. In FY 2016-17, NREGASoft helped to provide employment to approximately more than 5.12 crore households, and person-days generated through this portal in FY 2016-17 is also very huge at 235.81 crores.

11. Beneficiary of the Project

Adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage.

12. Problem statement or situation before the initiative

NREGASoft was built to solve following problem areas:

- Lack of transparency in whole system
- Fudging of Muster rolls
- Improper record keeping
- Duplication of works
- High Spurious Transactions leads to loss to exchequer
- Parking of funds leads to delay in benefits
- Partial Wage Payments
- Delay in Funds Disbursements
- Non-Standard Processes
- There are multiple local languages on ground
- Very low literacy rate on ground

13. Project Objectives

Objective of NREGASoft:

- To bring transparency in the whole system
- Make various Registers, muster rolls, documents available to public.

- Provide single window interface for all the stake holders of MGNREGA
- Maintain records of 100 days of employment to a family
- Maintain accounts and generate all Registers/documents to be kept at Gram Panchayat in the format specified in guidelines
- Track transfer of fund to various implementing agency.
- Track the pattern of demand for work for future planning
- Prepare inventory of works/assets created under NREGA for future planning.
- Decide when and how much fund to replenish in which account.
- Highlight the irregularities, alerts to various stakeholders.
- Register grievances of workers.
- Facilitate information exchange.

14. Project scope approach and methodology

- All the activities of NREGA are happening at the village level. Panchayat Secretary / Gram Rojgar Sahayak at the Gram Panchayat level are responsible for the record maintenance and account keeping.
- Stationary like Blank Muster Roll, Cash book, Measurement Book is made available to the Gram Panchayat from the Programme Officer. Blank MR forms go to the work site where workers mark the attendance. Engineers visit the worksite after the closure of muster roll and do the measurement and fill the Measurement Book. Panchayat secretary maintains the cash book which has details of the amount received and expenditure made on labour and material component.
- Gram Panchayats where computers are available the data get entered into the computer which will then be sent by an offline/ online mechanism to the central server at New Delhi.
- The Gram Panchayats where computers are not available; the physical records move to Programme Officer office at Block Level where they get digitized and sent to by offline/ online mechanism to the central server at New Delhi.
- The movement of records from Gram Panchayat to Block take place at a regular interval of 2-3 days.
- NREGASoft MIS developed for MGNREGA is a workflow based system. Data entered for any activity cross check/ freezes for the previous activity. Proper checks have been introduced to validate the data entered to stop wrong entries. For Example:
    - o For validating the persons on the job card, a loose coupling is provided with the Rural Household Survey BPL Census 2002.
    - o Expenditure cannot be made unless the funds are available with authority.

- The work can be allocated to a person for a period if he has made a demand in the same period and can appear on the Muster Roll if he/she has been allocated the work within the period of the Muster Roll and his family has not completed 100 days.
- The Job Cards and the Muster Roll are tightly linked that means that every entry in the Muster Roll will have a corresponding entry in the Measurement Book.

- Alerts have been raised to indicate the concerned areas so that corrective action can be taken for better implementation of the NREGA.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

1. **E-governance for masses:** Digitization of all NREGA activities made all information available for public access, this ensures accuracy in payment of wages to workers. This also facilitates the lodging of complaints through Grievance Redressal System and Social Audit.

2. **Assists gram panchayats in NREGA implementation:** MIS tracks 100 days of employment to a household, generates documents as per NREGA guidelines, tracks funds from the Ministry to the worker, provides real time status of available funds in accounts of Panchayats/ Blocks/ Districts, and details of unfulfilled demand, works which can be taken up and theunemployment allowance.

3. **Assists programme officers and administrators:** MIS Provides strong analysis about programme implementation like locations with number of registration, demand for work, allocation of work, work in shelf, on-going work, funds transferred, availability of funds at each level, and expenditure on work. It also generates Monthly Progress Report (MPR) at Gram Panchayat / Block / District and State level.

4. **MIS utilizes Information Technology to overcome challenges:**
   - NREGAsoft is available in both online and offline mode to meet connectivity barriers.
   - It is a Unicode enabled and supports all local languages overcoming the language barrier.

5. **Saving on hidden cost:**
   - **Eliminating Fudging of Muster rolls:** More than 12.8 Crore job cards and corresponding muster rolls are available in public domain; there is a tight coupling between job card and muster roll.
   - **Timely funds remittance to implementing agencies:** Fund transfer system tracks the transfer of fund from MoRD/States to pocket of person.
   - **Partial payment of wages:** No concept of Kaccha Muster roll. Muster roll has to get closed before payment and the payment is through Bank/Post Office. In the end, money reaches in right hands
   - **Duplication of works:** Each work has been assigned unique no. comprising of location,

type of work and the serial number; an inventory of assets created under NREGA has been created and available in public domain.

- **Right to demand of work:** Local language, Sound and Icon based touch screen module has been developed for illiterate workers, so that he himself can exercise his rights
- **Accounting/record keeping:** Software prepares all the records/registers as per guidelines of MGNREGA.
- Attendance at worksite being captured by hand held machines in some locations and GPS system to eliminate fudging of data and automating data collection.

6. **Direct cost savings:**

- ICT pilots to automate capturing of data to reduce manual inputs and overheads of the same
- Workers can demand work directly using the touch screen kiosk in the Panchayats
- Grievance can be lodged and action can be traced by worker through the touch screen kiosk in the Panchayats
- Payment to the worker can be done at door step by using hand held device in Business correspondence model

SAHAJ (An Online New LPG Connection Request Management Initiative)

Ministry of Petroleum & Natural Gas, Government of India

1.	Name of the State/Ministry	Ministry of Petroleum & Natural Gas
2.	Name of the host/owner organisation	Ministry of Petroleum & Natural Gas
3.	Status of the host/owner organization	Government of India
4.	Name of the Project	SAHAJ (An Online New LPG Connection Request Management Initiative)
5.	Name of the Nodal Contact Person	Shri Ashutosh Jindal
6.	Contact address	Joint Secretary (Marketing) Ministry of Petroleum & Natural Gas Shastri Bhavan, New Delhi
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8. Project Summary

Under Ministry of Petroleum and Natural Gas there are three Oil Marketing PSU's namely Indian Oil Corporation Limited (IOC), Hindustan Petroleum Corporation Limited (HPCL) and Bharat Petroleum corporation Limited (BPCL), doing refining and marketing of petroleum product in the country. The major petroleum Products include petrol, diesel, kerosene and LPG.

Liquefied Petroleum gas (LPG) is the premier cooking fuel used in the country as it offers a very efficient, healthy and smoke free experience. The oil Marketing Companies are serving 18 crores LPG consumers by supplying about 50 lakhs cylinders to them on daily basis. The Government of India through the three Oil Marketing companies has initiated very aggressive plans to increase the penetration of the LPG across the country especially in the rural areas with lower levels of penetration of LPG. These initiatives would help in providing the women of the country with a clean kitchen fuel as compared to the alternative of using firewood, cow dung cakes and other bio material which subject the users to a very un-healthy environment of smoke and pollution.

Requests for new LPG connections are made to one of the three OMCs by prospective consumers who do not have an LPG connection currently. The three OMCs put together issue 1 crore new LPG connection to consumers every year. The entire supply chain of cylinders to the consumers is being

managed by 18000 plus LPG distributors of OMC's present in metros, cities, towns, talukas and villages across the country.

