Success Story of SMART CITIES
A Smart City has sufficient and usable public open spaces that promotes exercise and outdoor recreation for all age groups. The Sabarmati Riverfront is a step in this direction. An urban planning marvel constructed on the banks of Sabarmati and flowing through the middle of Ahmedabad, it stretches for 10 kms on either side of the river.
CYCLE BY THE RIVER

Recently SRFDCL introduced cycle rental services at the Riverfront. From a modest beginning of 10 cycles made available through 1 station, the service has received an overwhelming response and has now expanded to 200 cycles available at 3 stations.

A Smart City has sufficient and usable public open spaces that promote exercise and outdoor recreation for all age groups. Public open spaces of a range of sizes are dispersed throughout the City so all citizens can have access.

The Sabarmati Riverfront is a step in this direction. An urban planning marvel constructed on the banks of Sabarmati and flowing through the middle of Ahmedabad, it stretches for 10 kms on either side of the river.

Besides providing safe and ample space for pedestrians to walk, the riverfront boasts of various attractions such as flower parks, boating, segway, zipline, etc.
Recently SRFDCL introduced cycle rental services at the riverfront.

From a modest beginning of 10 cycles made available through 1 station, the service has received an overwhelming response and has now expanded to 200 cycles available at 3 stations.

The stations are situated under Sardar Bridge (NID), Subhash Bridge (Shahibaug) and Gandhi Bridge (Usmanpura). The service which is currently operated by a private operator has registered more than 1,00,000 trips in a short span of 6 months and growing.

Starting at just Rs. 20/- (30 mins), this is one of the most affordable recreational exercise cum activity for the visitors thronging the riverfront and is growing in popularity among people of all ages and demographics.
ENERGY EFFICIENT AHMEDABAD SMART CITY

In order to address challenges related to electricity and power generation, Smart City Ahmedabad has already pioneered and started implementing energy efficiency programs to address energy conservation issues with mission for continuous upgradation of processes with energy efficient and eco-friendly technology to minimize the energy cost without affecting output in services provided to the citizens. Ahmedabad city’s energy efficiency programs includes pro-active functions to identify and address energy conversation opportunities.

Rapid urbanization and economic development are leading to subsequent rise in energy demand across the country and thereby leading to enhanced Green House Gas (GHG) emissions via extensive use of the non-renewable sources of energy. Local governments and the electricity utilities in India are finding it difficult to cope with this rapid rise in demand using conventional grids and power/energy generation sources and as a result most of the cities and towns are facing energy/electricity shortages.

In order to address these challenges, Smart City Ahmedabad has already pioneered and started implementing energy efficiency programs to address energy conservation issues with mission for continuous upgradation of processes with energy efficient and eco-friendly technology to minimize the energy cost without affecting output in services provided to the citizens. Ahmedabad city’s energy efficiency programs includes pro-active functions to identify and address energy conversation opportunities such as:
ENERGY EFFICIENT AHMEDABAD SMART CITY

- Focusing on renewable power generation using solar power, wind power, etc.
- Suggestions of Energy Efficient equipment and innovative technology in public utilities like Water Treatment Plants (WTP), Sewage Treatment Plants (STP), Water distribution Stations (WDS) and Sewage Pumping Stations (SPS), etc. which contributes to the major portion of the energy usage.
- Scrutiny and monitoring of energy bills and energy usage pattern.
- To conduct audit and identify energy conservation opportunities.
  Promoting and propagating energy awareness among citizens.

