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CITY LAYERS

An Integrated Platform For Geo-Enabling E-Governance

Nascent Info. Technologies Pvt. Ltd,
Ahmedabad, Gujarat, India

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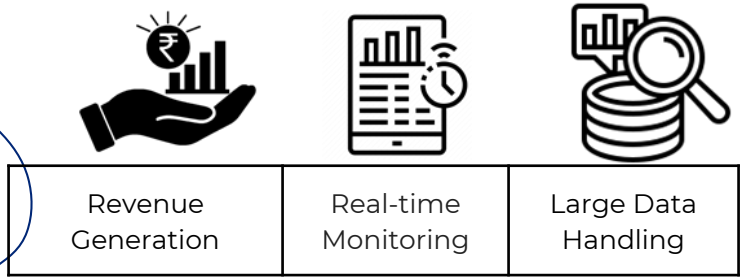
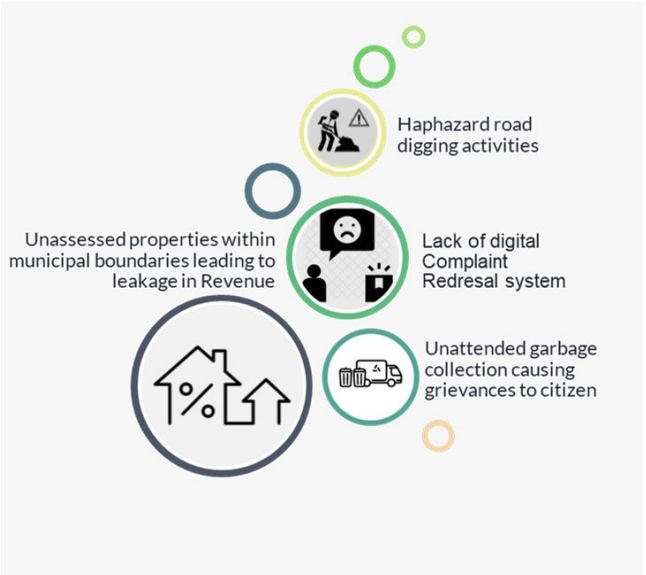
BACKGROUND

‘Development is all about people, who they are, where they live and how they live.’

A new generation Geo-enabled Decision Support System (DSS) would prove to be a vital tool for G-governance and help in





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A GLANCE INTO CITY LAYERS

01 Variant of ‘Layers’ Web GIS Enterprise Platform

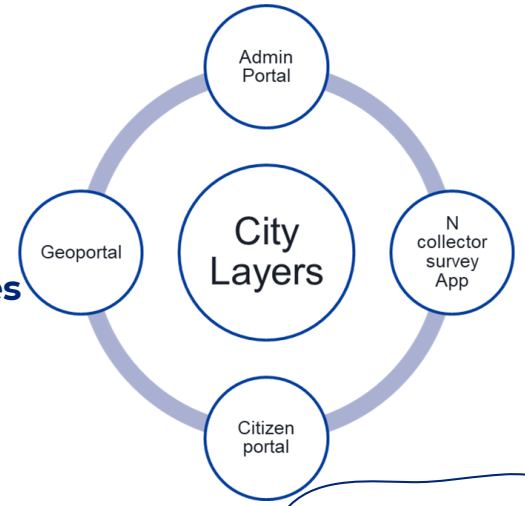
02 Departmental modules for Urban Local Bodies

