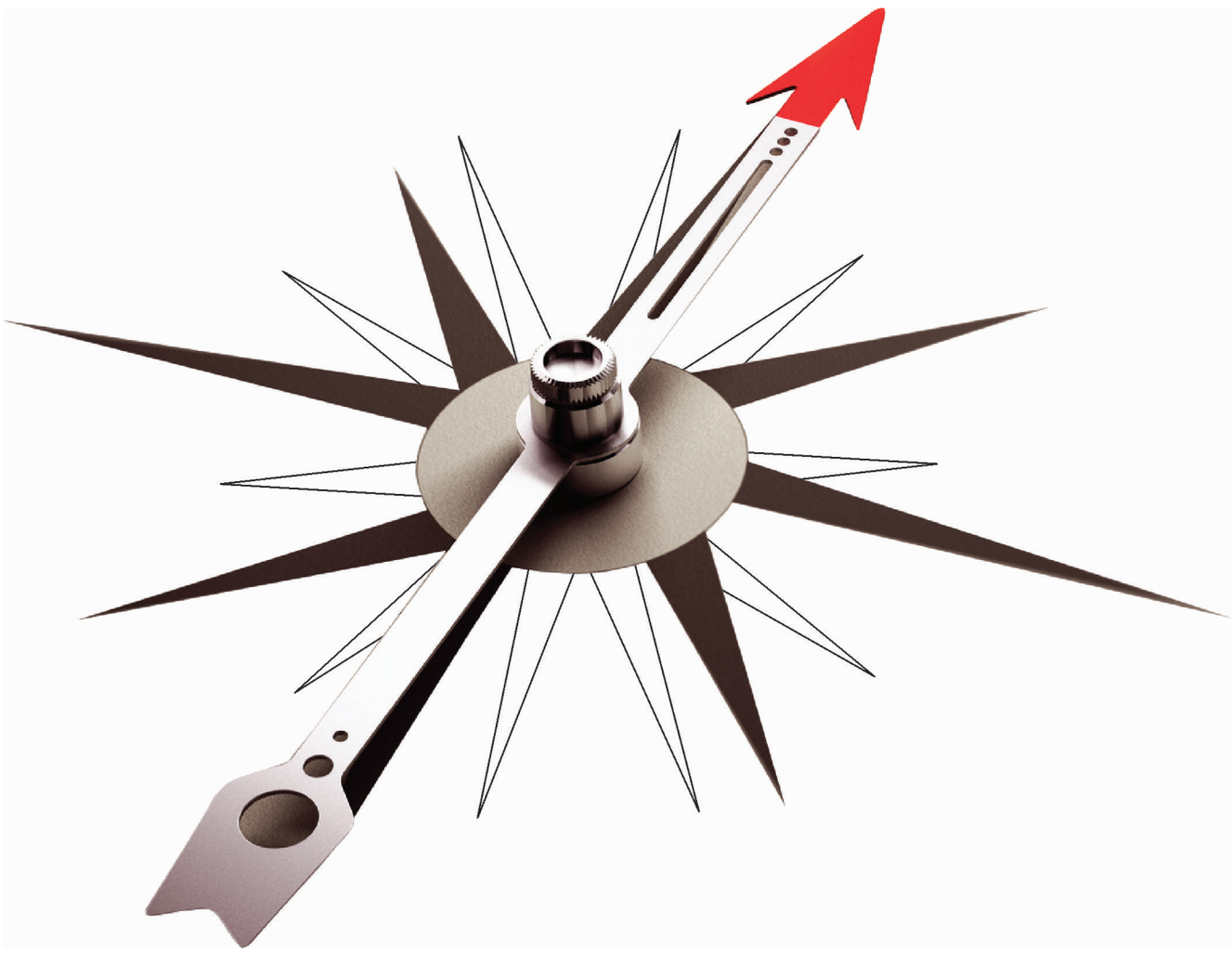
सत्यमेव जयते

# Excellence in e-Governance



## 20th 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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# COSMOS– Chhattisgarh Online School Monitoring System

**Sarva Shiksha Abhiyan, District Balrampur – Ramanujganj, Chhattisgarh**
**Office of the District Collector, District Balrampur – Ramanujganj, Chhattisgarh**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | Chhattisgarh |
| **2.** | Name of the Host/Owner Organization | : | Office of the District Collector, District Balrampur – Ramanujganj, Chhattisgarh |
| **3.** | Status of the Host/Owner Organization | : | Sarva Shiksha Abhiyan, District Balrampur – Ramanujganj, Chhattisgarh |
| **4.** | Name of the Project | : | COSMOS – Chhattisgarh Online School Monitoring System |
| **5.** | Name of the Nodal Contact Person | : | Mr. Sanjay Singh, District Project Co-coordinator Sarva Shiksha Abhiyan, District Balrampur – Ramanujganj, Chhattisgarh |
| **6.** | Contact Address | : | Sarva Shiksha Abhiyan, District Balrampur – Ramanujganj, Chhattisgarh,497119 |
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## 8. Project Summary:

Implementation of a unique IT enabled school monitoring system for continuous real time monitoring of various quality related aspects of school education like teachers' attendance, continuous child tracking and delivery of schemes like mid - day meals, students' scholarships, etc.

## 9. Date of Launch of Project:

**September 2014**

## 10. Coverage:

**Geographical and Demographic**

**(i)** **Comprehensiveness of reach of delivery centers:** Biometric devices have been installed in government schools, ashrams and hostel campuses, across the District. Thus, the project will directly impact quality of education in all the government run primary and secondary educational institutions operating in the District.

**(ii)** **Number of delivery centers**: The project will have biometric devices installed across all the 1420 school campuses which include 2285 primary and secondary schools as well as 135 Ashrams, KGBVs and Hostel campuses. Out of these, biometric devices have currently been installed in 787 School Campuses.

**(iii)** **Geographical :**

a) National level – No of State covered

b) State/UT level- No of District covered 1 (Balrampur – Ramanujganj)

c) District level- No of Blocks covered 6

**Please give specific details:-**

The Project covers all six blocks of District Balrampur – Ramanujganj, namely Balrampur (51 GPs), Rajpur (53 GPs), Ramanujganj (68 GPs), Wadrafnagar (72 GPs), Shankargarh (40 GPs) and Kusmi (56 GPs)

(iv) **Demographic spread (percentage of population covered):** The system will directly benefit almost **8000 teachers and other non-teaching staffs** in various school campuses, **Ashram Shalas, KGBVs and Hostels** across the district along with an estimated **188925 students (enrolment of AY 2014-2015)** studying in these schools. Besides this, the system has a potential to positively influence each and every household as it will improve the quality of education delivered in government schools and ensure that each and every child receives adequate attention and support in schools.

## 11. Beneficiary of the Project:

The project will directly benefit parents/guardians of 1,88,925 students (enrolment of AY 2014-2015) of District Balrampur – Ramanujganj, as well as the students, along with more than 7400 teachers and other non-teaching staffs posted across 2285 school campuses, Ashrams, KGBVs and Hostels within 1420 educational campuses spread throughout the District.

## 12. Problem Statement or Situation before the initiative:

District Balrampur – Ramanujganj is a newly formed district (formed in January 2012) comprising of a population of 7,30,491 individuals residing in 421 Gram Panchayats (GPs) and 6 Nagar Panchayats. Most parts of the district are covered in thick forests and undulating terrain which makes accessibility of delivery of government schemes to remote parts of the district a real challenge for the District Administration.

Earlier, mostly the data collection and monitoring of education in schools were done manually with the District Administration dependent on unpunctual and insincere teachers. Schools situated in remote villages were often neglected and impoverished even in terms of basic facilities. Thus, data reporting pertaining to schemes like mid – day meals, scholarships, etc. was often fudged and inaccurate. Besides this, it was impossible to monitor teacher's attendance in schools with parents often complaining of teachers remaining absent for many days without notice. The manual system of reporting had no provisions for regular checks and was dependent on the whims of the block administration. Teachers too often complained of hurdles in withdrawal of salaries and getting permissions for leave from the block administration. Thus, a comprehensive overhaul of the existing system to improve transparency and efficiency was the need of the hour.

**Extent of Process re-engineered services which depend on these processes, analysis/ re – design of Process workflows**

*(Processes that have been re-engineered – before (As-Is) and after (To-Be) re-engineering; changes in activities and their sequencing; level of automation (Extent of computerization in terms of number of services computerized, Extent to which steps in each service have been ICT – enabled)*

1. **Teachers' Attendance**: Earlier, teachers' attendance was recorded in manual registers and was monitored only during infrequent visits by block and district level officials. The process has been re – engineered using biometric devices for recording attendance. Each teacher has to check – in the device twice daily. For unpunctual teachers, the registration is being done in the end of every class/period.

2. **Students' Attendance & Mid – day meal records**: Earlier students' attendance was also recorded manually with payments for mid – day meals provisions done on the basis of these manual records which resulted in huge leakages. Under COSMOS, students' attendance is also recorded through bio – metric devices and monitored online. Payments for mid – day meals are made on the basis of these actual attendance reports thus preventing leakages.

3. **Applications for leave and salary payments for teachers**: Earlier teachers applied for leave through letters to their immediate reporting officers at the block level. Most teachers never applied for leave as their absence was hardly monitored. However, under the new system, leave applications can directly made to the reporting officer through the biometric device or SMS enabled system which has significantly increased the leave

applications being received. Salary payment slips can directly be printed from the web portal at the block office which has reduced the hassles of teachers tremendously.

4. **Feeding of Reports:** Earlier, the District administration or the administration at the Block level were bound to accept the reports or data as submitted by the field staff manually. Due to remote geographies of the district, and some other areas remain in accessible during Monsoon, many of such reports or data could not be verified for its veracity. However, with COSMOS, one can feed such data or reports locally in the system, which can be sunk to the central server on any given day. These data or reports, since bio-metrically administered, can be a reliable source without the need for its second level of veracity.

## 13. Project Objectives :

The main objective of the Project is to enable real time continuous monitoring and self reporting of various aspects related to school education to improve the quality of education delivered in government run primary and secondary schools in the District. Bio-metric tablets are used to monitor teachers and students daily attendance which in turn can reduced leakages in delivery of schemes like mid day meals, students scholarships, etc.

The bio-metric devices have provision for online as well as offline data uploading through use of GSM SIMs with the system specifically designed for use in rural areas lacking network connectivity. The data is thus regularly uploaded on a database that can be viewed on a web interface as well as mobile based android application.

The project will reduce bureaucratic (administrative) interventions in day to day functioning of schools as tasks like teachers leave application, reporting of information related to delivery of various schemes can be done online directly from the classrooms. The system has also enabled introduction of a unique child tracking system with each child provided with a unique 16 digit ID for continuous performance tracking and reporting. A database of all children attending anganwadis to studying in class 12th has been created. Based on the unique ID, the attendance and performance of each child can be tracked online so that weaker students and frequent absentees can be counseled and given extra coaching as the need may be. The system will thus help reduce school drop-out rates which is one of the major problems the education department currently faces.

The entire system has been developed in a user friendly manner which would reduce hassles for everyone right from the students, teachers to the Block and District level administration thus improving chances of adoption and continued usage.

Thus, the following are the main objectives of introducing COSMOS in school education in District Balrampur - Ramanujganj:

i) Automating collection of basic information and progress reports on various academic and non - academic parameters related to school education

ii) Streamlining processes to improve efficiency and reduce time and effort often wasted by teachers in non - academic administrative work

iii) Tracking academic progress of each and every child to provide customized counseling and improvement sessions to weaker children which would in turn reduce the school drop - out rates.

## 14. Project Scope approach and methodology :

- **Details of base line study done:** A detailed baseline study was carried out across all the schools in the district to understand the learning levels of children and infrastructural needs of government schools. The baseline survey revealed that children had extremely poor learning levels even in schools with adequate infrastructural facilities. Teachers' attendance and the quality of teaching material and techniques used were found to be one of the major issues for the poor learning levels. Thus, the idea of COSMOS was born which could directly address these issues.

A separate baseline study of all the school going and non – school going children was carried out to enumerate all children in the district. This baseline study will be used to provide each child with a unique tracking ID that will ensure that each and every child receives quality education and does not leave school.

- **Problems identified:** According to the Baseline survey, learning levels in primary and secondary schools were found to be quite low. Most parents complained of teacher absenteeism along with lack of basic infrastructure as being the main problem. Teacher's were often found to be absent without prior notice. Besides, it was also observed that many times, the teachers were busy compiling information for reporting to the Block and District officials. Thus, teachers often wasted their time in more pressing secondary issues instead of doing their primary job of teaching.

- **Roll out/ implementation model:** The first phase of the project covered one of the blocks of the district (Rajpur Block) which covered 185 locations and schools. The first phase has been completed and other blocks are gradually being covered. Biometric attendance devices have now been installed in 787 campuses in 6 blocks. Initially, only teachers' attendance was being recorded and reported through the system. However, additional features of the system like students attendance, teachers leave application, mid – day meals reporting, students scholarships, etc are being rolled out in a phased manner.

- **Communication and dissemination strategy and approach used:** Considering the teachers' attendance monitoring aspect and the perceived reluctance of the staff to implement a system of continuous monitoring, detailed orientation sessions were conducted with all concerned stakeholders before the initiation of the project. The positive aspects of the project, like ease of collection of information, ease in leave applications and withdrawal of salaries, etc was highlighted in order to increase acceptability. Parents and children were explained the benefits of the system through meetings of the School Management Committees (SMCs)

  Besides this, a monitoring team has been stationed in each Block to address any issues arising or pertaining to COSMOS. A district level helpline number has also been made available to all teachers and parents to address any issues regarding the proper functioning of the system.

- **Technology Platform used**

  **(i) Description:**

  1. Hardware – Tablet PC and Fingerprint Scanner (Fingerprint Device)
  2. Software & OS – COSMOS Software Development:
     a) Android for Tablet PC and Mobile App Software
     b) Microsoft ASP.net for Web App and Web Services
  3. Server Used:
     a) Microsoft SQL Server for Database.
     b) Microsoft IIS Server for hosting of Software and related web services

  **(ii) Interoperability:** The Tablet PC and the Fingerprint scanner has been integrated with each other through a link up process as enabled by the OS. The OS has been developed on android based platform, considering the following factors:

  - Android is freely available in the open market, and hence, it is cheap.
  - Most of the mobile device/tablet in the open market is run by Android OS, and which is easy to *tweak as per our needs.*

Besides, the device unit is capable of capturing Geo-location from either the inbuilt GPS antenna, from internet and mobile tower or the time sync from the internet. Thus, any transaction through this device is geo-tagged, negating any attempt of intended shifting or changing location.

**(iii)** **Security concerns**: The system is encrypted with SSL Security based protocol. All standard security norms and procedures have been implemented in the project to prevent misuse and breach of privacy.

**(iv)** **Any issue with the technology used:** The technology used is certified and tested for quality. Issues with network connectivity have been resolved through use of GSM SIMs of the most widely available network in the area. No specific technology related issues have been raised till date.

**(v)** **Service level Agreements (SLAs)** *(Give details about presence of SLA, whether documented, whether referred etc. #)*

The project software and hardware has been provided by a third party developer selected through a process of inviting Request for Proposals (RFP) from interested vendors. Based on the selection, a detailed Service Level Agreement explaining the terms of contract, services to be delivered, maintenance and resolving of issues, etc has been signed between the District Administration and the third party developer.

Specifically, Section B of the Agreement dated 25th October, 2014 details out the scope of the services to be provided including software features, training of all stakeholders, phase wise implementation and maintenance of the system for a period of one year after completion of the scaled up project.

Detailed Service Level Agreements can be referred to in Section B of the Agreement dated 25th of October, 2014 signed between the District Administration and the Third Party Vendor.

- **Citizen Centricity (Give specific details on the following#)**

i) **Impact on effort, time and cost incurred by user:** The User has to invest a minimal time of just 5 sec or less to get oneself registered in the device through finger print scanner. No direct costs will be incurred by individual users.

ii) **Feedback/ grievance redressal mechanism:** Till the project is in development/maintenance stage, the third party developer/vendor has provided a feedback window through provision of email service, along with mobile number to enabled direct voice interaction. Meanwhile, each Block is manned by with at least 2 personnel representing the third party developer/vendor 24*7 to address any situation locally.

The District Administration has a plan of placing the server in the district itself, with overall project's technical supervision shall be undertaken by the District Informatics Officer (DIO) in the days to come, after the development/maintenance phase is over. There shall be a dedicated toll free helpline number to address any support/problem solving queries related to the project.

iii) **Audit Trails:** A pilot has been already executed in the Rajpur Block of the District. There is a plan for Audit Trail through an independent body very soon.

iv) **Interactive platform for service delivery:** The COSMOS can be accessed through hand held mobile device or through web browsers in a desktop/PC.

v) **Stakeholder consultation:** The entire project was conceived, shaped, and developed having extensive discussion with parents and teachers community, and at times with students

- **User convenience** (Give specific details about the followings #)

  **i)** **Service delivery channels (Web, email, SMS etc.) :** Most data inputs done at the school level can be done through a touch screen enabled tablet integrated with biometric device installed in each school campus. Reports are automatically generated that can be viewed at the block level and the district level through the web portal and on the android application. Certain reports are publicly available to encourage community participation and monitoring.

  An inbuilt SMS system is available to directly contact teachers through the android application. E – mails are automatically sent to the concerned officers at the block and district level to flag emergent situations for eg. delay in salary payments, pending promotions, teachers or children remaining absent for long periods of time etc.

  ii) **Completeness of information provided to the users:** The user can have an access to any information regarding a school. Even information about students too shall be available for general public, but such shall be in conformity with the applicable privacy laws and any other laws of the land.

  **iii)** **Accessibility (Time Window):** The entire web and mobile interface has been developed in a user friendly and intuitive manner to encourage community participation and usage. All reports are available in real time and can be viewed by anyone based on three user access levels.

  **iv)** **Distance required to travel to Access Points:** Each school campus has been provided with the biometric device and hence, a teacher or a student will not have to travel outside his or her school campus to report his/ her attendance or any other data related to the school.

  **v)** **Facility for online/ offline download and online submission of forms:** The system supports both online as well as offline uploading of data based on GSM SIMs. For schools lacking network connectivity, the device can be taken to a location having network connectivity to upload the data.

  **vi)** **Status Tracking:** Status of data uploaded can be viewed on the interface and the principal/ teachers of schools with pending data uploading can directly be contacted through the mobile application.

- **Efficiency Enhancement** (Give specific details about the following)

  i) **Volume of transactions processed:** The system processed more than 6 lakh transactions in terms of teacher/schools/hostels/ashrams staff attendance entry till 13 September 2015. Currently the system is handling daily transactions of more than 1350 schools/hostels/ashrams and more than 7400 registered staffs.

  ii) **Coping with transaction volume growth:** The servers are capable of more than two thousand such transactions each second. So that it can handle lot of more transaction per second. The current bandwidth for uploading the data to the server are varying and depending upon the Mobile SIMs and wireless internet connection.

  iii) **Time taken to process transactions:** The data is processing by the device itself. The Tablet PC device processor is 1.3 GHz. There is almost no time delay in processing of data. However, filling the form does take time.

  iv) **Accuracy of output:** Since the project is being run by one year, the developed COSMOS modules has been cross checked at each level repeatedly for the accuracy of the output. Currently, the developed COSMOS modules are more than 95% accurate. Effort is on for achieving 100% efficiency.

  v) **Number of delays in service delivery:** Once the locally saved data (in the bio-metric device) is uploaded to the central server, the system is capable enough to generate any pre-assigned reports.

- **Cost effectiveness** *(Give details about impact on cost incurred w.r.t. overhead cost, direct and indirect cost, man days/ man hour required to do a job etc.)*

The major cost incurred for the project includes cost of biometric machine installed in the schools and development of software. With the basic hardware and software in place, the system requires minimal overhead charges as the devices can easily be managed by the existing teachers and staff in schools.

- Cost of the Bio-metric Device including

  Software and Installation component per device: Rs. 22050.00

- Monthly Recurrent Cost (Data Charges per device): Rs. 227.00

The cost of device includes the installation and maintenance costs for a period of one year. The costs include the cost of training staff in handling the device and software which will be done within the first year of implementation of the project. Thus no additional costs will have to be paid in subsequent years for maintenance and upkeep of the software. The senior most teacher in each campus has been assigned responsibility for the biometric device and thus, in the eventuality of a rare hardware breakdown, it will be replaced from infrastructural funds available in the school.

Electricity usage charge for the Device unit shall be very negligible, as comparable to charging one's mobile at home.

- **Capacity Building and Organizational Sustainability** *(Give details about hiring skilled staff, imparting training etc.)*

Till the end of the Maintenance Period (the SLA period), which is One year from the day on which the scaled up project ends, the third party developer ( and service provider) shall stationed personnel in each of the 6 Blocks across the District to impart training and hand holdings to the local administration and teachers. A training module has been developed on similar lines, and the same shall undergo continuous revision process till the completion of entire set of modules and as per the need.

The working of COSMOS is not very complex. It is very similar to using one's mobile phone. So, tasks like registration and feeding data locally, downloading and uploading the same, as such, does not requires one to be technically very sound.

On the other hand, local human resources, recruited as Data Entry Operators under erstwhile Rajiv Gandhi Panchayat Sashakthikaran Yojana (RGPSY), shall be trained to take up the most complex data entries part. Each of these Data Entry Operators shall be assigned with responsibilities confining to specific school campuses within their Gram Panchayat.

The District Informatics Officer (DIO) of the District NIC, as well as the Assistant Programmer of the RGSM-SSA will play the technical role in resolving any issues pertaining to the COSMOS.

There is a sincere attempt to institutionalize the entire project, as because salary component is also a part of the COSMOS. This institutionalization will lead to organizational sustainability.

Besides, it is heartening to note that even the local community has come forward towards claiming a stake in the ownership of the process and the system, as a whole.

- **Accountability** *(Give details about, impact on transparency of process, fixing responsibilities etc.)*

Each Bio-metric device is issued against an Under-taking signed by the Senior-most teacher of the School Campus, wherein there is more than one school in the campus, or the Head In-charge/Superintendent of the School/Ashram/ KGBVs/Hostel, as the case may be.

Such Senior-most teacher of the School Campus, wherein there is more than one school in the campus, or the Head In-charge/Superintendent of the School/Ashram/KGBVs/ Hostel, as the case may be, shall be liable for upkeep of the device, and report to the Block office (O/O BEO) about any issues or break down of the device, including physical or software damage caused due to any deliberate action. In such cases, the concern shall be liable to make good any loss caused due to such damage by the way of recovery, considering the fact that the device is a Public Property by

definition as specified under any Laws of Land/Penal Laws.

- **Innovation** (*Give details on the extent to which re-engineered process is unique, compared to other common process re-engineering efforts, impact on number of steps required, identification and removal of bottlenecks/ Irrelevant steps etc.)*

In the modern age of computing there are so many devices and technologies in the market and they are also being used by the government offices / school etc. In different time span so many efforts are made to control and monitor the process. For the school education, we have thought about something different to control and monitor the process of delivering the education and other government schemes for the schools, hostels and ashram. We have decided to provide portable computer (tablets) with a finger print scanner device which can not only takes the general fingerprint scanning attendance but can also process the customized required data as and when needed and at the same time data will be uploaded to the server from remote location for further process and desire reporting purpose despite all the hiccups like electricity or internet unavailability or failure etc. This will help to deploy the government schemes for the citizen more quickly and efficiently.

Also one very important innovation adopted in this process/system is the ability of geo-tagging of any such transaction as done through the system.

- **Appropriate Delegation** *(Give details on whether a team involving employees from all levels has been deployed for the project implementation and maintenance, can employees be held accountable for their actions, etc.)*

The Block Education Officer has been delegated with the task of project implementation, right from collecting baseline survey data to making entries of names – students, teachers and other staffs, in the web portal serving COSMOS for their Block. They are in the front of every such exercise meant to plan and execute the project.

They have been appropriately instructed to take cognizance of any physical or software damage caused due to any deliberate action and initiate necessary and appropriate action against any such delinquency.

On the other hand, the Office of the District Programme Officer, RGSM-SSA, Balrampur – Ramanujgunj, Chhattisgarh is under-taking the supervisory role in the entire scheme of things in the project.

## 15. Result Achieved/ Value Delivered to the beneficiary of the project

- **To organization:**

1. Attendance of Teachers, on real time basis.
2. Attendance of Students, on real time basis.
3. Exact consumption of meals under MDMS or rations as consumed in Ashram/ Hostel known, vis-à-vis students' attendance known.
4. Leave as availed by teachers known on real time basis.
5. Maintenance of discipline and punctuality on teachers' part.
6. Thus, if we connect all the above scenarios, then a handsome amount of public (government) funds is saved due to avoidance of attendance done on forgery.
7. Schools in remote location remain open due to online tracking capability of the system.
8. Data and Reports from the field becomes authenticated as there is no possibility of duplication or falsification due to bio- metric based authorization system.
9. These data can be automatically uploaded to the central server without the need for its physical movement.
10. This in turn helps in online processing of Service Book of the Employees.

- **To Citizen:**
  1. Guardians can remain assured of the Service delivery of the Government schemes, and overall delivery of quality education in the schools as it ought to be.
  2. Monitoring their wards by the guardians can be done through mobile phones, without their need to physically visit the campuses.]
- Other Stakeholders:
  1. Any interested third party can get to know about a particular school or campus and its functioning, virtually online and on real time basis.
  2. One does not have to file any request letter for the same.

### 15.1 Extent to which the Objective of the Project is fulfilled *(benefit to the target audience i.e.G2G, G2C, G2B, G2E or any other, size and category of population/ stakeholder benefited etc)*

G2G: The original objective of the project is to turn into "paperless office".

Digitalization of Teachers and Students' information is one such step. The integration of leave management module with attendance module is another such milestone. Now, the raw data from the field has the sanctity of authenticity.

G2C: Local denizens interacting with school/teachers within this background of manoeuvres, and coming forward and evincing willingness, to claim ownership of the process and the system, is a positive note towards future sustainable engagement.

### 15.2 Adaptability Analysis

Measures to ensure adaptability and scalability: COSMOS was initiated with a pan Chhattisgarh outlook. However, the field trial (pilot project) shows that it can be adopted and operated in any government educational institutions offering school educations. The beauty is that this system can be tweaked as per the local needs arising out of dynamism and requirement.

### 15.3 Measures to ensure replicability:

The system has been developed on Android based platform considering its availability in open market, ease to tweak and it being less expensive. Modules has been developed within the system considering the core issues and functionalities facing the school level educational set ups (Government set ups), especially that aspect of reaching those schools in remote location on real time basis.

### 15.4 Restrictions, if any, in replication and or scalability:

No such restriction in replication or scalability.

### 15.5 Risk Analysis:

Risk analysis is yet to be done by an independent organization.

### 15.6 Comparative Analysis of earlier Vs new system with respect to the BPR, Change Management, Outcome/benefit, change in legal system, rules and regulations:

In the earlier manual paper – based system of keeping records and registration, the veracity of information received from the gram panchayat and block offices is impossible to verify. Data fudging and incomplete reporting can hamper design making and corrective action at the district level. However, with the implementation of COSMOS, data on teachers' and students' attendance is updated on a daily basis. Thus, the reports fed into the biometric device on a continuous basis have the inbuilt capability to negate any duplication or forgery.

With the implementation of the system, there has been a marked improvement in reporting of mid – day meal consumption reports as well. Thus, the system has reduced leakages that were earlier common by showing inflated students' attendance.

This process or system does not require any changes in management set-ups (administrative set-ups) nor in any legal system in place.

Nonetheless, rules indicating directly the adoption of the system shall give much strength towards institutionalizing the entire initiative.

**Other distinctive features/ accomplishments of the project:**

i) The Attendance of teachers shows great improvement in punctuality and intensity.

ii) Similarly, the higher percentage of attendance of the students as inferred through MDM attendance/MDM consumption report shows a positive stride towards delivery of government schemes at school levels.

iii) No wonder, about half of the total costs of Rajpur Block pilot project has been recovered in terms of salary deduction of teachers due to unauthorized absenteeism during the month of July, 2015 (Rs. 2308538.00). This would not have been possible on the basis of registering one's attendance manually in register.

iv) Local denizens interacting with school/teachers within this background of manoeuvres, and coming forward and evincing willingness, to take ownership of the process and the system, is a positive note towards future sustainable engagement.

v) One distinctive features of this project is that, besides bio-metric enabled capability, the system in this project has the enabled capability to geo-tagged any such transaction undertaken through the system.

vi) On similar note, the system is custom build with a capability to automatically set on any alerts, through SMS module or email Module, as per the settings.

# SAMAGRA Portal

**Samagra Samajik Suraksha Mission**
**Social Justice and Disabled Welfare Department of M. P.**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | Social Justice and Disabled Welfare Department of M. P. |
| **2.** | Name of the host/owner organization | : | Samagra Samajik Suraksha Mission |
| **3.** | Status of the host/owner organization | : | Mission Director |
| **4.** | Name of the Project | : | **SAMAGRA 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. Ajeet Kumar (IAS), Mission Director (9425828382)<br>Mr. Sunil Jain, Technical Director, NIC (9425609696, sjain@nic.in) |
| **6.** | Contact Address | : | 1250 Tulsi Nagar Bhopal - 462001 |
| **7.** | Telephone/Fax/e-mail | : | 0755-2558391/mdcmsssm@gmail.com |
| **8.** | Date of launch of Project | : | 01/04/2014 |
| **9.** | Coverage (Geographical) | : | |
| | National level – No of State covered | | 1 |
| | State/UT level- No of Districts covered | | 51 |
| | District level- No of Blocks covered | | 694 (313 Rural Local Bodies and 381 Urban Local Bodies) |

**10. Beneficiary of the Project:**

- As a part of its commitment for a welfare State, GoMP 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 the low income working population and laborers of the State people living below the poverty line elderly including destitute unmarried and or dependent girl's widows including those deserted by the families and persons with disabilities and other vulnerable groups.
- The beneficiaries, who mostly are from weaker/underprivileged sections of society, have found it complex & difficult to understand the processes, rules and entitlements of schemes and were not able to get the intended benefits as per his entitlements in a simple and hassle free manner. The person was required to interface with more than one office & was subjected to repetitive verification of documents.
- It was observed several schemes being run by different departments were actually of the same nature and targeted same category of beneficiaries, but had different processes, application forms & entitlements/rates.
- In absence of a centralized family & beneficiary database and/or automation in the service delivery of schemes, departments were working in silos & there was no avenue for online workflows, coordination & integration of processes & data.
- An innovative concept to launch an ambitious program involving rationalization and convergence of schemes was conceptualized at address the issues and shortcomings. It also aimed at simplification & automation of

delivery processes involved in the implementation of over 200 schemes of various sectors like education, social security and health namely scholarships, pensions, marriages, insurance, ex-gratia & funeral assistance, health etc. The program was massive, challenging and christened as Integrated Social Security Program of Madhya Pradesh.

## 11. Problem Statement of situation before the initiative

**Background**

Madhya Pradesh is the second largest State of the country. It has largest tribal population amongst all States. The State is consciously working for improvement in Human Development Indicators. Social Security is the largest sector in the State in terms of number of beneficiaries, geographical reach, number of institutions, engagement of human resources etc. It is also the most complex sector with involvement of multiple departments and local bodies.

As a part of its commitment for a welfare State, GoMP 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 the low income working population and laborers of the State; people living below the poverty line; elderly including destitute; unmarried and or dependent girls; widows including those deserted by the families and persons with disabilities and other vulnerable groups. Over 200 beneficiary oriented schemes with estimated budget of ~ 5000 crores, involving cash or kind benefits, are being run for welfare of the masses. It was observed that several schemes being run by different departments were actually of the same nature and targeted same category of beneficiaries, but had different processes, application forms & entitlements/rates. These schemes were being run in isolation and most of them had common features and benefits and also practically targeted same category of beneficiaries due to seasonality and occupational portability of beneficiaries. Moreover, it was also observed that almost all low income informal sector workers profess multiplicity of occupations due to seasonal and livelihoods factors. Different government departments target different groups (including occupational groups) that are associated with their mandate and book the expenses by offering them the benefits. However, since most of the beneficiaries who are geographically as well as occupationally portable across these groups are booked as beneficiaries by these multiple departments. As a result of this while the expenditure is booked by all the implementing departments, the beneficiary in most cases remains one and the same.

In the absence of a centralized family & beneficiary database and/or automation in the service delivery of schemes, departments were working in silos & there was no avenue for online workflows, coordination & integration of processes & data. Decision making involved discretion, payment was through cash/cheque. It resulted in delays, leakages and trauma to the underprivileged. The scale and spectrum of operations of the schemes were also a major challenge as it involved around 23006 Gram Panchayats. Over the last two decades several new schemes have been launched regularly. Implementation of these schemes involved overlapping & repetitive tasks. Workload of departments, institutions and offices has increased manifold without corresponding increase in quantity and capability of the supervisory manpower. Because of these issues and complex implementation, schemes were not able to the deliver intended outcomes.

The beneficiaries, who mostly are 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. A person was required to have interface with more than one office & was subjected to repetitive verification of documents.

Demand- based governance: Resident had to know the rules, process and delivery point of each and every scheme being run by the government and then demand the benefit under the scheme at the delivery center of the concerned scheme by filling up the form of the scheme and submitting all the supporting documents related to Caste, BPL, labour category, disability certificate and affidavit. He had to prove his identity and credential again and again for each benefit every year.

**Multiple Departments offering same / similar Benefits:**

- Many Departments offered similar schemes that had overlapping eligibility criteria and there was no standardization of rates and rules.

- In absence of the standardization, implementation of these schemes in a rule-based and transparent manner was a major challenge as the entire work was being carried out in manual and isolated manner.

**Decentralized mode of implementation:**

- Each scheme had different application form, different service delivery points and different process for sanction and disbursal of benefit.
- Involvement of more than one office was required in collection of application form, sanction and disbursal of the amount to extend the benefit under any scheme.
- There was a lack of coordination between various departments leading to overlapping of benefits within various similar schemes.
- There was no single unique identifier for the beneficiaries of the schemes and there was no sharing of data.
- One was not sure that the resident had actually received the benefits from one or many departments or not received at all.
- There was no mechanism to track the history of the benefits already taken by beneficiary from any other department for similar nature of scheme.
- There was a huge possibility that these departments used to book their expenditure on the same beneficiary.

## 12. Project Objectives

- Convergence, Rationalization and Simplification of various schemes of same nature being run by different department for overlapping categories of the residents.
- Switch to Entitlement Based Model of Governance for running welfare schemes in a phased manner.
- Insulate resident from complexities of schemes, its rules, formats, processes. Minimize need of person to visit various offices for application/follow-up & eliminate need to repetitively provide documents for scrutiny.
- One time verification of important attributes of families and residents that decide the eligibility and entitlement and use of these verified attributes by all other offices to decide eligibility for schemes without discretion.
- To provide a common integrated platform for implementation of all individual and family specific schemes in a hassle-free manner using a single and integrated application architecture and database
- Automation of processes and online maintenance of live registers of beneficiaries of various schemes & their tracking, automatic updation of profile of family and residents on reporting of birth, deaths, marriages
- Financial Inclusion of target families/individuals and DBT.
- Proactively Governance: Propose the list of residents that are technically eligible for schemes
- Globalization of budget, better financial discipline, Online & live tracking of fund utilization, transparent operations, minimization of discretion in decision making, process automation.

## 13. Projects scope approach and methodology

i) Adopt holistic approach of implementing the schemes.

ii) Simplification, rationalization and convergence of schemes

iii) Switch from ‘Demand- driven and Reactive Governance Model’ to ‘Proactive and Entitlement based Governance Model’

All the concerned departments/boards had to be on board to ensure the effective implementation of the initiative. A committee under the chairmanship of Chief Secretary was formed for inter-departmental coordination.

- Considering the nature of the project and technical challenges, National Informatics Center (NIC) was chosen as the technological partner for design and development of Software solution, SAMAGRA platform and other technological support.
- To ensure support of District Collectors and CEOS of ZIlla Panchayats & ensure sustenance of the initiative, instructions from the Chief Secretary were also issued.
- Every fortnight the Chief Secretary headed committee of Secretaries of respective participating departments meets and resolves the interdepartmental coordination issues arising in convergence and BPR.
- In view of multiple departments, users, large number of sanctioning authorities, controlling departments and huge array of stakeholders and schemes, one required a platform to facilitate interdepartmental collaboration, coordination, seamless integration of activities, and smooth automation of key processes and updating of key information in real-time. This seemed most easily possible through an online application-based, database driven, dynamic web-portal which also needed to facilitate information based online monitoring, analysis and dissemination of live information in real-time.
- It was felt that it would not be possible to define the complete requirements & scope of the portal in one go. The needs and requirements would continue to evolve, grow and mature. Therefore, NIC was chosen as the technical partner as an in-house professional agency to address the changing requirements, provide a continued handholding support and ensure its sustenance.

It was decided to create an online, live and integrated State Population Register (SPR) and issue unique IDs to each Family and each Residents of the State. This was done so as to allow the government functionaries to know their families and residents and allow them to take informed decisions wt the time of the sanctioning of the benefits.

It was also decided to create institutional mechanisms to ensure the regular updation of the population register. It was decided that linking of various benefits with the population register will enforce auto updation of the register. This all benefits and assistance linked to Births, deaths, pensions, scholarships, PDS, Marriages were linked with the population register.

Further, it was also decided to maintain online and live registers of following so as to enable sanctioning of benefits in a hassle free without needing the supporting documents

- BPL families
- SC/ST families
- Persons with Disabilities
- Individuals registered as Casual Labour working in unorganized sector and registered by different departments/ boards

The above registered have been linked with SPR and SAMAGRA Family ID and SAMAGRA Member ID is recorded in each of the register to allow the linking and integration of the individual registered with the population register.

The schemes to benefits the families/residents as listed in above categories will be implemented on SAMAGRA platform in a phased manner.

It was decided to create an enabling environment so as to simplify and rationalize schemes, automate back-end processes and provide benefit to beneficiaries of same type though one common and integrated system, to bring about transparency through direct fund transfer without manual interference after sanctioning.

**CREATION OF SPR:** A massive exercise on in the lines of the census operation was undertaken to create the SPR. Door-to-Door survey of all households was completed to capture the detailed profiles of all families of the State in following formats : **KYR-**Know Your Resident, **F**: Family, **M**-Member

- Following online Systems were designed and developed to facilitate the common platform, convergence, transparency

**SAMAGRA Portal** **(SAMAGRA.gov.in)**

**Core Platform following constitutes the core platform for the SAMAGRA initiative**

| | |
|---|---|
| • State Population register | • (SPR.samagra.gov.in) |
| • State Register of BPL families | • BPL.Samagra.gov.in |
| • State register of Labours of various categories working in unorganized sector | • SHRAMIK.samagra.gov.in |
| • State register of Persons with Disabilities | • SPARSH.SAMAGRA.gov.in |

The **SAMAGRA** platform is being used for design, development and implementation of backend automation and MIS systems implementation of the following schemes:

| | |
|---|---|
| Implementation of National Food Security Act / Ration / Public Distribution System (PDS) | (NFSA.samagra.gov.in) |
| School Education Scholarships and Assistance | (SHIKSHA.samagra.gov.in) |
| Implementation of Marriage Schemes | (VIVAH.samagra.gov.in) |
| Implementation of National Family Benefit Schemes | (NFBS.samagra.gov.in) |

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

The whole idea of SAMAGRA is to target the beneficiaries and provide to them the services under of a '***One Stop Shop'*** concept so that the vulnerable population of the State does not have to run from pillar to post and repeatedly provide the same and identical documents for different schemes. On the supply side, human resources have been employed for a one time exercise to capture the data sets and later only to update and maintain them.

SPR, Allied core databases of BPL, SC/ST, PwDs, Labour and the Scheme Automation MIS has facilitated quick and informed decisions and sanction of benefits

- o Eliminate frauds ,bogus and duplicate beneficiaries
- o Prompt and proactive services to the eligible beneficiaries
- o Person/specific monitoring in place of number based monitoring
- o Identify the persons/families that are not getting the benefits that are legally due to them (for eg. SC/ST/OBC/ CWSN children not getting scholarships)
- o Transparency and digitized information of beneficiaries, Better monitoring, control and implementation

**(i) To organization/Government**

**The project has also allowed the adoption of Entitlement based approach of governance as per the following:**

The 'Entitlement' means Benefits guaranteed to an individual, such as dividends for shareholders or government aid for those who qualify. The integrated and verified database of the families has all the attribute information required to confirm the eligibility and entitlement of any scheme. It also stores the history of the

benefits already extended to the individual/family for other schemes by other departments/agencies. Thus the database throws the list of the individuals entitled for a certain scheme. The concerned agency/office can now proactively approach the individual and extend the benefits after completing the verification and bare minimum formalities. Thus the person/family gets the benefits even if it was not aware of the scheme. Thus, in case of entitlement based approach since the probable eligible person is known, instead of waiting for the eligible person to stand in queue and applies, the government machinery proactively verifies the eligibility and provides the services to the citizen. In the holistic approach if the universe is known i.e., details of all families/residents, and basic attributes of all citizen, the software throws the entitlements of the citizens using certain variables. In a planned way the officer in charge of the scheme can transparently verify the credentials of the citizen thrown by the software based on the attributes fed in the software and sanction the benefit which is due to the citizen instead of waiting for the eligible person to run pillar to post.