9. Date of launch of project

May 1, 2015

10. Coverage (Geographical)

Pan India

11. Beneficiary of the Project

Citizen of India

12. Problem statement or situation before the initiative

The new initiative SAHAJ was conceived to mitigate the above issues faced by the new LPG consumers from registration till maturity and finally allotment/installation of the connection. The major challenge was to push this new initiative through the distributors so that the end objective of consumer convenience can be achieved. As the new process removes the available discretion of the distributors in providing the connection as well as pushing the other allied items along with the LPG connection, there was initial resistance to this initiative from the distributors. During the pilot phase the usage of the facility was closely monitored and distributors were convinced to adopt this process and push this activity.

Consumer adoption of the new process was also to be addressed as most consumers especially in the rural areas were not aware of this process. Necessary awareness programs were conducted by the field staff to create a consumer pull for this initiative.

Enrollment for new LPG Connection was always a hassle for domestic LPG customers wherein consumer has to follow the following process:

- Register himself at respective distributorship by filling a registration form and submitting the required POI/POA documents. The consumer had to physically visit the distributorship to collect the necessary forms, fill it up and submit the same and obtain the acknowledgement from the distributor.
- Such registration requests for New Connections are placed by the distributor in a waiting list for reaching maturity.
- On release of specified number of connections by OMC depending on the availability of cylinders and regulators, the waiting list is cleared and consumer is accordingly intimated by a letter to complete the formalities and obtain LPG connection.
- The consumer had to visit the distributor and make the necessary payment
- The distributor completes the installation doing the inspection of the kitchen so that the necessary safety norms are adhered to

- The process called for significant process improvement since there was very little transparency from the time of registrations till final release of the connection. The status of the Registration was not known to the consumer.
- The consumers were also required to approach the distributorships multiple times to know the status and there were delays in giving the connections.

As a part of releasing the LPG Connection to the consumers, the OMC's provide LPG equipment e.g. cylinder, regulator against security deposit, while other appliances e.g. stove, suraksha hose, lighter etc. as a part of installation are being sold by distributor. Purchase of these appliances from the distributor are not mandatory and the consumer has a choice of procuring these from alternative sources. However, there have been always complaints of unscrupulous distributors forcibly selling these items as a part of package with the new connections, leaving little or no choice to the consumers but to buy the same.

Even if consumers wish to buy the appliances from the distributor they have to again visit the showroom for payment and signing the Subscription Voucher document.

This process leaves the consumers with little choice on and they also do not have the comfort of getting the connection in time even after complying with all required formalities for new LPG connection.

The above situation normally lead to the consumer grievances about inordinate delays in getting the new LPG connection, about their multiple visit to the distributorship to check the status of their application and complete formalities and about the harassment being put to by the force selling of additional appliance by the distributor for releasing the connection.

13. Project Objectives

This project was implementedto enable the consumers to complete their transactions including making the payment for newconnections / refill cylinders on-line from their homes without the need to visit any office of the LPG distributor and without the need of repeated follow up.

14. Project scope approach and methodology

As a strategy it was decided to launch this initiative initially as a pilot project for Delhi based consumers and accordingly the project was launched for Delhi consumers from May 1, 2015. The pilot implementation provided a number of valuable insights about the experiences being faced by the consumers as well as the distributors. Suggestions were received from the distributors and consumers about how the system could be made further user friendly and the processes made friction less. Based on the learnings from the pilot and inputs from consumers and distributors the application was modified wherever required and finally launched on all India Basis from Aug 1, 2015.

Business Process Re-engineering:

Govt. of India is driving various process improvisation scheme using the developments in Information and Communication technologies as a part of the Digital India Program. Therefore keeping in view to bring the transparency in enrolment process and to avoid the various difficulties of consumers. This SAHAJ (on-line E-SV) application was developed to facilitate a complete end to end On-line process for new connection registration, POI/POA documents upload, approval of documents, selection of

allied products by the consumer, on-line payments option, status tracking, alerts thru e-mails, release of new connection in LPG business process.

- **Online registration process:** Any consumer will have option at mylpg portal to register himself for new connection. Therefore no need to approach to distributor for registration. The mylpg portal gave the consumer the option of choosing his distributor after selecting his state and district. The consumer could study the performance rating of the distributor before deciding to register with the distributor of his choice. The on-line availability of the ratings given by the other consumers to the various distributors servicing in his market, gives the consumer sufficient information to make an informed decision. Further the process allows the consumer to complete the registration process from the comfort of his home without needing to first visit the distributor first to collect the blank application form and subsequently to submit the completed form.

- **Online submission of POI / POA:** As a part of new connection registration consumer are also required to submit POI/POA. Currently after filing online registration consumers have to submit same physically at showroom then only the submitted registrations are accepted in the system. The new process will also have option to upload the photograph, POI & POA, thereby complete facility to customer for registration. The consumers do not have to make additional copies of these documents for submission to the distributor. This also helps the back end process at the distributor as he does not have to physically receive, preserve and store these documents for future reference.

- **Online submission of bank details:** As a part of DBTL all consumers are required to be cash transfer compliant (CTC) for getting the subsidy transferred directly at bank. The new process will also have option to submit the Aadhaar number as well as bank account detail (Bank Account number + IFSC Code) on line. These documents can also be uploaded on –line by the consumer.

- **Electronic visibility of POI/POA:** The submitted document will be made available at distributor portal for verification online and registration is then accepted in DCMS. The documents submitted by the consumer are always available for retrieval and verification by the distributor or the field staff of the OMCs as well as by other agencies like audit personnel.

- **Status update:** Consumer will also have provision to check the stage wise status update of the progress of the registration. The status updation is also intimated to the consumers through e-mail. A major irritant in the earlier process was that the consumer had no visibility of the status of his application and had to depend on the distributor's good offices to get the correct status for which the consumer necessarily had to visit the distributor.

- **On line payment:** Upon maturity of the waiting list, the registration will be placed in allotment stage and consumer will have intimation on e-mail. An online payment option using secured payment gateway is activated in the portal at this stage. The consumer can have an option to make the payment of security deposit of equipment and other mandatory charges e.g. administrative charges, DGCC Book etc. on-line as well as off-line. In case he opted for off-line then he has to physically visit the distributorship and make the payment else he need not to visit the showroom. If he chooses to make the payment through the on-line option, the choice if using either net

banking, debit or credit cards for making the payment is available for the consumer. In future versions other modes of digital payment like mobile wallets, UPI and BHIM would also be introduced. The provision of making on-line payment also eliminates the need for the consumer to visit the distributor one more time for making the payment.

- **Ordering for additional items:** The portal will also facilitate customer to choose various appliances like LPG stove, Suraksha hoses and other essential items which are available for buying in the portal as per their requirement and pay for the chosen items online. With this the LPG consumers is empowered to decide himself what items he/she wish to buy along with the LPG connection. Distributor can no longer force the consumer to buy any item against his/her will.

- **Release of connection and e SV:** Once the entire cycle is complete and payment is made on-line or directly to the distributor, the connection is released by way of making a Subscription Voucher (SV) in OMC's system to be and printed/ mailed and delivered to the consumer. This subscription voucher (e-SV) is a contract between the OMC and the consumer and has all the required details printed on the SV. Immediately on payment an electronic SV document will be provided to consumer via e-mail for records and reference. The new initiative of Digi Locker of the Govt. of India has also been integrated into the process where in the new SV generated will be made available against the consumers Adhaar number of the consumer.

