

GEOSPATIAL FOR DIGITAL CITIES



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Principal Secretary/

MD KSITIL (E & IT Dept)

MD KFON (E & IT Dept)

CMD & ED IKM (LSG Dept)

Government of Kerala



Players – Government sector

- KSDI
- ULTS
- KSREC
- GPK
- ISRO
- S & S

Players – Private sector

- ESRI
- India Maps
- SGL
- Gensys
- Google

Possibilities

- Smart cities
- Smart villages
- KFON/BharatNet
- Emerging Technologies
- 5G

Why, what, how...

Why - Need to Visualise

- Seeing data in the context of location & terrain.

What - Better Insights

- Understanding how events are connected to geography and demography

How - GIS based Analytics

- Spatial Analytics for easier decision making

Issues...

- Maps
- Location services
- Data
- Platform

K-SMART

- Spatially enabled e-Governance
- Viewability
- Actionability
- GIS oriented workflow based decision making

Use cases

- Citizen services
- Development planning
- Infrastructure development
- Agricultural development
- Crisis management

CITY CENTRIC SOLUTION : SERVICES



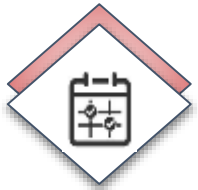
**Capital
Projects
Dashboard**



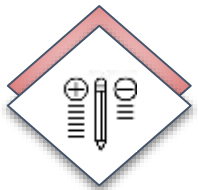
**Revenue &
Expenditure
Dashboard**



**Capital Project
Plan**



**Property Tax
App**



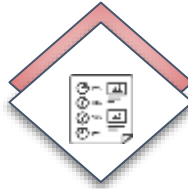
Plans and Drawings



**ROW Permit
Dashboard**



**Utility
Dashboard**



**Capital Project
Review
Manager**



**Right Of Way
Permit**



**Property
Calculator**



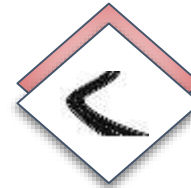
**Property Tax
Dashboard**



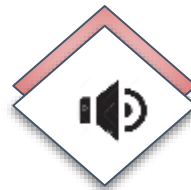
**Citizen
Problem
Dashboard**



**Citizen
Problem
Reporter**



**ROW
Project
Manager**



**Event
permit**

Tax

Building permit - 30 days to 30 minutes!

- “Automated permit approval process, reducing the need for field verification”

Challenge

- Manual comparison of the Data bank book with survey number of the plot for verifications, Delay in service delivery, Need for field verification, Duplicate permits in same location

Solution

- All geospatially related aspects can be visualised on the basemap, Adherence to laid out policies pertaining to building permit can be validated, Enables verification from office, Details can be cross checked with the IPMS Portal

Revenue optimization

Through GS survey, we can increase tax revenue by at least 30% on an average

Challenge

- Tax collection based on assessment registers which are not updated, Tax evasion, Unauthorized expansions

Solution

- With drone imagery, the built-up area can be inspected using the building's footprint, avoiding tax losses.
- Accurate information obtained by measuring the floor area of each building using laser tape as part of the GIS survey.
- The level of revenue leakage in each ward can be analyzed and the causes can be addressed.

BUILDING PERMIT APPLICATION

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- Manual comparison of the Data bank with survey number of the plot for verifications
- Delay in service delivery
- Need for field verification
- Duplicate permits in same location

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- All geospatially related aspects can be visualised on the basemap
- Adherence to layed out policies pertaining to building permit applications