- The system has allowed creating a common, Self-learning and integrated platform that can be used by any department of State/GoI to run the MIS for the automation, online efficient and effective implementation of all family and individual beneficiary oriented schemes.
- Currently the platform is actively being used by various departments like Rural Development, Urban development, School Education, Social Justice, Tribal Welfare, Sc Welfare, OBC & Minority Welfare, Revenue, Transport, Health, Labour for the implementation of their schemes. Agriculture, Fisheries, Animal Husbandry Department are expected to be on board very soon.
- Streamline and automate the back-end processes for efficient and reliable and timely service delivery.
- Create an integrated database of the residents and all families of the State that would enable a single point access to a variety of Government services
- 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 quick and informed decisions and sanction of benefits
- Track the history of benefits being provided to a single individual from birth to death
- Track the benefits being provided to a family
- Eliminate frauds and bogus beneficiaries
- Eliminate the possibility of same beneficiary availing the benefit of schemes of same nature from different departments/boards
- Prompt and proactive services to the eligible beneficiaries
- Person/specific monitoring in place of number based monitoring
- Identify the persons/families that are not getting the benefits that are legally due to them (for eg. SC/ST/OBC/CWSN children not getting scholarships)
- Systems calculates the eligibility of the pensioner for better scheme every month and automatically switch him/her to better scheme without involving any manual work.
- Transparency and digitized information of beneficiaries.
- Better monitoring, control and implementation

**(ii) To citizen**

- Entitlement based Model of governance allowed the citizen to be sure of his dues/benefits
- Convergence of schemes and single service delivery point for similarly placed schemes under one nodal department has facilitated hassle-free delivery to the citizens.
- 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.


The project has been highly successful in achieving the objects and proving the concept of the Integrated and holistic 'SAMAGRA' approach for running the schemes on the population register. It offers several G2G, G2C services. It has helped in benefits to the all sections of the society and specially population belonging to the following categories

| | |
|---|---|
| BPL, SC, ST, Labour and other categories of families that are getting the benefit of Subsidized ration under the provisions of the National Food Security Act | over 5.43 crore residents, over 1.16 crore families |
| Students that have got the benefits of the scholarships | Over 85 lacs |
| Pensioners | Over 33.32 lacs |
| Persons with Disabilities | Over 4.90 lacs |
| Labour of unorganized sector | Over 34 Lacs |
| BPL families | Over 65 Lacs |

# "Online Tracking System for Missing & Vulnerable Children (TrackChild)"

**Department of Child Development, Women Development and Social Welfare, Govt. of West Bengal**

| | | | |
|---|---|---|---|
| **1.** | Name of the State | : | West Bengal |
| **2.** | Name of the Host/Owner Organization | : | Department of Child Development, Women Development and Social Welfare, Govt. of West Bengal |
| **3.** | Status of the Host/ Owner Organization | : | Department of Child Development, Women Development and Social Welfare |
| **4.** | Name of the Project | : | Online Tracking System for Missing Children ('TrackChild') |
| **5.** | Name of the Nodal Contact Person | : | RoshniSen, IAS |
| **6.** | Contact Address | : | RoshniSen, IAS<br>Secretary to the Govt. of West Bengal, Department of Child Development, Women<br>Development and Social Welfare,Govt. of West Bengal,BikashBhavan, 10th Floor, North Block Sector – I, Salt Lake City, Kolkata – 700 064<br>West Bengal |
| **7.** | Contact No. | : | 033- 23341563, +91 9432331563<br>Fax: 033- 23341918<br>Email: secdsw@gmail.com |

**8. Project Summary**

'TrackChild' portal provides an integrated virtual space for all Police & ICPS stakeholders which includes Police Stations, District Crime Records Bureau (DCRB)/Police Commissionerates, SPs, State Crime Records Bureau (SCRB), Crime Investigation Department (CID), Child Care Institutions (CCIs), Child Welfare Committees (CWCs), Juvenile Justice Boards (JJBs), State Child Protection Society/Units and District Child Protection Units (DCPU), District Collectors etc. in the 36 State/UTs. It also provides a networking system amongst all the stakeholders and citizens to facilitate tracking of a "Child in distress". It requires data entry and updating at various levels such as Police Stations, Child Care Institutions (CCIs)/Homes, Shelters, Child Welfare Committees, and Juvenile Justice Boards etc. **The system has also been extended to District Collectors & Superintendent of Police.**

"TrackChild" is an online platform for immediate dissemination of "Missing/Found Children" data amongst stakeholders including citizens. The process may be found below:

a) When parents/guardians lodge "Missing Children" complaints at Police Station, the duty officer registers the FIR & uploads the information in the portal which becomes immediately available to all other stakeholders including citizens. Police can search all India "found children's" database as well as "CCI children" database.

b) Similarly, the CCI officials can search entire countrywide "Missing Children database" to find possible match. When the match is found, SMS alert goes to the concerned Police Station, CWC etc. Family tracing / reunification becomes easier then.

c) CWC/JJB can facilitate inter / intra state restoration of children produced before them. They can efficiently monitor the CCI children using e-Files. Order generation also gets facilitated through "TrackChild".

d) Parents are able to search the "Missing/Found Children" database directly without any dependence on

concerned authorities. Parents receive SMS alerts when the case is uploaded in the portal by Police and when 'match' is found. They can even search 'case status' online.

e) Citizens can take a proactive role in finding 'missing child' as they can provide information about a 'missing/ sighted child' to Police, search the database for a possible match. The all India child protection resource directory can also be viewed by them.

In the process, it is the "Children" who loses the 'safety net' gets benefited 'the most' from the system. It ensures 'family reintegration in shortest possible time & with minimum trauma'.

**The process flow of "TrackChild" has been depicted below:**

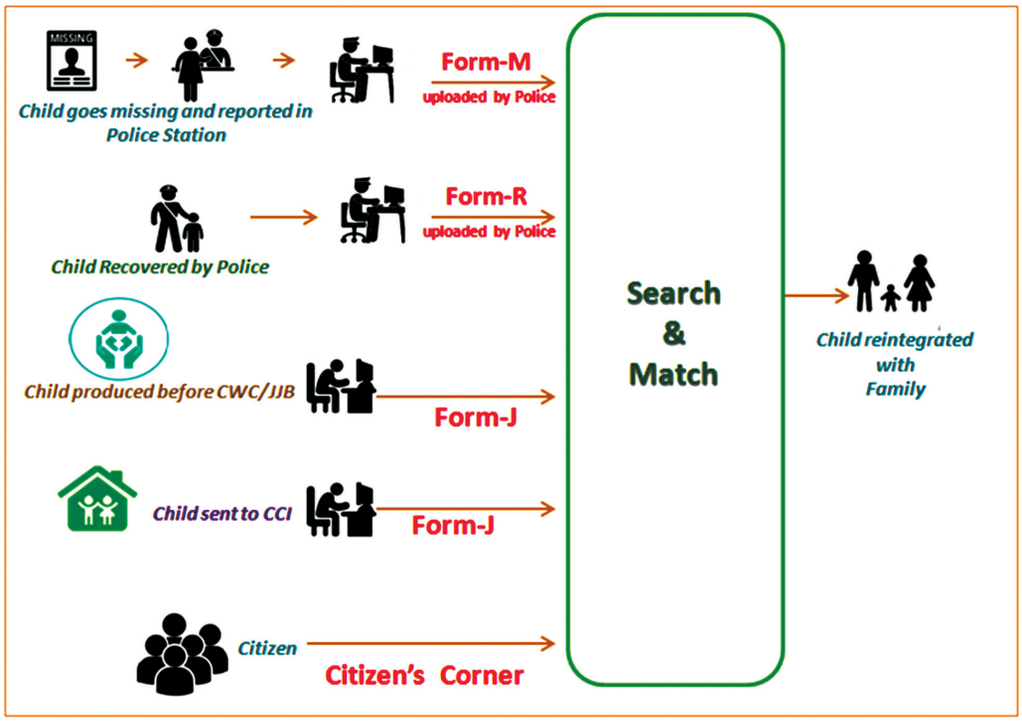



**Fig 3:** How TrackChild Works

## 9. Launch of project

The problem of "Missing Children" has been a great concern for Governments for quite some time. The family whose child is lost, gets devastated by the tragedy and parents seldom recover from the agony and wait eternally looking for their 'child' to return someday! A child who goes 'missing' is out of the 'safety net' and vulnerable to various kinds of exploitations. In a country like India having diversity in terms of vast geographical terrains, cultures, languages, it is extremely difficult to locate a child who goes "missing". If the child is very young and unable to communicate details of his/her native place, it is extremely difficult to reunite him/her with the family even if he/she is recovered. A considerable number of missing children actually gets trafficked. Various studies show that "Human Trafficking" has become a 'billion dollar' industry and after 'narcotics' it is the most dreaded form of 'organised crime'. The issue of "Missing Children" has complex dimensions in a state like West Bengal, which has more than 4000 kms of international border with 3 countries, namely, Bangladesh, Nepal & Bhutan. It is also identified as a source, transit & destination for human trafficking.

It was felt by the Government of West Bengal that there is a need to harness the prowess of Information & Communication Technology tools to tackle the problem of "Missing Children". There is a need to timely record the information of 'missing' and 'found' children and to immediately disseminate the information to all stakeholders concerned through various media. There is a need for a single database where all information needs to be recorded and searched for a possible 'match'. The process re-engineering need was also felt as it was evident that there was a need

to rope in a larger number of stakeholders to effectively search, recover, match & reunite the "Missing Child" with the family. In a nutshell, there was a paradigm shift in looking at the problem of "Missing Children". Traditionally, it was the duty of Police Stations to record the 'missing' diary and the duty of CID (at state level) to publish the 'photo' of the "Missing Child" in print and electronic media. In 2003-04, the West Bengal Police and National Informatics Centre joined hands to launch an ICT based initiative to track "Missing & Found" children which was implemented in every Police Station throughout the State. This is the first time, perhaps, in the country when the information of "Missing / Found" Children were getting recorded in a central database immediately after lodging the complaint at Police Stations by parents / legal guardians. The information becomes available instantly in the public domain. In 2006-07, after the 'Nithari' incident, the Govt. of India was searching for an ICT based solution for locating "Missing Children" and selected **West Bengal for a pilot implementation**. The Department of Child Development, Women Development and Social Welfare, (CD, WD & SW) Government of West Bengal was selected as the nodal department for implementation of the system. Accordingly, NIC-WB has designed the prototype model of **"National Missing Child Tracking System"** and implemented it in all Police Stations (506 nos) & JJ Homes (47) of West Bengal. The portal **www.trackthemissingchild.gov.in** was launched in 2008. After seeing the success of the system, the Ministry of Women & Child Development, Govt. of India has decided to adopt the system and launch it nationally in 2012.

'TrackChild' portal has been designed and developed adhering to the guidelines provided in Juvenile Justice (Care and Protection for Children) Act, 2000 and its amendment Act, 2006, Model Rule 2007 and the provisions laid down under the Integrated Child Protection Scheme (ICPS). It has been upgraded from time to time following various guidelines of the Hon'ble Supreme Court of India in ***'BachpanBachaoAndolan v. Union of India &Ors, W.P (Civil) No. 75 of 2012'***.

The system has been upgraded to "TrackChild 2.0" in 2013-14 to enhance its capability.

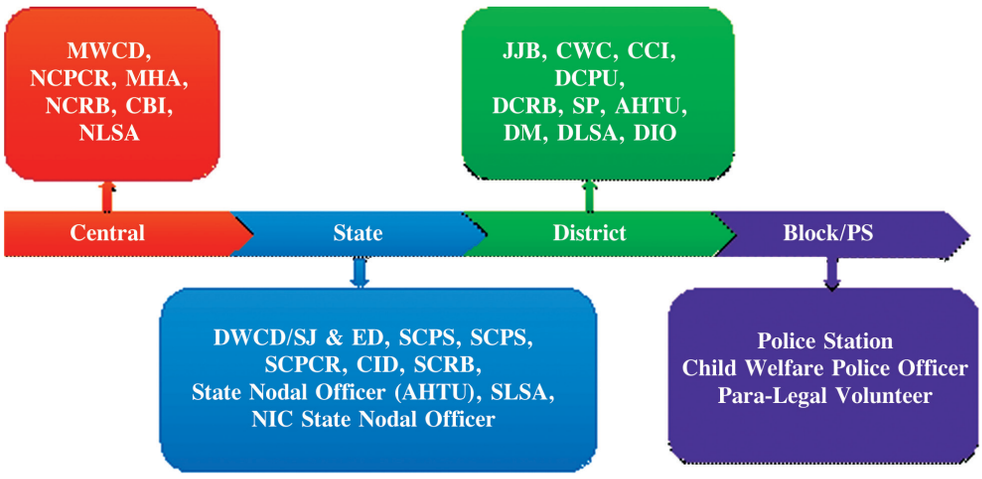
The Ministry of Home Affairs as well as CBI also issued advisory to all States & UTs advising them to use the system mandatorily. The national software development & support centre remains with NIC, West Bengal.

**"TrackChild" is a unique "e-Governance" initiative where the pilot programme has been successfully implemented at first and then the system has been rolled out nationally. All State / UT Governments have also adopted the system.**

## 10. Coverage

The 'TrackChild' system is available to any citizen from each and every corner of the country through internet or mobile technology. Now this portal is running in different law enforcement agencies, ICPS bodies, legal services authorities etc. of 36 states/UTs of India. Near about 17, 000 Police Stations, 618 Child Welfare Committees & Juvenile Justice Board, 5750 Child Care Institutions, 650 District Child Protection Units, District Legal Services Authorities and 36 State Legal Services Authorities of all over the country are the major stakeholders of this portal. Recently, the system has also been extended to District Collectors & Superintendent of Police.

The broad spectrum of stakeholders of "TrackChild" at various 'levels' has been depicted below:



The senior officials of law enforcement agencies can monitor the progress of tracking all missing and found children. On the other hand, the entire hierarchy of ICPS bodies can monitor the overall progress & development of children who are coming in contact with the JJ System of the country though this portal, while they are living at various CCIs.

## 11. Beneficiaries of the Project

Each citizens of India especially those who have lost their child, are the beneficiaries of this project.

Statistics from 01.01.2016 to 31.08.2016 shows that 1,30,866 children are recorded as missing, 1,01,780 children are recovered by police and 91,702 children are matched all over the country. The overall progress & development of 2,28,836 vulnerable children are being monitored very easily by the different ICPS bodies through this system.

On the other hand, this system provides searching facility on the national database of missing and recovered children to the stakeholders. This system also provides the facility of missing and found information sharing amongst its stakeholders and citizens. Thus, it reduces the effort of missing child's family tracing and reintegration process.

## 12. Problem statement or situation before the initiative

Earlier, there was no data / information available on "Missing Children" readily available. The complaints of "Missing Children" lodged at Police Stations were hardly compiled and shared with other Police Stations let alone with other child protection service providers.

India being a country of diversity in terms of vast geographical terrains, culture, languages, the problem of "Missing Children" has taken a different dimension. The "human trafficking" aspects have also made the issue more complex. The horrific "Nithari" incident shows that there was no concerted effort from law enforcement agencies, organisations dealing with child protection to track the "Missing Children".

It was evident that co-ordination amongst law enforcement agencies, organisations dealing with Child Protection, related Govt bodies and citizens at large to track a "Missing Child" was not present.

Under this backdrop, the project was conceived.

## 13. Project Objective

The major objectives of this portal are –

1. To ensure ultimate repatriation and rehabilitation of the missing children and women
2. To ensure proper care and development of CCI living children
3. To set-up a framework for participating organization involve in the process
4. To set up a web-enabled Child Protection Management Information System (MIS) for various ICPS bodies

## 14. Project scope approach and methodology

The Dept of CD, WD & SW organized nos of brainstorming sessions with various stakeholders to finalise the workflow of the system. Since, the NIC-WB has already developed a system for tracking "Missing Persons" way back in 2003-04, the experience came in handy while developing the prototype of the National Tracking System for Missing & Vulnerable Children.

Once the prototype launched in 2008, regular review meetings held between the Dept of CD, WD & SW and Police Authorities to review the progress of implementation and identify areas of concerns. A massive capacity building & change management initiatives were taken to reach officials who are working at the grassroots.

After successful implementation of the pilot system, it was rolled out nationally.

**15. Result achievement/value delivered to beneficiaries of the project and other distinctive features/accomplishments of the project**

**A. Citizen centricity & relevance:**

**'TrackChild' provides various e-Services to the citizens as well as the stakeholders:**

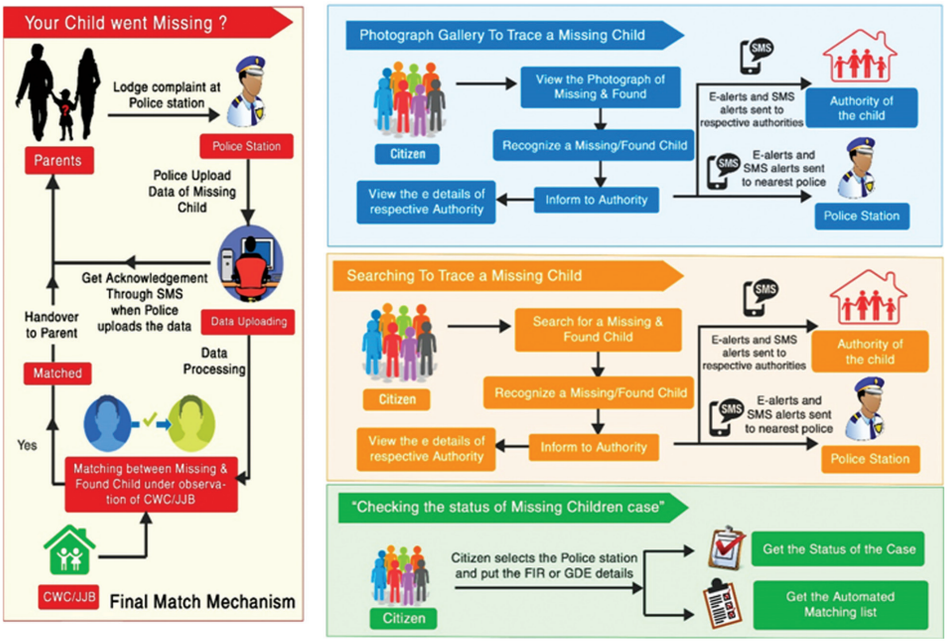
**Government-to-Citizen:**

1. Online submission of "missing / found" child complaints
2. Photograph database of missing and found children for citizen viewing
3. Online checking of "recovery" status a missing child
4. SMS alert
5. Advance searching facility
6. Multi-lingual home page for better understanding of usefulness of the portal
7. Online Child Protection Resource Directory which includes Police Stations, Anti Human Trafficking units, CCIs, CWCs and JJBs etc.

**In order to support the Citizen Services, various G2G services were also designed:**

**Government -to- Government:**

1. Centralized Database of Missing and found children
2. Virtual workspace for 16,928 PS and others law enforcement agencies like CID, DCRB etc.
3. Virtual workspace for 5,675 CCIs, CWCs, JJBs, and DCPUs in to one system
4. Advanced searching mechanism
5. Multi-lingual data entry forms
6. Automated Matching system
7. Automated SMS alert system at various levels
8. Online MIS reports generation
9. Online Technical support system




**Schematic diagram of e-Services**

**B. Accessibility:**

Keening in mind the accessibility of this portal from anywhere, a light weight citizen centric mobile version has been launched. Multilingual facility (available in English, Hindi and Bengali) of this portal is also available to make this portal more user friendly. Different e-alerts through SMS and email have incorporated in this system to increase the rate of real time tracking and monitoring. Times to time campaigning are running about missing children, human trafficking and utilization of this portal for increasing the citizens' awareness. Stakeholders are being trained in a regular interval with Upgradation this system for better handling this system.

**C. Cost to user:**

The system is available in internet platform. There is no additional cost involved to access the system for citizens. There is also no cost involved for stakeholders.

**D. Sustainability:**

The system has been developed by NIC-WBSC & the operational support services are also being provided by them. It has been deployed in National Data Centre. There is no additional cost regarding hosting or deployment of the system.

The TrackChild system is being used by Hon'ble Supreme Court of India to monitor the progress of tracking of "Missing Children" of the country. The MWCD & MHA also asked the States & UTs to use of this system mandatorily to upload "missing" & "found" children's data & to match them.

**E. No of Users:**

Police Stations: 16849

Child Care Institutions: 5435 and other law enforcement agencies and ICPS bodies (All India) CWC, JJB, DCRB, AHTU, DCPS, DLSA, District Magistrates / SPs of all Districts.

**F. Localisation of contents:**

i) Multi-lingual homepage (English, Hindi & Bengali ) for Citizens

ii) Online Forms are available for Police, JJ Home Officials in several languages like Hindi, Gujarati, Tamil, Bengali etc other than English

**G. Other distinctive features/accomplishments of the project**

i) Integrated Workflow including Dynamic Matching facility

ii) Child Protection Resource Directory for citizens & Stakeholders

iii) e-Alerts through SMS and Emails

iv) Advanced Searching facility of missing & found database

v) Customizable search agent

vi) Dynamic MIS for Monitoring & Decision making

vii) Photograph Matching System for missing & found Children (Beta)

viii) The portal has registered 2,64,614 missing children, 1,60,188 found children, 3,90,290 vulnerable children. So far, 1,33,088 children could be matched. (as on 27.09.2016, since inception)

# Farmer Registration (FR) & Paddy Procurement Automation System (P-PAS)

**Food Supplies & Consumer Welfare Department,**
**Department of Government of Odisha**

| | | | |
|---|---|---|---|
| **1.** | Name of State/Ministry | : | Odisha |
| **2.** | Name of the Owner Organisation | : | Food Supplies & Consumer Welfare Department, |
| **3.** | Status of Owner Organisation | : | A Department of Government of Odisha |
| **4.** | Name of the Project | : | Farmer Registration (FR) & Paddy Procurement Automation System (P-PAS) |
| **5.** | Name of the Contact Person | : | Madhu Sudan Padhi, IAS, Principal Secretary |
| **6.** | Contact Address | : | Qr. No.-VIB-1, Medical Campus, Unit-6, Bhubaneswar-751001 |
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**8. Project Summary:**

In Odisha, over 70% of the population are engaged in Agriculture. Paddy is the main crop both in Kharif and Rabi season (limited to irrigated areas). Procurement of Paddy at Minimum Support Price for providing rice for the Central Pool is the major source of marketing for paddy farmers. It is in fact one of the key drivers of rural economy with procurement of over 50 lakh MTs of paddy every year.In last 5-6 years,this operation has ensured transfer of over **Rs.6500 Crores**(on an average) to account of farmers every year.

Odisha has signed an MOU with Government of India to become a Decentralised Procurement (**DCP**) State since Kharif Marketing Season (**KMS**) 2003-04. Under DCP, the procurement operation involves many stakeholders starting from Central Government, State Government, State Agencies, Primary Agricultural Cooperative Societies (**PACS**), Food Corporation of India (**FCI**), District Central Cooperative Banks (**DCCBs**), Odisha State Cooperative Bank (**OSCB**),Commercial Banks, Rice Mills, Handling and Transport Contractors apart from lakhs of farmers. Other Departments of State Government like Revenue & D.M. Department and Co-operation Department apart from Food Supplies and Consumer Welfare Department are involved in the procurement operation at various levels.

Till Kharif Marketing Season 2012-13, all procurement operations were being done manually across Odisha. Different districts were following different documents to identify farmers. There was no uniform document to identify farmers. Some districts issued Farmer Id Cards (FICs) in every season resulting in delay & harassment to the farmers. FICs could not remove the problem of Ghost & Duplicate farmers as they were not unique.**Secondly**, there was no single formula to calculate the surplus paddy available with the farmers. Nor was this information available at District or State level. Farmers were often at the mercy of PACS Secretary and local rice miller for selling his/her paddy.

**Thirdly**, the farmers never knew as to how much paddy they can sell to the society. In some cases, the procurement operations used to be stopped all of a sudden without any notice leaving the waiting farmers high and dry. **Fourthly**, releases of cost of paddy to farmers were taking long time mainly due to delay in collection of cheques. This often forced farmers to sell his/her paddy to traders as requirement of funds after harvest was very high for farmers.**Lastly**,

no one in the hierarchy had any idea about the progress of paddy procurement or requirement of funds as reporting system was manual and information took long time to reach decision making levels.

Farmers Registration (**FR**) Project was taken up to create an unique digitised database of farmers interested in selling their surplus paddy to State Agencies along with their bank account details. It was meant to capture their cultivated land details so as to calculate their surplus paddy .This database was verified & authenticated by concerned banks for account details and revenue officials for land details. Later, the Bhulekh database maintained by the Revenue Department was integrated to verify the land details online and to authenticate them from Rabi season of 2016. Details of existing photo IDs like Voter Card or Kisan Credit card or Health Insurance (BKKY) card were collected for genuineness. In addition, Aadhaar numbers were collected for ensuring a clean farmers database so as to remove any fake or duplicates.

Paddy Procurement Automation System (**P-PAS**) project used the output of FR project as its input through a web service. Its objective was to digitise the transactions of paddy procurement happening at thousands of Mandis with an objective to make the entire transaction process efficient, transparent and error free.After purchase of paddy from the farmers at the Mandi, the PACS have to transfer the paddy to the Rice Mill(s) assigned to it through vehicles. All documents like advance token, Vendor receipt, vehicle challan, Paddy Acceptance (**AC**) Note, paddy purchase register etc. which were being prepared manually earlier were made available digitally by the project.This not only reduced the time taken to prepare the documents but also made the reconciliation process easy and quick. It also ensured direct transfer of cost of paddy to the bank accounts of the farmers in much reduced time by the DCCBs & commercial banks.

## 9. Date of launch of the project:

Though P-PAS was initiated in KMS 2013-14 in 4 Blocks, but Farmer Registration was implemented from KMS 2014-15 and therefore, the project in totality has been launched from 1st November'2014 in major part of the State.

## 10. Coverage (Geographical):

The two projects FR & P-PAS have been scaled up across the State in different manners. That is because the FR project was meant to create a clean digitised farmer's database and the PACS could use either their resources or the cyber cafes or CSCs to key in the data. Rest of the activities of verification & authentication were followed up at the District level. Therefore, FR project could be scaled up at one go across the State from Kharif of KMS 2014-15 after pilot testing it in Rabi season of KMS 2013-14 in 10 Districts.

On the other hand the P-PAS, being a transaction based web application, it required more resources like computer, connectivity and trained manpower at the PACS/Mandis itself. The pilot testingfor P-PASapplicationwas initiated in one Mandi (Godbhaga) ofBargarh District in April'2013. Subsequently, it was extended to 4 high procuring Blocks of Sonepur, Bargarh and Bhadrak Districts in KMS 2013-14. It was further extended to 60 Blocks (of 24 districts) procuring **54% of total paddy** in KMS 2014-15. In KMS 2015-16, it was extended to 160 high procuring Blocks(of 30 Districts) procuring **84% of total paddy** in the State. In KMS 2016-17, the same is being extended all the 294 paddy procuring Blocks of the State. The details of coverage of two projects in last two kharif marketing seasons (KMS) are detailed in the following table:

| Sl. No. | Parameters | KMS 2014-15 | | KMS 2015-16 | |
|---|---|---|---|---|---|
| | | State Total | Procurement through P-PAS | State Total | Procurement through P-PAS |
| i | No of Districts | 30 | 24 | 30 | 30 |
| ii | No of Paddy procuring Blocks | 293 | 60 | 294 | 160 |
| iii | No of PACS/LAMPS in PP | 2262 | 576 | 2507 | 1606 |
| iv | No of Farmers who sold Paddy **(in Lakhs)** | 5.92 | 3.24 | 6.90 | 4.96 |
| v | Quantity of Paddy Procured **(in Lakh MT)** | 52.50 | 28.26 | 50.80 | 42.50 |
| vi | **Cost** of Paddy **(in Rscrores)** | 7087.50 | 3815.10 | 7162.80 | 5992.50 |
| vii | **Percentage** (%) of procurement through P-PAS | **53.83** | | **83.66** | |

## 11. Beneficiary of the Project:

More than 7,50,000 farmers organised under 2552 PACS (Co-operative Societies) of 294 Blocks across 30 Districts of Odisha have participated in registration process. Apart from farmers, PACShave also benefitted from the initiative as they have used the two application modules to make their procurement process efficient& transparent. The eighteen DCCBs &the OSCB have improved their fund management & reconciliation processes. State Procurement Agencies like Odisha State Civil Supply Corporation (OSCSC), Tribal Development Cooperative Corporation (TDCC), MARKFED and NAFED have also benefitted from the projects as their paddy procurement operations have become error free and efficient. Reconciliation of stock and funds with Mills, PACS & Banks have become easier and quicker.

## 12. Problem Statement…

The existing paddy procurement process prior to initiation of the FR &P-PAS projects had many problems. The major among them were:

a) There was **no advance assessment of surplus paddy** available with the farmers or under PACS in their catchment area. As a result, no advance planning for procurement at PACS level was possible. The Districts had no data regarding surplus paddy available within jurisdiction of a PACS and often distributed targets just on intuition or last years' performance or equally among all societies. Related to the problem was anxiety of the farmers as they were never sure as to when and what quantity of paddy they can sell to their PACS.

b) **Farmer's ID Card**(FIC)was an area of concern as no single ID was used across the State. Different Districts used to follow different documents for identifying farmers. SomeDistricts used to print FICs afresh for each season so as to stop its' misuse. This not only created extra work for the Revenue authorities who used to issue them but resulted in long delays & harassment to the farmers.FICs could not remove the problem of Ghost & Duplicate farmers as they were not unique.

c) **Lack of monitoring of progress of procurement** was one of the major lacunae of the manual system. This was due to huge information gap between the actual purchase of paddy and the information reaching the District or State offices. It used to take weeks to get the procurement progress of a PACS to reach State headquarters. The information regarding availability of target for purchase or funds with the PACS were never up to date. As a result, some PACS would be sitting pretty with targets & funds but no paddy to purchase while others would be starving of same.

d) **Delay in payment to farmers** was caused mainly due to delay in crediting of cheques especially in commercial bank accounts. In the manual system, PACS issued Account payee cheques to farmers. All these cheques belong to the DCCB of which the concerned PACS was a member. If a farmer had an account in a commercial bank (as over 50% of farmers had), it often took couple of weeks to en-cash after deposit of that cheque by the farmer. This defeated one of the key procurement objectives of timely payment to the farmers.

e) **Delay in reconciliation** of paddy stock and funds caused delay in finalisations of accounts of the State agencies.As PACS deliver paddy procured from the farmers to the rice mills, reconciliation of paddy stock between the societies (PACS) and mills was essential but was taking long to complete due to manual process. Same was the situation in fund reconciliation between OSCSC/ other State agencies with DCCBs/OSCB. This delayed the finalisation of accounts of these agencies by over two years.

f) **Documentation of the farmer data**which were to be digitised as per DCP MOU requirements so as to eliminate fake purchases used to take months to compile even after close of Kharif Marketing Season. Such digitised farmers data was never used for the purpose for which it was documented.This was found out when the Government of Odisha decided to give "special calamity assistance" to farmers of Rs 100 per quintal of paddy up to 100 quintalsafter the very severe cyclone "**Phailin**" in October'2013.Getting the farmer's data and their bank account details took long time and it was seen that there were many gaps like one farmer selling under various names but with one account or many accounts and vice versa.

g) **Lack of transparency** in the whole process of paddy procurement created suspicion in minds of stakeholders especially farmers regarding the fairness in the process. The entire process was either PACS centric or Miller centric leaving the farmers in the lurch.

## 13. Project Objectives

The objectives of the two projects FR & P-PAS were different but both aimed to make the paddy procurement process farmer centric. It placed convenience of the farmer at centre of the entire procurement operations. These are as under:

**A) Farmer Registration**

a) To create a **clean and permanent database** of farmers cultivating paddy along with their bank account details and to eliminate fake farmersin the process

b) To assess the **quantum of surplus paddy** available with each farmer willing to participate in procurement operations,

c) To **manage the procurement process** under a PACS in an orderly manner by providing advance token to registered farmers based on the surplus paddy available & the capacity of PACS to handle paddy in a day.

d) Toensure **Minimum Support Price**to farmers for their FAQ paddy which they offer to sell at the Mandi,and

e) To **assure** allthe registered farmers for procuring their entire surplus during the period of procurement.

**B) Paddy Procurement Automation System (P-PAS)**

a) To reduce the paperwork at Mandis/PACS by digitising all manditransactions so as to improve efficiency and make process error free.

b) To reduce the information gap between actual paddy purchase in mandis and its information reaching the District& State offices.

c) To ensure quick and error free reconciliation between stakeholderslike PACS & Mills, Mills & State Agencies, State Agency & PACS etc.

d) To ensure direct transfer of paddy cost to the bank account of farmers with use of DSCs by PACS & DCCBs.

e) To bring transparency into whole system & across all stakeholders

## 14. Project Scope, Approach & Methodology

### A) Farmer Registration Project:

This project was developed to create a clean &correct database of farmers cultivating paddy and willing to sell their surplus fair average quality paddy to the State agencies through the PACS. The scope of the project was to cover all such willing farmers in all societies/ PACS across the State. Prior to launching of the FR module, jurisdiction of each of the PACS/societies was delineated so as to cover all revenue villages of the State. If there were any gaps due to non-functioning of PACS, same area/villages was allotted to a Pani-Panchayat or a Women SHG to do the procurement operation starting from farmer registration.

The approach to create such a database was to involve the PACS/societies in the process as they were major beneficiaries of the project. The data collection and digitisation was proposed to be done through a crowd sourcing method where each farmer would provide the details like personal information, bank account info & cultivated land info in a pre-designed form to his/her PACS along with documentary proof.

With inputs from key stakeholders, the Farmer Registration form was designed. It was validated in several meetings with district officials.The form along with instructions were sent to all district officials from the FS& CW Department with timeline to start the data collection & digitisation process in all societies across the state All the stakeholders were trainedin several rounds prior to the implementation.

The registration form is issued to each farmer by the PACS/Society and they are also guided by the society to fill it up correctly.It is the responsibility of the PACS to digitise the filled up forms submitted by the farmers after some preliminary scrutiny of the form with that of the documents like bank passbook copy & record of rights (ROR) copy. The farmer data is digitized by the Cooperative society/PACSunder login and passwordin theweb based Farmer Registration modulevisible in the homepage of the FS&CW Departments website www.foododisha.in.

Land information derived from the land information provided by farmers &entered by PACS is collated for a revenue village and RI circle by the FR application module. The Revenue Inspector (RI) wise is generatedfrom the FR module for verification by concerned Revenue Inspectors. Similarly, the Bank account information are collated Bank and branch wise and reports are generated for verification by concerned Bank Branches. After verification,District official login was provided to update the farmer database by incorporating the changes/corrections made by the Banks/RIs.

A unique farmer code is generated for each farmer after digitisation, verification and updating of changes made by Banks & RIs. Once all the changes are incorporated in the database,*Paddy Assessment Register* is prepared automatically by the module for each society/PACS.A farmer can know the status of his registration and surplus paddy eligibility by the unique farmer code from transparency portal in Food Odisha website. This data is shared with P-PAS (Paddy Procurement Automation System) for paddy procurement (PP).

The registration process for farmers was initiated on pilot basis in Rabi season of KMS 2013-14 across state in 11 districts. About 500 societies participated in the process. Data of around 2.3 lakh farmers were collected and digitised. The inputs from the field helped to make the FR application more user-friendly and robust.For the next season, this database became the foundation DB for farmers. Each of them(old farmers) could modify the fields in the pre-printed registration form but new farmers had to fill in the new registration form for digitisation.

The farmer registration process flow has been detailed as under:


Different MIS reports regarding farmers' registration are placed in the Food Odisha portal for monitoring various activities of FR module.

**B) Paddy Procurement Automation System (P-PAS)**

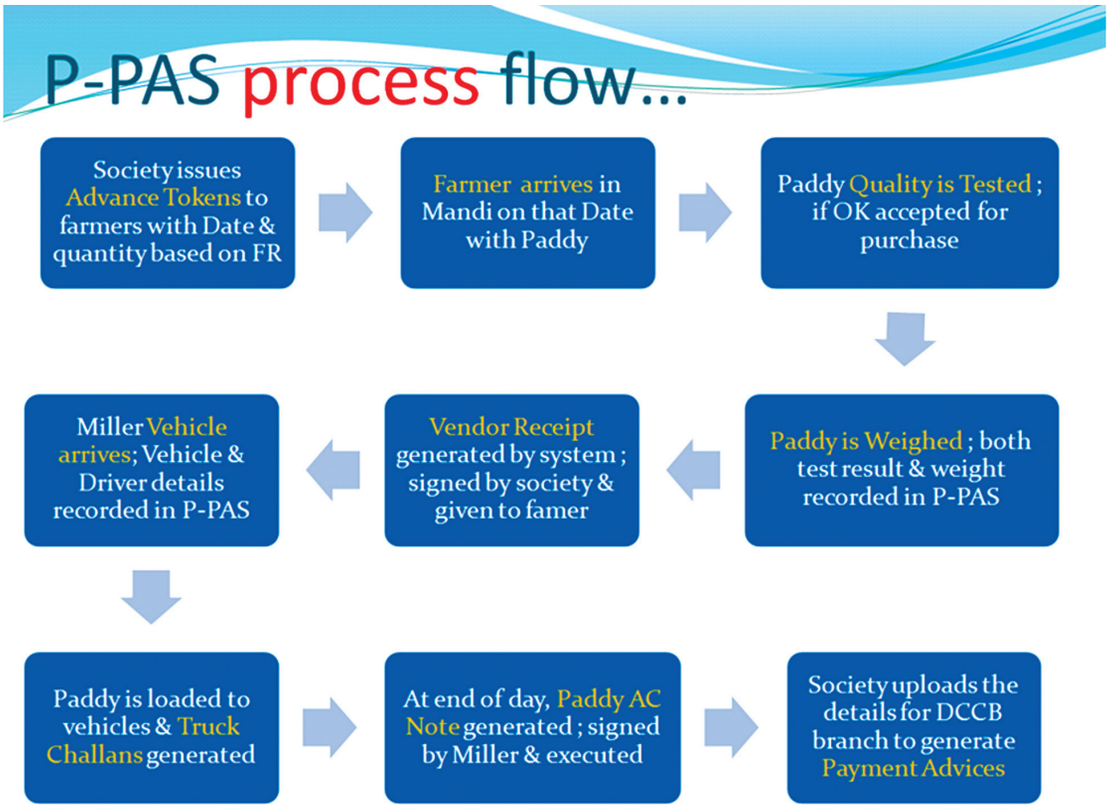
The **scope** of P-PAS project was to digitise all transactions at the Mandi where farmers brought their paddy to sell and to upload the same information to the internet for monitoring and follow up.It uses the updated& corrected database of Farmer Registration module as its input. It also uses master databases of societies/PACS and Rice Mills to

The **approach** of the project was to study the transaction processes at the Mandi and to digitise them so as to reduce the workload and prepare error free documents in quick time. This was done in one Mandi (Godbhaga) of Bargarh district in April'2013 to develop the application.

Documents like Advance Token, *Vendor Receipt* (both given to farmers) and Vehicle Challan & *Paddy Acceptance (AC) Note* (both given to Millers) are generated from the system at the Mandi. The P-PAS application also generates Paddy purchase register which was never up to date under manual system in most Mandis. *Payment advice* for each farmer is generated at Cooperative Society/PACS level in the system. The same is transferred to the linked District Central Cooperative Bank branch online and payment is made directly to the accounts of the farmers.

Along with FR module, the P-PAS application ensures discipline in the Mandis by regulating paddy flow as per its handling capacity. After finalizing the Paddy Assessment Register under FR module, the verified farmer list along with their surplus paddy is made available to societies under the P-PAS module. **Advance token** is issued to farmers on basis of verified farmer listby the Society/PACS for each Mandi. On the date mentioned in the token , the farmer

arrives at the Mandi along with paddy. Paddy is purchased from the farmer and a *vendor receipt* is generated from the system in P-PAS Blocks and issued to individual farmer. The process flow of P-PAS application is detailed as under:




On the other hand, in **non P-PAS Blocks**, the society/PACS has to do all transactions manually and issue Account Payee Cheques to farmers. However, all these manual transactions **have** to be entered in the Farmer Registration module later by the Societies/PACS for documentation purpose as stipulated in DCP guidelines issued by Government of India. It is worth noting that all Mandis in Odisha would be adopting P-PAS application module in KMS 2016-17.

The P-PAS application needed internet connectivity to be functional since it was a web based application. However, the availability of internet connectivity and coverage and bandwidth were major constraint and challenges to operate the P-PAS where all **transactions** have to be done online and instruments/documents need to be generated from the system in real time.

Considering **above** constraints, the FS&CW Department developed **two separate software versions** of P-PAS application module; a desktop version **(offline)**to work at PACS level even when internet is not available and a web portal version**(online)**for concurrent access to information by all stakeholders.Only authorized users can avail detail functionality of the system by logging into the system using a valid User ID and Password in relevant links ofwww.foododisha.in.The Secretary of the society/PACS where paddy procurement is done in offline mode has been assigned with the responsibility to sync it with central server on regular basis through his Data Entry Operator(DEO).