- **Installation:** Printed SV along with filled cylinder, regulator and other purchased items will be delivered at customers premises thereby eliminating any requirement for the consumer to physically visit the LPG distributorships.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

The result achieved can be categorized as below in terms of benefits to the stakeholders:

1. Consumer

a. Consumer could choose a distributer by looking at the ratings of the individual distributors serving in the market and make an informed decision. The facility also makes the distributors improve their service levels so that the consumers provide better ratings for them.

b. Getting connection without visiting the distributorship. In the earlier scenario the consumer had to visit the distributor at least three or four times to get the connection released.

c. Transparency in release of connection with status tracking, which was not possible in the earlier manual process. This reduces the anxiety and stress levels of the consumers who have applied for new connection and are looking forward to getting the connection at the earliest.

d. Time bound release of connection by the distributor.

e. Connection without compulsion to buy allied products along with the connection.

f. On-line payment facility through a secure payment gateway.

2. Distributor

a. Availability of POI/POA electronically. No need to co-ordinate with customer for physical POI/POA and accepting the registration. The distributor also does not have to provide space and facilities for physically receiving the documents, preserving them and storing them in his showroom. Further he does not have to spend effort in retrieval of these documents for verification at a later date.

b. Get payment electronically direct into the bank account thru payment gateway. No need of cash handling.

c. No need to send physical intimation letter and waiting for customer response.

d. Connections issued in transparent manner resulting in reduced consumer grievances.

3. Oil Marketing Companies :

a. Providing hassle free experience to valued customer. Implement a uniform and standardized process across the OMCs ensuring a common SLA.

b. Transparency in new connection issuing process. The status of new connection requests registered is available readily for the top management to prioritize the release of new connections, making the necessary supply and logistics arrangements for supply of LPG as well as the equipment required at individual distributor ships.

c. Consumer satisfaction and reduced grievances.

d. Brand image enhancement due to usage of technology

Financial Savings:

As the project is aimed at consumer convenience and transparency in LPG new connection allotment process, no financial savings are envisaged out of the project. The consumers saves on account of not requiring to make multiple visits to the distributor and not having to buy any unwanted items under pressure from the distributor.

4. Improvement in Efficiency/Productivity / Reduction in waiting time :

The initiative certainly achieved its prime objective of providing an efficient on-line process to issue LPG connection in a transparent and time bound manner. With this initiative the connections were issued to LPG consumers within the stipulated time frame and status was closely monitored for any delay at the level of the distributor.

The on-line payment option is also introduced which enables consumers to securely pay for the connection on-line.

The OMCs had the visibility of the pending registrations almost on a real time basis which enabled improved planning for logistics and equipment procurement.

5. Scalability of the project :

The initiative was initially launched in certain selected stated initially and basis the learnings and adaptability the same was launched PAN India within 3 month of launch of pilot. All 18000 distributors PAN India distributors of OMC's are covered under this initiative. As the application was available to all consumers in the mylpg portal the roll out across the country was very easy. The only requirement of roll out was distributor education and on boarding them for on line payment through the gateway and creating the consumer awareness at all the locations so that the adoption of the scheme would be quick.

In addition to the implementation of the facility for on-line payment for new connection requests, the payment gateway developed which enabled the consumer to pay directly to the distributor was scalable to handle other business processes. Based on the increased usage of the system and good acceptability of On-Line payment by the consumers and distributors, later the on-line payment facility was extended to the existing LPG consumers to pay on-line for the refill while booking the same. This facility has also been widely welcomed by consumers especially in case of consumers with young working couples who otherwise found it difficult to take delivery of refill cylinders due to the need to keep the cash for the refills.

Furthermore the SV's so generated are made available under Digi-Locker of the LPG consumer for all such consumers who have submitted Aadhaar numbers to OMC's. To achieve this a backend integration has been done by the OMC's with the DigiLocker system to ensure that all SV's shall get uploaded into the digital locker of the consumers and shall be available to them once they sign up to Digi locker facility. More than 13 crores SV's have uploaded into Digi-locker platform.

6. Simplification of the procedure :

The process adopted for this initiative simplify the registration, document handling , deduplication checks, choice to consumer to opt or not for other LPG related product like stove, apron etc., provision for Status tracking and e-mail alerts etc. The application is very simple to use and developed keeping in mind the convenience to be offered to the consumers.

7. Adaptability

Within a span of 3 month of the first pilot the facility was extended to PAN India consumers it shows the simplicity and adaptability of the On-line initiative. Till now 3.69 lakh new connections have been released thru this on-line process.

8. Sustainability

The initiative is targeted for very long term sustainability as this process is being adapted by the prospective consumers to apply and get the new connection for the LPG consumers. Gradually with availability of internet facilities in small cities, towns and villages more consumers are expected to use this channel to apply for new connection.

MyGov

Government of India and NIC

1.	Name of the State/Ministry	Ministry of Electronic and Information Technology, New Delhi, Government of India
2.	Name of the host/owner organisation	Government of India and NIC
3.	Status of the host/owner organisation	Government of India
4.	Name of the Project	MyGov
5.	Name of the Nodal Contact Person	Dr. Neeta Verma, DG NIC & CEO MyGov
6.	Contact address	3rd Floor, Room no-3015 Ministry of Electronics and Information Technology (Government of India) Electronics Niketan, 6, CGO Complex, Lodhi Road, New Delhi - 110003 India
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8. Project Summary

MyGov (www.mygov.in), Government of India's citizen engagement and crowd sourcing platform, aims to promote active citizen participation for better governance. Launched on 26th July 2014 by the Hon'ble Prime Minister, Shri Narendra Modi, MyGov facilitates continuous engagement between government and citizens using a range of engagement methodologies. MyGov has evolved as a key public consultation platform for citizen engagement on governance matters and continues to grow with participation of more number of citizens.

9. Date of launch of project

26th July 2014

10. Coverage (Geographical)

Global

11. Beneficiary of the Project

Citizen of India

12. Problem statement or situation before the initiative

The core idea of a democracy is the involvement of citizens in governance. Hitherto, this was limited to citizens casting their vote in the elections and occasionally participating in stakeholder discussions organized by individual ministries. Participation in these discussions was however largely limited to formal associations or sectoral organizations. Individuals could only petition the ministries without any assurance of the petitions being considered and evaluated in a structured manner.

The Ministry of Electronics and Information and Technology, Government of India had laid down a framework for citizen engagement in e-governance in the year 2012. Since then, various departments and ministries have reached out to citizens through social media platforms and sharing of information about upcoming policy initiatives on their websites.

Consultative meetings with experts on policy matters were being held face to face and were spread out across projects in various individual locations. Majority of the citizen-centric initiatives were predominantly aimed at gathering feedback or disseminating information. However, no uniform structure was available for such discussions and consultations, and different government organizations evolved their own strategies and methodologies for doing so. No structured uniform initiative for enhancing citizens' participation in governance through knowledge-sharing and collaboration was conceptualized until mid-2014.

The Prime Minister Shri Narendra Modi conceptualized a government-wide platform for involving citizens in policy formulation and program implementation. This concept was developed into MyGov, which was launched by the Prime Minister on 26th July, 2014.

13. Project Objectives

Citizen participation in formulation/propagation of government policies and programs by utilizing the talents, capabilities and enthusiasm of the citizens for various governance related tasks. MyGov is an innovative concept and the platform aims to build partnership between Citizens and Government with the help of technology, for inclusive and participatory growth of India. This is proposed to be accomplished through multiple engagement methodologies like discussions, tasks, contests, polls, surveys, blogs, talks, quizzes, innovation challenges, surveys and on-ground activities by innovatively using internet, mobile apps, IVRS, SMS and Outbound Dialling (OBD) technologies.

14. Project scope approach and methodology

Scope: Participatory form of governance through citizen engagement.

