

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

NAME OF CATEGORY- INNOVATIVE USE OF ICT BY STATE GOVERNMENT PSUs/ COOPERATIVES/ FEDERATIONS/SOCIETIES

1. Coverage – Geographical and Demographic :-

(i) Comprehensiveness of reach of delivery centres,

Entire state of Uttar Pradesh with 9635 buses spread over 240,928 Sq Km.

(ii) Number of delivery centres

20 regions with 115 depots and 135 bus stations.

(iii) Geographical

(a) National level – Number of State covered

1

(b) State/UT level- Number of District covered

75

(c) District level- Number of Blocks covered

Instead 20 regions

Please give specific details:-

Regions: Lucknow, Ghaziabad, Meerut, Moradabad, Saharanpur, Agra, Aligarh, Bareilly, Hardoi, Kanpur, Etawah, Jhansi, Devipatan, Faizabad, Gorakhpur, Azamgarh, Varanasi, Allahabad, Chitrakoot and Noida.

(iv) Demographic spread (percentage of population covered)

19.1 crore population

2. Situation Before the Initiative (Bottlenecks, Challenges, constraints etc with specific details as to what triggered the Organization to conceptualize this project) :

1. Electronic Ticketing Machines (ETM) were not non-GPRS based because of which real time data of tickets sold and revenue was not available.
2. Online Reservation System (ORS) earlier only covered high end buses through API. Reach was limited and there was no provision of advanced booking.
3. Counter Booking was not present hence no advance reservation was possible thus limiting reach and convenience.
4. Vehicle Tracking System was non-existent therefore tracking of buses for overspeed, harsh breaking could not be done. Emergency situations could not be controlled as well as the safety of onboard passengers.
5. Fuel sensor monitoring was non-existent. Pilferage was easy and widespread.
6. Data Center (DC)/ Data Recovery Center (DR) were not built till then to manage the huge confidential data base of the organization.
7. Passenger Information System: LCDs with timetables and automatic announcement system were not set up. The scope of information system was extremely limited.
8. To add to the above, passengers could not retrieve information through the basic mediums of communication like SMS, IVRS and internet web interface.

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

3. Scope of Services/ Activities Covered (Relevance of choice of application for clients/ PSU, extent of e-enablement in terms of number of processes/services, extent to which step in each service/process have been ICT- enabled #)

- 1) ETM is now GPRS enabled and real time current information of tickets sold and revenue earned is available online.
- 2) Corporations own ORS now sells tickets online with availability of timetable, journey planner, fare charges. Advance reservation is possible with smart cards for frequent travelers that offer discounts.
- 3) Counter Booking is now possible with advance reservation and smart card availability.
- 4) VTS is being implemented with GPS and GPRS functionality making online tracking and monitoring of buses easy. Digital mapping is also possible
- 5) Fuel sensor installation in progress.
- 6) PIS enabled automatic announcement systems and LCD displays.
- 7) Passengers can now retrieve information of bus timing, seat availability, ETA/ETD and fare through the use of SMS, mobile, IVRS, web interface

4. Strategy Adopted

(i) The details of base line study done,

- Before the inception of the project, UPSRTC did not have tracking methodology. Any emergency situation that could have arisen from accidents or over speeding of buses could not be tracked.
 - Fuel pilferage couldn't be tracked either.
 - Public Information System was at a very nascent stage with no real time information available to passengers.
 - Account reconciliation was a major issue which had several loopholes.
- The technology of transparent real time information was unavailable.

Hence, primarily these were the needs that triggered the organization to conceptualize this project.

(ii) Problems identified,

- ETM- previously was non-GPRS, therefore data was downloaded at the end of the day at the depot, hence ongoing monitoring and current sales figures were not available which also lead to unethical practices by bus staff.
- ORS: Advance reservation was unavailable. Plus the ORS ticket data initially could not be captured by ETMs.
- Counter booking: current booking, advance reservation was unavailable previously; hence customers had limited reach and could not even choose which bus to board. Plus with the absence of counter booking, all cash was handled by

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

conductors from whom the cash was collected at the end of bus journey.