While scaling up of FR module was across the State within six months of its pilot testing, the roll out of the P-PAS application was gradual. As P-PAS was a transaction based web application, it required more resources like computer, connectivity and trained manpower at the PACS/Mandis itself.The pilot testing for P-PASapplicationwas initiated in one Mandi (Godbhaga) ofBargarh District in April'2013. Subsequently, it was extended to 4 high procuring Blocks of Sonepur, Bargarh and Bhadrak Districts in KMS 2013-14. It was further extended to 60 Blocks (of 24 districts) **procuring54% of total paddy** in KMS 2014-15. In KMS 2015-16, it was extended to 160 high procuring Blocks(of 30 Districts) procuring **84% of total paddy** in the State. In KMS 2016-17, the same is being extended all the 294 paddy procuring Blocks of the State.

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

The objective of the project has been fulfilled to a large extent by implementation of two projects of FR & P-PAS. There has been positive results with:

**a)** **Increased Efficiency:** Efficiency of the functioning of the PACS/Mandis has increased with the use of the **two** projects. The tasks at the Mandisare performed much quicker than earlier. Data once entered are being used repeatedly. Registers & reports are being generated from the system without any hassles. The cost of paddy being directly deposited in the accounts of the farmers has increased the satisfaction of farmers.

**b)** **Enhanced Accuracy:** After implementation of the System, the chances of manual errors/manipulation by PACS/ Mandi official have been eliminated.

**c)** **Transparency:** All the information related to the transactions recorded in the system is now available in the website of the FS & CW Department (Public Domain) for the knowledge of citizens. It has increased the transparency of the Paddy Procurement Operations and reduced the anxiety of lakhs of farmers.

**d)** **Accountability:** Workflow automation tool in the system provides facilities to record transactions of PACS/ Mandis on real time basis. The systemhelps in monitoring pendency at various levels on real time basis. The higher authorities can review and monitor pendency effectively and take appropriate action quickly. The accountability of stakeholders in the system has increased manifold by the projects.

**e)** **Monitoring:** The system enables the Food Supply and Consumer Welfare Department & OSCSC to oversee the entire system implementation process through state level dashboard and decision support tools.

**Other achievements of the project are in following fields:**

**a)** **Citizen centricity & relevance:** Two projects of FR & P-PAS have brought farmer to the centre of the paddy procurement operations. Farmers are now assured that their surplus paddy will be procured within the procurement period. Currently about 60-90 minutes is taken by a farmer to sell his paddy at the Mandi. It was taking about 4 to 5 hours earlier. Sometimes farmers need to wait for days in the queue. Earlier farmers used to wait for 15-20 days' time to get payment. Now farmers are getting their payment of cost of paddy within 7 days' time.

**b)** **User convenience**: Verified and updated farmer list is available in public domain for farmers to know their surplus paddy quantity. Advance Token system brings in discipline in Mandi operations. Before implementation of the system, all the documents/instruments like Advance Token, Vendor Receipt, Transit Pass, Acceptance Note and Payment Advice were being prepared manually. This used to take hours to complete documentation. Farmers were used to wait for 15 to 20 days to get their payment. After implementation of the system the average time for payment has been reduced to 7 days. The convenience of the farmer has been kept at the centre of both the web based applications.

**c)** **Cost to user**…To avail facility of Farmer Registration or Paddy Procurement Automation System, **no Service Charge** is paid by the farmer. However, the society/ PACS has to spend money to digitise the farmer details. It has to also engage a DEO to operate the P-PAS application. But it gets around Rs.31 per quintal of paddy procured as its commission from the central pool. Thus it has resources to meet the expenses of the new applications. In the process, its work load is reduced drastically and it becomes more efficient and effective.

**d)** **Sustainability…**Both the applications have been developed in latest technology platforms which will provide sustainability to the application in terms of accommodating future technical advancements. Web services are being used to integrate the FR application with P-PAS applications. Other databases like that of Aadhaar and Bhulekh are being integrated with FR database through web services also.

Different stakeholders like ACSO & Assistant Programmers at District level andPACS Data entry operators have been trained regarding the usability of application. Other stake holders like RI,PACSSecretary and Bank representatives have also been trained by the master trainers.

Farmer Registration application is web-based and does not require any additional application to be installed in the PACS, no license required to run the application. Regarding P-PAS application, the expenditure at the PACS level is only manpower cost to run the application. Both the applications are hosted in the state data centre (SDC) which takes care of the maintenance of the hardware. The software maintenance cost is taken care by Odisha State Civil Supplies Corporation from its administrative costs.

e) **Number of Users & Services:** The Farmer Registration application has been used for two seasons. It is now being used to update the farmer's database for KMS2016-17 kharif season. Total numbers of users are about 2600 Societies who access the database for data entry. 30 District offices also use the application for updating the changes reported by banks & RIs. However, over 750,000 farmers access the information about their registration status or surplus trough public domain.

Nearly 2,250 RI verification reports were generated in KMS 2014-15. Each RI verification report contained village wise details of RORs for lands which the farmers had registered.Nearly 5,000 bank branch wise verification reports have been generated for verification of bank account details of these farmers.Every farmer normally sells his/her paddy in two or three phases. The system records every sale instance as distinct sale transaction against the farmer. The Number of Paddy Procurement Transactions during KMS 2014-15 insocieties under P-PAS was approximately 6 Lakhs.

f) **Enhancement of Efficiency:** Efficiency of the functioning of the PACS/Mandis has increased with the use of the two projects. The tasks at the Mandisare performed much quicker than earlier. Data once entered are being used repeatedly. Registers & reports are being generated from the system without any hassles. The cost of paddy being directly deposited in the accounts of the farmers has increased the satisfaction of farmers.

The new system is far more efficient and accurate than the old system. It places the convenience of the farmer at the centre of all activities. The harassment on account of getting a Farmer Identity Card has been eliminated Currently about 60 to 90 minutes taken by a farmer to sell his/her paddy at PPC. It was taking about 4 to 5 hours earlier. Sometimes farmers need to wait for days in queue. Earlier farmers used to wait for 15-20 days' time to get payment. Now farmers are getting their payment only in 7 days' time through payment advice method. Assessment of surplus paddy is possible now which helps in advance planning at all levels. This is very crucial as paddy procurement is linked to meeting the rice needs under Public Distribution System.

g) **Innovation….**Farmer Registration (FR) is the foundation for a project like Paddy Procurement Automation System (P-PAS) that aims to streamline the paddy procurement and reimbursement process in the state. This is first of its type when farmer's details are registered and verified through different departments/agencies to ensure that only genuine farmers get benefitted. This application aims to eliminate the middlemen that used to harass farmers. There are quite a few innovations that have been implemented in these projects:

i) **Transaction Based Application:** Farmer Registration and P-PAS is a workflow automation tool that provides facilities to record paddy procurement transactions of PACS/PPC/Mandis on real time basis. The data of transactions are used in MIS reports for taking various decisions.

ii) **A clean database through Farmer Registration process:** By registering farmers in advance, each society can assess the quantum of surplus paddy available with the farmers in their jurisdiction based on their cultivated area and yield per acre. The same data needs to be only updated season after season thereby reducing the workload to a large extent.

iii) **SMS Alert:** The software application generates an SMS alert on the daily/ progressive performance of PACS. It has the facility to intimate farmer as to when to bring paddy to the Mandi through SMS alert, i.e. like an advance token. The software application also generates an SMS alert on the receipt of paddy by miller from PACS and the same is sent to different stakeholders at State level and District level. The software application generates SMS alert on consolidated daily progress of a block and the same is sent to different stakeholders at State level and District level and Block level. A SMS is also sent to the farmer after the cost of paddy is credited to his account.

iv) **Online-Offline Model of Implementation:** The Paddy Procurement Automation System needed online application to automate the operations. But internet connectivity, coverage and bandwidth were major constraints to operate through fully online system. Considering the above constraints, two separate offline desktop and online web portal components have been developed. A desktop component is developed to work at PACS/PPC even when internet is not available and a web portal component for concurrent access to information by all stakeholders. Provisions have been made to ensure proper synchronization of online and offline data. The connectivity constraint is managed by implementing this online-offline architecture.

**h)** **e-Inclusion:** Farmer Registration application has been provided in local Odia language for the ease of use of farmers throughout the State. Name of the farmers is captured both in Odia&English as the bank accounts have only English names. All numbers are collected&digitised in English. Demographic data like village, tehsil, District etc.have been provided & captured in Odia font for readability of farmers.

On behalf of farmers, societies fill the forms so it doesn't matter if the farmer is disabled. They only have to produce the physical documents for verification at the societies. Paddy Procurement Automation System uses the output of Farmer Registration module as its input

The citizen centric reports like vendor receipt are generated in local Odialanguage. SMS Alerts are sent to farmers on sale transaction and on credit of amount in their bankaccount.

**The Way Forward,,,**

The farmer registration module is now being linked to **Bhulekh**(the land record database) maintained by the Revenue Department. This step reduces the human intervention in shape of RI verification. At the same time it reduces the time taken for such verification.

Second step is to make Aadhaar seeding compulsory as far as possible. Though a timeline has been given to get the Aadhaar number or the enrolment ID to the farmers, it is seen that nearly 95% of farmers have provided their Aadhaar numbers in their registration forms which have been digitised. The related task is to authenticate same with the Aadhaar database maintained by the UIDAI through the State Resident Data Hub (SRDH). This will eliminate any chance of fake or duplicate farmers.

Third initiative would be to credit the cost of paddy directly to the account of farmers from the Odisha State Cooperative Bank (OSCB) centrally without intervention of the DCCBs. This is possible now that OSCB has gone online with its IT solution. This will reduce the idling of costly funds of State agencies like OSCSC to a large extent. It would also reduce the time for transfer of funds to farmers account as same can be done almost on the day of reporting of purchase by the PACS through the P-PAS application.

# Universal Account Number Programme of EPFO

**1.** For the implementation of various schemes framed under the Act, there are three major stake holders in the process of management of funds – the Employee member (beneficiary worker), the Organization (EPFO) and the Employer (the intermediary). As per the provisions of the Act, every employer is required to deduct a specified amount of contribution from his employees' salary and remit the same to EPFO under the three schemes viz., Employees Provident Fund (EPF), Employees' Pension Scheme (EPS) and Employees' Deposit Linked Insurance Scheme (EDLI), along with information pertaining to the number of employees in respect of whom the amount has been deducted, along with their names and respective amount so deducted. The member is identified with a PF Account Number for the accounting of his contributions received in the Organisation. As the PF Account Number of a member has been linked to his employer, it gets a new PF Account Number on change of employment leading to a number of issues as mentioned above.

**2.** To address the above issue, Employees' Provident Fund Organisation (EPFO) has launched Universal Account Number (UAN) Programme for better service delivery to its member. The focus of the initiative was to allot a Universal Account Number to an EPF member, which would act as an umbrella number for his future employments. The said number has been allotted by the Organisation to the contributing members of Employees' Provident Fund Organisation. To make UAN effective and to link service delivery to the UAN, it has been made necessary to seed UAN with various "Know Your Customer" (KYC) details to identify the EPF members directly. KYC details selected for the purpose are Aadhaar, PAN, bank account number and other KYC details i.e. election card, ration card, passport, driving license etc.

**3.** Using this facility, the problems as identified above have been addressed as below:-

(a) The allotment of UAN as single account number has facilitated the EPF member to use the same number through all his employments with various establishments.

(b) The facilities to upload "Know Your Customer (KYC)" details of various documents i.e. Aadhaar, Permanent Account Number etc. have been made available to the members and employers thus enabling the seeding the various authentifiable data to UAN database of members. This has enabled the Organisation to identify the EPF members directly without intervention of employer through the seeded details of various documents.

(c) When an EPF member changes his job, he is required to inform his UAN to his new employer. The new employer furnishes the information through a portal and certifies the credentials of the member using the details of various documents seeded in the UAN database of member. This automatically tags his previous and present employments and triggers the transfer process on its own, in case the seeded KYC credentials are verified digitally by the present employer.

(d) A functionality has been provided to EPF member to register himself on the UAN portal. In the process, his mobile number gets registered with EPFO. The member can check his updated account balance on the portal. The monthly receipt of contribution is also intimated through SMS to the registered mobile number thus enabling the less IT savvy members to get to know their updated balance through mobile governance.

**4.** The Universal Account Number (UAN) programme has been entirely based on the innovative and effective use of Information & Communication Technology under the prevailing IT eco-system. Linux has been used as the Operating System and the portal has been developed in Java. The front end is PHP based and Oracle & MySQL have been used as RDBMS. Thus, the technology platform is inter-operable leading to centralisation

of a large and decentralized ecosystem. The software and hardware used have been planned to ensure cross compatibility.

**5.** The UAN is intended especially for improving the quality of service delivery as well as enhancing the Organisation's effectiveness and the entire program is leveraged to extract the best of the new and emerging technology not only in its internal processes but it has also effectively utilized the ecosystem containing the e-governance initiatives of other agencies such as UIDAI, Income Tax Department etc. This has greatly enhanced the service delivery effectiveness by enabling direct services to the stakeholders. The e-governance initiative has been further strengthened by the introduction of m-governance in the form of mobile app, missed call facility etc.

**6.** The entire IT ecosystem in the UAN programme has been designed to ensure cross compatibility with a readiness for integration with external portals of other government departments and agencies. The software used is generic and open ended, which is not restricted by the bounds of technology or vendor lock-in.

**(a) New Models of service delivery:**

- The implementation process was designed and developed with the view that the information submission through paper mode is not necessary from employer perspective. The electronic interface has been used for all the activities in the programme implementation.
- Another change introduced has been the digitization at the source only i.e. at the employer's end. With the prevalent use of IT in the accounting work at the employer's end, the receipt of electronic data has ensured that the employer does not need to visit the field offices for information submission. It has also ensured that the mistakes that occur due to digitization of information received in paper format at the end of field offices have been done away with.
- The digital verification of data using the digital signature certificates registered with EPFO not only has expedited the process of information submission, but also has ensured the record of the submission activity thereby reducing cost as well as the scope of harassment of the employer.
- The use of mobile governance has been another key aspect of this project. As the availability of internet may prove to be a hindrance for less IT savvy people, the provision of some services through mobile governance i.e. mobile app, missed call facility, intimation of P.F. credits to the account of the member on his mobile phone etc. has ensured that the balance updates of EPF accumulations are in the knowledge of such EPF members, who have registered their mobile number with Employees' Provident Fund Organization. Just a missed call provides the information to user FREE OF COST even to such users who don't have a smart phone and INTERNET facility.

**(b) Measures undertaken for Capacity Building/training**

- Targeted communication – The organizational stakeholders i.e. employers are clearly known and registered on employer portal. As such, the communications were made to each employer through online mode.
- Seminars, workshops and meetings with the employers as well as employees were held at Zonal, Regional and Sub-Regional Office levels.
- Special helpdesks through toll free number and online mode have been setup for this purpose.
- The Organisation's website disseminated elaborate help information on the processes and the project as a whole.

- Extensive coverage in the daily newspapers also contributed to the dissemination of the information on the project.
- Video Tutorials have been made and placed on the EPFO website for the convenience of EPF members and employers.
- Anticipating the need for handholding during the implementation of this initiative, inter-office feedback was sought and separate and dedicated support was made available at the National Data Centre, New Delhi.

**7.** New processes and technology interventions are built around a centralised architecture and have been designed to provide online portal based interactions. These interactions are highly dependent upon third party service providers such as Internet service provider/ MPLS connectivity etc.

**8.** The challenges are being planned to be overcome by inbuilt competition, redundancy and backup mechanisms.

**1. Results achieved/Value Delivered**

➢ **Increased Efficiency of processes and effectiveness of outcome**

The programme has added a lot of value to the three major stakeholders, namely EPF members, employers and the Organisation.

**EPF members:**

- The implementation of this project has ensured that the EPF member has been provided with single Account Number i.e. UAN which would act as umbrella ID for all his employments with different establishments. He can carry this number for his entire working life while being employed with different establishments. With the change in employment, the member has to simply submit his UAN to the new employer for tagging the present employment with his UAN.
- If the identification is digitally verified by the employer using the KYC details of member, the portability process is triggered and the member is not required to make further submission for transfer of his accumulations.
- The seeding of KYC details in the UAN database of member has been implemented with a view to identify the member directly without any intervention of employer. This has facilitated a number of direct services to the member. With the tagging of various services through UAN, the member can get to see the details of his fund for all his tagged employments at one place on his member portal.
- The process involved in the KYC seeding by employer also ensures that complete and clean data is available in respect of member. This is a key input for providing expeditious services to the members.
- This technological intervention has also enabled a higher degree of interface and communication by way of e-mails and SMS between the EPF member and EPFO.

**Employers:**

- The procedure adopted for this project has done away with paper filing of details by employer as all the details are to be uploaded by employer on the portal. This has resulted in saving on paper cost, thus resulting in eco-friendly solution.
- The availability of facilities for online submission of information has reduced the visits of the employers to field offices thereby reducing avoidable burden on them.
- The technological intervention has also enabled a higher degree of interface and communication by way of emails and SMS between the Employer and EPFO.

**Organisation:**

- For field offices, this project has facilitated the availability of clean and complete data essentially required to provide efficient services to the members. This was one of the major obstacles earlier in delivering expeditious services to the members.
- The reduction in terms of footfalls due to lesser visits by employers and EPF members have provided the EPFO offices with sufficient time to focus on other important work areas.
- The online submission of information has provided the data directly in digital form thus avoiding the re-entry of data in EPFO offices resulting in less workload and reduced data entry mistakes.
- The access to information on E-mail IDs and mobile numbers of employers and EPF members has enabled the Organisation to approach these key stakeholders whenever required for effective implementation of other initiatives.
- The availability of KYC details of the members has a potential to enlarge the scope of services significantly in near future.

➢ **Innovativeness of the initiatives and its replicability**

The programme has brought a decentralized system on a central portal assembly riding on the web portal technology. The systems have been standardized to the extent that they can be easily replicated for similar other systems as well.

➢ **Sustainability of the initiative (revenue, technology, security/privacy, digital encryption etc.)**

**9.** Sustainability from the perspective of process, manpower and technology: The life breath of the project is itself its sustainability, however, in the event of any future change from a legislative perspective, the systems are capable of re-orienting and further adaptation. Sustainability can be viewed from three principal perspectives; Process, Manpower and Technology.

**Process:** The process being followed is backed by the Act, Scheme and Manual provisions and as such, the facility would continue to remain in force till it encounters any legal amendment leading to a fundamental change in the Act which may redefine the basic role of the stakeholders.

**Manpower:** Continued availability of competent and technically qualified manpower is ensured by way of undertaking extensive training programmes to the in-house technical personnel. Hiring of qualified and professional manpower from the open market also has brought in the much needed technical depth to the Organisation's own technical staff. The non-technical users of the application software have also been made to undergo extensive training programs which, has ensured a continued process of training.

**Technology:** The technology used for this initiative is open ended and robust. Right from the stage of initial development, care has been taken to ensure that the various application software remain non-monopolistic and remain open ended to ensure cross compatibility across various platforms. Use of JAVA as front end and Oracle as the database has ensured not only ease of use, but has also ensured that the Organisation was never put at a disadvantage while integrating its application and databases with other external systems.

➢ **Convenience for user/citizen**

**Service delivery channels:** The UAN program has been designed, developed and implemented on the e-enabled and mobile platform only. The facilities can be accessed online through internet from any part of the world. The SMS governance has been introduced for information on balances and transactions to the registered mobiles of EPF members.

**Completeness of information provided to the users:** The use of facilities by the employers and the EPF members has been facilitated by providing separate User manuals for the stakeholders, wherein the process flow has been explained in detail along with the screen shots of the each stage of the process. The user manuals are available on EPFO website

www.epfindia.gov.in>>UAN services or directly at the links http://www.epfindia.com/site_docs/PDFs/UAN_PDFs/UAN_ForEmployers/UserManual_Ver1.4_Employers_new.pdfandhttp://www.epfindia.gov.in/site_docs/PDFs/UAN_PDFs/UAN_ForMembers/User_Manual_Ver1.1_UAN_MemberPortal.pdf for employers and members respectively.

**Accessibility:** The portal can be accessed by the member and employers on 24×7 basis through EPFO website www.epfindia.gov.in>> UAN services. The URL for the portal is http://www.epfindia.gov.in/site en/UAN Services.php.

**Distance required for travelling up to Access Points:** The facilities can be accessed online through internet from any part of the world. The portal has facility for members to download their UAN card and updated passbook. The employer can download the UAN details of his employees from the portal. The employer can furnish the information in respect of his employees through online mode. The KYC details of the employees can also be uploaded through bulk facility provided to employer.

**Status Tracking:** As regards status tracking, the system has been developed with the facilities to know the current status of the tasks to members and employers at any point of time. Besides, a number of dashboards have been put in place for the information of all the stakeholders. The dashboards are available through EPFO website www.epfindia.gov.in homepage >>>dashboards. The employers can also get to see the status in respect of their members by availing the facility of "UAN – Member Details Download" available on EPFO website through Homepage >> For Employers >> UAN – Member Details Download.

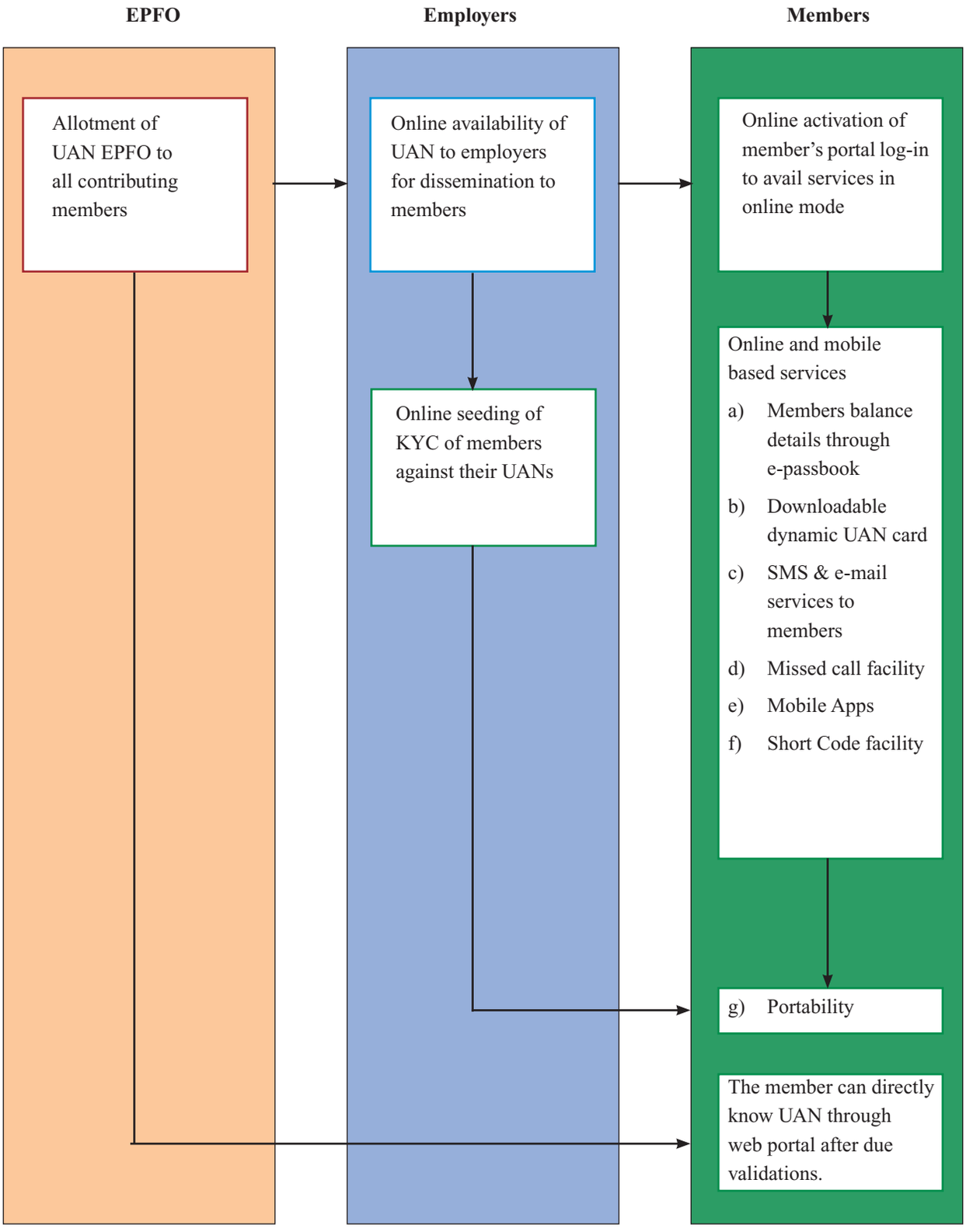
➢ **Value delivered for your Organization/agency.**

- For field offices, this project has facilitated the availability of clean and complete data essentially required to provide efficient services to the members. This was one of the major obstacles earlier in delivering expeditious services to the members.
- The reduction in terms of footfalls due to less visits by employers and EPFD members have provided the EPFO offices with sufficient time to focus on other important work areas.
- The online submission of information has provided the data directly in digital form thus avoiding the re-entry of data in EPFO offices resulting in less workload and reduced data entry mistakes.
- The access to information on E-mail IDs and mobile numbers of employers and EPF members has enabled the Organisation to approach these key stakeholders, whenever required, for effective implementation of other initiatives.

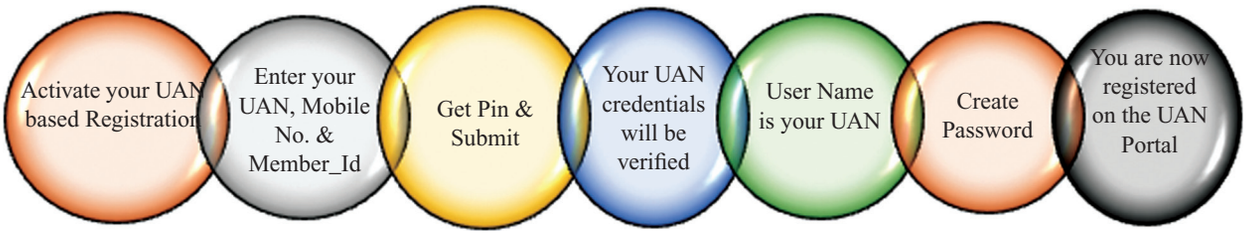
**Annexure – 'A'**

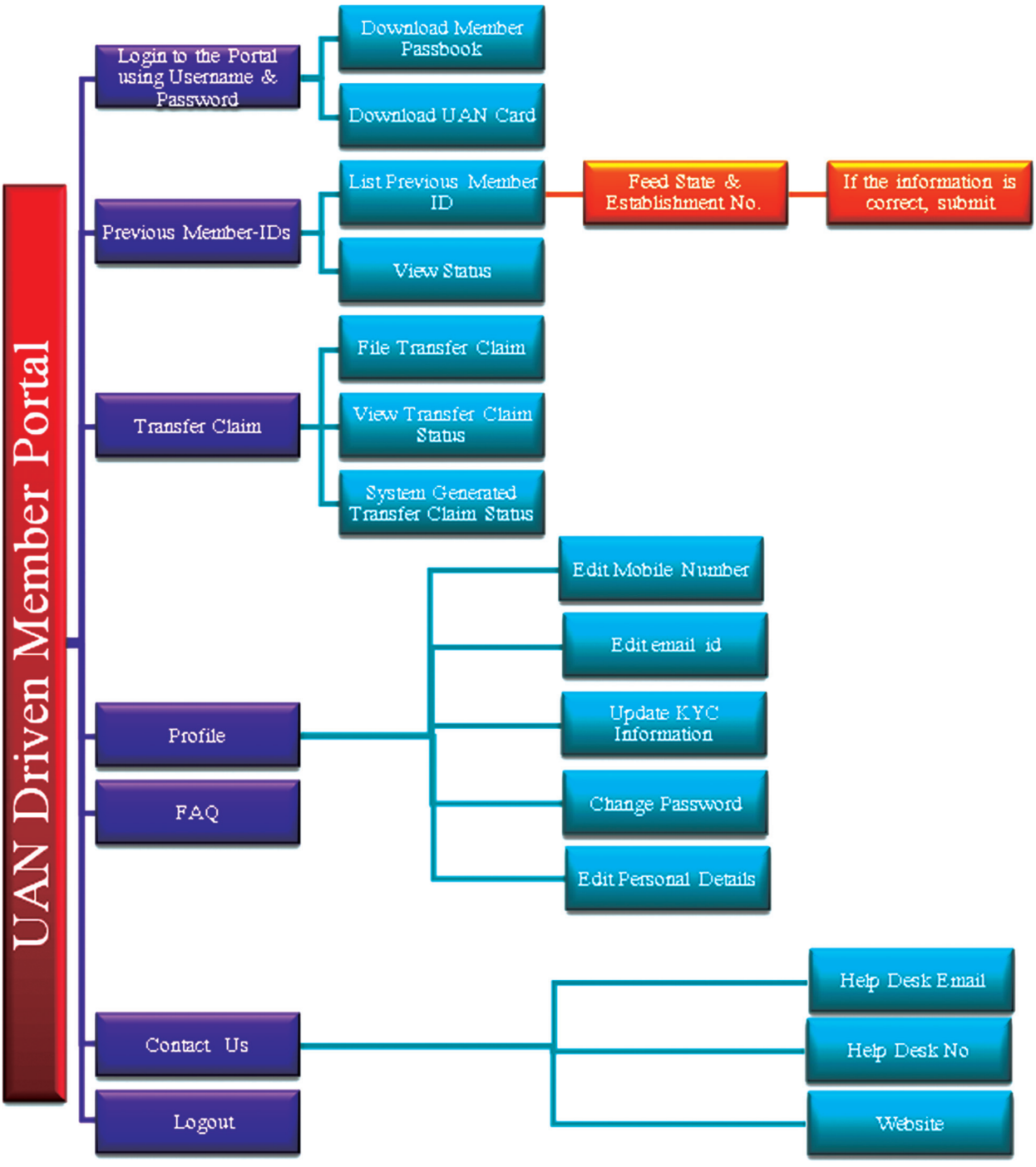
# Process diagram or flow chart for the steps involved in service delivery

The Process flow diagram is as below:

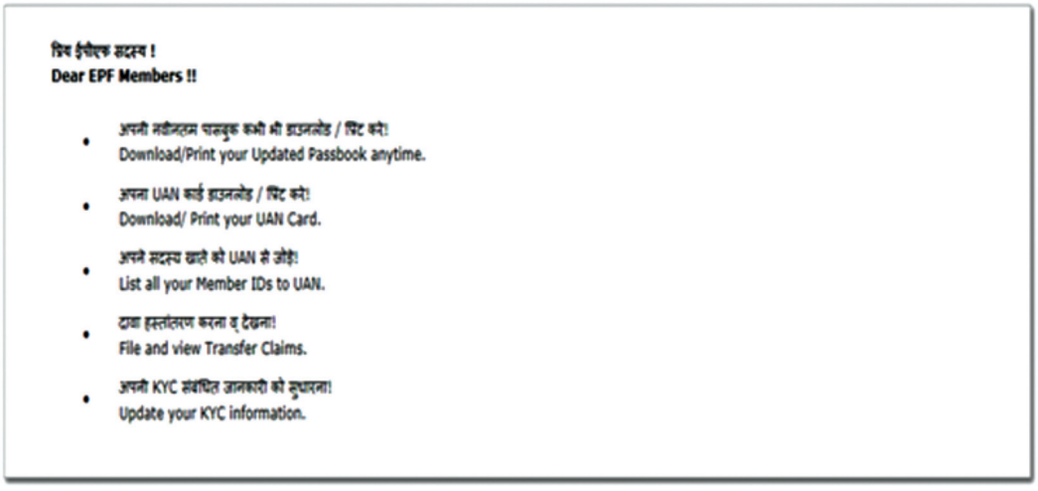


# Universal Account Number (UAN)
# MEMBER e-SEWA



The **user manuals** are available on EPFO website www.epfindia.gov.in>>UAN services or directly at the links http://www.epfindia.gov.in/site_docs/PDFs/UAN_PDFs/UAN_ForEmployers/UserManual_Ver1.4_Employers_new.pdfand http://www.epfindia.gov.in/site_docs/PDFs/UAN_PDFs/UAN_For Members /User_Manual_Ver1.1_UAN_MemberPortal.pdffor employers and members respectively containing the detailed process maps of all the relevant business activities. The processes have been explained with the screen shots of the screens visible to the users. The screen visible to member on his log-in, for instance, is as follows:

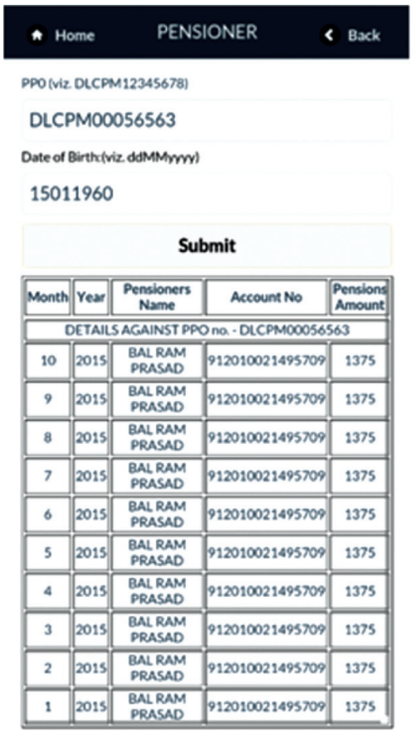




**(c) Adaptability and Scalability (Details about Local language support, Standardization of technology used in terms of H/W, S/W, application etc.)**

**I) Home page of Mobile App**

**II) Member Balance through Mobile App**

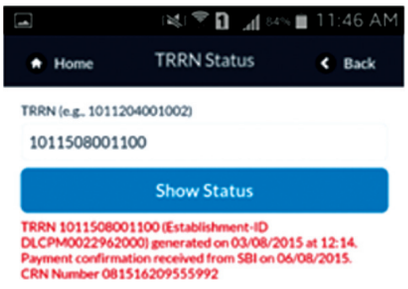

**III) Pension payment history through Mobile App**



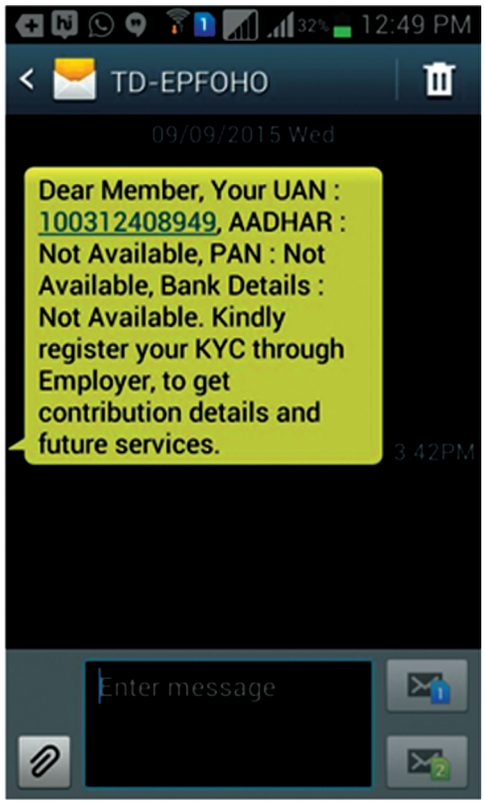

DETAILS AGAINST PPO no. - DLCPM00056563

| Month | Year | Pensioners Name | Account No | Pensions Amount |
|---|---|---|---|---|
| 10 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 9 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 8 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 7 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 6 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 5 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 4 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 3 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 2 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |
| 1 | 2015 | BAL RAM PRASAD | 912010021495709 | 1375 |

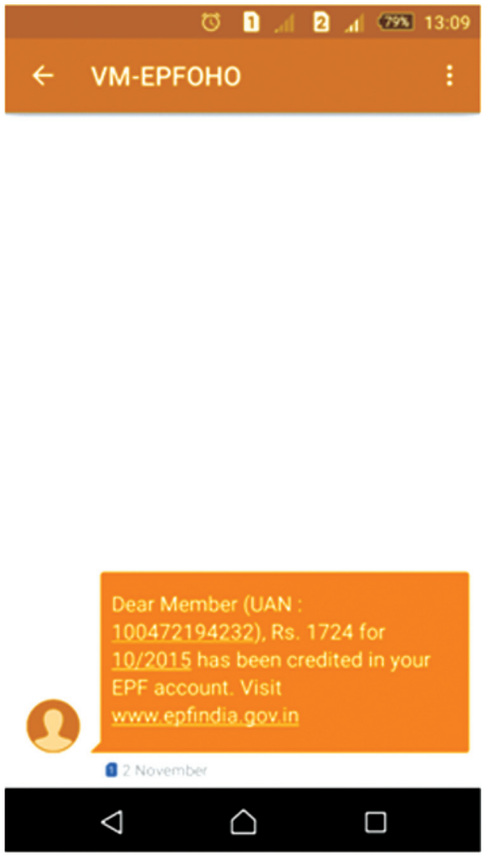
**IV) Payment status through Mobile App**




**V) Missed Call/ Short Code facility**




**VI) SMS to member on receipt of EPF contribution**



**Annexure – 'B'**

# Status of UAN programme as on 19.09.2016

| | | |
|---|---|---|
| **a.** | Total number of UAN allotted to EPF members | 7,63,71,193 |
| **b.** | Total number of establishments whose members have been allotted UAN | 5,06,342 |
| **c.** | Number of AADHAAR KYC details seeded in UAN database | 1,40,34,369 |
| **d.** | Number of PAN KYC details seeded in UAN database | 1,37,17,931 |
| **e.** | Number of Bank Account KYC details seeded in UAN database | 2,96,92,685 |
| **f.** | Number of individual member activation on UAN portal | 2,85,43,017 |

# Proforma for Write Up on National Awards on e-Governance Initiatives

**Crime Branch**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | Delhi Police |
| **2.** | Name of the host/owner organization | : | Crime Branch |
| **3.** | Status of the host/owner organization | : | Home Ministry |
| **4.** | Name of the Project | : | Lost Report App |
| **5.** | Name of the Nodal Contact Person | : | Sh. Rajan Bhagat, Dcp/Crime |
| **6.** | Contact Address | : | 1st Floor, Police Headquarter,<br>MSO Building, I. P. Estate, Delhi. |
| **7.** | Telephone/Fax/e-mail | : | 011-23490322, 011-023490261<br>011-23722065 (Fax)<br>phqpro1@gmail.com |

**8. Project Summary**

In an attempt to ease the public's (domicile or visitor) misery and make the process quick and hassle free. Delhi Police launched its first e-Governance module, the Lost Report App on 27 February, 2014. Any person can report the loss of anything, including any document, to Delhi Police using this App from their mobile phone or computer from anywhere in the world and obtain a digitally signed police report instantly on his email, without the hassle of visiting a police. This port can be used to apply for re-issue of any lost document and the issuing department can even verify the police report through the app itself

| | | | |
|---|---|---|---|
| **9.** | Date of launch of project | : | 27.02.2014 |
| **10.** | Coverage (Geographical) | : | GNCT, Delhi |
| **11.** | Beneficiary of the Project | : | PUBLIC, POLICE |

**12.** Problem statement or situation before the initiative

- Corruption
- Manual System causing delay
- Harassment and
- To/Fro of public at Police Station

**13. Project Objectives**

Earlier, for obtaining relevant report from police station, in case of loss of a document, one had to go through the inconvenience of visiting a police station repeatedly. Therefore, Delhi Police has decided to enable mobile and web based reporting of such lost/missing articles without the need to go to a police station. This report can be lodged from anywhere in the world and a printable digitally signed report is instantaneously sent in response to the complainant.

## 14. Project scope approach and methodology

**Following were the identified problems :**

- Large volume of complaints being lodged at a police station.
- The process of filing the NC-FIR was manual; hence the person needs to first of all identify and travel to the nearest Police Station.
- A Complainant needed to visit the same police station where the article was lost and wait for the availability of the concerned person to file a complaint.
- Person travelling through Delhi or tourists rarely find it possible to go back to the place where the article or document could have been lost and lodge a report in the closest police station.
- The loss of such items is usually reported after some delay after the actual incident, and details shared by the complainant are sketchy and not necessarily accurate.
- It was very difficult for police officials to keep a record of all the field NC-FIRs for lost articles over the years manually in the physical files. The pile of hand written data was neither manageable nor protected from even very common issued like pests.
- All these problems made Delhi Police officials realize the need of a fundamental shift in the basic process so that Public (domicile or Visitors) can be provided with world class services more efficiently.
- Also police officials needed to automate this manual process so that they could more efficiently on the investigation and tracking part which required more attention.

**Roll out/Implementation model**

- The Lost Report Application was developed within three months time, both for web based as well as for mobile version. The application development was commenced under the overall supervisio0n of Sr. Special CP (Special Unit), Sh. Dharmendra Kumar.
- The project implementation work was started under the leadership of Sh. Rajan Bhagat, DCP (CRO) for web based version and Sh. Mahesh Batra, Addl. DCP (IT) for mobile version. The application development was done in house with outsource software development team stationed at PHQ.

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

- Total registration till today - 3117725
- No complaint of corruption, harassment and
- Confirmation of Digital India Campaign.

## LOST REPORT APP (HASSLE FREE INSTANT REPORTING)

Delhi Police has consistently been adopting new methodologies and technologies to enhance its service-delivery capacity. Our endeavour has been to identify areas where newer means can help in reducing public inconvenience and consequent dissatisfaction with police functioning.

