

Tracking Systems:

Consultancy on ITMS (Intelligent Traffic Management System) :

The team has experience in installing, operating and maintaining India's longest working ITMS system in Ahmedabad. Some of the features of the system are described below:

ITMS is comprising of following distinct application areas:

- Automated Fare Collection System
- GPS based Fleet Monitoring System
- Vehicle Scheduling & Dispatch System
- Passenger Information System
- Financial Management System / Central Clearing House System
- Depot Management System

● Automated Fare Collection System

The Automated Fare Collection system is driven by a Central Computing environment which enables the devices and applications to exchange information based on the operational requirements. The components that are used to perform various functions are described below:

- Station ticket terminal
- Internet based ticketing
- Dealer/ Agent based ticket sale system
- Smart Card/ RFID Single Journey Coins
- Bus Card Validator
- Bulk Initialization Machine
- Card Personalization Device
- Flap Barrier

Station ticket terminal, Bus Card Validator, Access Control System (Flap Entry and Exit Barriers) act as the primary sources for fare collection. Smart Cards / Tokens facilitate users to pay for the travel using above devices and the smart cards/Tokens are made available for dispensing after the cards have been initialized by BIM and CPD.

The fare collection and authentication devices as mentioned above communicates with Central Computing environment and Bus Terminal Management System based on the operational requirements.

Smart card system is envisaged to have following characteristics:

- One time issue multiple usage
- Recharge remotely through following modes:
- Internet
- Mobile Phone
- Dealer Recharge
- At ticket counters

● GPS Based Fleet Monitoring System

The Automated Vehicle Locator System (AVLS) primarily use GPS devices mounted on the vehicle as primary source of data for tracking purposes. The AVLS also facilitates CCS to enable public information system to act as a source of information to be displayed on the public display screens and voice based information. The AVLS essentially comprise of following components:

- Bus Mounted GPS based driver console
- Onboard Passenger Information System
- Off-board Passenger Information System
- GIS Based Fleet Monitoring and Control System

The AVLS system enables operations team to monitor vehicle movement in real-time and synthesize the AVL field data to deliver the same on the public information system devices installed on Bus stations, Terminals, Buses, customer portal.

- Vehicle Scheduling and Dispatch System

Scheduling/dispatch software used to aid designing and modifying transit routes. This real-time information allows the dispatcher to address any problems with service or to respond to any emergency.

- Passenger Information System

The passenger information system consists of following units which offers customers schedule and real-time information regarding operations of Bus Service and extend ease of information Delivery related to travel:

- Display Screen on Bus Stations
- Display Screen on Bus
- Voice announcement system on Bus
- Web Portal for Bus Schedule & ETA

The display systems at bus stations and bus terminals display real-time information of the route and estimated time of arrival using mobile data connection with the central vehicle monitoring system.

The bus display units on the front wind shield and the back window display bus route information and the internal display displays real-time information of the stations bus is going to pass through preferably by showing real-time position of the bus on a transit line diagram.

A call centre maintained for passengers to call into for information on bus routes and schedules as well as for any issues on fare.

- Financial Management System – Central Clearing House

The financial management system comprises of enterprise accounting system & finance management which takes care of all accounting functions including fare accounting, disbursement to operations, profit and loss calculations, asset management etc.

- Depot Management System

Integrated Depot Management System

This module enables to automate depot Operations, which include workshop management, fuel management, traffic management, vehicle management, and so on. The module also covers administrative activities and stores requirement.

Personal Information System

This module covers the various processes related to Payroll and HR activities of Personnel working at Central Units, Divisions, Depots and Workshops. It offers centralized system for better control as well as employee satisfaction.

Top Edge Consulting is capable of providing consultancy for successful implementation of ITMS right from conceptualization to implementation of the project.