Practice of rendering conductors cashless could not be achieved.

- Passenger Information System was extremely limited in nature. Announcement system initially was manual. Now ETA/ETD was available as well as real time information of bus location.
- Real time information of bus was unavailable. Bus location, speed, arrival, departure knowledge was unavailable. Also handling emergency situation was tough.

(iii) Roll out/implementation model,

The project is being implemented on a Build Own Operate and Transfer Model. The duration of the project shall be 5 years after complete go-live and acceptance of the system in all regions.

On completion of the project the SI shall transfer all the assets (including hardware and software) which will be developed, procured or customized during the project to UPSRTC for a value of Rs 1. SI shall have to transfer the whole setup in running condition and provide knowledge transfer to UPSRTC's team at the end of contract.

(iv) Communication and dissemination strategy and approach used.):

UPSRTC organizes several meetings and sends/receives periodic reports of the project to keep track of the activities. For instance:

Periodic reports received: WSR (Weekly Status Report), MPR (Monthly Progress Report), Hardware Deployment Report

Meetings: ITMS project stabilization committee meeting with all ARMs (assistant regional managers), Status review meeting with the vendor which is chaired by MD, State Empowered Meeting with MD, Monthly meeting with CS.

5. Technology Platform used-

(i) Description,

The project has taken into account certain architectural principles while designing the solution which are:

Technology Independence, Service Oriented Architecture, Ease of Use, Interoperability, N-Tier model, Extensibility and scalability and Integration Needs

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

(ii) Interoperability

Across the project, the applications and computers from different sources and platforms can work seamlessly together on and across network which is the key to sharing resources and reduction in long-term development costs for UPSRTC.

(iii) Security concerns

Appropriate security measures have been taken to maintain performance at optimum levels 24x7 basis. The vendor maintains ongoing needs of security management which is not limited to monitoring. S.I. is required to maintain an updated knowledge base of all published security vulnerabilities ensuring any identified ones are blocked immediately. S.I. responds to security breaches, undertakes management and maintenance of security devices, maintains security policy, and conducts monthly vulnerability assessment as well as firewall management.

(iv) Any issue with the technology used

UPSRTC has taken all measures to make the technology as seamless as possible.

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

SLA have been defined very clearly in the RFP with a proper validation mechanism and severity checks and corresponding penalties for any deviation. RFP defines SLA for implementation across the state geographically as well as each ITMS component wise.

6. Enhancement of Productivity (Give details about impact on volume of transactions handled per employee, Productivity of machines/ resources#)

NA

7. Efficiency Enhancement (Give specific details about the following #)

(i) Volume of transactions processed,

NA

(ii) Coping with transaction volume growth

NA

(iii) Time taken to process transactions,

NA

(iv) Accuracy of output,

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

NA

(v) Number of delays in service delivery

NA

8. Service Delivery – Business/ Client Centricity (Give details about improvement in interaction with clients and outcome for clients, relevance of access points, Length and Breadth of services provided online etc. #)

NA

9. Citizen Centricity (Give specific details on the following#)

(i) Impact on effort, time and cost incurred by user,

NA

(ii) Feedback/grievance redressal mechanism,

Helpdesk, IVRS, Web portal, Social networking websites like Facebook and Twitter

(iii) Audit Trails,

Available on the software installed for Helpdesk

(iv) Interactive platform for service delivery,

Web portal, IVRS, Pull SMS, Mobile Application

(v) Stakeholder consultation

NA

10. User convenience (Give specific details about the followings #)

(i) Service delivery channels (Web, email, SMS etc.)

Web, SMS, IVRS, Counters, Mobile, Bus Station Display Systems,

(ii) Completeness of information provided to the users,

Fare, Time, ETA/ETD, Timetable, Journey Planner, Location, Advance reservation, Seat Availability, Online Booking

(iii) Accessibility (Time Window),

NA

(iv) Distance required to travel to Access Points

As far as nearby bus station and as close as mobile

(v) Facility for online/offline download and online submission of forms,

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

Yes, online as well as offline for MST.