03 Cross Browser , Cross- Device and Cross- Platform

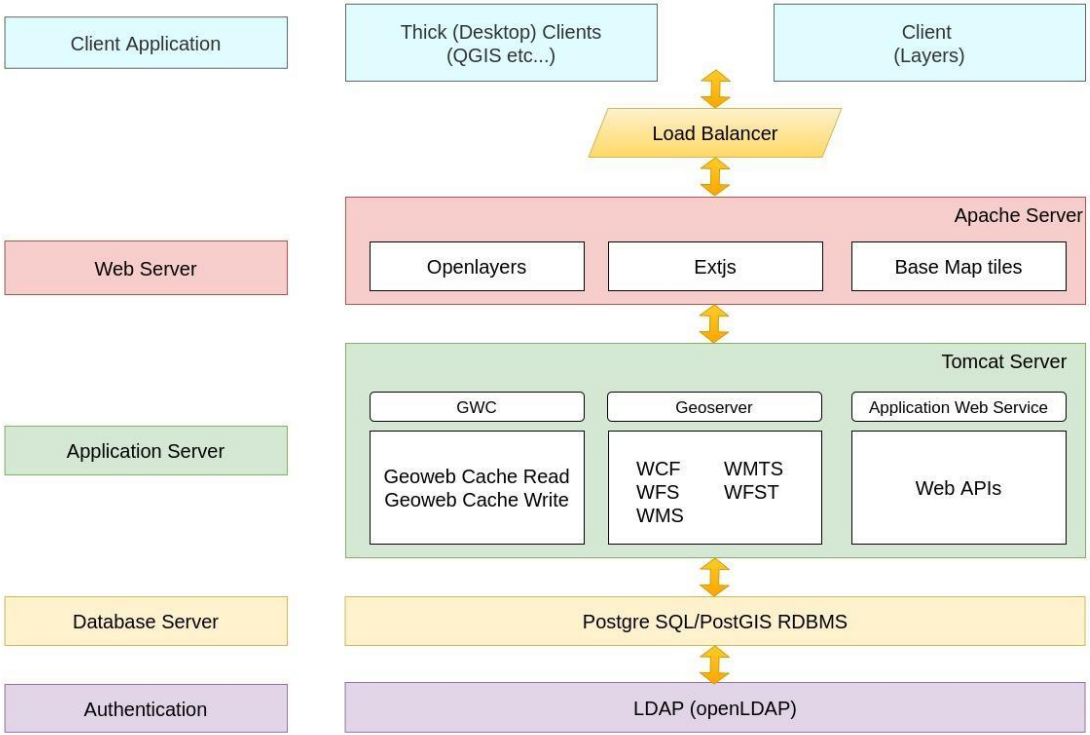
04 Built on OGC compliant Open Source Technologies

05 Cert-in Certified product

06 Already implemented at: VMC, BMC, AMC, DDA and ongoing at PCMC



ARCHITECTURE OF CITY LAYERS



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SALIENT FEATURES OF CITY LAYERS

- Supports multiple projects and projections
- Single Sign-On functionality using LDAP
- Maps rendering in WMS format for best performance
- Centralised data repository
- API based Integration capabilities with ERP, IoT, VTS, SCADA etc.
- Enhanced Data Security

city LAYERS

FUNCTIONALITIES OF CITY LAYERS

LAYER MANAGEMENT MODULE

- Layer switcher
- Layer styler
- Attribute table

QUERY MODULE

- Attribute Query
- Spatial Query
- Bookmark

SPATIAL EDITING AND VALIDATION (QGIS AND WEB)

BASIC GIS TOOL

- Zoom in /out
- Measurement Tool
- Dynamic Basemaps
- Information tool
- Select Tool

