

Achieving Resilience SMARTly

In conversation with **Mr. G. Anand Rao**, Manager (Urban Development), Greater Visakhapatnam Smart City Corporation Limited

ndia's ambitious Smart City Mission aims to develop 100 citizen-friendly and self-sustainable urban settlements meeting the aspirations of citizens. It hopes to develop the institutional, physical, social, and economic infrastructure for a resilient India.

Visakhapatnam is one among 100 Smart Cities selected by Gol under Phase-I. The city's Special Purpose Vehicle (SPV) carries out Smart City Project proposals, on a PAN City and Area-Based Development (ABD) basis.

What all comes under the purview of the SPV - Greater Visakhapatnam Smart City Corporation Limited (GVSCCL)?

We created Greater Visakhapatnam Smart City Corporation Limited (GVSCCL) to implement projects related to clean environment, basic infrastructure, and the application of smart technology. We want Vishakapatnam to become a role model for the region, and catalyze the creation of similar Smart Cities.

GVSCCL is operationalizing fifty-two city projects, with Smart City grants amounting to nearly Rs.1000.00 Crore. We have earmarked 1600 acres for projects related to various sectors, including heritage conservation, water supply and sewerage, parks and open spaces, solar, smart systems integration, roads and parking, schools, and citizen service centres. They will follow Area-Based Development strategies.

We hope to replicate these projects in city areas

outside the ABD limits, along the Smart City Mission guidelines.

What are the initiatives/steps Greater Vishakapatnam Municipal Corporation (GVMC) is taking in building a resilient New India?

GVMC believes in a bottom-up model of resilience; we try to involve citizens in all our resilience-building initiatives.

Our City Operations Centre brings all citizen complaints on a single platform. From here, it is tracked, analysed, and escalated to different departments. Similarly, GVMC uses platforms like Facebook, Twitter, and Whatsapp to log complaints. Our grievance platform Spandana and toll free number put citizens at a fingertip's distance from authorities. We address grievances on a day-to-day basis, and ensure that solutions fall within Service-Level Agreements. This takes care of daily maintenance to ensure systems work when they have to.

GVMC tracks disastrous incidents within the city, and responds promptly. The city is equipped with Smart Poles, containing smart sensors and a Public Address (PA) system. Smart sensors track weather conditions and pollution levels across the city, while PA systems disseminate precautionary information during a disaster. Smart Poles are also equipped with emergency response systems; the City Operations Centre attends to emergencies.

Esri India is a staunch believer in New and Resilient India. How do you feel GIS technology and Esri India are helping further this vision?

GIS is transforming visual interpretation. Providing us with centralized control over our assets, GIS helps track our infrastructure. Better decision-making using geo-tagged assets prevent cascading failures. GIS helps us nip problems in the bud.

GIS is helping us effectively communicate ideas and solutions to non-professionals, technical teams, and scientists alike. This speeds up and streamlines our crises responsiveness. We can now manage emergency response centrally, while retaining the capacity to work inter-departmentally and intra-departmentally.

Developing a Smart City is an ongoing journey, and not an ultimate destination. What role Esri India has played in this journey?

GIS has been indispensable in completing the multiple government schemes that are currently active in Vishakapatnam. Esri's GIS solutions help GVSCCL track the progress of 52 Smart City projects progressing across Vishakapatnam. Undeterred by the large spatial spread, city-level GIS maps simplify our tasks by delivering thematic maps for situation analysis. Esri's Collector and Survey 123 applications collect data quickly to build maps instantaneously.

Even interventions have become easier. GIS maps are bettering Vishakapatnam's various urban proposals, simply because we have data readily available.

Currently what are the areas in which this platform is helping?

We have created multiple dashboards through the city-level GIS Basemap, using data acquired by the City Operations Centre. Under Smart City and Amrut schemes, our water supply and sewerage networks were mapped, and the House Service Connections (HSCs) geo-tagged. We have geo-tagged nearly all municipal assets. Tracking asset functionality is a crucial requirement in city resilience.

India was hit by the COVID-19 outbreak in March this year; since then, governments are attempting to work

around the pandemic. Vishakapatnam was always ahead of the game in tackling COVID. Maps of hotspots and affected patients allowed us to quarantine various zones, and halt spread of the disease.

Integrated Control & Command Centers (ICCCs) were a bulwark during the COVID-19 pandemic response. Going forward, all cities will see the need to become smart cities. On the GIS front, what is your suggestive approach to non-smart cities in preparing for better responsiveness?

Going ahead, responses adopted by the Smart Cities have much to teach the so-called 'non-smart' cities. GVMC's strategy, in particular, hinged on creating a baseline from available data, coordinating among departments, and informing citizens. All three stages of this response required that we use GIS.

We first prepared GIS-based maps to identify risky areas around COVID - 19 positive case locations. To improve data granularity, we developed an app to collect household data, and track international travellers. We believe that something as small as avoiding the use of paper forms could help control COVID-19 transmission.

Once the baseline was in place, we worked on coordination. Intra- and inter-department coordination, with the Chief Medical Officer - Health (CMOH) as nodal officer, was the first step. Then, coordinating mechanisms were extended to cover international travellers and their family members. In the process, we could track their health, and analyse risks of COVID -19 transmission.

Finally, we communicated with citizens on a daily basis. The citizens app developed under the Smart City Project was equipped with a tab for COVID - 19 awareness. We made sure that citizens were made aware of transmission risks by enabling Public Address (PA) announcements at 76 locations. Of these 76 spots, 50 locations used Smart Poles for communications. Elsewhere, 10 spots displayed 24x7 video messages through Variable Message Display Screens (VMD).

This tells us that, for better responsiveness, all three pillars are important: a baseline of information, inter- and intra-department coordination, and public confidence and participation. This makes GIS an indispensable tool for future resilience.