Electricity Units Saved Per Year

- 3.10 CR Units
- 2.25 CR Units

Savings in Rupees Per Year

- Rs. 18.60 Crore
- Rs. 14 Crore

Total Savings in Rupees 32.6 Crore

Solar Roof Top System

- 540 KW Installed in various office buildings
- 4.20 Lakh Electricity Units Generated
- Savings of Rs. 57.80 lakh since commissioning

Smart City Ahmedabad has already implemented 540 KW Solar Roof Top System on various office buildings. The extent of this intervention has led to the generation of 4.20 Lakh Electricity Units per year and yielded savings of Rs. 57.80 lakhs since commissioning. City has recently commissioned 100 KW Solar Roof Top System at various office building of AMC which will generate 1.20 Lakhs Electricity Units per year and will be connected to the grid via Net Metering Mechanism.
ENERGY EFFICIENT AHMEDABAD SMART CITY

Smart City Ahmedabad has implemented an environment friendly system to generate electricity using wind power and has specific focus on using renewable sources as an alternate energy source to cope up with ever rising city’s electricity demand.

Smart City Ahmedabad has successfully commissioned 4.2 MW Wind Power Plant at Nakhatrana in Kutch (Gujarat). This wind power plant can generate and add upto 100 Lakh Electricity Units per year to complement the city electricity requirement and out of which 62 Lakh Units of Electricity has already been generated yielding a savings of Rs. 4 Crore since commissioning. City has also started paving its way to implement another 4.2 MW Wind Power Plant as a measure to increase its energy generation via renewable sources.
Ahmedabad City has been very prominent in replacing old conventional sodium vapor lamps with energy efficient LEDs. Ahmedabad City has installed 40,000 LED fitting to lit up 1000 Km roads yielding a saving of 1.55 Crore Electricity Units per year which amount to savings of Rs. 9 Crore per year. Notably in that, City has become a nationwide trendsetter in replacing the Conventional 250 W light by 100 W LED which is highest efficient luminary in the country. 5000 such LED fittings are installed across the city yielding a saving of 36 Lakh Electricity Units per year which amounts to Rs. 2.15 Crore.

Further as an extension of the Street Lighting initiative, City has planned for replacement of 1,08,500 street lights alongside 2500 KM roads yielding a saving of 1.55 Crore Electricity Units per year which amounts to Rs. 9 Crore. This energy efficient initiatives will help decrease the CO2 levels by 1600 tonnes.
SMART TRANSPORTATION FOR AHMEDABAD

Ahmedabad Smart City has initiated an Intelligent Transit Management System to ease public transit, provide real time tracking, plan trips and journeys across 230 BRT Buses, 158 BRT Stations, 850 City Buses and 11 Major City Bus Stations.

Intelligent Transit Management System (ITMS) is the application aimed to enable gathering of transit data/intelligence from the real-time operations and providing timely feedback to traffic managers and commuters. It provides tools for real time monitoring of public transport vehicles and enhances commuter satisfaction, reliability and punctuality of bus operations.

The major components are:

- Automated Fare Collection System (AFCS)
- GPS based Automatic vehicle Locating system (AVLS)
- Passenger Information System
- Vehicle Scheduling & Dispatch System
- Depot Management System
- Incident Management System
- CCTV based Security and Surveillance System
- Control Centre and Call Centre operation
- Business Intelligence Software System
- Enterprise Management System
- Parking Management System
- Web Portal for Passengers
- Mobile App for Citizens
- Operation and Maintenance for 7 years

Automatic fare collection system (ITMS-AFCS)

Ahmedabad Smart City has initiated an Automated Fare Collection System as an integral part of ITMS to facilitate automated ticketing for transit system across 230 BRT Buses, 158 BRT Stations, 850 City Buses and 11 Major City Bus Stations.

Automated Fare Collection System (AFCS) aims to automate its fare collection mechanism and technology within the transport ecosystem (BRTS & AMTS) to enhance operational capability, citizen's satisfaction, removing leakages and ease of operations. Further fare collection mechanism of the transport ecosystem is proposed to be integrated with the AMC's CCPS system. Thus a single card is proposed for transport, availing other city wide services like paying utility bills, parking, taxes, etc.
SMART TRANSPORTATION FOR AHMEDABAD

Smart Transportation for Smarter Ahmedabad
SMART CITY AHMEDABAD
SMART TRANSPORTATION FOR AHMEDABAD

Intelligent Transit Management System and Automatic Fare Collection System

Smart City Ahmedabad has set out its vision to “Provide efficient, affordable, equitable and customized governance for citizens of Ahmedabad” and the project conceived under the smart city program is a reflection of the vision. The Intelligent Transit Management System (iTMS) along with Automatic Fare Collection System (AFCS) is envisaged to offer seamless transit facilities to citizens such as journey planning, real-time bus arrival information and payments across public transit systems (Bus Rapid Transit System-BRT, City buses-AMTS) of the city.