DASHBOARD

- Maps and charts
- Geopdf Printing
- Report Generation

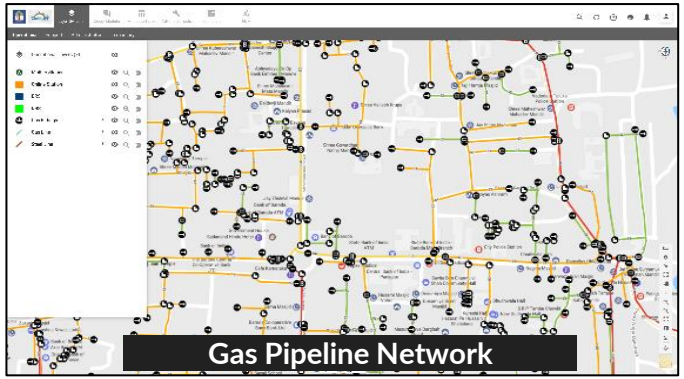
ADVANCED GIS TOOL

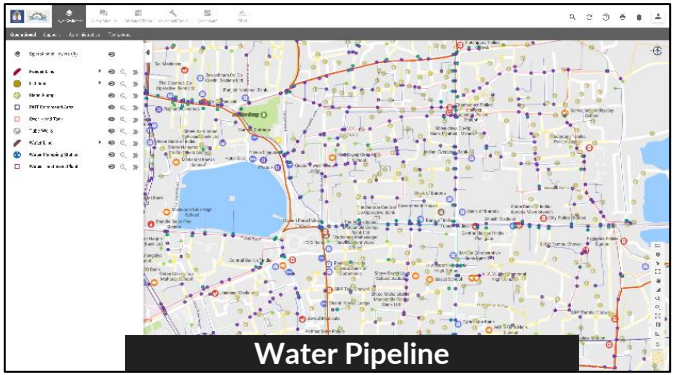
- Routing options
- Network Tracing
- Buffer Tool

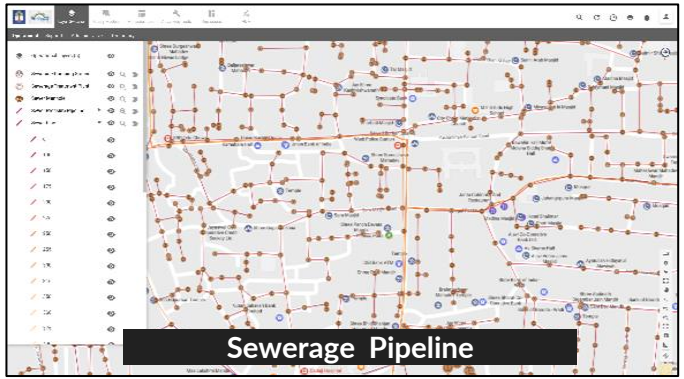
ADVANCED FEATURES

- Raster Processing
- LiDAR Data and pano viewer
- 3D visualizations
- Integration Module
- PDM Module

