

Digital Transformation of Urban Landscape

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*By Abhishek Srivastava & Prasenjit Samanta
Oroprise Solutions Pvt Ltd
India – Europe – US - Middle East*

Empowering towards Excellence



Who are we?



Founded in 2014

Established with a vision to deliver cutting-edge technology solutions



Experienced Leadership

Founded by a Jadavpur Alumnus & IT Industry veteran with extensive international experience



Global Presence

Serving customers across India, Europe, US & Middle East



Comprehensive Services

Delivering transformational and traditional software services, systems, infrastructure, network, and security solutions



Industry Expertise

Strong presence in City Management, Utilities & Healthcare



Select Reference Customers

- ✓ Trusted over a decade globally
- ✓ Across multiple sectors like cities, utilities and railways



USA



Europe



Middle East



India



Our Tech Verticals

- ✓ Maturing in multiple tech domains
- ✓ Accelerating digital transformation



Cloud Infrastructure

Seamless cloud migration and management across Azure and AWS platforms



Security Operations Center

24/7 monitoring and threat detection to protect your critical assets



Geographic Information System

Advanced spatial data solutions for smart city and utility management



Consulting

Strategic technology guidance to optimize business operations



Digital Marketing

Data-driven marketing strategies to amplify your brand reach

Capability Profile at a glance

Our comprehensive technology stack encompasses enterprise applications, data analytics, cloud infrastructure, and managed services—delivering end-to-end solutions tailored to your business needs.



Business Applications

- Java/ Python development with Spring framework
- Microservices architecture and RESTful APIs
- Mobile apps for iOS and Android
- Microsoft Dynamics CRM & ERP
- Geographic Information Systems



Data Analytics

- Data modernization and engineering
- Data warehouses and lakes
- Integration via Informatica
- Visualization with Qlik, Power BI, Tableau
- Customer and strategic analytics



Cloud

- Microsoft Azure and AWS expertise
- Cloud migration and acceleration
- Cloud consulting services
- Cloud security implementation
- Cloud operations management



Infrastructure Management

- Network Operations Center (NOC)
- Security Operations Center (SOC)
- End-user support services
- Service desk management
- Comprehensive managed services

Consulting

Setup

Development

Managed Services

Application Management

Geographic Information System (GIS)

Intelligence & Surveillance through Spatial Application & Computation for Policing (ISSAC)

Our GIS-based application has immensely improved the preparedness for Law Enforcement personnel

- ✓ Quick response to any Event
- ✓ Crime Mapping & Analysis
- ✓ VVIP Movement
- ✓ Efficient Management of Public Gatherings
- ✓ Large-scale Events Seamless Conduct of Elections

ISSAC is a versatile and adaptable platform to serve verticals such as Cities, Real Estate, Education, Health, Agriculture & Forestry



GIS Case Study – [Kolkata Police](#) & [WBP](#)

- Informed Decision Making
 - Creation of geo-spatial crime database with facility of geo coding
 - Tracking of traffic movement geographically by integrating with the camera coverage
 - To identify specific addresses (VIP, VVIPs, criminals) through geo-coding on the base map
 - Spatial crime analysis for crime patterns and trends with MIS report creation
- Improved Citizen Interaction
 - To facilitate time stamped digital reporting of incidents (crime, fatal, etc.)
 - To help citizens through integration with a mobile app with information on nearest police station within the applicable jurisdiction along with contact details thereof
 - To enable citizens to report any incident as e-FIR or General Diary (e-GD) through the mobile app and online submission for approval



GIS Case Study – Kolkata Police (contd)

Benefits Derived (For Police)

- Crime and Traffic Control through spatial visualization and locational intelligence
- To monitor real-time position of police personnel deployed within the jurisdiction
- Facilitation of digital & timestamped reporting of incidents (crime, fatal, etc.)
- To ascertain above-ground and underground utility network for improved coordination
- Improved VVIP movement management

Benefits Derived (For Citizen)