Approach: Citizen engagement through MyGov – for crowd-sourcing of ideas on policies, bills, approaches, procedures, etc. by use of web and mobile based applications/technology – An Initiative on Digital Transformation towards transforming India.

Methodology: Hon'ble Prime Minister Shri Narendra Modi conceptualised a government-wide platform for involving citizens in policy formulation and program implementation. This concept was developed into MyGov, which was launched by the Hon'ble Prime Minister on 26th July, 2014 to serve as a robust platform available to all citizens to participate in all aspects of the governance process,

to deliberate on important policy matters, to assess implemented policies/schemes, etc., effectively bridging the communication gap through MyGov, the government has created a participative democracy, making optimum use of technology to reach out to every citizen and motivate them to chip in ideas and endeavors for nation building, metamorphosing these ideas into action and acknowledging specific contributions. To solicit the ideas and views of the citizen, various activities on MyGov consist of essays, quizzes, surveys, blogs, discussions, talks, etc. between the citizens' and the Government and making the citizen's opinion heard.

Technology made it possible – MyGov is developed and managed using a complete stack of Open Source tools and technologies such as Drupal Framework (CMS), MariaDB (DataBase), CouchBase (NoSQL and Content level Hot Cache), Varnish (Web Server Level Caching), Memcache. Frontend technology is AngularJS, HTML5, CSS3. And a host of tools are used to manage MyGov for configuration, alert, mechanisms. These high-end technologies enable us to integrate and effective server, application and service management.

MyGov user registration and authentication module "Auth" is based on the standard OAuth 2.0 protocol for Seamless Authentication across all MyGov and its Sub-Domains as well as all initiatives under **"Information to All" category of Pillar 6 of Digital India Programme.**

It has facility to login using NIC LDAP, Social Logins, Mobile OTP based apart from local DB login. UUID based user management is done to identify and provide services to a user through his/her UUID.

A content delivery network (Akamai CDN) – a Data Centre Service has been used to deliver web pages and web content to a user based on the geographic locations of the user. This is a high end caching and fast delivery network that minimizes consumption of network bandwidth of the data center.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

The results achieved, value created and delivered, distinctive features and project accomplishments are mentioned separately in subsequent pages in this document:

GyanEra (e-Learning Management System)

RINL, Visakhapatnam Steel Plant, Central Public Sector Enterprise

1.	Name of the State/Ministry	Ministry of Steel
2.	Name of the host/owner organisation	RINL, Visakhapatnam Steel plant
3.	Status of the host/owner organisation	Central Public Sector Enterprise
4.	Name of the Project	GyanEra (e-Learning Management System)
5.	Name of the Nodal Contact Person	Shri K V S S Rajeswara Rao, GM(IT&ERP)
6.	Contact address	Central Computer Center, Visakhapatnam Steel Plant, Visakhapatnam
7.	Telephone/Fax/e-mail	0891-2540067

8. Project Summary

GyanEra provides an integrated platform for online Learning coupled with the facility of knowledge sharing by collaborating, thus fostering the culture of enterprise-wide training in the organization. It helps employees to take up online courses having digitized study material, varying in format ranging from. doc/.docx, pdf, ppt to audio (.mp3) and video (.mp4). It helps them to take tests and assignments designed by the teaching faculty. At the end of the training, the employee has the option of giving feedback which in turn helps the faculty to improve upon the effectiveness of the offered course. With the help of features like forums and chatrooms, it encourages synchronous and asynchronous communication amongst peers and mentors which bolsters the effectiveness of training process. Workshops,wikis,glossaries and assignments make the platform a comprehensive ecosystem to render training.

The faculty is facilitated to design and create courses, uploadrelevant study material and structure appropriate assignments for the employee besides scoring the assignments and tracking the performance of the employee. The results of quiz are available in the system as soon as the tests are over and can be downloaded in excel format. It thus provides the management a very comprehensive and effective tool to track the training performance of a particular employee. Its web based application configured and customized from MOODLE (Modular Object Oriented Dynamic Learning Environment) framework which helps the organization to establish a cost-effective, all-encompassing training methodology.

9. Date of launch of project

02/04/2015

10. Coverage (Geographical)

Accessible at all the offices of RINL across the country

11. Beneficiary of the Project

Key beneficiaries are primarily the employees of the organization who play the role of the "teacher" and the "taught" of the system encompassing the entire organization including the management. The system provides each one an opportunity to learn and teach others as well. The management is also benefited because it serves as a repository of all organizational trainings. It helps in meeting the role-skill matrix of the organization and at a granular level, each individual and each training's reach can be monitored. As a whole, it has revolutionized the way training is conducted in the organization by helping it to move from class room training to self-driven online training.

Enhancement of Productivity: It improves productivity and effectiveness of the training functions.

Improvement in Efficiency: Reduction in latency of training delivery and improvement in turn-around time of training.

12. Problem statement or situation before the initiative

In Visakhapatnam Steel Plant, the training was delivered in a traditional manner in classrooms. It carried in its wake all the limitations associated with the traditional mode of training delivery. The most significant being that it was limited for only being delivered during the office hours during working days. The training being sequential in nature, the trainees had to wait for their turn all over again in case they had missed their earlier schedule due to some pre-occupations at work. Also, the trainees had to go from course to course only after all them were covered, thereby, giving no room for trainees who were on the fast track or those who were not pressed for time to take up the next course. Most of the resources developed for the delivery of the training were kept offlinewhich were available to only a few as sharing was difficult. For conducting the classes it was mandatory for the students and the faculty to be present at one geographical location. To measure the effectiveness of the imparted training, a pen-and-paper examination had to be conducted at the end of the training. The evaluation of the examination was done offline and the scores were tabulated manually in a tedious manner.

13. Project Objectives

Key Drivers for GyanEra project:

1) Enable Training from anywhere anytime
2) Make training initiative easier and faster
3) To bring down the cost of training
4) To digitalize all the courses offered at TTI
5) To have scalable and replicable training ecosystem
6) Augment the existing training facility

7) Usage of open source as per guidelines of GOI

8) Contributing to Skill India campaign of GOI

9) Facility for self-paced training

10) Facility for Refresher Training

14. Project scope approach and methodology

Scope of Services / Activities Covered

Courses, resources and activities and have been made onlineto facilitate users.Synchronous and asynchronous communication between all stakeholders. Post Training examination, evaluation and results have been enabled onlineCustomizable and scalable training infrastructure established.

Online, GUI based and modular: The system is totally online, with robust Oracle database in the backend server. It has pleasing graphical user interface with lots of action points in its web pages. The home page is having many widgets with easy access to popular courses, last 5 courses, latest users, congratulatory messages, training calendar etc. The system is interactive and highly intuitive in nature.

Intensive Resource management: A resource is an item that a faculty can use to support learning, such as a file or link. GyanEra supports a range of resource types which can be added to one's course sections. Faculty can enrich one's course content by adding diverse resources.The following are the resources :

a. File - a picture, a pdf document, a spreadsheet, a sound file, a video file.

b. Folder - folders help organize files and one folder may contain other folders.

c. IMS content package

d. Label - can be a few displayed words or an image used to separate resources and activities in a topic section, or can be a lengthy description or instructions.

e. Page - the student sees a single, scrollable screen that a teacher creates with the robust HTML editor.

f. URL - you can send the student to any place they can reach on their web browser. Flickr, YouTube or Wikipedia are a few examples.

g. SCORM: A SCORM content package is a self-contained ZIP file containing certain contents defined by the SCORM standard. The file is known as a Package Interchange File (PIF) and it contains all files needed to deliver the content package via a SCORM run-time environment and/or learning management system (LMS). RINL has in-house capability for developing SCORM packages, which makes the learning very interactive in online environment. The system is SCORM complaint and in turn it implies that, we can add any SCORM package already developed and useful for our organization into the system. Likewise SCORM packages can be exported from the system and used in other Learning management systems.