VISION

To Provide efficient, affordable, equitable and customized governance for citizens of Ahmedabad.
HOW IT WORKS?

Integrated Transit Management System (ITMS) enables gathering of transit data and intelligence in order to provide timely feedback to traffic managers with real-time monitoring of fleet and hence enhances commuter satisfaction, reliability and punctuality of bus operations. Automated Fare Collection System (AFCS) automates its fare collection mechanism and removes revenue leakages and ease operations.

Further Automatic fare collection mechanism (AFCS) of the transport ecosystem is integrated with city-wide common card payment system (CCPS) to enable cashless travel using a single card.

A single city-wide common card can be used for mobility systems, municipal services, and any other government transactions within the city.
OBJECTIVES

A seamless experience across the mobility systems along with adequate planning and scheduling aims to decongest public transport and reduce the end to end transit times for citizens – thereby allowing the city to use the existing transit capacities to the maximum extent possible rather than investing in new urban mobility infrastructure.

The city has developed these system on bedrock of innovation – by utilizing technologies such as data analytic (to schedule buses and display estimated time of arrival), internet of things (to gather field level data) and open APIs (to integrate with city wide public transit systems).
SMART TRANSPORTATION FOR AHMEDABAD

BENEFITS OF THE ITMS AND AFCS PROJECT

1. Pre-trip information: Passengers get information about the transportation system and traffic status before they begin their trip so that they are capable of making more informed decisions regarding their time of departure, mode of use and route to take to their destinations.

2. On-route information: Passengers are provided travel related information on route after they start their trips via in-bus announcements and display boards.

3. Real time calculation of bus arrival time based on ambient traffic conditions in the city.

4. Increasing public transport accessibility to the citizens via multi-modal transport system.

5. In-bus and Bus station surveillance system to monitor the buses and enhancing citizen safety.

6. Real time driver behavior analysis for enhancing on road safety.

7. Unified payment mechanism through city wide common card.

8. Bus Planning: ITMS-AECS system collects real time data from the bus system, processes it into usable information and uses it to determine the optimum schedule of the vehicles. This helps in planning of the vehicle according to the traffic flow patterns and peak-non peak demand of the travelers.

9. Incident Management: Advanced sensors, data processors and communication technologies used in the ITMS-AECS project helps to identify incidents quickly and accurately so as to take up actionable responses by the control center immediately with shorter response time, which minimizes the effects of these incidents.

For more details visit ahmedabadcity.gov.in
COMMON CARD PAYMENT SYSTEM (CCPS)

Ahmedabad Smart City has initiated implementing Open Loop card based Common City Payment System (CCPS) with an aim to offer citizens a city wide payment platform which would enable them to pay for any services via single payment media. The project includes EMV based pre-paid card issued by a Financial Institution (Bank) and implemented to avail different services offered by Ahmedabad Municipal Corporations and other merchants. The major acceptance points of the city wide 'Janmitra' card includes:

- Transit Ticketing for BRTS and City Buses
- R recreational Services at Kankaria and Sabarmati Riverfront
- Parking Facilities
- Municipal Payments for professional tax and property tax

- Utility Payments
- Retail /Merchants etc.
- Provision for expansion to other mode of transport such as Auto, Taxi etc.

The major components are:

- Card Management
- Card personalization
- Supply of POS based acquiring /recharging Terminals
- Payment Gateway and Mobile App interfaces

- Integration with Transit AFCS system
- Establishing Marketing and Channels
- Transaction Settlement and Reconciliation
- Cash Collection
- Customer support through call center