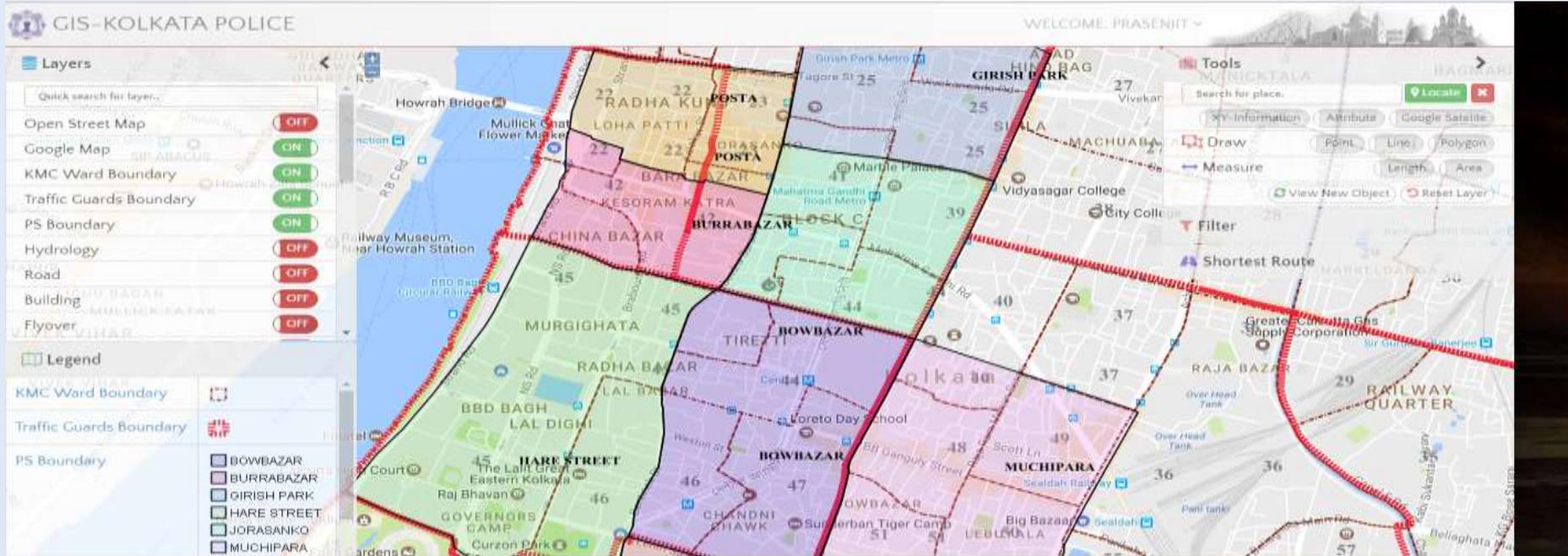
- Distance between citizens and police bridged

Solution Overview

- Web based
- Mobile Application for citizens and police in-built
- Open source architecture
- SSO enabled for enhanced security
- Accessible from anywhere, anytime
- Analytics / MIS in-built
- Easy to maintain (can be easily backed up and restored to last point of failure)



Superimposing of available maps



The screenshot displays a GIS application titled "GIS-KOLKATA POLICE" with a user greeting "WELCOME, PRASENJIT". The interface includes a "Layers" panel on the left, a "Tools" panel on the right, and a central map area. The "Layers" panel lists several map types with their status (ON/OFF):

- Open Street Map: OFF
- Google Map: ON
- KMC Ward Boundary: ON
- Traffic Guards Boundary: ON
- PS Boundary: ON
- Hydrology: OFF
- Road: OFF
- Building: OFF
- Flyover: OFF