ASSET MAPPING AND VISUALIZATION







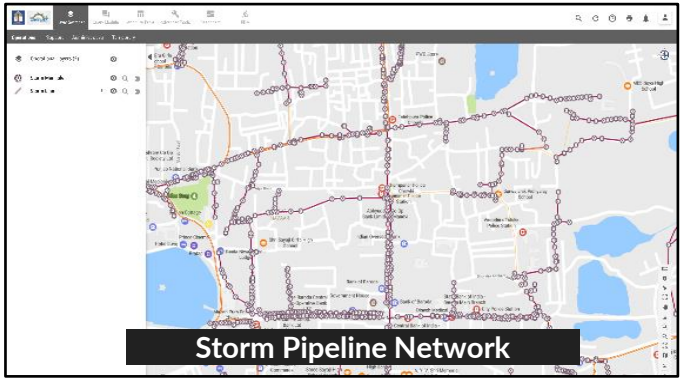
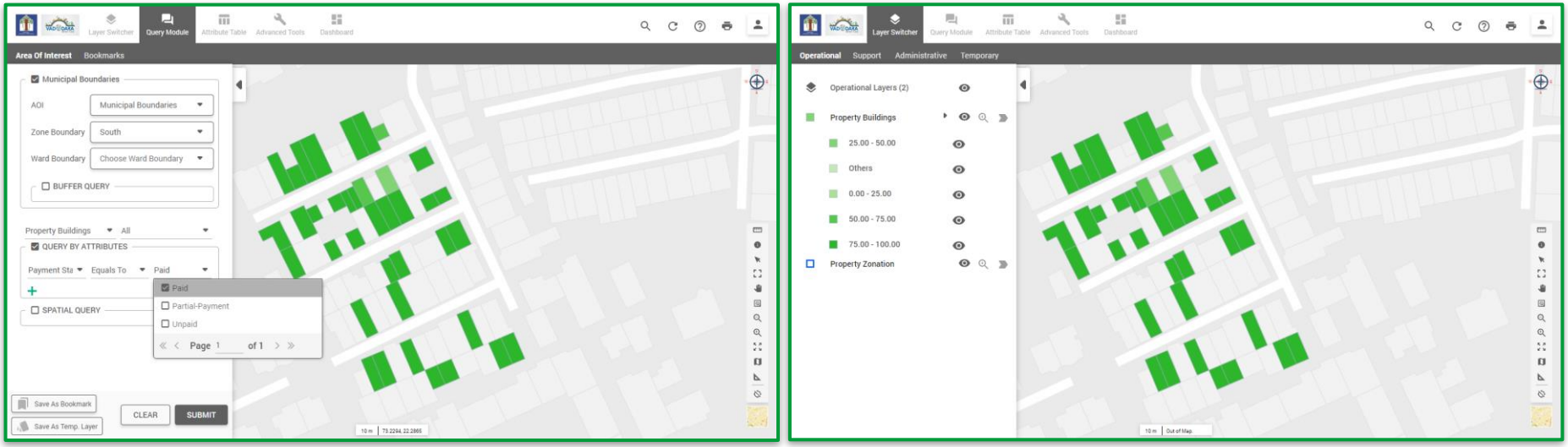


