

## CASE STUDY

# Sewerage Asset Management System for Margao & Navelim in the State of Goa.

### PREFACE

Margao is the largest commercial city in the State of Goa. It houses the only major railway junction in the state and is an important transit point along Konkan Railway. With an ever-increasing population combined by a floating population of tourists, city's infrastructure takes an immense pressure.

Margao did **not have any existing sewerage system** in the city and was under tremendous threat of groundwater pollution induced by ageing septic tanks from new and old buildings in the city. Government of Goa, through its special purpose vehicle, Sewerage Infrastructure Corporation of Goa Ltd. (SIDCGL), initiated a citywide sewerage system design and construction. Though the city gains with the introduction of a network sewerage system, the utility agency also then needs to step up in effectively managing the system. SIDCGL realized that with time, the sewer manholes get covered by road surfacing over years and it **eventually becomes impossible to track the sewer lines and manholes** for continual operations and maintenance.

## REQUIREMENT

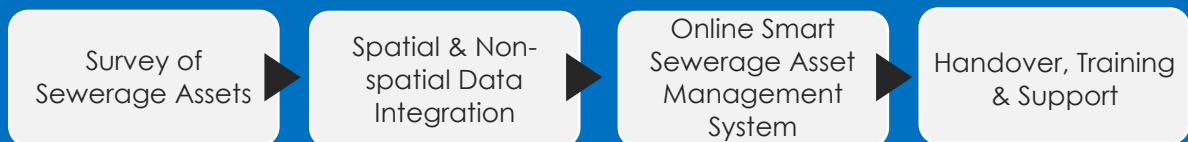
**To ensure that wastewater systems are adequately maintained** and operated to continually and reliably meet citizen service expectations as well as comply with applicable design conditions, SIDCGL required to demonstrate that they have adequate facilities, and equipment, and that they regularly perform operation and maintenance to meet the conditions in their jurisdiction areas. With an aim to better manage the operations of the sewerage systems, the following broad requirements were listed:

1. **Survey and Digital Mapping of Sewerage System and its Components**
2. **Easy Access of information of management staff on a web-based GIS platform.**

SIDCGL's requirement to digitize sewerage assets and creation of Online Sewerage Asset Management System was that of a platform that will be used for viewing the base map of the project area, viewing and querying the sewerage asset details. In addition, accessing infrastructure and providing an online hyperlocal user interface to the users to visualize the data was desired.

## SOLUTION

Transerve Technologies provided SIDCGL with **an intelligent map-based solution to handle sewerage asset information effectively using its proprietary field-to-office GIS workflow solution.** Transerve team created a comprehensive manhole-to-manhole digital map by mapping every asset in the field using its Android-based Data Collection platform. Map-based online asset management allowed SIDCGL to pinpoint every asset with all its design and technical details.



### KEY PRODUCT FEATURES

- **USER-FRIENDLY INTERFACE:**  
A map based web platform for accessing sewerage system information
- **SMART VIEWING:**  
Colour-coded maps for easy access to lists based on network elements (mains, sub-mains and collection lines), manholes, pumping stations, inspection chambers, etc.
- **HIGH PRECISION MAPPING:**  
For sewerage assets and other asset elements/ properties on geographic coordinates
- **DATA SECURITY AND ACCESS CONTROL:**  
Authority based login for accessing / editing information in the portal
- **INTEGRATION OF WATER SUPPLY, STORM WATER AND SANITATION UTILITIES:**  
Provision to integrate the utility maps and their asset details on the same platform, if required at a later stage.