One of the sore points with those coming in contact with the police is the difficulty experienced by them when they have to approach police to lodge a complaint regarding the inadvertent loss of some document or article. Lodging a report of such a loss is often indispensable because most of the authorities responsible for reissue of lost document/ article insist on submission of a police report as an evidence of the factum of loss.

On many occasions, such losses are detected by the victims after some gap of time and in some cases exact place and time of loss may not even be known to them. Some reluctance on the part of the police in lodging the report is also encountered by the victims as they may not be aware of the precise jurisdictional police station to be approached for lodging a report. In particular, persons in transit or tourists rarely find it possible to go back to the place where they might have lost the document or article.

The difficulties experienced in lodging the seemingly innocuous police report for a lost document or an article, therefore, often generates public dissatisfaction towards police. Also, the systems for lodging of such reports are not very well defined, and certain loose conventions presently govern police response in dealing with such information. Acknowledgments given to the persons tendering such reports vary from place to place. Consequently, an accurate statistical compilation of data about missing documents or articles is not possible for analysis and record. Given the above, Delhi Police decided to enable mobile and web-based recording of information with police about lost or missing articles. An appropriate mobile and web based application was designed for lodging such reports. Now there is no need for a person, if one so chooses, to go to a police station. Once information is lodged through mobile or on web, a printable digitally signed report is instantaneously sent in reply. Such trouble-free lodging of information, where a digitally signed report is instantaneously sent back, brings about a paradigm shift in police functioning and is a precursor to the lodging of FIR on the web.

**Why download this App**

- ✓ Facilitates reporting of lost article or document through mobile phone or computer.
- ✓ No need to go to a police station.
- ✓ Allows online tracking of the verification status.
- ✓ Instantly provides a digitally signed 'Lost Report' on mobile and email for getting duplicate document reissued. Enables the agency issuing duplicate document to verify the 'Lost Report' through website.

Since February 27, 2014 when this application was launched, 28,41,199 lost reports have been lodged electronically with Delhi Police which include 1,17,210 reports lodged on cell phones (upto 31st August). Incidentally, this is the only such facility in the world, where a digitally signed lost report is instantaneously sent to the complainant.

# eXtended Green Node (XGN)

**Gujarat Pollution Control Board**

| | | | |
|---|---|---|---|
| **1.** | Name of the State / Ministry | : | Gujarat |
| **2.** | Name of the host / owner organisation | : | Gujarat Pollution Control Board |
| **3.** | Status of the host / owner organisation | : | Statutory Body |
| **4.** | Name of the Project | : | eXtended Green Node (XGN) |
| **5.** | Name of the Nodal Contact Person | : | Mr. Hardik Shah, IAS, Member Secretary |
| **6.** | Contact Address | : | Gujarat Pollution Control Board,<br>Paryavaran Bhavan, Sector 10 A,<br>Gandhinagar – 382 010 |
| **7.** | Telephone/Fax/e-mail | : | (P) 079 – 23232152<br>(F) 079 – 23222784<br>(E) msgpcb@gmail.com |

## 8. Project Summary

Gujarat Pollution Control Board (GPCB) was established in 1974 as a regulator to prevent and control pollution. The conventional approach since then adopted was "Command and Control". Working methodology of the Board was manual and paper based which could not match with the pace of rapid industrialization in the State, adversely affecting the main focus of pollution control and environment preservation. To overcome not only the constraint of manpower but also to bring about speedy and transparent working, Board decided to switch over to e-Governance which is unique in its nature for a regulatory authority and step forward to eliminate red-tapism.

The e-Governance initiative is a web based application jointly developed by NIC (National Informatics Center - Gujarat) and the GPCB named as eXtended Green Node (XGN) to provide an IT-solution aiding the GPCB in effective and qualitative implementation of Environmental Laws for Air, Water & Hazardous Waste including rules for management of Plastic, Bio-Medical Waste, Municipal Waste etc.

## 9. Date of launch of project

It was launched w.e.f. 1st April, 2008 and it is continuously being upgraded to meet with the prevailing needs, norms and policies.

## 10. Coverage (Geographical)

Number of Delivery Centres are the 26 Regional Offices, 9 Laboratories, 4 Vigilance Branches of GPCB in various District the Head Office at Gandhinagar, 23,128+ Industries and 32,532+ Healthcare Units(Hospitals/Clinics) spread all over the state of Gujarat. Additionally, 27 TSDFs (Hazardous Waste handlers towards treatment & disposals) & Captive Plants, 29 Common Effluent Treatment Plants & 14 Common Bio-Medical Waste Collectors & treatment operators are also delivery centres for XGN. Average daily users from these centres totals to about 2400. Of lately, 124 Environment Consultants & 87 Auditors, NGOs are utilizing this e-Governance tool-XGN.

A Plug-In Node alongwith a Broadband Connectivity ensures the reach of a delivery centre to any destination across the globe. Geographically these centres spread all over the state, from the remotest taluka to a metro. Hence some Help Desks have been opened at all Regional Offices to ensure usage of XGN for needy Small Scale Industries who are devoid of this Connectivity & Infrastructure.

After having XGN implemented in Gujarat since 2009, XGN is successfully implemented in other states – Andhra Pradesh, Madhya Pradesh, Himachal Pradesh, Goa, Uttarakhand and Karnataka.

## 11. Beneficiary of the Project

**The stake holders of this initiative are as under:**

1. More than 22,000 Industrial Units of Small, Medium and Large Sectors
2. More than 30,000 Health Care Units ranging from Civil Hospitals to General Practitioner
3. Common Bio Medical Waste Treatment Facilities
4. Common Effluent Treatment Plants
5. TSDFs-Hazardous Waste Handlers
6. Registered Re-cyclers for various wastes and scrap metals
7. Local bodies and authorities
8. Environment auditors
9. Environmental Consulting Firms
10. Non-Government Organisations
11. All the officers and employees of GPCB working at the 25 Regional Offices and 9 Laboratories across the state.
12. Non-Government Institutional Laboratories like Gujarat Institute of Desert Ecology (GUIDE) etc.

## 12, Problem Statement or situation before the initiative

The major challenges and limitations in implementing the idea on ground were:

- ➢ No such successful model available in the regulatory domain for regulatory purpose. Therefore no precedence is available and hence a new path was to be charted.
- ➢ The initiative required many business processes re-engineering which is difficult in government process especially in regulatory set up like GPCB.
- ➢ Inherent internal resistance to bring transparency in a bureaucratic environment was a challenge in itself.
- ➢ Changing mindset of the stakeholders for the adoption of the novel tool was also a great challenge
- ➢ Practices followed at the time of implementation were fixed without much flexibility and new system was to be molded according to that which was causing many restraints.
- ➢ At the time of implementation of XGN, organization faced challenges due non-availability of infrastructure especially web connectivity
- ➢ Due to e-governance initiative being implemented, pending work surfaced out and to cope up with this enormous visible pending work and the increased workload subsequently posed a big challenge.
- ➢ Initially the staff was not computer savvy and huge capacity building exercise was required
- ➢ Initially there was resistance from Consultants and Businesses which were more accustomed with Manual system and also the fact that transparency of the system killed monopolistic practices
- ➢ GPCB has no in-house IT specialist staff
- ➢ Average age of the staff in the organization was around 50 at the time of implementation of initiative so that itself was a big challenge.

## 13 Project Objective

The core of XGN lies in providing hassle free, 24 X 7 anywhere e-access to businesses through unique ID to perform GPCB related various activities like making online applications, its tracking, filing returns and statements prescribed under the acts/rules and to obtain the online permissions and other communications from GPCB as well as to facilitate reuse/recycle of wastes.

## 14 Project scope approach and methodology

**A) All the major 38 transactions between GPCB & stake holders are through electronic means. These include:-**

1. HCU-Healthcare Units IDs(BMW) & Passwords
2. Bio-Medical Waste Authorizations
3. BMW Rejection
4. CCA Expiry Alert Bulk SMS to Industries
5. Complainant Letters
6. Consent Grant
7. Consent Reject
8. Consultants id password
9. Processing stage of the Application
10. Due For Extension of the Application
11. e-Outward Legal Notices
12. e-Outward CCA Grants/Reject
13. EC-Registration
14. EC-SEAC Meeting
15. Editing of W.C entries by GPCB Staff
16. Grant / Reject of application
17. Industry Registration with Auditors
18. LAB. Billing to the Stake Holders
19. On Demand : Application Status
20. On Demand : Defaulter Industry
21. On Demand : Industry Details from GPCB ID
22. Online Application ACCEPTANCE
23. Online Application Query
24. Outstanding Payments
25. Payment & File Received
26. Query from R.O to the Stake Holders
27. Query from H.O to the Stake Holders
28. Release ID & Password for INDUSTRY
29. RTGS Discrepancy SMS TO RO
30. Sample Result Declaration SMS to the Industry
31. Sample Violation Alert to the Stake Holders
32. Updation by Industry Towards Consent
33. Water Cess Assessment Orders to the Stake Holders

34. Water Cess Bills Cleared from Surplus

35. Water Cess Bills Pending/Due in next 5 Days

36. Water Cess Bills

37. Water Cess Return

38. Miscellaneous / Others

**B)** Work flow of various applications towards obtaining NOC, Consents, Authorizations, Assessment Orders etc are thru online modes right from acceptance, Querying, e-replies, Processing at Field Offices, Approvals at regional offices, Movement of eFile to Head office, Processing by H.O Staff & Unit Heads and final Actions by Member Secretary/Chairman

a) Online filing of applications for various permissions like Consent to Establish (CTE), Consolidated Consents & Authorization (CCA) by concerned industries & online application for authorization under Bio Medical Waste (BMW) Rules by Health Care Units (HCUs)

b) Online scrutiny of applications prior to acceptance

c) Online payment of fees for above stated application enabled through system generated RTGS challan

d) Online processing of above applications by GPCB officials, online query generation and replies to queries by the applicants

e) Applicants can verify status of their application online and even track the application i.e. at which stage/level application has reached. No need to visit the office to know the status.

f) Apart from online updation of status, Applicants get SMS from XGN for generation of query for their online application, acceptance of application, final decision of their application, lab bill generation, issuance of legal notice etc.

g) Enhanced transparency by way of making inspection reports available online to respective industry, HCU.

h) Analysis reports of the samples collected are available instantly as soon as it is freeze (subject to payment of analysis charges)

i) Facility in XGN through which registered industries / HCUs can print their own consent order, analysis reports, Bills, Payment Receipts, Assessment Orders and Inspection – sample analysis history for a period.

j) Issuance of legal notices, direction of closure online with notice/ order posted in the respective ID also informed through SMS. Similarly revocation of closure and other correspondence also posted online.

k) Online payment of Analysis Charges through RTGS etc

l) Online filing of return for water cess by an industry

m) Online assessment order for making payment of water cess by the industry

n) Online payment of Water Cess through RTGS by the industry

o) Bulk SMS can be sent through XGN to defaulter units

p) E Talk facility for easy communication among industries / HCUs, GPCB Staff and NIC

q) Helpdesks provided at all the offices to guide & help the applicants in uploading online applications and monthly information

**C)** The entire details pertaining to PROFILES, TECHNICAL PARAMETERS, INFRASTRUCTURE of all stake holders including HCUs and Industries are stored in digitized format in XGN. XGN is based on a simple logic of saving the precise image of each document at its own time of freezing. i.e. When a Sample

Result is frozen or an Inspection report is frozen & send from R.O to Head Office. This avoids any changes/ manipulations in these reports at any stage, whatsoever.

There exists an e-file instead of a Physical file. i.e. 34 set of documents which are to be submitted by Industries / hospitals are stored in a form of a PDF and that too in binary form & encryption to avoid any deletions or manipulations.

Any document outwarded to any stake holder is e-Outwarded by the outward section. The image in a form of a scanned document is linked to the e-File of the related stake holder, be it a Legal notice or an order.

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

**The Key Benefits due to implementation of XGN are as under :**

### 1. Transparent, speedy, ease in process and sound decision making as well as instantaneous communication with businesses :

Under the different environmental Acts / Rules, businesses are mandated to obtain prior necessary permission(s) before commencing their business and are a pre-requisite for the businesses for obtaining electricity connection, land allotment, other Government permission and to avail financial aid from financial institutes/Banks. Previously, entire process of submission of application, its scrutiny, decision taking and intimation of the decision to the applicant by the Board was manual. This manual approach obviously was taking time and was also necessitating the businesses to approach various offices / officers of the Board personally and thus encouraging red-tapism.

To remove this red-tapism the entire process has been made transparent and smoother. Tracking of application status at all levels and obtaining decisions online without coming to any officer was made possible due to this initiative. Due to this the average time for processing the permits is reduced by almost half. There was also reduction in consent rejection ratio benefitting the businesses as a whole towards environmental compliance.

The basic objectives achieved were **transparency, speed & ease in process** which any businesses would expect in this era of IT.

### 2. Platform for waste exchange – facilitating use of waste as fuel and / or raw material:

After the Kyoto Protocol and debates on climate change the global scenarios with respect to use of fuel, emissions due to it and greenhouse gas emissions have totally changed. Thus it is required that the development meets the need of the present without compromising the ability of future generation to meet their own need. It is the need of the hour that conservation of energy and reduction of greenhouse gas emissions are taken care of. Hence it is of prime importance to manage waste, which is considered as the resource at wrong place.

India is an energy deficit country and imports crude, coal, natural gas to meet with energy demand and therefore any savings in consumption of fossil fuels is **net saving in foreign exchange** for the country. GPCB has promoted this thinking by adopting **reuse/recycle of wastes** as an alternate to fuel and/or raw material wherever feasible. Here, energy in the waste is harnessed by co-processing it in cement, power and steel industries. By co-processing, the bottom line of the businesses improves and the cost of environmental compliances is reduced.

Using the large database of different wastes generated by the businesses available on XGN a **platform is provided for waste exchange**. This has become instrumental for co-processing of wastes in cement industry in a big way.

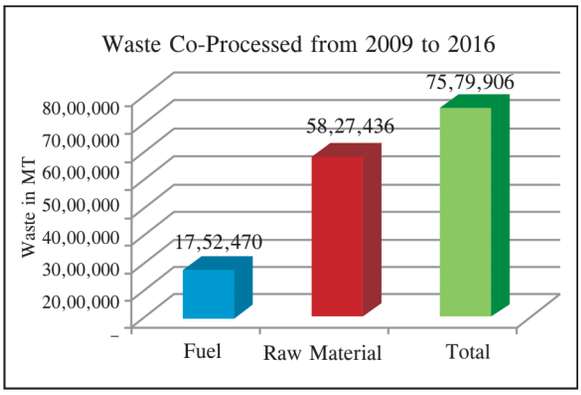
Module provided for co-processing facilitated cement industries to utilize data base generated by other businesses. Cement industry subsequently interacted with other businesses that generate such wastes through

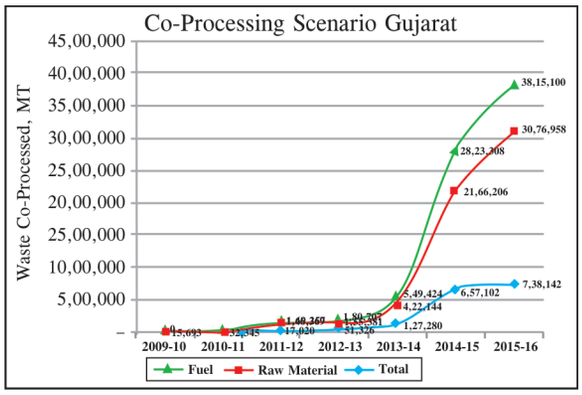
XGN so as to use it as raw material or for co-processing at their facility. Thus the energy costs of the cement industry are thus reduced.

Also, the high cost of treatment induced the industries to discharge the waste by surreptitious way which affected the society. Now since the waste is utilised as raw material or fuel such risks are eliminated.

Cement industries in Gujarat have utilized this data base and since 2009-10, they have used 75,79,906MT either as alternate to fuel or alternate to raw material. In other words, it can also be said this waste that would otherwise have gone to either incineration and / or TSDF facilities have gone to cement industries and have saved the energy and resources.

Thus, this approach has resulted into **saving of energy** that would be required not only for incineration of waste but also energy and raw materials required by the cement industry. **Pollution footprint** attributed to these activities has also proportionately thereby **substantially decreased**.




## 3. Benefits to the citizens in general

One of the most important stakeholder of the organization is the citizen in general and the organization is given mandate to resolve their complaints related to environmental degradation.

The citizens can file online application to lodge complaint simply by logging on the site, can track its status and get the action taken information through e-mail and SMS alerts. There is no need to visit the office to file any complaint or make tedious correspondence like the earlier system.

The citizens do not have to pay anything for availing the online complaint module facility, and can save upon the correspondence charge. They save upon travel cost not only by e-filing of the complaints but also getting the response for the same.

The e-governance has helped citizens know the statistics of the organization on day to day basis, involving the permissions granted to and legal actions against the industries which could otherwise be known only through expensive and tedious modes of communications and RTI.

The e-governance has enabled reduction in overall paper consumption on the part of both, the organization and the citizens in general owing to the fact that all the correspondence is necessarily through the e-mails and SMS.

## 4. Benefits to the Industries:

The industries are the most beneficiary stakeholders of the e-governance program.

1. Provides flexibility by multipoint access as it is web based software. Also it is operating 24x7 as against earlier system of time consuming and with single point access. There is no need on the part of the industry to visit the office.

2. In availing the online facility the industries do not have to pay any charges. All important data, permissions, legal documents etc. can remain in the soft form in the database and can be retrieved by the industry whenever needed, thus avoiding need to preserve physical data and direct or indirect expenditure involved in it.

3. Industries can print their own consent order, Bills, Payments Receipts, Assessment Orders and Results without visiting the office is also a 'green way' of communication associated with lot of tangible and intangible benefits to the industry. Online generation of manifest system has removed botheration of multiple copy generation, record keeping etc. Facility of payment through RTGS has made life even simpler for the industries.

4. The system provides Cleaner Technology options to several sectors of industries, which the industries can straight away adopt for better results in productivity and pollution control. Industry specific environmental guidelines are made available through system for better compliances. Concept of well-defined Formats is recently introduced to enable industries to assess its position with regards to compliances of various environmental attributes.

5. The summary with explanation for few of main services / facilities provided vis-à-vis the benefits is as under:

| Service / Facility Provided | Benefit to the Stakeholder |
|---|---|
| Intimation of status of application through SMS at each stage viz. acceptance of application, application physically received, application further forwarded with inspection report for decision making, freezing of analysis report of the sample collected, final decision taken about the application and e-outwarding of physical order | • Instantaneous automated intimation about the status of application through SMS resulted into saving of time and manpower and has completely eliminated earlier custom of physical involvement of the businesses. **Now no need for business to visit GPCB office**. |
| Availability of provisional order of permission | • Once the decision for grant of permission is taken, provisional order is automatically generated from the database of the business and instantaneously made available to the businesses. This enables business to take up the subsequent activities immediately and does not warrant them to wait till detailed physical order is received by them which have resulted into **tremendous valued time saving and avoidance of un-necessary follow-ups**. |
| | • Since provisional order is a computer generated order, facility to concerned Government departments and financial institutes is provided for the checking of its correctness with the system by entering the order number.<br>• Once physical order is prepared and sent to the business through post, it is first e-outwarded which is automatically intimated to the business through SMS on registered mobile and detailed order is also uploaded enabling business to get it through their login immediately. |
| Access to findings of inspection report | • The inspection report prepared by the inspecting officers of the Regional Offices of the Board was kept secret till the decision is taken and communicated by the Head Office for any shortfalls reported by them in environmental management system, if any. Now, inspection report is made available online to business enabling them to understand shortfalls noticed by the officials and to take immediate necessary corrective / preventive steps which otherwise was not possible in previous scenario. It also provides opportunity to business to make representation for the findings of the inspecting team, if required. Thus, it has not only brought **highest degree of transparency** but also yielded **early compliance**. |

| Service / Facility Provided | Benefit to the Stakeholder |
|---|---|
| Tracking of compliance of inspection remarks given by inspecting officials | • One paradigm shift in inspection methodology has been brought about whereby businesses are issued a written inspection remarks for any shortfalls observed and / or for any suggestions to bring about the better compliance. These **inspection remarks are made available online** as soon as inspection report is frizzed and businesses are prompted to update point wise compliance of such remarks. History of remarks issued along with its status of compliance is maintained. This has helped into **enhanced environmental performance** of the businesses. |
| Maintenance of history to eliminate requirement of physical record keeping | • History along with order issued for any legal action(s) and CTE, CCA orders are maintained which enables business to get all the **relevant details at one go**.<br>• History of inspection carried out with inspection report are maintained which enables business to keep track of number of inspections carried out and to take corrective / preventive actions as well as **review pending compliances** of earlier issued inspection remarks. This has also helped inspecting officials to verify the progress made during subsequent inspections. Thus, it has facilitated GPCB in taking sound decision which in turn also helped businesses manifold.<br>• Comparative of analysis results for given time period of the samples collected by GPCB can be retrieved which otherwise was practically very difficult for the business to maintain.<br>• History for year wise water cess returns and water cess payment is maintained enabling business to **ensure timely submission of return** and payment.<br>• History of annual returns submitted is maintained enabling business to **evaluate year wise trend and performance**. |
| Platform for waste exchange – facilitating use of waste as fuel and / or raw material | Sustainable development is defined as development that meets the need of the present without compromising the ability of future generation to meet their own need. Thus, to achieve sustainable development it is of prime importance to manage waste, which is considered as the resource at wrong place.<br>India is an energy deficit country and imports crude, coal, natural gas to meet with energy demand and therefore any savings in consumption of fossil fuels is net saving in foreign exchange for the country. GPCB has promoted this thinking by adopting reuse/recycle of wastes as an alternate to fuel and/or raw material wherever feasible. Using the large database of different wastes generated by the businesses available on XGN a platform is provided for waste exchange. This has become instrumental for co-processing of wastes in cement industry in a big way.<br>Module provided for co-processing facilitated cement industries to utilize data base generated by other businesses of Gujarat for identifying/ accessing region/district wise waste generation with their waste disposal facilities. Cement industry subsequently interacted with other businesses that generate such wastes through XGN for purchase of their wastes & by-products so as to use it as raw material or for co-processing at their facility.<br>The success story of this module is tabulated hereunder:<br>Cement industries in Gujarat have utilized this data base and since 2009-10, they are using hazardous waste as an alternate to their conventional fuel. Thus, during last four years, these cement industries have used hazardous waste either as alternate to fuel or alternate to raw material. In other words, it can also be said that the total waste that would otherwise have gone to either incineration and / or TSDF facilities have gone to cement industries and have saved the energy and resources.<br>Thus, this approach has resulted into saving of energy that would be required not only for incineration of waste but also energy and raw materials required by the cement industry. Pollution footprint attributed to these activities has also proportionately thereby substantially decreased. |

## 5. Benefits to the Research Institutes:

This initiative has been a great benefit for the research institutes. Earlier, the data was lying in physical files and retrieval of the same was a huge challenge. With the introduction of this initiative, wherein biggest flexibility of the system is its multipoint access as it is web based software, all data are preserved in digital form with utmost security in distant server(s) and are retrievable – less susceptible of loss of data / willful action(s) for delay too. Thus this data is now used by various research organisations throughout the globe to work towards better environmental management and few of them are as under:

A) Data was used by Gujarat Ecological Education and Research (GEER) Foundation for estimating Green House Gas Emissions and modeling its future trends under its climate change project.

B) Data from the project is being used by International universities like Harvard and MIT to help GPCB in devising evidence based policy

C) Data is being used by NGOs like J-PAL to assist GPCB for formulating policy intervention tools

D) It has opened a new era of evidence based policy intervention for the organization

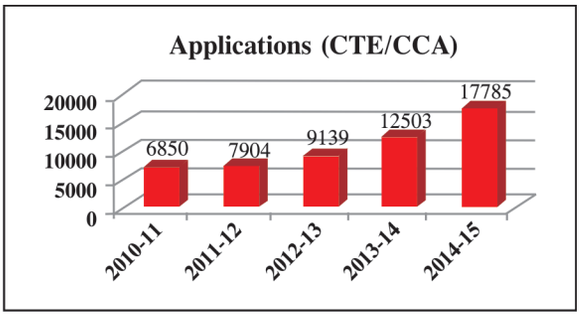
## 6. Benefits to the Environment:

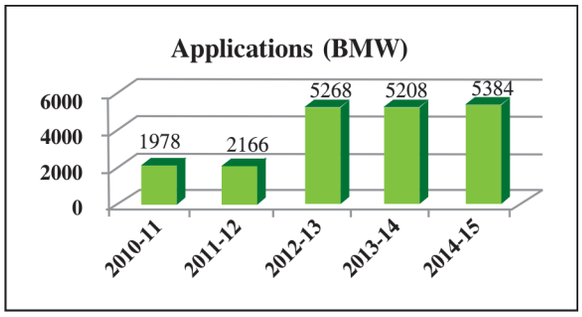
- Due to usage of software, entire database is shared with the Cement Industry for use of hazardous waste as raw material and/or fuel (co-processing) thus saving natural resources as well contributing towards abatement and control of pollution. There has been a strong not-in-my-backyard syndrome in the communities for opposing the setting up of disposal facilities in time to come where waste is supposed to be disposed through alternative routes like reuse, recycle and recovery.
- Because of reduced number of visits to the Board by the Project Proponents, there has been considerable saving of fuel and hence reduction in emissions but the same is intangible
- Reduction in printing on paper due to the XGN system has ensured in saving of lakhs of paper and thus saving of trees.
- The pollution has reduced drastically in all critical areas because of timely monitoring, action and compliance. The system itself pin-points the non-compliance wherein action is to be taken.

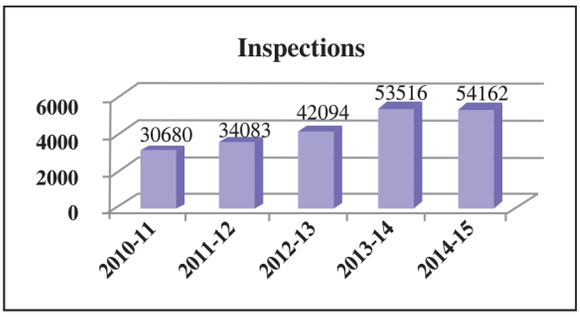
**The following table summarises the impact of the implementation of XGN:**

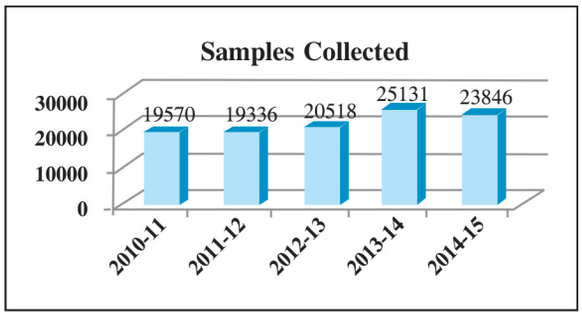
| The activity | Before XGN | 2009-10 | 2014-15 |
|---|---|---|---|
| **Monitoring Visits in a Year** | 7,500 | 10,721 | **54,162** |
| **Pollution Samples Drawn in a Year** | 7,100 | 8,900 | **23,846** |
| **Samples Analysed in labs in a Year** | 3,250 | 7,516 | **22,549** |
| **Profile Updations by Ind-HCUs / Month** | No System | 1,800 | **9,500+ Monthly** |
| **PDF Docs uploaded by stake holders** | No System | 21,000 | **80,500+ Yearly** |
| **e-Returns files by stake holders – Yearly** | No Track | 35,000 | **1,40,000+** |
| **Water Cess Returns Filed** | 1,900 | 6,289 | **34,500** |
| **NOC-CCA Applications – Yearly** | 2,500 | 5,280 | **17,785** |
| **Ratio of Rejection - Yearly** | 40 % | 38 % | **3%** |
| **LAB Charges defaulting Amt** | Rs 3.2 Cr | Rs 78 lakhs | **Almost Nil** |
| **Total Waste Co-Processed (MT/yr)** | Nil | 15,693 | **28,23,308** |

**The following graphs show the improvement after implementation of e-governance initiative at GPCB**




## Awards to XGN

Due to the adaptability, scalability, replicability and sustainability the project has received the following accolades at various forums:

- National e-governance Award ( Processes Re-engineering) - 2009
- Award for Special Recognition (Environment) – 2010 by Computer Society of India
- Award for Excellence – 2013 by Computer Society of India
- Special Recognition – Manthan Award South Asia & Asia Pacific - 2014
- National e-governance Award ( Incremental Innovation in Existing Project) - 2015

The initiative has also helped GPCB to obtain ISO – 9001 and ISO – 14001 at its Head Office and all its Regional Offices and to obtain Certification from National Accreditation Board for Laboratories for all if its Laboratories.

Thus, GPCB's e-governance initiative – XGN has successfully proved instrumental in bringing about effective implementation of Environmental legislations leading to rapid continual improvement of environmental performances especially of the small businesses.

# Medical Resource Planning

**District Administration, Giridih**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | Govt. of Jharkhand |
| **2.** | Name of the host/owner Organization | : | Distirict Administration, Giridih |
| **3.** | Status of the host/owner Organization | : | Office of Deputy Commissioner, District Administration, Giridih, Govt. of Jharkhand |
| **4.** | Name of the project | : | Medical Resource Planning |
| **5.** | Name of the Nodal Contact Person | : | Sri. Uma Shankar Singh, IAS<br>Deputy Commissioner, Giridih |
| **6.** | Contact address | : | D. C. Office, Collectorate Buidling, Court Campus, Giridih-815301, Jharkhand |
| **7.** | Telephone/ Fax/e-mail | : | 06532222001/06532222699/dc-gir@nic.in |
| **8.** | Project Summary | : | Sheet attached |
| **9.** | Date of launch of project | : | 15th Nov., 2013 |
| **10.** | Coverage (Geographical) | : | District – Giridih, Simdega<br>Blocks- referral hospital Dumri, urban CHC, Jamua CHC |

**11. Beneficiary of the Project**

Citizens, health officials, govt. departments

**12. Project statement or situation before the initiative**

This is education of the specific problem that was sought to be solved or issue to be addressed though this initiative.

-----sheet attached ----

**13. Project Objectives**

This Project objectives should clearly spell what the initiative sought to achieve.

-----sheet attached-------

**14. Project scope approach and methodology**

To describe in detail the activities that took place in Order to to achieve the desired results.

-----sheet attached-------

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

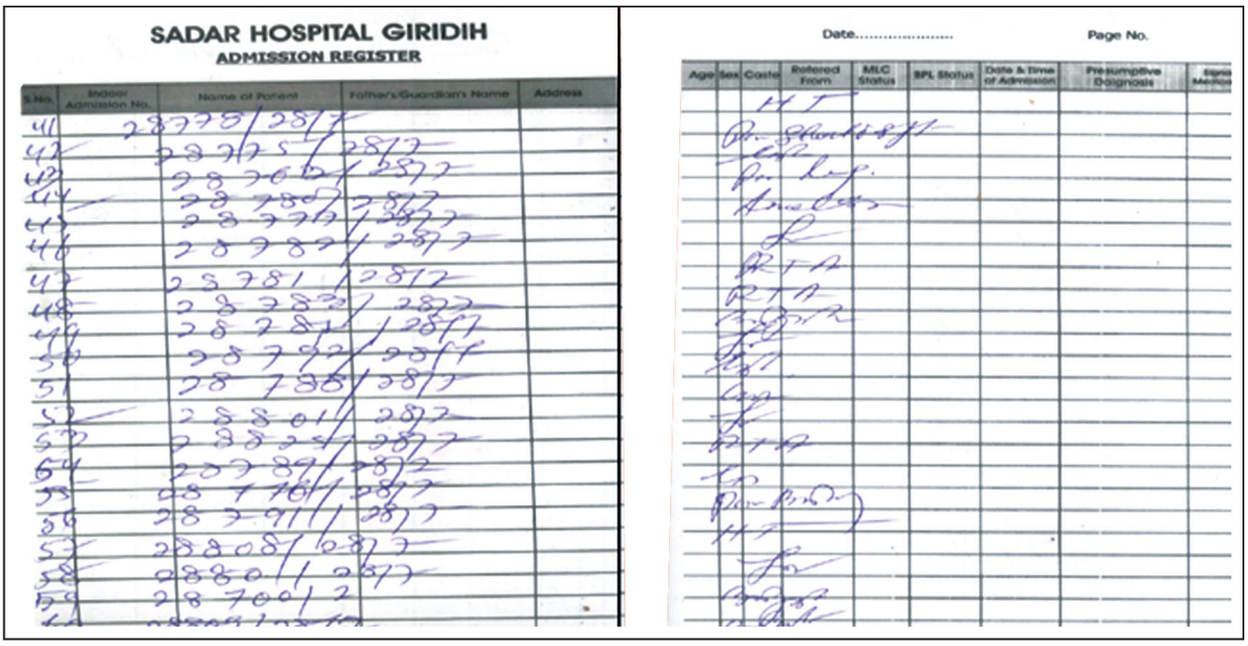
Citizen Centricity and relevance, user convenience, cost to user, sustainability, number of users and services, appropriateness of context & localization of best practice, enhancement of efficiency, innovation, e-Inclusion etc.

**Project statement or situation before the initiative**

Medical Resource Planning has been initiated by looking into the poor quality of the services provided to the patients and internal leading departments of the District Sadar Hospital.

While studying the existing system, we observe some serious issues and limitation on the services to citizens, which are follows-

1. **Case Study:** At Sadar Hospital Giridih an average of 250-300 patients are visiting daily. There treatment was done baseless over a cheat of paper. No doctor was upto the routine marked. Even the medicines and Vaccines received/transferred to the departments from State/District level were trackless; new stock was consumed before the use of old stock and old stock was expired.


SADAR HOSPITAL GIRIDIH
ADMISSION REGISTER

Date.....  Page No.

2. Manual Patient Appointment processes.

3. Medicines were prescribed on a slip of paper, No diagnosis history was maintained.

4. Patients were need to move to multiple departments/counter for diagnosis and report .

5. Admission at Labour room was unmanaged, no checkpoints and tracking system was there to provide Govt. funds to beneficiary. Patients having delivery in private clinics and outside hospitals were taking advantages through middleman.

6. Patient had to long wait to get the all test report.

7. Patients Appointment, medicine distribution and disease analysis was done roughly.

8. All register filling system causing delay in patient services.

9. All medicines prescribed by doctor were not given to the patients from Medicine counter.

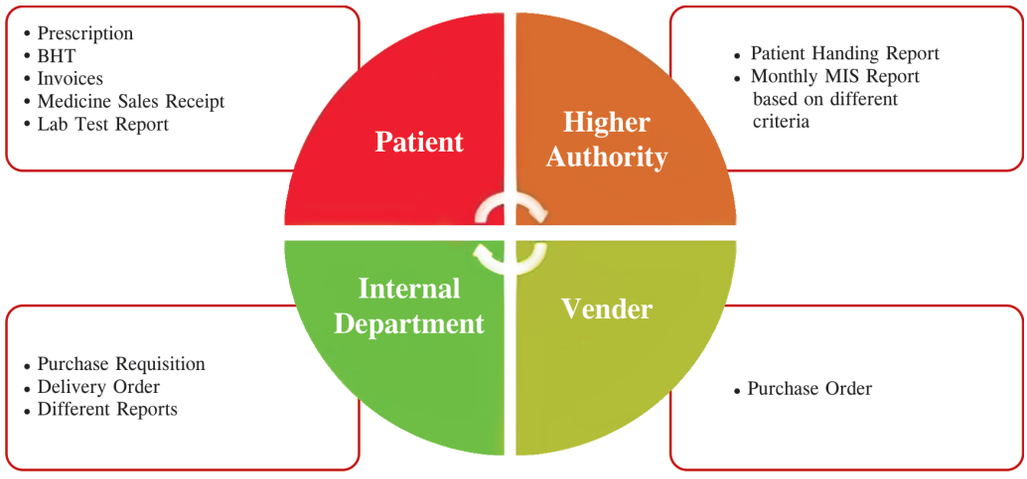
10. Purchase Requisition, Purchase Order, Delivery Order for the medicines/ vaccines; nothing was up to the mark.

## Project Objectives

The Deputy Commissioner Giridih and DIO NIC with the help of civil surgeon has taken the initiative, motivated and instructed the Departments/ Doctors/Nurses/Concern Officials of sadar hospital giridih to make use of the ERP System for managing all the core & internal services/work at Sadar Hospital. Looking at the challenges faced due to

rapid growth of Sadar Hospital, there is increasing need to have a comprehensive, integrated, ERP based e-Governance model. Such a system will also help administration to adhere to the reforms agenda set by Medical Resource Planning (MRP). Objective behind this reform is given below:

1. Promote people centric administration: - Common citizens should get the benefits of the system of accurate billing. Corruption should be avoided as well as Billing can handle by online in short span of time.
2. Move from process accountability to productivity accountability and from transactional to transformative governance: The Process is computerized to increase productivity. Each department Report is giving exact statistics and how accountability is achieved through the system.
3. Reduce delays and ensure promptness in delivery of services:
4. Computerization would ensure timely delivery of accurate service.
5. E-Administration: Improve administrative processes by cutting cost managing performance, making strategic connections within the local bodies and creating empowerment E-Citizen and E–Services: Connect citizens to the local government by talking to citizens, supporting accountability, by listening to citizens and supporting democracy, by improving public services.
6. Citizen Centric Organization: Medical Resource Planning (MRP) has taken a lead in e-governance projects. Presently it has displayed a true citizen centric project through Citizen Facilitation centers. Medical Resource Planning (MRP) would like to augment this citizen centricity by providing many more services at different service delivery channels.




## Project scope approach and methodology

Medical Resource Planning (MRP) has been adopted with the goal of ensuring all services to the citizens and standardization of Hospital Management Society with an extensive range of standard features for real-time Patient Management, Accounting & Sales Management, Warehouse Management, efficient back-office administration for Management operations and providing improved services to citizens. The initiative is led by the Department of Health, Ministry of Health & Family Welfare-Government of India and the Medical Resource Planning was conceived by GoI under the District e-Governance Society (DeGS) and NIC. Medical Resource Planning typically account for total district population.

## Activities through e-Governance Initiatives under Medical Resource Planning are

1. Citizen based Services through e-Governance and ICT tools.
2. Patient Registration and OPD Appointment
3. Facilitating IPD, Labour Room Bed Halt Ticket(BHT)
4. Radiology/Pathology Reporting and Invoicing.

5. Centralized Point of sale (PoS) at Medicine Counter for medicines and vaccines distribution.
6. Requisition Generation, Quotation Receiving and Analysis, Purchase Order generation.
7. Incoming Shipment Processing, Product Receiving, Delivery Order Generation, Product Delivery.
8. Internal transparent Stock management.
9. Providing Computerized Medical certificates issued by the department.
10. Alerts on Emergency Medicine .
11. Various MIS based reports and searching facility from anywhere
12. Providing various analytical data to District Health Society.
13. FCFS based usage of stock at district sadar hospital.
14. Extending computerisation up to CHC Hospitals at Block level.


**Snapshots**

15. Keeping total patient's visit and their laboratory and medication history.
16. Providing transparent stock available in different departments.
17. Providing extra facilities to BPL, RSBY card holders.
18. Monitoring of JSSK and JSSY funds under NATIONAL HEALTH MISSION programme.
19. Easy compilation of reports demanded by State Health Department

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

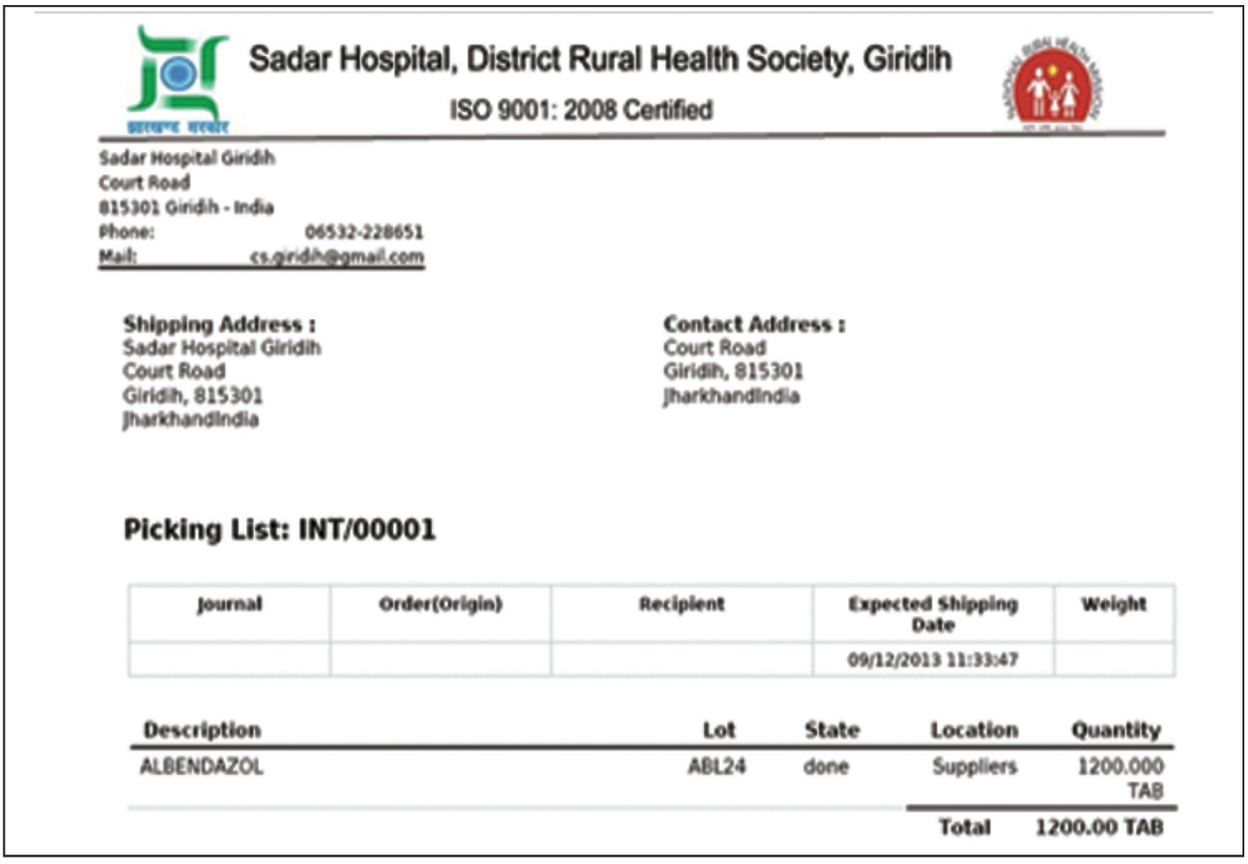
**a) Strategies adopted for bringing about the transformation and positive impact-**

- Patient Registration and Appointment processes are being done through the Centralized Counter using ERP System.
- Patient treatment is more efficient and accurate compare to before, as doctor can check previous diagnosis and lab reports result.
- Centralized counter established for fast process and patient interaction.
- OPD doctors were attending their duty as per schedule.