REVENUE OPTIMISATION

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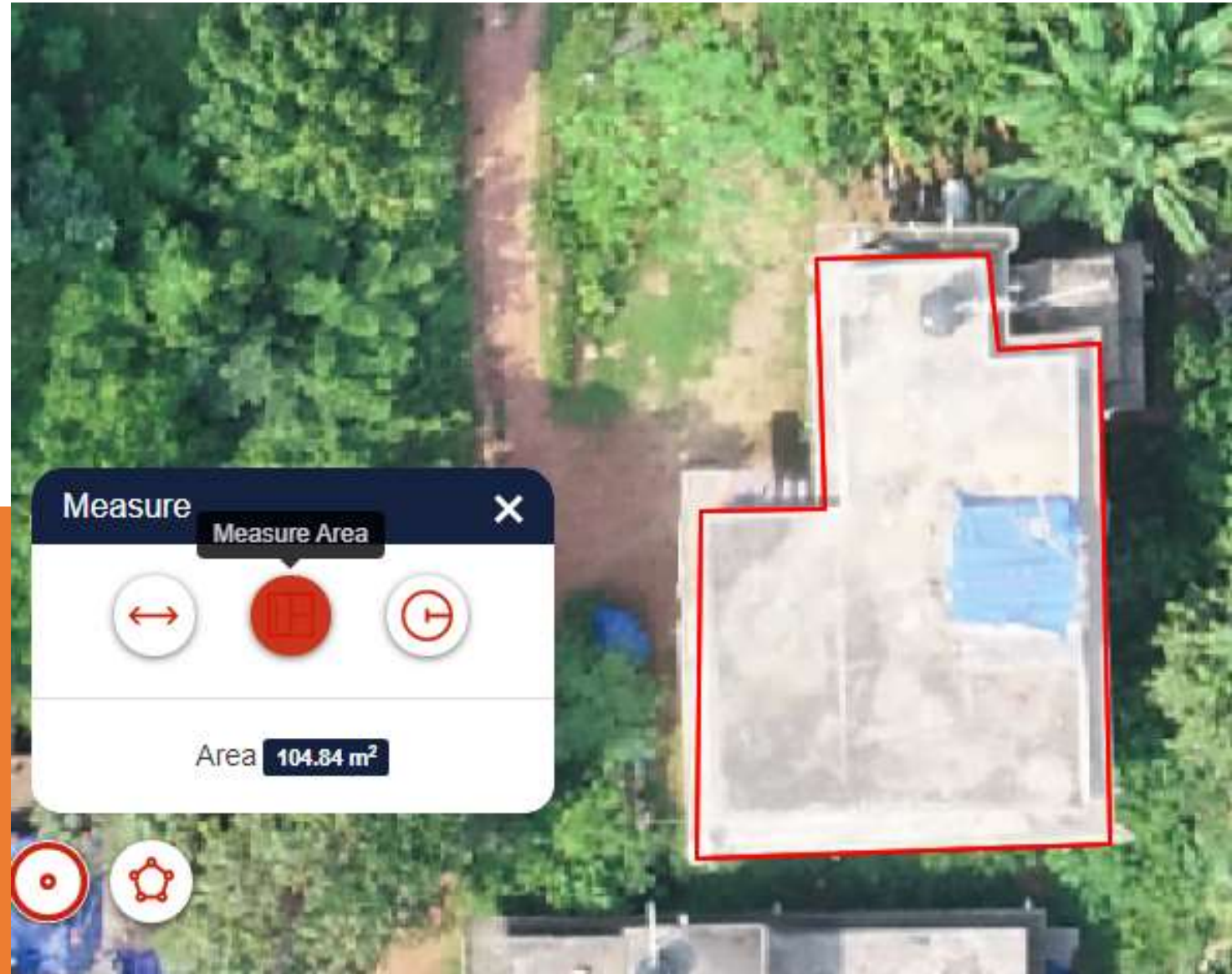
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- Tax evasion
 - Unauthorized expansions

