Smart Solutions in Coimbatore

Introduction:

Globally, the need to adopt a smart approach to urban development is recognised. Such an approach envisions the creation of liveable, sustainable and prosperous societies. In line with this, and against the backdrop of India's growing trend towards urbanization, the Government of India has substantially increased its focus on the urban sector/ cities. In this context, the Honourable Prime Minister of India launched one of the important national flagship missions, the Smart Cities Mission (SCM) on 25 June 2015. The Mission will contribute to overall impetus of the government to transform cities into engines of economic growth. The broad objectives of the Mission are: (a) provision of core infrastructure and decent quality of life to residents, (b) application of Smart Solutions, and (c) ensuring clean and sustainable environment.

Background:

Coimbatore, with a population of 1,051,721 (2011 census) and a decadal growth rate of around 20 percent, is a rapidly growing city in Tamil Nadu. It is a hub of economic activity and is famous for its textile manufacturing also known as Manchester of South India. Further, Coimbatore Corporation ranks first among the 11 urban local bodies in the State in implementing projects taken up under the Central Government-funded Smart Cities Mission programme. In all, the civic body had taken up 49 projects worth ₹ 1,014.8 crore. A significant focus of the Coimbatore Corporation has been on technology-driven initiatives towards improving basic services and quality of life of citizens.

Some of the initiatives are:(i) 24x7 water supply, advanced leak detection and smart metering; (ii) sewerage/ septage; (iii) 24x7 electricity and broadband access; (iv) public transport/ seamless mobility, 'mass transit', NMT and targeting 'zero accident fatalities'; (v) extension of 'Project Shunya' (decentralized composting) in all zones including bio-methanation and composting facilities for local waste treatment, creating Waste-to-Energy plant; (vi) sustainable environment initiatives (vii) tagging sanitation assets to Property Tax database for traceability/sustainable O&M; (viii) public safety and (ix) Transparent ICT-led governance/citizen engagement. However, the above initiatives are significantly challenging in scale and complexity to accomplish, for being a city with a population of more than a million people.

Details of the Intervention:

With the aim of effective implementation of the initiatives, Coimbatore has decided to adopted ICT/ technology based Smart Solutions for many of its initiatives. Towards this, an inventory of Smart Solutions and technology options was prepared keeping in mind the major interventions/ priorities for the city. These Smart Solutions and technology were then suitably assigned to the major interventions for the city.

The Smart Solutions include: (a) technology solutions for improvement of water supply, SWM, sanitation etc.; (b) Intelligent Transport System (ITS); (c) online ambient air quality monitoring; (d) energy efficient street lighting (e) GIS Mapping and Spatial Information Centre; (f) integrated CCTV surveillance; (g) web-enabled e-governance application; and (h) mobile-governance and citizen engagement platform.

The emerging benefits of Coimbatore's approach of adopted ICT/ technology based Smart Solutions shall be realized in the following areas:

- Water supply – SCADA, 'smart metering', advanced leak detection, online quality monitoring
- Solid Waste Management – RFID tracking of vehicles, Bio-methanation, Wasteto-energy, decentralized waste processing
- Traffic Management System – covering dynamic signal synchronisation, Automatic Number Plate Recognition (ANPR) cameras, license plate recognition camera, red light violation detection system and radar based speeding detectors built on the surveillance camera network
- Air quality – monitoring equipment at select locations to capture information on critical air quality parameters
- Street lighting – energy efficient LED street lighting in all roads and public locations
- Surveillance – surveillance network consisting of PTZ cameras, fixed box cameras, mobile transport cameras, at different locations, to capture high resolution real-time images with facilities for wireless and wire connectivity download
- Scalable Data Centres, as part of Command and Control Centre, with an application portfolio covering Video Management System, Recording System, Analytics System, GIS and customized dashboards for Coimbatore City Municipal Corporation and various line departments including police/ Traffic Police
- Seamless IT connectivity built on wireless and fibre backbone to relay information from Smart Solution related equipment to Data centres
- Universal access to essential services for Citizen through web/ mobile platform

Impact:

In medium to long run, such a Smart Solution based approach is likely to improve governance/ administration/ monitoring of civic services thereby ensuring good quality service delivery/ convenience to citizens. The use of ICT/ technology-based Smart solution are replicable in the Rurban context.

Source: Ministry of Urban Development. (2017). Success Stories from Mission Cities. Government of India