Fig.2 A schematic representation of the Utility Mapping

INTEGRATION CAPABILITIES: ERP

Property Tax

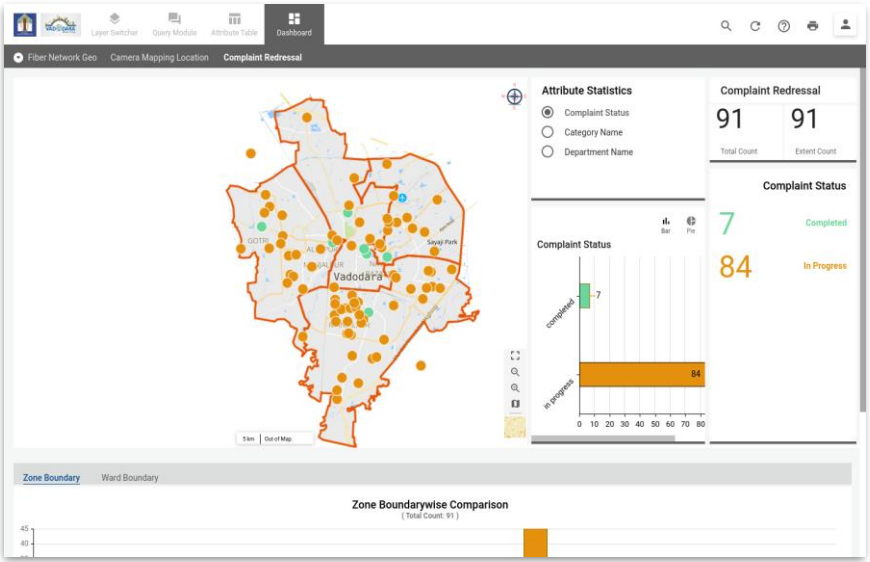


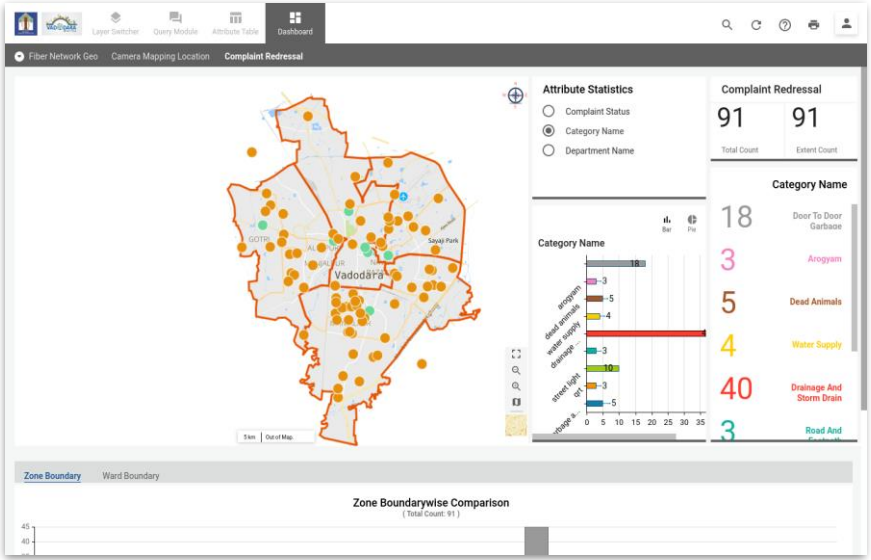
Enhanced Integration capabilities helps the government to determine the Tax defaulters

Fig.3 An illustration of ERP Integration Capability

INTEGRATION CAPABILITIES: ERP

Complaint Redressal



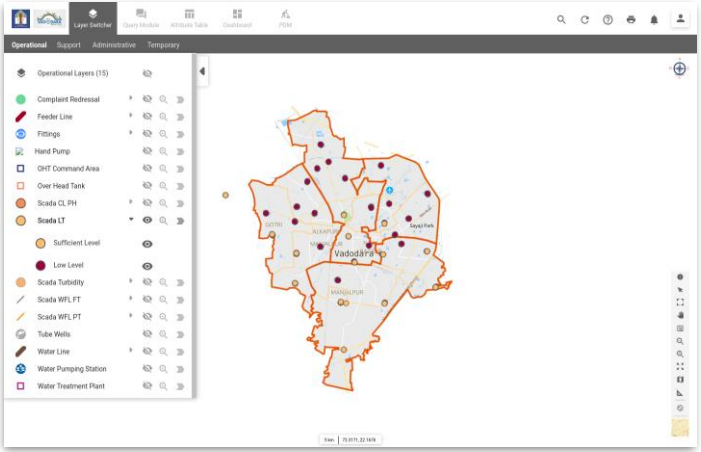


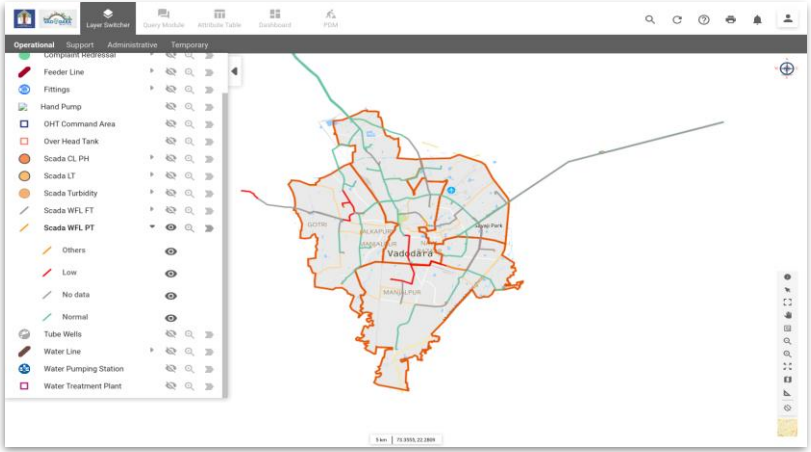
Integration with Complaint Redressal system to map and monitor the status of the complaints for each department