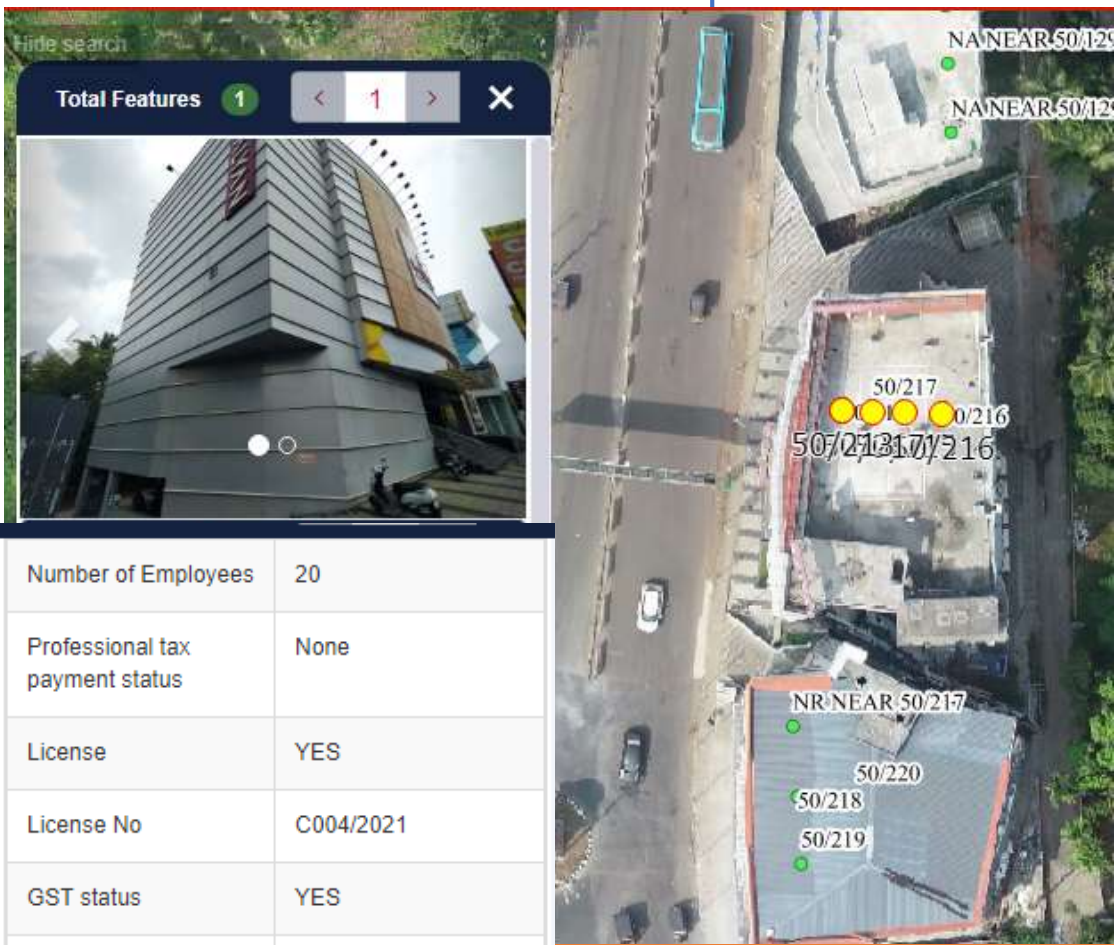
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BUILDING TAX

- Built-up area can be **inspected** using the building's footprint
- **Accurate information on building area**- Drone survey & laser tape.
- **Analyse revenue leakage** - ward-wise





Number of Employees	20
Professional tax payment status	None
License	YES
License No	C004/2021
GST status	YES
GST Number	None

Property area	
Basement 1	
Floor Area	429.1200
Ground Floor	
Floor Area	408.2400

PROFESSIONAL TAX

- Details of all commercial and industrial enterprises under the Corporation and **number of workers**
- Identify employers, who have not paid their legal labor tax and to take necessary follow-up action.
- Corporation can achieve a huge **increase in revenue**

PAY & PARK

More than 5 locations identified suitable for parking sites within the corporation

- **Open spaces and grounds** can be identified and turned into pay and park facility
- Source of income for the corporation



ENTERTAINMENT TAX



It is possible to visually **identify** the **institutions** that have to pay entertainment tax under the Corporation and ensure that they are paying the tax correctly.



Tourism Possibilities- Coastal Tourism and Heritage Tourism

- **Ascertain availability of necessary facilities** like Hotels, Restaurants, Transportation near Tourist spots.
- If inadequate, necessary steps can be taken to **develop the infrastructure**
- Attract more tourists and **increase revenue**



WASTE MANAGEMENT

- **Sites of Open dumping** can be identified and **CCTV cameras** can be installed at these spots
- **Penalties** can be levied on those who inadvertently dump waste.
- "**Paid waste collection**" can be done once or twice a month to collect inorganic waste.
- Garbage from homes and other establishments can be **collected for a fixed fee.**



JOB/SKILL



Skill Portal to connect with people in need of specific services with corresponding labourers

Workers can **register** themselves by paying a small registration fee to Corporation.

FOOD DELIVERY SYSTEM

Food delivery system can be envisaged in collaboration with all hotels within the Corporation.

