

# Urban Service Monitoring System



( Completed )

## Lead Institution:

TARU Leading Edge Pvt. Ltd.

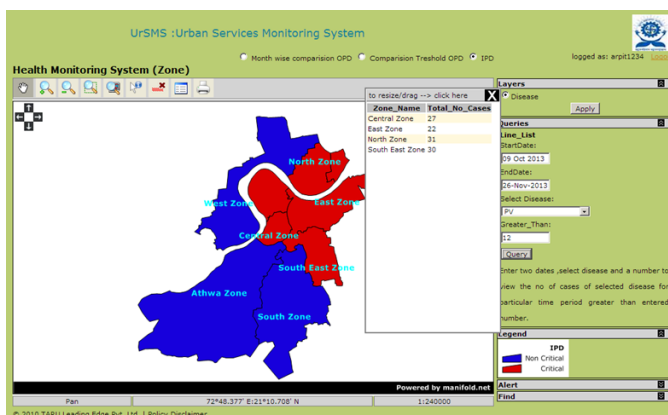
## Partner Institutions:

Surat Municipal Corporation

## Project Summary:

Surat is India's 12th largest city with a population of 4.4 million (2011 Census). The city has been growing fast: it has almost doubled in size between 2001 and 2011. The high density, the lack of safe water supply and its location on a river side, combined with high temperatures and humidity, changing rainfall patterns, rapid urban growth and industrial development make Surat highly conducive to vector-borne and water-borne diseases. Real time structured data collection from different Health institutions including Urban Health Centres (UHC's), Government and Private Hospitals, Laboratories and private practitioners and its efficient analysis were the key challenges faced by Health Department, Surat Municipal Corporation.

In order to overcome the above challenge Short Message Service (SMS) enabled integrated Urban Services Monitoring System (UrSMS) was conceptualized and developed for the Surat Municipal Corporation. This system brings resilience to disease monitoring framework by providing timely information about quality of water supplied from distribution stations and occurrence including outbreak of diseases within Surat.



Registration Date: 26/11/2013 4:20:34 PM  
Patient No: 48  
IDSP WeekNo: 48

Age In: [Select AgeIn] Age: [ ]  
Gender: [Select Gender] Religion: [Select Religion]  
Zone: [Select Zone] Area: [Select Area] Ward: [ ]  
Sub Ward: [ ] Society Name: [ ] Zip: [ ]  
City: Surat  
Admit Date: [ ]  
Disease: [Select Disease] Test Done: [ ] Test Result: [ ]  
Date Of Onset: [ ] Out Come: [Select Outcome] Is Cause Of Death: [No]

## Objective:

The objective was to develop an integrated system for Surat Municipal Corporation to aid them in monitoring key life line services. The sub objective was to develop tools that could facilitate the urban and health managers in visualizing the information spatially and auto-generating customised reports.

## Project Components:

The Urban Service Monitoring System (UrSMS) is designed on a robust platform to cater to the customized need of SMC. The system has two main interfaces: 1) Mobile interface for sending and receiving structured data via SMS and 2) PC interface with internet Mapping Service for visualising the information as charts, report and maps. Following are the key components;

- Mobile application data collection
- Web based mapping interface for accessing spatial information.
- Web based interface for data collection and information visualization as maps, reports and charts
- Server application to store and manage data. The application also converts SMS information to structured data and trigger automated SMS to select stakeholders

## Implementing Approach:

The implementation of the system was done in phases

- Phase 1: Stakeholder interaction and documentation of the functioning of existing system
- Phase 2: Identification of problems, bottlenecks and future system requirements. This was done through key informants interview and stakeholder workshops
- Phase 3: Securing assurance from the municipal corporation for system ownership beyond project period and permission to demonstrate in Surat city.
- Phase 4: Concept development, system design and prototype development
- Phase 5: System development and testing within select areas/ departments in city
- Phase 6: Capacity building and awareness
- Phase 7: Implementation across the city
- Phase 8: Support and systemic improvements based on user requirements. This process also included further developments which were requested by the municipality

## Key Achievements:

- The near real-time data collection and analysis is currently helping the health department predict disease outbreaks based on number / distribution of cases across the city and enables them take prompt action to prevent further spreading.
- Better visualisation of data and integration with ongoing government programs/schemes.
- Significantly reduce the number of patients affected by malaria, dengue and leptospirosis.

## Organisation Details:

**TARU Leading Edge Pvt. Ltd** is a private research consultancy organization with an expertise is primarily in six core sectors: Disaster Risk Management & Climate Change, Governance & Institutions, Natural Resource Management, Social Development, Urban Development, and Water, Sanitation & Hygiene. Within these sectors we undertake policy analysis, strategy development, action research, programme design, project management support, assessments and evaluations.

**ACCCRN** was launched in 2008 and is funded by The Rockefeller Foundation as part of their 9-year initiative aimed at building Climate Change Resilience. Climate change resilience is the capacity of an individual, community, or institution to dynamically and effectively respond to shifting climate impact circumstances while continuing to function at an acceptable level. Simply, it is the ability to survive, recover from, and even thrive in changing climatic conditions. ACCCRN works at the nexus of climate change, vulnerable and poor communities, and urbanization.

**Surat Municipal Corporation** is a local self government which came into being under the provisions of the Bombay Provincial Municipal Act, 1949 carries out the obligatory & discretionary functions.