Fig.4 An illustration of ERP Integration Capability

INTEGRATION CAPABILITIES: IoT

SCADA



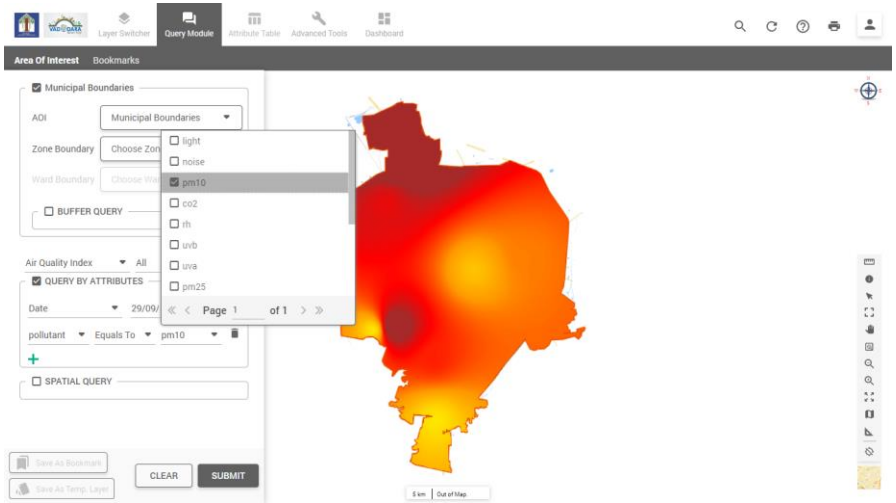


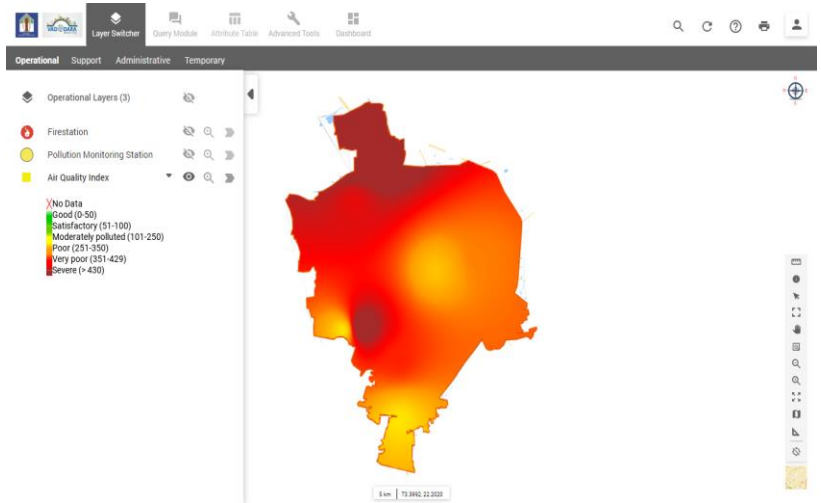
- **Integration with SCADA to visualise and monitor water quality parameters like - PH, CL, Turbidity and quantitative parameters like flow, pressure and Level parameters**
- **Evaluate Overhead Reservoir Tank Capacity and per capita consumption**