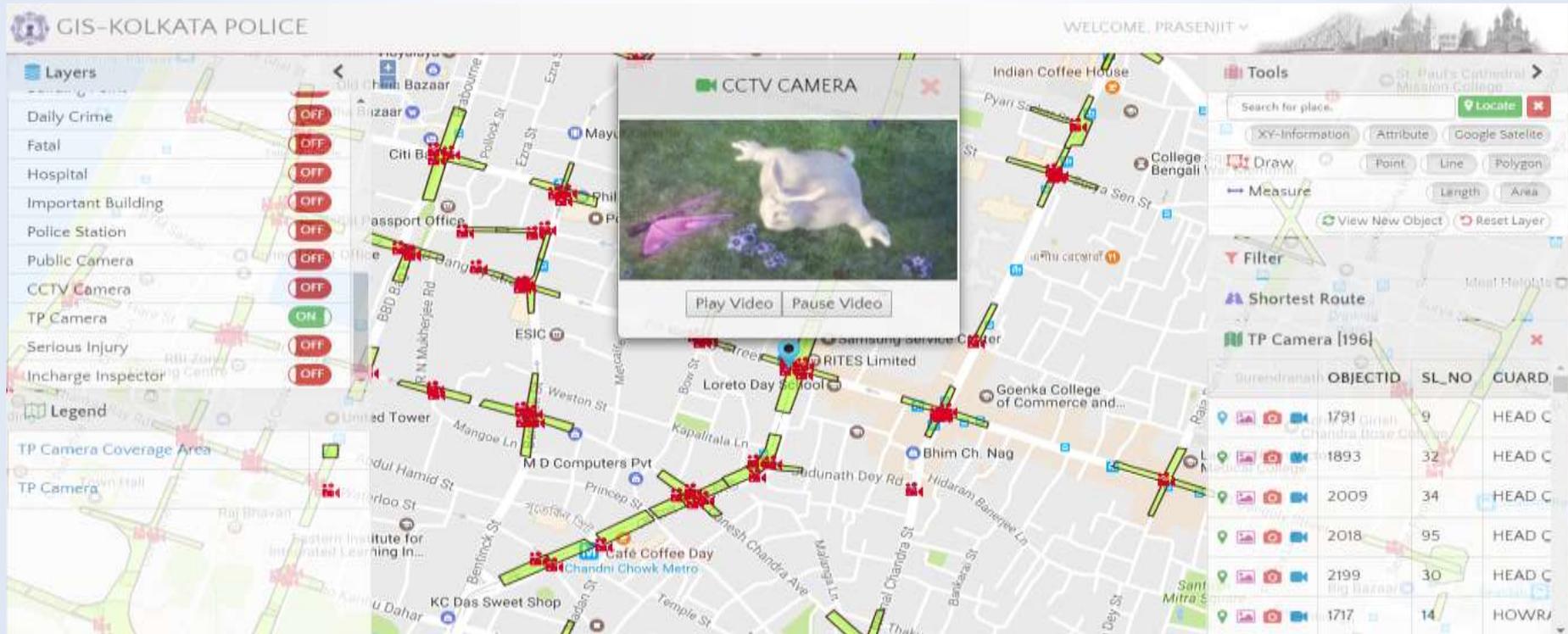
The "Legend" panel at the bottom left shows color-coded boxes for police stations:

- BOWBAZAR (Blue)
- BURRABAZAR (Pink)
- GIRISH PARK (Light Blue)
- HARE STREET (Light Green)
- JORABANKO (Light Purple)
- MUCHIPARA (Light Orange)

The map area shows a grid of police stations and wards, including RADHA KUNDA, BURRABAZAR, BOWBAZAR, and MUCHIPARA. A red dashed line highlights a specific boundary across the map. The "Tools" panel on the right includes options for search, drawing, measurement, and filtering.