Intensive Activities management: There are 14 different types of activities in GyanErawhich are listed below:

a. Assignments: Enable teachers to grade and give comments on uploaded files and assignments created on and off line

b. Chat: Allows participants to have a real-time synchronous discussion

c. Choice: A teacher asks a question and specifies a choice of multiple responses

d. Database: Enables participants to create, maintain and search a bank of record entries

e. External tool: Allows participants to interact with LTI compliant learning resources and activities on other web sites.

f. Feedback: For creating and conducting surveys to collect feedback

g. Forum: Allows participants to have asynchronous discussions

h. Glossary:Enables participants to create and maintain a list of definitions, like a dictionary

i. Lesson: For delivering content in flexible ways

j. Quiz: Allows the teacher to design and set quiz tests, which may be automatically marked and feedback and/or to correct answers shown

k. SCORM:Enables SCORM (Shareable Content Object Reference Model) packages to be included as course content

l. Survey:For gathering data from students to help teachers learn about their class and reflect on their own teaching

m. Wiki: A collection of web pages that anyone can add to or edit

n. Workshop: Enables peer assessment.

15. Result achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project.

Citizen/Client Centricity

Impact on effort, time and cost incurred by user: With less effort, the training functionality has been enhanced

Feedback/grievance redressal mechanism: Training department is co-ordinating with a separate cell

Audit Trails: are available in the system.

Interactive platform for service delivery: Interactivity helps in self paced learning.

Stakeholder consultation: Meetings are held frequently to consult and take views on improvement opportunities in the system.

User Convenience

Service delivery channels: Web

Accessibility (Time Window): 365/24/7

Distance required to travel to Access Points: Across the LAN and VPN of the organization

Facility for online/offline download and online submission of forms: Online including user registration

Status tracking: Status is tracked using extensive log analysis.

Sustainability

Technology: PHP, HTML5, CSS, AJAX, etc, all are industry wide open-standards, supporting interoperability.

Organization: Team is well trained and skilled to maintain and enhance the system for future requirement.

Infrastructure: Server is hosted in state of art Server Farm which is located within the organization.

Adaptability Analysis

Measures to ensure adaptability and scalability:

Courses and users can be added at any point of time.

Courses can be imported/exported as ordinary courses or SCORM Courses

Risk Analysis:

Sever and network redundancy is ensured

Backup and Restoration process is institutionalised.

Benefits

- Reduced the cost of training
- Reduced the cost of travel
- Learner time is better spent
- Available across the geographical boundaries
- More number of employees are covered
- Self paced learning with interactive media
- Fully Automated assessment methods
- Meet Pre-requisites criteria for TTI training

Transformation of TNHDC using Information Technology

Tamil Nadu Handicrafts Development Corporation Limited

1.	Name of the State/Ministry	Handlooms, Handicrafts, Textiles and Khadi Department
2.	Name of the host/owner organization	Tamil Nadu Handicrafts Development Corporation Limited / Dr. Santhosh Babu IAS Chairman & Managing Director
3.	Status of the host/owner organization	Tamil Nadu Handicrafts Development Corporation Limited / Dr. Santhosh Babu IAS Chairman & Managing Director
4.	Name of the Project	Transformation of TNHDC using Information Technology
5.	Name of the Nodal Contact Person	Dr. Santhosh Babu IAS Chairman & Managing Director
6.	Contact address	759, Anna Salai, Chennai - 600002
7.	Telephone/Fax/e-mail	Tel:044 28521271, 044 28521798, 044 28521325, Mobile: 9940474863 Fax: 044 28524135. E-mail: santynits@yahoo.com thdcltd@tnpoompuhar.org tamilnaduhandicrafts@yahoo.co.in www.tnhdcltd.com www.poompuhar.org www.tnartisaan.com

8. Project Summary

The Tamil Nadu Handicrafts Development Corporation, better known by its brand name Poompuhar,was incorporated in 1973 with the objective of providing marketing and value-added services forthe artisans of Tamil Nadu, including but not limited to, upgrading their skills through appropriatetraining, improving their productivity and quality of their products, minimizing the drudgery involvedin the production process, minimizing / eliminating occupational hazards, encouraging innovationin design, providing socio-economic security for craftsmen and to documenting and recording forposterity the work of the artisans.

The objectives of the project are to enhance the market responsiveness and cost-effectiveness ofthe Corporation, with the optimal and appropriate use of ICT and to reengineer and automate keyprocesses, including, Marketing, Operations (administration), and Design & production.

9. Date of Launch of Project

2016-17

10. Coverage (Geographical)

The project is targeted at multiple stakeholders with differential magnitude:

- Artisans: live-registry and active engagement of over 200,000 artisans of Tamil Nadu (of which 60,000+ has already a dedicated web-page detailing their key skills, sample works and contact coordinates);
- Staff of Poompuhar: over 128 nos. of Officers and Staff spread across 7 production units and 12 sales-cum-showrooms across the country in the State are being managed through an ERP, biometric attendance and remote-CCTV supported surveillance, monitoring and supervision systems.
- Customers/ Buyers: enhanced reach (Global) of over lakhs of customers through e-commerce portals and improved footfall to an extent of thousands of customers into the sales-cum-showrooms, leading to improved turnover of INR 10 Crores within one-year.
- General Public/ Prospective Customers: enhanced visibility and promotions achieved through 'interior designing displays' at the International Terminals T3 & T4 at Chennai Airport, Public Sector Undertakings and Corporates, online display (and sales) of products, and brand-promotions through FM Radio.

11. Beneficiary of the Project

1. Artisans
2. Customers
3. Organisation

12. Problem statement or situation before the initiative

Some of the key challenges in the existing legacy environment were:

1. Manual and voluminous paper and file work resulting in delay in key decisions and actions thereto.
2. Decentralized HR and Payroll management.
3. Primitive approaches constrained product design from achieving precision and proactively responding to the customers' demands.
4. Lack of effective surveillance leading to pilferages of expensive handicraft products at the showrooms.

5. Showroom and exhibition based marketing channels had constrained the growth prospects of the Corporation.

6. Lack of exclusive and multi-modal promotion constraining reach to digital customers, as well as brand recall by potential customers.

7. Absence of exclusive approaches adopted to enhance "Customer Experience".

8. Lack of innovation and customization in sales transactions leading to lack of appropriate responsiveness across G2G/G2B/B2B sales.

9. Absence of digitized, and manual decentralized billing resulting in lack of scope for optimizing sales and inventory management.

13. Project Objectives

To enhance the market-responsiveness and cost-effectiveness of the Corporation, with the optimal and appropriate use of information and communication technology (ICT)

To reengineer and automate key processes, including,

- Marketing,
- Administration
- Design & production.

The project was targeted at multiple stakeholders with specific developmental objectives:

- Artisans – e-Commerce, Creation of an e-Repository of Artisans and their skills to ensure their proper registry and targeted employment benefits (direct engagement, preferential treatment to women artisans and underprivileged, etc.), new designs and production techniques.
- Customers/ Buyers – to ensure enhanced customer-response and customer experience, through flexible, reliable and effort-free purchase.
- Government – to ensure commercial sustainability and promotion of traditional industry, with secured livelihoods to artisans, and enhance accountability and transparency through digital governance.

