



INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent system for the Bus Rapid Transit system (BRTS) of Ahmedabad (India)

The project

- FMS on-board equipment for 139 buses:
 - On-board location and communications unit
 - Driver console
- Passenger information system:
 - 127 information displays at stations
 - Information displays and public address communication on buses
- Ticketing system at BRTS stations:
 - 150 stations equipped with validators for access control
 - Ticket offices (POS) for the sale of tickets and transport cards
- FMS and ticketing control center

marketing.transport@gmv.com
gmv.com



«With the launch of the Smart Card System in Ahmedabad BRTS, we are the first in India to introduce a Smart Card System in bus services»

Shri Harsadrai J. Solanki, General Manager,
Ahmedabad Jangmarg Limited



Initial situation and objectives

The Ahmedabad BRTS is a pioneering project in India, created by the Ahmedabad Janmarg Limited (AJL) - an instrumental company of the Ahmedabad Municipal Corporation -, the Ahmedabad Urban Development Authority and the Gujarat Government with the aim of reducing congestion traffic, pollution and accident rates. Ahmedabad is the fifth city in India and the third growing city in the world. BRTS aims to be a fast and effective means of transport and therefore needs the effective support of a real-time passenger information system and a fast and easy means of payment and access control.



Implementation of an intelligent system for Bus Rapid Transit, with a complete comprehensive management solution

GMV, in collaboration with its local partner Vayam Technologies, has designed and installed this project for the mass bus transportation system (BRTS), which not only provides the technological equipment needed for fleet control and ticketing, operation for 6 years of the system, including incident management, human resources, etc..

«The system as a whole has been accepted and appreciated by the citizens of Ahmedabad, with the daily number of passengers increasing day by day»

Shri Harsadrai J. Solanki, General Manager, Ahmedabad Janmarg Limited

Solution

The project includes the implementation of the **Fleet Management System (FMS)**, Ticket Management and the Passenger Information System. The comprehensive solution provided by GMV also includes other project support systems, such as human resource management, financial management, call center, website and incident management, as well as the 6-year operation of a system in which they work 400 people that handle 150,000 daily passengers.

All stops are provided with a system for the presentation of information to passengers such as electronic signage, general outline of the routes and details of the same. The real-time information systems, both in the stations and on board, are

managed by the **FMS** tool, which, in addition to the on-board location and communications equipment (OBU), provides a control center that performs Real-Time Monitoring functions of the information generated in the OBUs that help the controller in making traffic regulation decisions for the BRT service and provides functions that monitor the operation of the system itself in order to facilitate its maintenance.

The ticketing system implemented is characterized by being a flexible and open architecture system that allows interoperability with general-purpose software and thus facilitates the export of data files to other applications. The system is deployed in all bus stations and is capable of accommodating future expansion needs and new applications, guaranteeing high availability.

Payment collection is based on a system carried out prior to accessing the boarding area using turnstiles. As physical means of payment, the existing system is based on the use of tokens and smart cards, both contactless options, which offer definite advantages to provide various forms of discounted travel, even for the single-trip fare, especially when associated with transfers.

Results

The GMV project improves the management of public transport, providing the technological infrastructure required for the monitoring, regulation and control of the fleet, allowing the issuance and validation of transport tickets as well as the management of historical data.

The Smart card system has helped travelers by increasing speed and comfort, to the point of distributing nearly 15,000 cards in the first 15 days of the system's launch.

The Ahmedabad BRTS has received numerous national and international recognitions and awards and has become a benchmark among BRTS globally.

Thanks to the systems installed by GMV, the Ahmedabad BRTS was awarded in December 2011 as "Best Intelligent Transport System" by the Indian Minister of Urban Transport.