Incorporating live feed from cameras

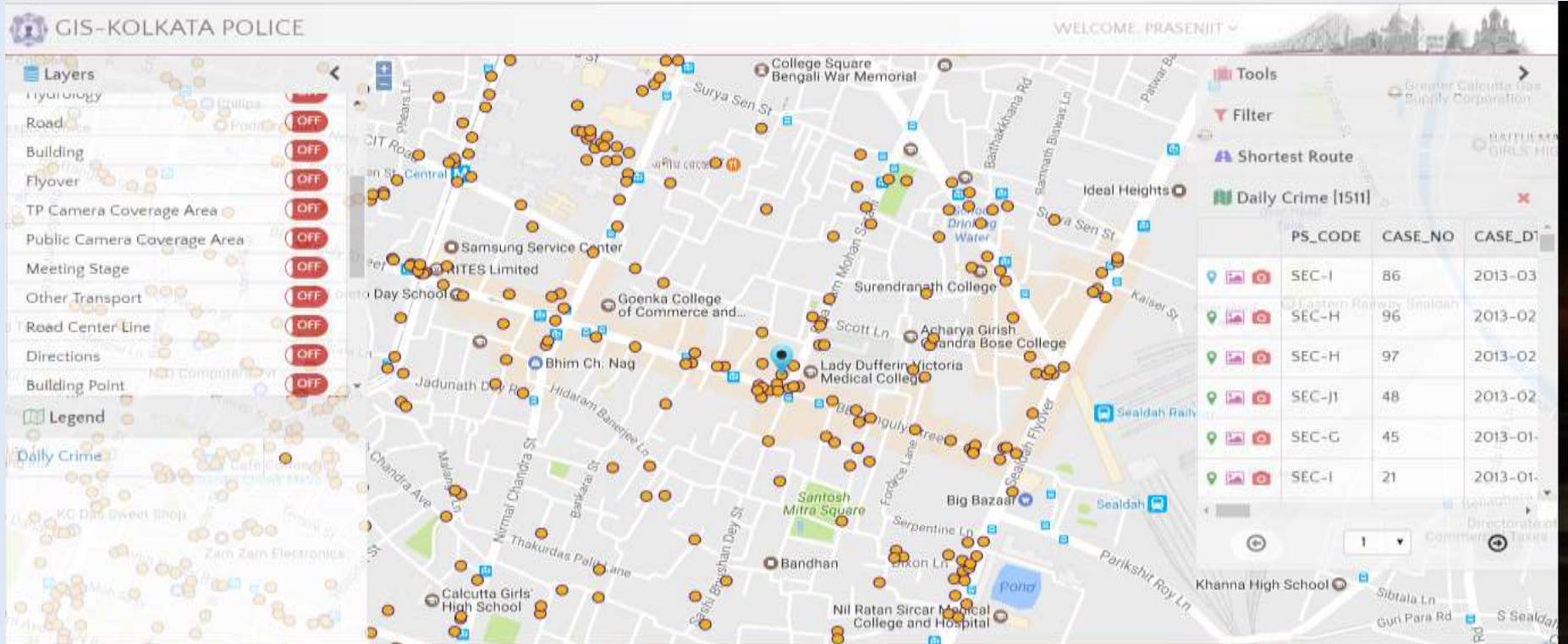
GIS-KOLKATA POLICE WELCOME, PRASENJIT



The screenshot displays a GIS interface for Kolkata Police. On the left, a 'Layers' panel lists various data layers with status indicators (ON/OFF). A central window shows a live 'CCTV CAMERA' feed of a white dog. On the right, a 'Tools' panel offers search and drawing options, and a 'Filter' panel shows a table of camera data.

OBJECTID	SL_NO	GUARD
1791	9	HEAD C
1893	32	HEAD C
2009	34	HEAD C
2018	95	HEAD C
2199	30	HEAD C
1717	14	HOWRA

Monitoring of Traffic Movement



Our Vision & Goals for Cities & Urban Bodies

IMPETUS (Important Municipal Program for E-governance & Transformational Urban Services)

❖ **Vision :**

To become a citizen friendly and commercially sustainable ULB in 3 years

❖ **Objectives:**

- Ensure ARTS (Accountability, Responsiveness, Transparency & Speed) in governance
- Empower Citizens with FACTS (Faceless, Automated, Cashless, Touch-free Services)
- Enhance own revenue collection by three times in three years

❖ **Portfolio of IMPETUS :**

- Delivery of Urban Services
- Municipal Finance
- Structural Institutionalization
- Capacity Building of People



Revenue Management System Overview

Reporting And Dashboard

Property DCB Report

Ward Wise DCB Reports

Ward Wise Property Types

Defaulters Report

New Property Assessment

Assessment Submission

Verification and Approval

New Property ID Generation

Assessment Notice (Hardcopy, Email & SMS)

Transfer of Ownership

Request for Transfer

Verification and Approval

Transfer Notice (Hardcopy, Email & SMS)

Pay and Transfer Document

Property Mutation/Separation and Amalgamation

Request for Mutation

Revised Demand Calculation

Verification and Approval

Demand Notice (Hardcopy, Email & SMS)

Pay and Mutation Document

Collection

Online Counter Field

Update DCB

Generate Receipt

Integration

Employee Information System

Financials

Collections (UPI/card/ECS etc)

ISRO Data

ULB

DISCOM

Master Data/Set up

Property and Property Type Master

Category Master

Street Master

Geo-Spatial Master

Calculation Rule Set up

Case Study of ULB in WB



❑ Demographics:

- Second largest city in West Bengal with Population of 14 Lakhs spread over 350 sq-km
- Ratio of Male to Female: 52:48 having an overall literacy rate of 80%

❑ Scope

❖ Digitalization for e-Governance & Citizen Services

- Automate & optimize municipal processes like Property Tax Management, Trade License, Building Plan Approval, Advertisement & Rental on a Software Platform
- Municipal GIS for locational intelligence & taxation
- Mobile App for Citizen information and seamless interaction

❖ Commercialization

- Sanitize tax, licensing & advertisement/rental data through door-to-door survey
- Employ different means and methods to improve revenue collection of ULB
- Institutionalize and delegate operations at the Borough/Ward level



Why Commercialization along side Digitalization?