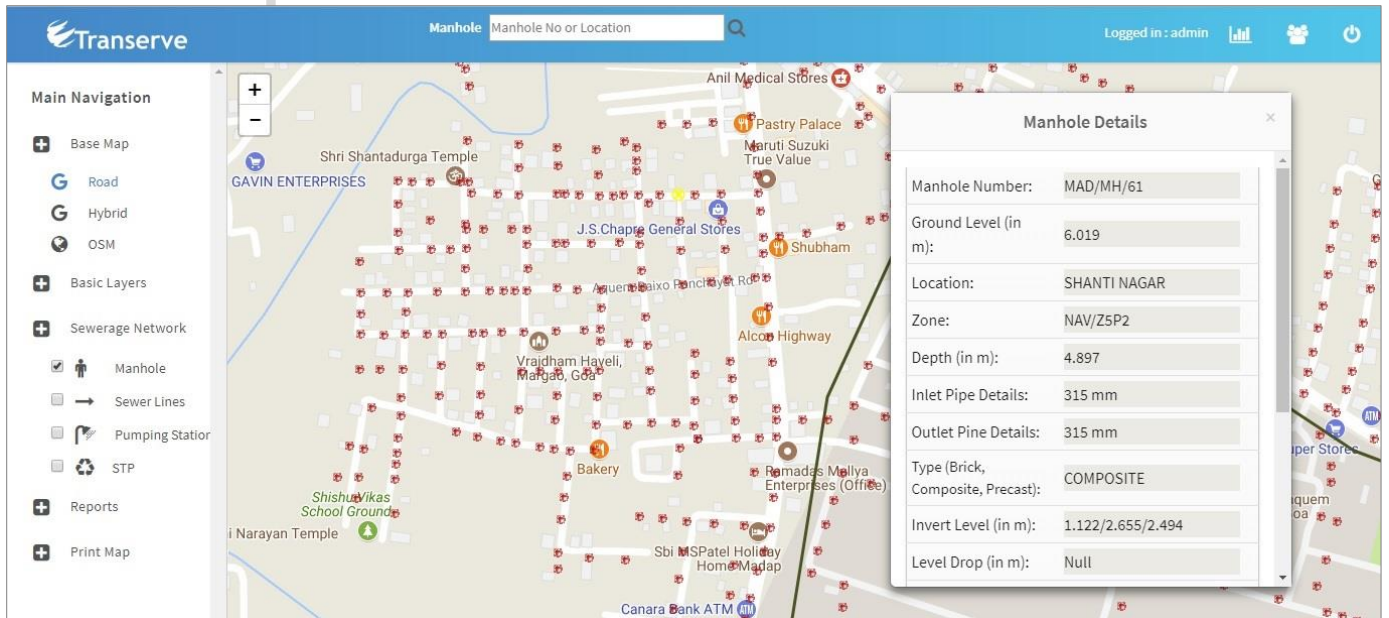
## ASSETS ON TRANSERVE'S DASHBOARD FOR SIDCGL

5,213 Manholes across 17 Zones

4,800 Sewer Lines totaling nearly 200km in length

Pumping Stations

Sewage Treatment Plant



## BENEFITS TO SIDCGL

Asset mapping exercise is crucial for developing a plan to reduce costs while increasing the efficiency and the reliability of the assets. An asset management plan incorporates detailed asset inventories, operation and maintenance tasks and long-range financial planning to ensure that the system works as per design and does not falter and affect the health of citizens. The major goals that will be achieved with this exercise are:

Performing an inventory and condition assessment of the system's assets

Defining level of service goals from design flow computations

Identifying critical assets

Establishing life cycle costs

Developing a long-term operations and maintenance strategy

## ABOUT US:

Transerve is an award winning technology company working on geospatial technology, smart city solutions and advanced data collection technology for data democratization. Founded by a team of IITians, Transerve is an ISO 9001:2015 certified organization with a vast experience of working on city-level technology roll-outs, including the likes of World Bank aided projects. Their team brings a complete end-to-end experience on geospatial data acquisition, data processing, mobile & web based application development and complete geo-database design and development. They have worked with customers in sectors ranging from urban to ports to water resource and environmental management, etc.

Supported by: IL&FS, Omidyar Network as its investors and incubated by CIIE (IIM Ahmedabad) and CIBA (Goa), both of which are DST funded, Transerve has its presence in both Panaji (Goa) and Gurugram (NCR) now. Geographically, Transerve is executing contracts from Chandigarh to Jharkhand to Tamil Nadu in the south. It is also involved in the prestigious Statue of Unity project in Gujarat. Its municipal revenue management solution has been adopted by ULBs in Maharashtra, Goa and Uttar Pradesh. BBMP Restructuring Committee in Bengaluru has adopted its solution for urban flood risk mitigation and assessment.

## CONTACT US

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### PANAJI OFFICE:

604-606, 6th Floor, Dempo Towers, EDC Patto Plaza,  
Panaji 403001, INDIA

### GURGAON OFFICE:

Rider House, Level 3, Sector 44, No 136, Near HUDA City Center Metro Station  
Gurgaon-NCR 122003, INDIA

### BHUBANESWAR OFFICE:

Workloop Premises, 102, Arihant Plaza, Shaheed Nagar,  
Bhubaneswar 751007, INDIA