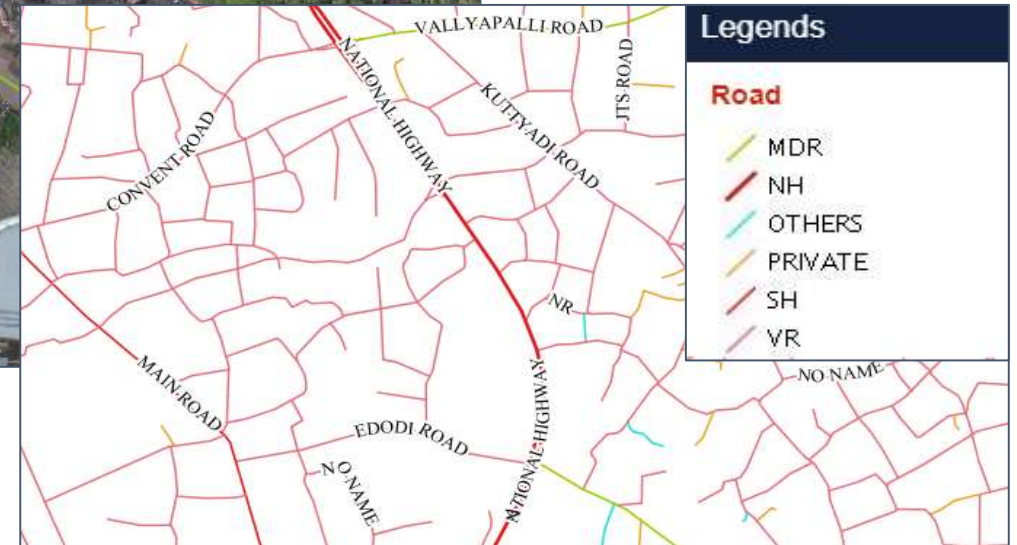
Basemap and details of hotels are available in DRISHTI



ROAD NETWORK

The details of all the roads including NH, SH, Private road, District Road, village road etc

- Details like name of the road, photographs, type of road are included in the portal
- All the Road junction, sign board, divider, taxi stand, parking area, sidewalk, Culvert, Drainage, Footpath, are also included



STREETLIGHT

- The street lights within project area is mapped which can be used for infrastructure planning and development analysis.
- Information such location , post number, type , status are provided.

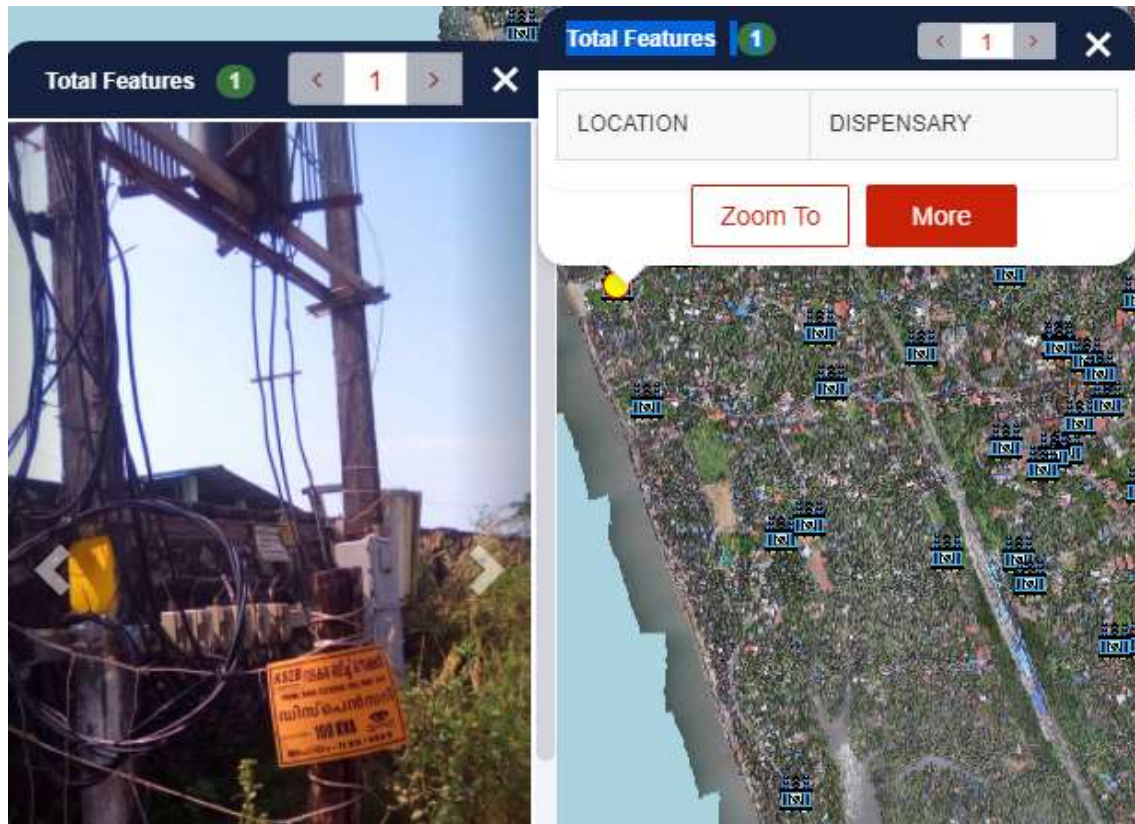
DETAILS, APPLICATIONS

- Infrastructure planning
- Development analyses like identifying areas where street lights are lacking.
- Also contributes to socio-economic analysis.