- Under-assessed and un-assessed properties, unlicensed trading establishments & unauthorized building are crippling the financial performance of ULB
- Property/citizen/trading establishment records are archaic – 50%-plus of them are not in the ULB records! Moreover, Property tax collection is less than 50%
- Similarly, business license records, water connection details, building status are incorrect
- Internally, the ULB processes are required to be automated or optimized
- Citizens' access to the municipal services needs to be improved manifold.
- Thus transformational initiative of IMPETUS conceived to improve citizen service & step-function improvement in revenue collection.

Impact of IMPETUS

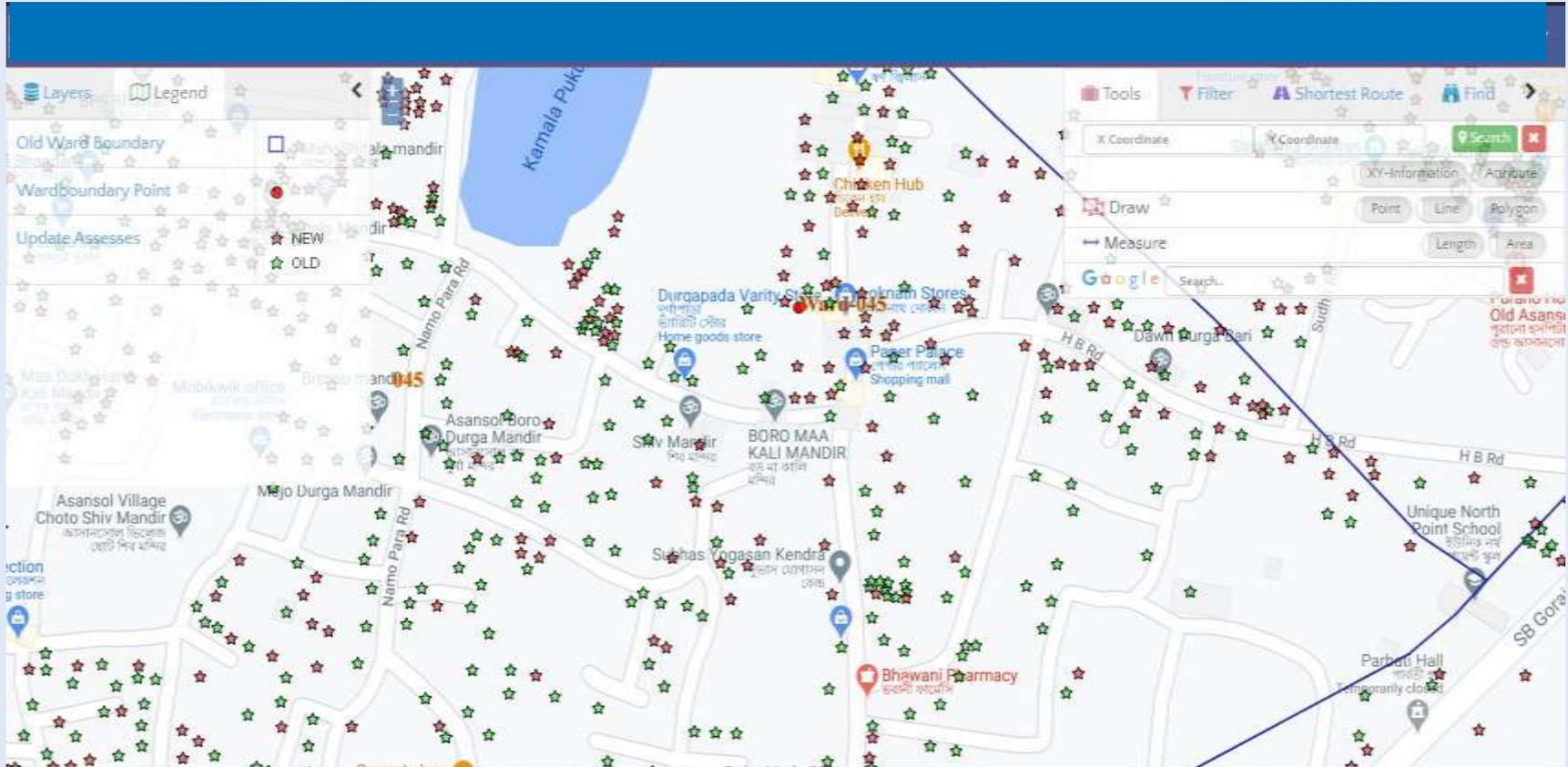
- Dramatic reduction in lead time for delivering municipal services
- Limited footfall in Municipal hall
- At least 2x increase in property assesseses & 2x increase in Average Realized Tax (ART) for each property holding.
- Three (3x) times increase in business licensee count
- 50% Reduction in Arrears
- Improvement in employee productivity gains to be measured in Revenue Collected/Per Employee & No of Employees Per lakh of Population
- Incremental Collection to ULB over its initial level : INR 250 to INR 300 over three years