- Medical Resource Planning is linked with Mamta Wahan Call centre and JSSY, to track as the patients have make use of it and they have to pass on through a short registration process before admission in labour room.
- Calculations are done through Medical Resource Planning for exact reporting and analysis block wise.
- Ledgers are generated at end of day to manage and make procurement based on requirement.
- Medicine counter give patients a bill containing all medicines given to the patient, through which one can check what medicine they have given and haven't given to the needy.

**b) Highlights/positive features of the initiative under each of the following important dimensions:**

- Through Centralized Registration Counter Citizens/Patients need not to be confused, all information available at a single window.
- Proper Patient Registration, Appointment, Invoicing, POS for Medicine counter introduced give better support at the citizens.
- Accounting system has been strengthening and generating various accounting related reports.
- Proper Tracking and utilization of the medicines/vaccines are being done
- Patient history is available on single click.
- Proper utilization and monitoring of all Consumable/Non-Consumable/ Service Products by the concern Departments.
- Through Computerization Of IVRS based Mamta Wahan Call Centre, JSSY Scheme by Government has been strengthen and genuine patients are being benefited by the system.
- By introducing GPS (with camera) based Mobile Health Unit, proper roster are being followed and is being duly monitored that the van is moving to respective location or not, with the details for the Doctors and Staffs available in the unit.
- All Reports (Pathology/Radiology) are computerized for better diagnosis, future use.



**Sadar Hospital, District Rural Health Society, Giridih**

**ISO 9001: 2008 Certified**

Sadar Hospital Giridih
Court Road
815301 Giridih - India
Phone: 06532-228651
Mail: cs.giridih@gmail.com

**Shipping Address :**
Sadar Hospital Giridih
Court Road
Giridih, 815301
JharkhandIndia

**Contact Address :**
Court Road
Giridih, 815301
JharkhandIndia

**Picking List: INT/00001**

| Journal | Order(Origin) | Recipient | Expected Shipping Date | Weight |
|---|---|---|---|---|
| | | | 09/12/2013 11:33:47 | |

| Description | Lot | State | Location | Quantity |
|---|---|---|---|---|
| ALBENDAZOL | ABL24 | done | Suppliers | 1200.000 TAB |
| | | | **Total** | **1200.00 TAB** |

**(c) Sustainability and Outcomes, i.e impact/benefits resulting from the initiative, for example:**

- Cost to user is nothing since it is developed on open source technology and DeGS will provide technical support.

- Sustainability is a big issue district health society is generating revenue through this system, and through that they are providing HR resources and consumables
- Proper Indents and Requisitions are being made easily on any requirement of medicines/vaccines by the departments.

**(d) Medical Resource Planning module wise report :**

| Patient Registration from | 191020 |
|---|---|
| Patient OPD Appointment | 161270 |
| Patient Laboratory Tests | 58500 |
| Patient IPD Admission | 27220 |
| Appointment Collection (in Rs) | 709346.00 |
| Lab Tests Collection (in Rs) | 1979275.00 |
| Total Products | 1431 |
| Total Products category | 10 |
| Warehouse Location | 5 |
| Medicine Counter(Point of Sale) | 95757 |
| Paying Ward Collection (in Rs) | 23575.00 |

# MAHA-GEOMIN (Maharashtra Geology, Minerals and Mining Information System)

Directorate of Geology and Mining (Industries Department, Government of Maharashtra),
Khanij Bhawan, Shiwaji Nagpur

***Gold Award for Exemplary Implementation of e-Governance Initiatives***

| NODAL PERSON | | |
|---|---|---|
| The project Coordinator is Dr. Ajay Shashikant Deshpande, Associate Scientist, MRSAC, Nagpur. (dr.ajaydeshpande27@gmail.com) (ajay.deshpande@mrsac.maharashtra.gov.in) | The overall guidance and project Manager from DGM, Nagpur is Rajendra S. Kalamkar, Director, DGM, Nagpur | The overall guidance and project Manager from MRSAC Nagpur is Dr. Subrata N. Das, Director, MRSAC Nagpur |
|  |  |  |

| | | | |
|---|---|---|---|
| **1.** | Name of the State / Ministry | : | Maharashtra Remote Sensing Applications Centre, An Autonomous organisation of Planning Department Government of Maharashtra, VNIT Campus, South Ambazari Road, Nagpur - 440 011 |
| **2.** | Name of the host/Owner organisation | : | Directorate of Geology and Mining (Industries Department, Government of Maharashtra), Khanij Bhawan, Shiwaji Nagpur - 440 011. |
| **3.** | Name of the Project | : | MAHA-GEOMIN, Maharashtra Geology, Minerals and Mining Information System. |
| **4.** | Name of the Nodal Contact Person | : | Dr. Ajay Shashikant Deshpande, Associate Scientist & Project Coordinator, MRSAC, An Autonomous organisation of Planning Department Government of Maharashtra, VNIT Campus, South Ambazari Road, Nagpur - 440 011 |
| **5.** | Contact Address | : | Maharashtra Remote Sensing Applications Centre, An autonomous organisation of Planning Department, Government of Maharashtra, Vishveshwariya National Institute of Technology Campus, South Ambazari Road, Nagpur, 440 011, Telephone - 0712 - 2220086, 2238576<br>email-ajay.deshpande@mrsac.maharashtra.gov.in; dr.ajaydeshpande27@gmail.com |
| **6.** | Date of Launch of the project | : | 15 August 2013 |

**7.** Coverage (Geographical) : Entire state of Maharashtra, covering all the major mineral leases spread in 35 districts.

## 8. Project Summary

The Maharashtra governments centre of excellence, "Maharashtra Remote Sensing Application centre (An autonomous organization of Planning Department, Government of Maharashtra), Nagpur has executed a Joint Venture project for the Directorate of Geology and Mining, Industries Department, Government of Maharashtra, Nagpur. This task is the maiden attempt in the country for monitoring the Minerals, Mining & Geology operations in the country with the help of Geo-Informatics Technology comprising of Remote Sensing, Geographical Information System, & Global Positioning System. This excellent attempt has been successfully completed and operational for all the major mineral mining lease areas in the state of Maharashtra, and it can be aptly described as 'Eye In The Sky' for observing the utilisation of the mineral resources as per the laid down rules and regulations. MAHA-GEOMIN, "Maharashtra Geology, Minerals and Mining Information System, has won the gold category award for "Innovative use of GIS technology in e-governance" in the 19th National e-governance award scheme for the year 2015. The project is a maiden attempt in the country for introduction of modern Geo-Spatial technology, for e-governance readiness, in the area of Minerals and Mining sector on entire state wide basis. It is now a mandate, issued by the Ministry of Mines, Government of India, that the maiden example of Maharashtra, for introduction of the e-governance approach, using Geospatial tools, for the minerals and mining sector of the country, be replicated throughout the country for following a uniform, standard and structured approach.

### Beneficiaries/Target Group of the project

Industries, Geology and Mining department, Director - Geology and Mining, Government of M. S., Deputy Directors and Regional Heads - Directorate of Geology and Mining, District Mining Officers., Entire Geoscientific, Exploration, Surveying and GIS staff of Directorate of Geology and Mining. Entire geological fraternity and organisations working in the area of Geology, Minerals and Mining sector in the state of Maharashtra and Government of India.

**The accrued benefits of the project**

Proper management of valuable natural resources of our country particularly in the Minerals and Mining sector. The system is presently available in G-2-G domain & is providing the modern tools of 'eye in the sky technology' of Remote Sensing & GIS for proper governance.

MAHA-GEOMIN system of MRSAC puts on record the technology utility for achievement of the Government of India's core objective for innovative usage of modern technology like Remote Sensing, Geographical Information System, Global Positioning System, Light Detection and Ranging, subsurface 3D modeling, integration of GIS database with the e-transit pass systems for generation of mining royalty pass & detailed surveys of mining areas for monitoring in 3D environment and volume estimations using the Unmanned Aerial Survey.

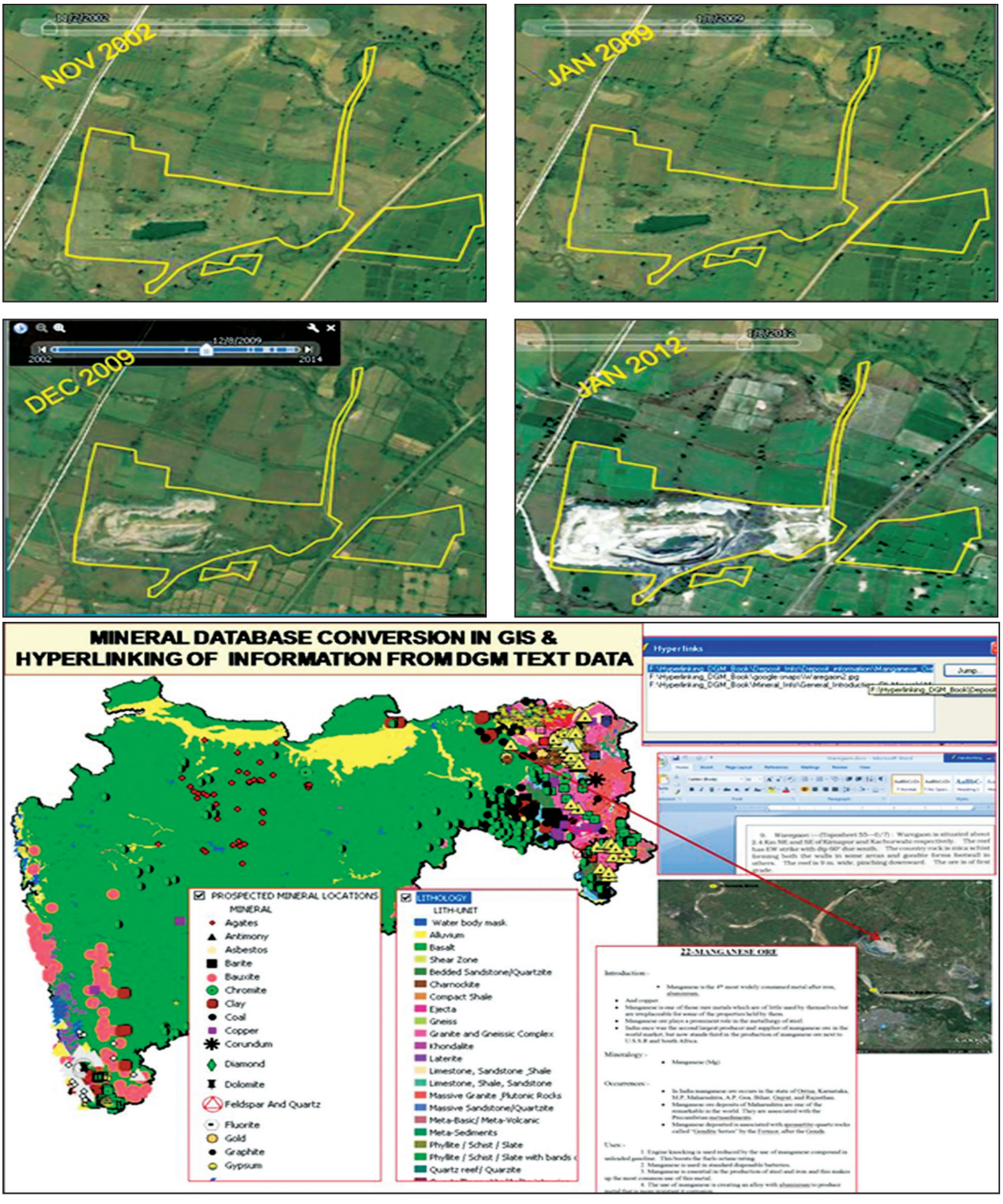
### Objectives of the Project

The project boasts use of e-governance in Minerals, Geology and Mining. All the available text data about prospected minerals locations are converted to Geographical Information system based intelligent maps. This has helped in observing the mineral occurrence situation in the state in a single perspective, hitherto not available in a decision support mode. Analysis, Query and output generation is easy in this Geo-Spatial model.

**Project Scope and approach**

The project has been appreciated on many forums and by senior officials of state and central government and has successfully proven its importance in the new and changing scenario of MMDR-2015 rules for allocation of mining blocks for e-auctions using Remote Sensing, GIS and GPS technology. The project has established a newer approach and unique delivery mechanism delivered “Innovative use of GIS for e-Governance’. The joint effort of the team has helped in making of the Maharashtra Geology and Mineral information System “MAHA-GEOMIN” which has compiled and provided access to geological, Mineral Location, Mine Leases and other mines related data of

Maharashtra at a single Location in a GIS environment for the decision makers, by way of data generation using standard formats, mapping, monitoring, evaluation, future planning, and depiction of prospective blocks of minerals for auction. The MAHA-GEOMIN project in Maharashtra has proven its capabilities as a vital e-governance, geo-informatics technology enabled, tool for assisting the minerals and mining sector and has initiated the mission – "From Systematic exploration to Sustainable utilization" as per the objectives of the Maharashtra Government. The view graph below depicts the actual output of the project which is available to the decision makers for evalution of mining scenario. The viewgraphs below depicts a snapshot of the model.



## Methodology

Collection, storage, management and quality control of digital geological and related metadata were the steps used as a methodology for the project. The data is generated in ArcGIS–GEODATABASE format and it can be easily converted to any desired GIS software format. The maps are provided on 1: 5,000 scale in GEOPDF format for easy sharing with the stake holders. The stake holder can load the map either in his desktop or laptop or smart-phone for easy decision support. The stake holder is also provided the maps in mobile format, so that he can verify the actual scenario of mine when he is visiting the mine. The GEODATABASE format is considered as one of the most secure GIS database format and the data cannot be tampered or stolen easily. The files are available on mine wise basis and every file now depicts the complete history archive and prospects of that particular mine. It can be considered as a base on which audit trails can be based. All future inputs on each year wise basis shall be added up to the facility.

## Status Before Implementation of the project

- Conventional modes of working & paper based maps were available for the references.
- Absence of compatible and geo-spatial database.
- Minimal convergence of data or database.
- Information based decision making was not possible.
- Dependency on the field staff of the Mining Department was very high.
- There were no tools for effective monitoring & Management of the Mining work.
- The information was available in the form of hard paper traditional cadastral maps.
- Difficult to search and respond to the queries on any specific mines or any arising issues in limited time slot. The entire departmental staff was required at the time of SOS.
- The conventional data and maps were available locally at the offices and were prone to damage/destruction/ unauthorized access.
- It was cumbersome activity to manage and maintain the physical hard files and data.
- The response time for any query/crisis/SOS was high as the information was not available at the hands of the Department.
- Huge efforts used to go for the physical surveys and monitoring visits by the Department. Also the same were not very accurate as the lease boundaries could not be ascertained.
- There were no means to monitor the area where the extraction is being carried out.
- There were physical passes (which were prone to be tailored) for assessing the royalty.
- There were no means to estimate and capture the amount of mineral extracts.
- No accurate decision support system was available with the department for taking timely decisions.

## Status after Implementation of the project

- Email / FTP / SMARTPHONE APPS based GeoPDF, Geo-Tiff transfer, KML files for actual visualization, Mobile based apps and maps are now available.
- Technological Integration: Various technological integration, which includes GIS, Remote Sensing, GeoPDF, Google earth, 3D maps, Mobile based applications, is achieved.
- Database integration (geo-spatial & attribute) to be compatible, comprehensive, standardized and organized with large scales (program implementable level).

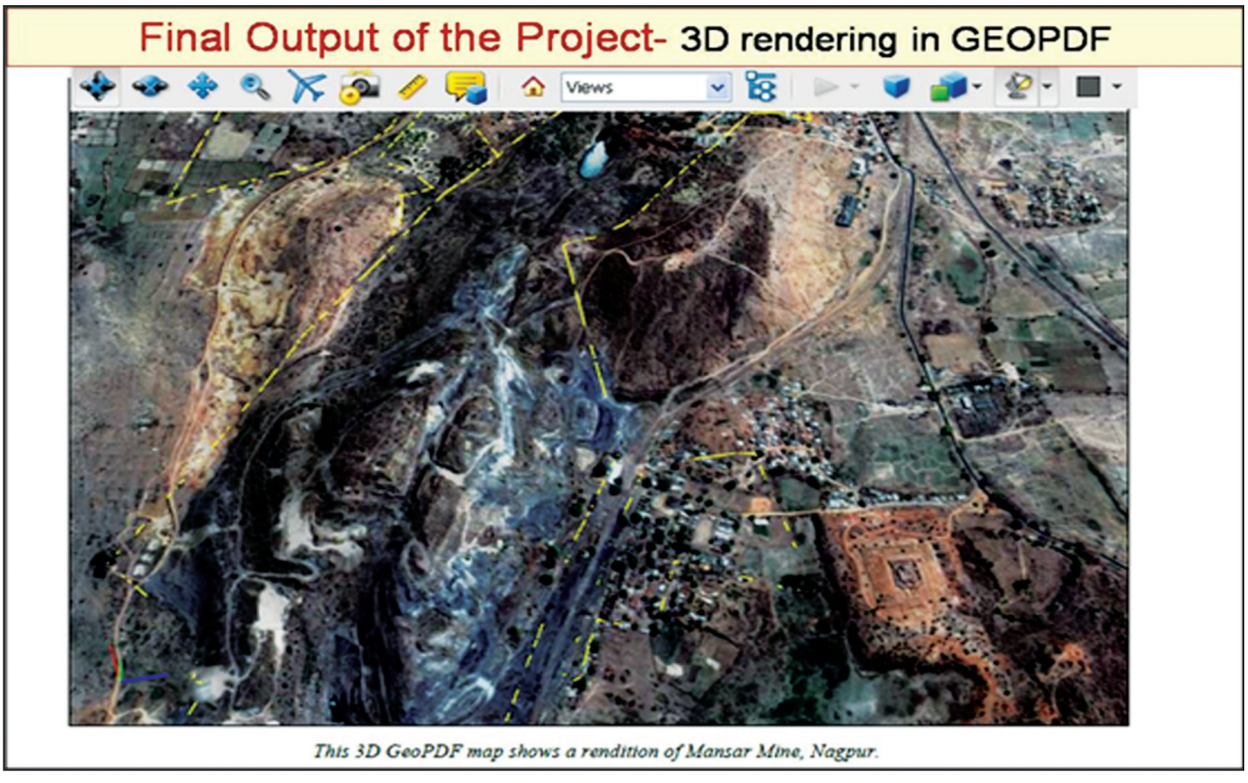
- The information is readily available at the hands of Management in the form of online database depicting the as-on-date status of the mines with respect to the field activity.
- Also, the Department staff and beneficiaries are aware of the current ground scenario at any point of time.
- The information / datasheet for every major mineral mine is available with just one click in the form of GeoPDF, KML files or Google earth maps. This does not disturb the day to day working of the staff members of DGM.

**Difficulties & Challenges**

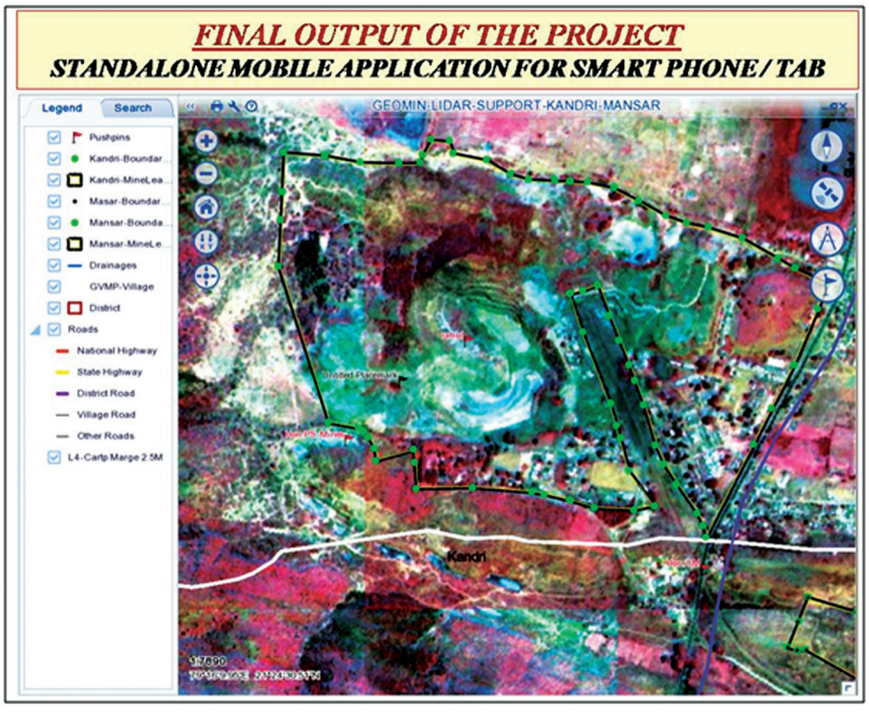
The entire process for e-governance prepardness in Geology, minerals and mining sector, in the state of Maharashtra, using the Geospatial Technology tools required enormous efforts, especially for technology awarness and sensitisation. The capacity building and sensitisation in the initial phases yielded the desired results.

**Results Achieved and Value delivered**

- The system is operational at DGM since August, 2015 and it has helped in the day to day working.
- The system has helped in achievement of a very important objective of "Ease of doing work".
- The system is demonstrated to the people who matter, namely the decision makers of the State of Maharashtra and Government of India and they have appreciated the innovation and utility of the exercise.
- Some of the unique delivery mechanisms are provided in the view graphs below.



*This 3D GeoPDF map shows a rendition of Mansar Mine, Nagpur.*


FINAL OUTPUT OF THE PROJECT
STANDALONE MOBILE APPLICATION FOR SMART PHONE / TAB
Legend
Search
Pushpins
Kandri-Boundar...
Kandri-MineLea...
Masar-Boundar...
Mansar-Bounda...
Mansar-MineLe...
Drainages
GVMP-Village
District
Roads
National Highway
State Highway
District Road
Village Road
Other Roads
L4-Cartp Marge 2.5M
GEOMIN:LIDAR-SUPPORT-KANDRI-MANSAR
Kandri
1:7,500

# Village Profile and Taluka Planning Atlas, Gujarat

**Directorate of Economics and Statistics, General Administration Department (Planning), Government of Gujarat**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | General Administration Department (Planning), Government of Gujarat |
| **2.** | Name of the host/owner organization | : | Directorate of Economics and Statistics, General Administration Department (Planning), Government of Gujarat |
| **3.** | Status of the host/owner organization | : | Directorate of Economics and Statistics, General Administration Department (Planning), Government of Gujarat |
| **4.** | Name of the Project | : | Village Profile and Taluka Planning Atlas, Gujarat |
| **5.** | Name of the Nodal contact Person | : | Shri S K Hudda, Director Directorate of Economics and Statistics, Gandhinagar |
| **6.** | Contact Address | : | Directorate of Economics and Statistics, Near Police Bhavan, Sector-18, Gandhinagar, Gujarat |
| **7.** | Telephone/Fax/e-mail | : | 079-23252930, 079-23252980<br>dirdes@gujarat.gov.in |

**8. Project Summary**

- "Village Profile and Taluka Planning Atlas", a Geographical Information System (GIS) based Decision Support System with the technical support of 'Bhaskaracharya Institute for Space Applications and Geo-Informatics' (BISAG) has been developed.
- The system is administered by General Administrative Department (Planning) Division and Directorate of Economics and Statistics. It is designed to grasp infrastructural amenities at sub district i.e Taluka and village levels. In this Portal 300+ data items relating to the services/amenities available at village level covering 11 sectors i.e. Demography, Education, Health, Electrification, Animal Husbandry, Irrigation, Land Use, Roads & Transportation, Communication, Water Supply & Sanitation and Community Development have been collected and entered into the centralized database and being updated regularly in this online portal.
- The portal has been developed integrating the above mentioned data with spatial data (Taluka maps with village boundary).
- This portal provides village level data with Taluka maps showing village boundary. Apart from maps depicting availability of amenities/services the system (portal) also provide various reports.

**9. Date of Launch of project:**

August 2014

**10. Coverage (Geographical)**

- Demographic spread (percentage of population covered):- Entire rural population of the state. (57% of Total Population)

## 11. Beneficiary of the Project

- Entire rural population of the state is the real beneficiary of this project
- Application is accessible at different levels through authentication and authorization. Access has been given to
  - All Taluka Development Officers (250)
  - All District Statistical Officer (33)
  - All District Planning Officer (33)
  - All District Development Officer (33)
  - All District Collectors (33)
  - All Secretaries and Ministers of the State.

## 12 Problem statement or situation before the initiative

- To support the planning process an attempt was made by Directorate of Economics and Statistics through Village Amenities Survey, covering 69 items which was conducted bi-annually and static reports were generated in hard copy, the same were distributed need base. Due to time lag in collection, compilation and report generation reference to village amenity survey, it was difficult to provide updated information to planners/administrators. Moreover, the information was available in static tabular report so it was not user friendly to use this data.
- The availability of relevant and authentic data in an easily intelligible form is an important requirement for any kind of planning. Due to lack of integrated database of status of various amenities/services available at village level, decentralized development planning; used to be based on an approach that is essentially demand driven. Development works are taken up by the District Planning Board based on requirements articulated by the local representatives and functionaries.
- All stakeholders associated with planning process like Collectors, District Development Officers and also MLAs/MPs and elected representatives wants to develop their Taluka/District/Constituency in a balanced manner and to allocate resources in an equitable manner. For this they are in need of reliable information about the availability of facilities/services at village level and also in easily understandable format. Data was available, but at different sources/offices, so it was difficult to decide the allocation of resources and to select villages to provide specific facility/service in terms of balanced development.

## 13 Project Objectives

- To develop and institutionalize spatial planning process in the state through an acceptable, adoptable, and affordable GIS based Decision Support System and visualization at various levels of hierarchies.
- To provide within the decentralized structure of the system; timely, reliable and credible socio-economic statistics.
- To assist grass root level planning and decision making; leading to balanced regional development of the State to meet an overall objective of improving the Human Development.

## 14 Project scope approach and methodology

- To facilitate planning machinery in their decision making as part of decentralized district planning and to avoid duplication of works undertaken by different line departments and also to facilitate them in equitable and need based allocation of resource for balanced regional development in the state this project was initiated.

- Directorate of Economics and Statistics (DES) earlier carried out 'Village Amenities Survey' of 69 items every two years.
- Considering present-day need with reference to human development, scope of the data collection has been widened and village level data of more than 300 items (demography/amenities/ services/ facilities) covering various sectors of development for all the villages of the state have been collected and entered into the centralized database and being updated regularly in this online portal.
- **Schedule for data collection devised on the basis of:**
  - o Assessment of earlier Village amenity Survey
  - o Expert inputs from
    - All concerned Departments
    - Committee of Secretaries
    - Reputed institutes and Universities involved in preparation of DHDR
  - o Pilot survey conducted in two talukas viz. Kaprada and Jambughoda.
- Village level data have been collected, verified and entered into the centralized database through district/taluka/village level machinery.
- **Sectoral Coverage:**

| Sector | Amenities/Services | No. of Data Items |
|---|---|---|
| Demography | • Population, Literacy, Workers, etc. | 51 |
| Education | • School-wise No. of students, Teachers, Amenities, etc. | 77 |
| Health | • Availability of Facility by Type and Numbers | 27 |
| Electrification | • Number of HH/Agricultural/Industrial Connection, etc. | 9 |
| Animal Husbandry | • Dairy Co-Op., Service Availability | 14 |
| Irrigation | • Source-wise Area Covered | 6 |
| Land Use | • Land Use Pattern, Social Forestry Area, Land Holding | 19 |
| Roads & Transportation | • Connectivity, Distance to City | 11 |
| Communication | • Commutation, P.O., Telephone, Mobile etc. | 14 |
| Water Supply & Sanitation | • Source of drinking water, type of drainage facility etc. | 18 |
| Community Development | • Anganwadi, Tourism, Employment, Social Security and Other Amenities | 58 |

- The portal has been developed integrating the above data with spatial data (Taluka maps with village boundary). This portal provides mapping of above data with Taluka maps showing village boundary. Apart from maps depicting availability/non availability of amenities/services that user select, system (portal) also provide various reports.
- Throughout the development process of the application/portal, regular consultation with the end user, developer and appropriate authority of the department was done through meetings, discussions, mail etc.

- Data collection and verification mechanism has been developed and implemented. Data collected at village level in hard copy in a predefined data collection schedule. Collected data be entered at taluka level online, after physical verification at taluka as well as district level authority and verified data is available to end users.
- Training through SATCOM/Video conference has been given to all Taluka/ District level functionary involved in the project (initially for data collection form, then data entry, verification and then to utilize the portal for information retrieval)
- Accessibility (Time Window):- Software is hosted on the State Data Center of Gujarat and has the 24X7 accessibility in terms of time window.
- Facility for online/offline download and online submission of forms:-Software has the features to download information in form of reports and maps online.
- The application has been developed using latest technology, it is sustainable and can be upgraded easily with less financial component.
- The data entry module has been develop in Gujarati – i.e. local language, which benefited in data entry work by Village/ Taluka level manpower with honorarium benefiting village/Taluka level manpower.
- Earlier map used to be prepared manually, hence when data updates again it required the process of manually preparing maps – this application provides generation of dynamic thematic maps online, no need of printing.

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

- Value has been delivered across the board in the following aspects:
  - o Centralized availability of Database
  - o Saving of Time, Cost and Efforts
  - o Transparency in Governance
  - o Support for Parity and Inclusive Growth
  - o Remove Redundancy
  - o MIS Report Generation
- The portal is aimed at facilitating decision makers; more specifically at district level in gap analysis and taking decision about where and for what the resources need to be allocated for balanced regional development.
- With the development of the portal all stakeholders are using the portal. The brief of how the stakeholders are being benefited is mentioned in following paragraphs.

**To organization:** (The State and District planning machineries)

- With the help of Taluka Planning Atlas and Gap Analysis done using the information available from the portal, planners particularly at District level (Collectors, DDOs and DPOs) benefitted to carryout need based planning. They select the villages where some specific services to be strengthened or amenities to be created for balanced regional development.

**To Citizen (Rural community):**

- Villages and services & amenities to be provided are being selected need based using this portal information; hence, people of the villages where there is a real need be benefitted. This leads to inclusive development and overall human development across the state.

**Other Stakeholders:**

- Other stakeholder like public representative's wants to develop their area inclusively and wants to provide services and facilities to people of their entire constituencies are also benefitted as they can now decides where and for what the resources to be used based on the Taluka Planning Atlas and village profile information.
- Even Hon. Ministers and Secretaries in-charge of developing Talukas uses the Taluka Planning Atlas and Village Profile information for GAP analysis and thereby need based planning.

**Services Delivered (some examples):**

- Planning department of the State has issued guidelines to all districts mentioning that in 2016-17 the selection of works to be carried out under decentralized district planning should be selected by Gap Analysis based on this portal data.
- As per the latest information available from district planning offices from various districts more than 2400 works covering sectors like Water Supply, Education, Health, Animal Husbandry, Village Roads, Sanitation and Others has been identified and approved based on the gap Analysis done through this portal and this is an ongoing process.

**District Bharuch:**

- There are 92 primary schools in 59 villages of developing taluka, Valiya, out of which 12 didn't had compound wall; Rs. 30 lakh has been allocated for construction of compound wall in these schools.
- 10 villages (consisting 144 households) among 59 villages of developing taluka, Valiya didn't had electricity for which Rs. 35 lakh are allocated for providing electricity connections.
- It was found that, only 444 farmers are using drip/sprinkler method for irrigation. In order to encourage such method among other farmers, Rs. 28.82 lakh allotted to Gujarat Green Revolution Company Ltd.

**District Tapi:**

- It was found that villages of Valod, Vyara, Dolvan and of developing talukas like Sonagdh, Uchchal, Nizar and Kukarmunda not having Approach Road; works are undertaken on priority basis in 2015-16.
- Village Nindvada of Songadhtaluka and village Nizar-5 of Nizartaluka : didn't had own building for Anganwadi ; work is sanctioned under DDP grant
- A work of construction of compound wall of primary school of Village Musa andNibhora of Vyarataluka under DDP grant.

**District Bhavnagar:**

- Underground Drainage works were sanctioned in villages of developing taluka, Ghogha.
- Taluka Development Officer of all other talukas has undertaken works for Underground Drainage based on list of villages generated from this portal.
- Pre - Summer works related to providing drinking water facility throughout the year is undertaken by Taluka Development Offers of all talukas based on information generated from this portal.

# Online Delhi Traffic Police Mobile Application

**Ministry of Home Affairs, Govt. Of India. (Delhi Police)**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | Ministry of Home Affairs, Govt. Of India. (Delhi Police) |
| **2.** | Name of the host/owner | : | Delhi Police – Traffic Unit |
| **3.** | Status of the host/owner organization | : | Ministry of Home Affairs, Govt. Of India. (Delhi Police – Traffic Unit) |
| **4.** | Name of the Project | : | Online Delhi Traffic Police Mobile Application |
| **5.** | Name of the Nodal Contact Person | : | Ms. Aslam Khan, Deputy commissioner of police/Traffic Head Quarter |
| **6.** | Contact address | : | Delhi Police Traffic Head quarter, Dev Prakash Shastri Marg, New Delhi-110012 |
| **7.** | Telephone/Fax/e-mail | : | 25845625, 25845626 |

## 8. Project Summary

With ever growing vehicular population and limited road length, Delhi, over the past few years, has been witnessing more frequent traffic jams and a sense of urgency on the part of all road users. It has given rise to incidents of road rage and also traffic accidents in which many lives are lost.

Traffic Mobile App was launched by Delhi Traffic Police on 8th May 2014 for a two way interaction with general public to share the traffic status information and to invite public to participate in better management of traffic on Delhi roads. This app provides information to general public by issuing Traffic Advisory and Traffic Alert about traffic situation at various location. It also has a feature of fare calculation for Auto/Taxi on the bases of areal distance provided by Google map. Public can make complaint against the Auto/Taxi driver for refusal/overcharging/ harassment. Public can also help in traffic management by making complaint for faulty traffic signal. App also provides the information regarding various offences and their fine amount.

## 9. Date of launch of project

8-May 2014

## 10. Coverage (Geographical)

Globally, Reporting Jurisdiction is Delhi only

## 11. Beneficiary of the Project

General commuting public (domicile or Visitors) of Delhi

## 12. Problem statement or situation before the initiative

The traffic situation in a metropolitan city like Delhi changes rapidly. Limitation was felt by Delhi Traffic Police to convey quick information to public. The conventional methods offered no facility of instant alerts. There was no way to reach public about unplanned accidents and breakdowns.

These problems made Delhi Traffic Police officials to realize the need for achieving a paradigm shift in the basic process of communicating with the public which eventually led to automation of this manual process through mobile technology for effective and instant communication.

## 13. Project Objectives

The main objective of this Mobile Application is to provide instant information related to traffic situation to the road users of Delhi. The Application aims to reach out to maximum number of road users in Delhi, directly through their individual Android smart phones and keep them aware of the latest traffic situation in Delhi through timely traffic alerts and traffic advisories, aiming to make commuting in Delhi faster and easier. The App provides single window services of Traffic Advisory, Traffic Alerts, Taxi/Auto rickshaw/cab Fare, Complaints, Signal Faults, Towed Vehicles, Emergency Contact, FAQ's, Offences, Lost Report and link to Facebook, Twitter and Delhi Police website. Besides this, the app also have a complaint section where users can lodge complainants regarding refusal, overcharging by Taxi/TSR drivers, faulty traffic signals etc. and give their suggestions, which will help us to improve the traffic situation in the area. The application has a global reach and removes the geographical and time barriers for assessing these services.

## 14. Project scope approach and methodology

1. Traffic advisory
2. Traffic alert
3. Taxi/auto fare
4. Traffic Sentinels (Complaints of Traffic Violations on Delhi Road)
5. Signal fault
6. Towed vehicles
7. Emergency contacts
8. FAQ
9. Traffic Violations
10. Link to Lost Report Mobile App
11. Link to Delhi Traffic Police Face Book Page.
12. Link to Twitter Handle of Delhi Traffic Police
13. Link to Web site of Delhi Traffic Police

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

**SPEED OF DELIVERY OF SERVICE:** This application is a great step forward in comparison to the conventional system in information dissemination to the public since the application provides instant delivery of information in the form of traffic alerts and advisories to the general public. The conventional methods of erecting boards, publishing advertisements and arranging radio/TV broadcast were both time consuming and high in cost. The conventional systems are practically unable to help if any urgent information needed to be passed to the road users. The lightening speed with which an urgent information can be transmitted to individuals, with click of a button is the unique feature of this Mobile App which has helped develop a direct connect between the Delhi Traffic Police and the members of public.

**QUALITY OF SERVICE:** The main aim of the Delhi Traffic Police Application is to:

- Provide a tool for instant two-way dissemination of information
- Reduce the gap between the traffic police and the community for better understanding of local and general traffic problems
- Monitor traffic movements and road situations smoothly
- Operational involvement in traffic regulations as and when needed

# Bhamashah Scheme

**Directorate of the Economics and Statistics**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | Rajasthan |
| **2.** | Name of the Host/Owner Organization | : | Department of Planning |
| **3.** | Status of the Host/Owner Organization | : | Through the Directorate of the Economics and Statistics |
| **4.** | Name of the Project | : | Bhamashah Scheme |
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## 8. Project Summary:

Bhamashah is a Scheme to provide for Women Empowerment, financial inclusion;effective service delivery and direct transfer of public welfare benefits, to the beneficiaries through Bhamashah platform in efficient and transparent manner.

## 9. Date of Launch

15th August, 2014

## 10. Coverage (Geographical)

The entire state of Rajasthan

## 11. Beneficiaries of the Project

All the residents of the Rajasthan who are beneficiaries of the public welfare schemes either cash or non-cash.

## 12. Problem Statement or the situation before the initiative

There were following bottlenecks and challenges which actually triggered the idea that there is dire need to deal with these issues for good governance-

**a)** **No Financial Inclusion-** A large populace of the state was devoid of basic financial/ banking facility.

**b)** **No or little Women Empowerment-** Being a patriarchic society, in Rajasthan, woman has either little or no say in the financial decisions of the family.

**c)** **No Common Database-** Different government departments and agencies had their own databases with large duplicity of surveys and wastage of the public money in these surveys.

**d)** **Wide range duplicity-** Same resident may have different accounts with different or little change in the name. The duplicity has created lots of leakages in the system and wastage of resources.

**e)** **Lack of optimum Utilization of Resources-** Due to many channels of distribution of government services/ benefits, there was great wastage of money and human resources in service delivery as well as benefit distribution.

f) **No Family ID-** only individual residents were provided identity cards etc. for identification but there was no family ID for identifying the antecedents of a person so that benefit distribution could be monitored and the ID can be verified.

g) **Lack of Point of Service in the vicinity of the resident-** There was lack of IT infrastructure due to which there were few points of service hence wastage of money and time of the residents to avail a government service. Delivery & quality of service were very poor due to lack of infrastructure and sense of quality among the government functionaries.

## 13. Project Objectives

Taking a broader view of the Bhamashah Scheme, the main purposes and priorities can be enumerated as fallows-

- To empower women by making them Head of the Family and also to empower them with freedom to decide what to spend their money on;
- To make banking services available near the doorsteps of the residents of the state through banks/ post office / e-Mitra / business correspondents.
- To motivate all state residents to open Aadhaar enabled biometrically operated bank accounts linked with core banking facility.
- To reform and institutionalise direct benefit delivery mechanism of government programmes-
  - To transfer all cash benefits directly to the bank account of the beneficiaries of the state.
  - To provide all non-cash benefits/services directly into the hands of the beneficiaries of the state using Aadhaar enabled biometric authentication
- To provide effective check on the leakage of direct benefit transfer to beneficiaries;
- To issue a Multi-purpose Family ID card to all families of the State.
- To provide employment to over 20000 persons.