Fig.5 An illustration of IoT Integration Capability

INTEGRATION CAPABILITIES: IoT

Air Quality



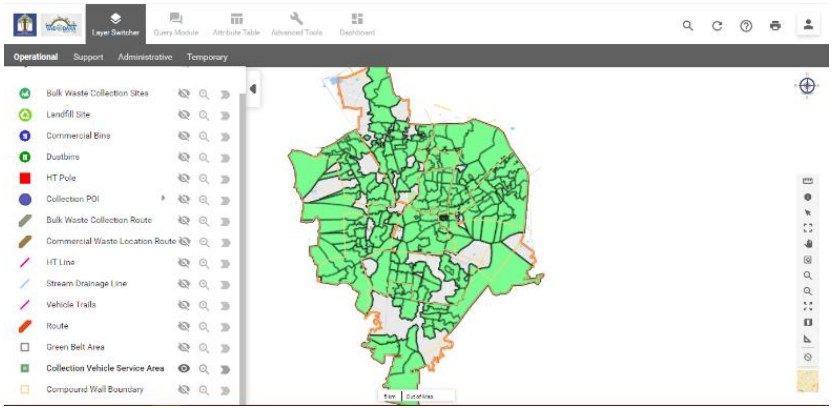


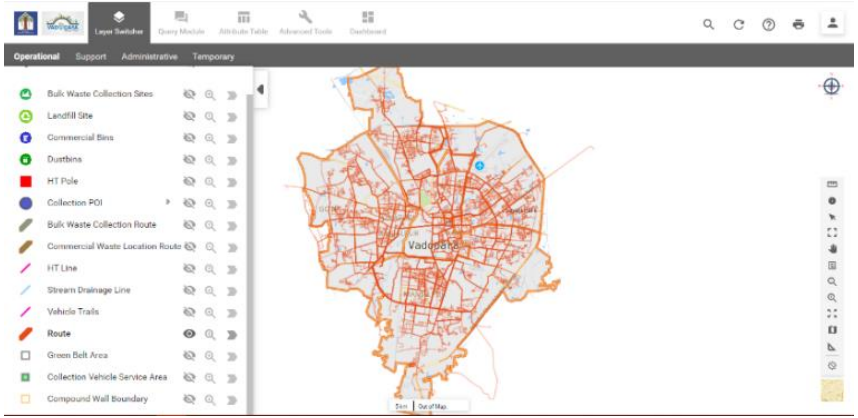
Integration of IoT with Air-Quality sensors to visualize its real time status for various pollutants across the region.

