Areas of Application

The possible areas of application for UrSMS may be as under:

- Urban surveys including quality of life surveys.
- Monitoring activities like Service Level Benchmarking (SLB) wherein different components of SLB can be monitored using this system.
- Early warning system for DM where this application can trigger SMSs to vulnerable populations to forewarn about an impending disaster like a flood.
- Post-disaster co ordination to facilitate propoer synergies between relief and rehabilitation activities of various agencies.
- Health Monitoring where vaccination schedules can be triggered to the general public via SMSs and this system can also be used to monitor outbreak and spread of diseases within a city or segment of population.
- Complaints redressal monitoring system for urban local bodies where the general public can make their complaints regarding basic municipal services like water supply, sewerage, solid waste management, etc.
- Energy Audit where data can be transferred directly to the decision makers in real time without errors to inform about levels of energy consumption and transmission.
- Public addressal system where in general public can be informed about the functioning of the urban local bodies and city councilors can use it to know the opinion of common citizens regarding any issue.

About Us

TARU provides informed, research-based and effective solutions on project planning, design, appraisal, M&E and impact assessments accross urban planning, development, housing and services, infrastructure, disaster management sectors. It specializes in problem solving and risk management in the public-private-community interface, with a strong political economy, public systems and community-based perspective.

TARU has partnered/worked with a cross-section of agencies and stakeholders including governments; technical, scientific and research institutions; multi-lateral and bi-lateral agencies; sector-specific organizations and communities. Our services have taken the form of strategic analysis of constituency needs to help crystallize knowledge, define approaches, build capacities and promote sustainable development. In brief, make a difference with doing things differently.

TARU's work spawns five core sectors with inherent potential to catalyze efforts related to:

- **Urban Development**, where amidst unprepared institutions, rapid growth, stretched infrastructure and proliferating low income settlements, we work towards ensuring pro-poor governance and planning in the firm belief that a vibrant, viable and resilient city is the one that responds to existing and emerging needs of its denizen

- **Rural Water Supply and Sanitation (RWSS)**, a rapidly evolving Sector where we are playing a key role in shaping and refining the Sector's unfolding reform agenda and facilitating its institutionalization

- **Disaster Management and Climate Change**, where our cutting edge work is on to assess the impacts of climate variability, hazards, mitigation and reconstruction options in the most vulnerable locations.

- **Natural Resource Management (NRM) and Rural Livelihood**, where our work concentrates on examining, designing and supporting sustainable livelihood opportunities marked by unevenly distributed, accessed and severely contested resources for creating and actualizing sustainable livelihood options

- **Energy**, where our rare and unique engagement focuses on three issues commonly identified as among the most challenging to State-level reform-stakeholder communication, agricultural power subsidy reform and power theft.

Urban Service Monitoring System

TARU

TARU Leading Edge

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Background

Urbanization in India is increasing at a rapid pace. The growth during past two decades has been mostly concentrated in million plus cities. The population of thirty five million plus cities account for nearly one third of the urban population. This urban growth is adding pressure on resources and infrastructure, which is mostly old and was designed for much lower population. This resources/ infrastructure shortages are having impact on people's life and lifestyles. Keeping the growth perspective in view, one can comprehend the level of basic municipal services, people's life, lifestyle and related issues such as health coming under tremendous pressure.

In order to address burgeoning urban issues, private and public organizations and institutions are taking several initiatives (service level benchmarking, e-governance, m-governance, urban quality of life survey, urban risk analysis, vulnerability survey, spatial information management etc). These initiatives are targeted towards bringing in more efficiency in delivery of the services and the larger accountability within the system. The focus has shifted towards improving urban governance, management of the services and meeting the objectives of economic development. Reform linked investments are being discussed based on level of urbanization. Most of these initiatives require systematic ground based surveys either to understand the current/future needs or for monitoring the success of the action implemented.

In many developing countries, the monitoring activities still follow paper based approach. Such approaches may lead to errors due to omission/ commission. Further this process is time intensive causing lags in processes and outcomes.

One of the ways to overcome the above increasing efficiency is through the use of technology. But unfortunately there still exist a digital divide amongst the urban society. For e.g., internet is being used by only about 5.3% of the India's 1.25 billion population. On the other hand, current mobile applications are not designed for people at large. Applications designed for high end mobiles do cater to only a fraction of the Indian population and limitations of GRPS & 3G makes it difficult to implement within an institutional setting or scale it to the masses.

To overcome the above stated problems, an integrated system of data collection based on the premise of e-governance and m-governance has to be forged which would act as a seamless entity in ensuring structured data collection to catalyze informed decisions. Having understood this need, TARU has developed an innovative **Ur**ban **S**ervice **M**onitoring **S**ystem (**UrSMS**) to solve the tedious task of monitoring and public participation.

System Description

The **Ur**ban **S**ervice **M**onitoring **S**ystem (**UrSMS**) is designed on an efficient platform. The system has two main interfaces: 1) The mobile interface for sending and receiving structured data via SMS and 2) PC interface with Internet Mapping Service for visualizing the information as charts, reports and maps.

The mobile interface is designed to suit the needs of structured data collection. The PC interface is designed for editing and visualizing the data in an innovative manner depending upon the application. Within this interface the users will have the option to select the type, the time duration and the content of their reports and maps. In addition to this the PC and the mobile interface can both be used for sending mass alerts to all concerned users in case of need or emergency. The schema of the system is provided below.

Server

User

Maintenance Staff

Decision Maker

Internet

Maps & Reports
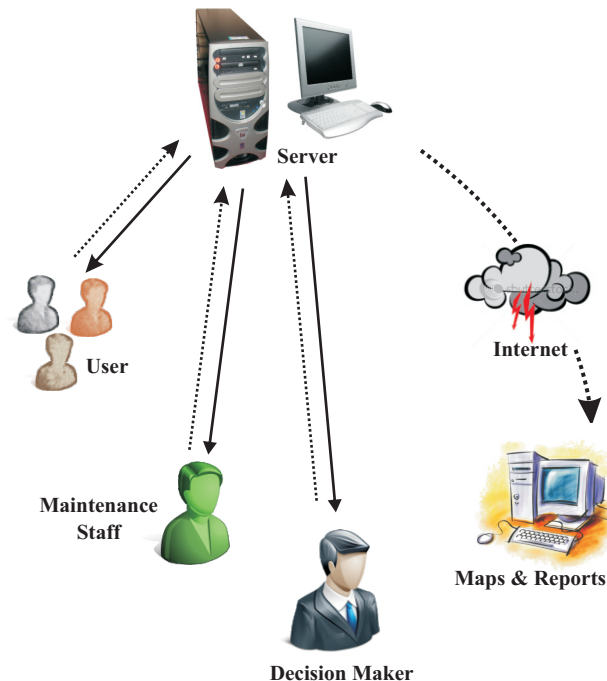
Advantages

➤ Collection of structured data using mobile phones is made possible.
➤ Application can be loaded onto mobile phones ranging from low cost to high end
➤ GPRS or 3G is not required to operate
➤ Easily deployable to most areas to suit any form of data collection
➤ Provides user friendly and customizable interface to suit specific needs.
➤ Provides timely auto generated updates / summary statistics to decision makers.
➤ Customized alerts could be sent in case of need/emergency
➤ Auto generates detailed reports (daily, weekly, monthly, etc)
➤ Provides integrated GIS based outputs
➤ Inbuilt security
➤ Enhanced infrastructure survivability.
➤ Steep learning curve (time and money)
➤ Innovative use of the available technology thereby reducing the initial infrastructure cost.
➤ Less investment in implementation and operations