Challenge Matrix for Implementation

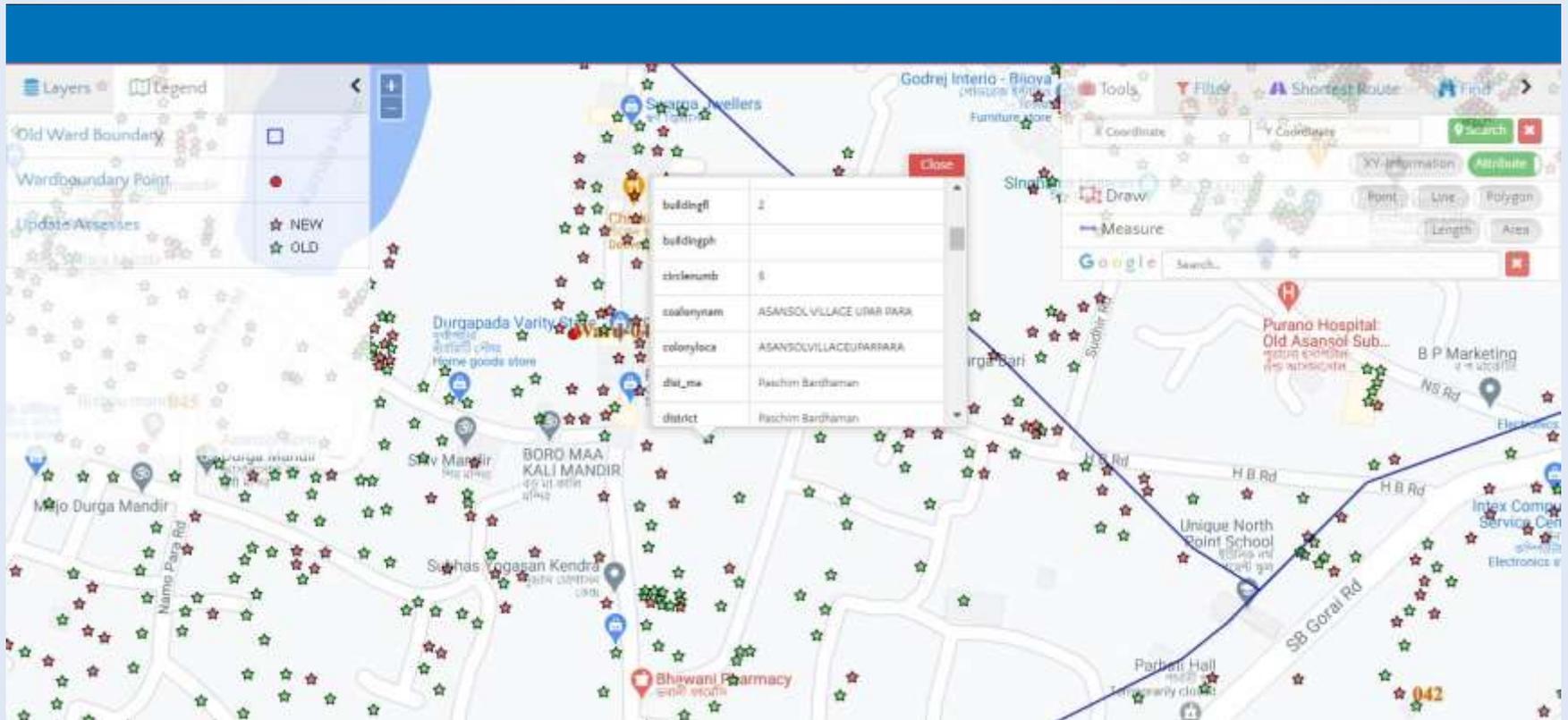


Sl. No	Challenges encountered	Solutions under implementation
1	Asymmetrical data in respect of un-assessed and under-assessed property holdings and un-licensed business entities.	Mobile App based Door-to-door for sanitization of the database for property assessees and business premises
2	Non-uniformity in processes across different zones	Process standardization and documentation
3	Resistance from Citizens for the fear of the “unknown”	Citizen awareness campaign & local political support
4	Internal resistance to change	Continuous Counselling and capacity building and formation of Task Force
5	Ambiguous demarcation of ward boundaries	Verification through old documents and drawing on knowledge of local leadership