(vi) status tracking

Available on UPSRTC portal and PIS web interface.

11. Innovation (Give details on how the usage of technology is exemplary, any use of new and emerging technology, impact on number of steps required, identification and removal of bottlenecks/ Irrelevant steps etc. #)

Vehicle Tracking System ('VTS') will utilize the GPS tracking device to provide the position of every bus. The GPS device is fitted inside the VTS device with data logging facility and GPRS connectivity in the bus. The co-ordinates of bus location will be continuously transmitted through GPRS connectivity to the DC. The VTS system shall have the following components:

- 1) Central and Regional Control Center : The control centers shall have large LCD display terminals where the buses can be monitored on digital maps. The ETA and ETD information of the buses can also be monitored from the control centers. Some of the key parameters than can be tracked using the Vehicle tracking system are locations of the bus, speed of the bus, path followed by the bus etc. This will allow the management to ensure safety of the onboard passengers and adopt necessary actions in the case of an emergency situation. The VTS system shall enable the driver or conductor of the bus to send a SOS signal to the respective Control Center in case of an emergency.
- 2) Fuel Level Sensor: The in-built fuel gauge in the buses will be connected to the VTS device and the fuel level data will be continuously fed to the data logger in the VTS device. The GPRS module shall keep sending fuel data to the DC. In case of a sudden change in the fuel level, alerts shall be generated and the respective RO Control Center and the HO Control Center shall be intimated for appropriate action.

VTS system is the backbone of the entire Intelligent Transport Management System (ITMS) project. This will make tracking and monitoring of 9635 (Fleet of March 2014) possible for UPSRTC. Any emergency situation would be addressed. Timing of the bus for arrival and departure would also be monitored which will be fed into the PIS system to calculate ETA and ETD.

12. Defined and Achieved outcomes (Give details about extent of improvement in terms of organizational objectives, output targeted in the beginning of the project and output achieved, extent to which the project is able to reach/ fulfill the requirements of planned beneficiaries etc. #)

NA

13. Sustainability (Give details about sustainability w.r.t. technology (technology used, user privacy, security of information shared- Digital Signature/ Encryption etc.

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

#), Organization (hiring trained staff, training etc#), financial (Scope for revenue generation etc. #)

NA

14. Adaptability Analysis

(i) Measures to ensure adaptability and scalability

NA

(ii) Measures to ensure replicability

NA

(iii) Restrictions, if any, in replication and or scalability

NA

(iv) Risk Analysis

NA

15. **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):

(i) To organization

- Real time tickets sold and revenue collected data available.
- Increased transparency in the accounting system
- Monitoring and tracking of buses possible through alerts.
- Increased mediums of ticket collection through counter booking, PORS with availability of advance reservation.
- Periodic reports available that are being used to analyse revenue data, load factor which has further enabled route planning and optimization.

(ii) To citizen

- Increased medium of booking tickets through counter booking and public online reservation system. Advance reservation possible with confirmed ticket no.

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

- Passenger Information System: Information on timetable available on PORS, LCD displays in bus station of automatic announcement system of buses.
- Smart cards available that offer variety of benefits for passengers.
- Push SMS launched wherein after booking tickets passengers get an sms with requisite details.
- Passengers can log in complaints/grievances through helpdesk, facebook, twitter or PORS of UPSRTC.
- Soon to be launched is mobile application, IVRS and Pull SMS.

(iii) Other stakeholders

NA

16. 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):

NA

17. Comparative Analysis of earlier Vs new system with respect to the BPR, Change Management, Outcome/benefit, Change in legal system, rules and regulations

NA

18. Other distinctive features/ accomplishments of the project:

NA

1.

2.

3.

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF e-GOVERNANCE INITIATIVES

This is just an indicative list of indicators. Applicant can add on more information based on suitability of the project nominated.