Fig.6 An illustration of IoT Integration Capability

INTEGRATION CAPABILITIES: VTS

Solid Waste Management



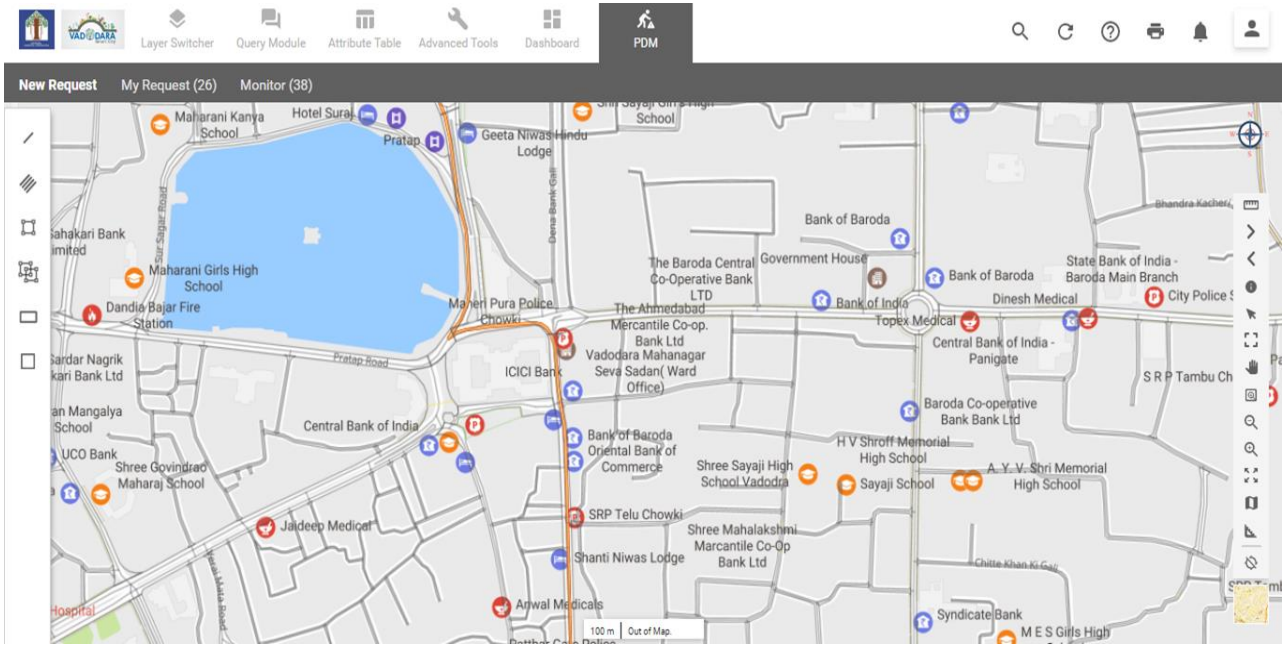


Service Area Mapping

Tracking Vehicle paths through Routing

Fig.7 An illustration of VTS Integration Capability

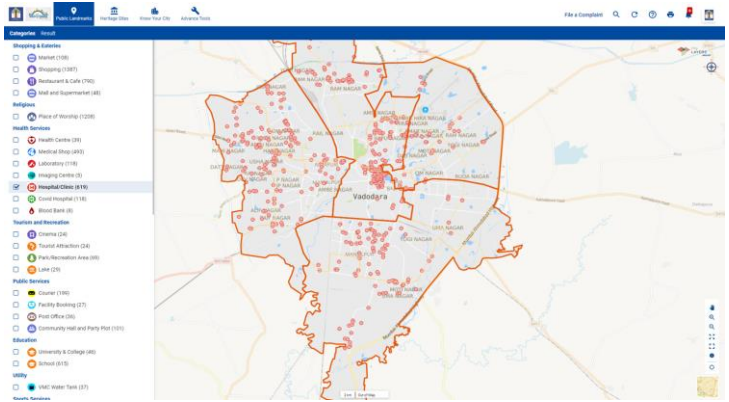
PLAN, DIG & MONITORING

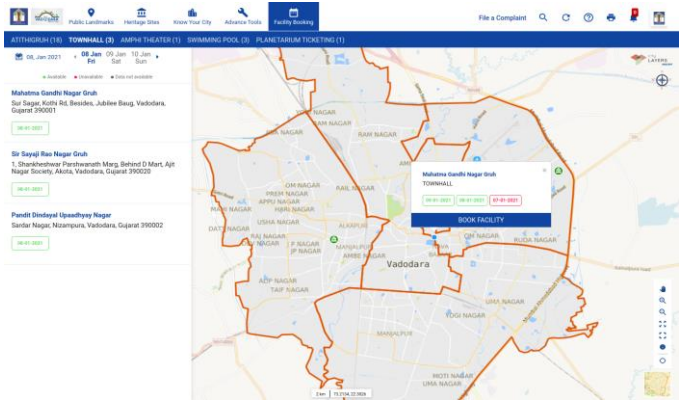


NOC Certificate Generation from concerned departments to take permission before commencing any field work

Fig.8 An illustration of PLAN, DIG & MONITOR Module

GIS ENABLED SERVICES FOR CITIZENS





Helping Citizens to locate various :

- **Landmarks**
- **Heritage Sites**
- **Health services, public spaces, education institutes, etc.**
- **Ability to locate shortest path to the facility**

Provides details about recent advances pertaining to lifestyle and entertainment viz., amphitheatre, swimming pool, auditorium, town hall, etc.

Fig.8 A schematic view of the Citizen Portal of the City Layers

CLIENTELE

Fig.1 Application Suite

ACCOLADES

- **Best Research Paper Award : FOSS4G, Asia Conference, Sri Lanka in 2018**
- **Vadodara Smart City GIS project – Best GIS Project in a smart city in India 2019**
- **India Smart Cities Awards Contest 2020 (GIS Governance – Vadodara**
- **“Best GIS Product Solution” Award : GESIA Annual Awards for Excellence in ICT 2022**

THANK YOU

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