Overview of Property Holdings – Ward 45 ULB



Illustrative Property Information



Illustrative Tax Details



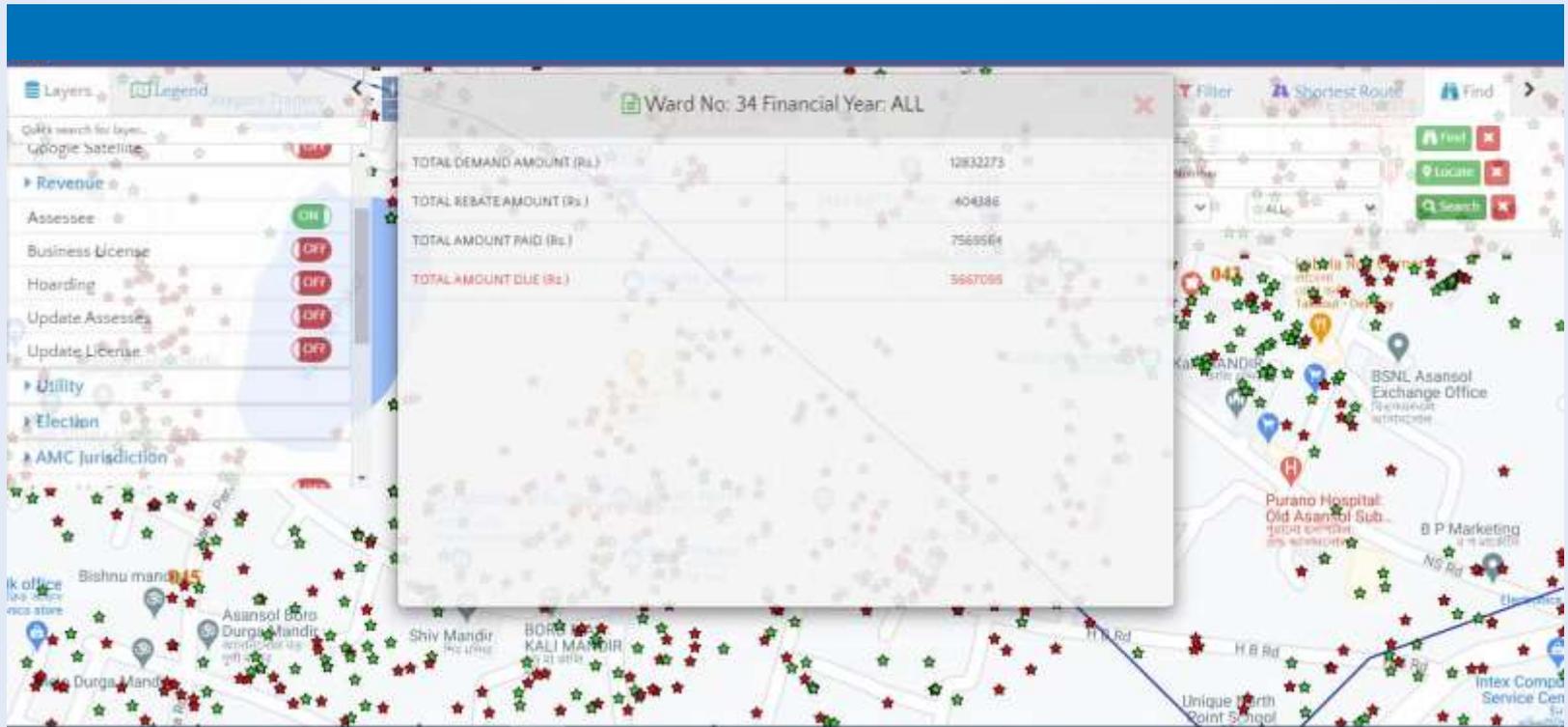
Layers

- Google Satellite
- Revenue
 - Assessee: ON
 - Business License: OFF
 - Hoarding: OFF
 - Update Assesses: OFF
 - Update License: OFF
- Utility
- Election
- AMC Jurisdiction