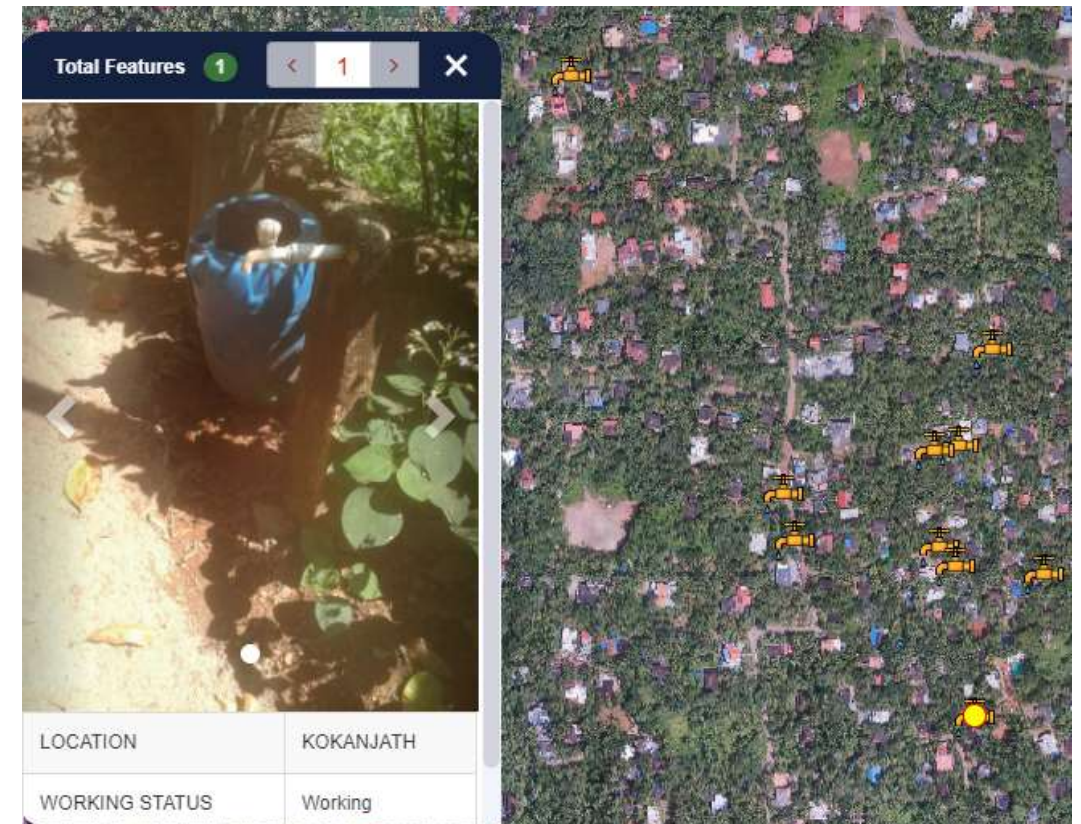
TRANSFORMERS

Locations of all the transformers along with their rating and photograph are included in the portal.