## 14. Project scope approach and methodology

The methodologies adopted to implement the Bhamashah Scheme to ensure achievements of the objectives of the scheme have played major role in transformation of the life of the beneficiaries all over the state. Right from the enrolment of the beneficiaries to Direct Benefit Transfer, the process has been implemented meticulously. A brief description of the processes is being described below.

**1. Enrolment Process:**

- The Bhamashah enrolment software has been developed to work both in offline as well as in online mode. State Government has facilitated enrolment near the door steps of the residents so that more and more residents are enrolled under the scheme.
- For offline enrolment, camps were organized in each Gram Panchayat in rural area and in each ward in urban area. For online enrolment, various Points-of-Services can be used by the resident. Any resident of the State can also apply online for Bhamashah enrolment through the Bhamashah Portal.

**Launch of Bhamashah Card**

**Bhamashah Enrolment Camp**

- The enrolment software also has features for Updation of details like
  - New birth in the family
  - Marriage of an individual
  - Death of a family member
  - Change in address of resident
  - Change in any of the detail like bank account number
  - Correction in detail fed by operator

2. **Quality Control:**

- For data quality assurance Bhamashah enrolment camps have been organized under the supervision of Block level senior officials like-SDO, BDO, Tehsildar etc. with subordinate officials like-Gram Sevak, Patwari, Ward Inspector etc.
- Data quality check
  - First level- Gram Sevak, Patwari, Ward Inspector etc.
  - Second level- SDO, BDO, Tehsildar etc.
  - Third level- Through MDM software
- Proper validation checks have been provided at relevant data entry fields in the software.

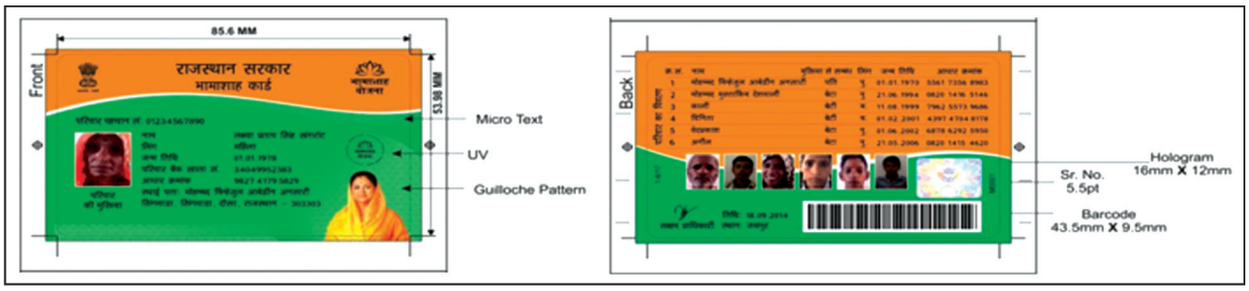
3. **Bhamashah Card:**

- **Family Card:** Bhamashah Card is issued to the woman head of the family free-of-cost by the state Government, wherein the essential information regarding entire family is given.
- **Individual Card:** Any member of the enrolled family can get the individual Bhamashah Card by paying a nominal fee.
- **E-Bhamashah card:** Generated on E-Mitra after successful enrolment/ updation in family details.

**Bhamashah Enrolment in process**

4. **Issuance of the Card:**

- **Family Card:** Bhamashah Card is issued to the woman head of the family free-of-cost by the state Government, wherein the essential information regarding entire family is given. The Bhamashah Card leverages biometric identity of the beneficiary through UID (Aadhaar) and also ensures linkage with his/her core bank enabled bank account.




**Family Bhamashah Card**

- **Individual Card:** Any member of the enrolled family can get the individual Bhamashah Card by paying a nominal fee. This card, apart from being an identity Card, highlights individual's entitlements e.g. Pensioner; Unorganized Labourer, etc.
- **E-Bhamashah card:** Generated on E-Mitra after successful enrolment/ updation in family details. This card also works as original card for all purposes of residents.

**5. Secured Delivery of Services-**

- The concerned service department will deliver the given benefit/services/material delivery or deliver the amount to the core banking account of the Bhamashah Card holder family after bio-metric verification. It ensures that only the genuine Bhamashah Card holder families get the benefits of material/amount.
- The card cannot be used by anyone else except the head of the family/family members as it uses bio-matric verification. Therefore, there are no chances of misuse of the card when lost or stolen.
- In case of difficulty in verification through finger print based bio-metric authentication (especially in case of manual laborers whose finger prints are not easily readable), facility of secured validation through One Time Password (OTP) on registered mobile is also provided.

**6. Security features on the card include:**

- Micro-text printing
- Guilloche Pattern
- Invisible UV
- Fluorescent ink printing
- Bar Code/QR Code
- Hologram Hot stamping

**7. Unified Dataset-**

Unified Bhamashah Resident Data Hub (BDH) is created under the Bhamashah Scheme, which can be leveraged at the backend. It is the centralized and comprehensive dataset comprising authentic data for residents of Rajasthan. It also ensures' One Family, One identity' phenomenon along with' One Resident, One identity'.

In line with the Rajasthan E- Government Architecture and completely compliant with Aadhaar authentication framework, the Bhamashah Resident Data Hub shall be leveraged by every department in a centralized manner for all departmental applications for service delivery.

Bhamashah Data Hub is comprised of Aadhaar identification Data (KYR) and Basic Demographic data (KYR) of residents of the State. This includes entitlements and provides eligibility status under the scheme. This database shall replace all other resident/beneficiary databases being maintained by other departments. All cash and non- cash benefits shall be provided directly into the hands of the beneficiaries of the State using this single dataset and Aadhaar enabled biometric authentication. This would reform and institutionalise direct benefit delivery mechanism of government programmes. This will further in taking decisions regarding conversion of non- cash benefits into cash benefits.

**8. Data Seeding-**

Seeding is the process of inserting Bhamashah ID, Aadhaar number and bank account detail of the resident in a scheme/ departmental database. This ensures that all legacy departmental applications leverage Bhamashah data for transfers. This also enables validation using Aadhaar infrastructure. This is one of the foremost requirements to transfer benefits directly into the bank account of the beneficiary through existing application. In this scheme, the benefits of all the schemes of the govt. will be transferred to the Bhamashah card holder through Bhamashah platform.

To transfer cash benefits or provide services with biometric identifications, the data of concerning department is linking (i.e. seeding) with Bhamashah Data Hub. The work of seeding is under process at District and Block level.

**9. Direct Benefit Transfer (DBT):**

Direct Benefit Transfer (DBT) envisages transfer of benefits directly to core bank enabled bank accounts of the beneficiaries for the identified schemes. Beneficiaries are also provided with a facility of mobile payments.

**10. Advantages of DBT:**

- Consolidate cash transfers to Households which are getting benefits from multiple sources and multiple forms
- Adoption of cutting edge technical system
- Ensuring real- time availability of data at all levels of governance for strategic decision making
- Maximise benefits from expenditure of welfare schemes which leads to overall human development
- Safer and more secure than carrying cash or cheque
- Faster payment

**11. Point of Service (PoS):**

Bhamashah card holders will be able to get services at many different service-points. For cash benefits, besides bank branches & ATM, services will be available through Banking Correspondents and Micro ATMs at various e-Mitra kiosks across the State. e-Mitra is a multi service, single window network for providing government information and service to the residents. Various cash and non-cash services would be available from e-Mitra centers through Micro-ATMs as well as IT enabled PoS at concerned institution like Ration Shops for PDS.

For door-step service delivery-

- More than 40000 e-Mitra are working at all panchayats in rural areas and wards in urban areas,
- More than 25,000 micro ATMs established on e-Mitraand
- More than 25,000 PoS machine are establishedon fair price shops.

**12. Bhamashah Transaction Mapper-**

Transactions both cash and non-cash, pertaining to a family are consolidated at one place by way of 'Transaction Mapper'. All the transactional events are linked with notifications to concerned stakeholders through SMS/e-mail. Multiple MIS reports are available to the decision-maker and beneficiaries alike. Thus, apart from bringing in awareness and transparency, this feature will help the government in analytics, taking corrective measures and designing of new schemes.

**13. Mobile App:**

Various transactional facilities to all the stakeholders of Bhamashah Scheme are being provided through Bhamashah Mobile App. The App works on all the operating systems. The features available in the App are:

**For Beneficiaries-**

- Apply for Bhamashah enrolment
- Check status of enrolment
- Check status of transactions
- Transactions via various digital wallets such as PayTm, Vodafone m-pesa, Airtel Money as per RBI guidelines

For Government Officials-

- Verification and tracking
- MIS for monitoring & supervision
- Service charge management

**14. Communication and dissemination strategy and approach used-**

- Infrastructural enhancements were made from state level to the gram Panchayat level through the Video Conferencing, which establishes direct dialogue with the implementing stakeholders (district administration, private partners and public representatives), was established.
- Regular guidelines and clarifications were issued through government circulars for establishing a continuous and error free communication with all the stakeholders.

**15. Feedback/grievance redressal mechanism-**

- To facilitate the grievance redressal system of the government, RajSampark Kiosk (for handling electronic grievance/compliant redressal) has been set up at the RajSampark IT Kendra, a government premises, with Internet connectivity.
- These IT Kendras have been set up at every Gram Panchayat of the State (about 10000) so that they cater the need of the citizen residing at the remotest place.

**16. Interactive platform for service delivery-**

A citizen can access services of Bhamashah Portal through the following service delivery channels:

- Web Portal – www.bhamashah.rajasthan.gov.in
- Citizen Contact Center – Toll Free Number: 1800-180-6127
- Jan SamparkKendras (at District Head Quarters and Block Office)
- E-Mitra Kiosks spread across Rajasthan
- Banking Correspondence
- Mobile Application (android based)

**17. Results Achieved/Value delivered to the beneficiary of the project and other distinctive features/accomplishments**

**Increased Transparency:** The Service delivery through Bhamashah portal is absolutely transparent and includes the following features-

i) Almost all of the services (of which deliver some kind of cash and/or non-cash benefits) being delivered by any government department, are to be e-enabled which are meant to reach the common resident in time, in a transparent manner and directly such as Social Security Pension, PDS, MGNREGA, Scholarships etc.

ii) Provision for verification and cross verification of each enrolment information has been kept as a part of the process flow. All the actions and comments of verifying authority are maintained in the action history as audit trails.

iii) A citizen can access services of Bhamashah Portal through the following service delivery channels:

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- Citizen Contact Center – Toll Free Number: 1800-180-6127
- Jan SamparkKendras (at District Head Quarters and Block Office)
- E-Mitra Kiosks spread across Rajasthan
- Banking Correspondence
- Mobile Application (android based)


**Bhamashah Mobile App**

iv) By replacing the manual system of service delivery by electronic system, the system has been rendered completely transparent. The transaction mapper and receipt of messages on mobile generates transparency and trustworthiness of the system.

**Stakeholder participation:**

A wide level survey was conducted involving Public representatives, public servants, media, general populace, banking sector etc. before launching this ambitious scheme.

Besides, while implementing the scheme, not only the nominees but also the officials of other incumbent departments have been key players in the integration of the services of public welfare (such as Social Security Pension, NREGA wages, PDS etc.) of their respective departments with the Bhamashah Platform to implement the DBT through Bhamashah. Banking partners and the private players working as Business Correspondents and Service Delivery points (such as e-Mitras) have been also contributing largely to implement the Financial Inclusion in the state. People in general have shown huge interest in the scheme as it is more transparent delivery system with almost nil human intervention.


**Launch of DBT through Bhamashah Portal**

**Innovativeness of the initiative and its replicability-**

Bhamashah Scheme is unique in number of ways:

- It provides a family ID. (Apart from the usual individual ID).
- Provides an umbrella platform for all the government departments which are delivering cash or non-cash services to the residents of the state.
- The beneficiary is authenticated biometrically by leveraging the Aadhaar platform of authentication.
- The beneficiaries have been identified and authenticated at their door step and have been verified through the two-layered system of the verification, hence making the data cleanest possible.
- Change Management and Capacity Building has been implemented right from the inception of the scheme to make it more acceptable to the government machinery as well as the public representatives.
- The departmental data bases as well as the applications have been integrated with the Bhamashah Application to avoid the repetitive steps and to remove bottlenecks.

All of the above features can be replicated into any electronic delivery system to exude transparency, timeliness and prevention of leakages and duplicities.

➢ **Increased efficiency of outputs/processes and effectiveness of outcomes-**

**(i) Volume of transactions processed-**

- Enrolment was started from 15.08.2014 and till 15.09.2016 close to 4.50 crores citizens have been enrolled.
- Seeding of various departmental data was started from March-15 and now more than 1.5 lacs entries are being done in a day.
- Direct Benefit Transfer through this project was started from July-15 and till 15.09.2016 through more than 9.80 crores transactions an amount of whooping Rs.4040 crores has been transacted through the Bhamashah platform.

**(ii) Coping with transaction volume growth**

With the increase in the volume growth following measures has been taken to ensure satisfactory performance of the system:

- Enhancement in Database technology used (migration to Oracle 12C database)
- Database tuning
- Database Table restructuring and proper indexing
- Optimization of forms
- Optimization of Dashboard through asynchronous loading
- Optimization of all the screens

**(iii) Time taken to process transactions-**

- Around 2 to 4 secs.

**(iv) Accuracy of output-**

100%

**(v) Number of delays in service delivery- None.**

➢ **Display of leadership / Team work by the nominee(s)-**

Since two years, the Team Bhamashah has shown impeccable comradery and team spirit while implementing the scheme in a watertight manner. The scheme as huge as Bhamashah Scheme cannot be sustained and achieve the success it has achieved without a confident and unflinching leadership. Hence all the members of the team have led their respective functioning areas from the front and outcomes are the testimonies of their efforts.

**Sustainability of the initiative-**

- A self sustaining Bhamashah Service Delivery System has been designed. The e-Mitra network is run on the profit sharing basis with the LSP (Local Service Provider). The e-Mitra owner receives commission on the basis of the transactions performed by him. Similarly, the Business Correspondent of the bank also receives a pre-decided monthly fixed amount and also commission based on the transactions. Hence the system is self sustaining.
- For ensuring sustainability of technology the latest technology has been used both in development of front end (IBM Pure App) and database (ORACLE Exa Data)

**(a) Outcomes i.e. impact/benefits resulting from the initiative, for example:**

➢ **Improvement in delivery time of services-**

The service delivery through Bhamashah Scheme has certainly reduced the delivery time drastically for example the pension delivery through manual mode has been reduced by 45 days! Numerous visits were required before the automation which have been reduced to just one or even zero visit.

The resident can avail the benefits of the government schemes of public welfare just by click of his finger and authenticating herself at the e-Mitracenters or her own PC/mobile.

➢ **Better beneficiaries feedback-**

The beneficiaries are reached time to time for reality check and the database of responses is maintained for improvements. The testimonies show that the Bhamashah Scheme is a huge success and the targeted populace is adopting to it in a steady manner.

➢ **Improvement in measurable indicators-**

**Result Achieved/ Value Delivered** to the beneficiary of the project-(share theresults, matrices, key learnings, feedback and stakeholders statements that show a positive difference is being made etc):

| Achievements Till 15-09-2016 | Family | Individuals |
|---|---|---|
| Total Enrolments | More than 128 Lacs | More than 455 Lacs |
| Bank Accounts opened | 130 lacs | |
| Transactions (Cash & Non-Cash) | More than 1007 Lacs | |
| Cash benefit transferred | More than 4120 Crores | |

➢ **Simplified procedures:**

On account of simplified procedures the time, user accessibility, transparency, single window resolutions, ease of navigation etc. various dimensions of comparison before and after have certainly been enhanced after the implementation of the Bhamashah Scheme-

**a)** **User Accessibility-** The resident can avail the benefits of the government schemes of public welfare just by click of his finger and authenticating herself at the e-Mitracenters or her own PC/mobile.

**b)** **Transparency in system-** By replacing the manual system of service delivery by electronic system, the system has been rendered completely transparent. The transaction mapper and receipt of messages on mobile generates transparency and trustworthiness of the system.

**c)** **Single-window resolution-** Through the RajSampark and e-Mitra portals of the government, the problems and grievances of the residents are being resolved without much hassle.

**d)** **Ease of navigation-** the government service delivery portals such as emitra.gov.in, sampark.rajasthan.gov.in,http://rajssp.raj.nic.in, food.raj.nic.in, http://rajpms.nic.in etc. are all STQC certified which have been tested for the ease of navigation besides all other aspects.

**e)** **Impact on service response time-** The service delivery through Bhamashah Scheme has certainly reduced the delivery time drastically for example the pension delivery through manual mode has been reduced by 45 days!

**f)** Number of visits required for accomplishing the task before and after automation- Numerous visits were required before the automation which have been reduced to just one or even zero visit.

# ASHASoft a way of e-Governance cum first step in improving quality of care through rigorous monitoring mechanism of front line workers
# (ASHAs – a Village volunteer)

**Man with Mission:**

Mr. Naveen Jain, a highly enthusiastic public service cadre officers, resolve the problem which not only improved the governance at scale but a stepping stone in quality of healthcare services in India.How an ASHASoft developed, challenged before it's launched and benefits which at scale (47000 – front line workers), a success story in few words.

**Background:**

Since the inception of National Rural Health Mission (2005), Accredited Social Health Activist (ASHA) component has played an important and critical role in the implementation of NRHM activities. The ASHA programme was introduced as a key component of the community process intervention and over the 8 year of period, this programme has emerged as the largest community health worker programme in the world and is considered of critical importance in enabling people's participation in health. ASHA is a community level worker, whose role is to generate awareness on health issue and also is an interface between community and health services.

**A Challenge:**

To reduce the MMR and IMR, to ensure better health services and to prevent other diseases, at present, approximately 47000 ASHA (Accredited Social Health Activist) Sahyoginis are functional in the state. ASHA Sahyoginis are paid incentives against providing various health services to pregnant mother and child and for providing health services to the community. The roles and responsibilities of an ASHA include the functions of a healthcare facilitator, a service provider and a health activist.

ASHA workers are paid incentives against 26 types of activities and that also at different time period and from various channels. These complexities in their payment system cause various problems for ASHA's payments. Because of not being paid on time, ASHA's were getting de-motivated to render proper services to the community. Getting payment for every activity on time is a challenge, which has been acting as disincentive to them.

**Problem at depth/ground level:**

It was noticed by the department that there are many challenges and gaps in the smooth implementation of 'ASHA Programme'. It was decided to evolve an IT based mechanism to overcome these issues and to ensure the best utilization of ASHAs.

Based on the interactions with ASHAs, ANMs (Auxiliary Nurse and Midwives) , PHC (Primary Health Center) ASHA Supervisors, Block Health Supervisors, District ASHA Coordinators, Design and Development team at health institution level the following gaps were identified and enlisted.

- Irregularity and delays in payment to the ASHA workers, leading to lack of motivation among them.
- Pending payments at the facility level.
- Lack of awareness among the ASHA workers about incentives on the 26 activities to be done by them.
- Dearth in monitoring the performance of ASHA every month.
- Inadequate availability of training status of ASHA's with the state authority.

## A Feasible Solution:

"ASHASoft – The Online Payment and Monitoring System" with website address http://ashasoft.rj.nic.in, is web-based, user-friendly software for online payment to ASHAs bank account and monitoring their performance. The services rendered by ASHA are captured beneficiary wise at village level.

The software generates dash-board (for at a glance report), analytical and graphical reports enabling monitoringof various health programs. It is developed by NIC-Rajasthan State Unit and online payments are being done by Bank of Baroda. Bank account details of ASHAs are collected and verified in ASHASoft by authorized users at district level for online payment. The software is integrated with PCTS (Pregnancy, Child Tracking and Health Services Management System) which records the information of pregnant women and children leading to decreased probability of duplication of data.

## Objectives of project:

- To monitor the performance of each and every ASHA every month.
- To identify the gap areas and need assessment for rendering better services at community level.
- Assessing the quality of services in remote and vulnerable areas. It would be easier to assess the service delivery of ASHA in remote areas and marginalized community.
- Timely payment of incentives to ASHAs to maintain their motivation level.
- Streamlining payment mechanism through institutionalizing standard protocols at village (ASHA's level), at sector level (Medical officer level) and at district level (Chief Medical and Health Officer level)

## How it works:

For the effective implementation of ASHASoft following have been issued, designed and defined – Circular to authorize ASHASoft, ASHA Claim form, User Guide, Roles, Responsibilities and timelines.

## Following steps have been defined:

- **Step 1 -** Verification of ASHA Claim Form by ANM
- **Step 2 -** Online data entry of ASHA Claim Form and verification on ASHASoft by Information Assistant/ PHC Health Supervisor/ Data Entry Operator
- **Step 3 -** Release of Sanction or Fund Transfer Order (FTO) by Medical Officer In-Charge with assistance of Lady Health Visitor/ Accountant
- **Step 4 -** Release of payment using Digital Signature Certificate by Chief Medical & Health Officer
- **Step 5 -** Payment will be transferred directly to the Bank A/C of ASHA
- **Step 6 -** SMS will be sent to ASHA for information of online payment.

Orientation and training has been imparted to the ASHAs, Computer Operators, Block ASHA Health Supervisor, District ASHA Coordinators, District Programme Managers, District Nodal Officers etc. about the ASHA Claim form and ASHASoft. The solution has been established in a seamless manner.

## Uniqueness:

**The software is unique in many ways:**

1. It is the first software in India that does online payment to ASHA's.
2. It is zero investment project designed and developed using the existing resources with the state.

3. Its association with PCTS has reduced the data redundancy and has created a strong beneficiary i.e. maternal and child database.

4. ASHA being incentive based grass root level worker had to face difficulties in getting their payments. But, with the ASHASoft there is timely payment, the backlogs have reduced.The only software that serves the community level service providers.

5. Regular monitoring of ASHA's work b generation of reports on working and non-working ASHA's.

6. Generation of program based reports for appreciating the progress of the program, gap analysis and hence doing the corrective actions.

7. Generation of district based reports for analyzing good and poor performing districts in the state and inculcating a healthy competition among them.

8. For the redressal of grievances related to payment of incentives to ASHAs, a very cost-effective helpline (mobile based helpline) 8290266668, 8290266669 have been established for the immediate disposal of grievances which is managed by the designated officers of the department.

**Output of the ASHASoft in very short term:**

1. ASHASoft initiative has helped in resolving bottlenecks not only in terms of payment but has also improved the monthly monitoring of ASHA's work even. It impacts more than 70 per cent of the target beneficiaries

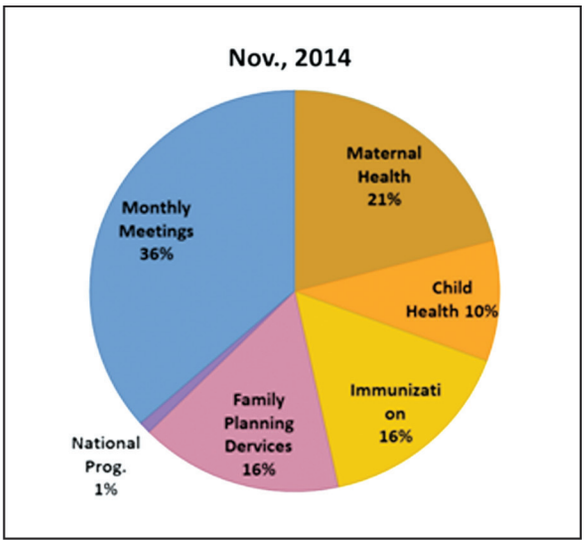
2. Reduction in number of steps and paperwork that was initially required for earning the incentive.

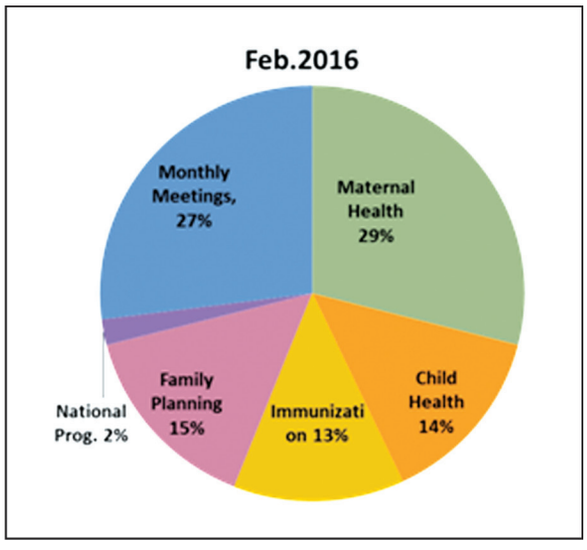
3. Increased transparency as the payments are generated online and the reports can be viewed by anyone.

4. Improved and strengthened database of maternal and child health indicators, reduced data redundancy and discrepancies. The data entry in PCTS has improved by 30 per cent after the implementation of ASHASoft.

5. Increased work satisfaction and enthusiasm among ASHA workers and also improved health service delivery.

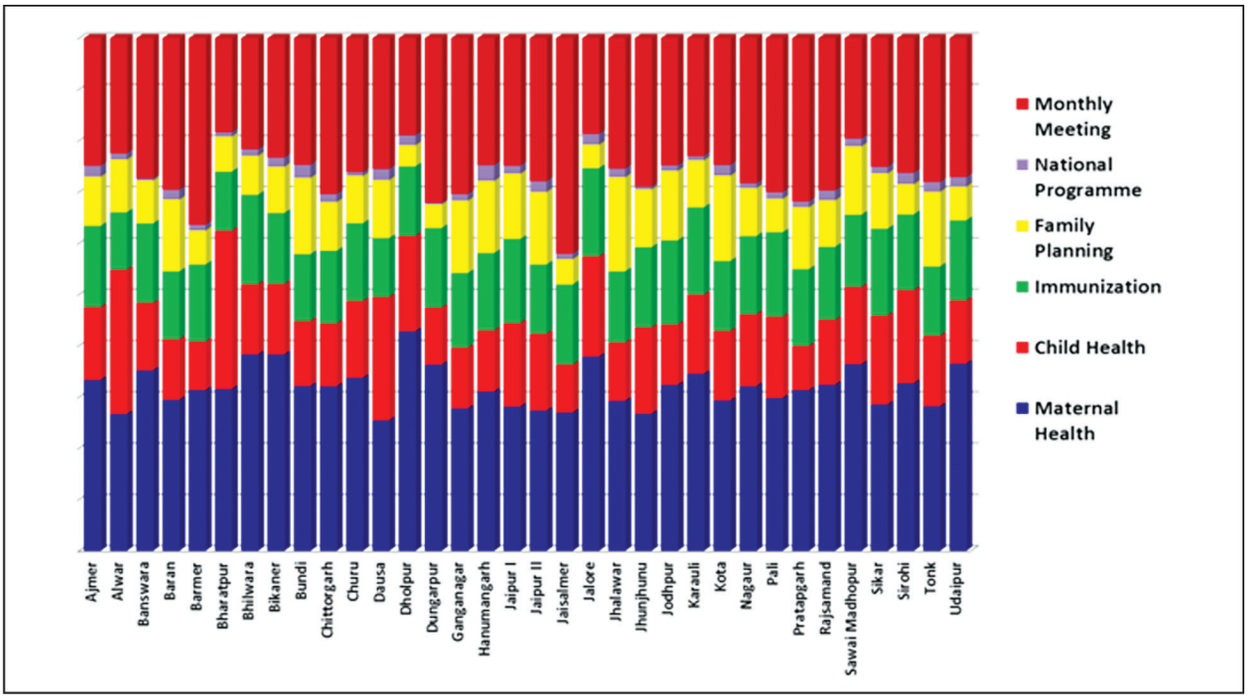
**Activity wise contribution of ASHAs**




6. Generation of online reports for regular monitoring of ASHA's activity, progress of program, district's achievement.

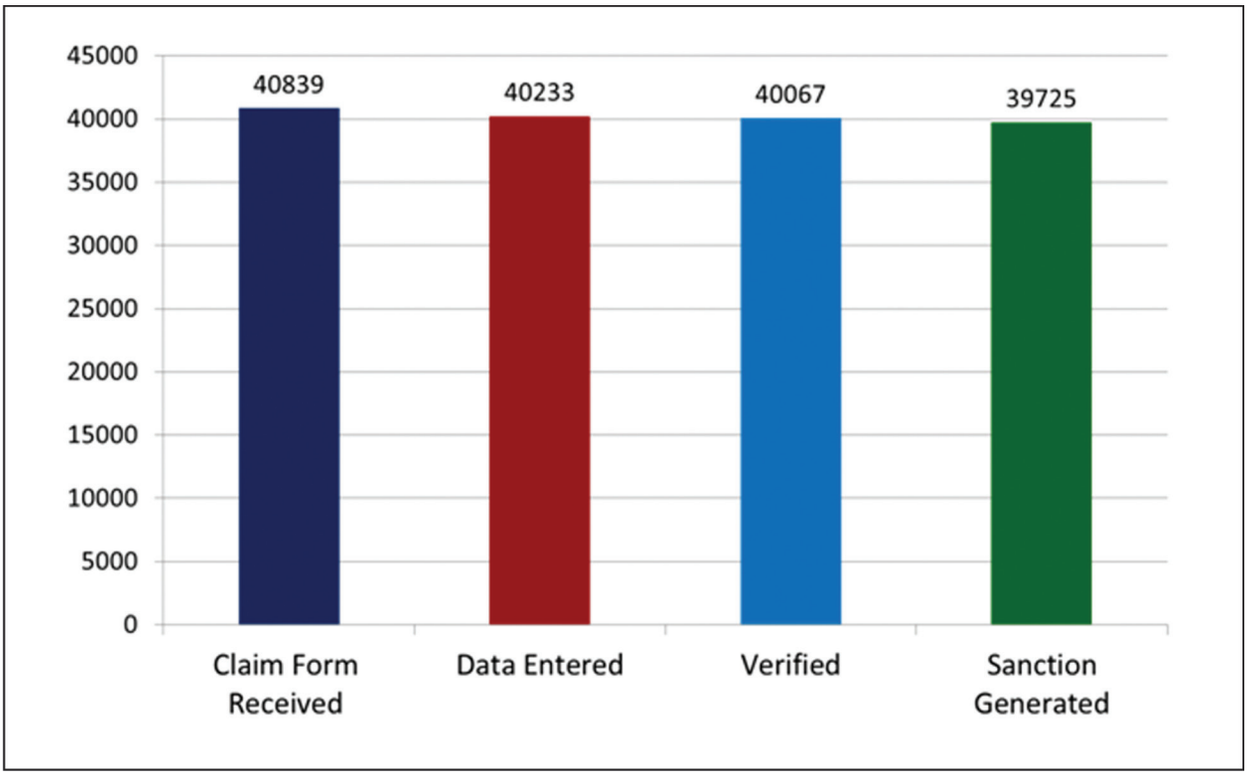
## Performance of Districts under various services (April.2015 to Feb. 2016)




**Stakeholder analysis for the benefits received on ASHASoft:**

- **To ASHA**
  - Identified objectives of the software have been fulfilled satisfactorily like timely and transparent online payment to ASHAs has been ensured and improvement in the system for effective monitoring their performance on 26 parameters.
  - The project has benefitted 47000 ASHAs working in the state and the vast population being catered by them. It impacts more than 70 per cent of the target beneficiaries.
  - With the improvement in monthly monitoring of the work done by ASHA, an enhancement in the service delivery can be seen benefitting the citizens. ASHA soft has reduced the number of steps and paper work which was initially involved in issuance of the payments. With things being online the delay and backlogs in payment have reduced to a very large extent thereby benefitting the government officials. Also, timely payment to the frontier workers has boosted their enthusiasm.
  - The system has been adapted by all stake-holders at all levels. The number of transactions processed is encouraging which shows that data of more than 40,000 ASHAs is being entered, verified, and sanctioned and payments.

**Average Reporting Status (from April 15 to Feb. 16)**




- Based on successful implemented of this software, government is agreed to provide 15% quota for admission in the ANM course.

- **To the Health Department:**
  - Efficient monthly monitoring of ASHA work
  - Availability of real time data constituting of training status of ASHAs, district wise and head wise payments released etc.No more delays in release of payments.
  - Improved and strengthened database of maternal and child health indicators, reduced data redundancy and discrepancies. The data entry in PCTS has improved by 30 per cent after the implementation of ASHASoft.
  - Average 2.38 lacs transaction are being processed per month.
- **To citizen:**
  - Efficient and improved service delivery by ASHA.
  - Increase in number of interactions between citizen and ASHAs
- **To other stakeholders:**
  - Improvement in confidence and motivation level among the ASHA, ANM, Computer operator/ PHC ASHA Supervisor/ Information Assistant, Medical Officer Incharge and Chief Medical & Health Officer.

### Zero Investment (Optimal Utilization of available resources:

The tagline of this project is Zero Investment Project. The health department has optimally utilized available human resources at different level (from state to village level). Only training cost has occurred for the effectiveness of

implementation. The department has used resources of NIC (National Informatics Center) in the development of software and it's designing without any cost. Use of existing server for the deployment of ASHASoft software. The Bank of Baroda has provided free support in online payment to ASHA and its integration with ASHASoft.

**Scalability:**

The system is scalable and customizable as per the guidelines of 'ASHA Programme' of Government of India and other desired performance monitoring indicators. New major activities, sub activities, payment conditions, incentive amount etc. can be added or amended easily. Already states Karnataka, Maharashtra, Punjab, Uttarakhand& Haryana visited Rajasthan to learn about ASHASoft and they are working in replicating the best practice of Rajasthan in their state.

**Awards received:**

- 4th Annual e-Health Healthcare leader Awards-March, 2015
- elets Knowledge Exchange GOA- May, 2015
- Skoch Order of Merit 2015
- Skoch Award - September, 2015 at New Delhi
- National Award for e-Governance, 2015-16 (Silver Award)

# National Award on e-Governance initiatives

**IRCTC New Next Generation e- ticketing System (Nget)**

## About IRCTC

IRCTC is a subsidiary & Public Sector Enterprise under Ministry of Railways, handles the catering, tourism and online ticketing operations of the railways. Awarded "Mini Ratna" by Ministry of Railways, Govt. of India.

IRCTC Online Ticket booking system is a boon to the common man, empowering him through technology. Today people don't have to wait for long in queues, saving on time as he may check the availability of the trains, seats, ticket booking, cancellation, TDR filling and other services are available to him at the click of the mouse. IRCTC has revolutionized life of the common man travelling with the Indian railways and has been the biggest success story of e-commerce not only in India but in the Asia Pacific region.

Indian Railway Catering & Tourism Corporation (IRCTC) is a service-delivery arm of Indian Railways, specializing in e-ticketing, railway catering, & promoting tourism through trains & package tours. The recent revamping of the e-ticketing system will enhance the quality of service by IRCTC.

## Name of the State/Ministry- Ministry of Railways

### Name of the Host/Owner Organization

IRCTC (Indian Railway Catering & Tourism Corporation Ltd.) is a subsidiary & public sector enterprise under Ministry of Railways.

| | |
|---|---|
| **Name of the Project** | IRCTC Next Generation e- ticketing System (Nget) |
| **Name of the Nodal Contact Person** | Shri Sunil Kumar (Group General Manager/IT) |
| | State Entry Road |
| | IT Center/IRCTC |
| | Mob No. – 9717640497 |
| | 011-23741116 |

## IRCTC Next Generation e-Ticketing System

In the past, the demand had gone up beyond the infrastructure we had, especially during the peak season when advance reservation opens, and also for a few minutes when Tatkal tickets open. The problem was actually limited to 10 to 20 minutes between 8 am and 8.20 am when advance reservation opens, and between 10 am and 10.20 am when Tatkal reservation opens. The system could only handle 40,000 concurrent users and book 2000 tickets per minute. Once that threshold was crossed, the system would develop a snag. Then we analyzed the number of concurrent users especially during these peak load times. We found that the number of concurrent users touched 70,000 at times against our capacity of 40,000. Accordingly, the new system was designed to handle 1.2 lakh concurrent users, 1000 enquiries per second and to book 7200 tickets/minute which has been further augmented to handle 3 lakh concurrent users, 3500 enquiries/second and to book 15000 tickets/ minute. This system, we feel, would take care of not only the current constraints but also the future requirements. Moreover, the new platform that we have is a scalable one. We can scale up the system further to meet unprecedented increased future demands as well.

IRCTC rolled out next generation e ticketing system to book your train ticket faster and in a user friendly manner than earlier. Next generation booking system is nothing but the change in user interface to lightweight and adding some more functionality. The Next Generation E-Ticketing system asserts to be capable of booking 7200 tickets per minute. With the launch of the system, now 1, 20,000 concurrent users can book e-tickets simultaneously against the earlier capacity of 40,000 concurrent users at a time. It is also said that the new system will make use of advance fraud control and security management tools thereby further improving pellucidity in sale of tickets.

**NGET was designed for 5 years traffic with following projections:**

- 1,20,000 concurrent user connections
- 7200 tickets per minute
- 1000 enquires per second
- However traffic was much more and in first year itself additional inputs have been given.
- PRS servers (Itanium) at integration layer doubled to increase per minute booking to 15000 tickets per minute.
- Concurrent user connections increased to 3,00,000.
- Enquiries increased to 3000 per second.
- Booking transaction amount likely to cross 25000 crores in 2016-17.
- Internet ticketing share will increase to more than 60%.
- Tatkal bookings 80% through website.

To cater to the increased traffic over the IRCTC portal, and to improve the experience of people booking tickets over internet capacity of system has been increased to 7200 tickets per minute by the implementation of NGeT (Next Generation e-Ticketing) System. System allows 1, 20,000 concurrent connections at any point in time.

**Transforming Rail Ticketing with Innovative User of Technology:**

| | | |
|---|---|---|
| Language | : | Java Based Application (Open Source) |
| Database | : | Oracle 11g |
| Caching solution | : | JemFire |
| App Server | : | Web logic |
| Web Server | : | Oracle HTTP Server(OHS) |
| | | An enterprise grade Web Server software |

**Based on open source Apache HTTP Web Server**

| | | |
|---|---|---|
| Operating System | : | Red Hat Enterprise Linux |
| Replication Software | : | Oracle Golden Gate |
| | | Application Delivery Controllers (ADC) with Web Application Firewall |

Premium support for critical equipment (Equipment whose failure can result in total service failure) with 8 hours call to resolution: SAN Storage, SAN Switches, Database Servers, Cache servers, Mail Servers.

24 by 7 supports for other equipment which includes guaranteed delivery of spare parts so as to meet the applicable SLAs.

Provision to log complaints/ open support cases directly with OEM. Updates of firmware software. Root Cause Analysis of all failures.

24 by 7 escalation support for other Network and Security equipment to be provided through Phone, Email or Site visit depending on the criticality and nature of the Problem.

## IRCTC e-Ticketing

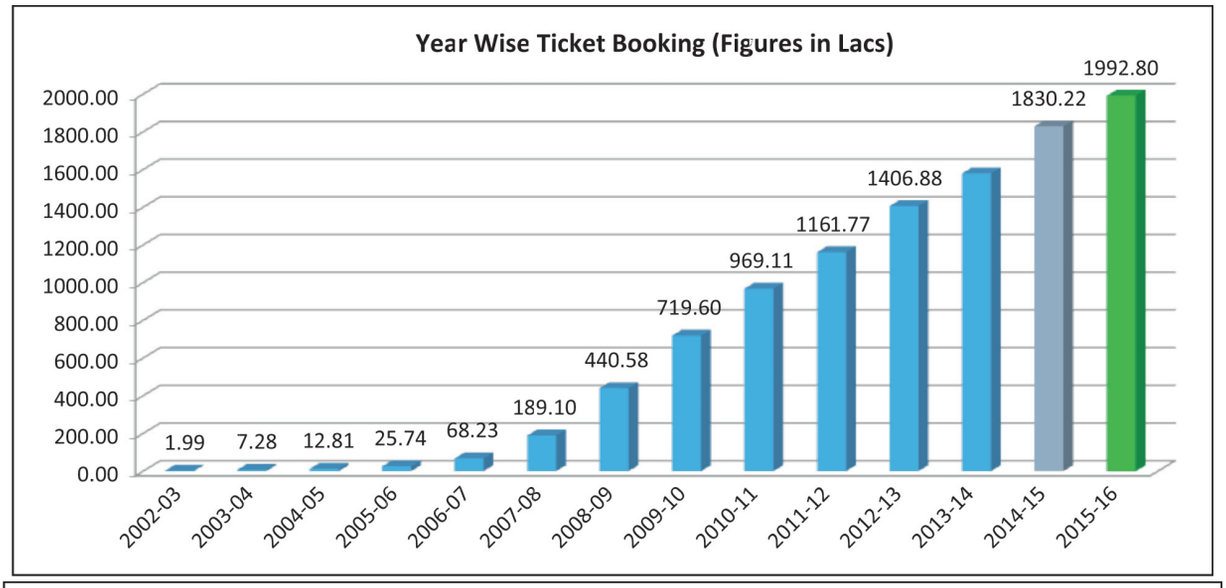
IRCTC started with 29 tickets in a day and today achieved over 13.45 Lakh tickets in a day.