Therefore, the Corporation identified the 3 key pillars viz. Marketing, Administration, and Design & Production to be revamped and redesigned to enable the envisioned transition in a smoother manner. The principal mode for the envisaged reengineering of the process was the optimum adoption of Information and Communication Technology (ICT). The Corporation has successfully championed the targeted activities and has already started reaping the benefits. In 2016-17 the Corporation touched an annual turnover of Rs.40.35 crores, thanks to this transformation. The details of this "transformation" are elaborated below.

14. Project Scope approach and methodology

The Corporation implemented a multi-layered e-Governance solution, streamlining and strengthening the three key functions and the processes therein:

I. Technology interventions in Marketing

1. e-Commerce: The Corporation created its own e-Commerce site www.poompuhar.org, a Smartphone App and supported by free-home delivery through dedicated bikes/vans.

2. e-Commerce: The Corporation signed MoUs with e-Commerce giants like Snapdeal, Flipkart, Crafts villa, Shop clues and India Mart for online selling of Poompuhar products. Exclusive web pages have been created in all these sites.

3. e-Promotion: With funds under the disposal of the Corporation for undertaking an advertisement campaign, it decided that a massive Social Media & Online Digital Marketing campaign using about 10 social media platforms including Facebook, LinkedIn, Twitter, Quora, Pinterest, Google+ etc can have the same impact if not more, at a fraction of the cost of traditional advertising in newspapers and magazines. The Corporation engaged an exclusive agency for this promotion of Poompuhar arts and crafts through social media.

4. e-Inventory: Hitherto, none of the products including Poompuhar made products and other products made by artisan sold through our showrooms were just price tagged, not giving us a birds eye view of what was selling and what was not. Bar coding of all handicrafts products at all 15 showrooms now allows us to manufacture or procure what the market wants.

5. e-Billing: Gone are the days of maintaining multiple registers for billing and inventory management. A centralized computerized billing with the use of POS machines at all 15 showrooms has made customers happier.

6. e-Promotion: We are using jingles on the FM Radio at prime-time to enhance prospective customer base and brand recall during festival seasons.

7. e-mails: CMD and Managers of showrooms keeps writing personal emails to potential High Net worth Individuals in an effort to woo them.

8. iPads: All 21 Mangers have been provided with iPads as a marketing tool. Whenever our managers meet with any potential customer, they can show high quality photographs of our products and also interact with customers on Facetime. They also make corporate presentations using the iPad.

II. Technology interventions in Administration

1. e-Repository of Artisans and their skills: The Government of Tamil Nadu sanctioned Rs.1.00 crores from the State Innovation Fund for creating an “e-Repository of Artisans and their Skills”. This is a comprehensive and dynamically updated web based repository of all artisans in the State of Tamil Nadu, with dedicated a web-page in a standardized format for each artisan who has been registered in the site, with special features to promote marginalized groups of artisans. This is probably the biggest marketplace for artisans in the world. We expect about 2 lakhs web pages to be created for 2 lakh artisans shortly. Currently we have data for about 10,000 artisans and the survey is on. The data is being entered as and when bulk data is received from the field. The advantage about this website is that now the world can deal directly with our artisans and vice versa, without having to go through middlemen. We can search works of artisan’s craft wise,

artisan wise, community wise, gender wise etc. Even if we are planning an intervention for say tribal artisans, we can locate those artisans by the click of a mouse.

2. e-Office Administration and Management Solution: We have implemented an ERP (Enterprise Resource Planning) Software connecting all 7 production centers and 15 showrooms across the country with the Corporate Office at Chennai, thus bringing together all 128 employees of the Corporation from CMD to Peon. Even a peon who wants to apply for a leave letter has to log into the ERP using his user id and password and apply. Only then will the leave application be entertained. It is a 100% paper-less file-management and decision support system. Production and procurement decisions that used to take anywhere between 25 to 30 days are now taken in a matter of hours if not minutes. All 128 employees have been permitted to work from home or browsing centers etc. when they are on duty outside, making this an "Anytime, anywhere Organization". The HR & payrolls management modules have streamlined the human resources management capability of the Corporation considerably. All files of all 15 showrooms and 7 production centers can be viewed at Corporate Office.

3. IPads: Monthly or quarterly reviews used to cost a lot, in addition to the fact that all managers have to be absent from their showrooms and production centers. But now physical review has now been completely dispensed with. Reviews are now held either via Facetime using iPads or through an audio review using an application developed by a Telecom Service Provider. The reviews these days cost about Rs.2000/review.

4. e-Accounting: Centralized billing and use of integrated tally-based double-entry accounting has now helped the Corporation in being on time insofar as accounts is concerned. All 15 showrooms, 7production centre and Corporate Office uses Tally software for accounts purposes.

5. e-Attendance: Attendance is now market through biometric attendance systems at all locations.

6. WiFi has been provided at all locations for the purpose of using the ERP and for customers.

7. Centralized CCTV remote surveillance and monitoring: More than 100 IP cameras have been fixed at all 15 showrooms and 7 production centers across the country at the Corporate Office. This has made real-time monitoring of all locations possible. The result has been that we have been pilferage free for the last one year.

8. Web portal: The organization hitherto didn't have a website of its own. A multi-purpose dedicated web-portal: www.tnhdcltd.com has been developed which keeps all stakeholders informed about the developments in our Corporation and in the sector.

III. Technology interventions in Design & Production

1. e-Production: Government of Tamil Nadu has sanctioned Rs.1.68 crores for the creation of a Design Research and Development Centre (DRDC) for introducing contemporary designs using 3D designing and 3D printing of designed plastic molds, which can be used for production of bronze icons. This also enables anywhere anytime custom production of handicrafts though 3D designing and printing of handicrafts molds. The 3D designing software and 3D printer have been procured and currently training, designing and printing are on. The DRDC is currently under construction.

2. e-Work Order Management: The e-Repository of Artisans and their skills will enable remote assignment of work order to various artisans (direct engagement of artisans), and geo-tagged bar-code based tracking of finished/ semi-finished products and inventory.

3. e-Designing: Poompuhar has forayed into contract works for interior and exterior embellishment of institutions in the Government and private sectors. Poompuhar bagged and completed the orders for embellishing the International Terminals T3 and T4 at a cost of Rs.7.00 cores at the international terminals T3 and T4 of Chennai Airport. We are currently anticipating the works orders for the domestic terminal of Chennai Airport and for airports at Tirupathi, Trichy, Madurai, Pondicherry and Coimbatore totalling Rs.7.00 crores. The Corporation has also completed works to the tune of Rs.1.10 crores at the Kamarajar Port Trust, Ennore, near Chennai and is currently doing works at the State Secretariat and Chennai Corporation Ripon building. What we do is take photographs of empty spaces as identified by the client and e-design compositions using a variety of handicraft products on the selected space. We then negotiate the price and freeze the design.

All the above innovations using IT has been complimented by other non IT innovations like creating a common name board for Poompuhar showrooms, production units and Corporate office, redesigning the existing logo with a new design and registering the same with the Trade Marks Registry, signing MoUs with India Post for logistics, signed MoU with star hotels, refurbishing an unutilized mobile van as a marketing vehicle, introducing uniforms for marketing staff, designed and introducing Feed Back forms for customers at all showrooms, designed and introducing new carry bags for customers, designing a mobile kiosk for marketing campaign in the premises of the Corporate sector and other institutions, introducing the concept of a mobile delivery bike for delivery of gift items to customers in Chennai, setting up of Craft Cafés at Chennai and Mahabalipuram, setting up of Urban Haats at Kanyakumari and Mahabalipuram, development of artisan clusters at a cost of Rs.20.00 crores etc.

