

ITMS (Intelligent Transit Management System)

1. Name of Project: Intelligent Transit Management System (ITMS)

2. Background:

Surat has been a major trade city of Western India but one thing that the city lacked despite major infrastructural reforms was an Integrated Transit system. ITMS was conceived as a result of lack of public transport available to the 4.5 million population of Surat. The need for a fast paced, secure and affordable transit system was felt and ITMS was envisioned.

3. Vision:

- Surat is implementing a city wide integrated system – “Intelligent Transit Management System” (ITMS), to manage diverse set of transportation needs for the city – this includes: (a) public transport and (b) vehicles related to civic services like Solid Waste Management, Drainage, Heavy Engineering, Emergency Services etc. ITMS is planned to bring in best-in-class operational efficiency and automation to the operational capability of the city in respect to transport.
- The Intelligent Transit Management System is an all-inclusive system that integrates various departments of Surat Municipal Corporation for better operational efficiency and optimum utilization of resources.
- The project is envisaged to reduce the travel time, improve reliability of public transports, and bring operational efficiency to various departments in providing their services to citizens with the Surat city.

4. Sector: Transportation

5. Cost and financing:

SCP Cost	: Rs. 127.00 Cr
DPR Cost	: Rs. 81.10 Cr
Tender Estimated Cost	: Rs. 81.10 Cr
Tender Sanctioned Cost	: Rs. 48.99 Cr
	(Capex=33.7+Opex=15.7)
Convergence Scheme/PPP/SMC	: Surat Smart City Project
Convergence/PPP/SMC Costing	: NA

6. Brief Description (Technical Details):

The functional specifications for ITMS:

- Automated Vehicle Location System
- Passenger Information System
- Vehicle Scheduling & Dispatch System
- Depot Management System
- Fare Collection Devices
- Incident Management
- Business Intelligence
- Enterprise Management System

Technical Specifications for ITMS:

- GPS Based Automated Vehicle Location System
- Passenger Information System
- Depot Management System
- Incident Management System
- Call Centre Management 36
- Computer aided Scheduling and Dispatch
- Central Control Centre (CCC)
- Business Intelligence Platform for Reporting
- Enterprise Management System
- ITMS Computing, Network & Storage infrastructure Specification

7. Speciality:

- First project in nation to cover Department and Emergency Vehicles
- Vehicle Scheduling and Dispatch System
- Business Intelligence Platform for Reporting
- Enterprise Management System: to monitor operations and adherence to laid down service levels
- Automatic Vehicle Location System (AVLS): to track buses on service lines and provide alerts like route deviation, trip adherence, skipped stops, etc.

- Incidence Management system (IMS): helps streamline incidence management in cases like vehicle breakdown, accident, etc.
- Depot Management System (DMS): Manages all bus/ driver information; facilitating schedule management and allocations of the same
- PIS Management System: This is the central module, which manages all data from buses' GPS units and pushes it to Passenger Information System (PIS)/ mobile app/ website etc.
- Command and Control Centre (CCC): provides overall management, ensure smooth ITMS functions by coordinating with relevant stakeholders – the CCC is presently operated by 10 designated/ trained personnel
- Data Centre: ITMS has its own data centre comprising of switches, servers and storage systems, which is specifically designed for the ITMS project

8. Benefits:

Under the project, the Command & Control Centre along with Data Centre has been established and four Bus Depots have started utilizing DMS (Depot Management System). The project covers 30 operational routes for bus services in the city. The emerging benefits of the project are:

- At present, 115 BRTS buses and 200 City buses are being tracked using
- ITMS, where ridership of – 85,000 per day (for BRTS) & 45,000 per day (for other City Bus service) has been recorded
- 154 BRTS Stations and more than 400 City Bus Stops have been integrated with ITMS
- BRTS & City Buses are now available with an average frequency of 8-10 minutes
- There is increased information about public transit covering BRT buses and City buses, to citizens with help of mobile app and public website
- Citizen will get real time information of BRTS/City Buses
- Tracking of SMC vehicles working on the field
- Reduced travel time and operation cost of buses
- Reduced Traffic problem in future
- Operation of Buses monitored accurately. Information regarding route of Bus easily made available for people in general.

- Improved public transport connectivity across the city – increased number of buses on BRTS as well as City Bus routes, in accordance with demand analysis through ITMS
- Increased ridership and increased usage of public transport
- Reduction of travel time owing to dedicated BRT corridors managed through ITMS
- 44Success Stories from Mission Cities - SCM
- Reduction of local travel/ commute cost for citizens and visitors
- Increased security and traffic enforcement
- Improved incident management

9. Implementation Plan:

- **Current Status:**

- ITMS fitments installed on 154 BRTS stations, 113 BRTS buses, 275 City Buses.
- 154 Stations are showing ETA (Estimated Time of Arrival), 113 BRTS buses and 243 City Buses are getting tracked in Control centre.
- Control Centre is setup and operational at SMAC Centre, Muglisara, SMC Main office.
- Software Modules like PIS Management system, DMS, EMS, IMS are implemented & in the process of getting operationalized.
- System generated reports for both BRTS & city buses are getting generated for all Operators.
- Installation of GPS apart from 535 SMC Vehicles, 355 installations made and others are in progress.
- Toll free No. 18002330233 activated and in use.

- **Completion Date:**

- 20/03/2018

10.Photos:

Site photo:



Passenger Information System



ITMS Control Room



GPS System