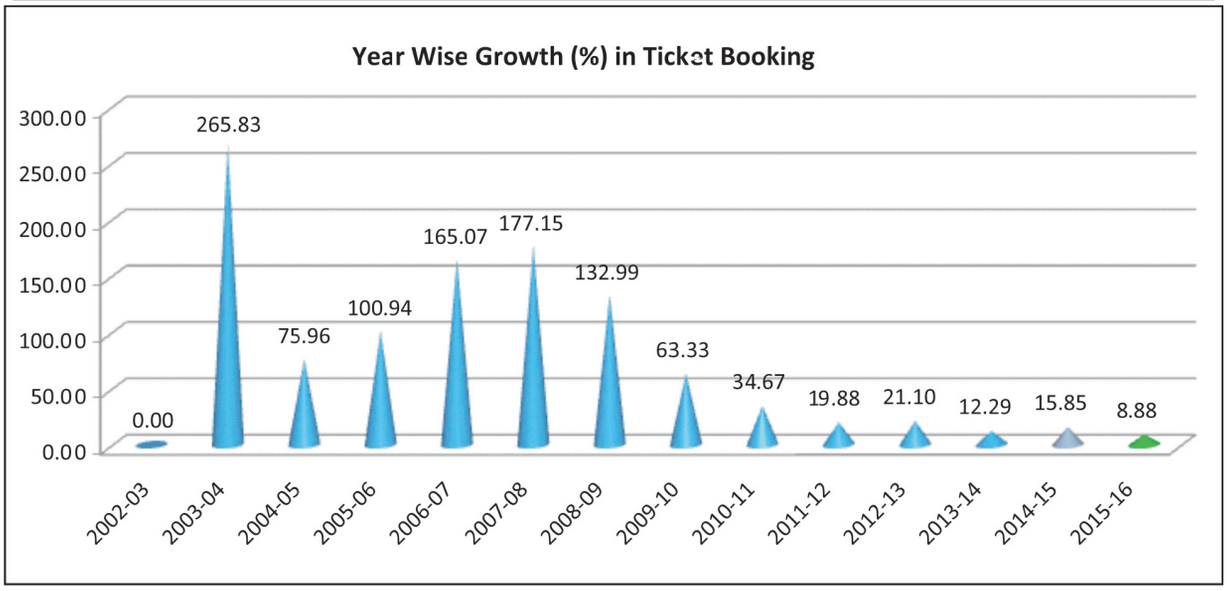
Annually - increased from 68 lakh tickets in 2006-07 to 19.92 Crore tickets in 2015-16 (amounting to **Rs. 24022 Cr)**.

**59%** Reserved tickets on Indian Railways are now being booked Online

| | | | |
|---|---|---|---|
| ➢ | Max Concurrent Connections | : | **5,43,255** Connections on 13-Jun-15 |
| ➢ | Daily Average User logins | : | **32,30,791** |
| ➢ | Daily Average Ticket Booking | : | **5,50,000** |
| ➢ | Average Daily passengers booked | : | **10 lakhs** |

## Ticket Booking Progress




## Launch Date

- Internet ticketing on IRCTC website was launch on Aug 2002
- Rail e-ticketing was launched in the year 2005
- With proliferation of Internet in India, rail e-ticketing demand increased exponentially from a few hundred tickets at the time of its launch to over half a million tickets per day now.
- Due to design limitations, the old system could not scale up beyond a point.
- In the year 2013, Ministry of Railways decided to re-architect & implement the system de-novo.
- Design, development & implementation of this Next Generation e-Ticketing (NGeT) system on 28-Apr-2014

## Design Considerations for NGeT

E-ticketing is one of the most essential G2C service running in the country. Next Generation e-ticketing system has been designed to enhance overall customer experience**:**

- High performance and seamless access even at peak time
- High availability and Business continuity
- Scalability to cater to future growth
- Security to prevent frauds and unauthorized access
- User friendliness
- Agility to cater to business rule changes

## Coverage – Geographical and Demographic:-

**Comprehensiveness of Reach of Delivery Centers**

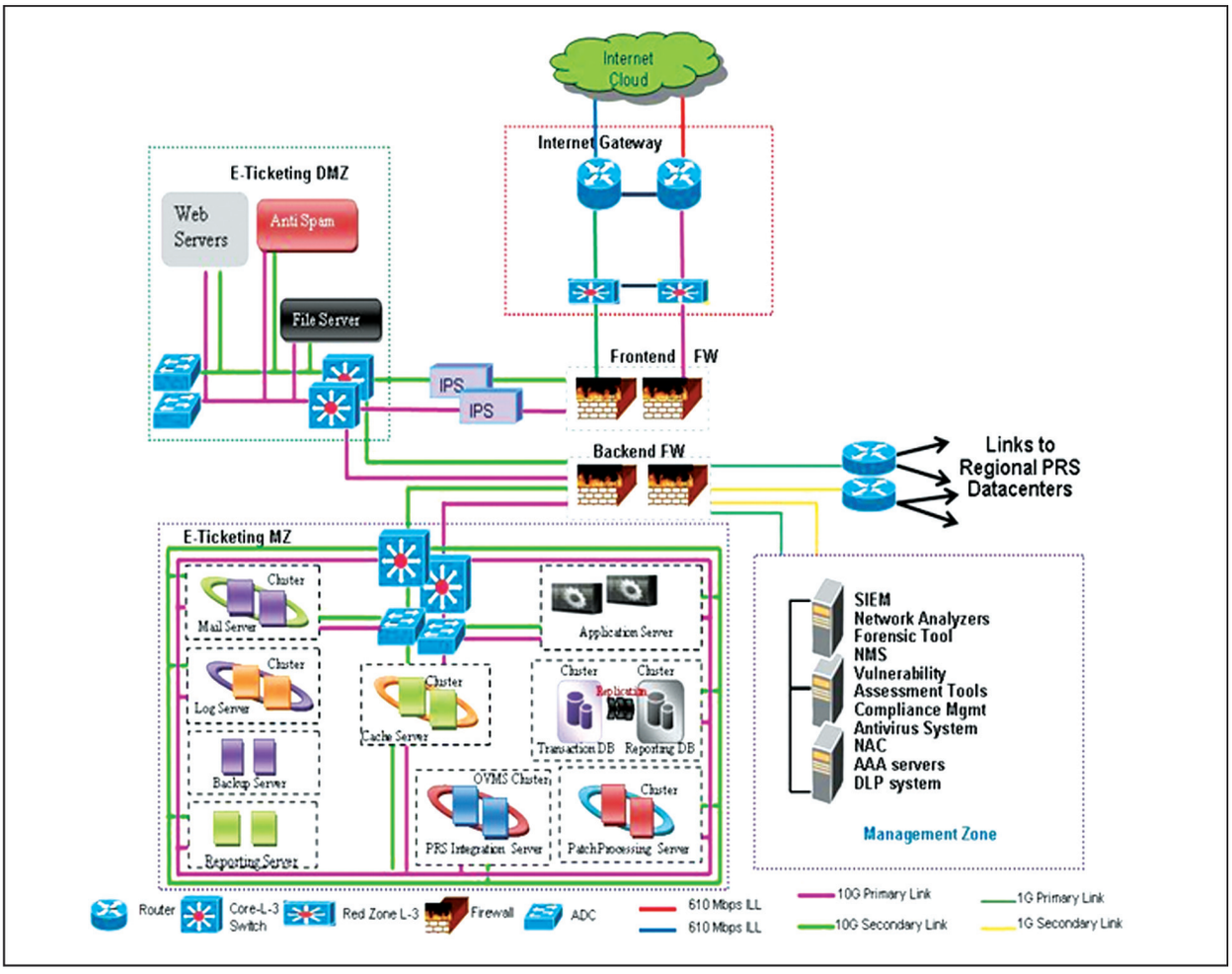
The reach of irctc.co.in is worldwide. IRCTC registers PSPs who in turn appoints Retail service providers whose details are registered with IRCTC. There outlets provide easily accessible e-ticket services to customers. This enables them to procure tickets without travelling long distance to reservation centers and avoid waiting in long queues at reservation centers. Apart from above IRCTC has around 3 crores registered users and the number is increasing by more than 15,000 new registrations a day.

IRCTC covers 76 thousand delivery centers covering all states of India 29 States; 7 Union territories and all 675 districts (All Indian Districts as of now).

## Beneficiary of the project:-

IRCTC Online Ticket booking system is a boon to the common man, empowering him through technology. Today people don't have to wait for long in queues, saving on time as they may check the availability of the trains, seats, ticket booking, cancellation, TDR filling and other services available to them at the click of the mouse at their homes or offices and now with Mobile Applications, even on the move. IRCTC has revolutionized life of the common man travelling with the Indian railways and has been the biggest success story of e-commerce not only in India but in the entire Asia Pacific region. IRCTC does partnership for mutual benefit of the customers. In every new tie up or initiative our concern is customer satisfaction and good service. A Green initiative taken by IRCTC by allowing paperless soft copy of tickets is vastly praised. We are committed to deliver best e-governance service. Our user base is increasing exponentially and providing them with a smooth and better experience is our motto.

**NGeT System Deployment Architecture**




**USER Friendliness**

- Resume option- user can continue transaction from the point his session closed/Aborted
- Automatic booking if user has successfully done the payment.
- Informing the users through SMS regarding the status of incomplete transaction.
- Enhanced journey planning with options for filtering, sorting and comparative views.

**Security**

- Application Software audited by Cert-In
- No access to site through automated scripts
- Option for Identification of registered users through ADHAAR/PAN
- Website is continuously audited by STQC for IT Security Audit including Web Application Audit
- Multi layered security
- Advance event correlation engine to detect and mitigate threats.

**Benefits**

- Improved Customer Satisfaction

- Significant improvement in Image of Indian Railways
- IPR with Indian Railways - Entire System architected and developed in-house by CRIS.
- System based on Open standards –No Vendor lock-In

**Other distinctive features/accomplishments of the project**

IRCTC perform various services to the passengers by using information technology. Currently, IRCTC is booking approximately 5.5 Lacs tickets/day and achieved the following major milestones in online ticket booking:

1. IRCTC booked first internet ticket on 03, August, 2002.
2. Highest daily booking – 13.45 lacs on 01 Apr, 2015
3. Highest hourly booking - 1.61 lacs ticket on 25.10.2014 between 10 to 11 am.
4. Highest minute-wise ticket - 14,904 tickets on 27.12.2014.
5. Highest booking/second - 378 tickets on 30.12.2014
6. Highest no. of calls answered - 11,483 on 02.11.2014
7. Highest no. of mails answered – 8,720 on 30.10.2014
8. IRCTC has done annual transaction of Rs. 15410 thousand Cr. in financial year 2013-14.
9. IRCTC Booked approximately 15 cr. tickets in financial year 2013-14.
10. IRCTC is having user base of 3.95 Cr. users of which 2.67 Cr. are active users.
11. IRCTC received traffic upto 1.2 GBPS at firewall level during tatkal time.
12. IRCTC launched SMS/USSD based non-internet ticketing on 28.06.2013 to enhance the ticketing booking reach to basic phone users.
13. IRCTC launched IRCTC apps on Microsoft, Blackberry, Android & iOS platform in last 1 year.
14. To Proliferate the usage of e-ticketing and to enable the facility to the users those who are not computer savvy or don't have any access to the Internet, IRCTC has introduced the concept of appointing Principal Service Providers at every nook and corner of the country and even abroad for facilitating the customers to book the train tickets.
15. Under e-Governance policy IRCTC is now in the process of registration of VLEs (Village Level Entrepreneur) with a view to enable online ticketing services in rural areas.
16. IRCTC facilitates the customers to book train ticket using about 47 payment options including Debit/Credit Card and Cash cards
17. Online transactions on IRCTC enabled people to break the myth and reluctance for online usage of Debit Card, Credit Card, Internet Banking, Cash Card etc.
18. IRCTC launched the mobile application IRCTC connect to book rail tickets at ease
19. IRCTC partnered with Amazon to provide online shopping portal
20. IRCTC launched Taj Mahal E ticketing for ASI, intends to do al monument E ticketing soon
21. IRCTC launched Co-Branded IRCTC Union Bank Rupay prepaid card through Railway minster Shri Suresh Prabhu.
22. IRCTC is putting continuum of efforts to bring value added services and products for the customer.

## IRCTC Milestones

| | | | |
|---|---|---|---|
| ✓ | Railway Board Initiative Assigned to IRCTC | : | **Oct-2001** |
| ✓ | I-Ticketing began | : | Aug-2002 |
| ✓ | E-Ticketing began | : | Aug-2005 |
| ✓ | Loyalty Programme | : | Feb-2006 |
| ✓ | Agent Booking | : | Apr-2006 |
| ✓ | e-Wallet Launch | : | 08-Nov-2013 |
| ✓ | IRCTC Lite | : | 10-Jan-2014 |
| ✓ | Retiring Room Booking | : | 13-Jan-2014 |
| ✓ | QR codes on ERS | : | 28-Apr-2014 |
| ✓ | Dynamic Fare Spl. Train | : | 21-Dec-2013 |
| ✓ | Booking-visually impaired | : | 13-Jan-2015 |
| ✓ | Phy. Challenged persons | : | 29-Jan-2015 |
| ✓ | Windows App | : | 12-Sep-2013 |
| ✓ | Blackberry App | : | 28-Aug-2014 |
| ✓ | Android App | : | 10-Oct-2014 |
| ✓ | IOS App : | | 10-Jan-2015 |
| ✓ | SMS Based Ticketing | : | 28-Jun-2013 |
| ✓ | USSD based booking | : | 28-Jun-2013 |
| ✓ | COD (Cash on Delivery) | : | 03-Feb-2015 |
| ✓ | NGeT System | : | 28-Apr-2014 |
| ✓ | FTR (Coach & Train) | : | 28-Jan-2015 |
| ✓ | Hindi Site | | |

## AWARDS

**2010-11**

- ✓ The India Pride Award - Gold for Internet Ticketing by the Bhaskar Group
- ✓ The World Open Award for Integrated Train Enquiry System (ITES) by the SKOCH

**2011-12**

- ✓ Speed King (Mini Ratna) Award as the fastest growing non-manufacturing companies with balance-sheet size less than Rs. 4000 Crore by the Dalal Street Investment Journal
- ✓ GMR Travel World Award for “Excellence in Operations” for Bharat Darshan/Bharat Tirth trains.

**2012-13**

- ✓ CSR Corporate Governance Award by the Institute of Public Enterprise (24.11.12)
- ✓ Global Green Award by the Earth Infrastructure for Introducing Paperless SMS E-Ticket (8.12.12)
- ✓ World Travel Award for the Maharajas' Express as the World's Leading Luxury Train (12.12.12)
- ✓ India Pride Award in the Consumer Industry Category by the Bhaskar Group (28.1.13)
- ✓ e-Retail Award in the Leisure and Travel category by Franchise India. (15.2.13)
- ✓ Best PSU Award by the Dalal Street Investment Journal (28.3.13)

**2013-14**

- ✓ e-INDIA award in the category "Internal Management – ICT in HR & Payroll" for the project "IRCTC PAYROLL/ORACLE HRMS". (23.7.13)
- ✓ Forbes India Leadership Award to Sh. Rakesh Kumar Tandon, CMD, IRCTC as the Best CEO – Public Sector (16.10.13)
- ✓ India Pride Award in the Consumer Industry Category by the Bhaskar Group (19.12.13)

**2014-15**

- ✓ Indian Restaurant Awards 2014.
- ✓ IRCTC placed in the list of '100 most influential CFOs of India' by CIMA

**2015-16**

- ✓ IRCTC has been awarded the BEST E RETAILER OF THE YEAR 2015 IN THE LEISURE AND TRAVEL CATEGORY
- ✓ IRCTC Mobile App proudly bagged the Silver award under the category "Best Use of Mobile Apps" at Digital Market Asia's debut Mobillion 2015
- ✓ IRCTC Received 10th Star Retailer Awards 2015 organized by Franchise India.
- ✓ IRCTC has been bestowed GOLD in national award for e-governance 2015-16 in the category of "Innovative Use of ICT by Central Government PSUs" for IRCTC's Next Generation e-Ticketing System (NGET) IT Center, IRCTC.

# IOHRS - Integrated Online Hotels Reservation System

**Himachal Pradesh Tourism Development Corporation (HPTDC)**

| | | | |
|---|---|---|---|
| **1.** | Name of State/Ministry | : | Himachal Pradesh |
| **2.** | Name of host/owner organisation | : | Himachal Pradesh Tourism Development Corporation (HPTDC) |
| **3.** | Status of host/owner organisation | : | Corporation under Tourism Department, HP |
| **4.** | Name of the Project | : | IOHRS - Integrated Online Hotels Reservation System |
| **5.** | Name of the Nodal Contact Person | : | Ajay Singh Chahal, Sanjay Sharma, Sandeep Kumar, Gopal Sood |
| **6.** | Contact address | : | NIC, HP Secretariat, Shimla |
| **7.** | Telephone/Fax/e-mail | : | 0177-2624045, 0177-2621154, sio-hp@nic.in |

## 8. Project Summary

The HPTDC Integrated Online Hotels Reservation System (iOHRS) is a web enabled application software which provides online availability, status of accommodations and instant online reservation facility of HPTDC Hotels to the prospective Guests/ Tourists/ Visitors or general public through multiple channels. In addition, the HPTDC management can track the business of its hotels with the help of various analytic reports incorporated in this application. Online reservation of accommodations and cancellations of already done reservations in hotels could be done using internet, by the Guests themselves or through HPTDC marketing offices and authorized agents. The software system is integrated with online payment gateways of Yes-Bank, ICICI Bank and CC-Avenue, NIC email / SMS Gateways, Mobile App and as well as online channel manager AxisRoom for sale of rooms through various travel portals.

## 9. Date of launch of project

01-May-2014

## 10. Coverage (Geographical)

The iOHRS is accessible using Internet and available on public domain, so it is accessible and available to all through Internet, which includes tourist/citizens of India and abroad. The only requirement is the Internet connectivity at user end. The electronic service delivery of confirmed room bookings on payment of necessary reservation amount, can be done from anywhere in the world from HPTDC website, reservation office and various online travel portals.

## 11. Beneficiary of the Project

Main beneficiaries are the Guests or Tourists, who wish to stay at HPTDC Hotels. They can reserve or cancel accommodations online in advance at their own independently, even without contacting HPTDC hotels, marketing offices or authorized agents. Details of any transaction carried out using the system are immediately conveyed to the customers using SMS alerts and automated e-mails. Apart from these HPTDC management can monitor its business and analyze occupancy trends and related information online. The travel portals with whom the HPTDC is sharing the inventory of rooms, are also benefitting from the system as the room availability of all hotels of HPTDC is made available to these travel portals on real time basis, extending their coverage. The HPTDC has benefitted the most as their room occupancy has gone up.

## 12. Problem statement or situation before the initiative

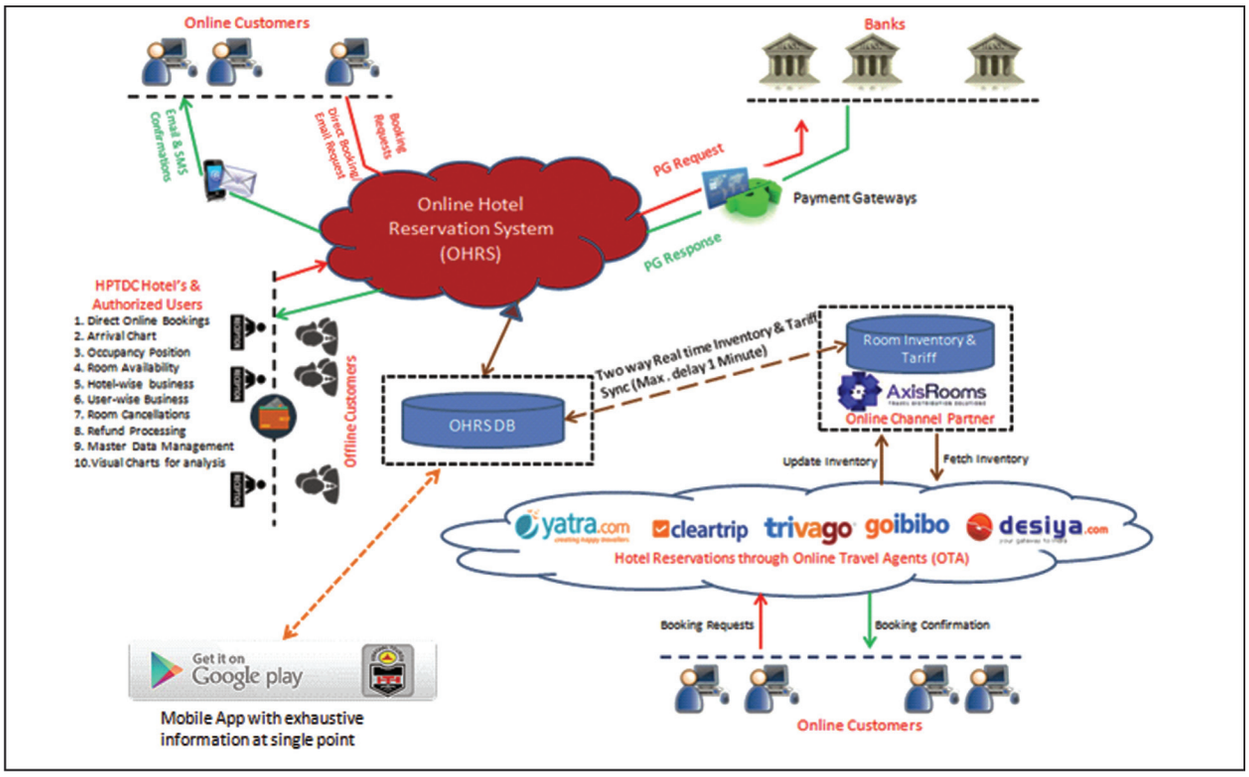
The hotels of HPTDC are located at all popular tourist destinations throughout the State of Himachal Pradesh and the reservation of accommodation for these hotels was done earlier, either by the marketing offices of HPTDC located at New Delhi, Mumbai, Chennai, Ahmadabad, Kolkata, Chandigarh and Shimla or by the respective hotels themselves or by authorized travel agents throughout the country. Besides these marketing offices, hotels and travel agents, HPTDC had set up a Central Reservation Office (CRO) at Shimla, which was used to keep a centralized database of all bookings being done for all the 57 hotels. Therefore, all marketing offices, hotels and authorized travel agents used to get status of accommodations or reserve the same through the CRO. Also, entire Communications were either through e-mails or telephone calls.

This issue was addressed when the HPTDC introduced the online reservation system software some years back and the HPTDC and tourists benefitted from this system. However, over the years, various online travel portals have come up and they are offering cut-throat competition by offering rooms at very low rates for many hotels at one location. The HPTDC also tried to share inventory with these travel portals to increase their share of business. However, getting into individual contract proved a real problem in the Government system as the tendering process took lot of time for selecting a travel portal and then getting the contractual terms finalised. Similarly, the tourists have also become tech-savvy and compare the rates of rooms of hotels on different portals and also look for positive feedback on these travel portals. Since, HPTDC's rooms were booked from their own online system only; the HPTDC was losing out business which would otherwise be coming to them as they have good reputation and hotels at exotic locations.

The above constraints necessitated the HPTDC to conceptualize the project "Integrated Online Hotels Reservation System" for reservation of accommodations of all hotels of HPTDC. Therefore, the HPTDC and NIC decided to re-develop the application as a product with HPTDC entering into a single contract with the channel partner (new concept where the channel partner is already having a number of travel portals into agreement) to extend the reach of HPTDC's business.

## 13. Project Objectives

The Himachal Pradesh Tourism Development Corporation (HPTDC), a Government run organization, is a premier organization of Himachal Pradesh operating in the Tourism & Hospitality industry sector with a mission to expand quality tourism infrastructure in the State and outside. The HPTDC has 57 hotels spread throughout the State, besides having several Restaurants, fleet of vehicles for transportation of Tourists and facilities for adventure sports. Today Internet has revolutionized the way a business can reach, interact and serve its prospective Clients globally. Well informed and demanding customers, coupled with increased competitions are driving the Hospitality Industry to gain better flexibility and control of the operations. Today internet has become a powerful channel for business marketing and communication and the Hospitality industry has wholeheartedly embraced it to reap the benefits. The HPTDC Integrated Online Hotels Reservation System has been a great mile stone that takes the business of HPTDC to the doorstep of the prospective clients, using information technology. Public interface of the HPTDC Integrated Online Hotels Reservation System can be accessed at HPTDC website at http://hptdc.nic.in by clicking on Hotel Bookings.




**Architecture of the Integrated Online Hotels Reservation System**

**Objectives of the project were:**

1. Online availability status of accommodations in all hotels of HPTDC.
2. Instant online reservation or blocking of available accommodations for all hotels by guests themselves, even without enquiring or contacting HPTDC hotel, marketing office or authorized agent.
3. Cancellations of already reserved or blocked accommodations on online mode.
4. Integration of multiple payment gateways for online payment and refunds.
5. Integration of multiple online travel portals to share room inventory of all hotels in online and near real time mode, such as Yatra.com, TravelGuru, ClearTrip, Goibibo, Via, MakeMyTrip and many more as per business suitability, without any separate technical integration for each of the travel portal, making presence of HPTDC hotels on all popular travel portals.
6. Integration of HPTDC website and accommodation status with mobile-app.
7. Notifications of transactions through e-mail and mobile SMS.
8. Immediate and accurate compiled information to HPTDC in the forms of number of compiled text reports, visual reports and dashboard.

## 14. Project scope approach and methodology

The scope of project was formulated to overcome/ mitigate the challenges faced before deployment of the new system and to achieve project objectives, by designing, developing and implementing a web enabled information technology based integrated online system for the reservation, blocking and cancellation of accommodations for all hotels of HPTDC. Further the online software system to be integrated with multiple travel portals, payment gateways, mobile app, e-mail and SMS gateways.


***Project Scope:***

1. Online accessibility and status of available and reserved accommodations in all hotels of HPTDC spread in all destinations throughout Himachal Pradesh.

2. Instant online reservations of accommodations and cancellation of already reserved accommodations.

3. Payments and refunds using online payment gateways.

4. Immediate dissemination of details of any transaction (Reservation/ Cancellation/ Refund) carried out using the system to the customers through SMS messages and automated e-mails.

5. The software system integration with all popular online travel portals for greater visibility in cyber space and comparison with other similar hotels in and around the destinations with respect to tariff, facilities, amenities and promotional offers etc.

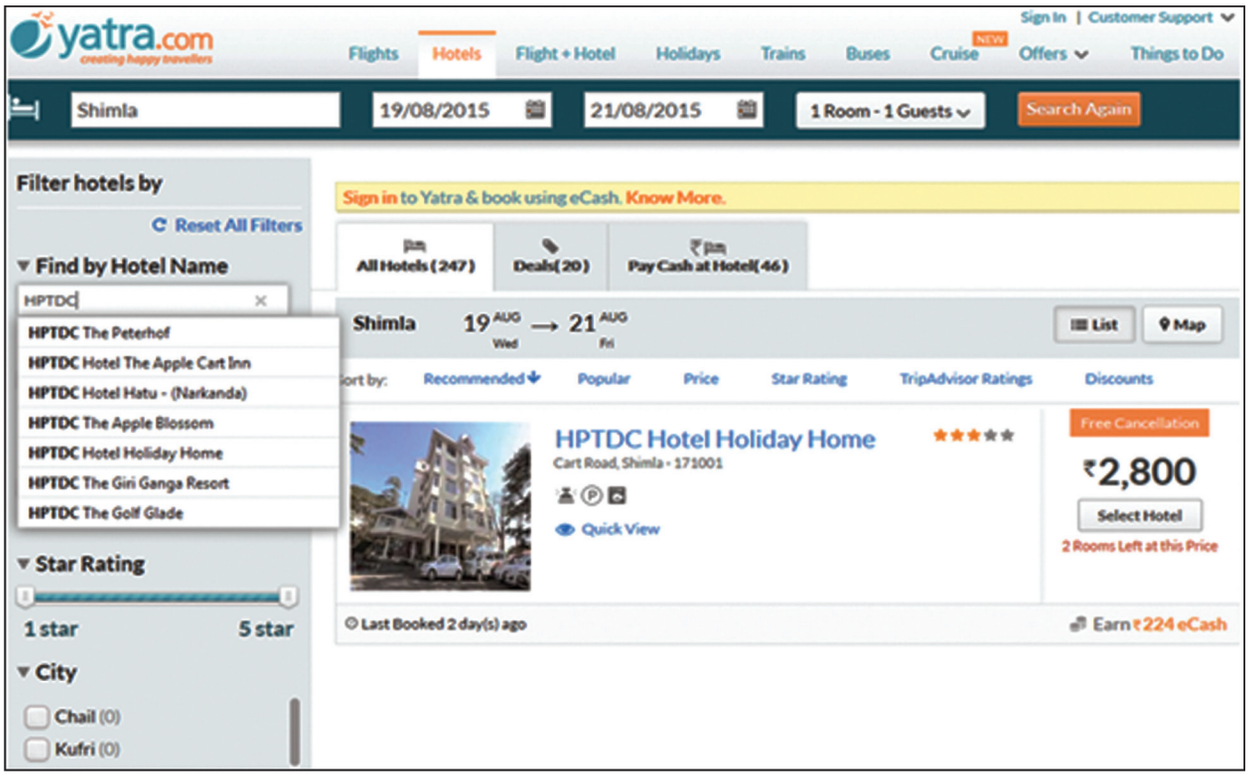
6. Hassle-free integration with new travel portals, without getting into the technology part, as the feature is available through the channel manager.

7. The HPTDC website and software system is supplemented and integrated with the Android Mobile App, which also integrates Google maps and acts as a guide to guests to reach the destinations comfortably.

8. Modules to manage Master Data such as popular destinations, Hotels, Type of accommodations, Category/ period wise room tariff, promotional offers, application of promotional offers, User/role management.

9. Summary and detailed business Reports such as Room Nights booked, Period wise business comparison, Hotel/User wise business, User wise bookings and analytical graphical charts for Hotels, Booking offices and Management.

10. Automatic real-time two way inventory sync with Travel Portals through channel partner (Axis Rooms) using WCF Services.




**Integration with Yatra.com through AxisRoom Channel Manager**

***Project approach and methodology:***

The project iOHRS has various online software system components integrated and these are online web app, payment gateways, travel portals, mobile app, e-mail gateway, SMS gateway. The integrated software system's web app and mobile app were designed, developed and hosted on respective servers. The other components of payment gateways, travel portals, e-mail gateway, SMS gateway along with 2 software application components have been integrated using WCF web services and accommodation inventory of all hotels of HPTDC is being shared in online and real time mode among web app, mobile app and number of travel portals.

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

***To HPTDC:*** The results achieved to HPTDC are at highest level, as the business has been improved in terms of employees' motivation and satisfaction levels and also their revenue has increased to about 35%. The goals or results envisaged by the management have also been achieved, because a systematic structured and defined system of reservation has been implemented using ICT solution and reach of the business has been achieved up to last mile, that is, door step of the guest or customer. Additional travel portals can be brought onboard without any technology changes or administrative issues in their selection process as only the channel partner needs to be told about additional integration requirements. It saves HPTDC a lot of time, cost, processes and hassles. The service standards have improved in HPTDC hotels as the guest feedback is given on the travel portals now, which may further increase the HPTDC business.

***To Guests:*** The guests or tourists have online system available and accessible 24×7×365 at their computers and at hand-held smart mobile phone devices and the benefits of services delivered and results achieved are one hundred percent through the system, because guest can compare about tariff, facilities, amenities and other promotional offers, while making reservation of accommodations among various hotels and can choose best for them as per the requirements. They have immediate access to status of their reservation through SMS messages and system generated

automated e-mails. The guests have no grievances about the system, except personal issues sometimes, because there is no other system of reservation of accommodation with HPTDC, only this system is in place for all stakeholders uniformly in integrated mode, and business has increased tremendously. They can compare room tariff of HPTDC hotels on different travel portals, who normally offer rooms at lower tariff too at certain periods of time.

***To Other Stakeholders:*** The other stakeholders are AxisRoom channel manager, who in turn integrates with all online travel portals and online payment gateways. These stake holders are also being benefitted as their business has also increased manifolds, because these travel portals have very high visibility in the cyber space and general behaviour of the guests is to browse through these portals and find best deal for themselves, by comparing on various parameters, which these portals provides, in addition to making a reservation of accommodations at desired hotels.

The iOHRS has provided the complete solution to HPTDC, tourist and travel portals using all possible ICT mediums.

# Odisha State Seed & Organic Products Certification Agency

**Odisha State Seed & Organic Products Certification Agency (Ossopca), Bhubaneswar, Odisha**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | Odisha, Ministry of Agriculture & Farmers' Empowerment, Govt of Odisha |
| **2.** | Name of the Host/Owner Organisation | : | Odisha State Seed & Organic Products Certification Agency (Ossopca), Bhubaneswar, Odisha |
| **3.** | Status of the Host/Owner Organisation | : | Autonomous Body under Ministry of Agriculture & Farmers' Empowerment, Govt of Odisha |
| **4.** | Name of the Project | : | Odisha State Seed & Organic Products Certification Agency |
| **5.** | Name of the Nodal Contact Person | : | Sambit Panigrahi, e-Governance Coordinator, Ossopca |
| **6.** | Contact Address | : | Ossopca, Plot No.- 326, Baramunda, Bhubaneswar |
| **7.** | Telephone/Fax/e-Mail | : | 0674-2563639/7205096103/ directorossca@rediffmail.com |

**8. Project Summary**

The seed certification process of Odisha State Seed & Organic Products Certification Agency (OSSOPCA) involves online submission of applications, verification, inspection, threshing certificate issue, sampling, testing and tag issue modules. This project is the pioneer in implementing the automation of the complete workflow of the seed certification process. Citizen services can be consumed from any public internet access as well as through Common Service Centres established across the state. The project also offers real time MIS report generation and monitoring of the seed production. This is a cloud ready application and is under process to be deployed in the MeghRaj national cloud.

**9. Date of Launch of Project**

**25.07.2014**

**10. Coverage (Geographical)**

Whole State of Odisha

**11. Beneficiary of the Project**

Seed Growers of Odisha State, Odisha State Seed Corporation, Odisha Agro Industries Corporation, Department of Agriculture & Food Production, Odisha University of Agriculture Technology, All Seed Producing Agencies & OSSOPCA

**12. Problem statement or situation before the initiative**

Enclosed (Enclosure-1)

**13. Project Obejctives**

Enclosed (Enclosure-2)

**14. Project Scope approach and Methodology**

Enclosed (Enclosure-3)

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

Enclosed (Enclosure-4)

## Odisha State Seed and Organic Products Certification Agency: A National e-Governance Award Initiative

Odisha is an agrarian state. More than 80% people are engaged in agriculture and **Good seed** underpins more sustained crop production and livelihoods. Quality seed has inbuilt power of increasing crop yield to the tune of 20-25% in presence of other inputs. Due to low income, and limited economic opportunities, farmers have limited access to seeds sourced off-farm or from formal seed systems; more so, their seeds are of inferior quality. Importance of good **Quality Seed** has been underlined since ancient times and it has gained further importance after introduction of improved and hybrid seeds, particularly since green revolution. The Indian seed industry has risen to the challenge of meeting the requirements of quality seeds. The challenges confronting seed sector are now more than earlier with increasing demand of quality seed of promising varieties to ensure food security. During recent past, seed technology has emerged as a potent tool to achieve targeted agricultural production.

The role of the formal seed sector (private and government) normally concentrates on seed production and marketing, with appropriate compliance with government policies and regulations.

In Odisha, the major players in seed sector are OUAT, OSSC Ltd, NSC Ltd, OAIC Ltd, TRIPTI SVP, some private seed Producers, Directorate of Agriculture, OSSOPCA etc. In spite, there is need of making available of quality seeds to untouched farmers at remote areas in which 15000 seed growers take part annually.

Odisha State Seed & Organic Products Certification Agency (OSSOPCA), established in 1978 as per Seeds Act, 1966, is responsible for seed quality assurance through certification. The purpose of Seed Certification is to maintain and make available to public, through certification, high quality seeds and propagating materials of notified kind and varieties so grown and distributed as to ensure genetic purity. Seed certification is also designed to achieve prescribed standards.

### Functions of Seed Certification Agency:

i) Certify seeds of any notified kind or varieties.

ii) Outline the procedure for submission of applications for growing, harvesting, processing, storage and labelling of seeds intended for certification till the end to ensure that the seed lots finally approved for certification are true to the variety and meet prescribed standards for certification under the Seeds Act or the Rules.

iii) Maintain a list of recognised Breeders of Seeds.

iv) Verify, upon receipt of an application for certification that the variety is eligible for certification that the seed source used for planting was authenticated and the record of purchase is in accordance with these rules and the fees have been paid.

v) Take sample and inspect seed lots produced under the procedure laid down by the Certification Agency and have such sample tested to ensure that the seed conforms to the prescribed standards of certification.

vi) Inspect seed processing plants to see that the admixtures of other kinds and varieties are not introduced.

vii) Ensure that action at all stages, e.g. field inspection, seed processing plant inspection, analysis of all samples taken and issue of certificates (including tags, labels, seals etc.) is taken expeditiously.

viii) Carry out educational programmes designed to promote the use of certified seed including a publication listing certified seed growers and source of certified seed.

ix) Grant of Certificates in accordance with the provisions of the Act and Rules.

x) Maintain such records as may be necessary to verify that the seed plants for the production of certified seed were eligible for such planting under such rules.

xi) Inspect the fields to ensure that the minimum standards for isolation, rogueing (where applicable), use of male sterility (where applicable) and similar factors are maintained at all times, as well as ensure that the seed borne diseases are not present in the field to a greater extent than those provided in the standards for certification.

**(Problem statement or situation before the initiative)** **(Enclosure-1)**

Seed certification is a time bound work. Technical man power is the main constraint to carry out the certification works. Area registered and quantities of seed certified by OSSOPCA during last three years are placed below.

**Yearwise Area Registered & Qunatity of seed certified by OSSOPCA in Odisha**

| Year | Area Registered (Ha) | Quantity of Seed Certified (Quintal) |
|---|---|---|
| 2012-13 | 62019 | 782842 |
| 2013-14 | 68741 | 706777 |
| 2014-15 | 55204 | 981945 |

The seed producers/growers reside at large distances from the seed certification offices and they face difficulties in submitting applications for certification in time and even loss of time in mobility and face a risk of losing of money during transit. Looking to reduce the work load and to bring transparency in seed certification works and to allow the seed growers to submit applications for certification from home, a complete on line seed certification to the possible extent (e-Governance) was thought of and NIC, Bhubaneswar was entrusted with the work for development of all the online modules of seed certification during 2013-14 with the funding from RKVY. Trainings on on-line seed certification (e-Governance) to certification personnel & seed growers were carried on regular basis. Finally the same was implemented from Kharif 2014. Issues & sort comings in implementation were sorted out; feedbacks were addressed subsequently to make it more user-friendly. Now the online system of Seed Certification is running in the state smoothly & successfully.

**(Project Objectives)** **(Enclosure-2)**

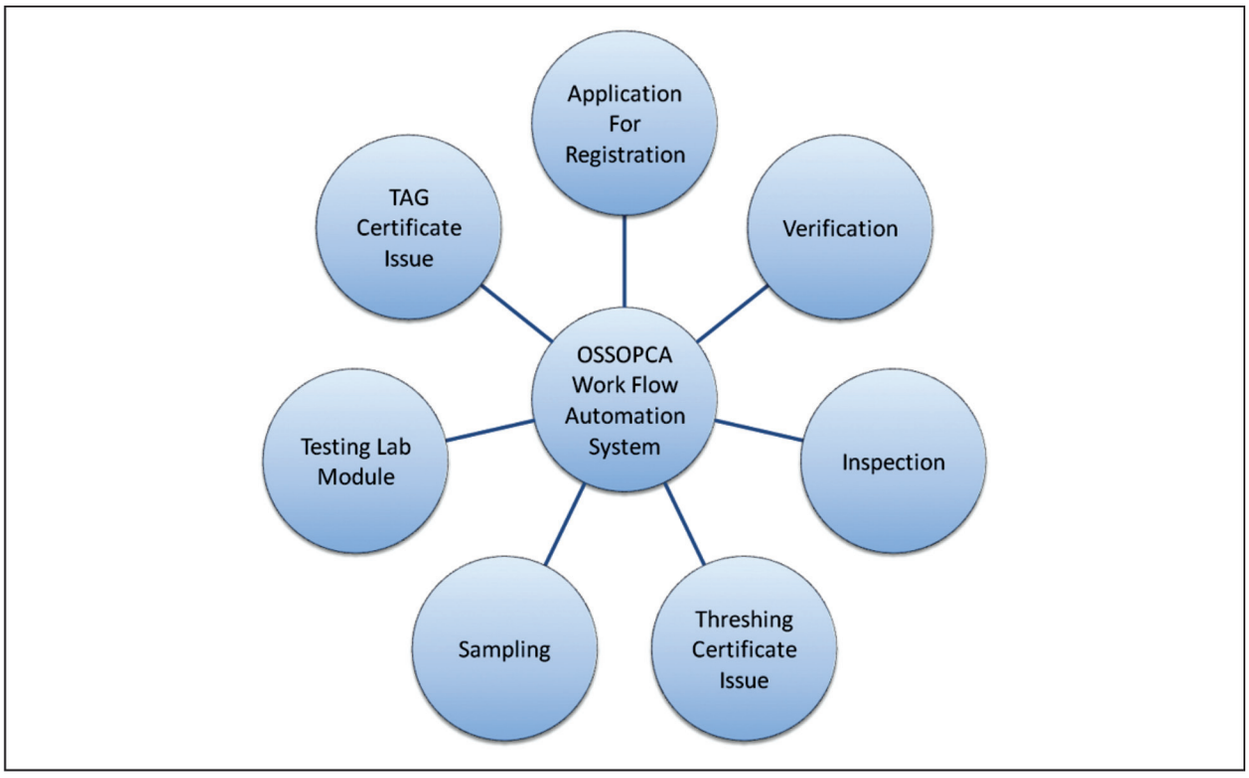
- Completion of all seed certification activities timely.
- Elimination of manipulation in the certification system.
- Minimization of human error in seed certification.
- Achieving the outcome utilising the minimum work force.
- Improving the certification monitoring system.
- Generation of real time data & report at ease.
- Time-tested traceability mechanism in seed certification.
- User-friendly Online system

**(Project Scope approach and Methodology)** **(Enclosure-3)**

In OSSOPCA, the submission of application for crop registration is done by the seed grower. No application fee is collected and the applicant has to fill a single application for multiple crops. In order to decentralize the responsibility of verification and speeding up the process, SCO (Seed Certification Officer) has been e-enabled to forward applications to any concerned ASCO (Assistant Seed Certification Officer). ASCO does the inspection of the field assigned to him and he is equipped with two modes of data acquisition modules. ASCO can enter the inspection report in offline mode and then later synchronize with the central database or an online mode has also been provided to support direct

submission of inspection report. Threshing Certificate is issued from the concerned authority and further procedures like sample slip generation and TAG certificate is issued by the same authority after the seed testing.