15. Results achieved/value delivered to beneficiary of the project and other distinctive features/accomplishments of the project

- PAN India + Global sales and delivery through e-Commerce since December 2014
- End-to-end electronic paperless e-Office operation since January 2016
- Real-Time centralised computerized Billing and centralised-accounting system across all sales-cum-showrooms
- Double entry books of accounts using Tally
- e-Commerce
- Mobile app
- 12 sales-cum-showroom
- Exhibitions
- Virtual experience of entire product range – online, as well as electronic albums viewed through iPads

- Online and offline feedback enabled
- In-addition to the traditional options, social media, public displays, jingles on FM radio, dedicated portals, etc.
- Web based Wiki-like page for each artisan
- Digital DB with adequate backup and redundancy support
- Corporation applies for GI for various crafts
- Training – given for 100+ women in Tanjaore painting, paper mashe and doll making
- 6 more awards were newly introduced n 2013-14
- Many new special projects: Embellishments in Airport, Ennore Port Trust completed.
- Computerized designs for 5 airports, 7 railway stations, Chennai Corporation building, Kalaivanar Arangam etc are ready.
- Granular approach at cluster level and harnessing the dove tailed needs of the craftsmen
- GoI Central Funding assistance (Integrated development for promotion of handicrafts in Tamil Nadu) of Rs.20.82 crores is being leveraged

Six sigma high altitude medical rescue services

Division of High Altitude & Mountaineering Medicines,
Six Sigma Star Healthcare Pvt. Limited, Delhi

1	Name of the State / Ministry	Six Sigma Star Healthcare (p) Limited, New Delhi, India
2	Name of the Host/ Owner Org	Dr. Pradeep Bhardwaj, CEO & Medical Director : Six Sigma Star Healthcare (P) Limited , New Delhi
3	Status of the Host / Owner Org	Division of High Altitude & Mountaineering Medicines, Six Sigma Star Healthcare Pvt. Limited, Delhi, India
4	Name of the Project	Six sigma high altitude medical rescue services
5	Name of the Nodal Contact Person	Dr. Pradeep Bhardwaj, CEO& medical director
6	Contact Address	Six Sigma House, Division of High Altitude, 10A, Sai Baba Enclave, Tehsil Road, Near SDM Office, Najafgarh, New Delhi – 110043, India
7	Telephone / E. Mail ID	011-25324000/ 4001, Mob – 9818868727, E-mail Id -pradeepkb28@gmail.com

8 Project Summary

Six Sigma High Altitude Medical Rescue services is a Path Breaking ICT Initiative in Public Services, where there is minimum government and maximum governance. They are leading by examples. Six Sigma Star Healthcare is using ICT to provide High Altitude Medical Rescue Services free of cost at Any Time – Any Where – Any Height – Any Weather. The CEO & Medical Director, Dr. Pradeep Bhardwaj, has converted his SUV into High End Mobile Ambulance and was one of the first to reach and save lives during Uttrakhand Floods in 2013, JK Floods in 2014, Shri Amarnath Yatra-2014, Nepal Earthquake- 2015, Kailash Manasarover- Nathula- 2015 and Manimahesh Yatra- 2015, 2016, 2017 at HP. Six Sigma Healthcare offers accurate location based high altitude medical rescue services to save victims stuck up in high altitude disasters.

Six Sigma Healthcare, Delhi has developed a Mobile based Application- Real Time Location Finder or Disaster Alert which can help locate a person trapped in debris in an earthquake or other disasters when communications fail. This mobile App works without Internet or Mobile Network and is a Great Communication tools for our Military and Para- military forces, ITBP, BSF, CRPF, High Altitude people working on high hills. With the help of this mobile app, Six Sigma saved 5600 Victims.

9 Date of Launch of Project

July 2014

10 Coverage (Geographical)

Entire India

11 Beneficiaries of the Project

1. Citizens staying on High Altitude Areas (In India 11 States are on High Altitude).
2. People under any disaster like Avalanches, Earthquake, Landslide, Flood, Flash Flood, Cloud Brust.
3. Pilgrimage of Shri Amarnath Yatra, Kailash Mansarover Yatra, Manimahesh Yatra .
4. Medical and Paramedical offering Disaster Management Services on High Hills.
5. Military and Para- Military Forces like Army, Airforce, ITBP, BSF, CRPF, SSB, NSG
6. Disaster Management Forces / Organizations like – NDMA, NDRF, SDRF, Police, NGO
7. Mountaineers / Rescue team
8. Mountaineering Institutes
9. Academic Institutions / Hospitals
10. District Administration located on High Altitude

12 Problem Statement or Situation Before the Initiative

Many of the world's most fascinating environments and abodes of Hindu Gods are located at high elevations. People from all over the world travel to high-altitude every year for recreation or for work. Twenty percent of those traveling to altitudes below 5500 m/18,000 feet get affected by some form of altitude illness.This number rises to fifty percent above 18,000 feet. While most cases of altitude illness are mild and self-limiting, some cases can become life threatening.

Six Sigma High Altitude Medical Rescue Project was implemented when people on high altitudes are dying under Disaster like Flash Flood, Cloud Burst, Avalanches, Earthquake, and Wildfire etc. There was no track or location records of the citizens in high altitude areas. If there was any disaster, it was very difficult to locate the victims in high altitude. In INDIA, 11 States are located on High Altitude but there is was no high altitude medical rescue team. No hospital exists in high altitude area, which may give super specialized "Mountain Medicines" rescue services.

13 Project Objective

1. To give Free High Altitude Medical Rescue services at Any Height – Any Where and Any Weather.
2. Effective use of ICT in saving lives.

3. To inspire the society at most difficult situations of high altitudes.

4. To exemplifies professionalism, selfless commitment and unparalleled bravery.

5. To create real life hero's by using ICT for the common people of India

6. To give a live example of society leadership, Medical Management distinguished work and selfless services to the nation.

7. To evacuate pilgrims and citizens in inaccessible pockets of Himalayan.

8. To the mission of saving people without caste, creed or religion.

9. To make provision of medical relief for worshippers and pilgrims during Holi Yatra.

14 Project Scope Approach and Methodology

Six Sigma Healthcare team has done an excellent Extra ordinary work for the welfare of the society by using ICT and provided free – "High Altitude Medical Rescue Services" up to the height of 24500 ft. at Moutnt Everest during Nepal Earthquake 2015 and Kailash Mansarover Yatra (15500 feet) in China. They are the first to reach at Mount Everest base camp to rescue the people at the height of more then 24000 feet. The major medical operations are "Uttrakhand Flood – 2013, Shri Amarnath Yatra-2014, Nepal Earthquake- 2015, Kailash Manasarover Yatra - at Nathula Sikkim- 2015 and Manimahesh Yatra-2015 at Himachal Pardesh. Its FREE WITHOUT ANY DONATIONS / GOVT. SUPPORT. THERE IS NO LIABILITY ON GOVERNMENT AGENCIES, THEY ARE LEADING BY ICT EXAMPLES.

Six Sigma Team has saved more than 5600 victims, who stuck up in high altitudes disasters. This has inspired lots of people to serve the society at most difficult situations of high altitudes. This task is appreciated and acknowledged by the Govt. of India, Govt. of Nepal, Govt. of China, Govt. of Himachal Pardesh, Govt of JK, ITBP and many more top CEO's, Chairman and corporate social leaders at National and International levels.