Tax Detail: House No. - 160093

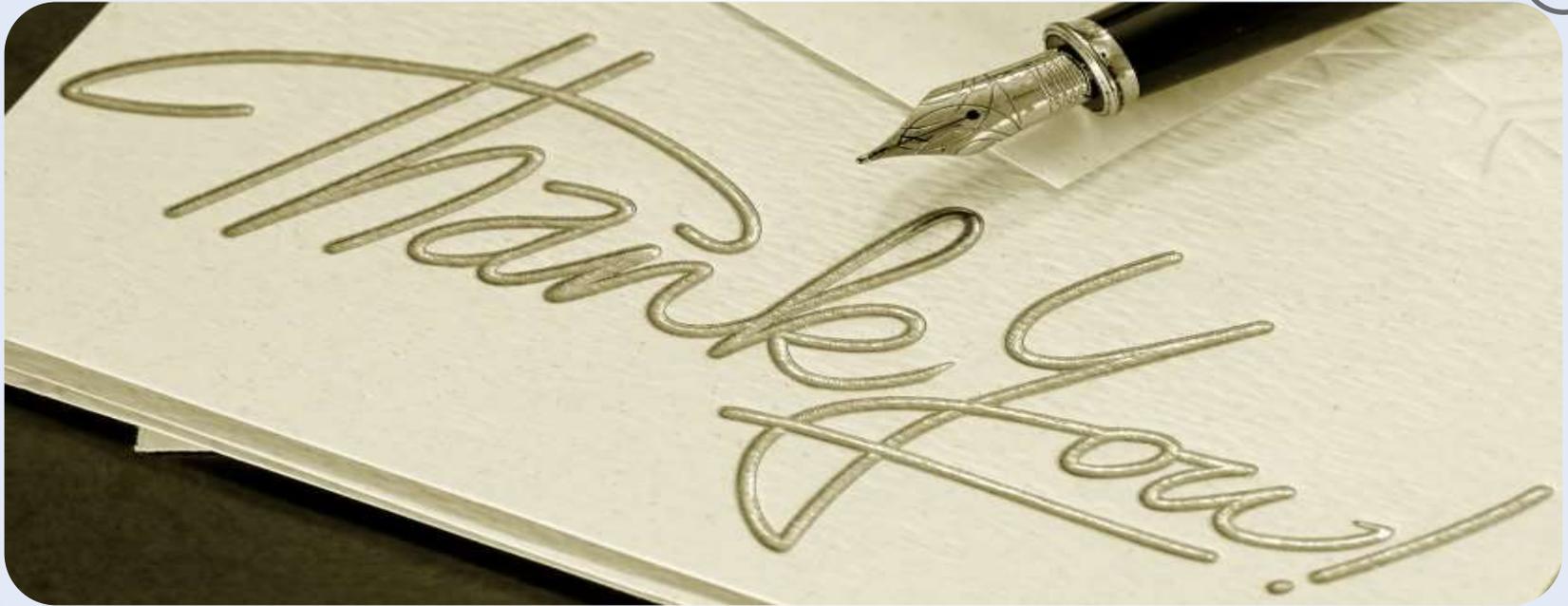
Year	AMOUNT Q1 (Rs.)	REBATE (Rs.)	PAYMENT (Rs.)
2006-2007			
AMOUNT Q1 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79
AMOUNT Q2 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79
AMOUNT Q3 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79
AMOUNT Q4 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79
2007-2008			
AMOUNT Q1 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79
AMOUNT Q2 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79
AMOUNT Q3 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79
AMOUNT Q4 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79
2008-2009			
AMOUNT Q1 (Rs.)	83	REBATE (Rs.) 4	PAYMENT (Rs.) 79

FY Wise Demand Information



Ward No: 34 Financial Year: ALL	
TOTAL DEMAND AMOUNT (Rs.)	12832273
TOTAL REBATE AMOUNT (Rs.)	404386
TOTAL AMOUNT PAID (Rs.)	7569564
TOTAL AMOUNT DUE (Rs.)	3667095

The screenshot displays a GIS interface with a map of Ward No. 34. A central pop-up window shows the financial summary for the year 'ALL'. The interface includes a 'Layers' panel on the left with categories like Revenue, Assessee, Business License, Hoarding, and Utility. The map is populated with various colored markers (red and green stars) representing different types of assets or demand points. A legend and search bar are also visible at the top of the map area.



NAMASTE