A complaint monitoring system has also been provided to render backend technical support for any unintentional mistake committed by officials which is expected to provide trustworthy comfort zone to the users. The project covers all the districts of Odisha and around 15000 registrations are currently processed from across Odisha. The main beneficiaries of the project as Seed Growers, Odisha State Seed & Organic Products Certification Agency, Seed Testing Lab and Odisha State Seed Corporation Ltd.




**Use of new and emerging technology to improve organizations effectiveness.**

1. In the era of IOT it is believed that desktop is not the only device for web activity, as many other devices like mobile and tablet is rapidly replacing the PC. So it is a very important step taken by the department to design the citizen centric portal in **responsive** mode for supporting devices like mobile and tablet.

2. Real time information at the right time is power and thus **SMS gateway** has been used to provide real time information to seed growers as well as officials to take necessary steps at right time. The information delivery mechanism is very effective in this context.

3. As the department is responsible for certification of crop mostly in the rural parts of Odisha and online system may be very difficult for submission of inspection report due to lack of proper or nil network connectivity at these locations. So an innovative **Online Offline Synchronization module** has been introduced for filling up the inspection report even if no network connectivity and latter upload to server as and when network gets available. Adequate security measure has also been taken to avoid manipulation.

4. An innovative step in payment system, **Bank's Easy Pay System** has been integrated along with manual method of deposit in banks. The **Online Payment System** has already been developed to carry out the payment at ease from home so that accounts and payment verification can be done without error.

5. **GPS devices** have been provided to all field level officers to take the latitude longitude coordinates of the fields being inspected for **GIS integration** which is under development.

6. **Mobile App** has been developed for seed grower to see the status of their certification at any point of time. This has been developed as plugin basis so new modules and features will get introduced as and when released.

**Joint Ground Nut Field Inspection of OSSOPCA through Tablet**

**(Result achieved/value delivered to beneficiary of the project and other distinctive features/ accomplishments of the projects) (Enclosure-4)**

**Benefits achieved through on-line certification:**

➢ **Sustainability of the initiative (revenue, technology, security/ privacy, digital encryption etc.)**

The project has successfully completed the management of 4 seasons while 5th season is undergoing. The issue and enquiry have tremendously reduced by every subsequent season. In perspective of technology the project has been designed in new technology keeping future manageability and sustainability is mind.

The system has security audited and got the clearance certificate but still planned for security audit after every 6 months to address new ways of hacking tricks.

All the User credentials and vital information is kept in the database either as encrypted form or as salted hash form. Use of digital signature also kept in the departmental agenda for future extension.

Government of Odisha has proposed for 2% reserved budget in every scheme for IT infrastructure development as well as IT services to aid existing e-Gov initiatives and new programs. So, it has been envisioned to take this opportunity for the long run sustainability of the project.

➢ **Convenience for user/ citizen i.e. Seed Grower**

- Citizen can now register multiple crops using a single application form where the application fees for the registration has wave out. This enables the seed grower to approach any CSC for initial IT support.
- Citizen can see the status of his certification process on real time using the mobile apps developed by the department or through SMS.

- Citizen can now get their documents as well as TAG verified at their nearest ASCO office instead of going to SCO office far away from his home.

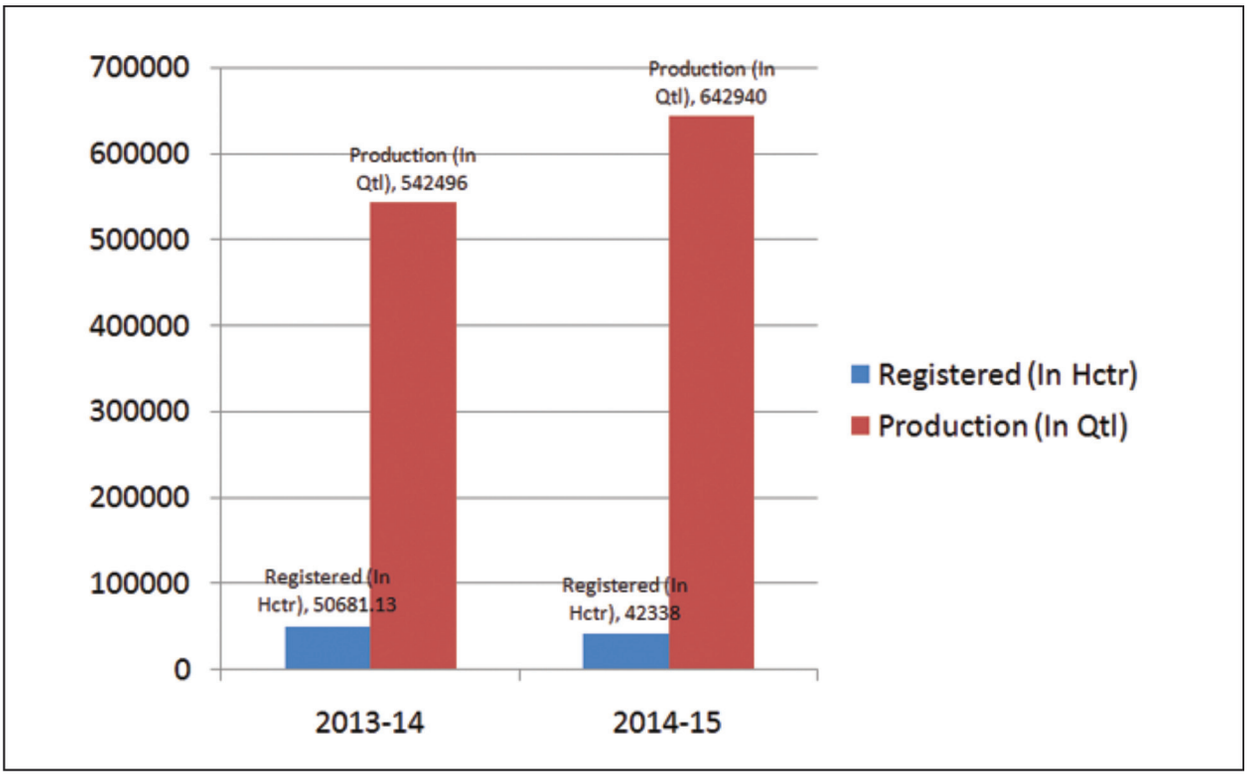
➢ **Value delivered for your organization/ agency**

- Optimum utilization of the human resources and avoidance of redundant work has been achieved.
- Minimization of human error at the same time effective data retention improved the data analysis process multifold.
- Elimination of any chance of manipulation in the certification system by lodging every online activity for security purpose as well as legal purpose.
- Real time MIS report generation and monitoring of the seed production as well as certification is done through this system.
- Crop yield prediction can also been effectively done to address any fore coming shortage of seed in the state.

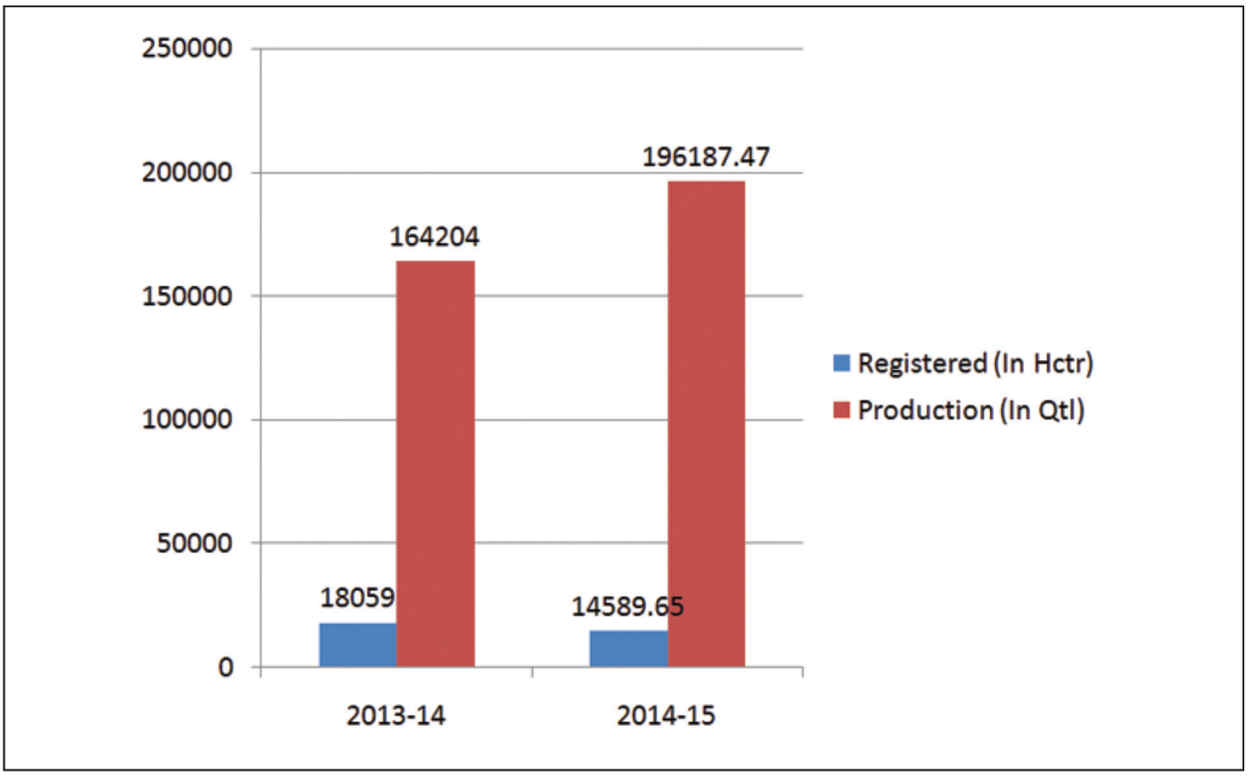
➢ **Other distinctive features/ accomplishments of the project**

- Application is very much pluggable for enhanced Interoperability as a result of which this has been integrated with http://odishaseedsportal.nic.in which is an information warehouse about seed by the Department of Agriculture.
- Payment verification of the transactions done by manual process is done with Easy Pay System of Axis Bank integrated with the current OSSOPCA workflow automation system.

4 Number of Seed Testing Laboratory has also been integrated to the system and MIS of Odisha State Seed Corporation is under process for integration with the same.




***Session:*** Kharif Year: 2013-14 (Manual System), 2014-15 (Automation System)




***Session:*** Rabi Year: 2013-14 (Manual System), 2014-15 (Automation System)

**Production Quantity to Area ratio has been continuously improved after implementation of the project**

It is believed that Online Seed Certification system of OSSOPCA is the pioneer in implementing the automation of complete workflow of seed certification process in the country. This project is also very citizen centric as well as interoperable to other government departmental MIS. **Due to the innovativeness & successful implementation throughout the state of Odisha, The project "Odisha State Seed & Organic Products Certification Agency" has been awarded SILVER under category "Cat-X – Innovative Use of ICT by State Government PSUs/Cooperatives/ Federations/Societies" for the National Award on e-Governance 2015-16 during the 19th National Conference on e-Governance at Nagpur on 21-22 January, 2016.**

In the present context, the online system has **become the mainstay of many other ambitious Government online programmes like DBT in seed supply, Odisha Seeds Portal, OSSC etc**. Now, OSSOPCA is going to implement the tablet version of the online system of seed certification during Kharif -2016 to make a shift from e-Governance to m-Governance so that the service to the seed growers can be provided easily at any time with a single touch on the screen.

**Director, OSSOPCA**
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BHUBANESWAR. Odisha
PIN- 751003
Email- directorossca@rediffmail.com
Website – ossopca.nic.in

OSSOPCA & NIC, Bhubaneswar officials receiving Nation e-Governance Award from Honourable CM of Maharastra SJ. Devendra Fadnavis at Nagpur on 22.01.2016 during the 19th National e-Governance Conference

# e-Based Laboratory Management System

**Gujarat Environment Management Institute (GEMI)**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/Ministry | : | Gujarat State |
| **2.** | Name of the host/owner organization | : | Gujarat Environment Management Institute (GEMI) |
| **3.** | Status of the host/owner organization | : | An Autonomous Institute of Government of Gujarat under Forests and Environment Department. |
| **4.** | Name of the Project | : | e-Based Laboratory Management System |
| **5.** | Name of the Nodal Contact Person | : | Ms. Nitasha Khatri, Senior Scientific Officer and Laboratory Head |
| **6.** | Contact Address | : | Office of the Director, 3rd Floor, Block no. 13, Dr.Jivraj Mehta Bhavan, Old sachivalaya, Sector 10, Gandhinagar -382010. |
| **7.** | Telephone/Fax/e-mail | : | T: 079 – 23240964,F: 079 – 23240965,<br>e-mail: info@gemi-india.org |

**8. Project Summary:**

e- based Environment Monitoring System is a JAVA based online application developed by the GEMI. The purpose of the application is to increase productivity, lower the cost for laboratory & allow more creative time for individual. e-LMS has been developed to substitute the manual and conventional working system of laboratory with fast, reliable & user-friendly computerized system.

**9. Date of launch of project:**

01/04/2012

**10. Coverage (Geographical):**

The e-based Laboratory Management System of Gujarat Environment Management Institute (GEMI) has a comprehensive coverage. The Laboratory Management System has been designed for GEMI's Lab, which been declared as "State Water Lab" and "State Air Lab". The Laboratory Management System, thus incorporates the entire working of the lab, which has four sections namely Air, Water, Soil and Microbiology. The e-based Laboratory Management System incorporates e-management right from collection of sample in the field to its transportation to coding –decoding analysis and bringing out of final results. The Laboratory gets samples from the entire state of Gujarat. These are Samples from all the rivers of the state selected ground water source and certain industries spread over the entire State.

**11. Beneficiary of the project:**

Public at large, Government, Industrial etc.

**12. Problem statement or situation before the initiative:**

**i) Situation before the initiative (bottlenecks, challenges, constraints etc.):**

Before Laboratory Management System was developed, the coding –decoding system was not in place properly, Security was not maintained especially about the sample source. Inventory management was not in place properly managed. Instrument calibration was not being done timely.

ii) **Strategy Adopted (have you done base line study, problems identified, technology and architecture used, roll out/implementation model'):**

In Environment Laboratory, The Laboratory Management System has been developed for the computerization of the entire working of the Laboratory as also to secure sample source this in turn reduces the work load in book keeping. Further, paper work is reduced and time can also be saved. Scientists cannot identify the source of sample. Thus, there is less chance of giving biased result, which becomes reliable.

iii) **Result Achieved/ Value Delivered to the beneficiary of the project-(share the results, matrices, key learning's, feedback and stakeholders statements that show a positive difference is being made etc):**

The Laboratory Management System transfers the result to the relevant client automatically. Client can give e-based feedback about the reliability and accuracy of result. Because of this system, paper work has reduced along with reduced manual work in the laboratory. In environment laboratory reduced paper work is one of the most important features besides quick and reliable delivery of result.

iv) **Extent to which the Objective of the Project is fulfilled-(benefit to the target audience i.e.G2G, G2C, G2B or any other, size and category of population/stakeholder benefited etc):**

The Laboratory Management System developed by GEMI is quite useful in environment laboratory. The objectives of the project are met as there is automatic transfer results to internal and external client, reduced paper work, and Secured Sample Source data and, reduce time consuming book keeping procedure. Client can give online feedback to Laboratory. All report related to various government project are directly submitted to government departments.

v) **Communication and dissemination strategy and approach:**

The Project is an in-house development, which finds its utility among the users such as government institutions, industries and public at large. The display and communication of results on website, through, email and wide publicity by the lab are some of the strategies for communication and dissemination.

**Other distinctive features/ accomplishments of the project:**

1 Laboratory Management System : The software is easy to operate and all office personnel can handle it well.

2. Officials can access only that information which they are officially entitled to.

3. The Laboratory Management System can be implemented at other lab establishments as well.

## 13. Project Objectives:

- To develop an outstanding e-based Laboratory Management System for the entire process, preparation and working in GEMI's Lab.
- To secure sampling source data by hiding the information from those carrying out the analysis so as to provide unbiased results.
- To reduce manual paper work and time consuming activities.
- To increase reliability of results of client samples and government projects.

## 14. Project Scope, Approach and Methodology:

Laboratory Management System is an integral part of Laboratory. Scope and Activities of Laboratory Management System are as under.

**a) Storage of Data**

This module stores all data pertaining to Sample Collection, Coding, Decoding and personnel engaged in the monitoring and analysis of sample. It also keeps record of sample analysis and its results parameter wise including exceedance, if any with reference to standards.

**b) Report Generator**

This module encodes all the data related to samples collected and then generates a dummy label for each and every sample. It again decodes the data of sample and generates the report.

**c) Audit Management**

All Audit standards are set in system, so regularly checking is done by system automatically.

**d) Compliance (Standards Compliance)**

Compliance of sample data with industry standards is monitored by system automatically with a certain predetermined schedule.

**e) Document Management**

The software system keeps all the records, thus there are less chances of manipulation. Hence, the document management through Laboratory Management System is excellent.

**f) Instrument Calibration and Management**

Time duration for Instrument calibration and management is set in system, so timely alert for the calibration starts blinking in this module. It reminds the manager about the urgency of calibration and other operations well in advance.

**g) Inventory and equipment Management**

This module is one type of a reminder for the user for inventory and equipment management. The software has adequate space and there is no immediate shortage of storage.

**h) Personnel and Workload Management**

Attendance record is recorded and maintained regularly in the system. All data related to work of personnel is also recorded. Thus evaluation of personnel's work can be done by authorities at any point of time.

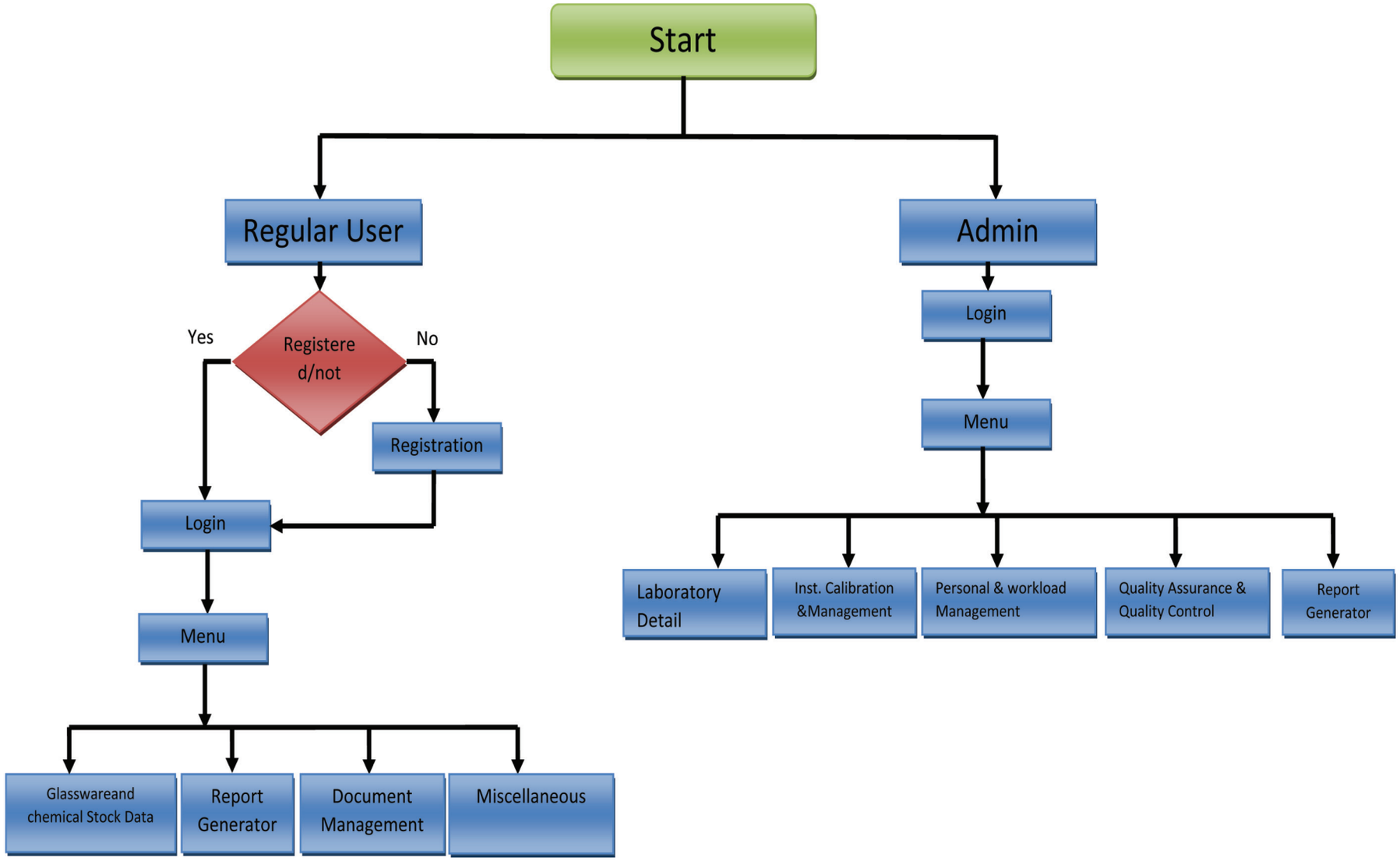
**i) Quality Assurance and Quality Control**

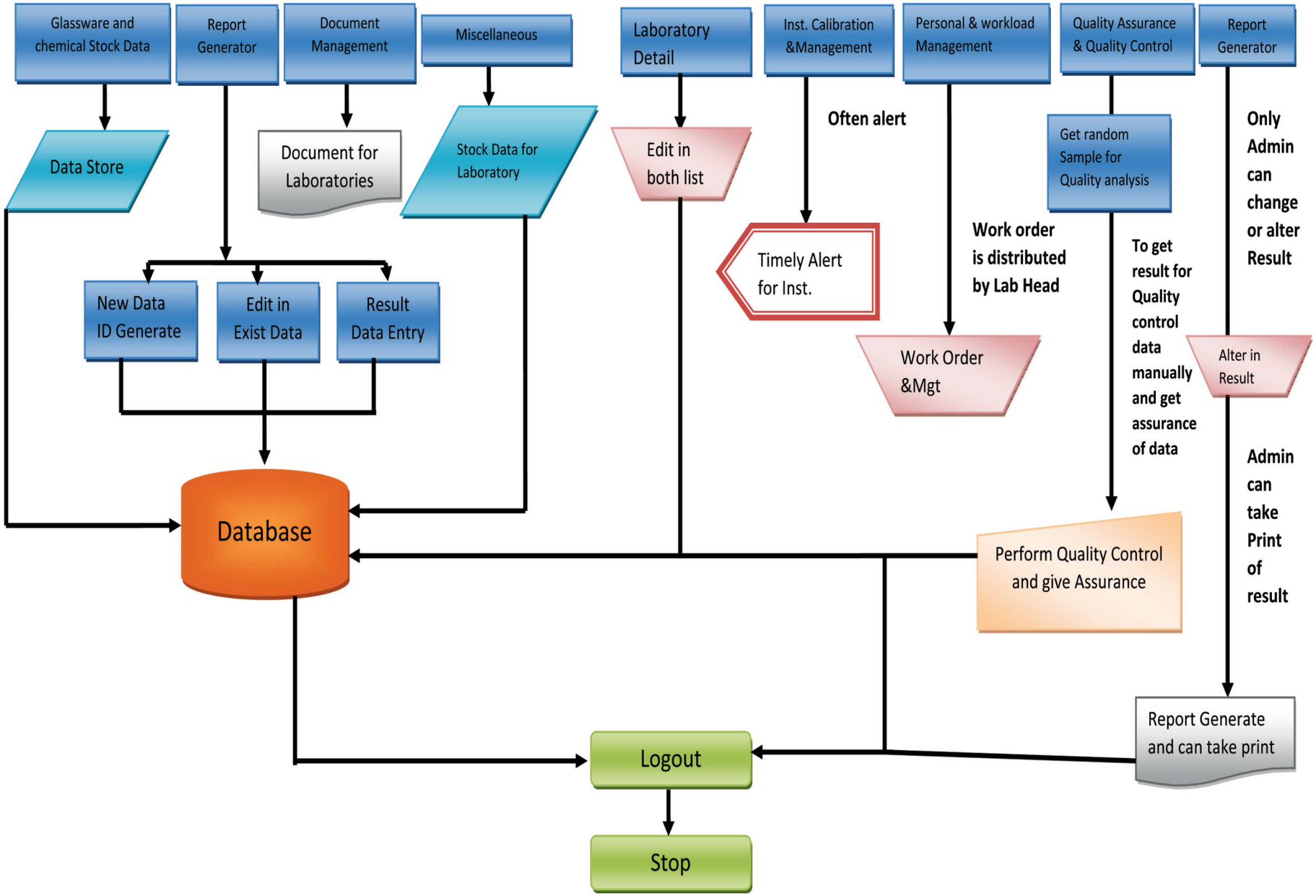
This is a very important module for the Environment laboratory. As per the Standard, monthly exercises of Quality Control are done by lab personnel. The entire Process for Quality Control is done by this module using this software application.

## Methodology

e-LMS is compatible with windows XP, 7, 8, and 8.1 in which MySQL, an open-source database management system (DBMS) used to generate the database. E-LMS is developed on JRE 1.8 (Apache tomcat 1.8) using Eclipse as a development tool. As mentioned above, the software has various functionality, report generation, data storage, inventory and equipment management etc. e-LMS starts with registration page which have two types of login for Admin and Regular users. Admin have functionality to check, update, delete and monitor the activity of regular users. Admin have also facility to monitor the registration process of regular users, laboratory details, instrument calibration and management etc. which enhance the quality assurance and quality control over various on-going activities. After the login of registered user; activities as management of glassware, chemical stocks, report generation, document generation can be performed. The detailed flow chart of e- based Laboratory Management System has been given herewith:

**Flow Chart for e-based Laboratory Management System**




Glassware and chemical Stock Data
Report Generator
Document Management
Miscellaneous
Laboratory Detail
Inst. Calibration &Management
Personal & workload Management
Quality Assurance & Quality Control
Report Generator
Data Store
Document for Laboratories
Stock Data for Laboratory
Edit in both list
Often alert
Get random Sample for Quality analysis
Only Admin can change or alter Result
New Data ID Generate
Edit in Exist Data
Result Data Entry
Timely Alert for Inst.
Work order is distributed by Lab Head
To get result for Quality control data manually and get assurance of data
Work Order &Mgt
Alter in Result
Admin can take Print of result
Database
Perform Quality Control and give Assurance
Report Generate and can take print
Logout
Stop

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

### Efficiency Enhancement:

**Efficiency of Laboratory Management System is as under.**

**a) Manage high volume test result quickly and reliably**

Result for the analysed sample is prepared very accurately, reliably and quickly. So, there is virtually no delay in comparing it with manual result preparation.

**b) Transfer test result automatically to internal and external client.**

There is a facility to transfer all results to relevant clients. Therefore, results are transferred timely and correctly, to client.

**c) Decrease the need for manual transcription of test result.**

The system provides for sending soft copy of the results to the client. Thus, there is decrease in manual transcription of the sample result.

**d) Allow for high level overview of laboratory Process status using summary screens and reports.**

The system stores all day to day data of the Lab. However no one can change the system security without permission of the Authorities. It enables top management to get status about all the laboratory processes and enables them to.

**e) Meet organisational needs with flexible configuration.**

All data in the module such as inventory stock, glassware, instrument, sample etc is available. Thus, the entire set up of Laboratory can be checked by the organisation.

**f) Reduce Paper work.**

The Laboratory Management System reduces manual work and also reduced paper work of the Laboratory. This one of the excellent feature of Laboratory Management System in an environment Laboratory.

**Service Delivery -- user Orientation**

a) To sent purchase order online for Instrument, Chemical, Glassware and Stationary. Inventory management can be done using this system. When requirements are least for stock, purchase order will be generated as per requirement indicated in the system.

b) To get client feedback online. Clients can give online feedback about the results and efficiency in the process of Laboratory.

c) Client can show other analysed report of river and rural environment report. In the module, System puts results of different river and rural areas for wider dissemination. Client can see the results and give their feedback for the same.

**Accessibility & User Convenience**

a) To provide Simplification and Automation of work process. The system can help the Organisation to adopt automation in the lab, thereby decreasing the manual work. This will simplify the work.

b) To increase efficiency, reducing cost and improving reliability of results. Because of coding-decoding system, there are less chances of manipulation in analysed results, which results in increased reliability of results and reports.

c) All relevant data are stored in database and access by authorised person only. In this e-based system, data is stored in e-database. Thus, without permission of top level management, no one can change the data.

d) Process efficiency is greatly improved through automation of standard procedures and administration. This e-based system follows all standards and protocol, thus all management of laboratory goes on systematically and as per well-defined standard procedure.

e) Automatic notification of Instrument calibration, disposal of sample, store which is to be finished etc. For user convenience, System gives timely alert for calibration, sample disposal and quantity of store and glassware.

**Innovations**

The Laboratory management system developed is in-house indigenous software developed by GEMI. This is the first time Laboratory Management System software is used in an Environmental lab. This software reduces the manual work of users. The innovation has reduced any fault that may creep in due to human biases. It makes scientist less worrisome about the procedural aspects and they are able to concentrate more on their scientific pursuits. This type e-based laboratory Management System has been first time used in any Environment Laboratory. This is developed on Java based platform. Java is a secure language, which makes the system absolutely safe and secure. The following are the details of the new activation introduced in Laboratory Management System:

a) The entire system is new and a complete switch over from the manual system has been done.

b) The Laboratory Management System is based on the protocol system developed specifically for the GEMI's Laboratory. The various processes and procedures protocol are then broken into steps. A flow chart has been worked out and each step is incorporated into the e-based Laboratory Management System.

c) Every step/stage has been included in the Laboratory Management System. This has reduced the administrative load on the Laboratory. Further, the Laboratory Management System has been developed on JAVA, unlike other such systems which are .NET or PHP based, is a secure language.

d) Many of the bottlenecks and manual steps have been reduced in the working. The e-based Laboratory Management System works faster and better.

e) The original working was completely based on manual working and thus drastic change has been brought about in laboratory working.

# Western Union and India Post collaborate to provide money in remote parts of India and enable Financial Inclusion

**Western Union Services Pvt. Ltd.**

| | | | |
|---|---|---|---|
| **1.** | Name of the State/ Ministry | : | Department of Administrative Reforms & Public Grievances (DARPG), Ministry of Personnel, Public Grievances & Pensions, Government of India and Department of Electronics and Information Technology (DeitY), Ministry of Communications & Information Technology, Government of Indiahave been jointly organizing the National Conference on eGovernance every year in partnership with one State Government since 1997 |
| **2.** | Name of the host/ owner organization | : | Western Union Services Pvt LTD |
| **3.** | Status of the host/ owner organization | : | Same as above |
| **4.** | Name of the project | : | Western Union and India post collaborate to provide money in remote parts of India and enable Financial Inclusion |
| **5.** | Name of the Nodal Contact Person | : | Mr. Sharad Somani |
| **6.** | Contact Address | : | Western Union Services Pvt. Ltd., Fortune 2000, Ground Floor, Unit No. G 101, BandraKurla Complex, Bandra East, Mumbai, Maharashtra 400051 |
| **7.** | Telephone/ fax/ e-mail | : | 022 6676 2929 |

**8. Project Summary**

Western Union's partnership with India Post, world's largest postal network, is a good example of a public private partnership that plays a crucial role in the advancement of financial inclusion in India. Western Union's ability to provide money in minutes from across the globe to the remotest part of our country has also greatly allowed the formal remittances industry to grow in India

**9. Date of launch of project**

2001

**10. Coverage (Geographical)**

Western Union Services are available in Urban and Rural areas across all districts in the country. We have pan India distribution of over 112,000+ locations. Globally, Western Union has been associated with around 100 Postal Organizations, predominantly offering money transfer services to rural and interior areas.

**11. Beneficial of the Project**

It has greatly helped formal remittance industry growth in India. The remittance business has grown from US$2.11 billion in FY 1990-91 to nearly US$71 billion in the year 2015 and India has become the largest remittance receipt country in the world.

## 12. Problem statement or situation before the initiative

The era of the 90s witnessed a massive migration trend, when Indians started accepting job offers from different countries. The Indian diaspora soon began to expand and hence need to send money back home also increased. In absence of formal channels to send money back home, people used informal channels. To bridge this gap and be able to help the world's largest diaspora to stay connected to their loved ones back in India, and to make the money in minutes a realitythrough formal channels, Western Union entered the Indian market in early 90's.

Western Union's ability to provide money in minutes from across the globe to the remotest part of our country has greatly helped formal remittance industry growth in India. The remittance business has grown from $2.1 billion in FY 1990-91 to **$71 billion** in the year 2014. India has become the **largest** remittance receipt country in the world. It is impressive to note that Remittances is **three times the size of** FDI investment in the country. Today, remittance contributes 4% to the Indian.

Remittances are better targeted at the needs of the poor than foreign aid or foreign direct investment (FDI), as recipients often depend on remittances to cover daily living expenses, to provide a cushion against emergencies, or to make small investments in business or education.The size and potential impact of the remittance inflows is large. Remittances increase the recipient country's foreign exchange reserves. Although capital flows tend to increase during favorable economic cycles and decline in bad times, remittances tend to be countercyclical relative to recipient countries' economic cycles. Remittances also tend to be less volatile than other sources of foreign exchange earnings. Remittances support financial sector development through a strong and positive impact on bank deposits and credit to the private sector Western Union has partnered with India Post for allowing international remittances at India Post locations India Post is a symbol of trust for the Indian consumers and the impressive national network with strong urban and rural coverage allows Western Union to provide financial access to millions of people across India and offer our global service with utmost convenience. Our common goals of facilitating financial inclusion and reaching out to the masses made India Post the ideal choice for **International remittances services**.

Consumers in the remotest parts of India can receive their money at the 9942 post offices of India Post from Western Union's 5,00,000 locations & over 1,00,000 ATM's and Kiosks spread across 200 countries across the globe. Western Union® Money Transfer along with India's Department of Post transferred $6.5 billion worth of remittances through the strong postal location network across urban and rural India in the last decade.

Across South Asia, Post offices in general and Post Masters in particular serve an important influencing role for villagers and community elders. Consequently, financial services offered through Post offices are well regarded among consumers who frequent these locations.

## 13. Project Objectives

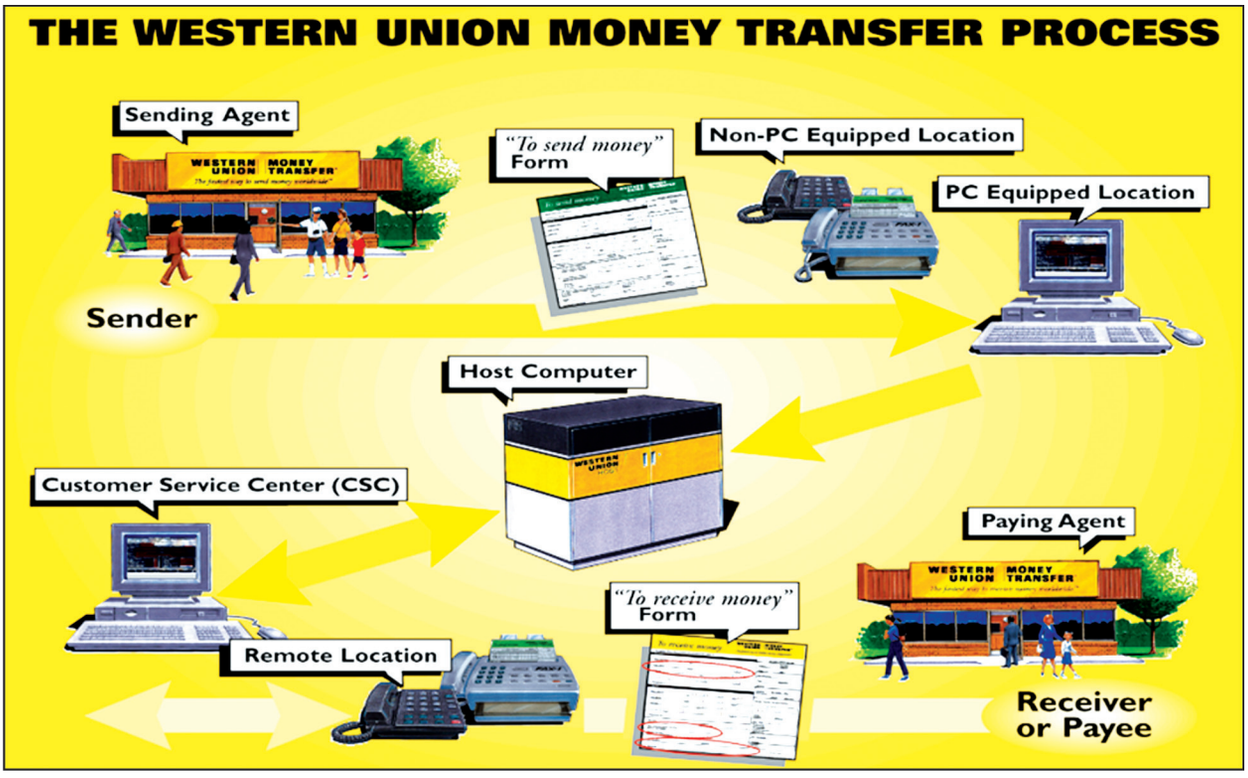
To provide money in minutes from across the globe to the remotest part of India.

## 14. Project scope approach and methodology

Western Union worked closely with the Department of Post in enabling IMTS initially with 3500+ locations in the first 3 years since 2001 and expanded over the years to the current number of 9942 Post Offices.

- During 2001 to 2005 when IT infrastructure and connectivity was at its nascent stage Western Union provided robust solutions catering to different types of Post offices
    - o 3162 Major/Head post offices with good connectivity were provided with computers by Western Union to directly service the customers

- 5879 remote post offices in rural areas were provided with fax machines by Western Union to be able to service customers through remote transaction process with help of Major/Head Post Office.




- Western Union also put in place dedicated Field Task Force to support India Post network in terms of the following
  - Installation and Troubleshooting of Software
  - Training on various aspects of Money Transfer services
    - Training on Money Transfer and Reserve Bank of India Guidelines
    - Compliance
    - Security and Fraud prevention
    - Customer Service
- Coordinate and support Post Offices for BTL activities to create awareness of the services provided in the Post Office.

**Western Union Services at India Post**

1. **Cash to Cash International remittances**: Currently India Post is offering the Western Union Cash to Cash product, which enables cash payout over the counter to a customer. Western Union provided computers to post offices to enable them to process remittances. WU trained India Post staff to service WU customers. TheFront Line Associates or Operators undergo a rigorous training regime both directly as well through an online portal (LMS). This training is a part of the R2S or the 'Ready to Serve' initiative wherein each Post Office needs to have a proper signage, trained staff, as well as an operational software called Western Union Point of Sale application to process transactions.

2. **Account Based International remittances:**Western Union is working with India Post to offer Account Based Money services as well, which will be available by the end of the year.This would now enable the

customer to choose whether he wants to carry the cash with him or deposit it in his India Post saving bank account. This would be a huge advantage for India Post as well as its customers as they would now have a freedom to choose. All account holders of India Post can now receive money through Western Union directly in their account instead of visiting a physical location to take cash. The sender can send money through any active channel in the send country. The receiver can go to his India Post Internet Banking, log in and pull the Money Transfer transaction to his savings account with India Post by specifying the MTCN and other related details.

With India Post transformation into Payment Bank with the grant of payment bank license recently, Western Union can enable international remittances into payment bank accounts as well. Consumers in select countries will be able to send 'money in minutes' directly into the recipients' India Post bank accounts in India. This service operates via the National Payments Corporation of India's (NPCI) revolutionary IMPS platform which facilitates money transfer within minutes to a bank account.

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

**Last 14 Years relationship**

- $ 10 Billion of principal paid out

The Western Union – India Post relationship has been one of the pioneers of the public-private partnership models in India.

This relationship exposed the India Post personnel to technology and the use of computers, printers and internet, way back in 2001. The relationship has been the driving force, especially in rural India and the post office has been a focal point of receiving money from abroad.


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