UTTRAKHAND FLOOD -2013

Really the Leadership is the capacity to translate vision in to reality. The role of Six Sigma Healthcare in High Altitude Disaster management at Uttrakhand Flood is a milestone in the history of healthcare. They are first to reach at Kedarnath and saved 511 people. The Six Sigma today stand tall for its commitment, encouragement, inspiration, through professionalism, modern healthcare management techniques with a commitment of on time or before time services in the changing scenario of hospital and healthcare management.

When disaster strikes, responses must be rapid, Six Sigma Healthcare has the will and capability to respond fast in such tough situations at anytime, anywhere, any whether and any height. The Six Sigma left no stone unturned to rescue the people at high altitudes. They put themselves in harms' way to evacuate pilgrims and citizens in inaccessible pockets of Himalayan. They have gone extra miles to rescue the people. Six Sigma Healthcare had swung into action much before the civil administration could gauge the scale of the disaster. The team in White Apron knocked down the obstacles, with single mind dedication to the mission of saving people without caste, creed or religion.

Nepal Earthquake : 2015 –

A powerful earthquake jolted NEPAL and sent tremors through Northern India, Killing more than 9000 people, leveling centuries old temples and triggering a deadly avalanche on Mount Everest.

Six Sigma Healthcare team rescued / evacuated 1700 people with the help of Indian Army & Air force Aircrafts. Flying here is certainly not for the faint hearted. Here, the Helicopters, Doctor and Porter are real gods. These medical rescue operations were carried out to far flung inaccessible areas at earthquake affected places of NEPAL includes – Gorkha, Barpak, Lapark, Lamzung, Palumtar, Ulya of Nepal from 30th April, 2015 to 4th May, 2015. They always serve like an ARMY – ever ready for everything, courgeous, disciplined and ever ready to fight against all odds. This operations was highly appreciated by the Government of Nepal, Embassy of India (Kathmandu – Nepal), Health Ministry of Nepal, Economy Ministry of Nepal.

AMARNATH YATRA MEDICAL SERVICES, SHESHNAG- SOUTH KASHMIR

The Governor of Jammu and Kashmir & Chairman, Shri Amarnathji Shrine Board has invited "Six Sigma Healthcare " Delhi to make provision of medical relief for worshippers and pilgrims during Holi Yatra of Shri Amarnathji 2014, 2015, 2016 by organizing medical camp at the highest point of yatra @ Sheshnag.

Six Sigma Healthcare has reached there and established first medical camp at Sheshnag, height of 14000 ft. Here Dr. Bhardwaj and team has provided free treatment to Yatris, Amry, CRPF, BSF, JK Police under the minus 7 degree temperature.

15 Result Achieved / Value Delivered to beneficiaries of the Project and other Distinctive Features / Accomplishment of the Project

Six Sigma High Altitude Medical Rescue saved more than 5600 victims. This has inspired lots of people to serve the society at most difficult situations of high altitudes.

Major Medical Rescue Operations on High Altitudes:

Years	Country Served	State Involved	Height	Name – High Altitude Medical Rescue Operations	People Served/ Rescued
2016	India China India	Kashmir Kailash Mansarover Himachal Pardesh	14500 Feet 19500 Feet 15000 Feet	Holy Pilgrimage : Amarnath Yatra Holy Pilgrimage : Kailash Mansarover Manimahesh Holy Pilgrimage	21000 1050 24000
2015	India China Nepal India	Kashmir Kailash Mansarover Gorkha, Mt. Everest Himachal Pardesh	14500 Feet 19500 Feet 24500 Feet 15000 Feet	Holy Piligrimage ; Amarnath Yatra Holy Pilgrimage : Kailash Mansarover Nepal Earthquake Disaster Manimahesh Holy Pilgrimage	22580 750 1700 22780
2014	India	Kashmir	14500 Feet	Holy Pilgrimage: Amarnath Yatra	11290
2013	India	Uttrakhand Flood	18500 Feet	Flash Flood of Uttrakhand - Kedarnath	511

Six Sigma High Altitude Medical Rescue has developed an Innovative citizen centric, mobile based application which can help locate a person trapped in debris in an earthquake or other disasters when communications fail. This app is free for the users and sustainable without internet or network.

The concept is based on Satellite based HAM radio used by amateurs to communicate with one another. This can be downloaded to a mobile phone, for continuously sending out a signal which can be detected by special equipment. "The application does not require mobile network or internet connection to communicate. This is based on satellite which will continuously transmit coded signals but which cannot be used to communicate. The transmitted signals can be detected within a radius of 50 kilometers.

The Real Time Location mobile application is made keeping in mind the rescue operations, in high altitude areas… where mobile towers network or Internet fails being hit by a natural calamity. People or soldiers who get trapped in the debris or snow can easily be helped out using the application.

Joint Exercise's for High Altitude Rescue:-

Joint Exercise with Defense and para military forces	Venue	No's of People Trained in High Altitude's
ITBP	AULI, UK	150
BSF	BANDIPORE, JK	200
CRPF	SONAMARG, JK	100
AIRFORCE	DELHI	50
HMS	DELHI	100

Innovations :-

1. Path Breaking ICT Initiative in Public Services
2. Exemplifies professionalism, selfless commitment and unparalleled bravery by the use of ICT.
3. ICT Role model of outstanding medical stories of courage and patriotism.
4. First to start ICT on "Mountain & High Altitude Medical Rescue" in India

AWARDS WON by SIX SIGMA HEALTHCARE:-

1. National eGovernance Award 2016-17, Government of India
2. Best Startup of the Year 2017, Government of India
3. Symbiosis Star Alumnus Award 2017 – Symbiosis International University
4. State Achiever Award 2016, Govt of NCT of Delhi
5. Indian Express Healthcare Excellence Award 2016
6. India Book of Records – 2016 (National Records)
7. Limca Book of Records – 2017 (National Records)
8. Iconic Leader of the Decade 2016 by Women Economic Form Delhi
9. National Record Limca Book of Records for Providing Medical Services at 19500 feet

10. Sat Paul Mittal National Award – 2015 at Ludhiana Punjab
11. Healthcare Personality of the Year 2014 at Hotel Ashok By MP Loksabha East Delhi
12. Listed under Top 10 Doctors of India Survey by Medgate Today March 2011 and 2012
13. India's Most Influential People in Healthcare 2014 by MT India
14. 20 Most Influential People in Healthcare by Modern Medicare
15. Best Organizer Six Sigma Healthcare Excellence Award 2013 Mount Abu
16. Youth IDOL and Youth ICON Award 2013 by Delhi University
17. IMA Oration Award 2010 by IMA Vododara Gujrat India
18. Youngest Medical Superintendent in India – Indian Express Limca
19. Rashtriya Ratan Award 2009 by First in Healthcare Management
20. Star Performer in Healthcare Life by Express Healthcare Management
21. Medical Excellence Award Yong Achiever 2006 Final Nominee Modern Medicare

STATE AWARDS

1. Big Hero 92.7 BIG FM radio For Nepal Medical Rescue Operations May 2015
2. Kalpana Chawla Shaurya Award 2015 by Government of Haryana
3. Academic Excellence Award by Pharmacy Council of India
4. Best Medico Legal Expert by IBN 7 & Jury by Times of India Lead India
5. Govt. of Delhi – Social Work Award 2016

INTERNATIONAL AWARD

- Asian Hospital Management Award 2016 at Vietnam
- Best Enterprise Award 2014 by Europe Business Assembly UK
- Soldering on Award 2017 by UK

Department of Administrative Reforms & Public Grievances
Ministry of Personnel, Public Grievances & Pensions
Government of India

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