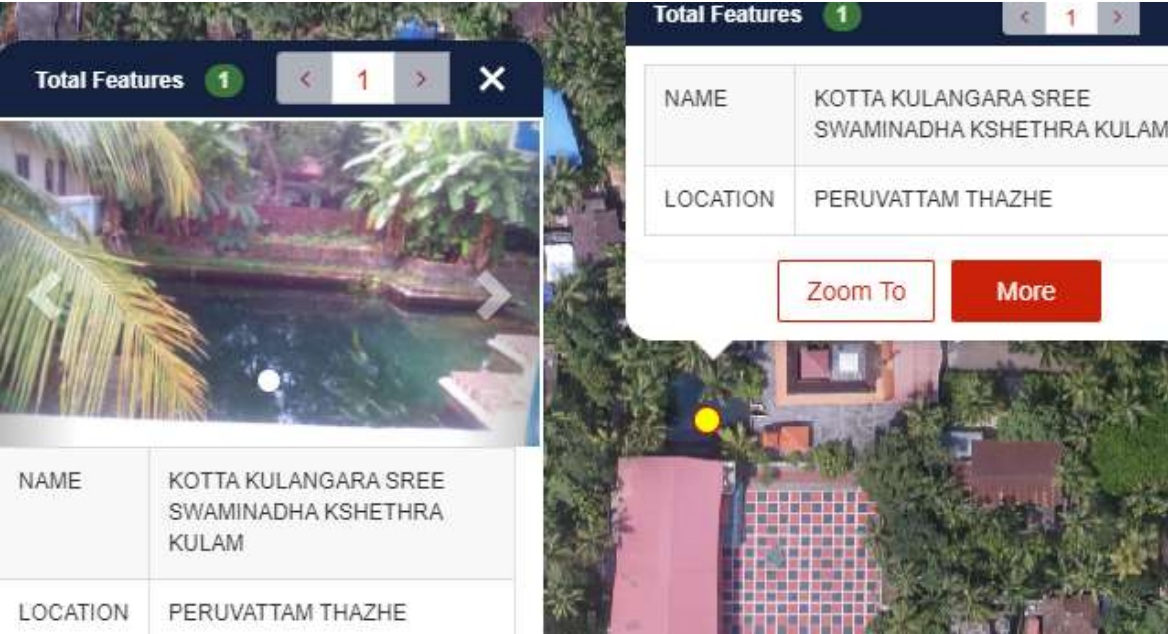
STREET TAPS

All the street taps are geotagged and the portal displays the location with the photograph and the working condition of the taps.



WATERBODIES

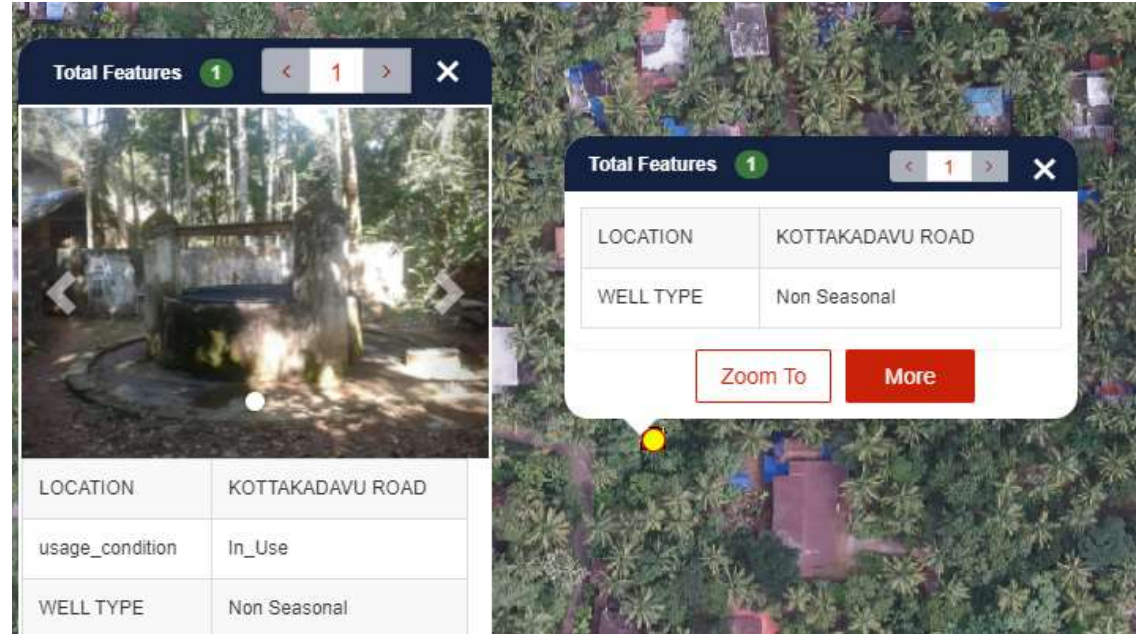
Details of River, Streams, Ponds, Canals, Well and Tank are provided in the portal with the photographs of them, their name, exact location.



Total Features 1

NAME	KOTTA KULANGARA SREE SWAMINADHA KSHETHRA KULAM
LOCATION	PERUVATTAM THAZHE

Zoom To More



Total Features 1

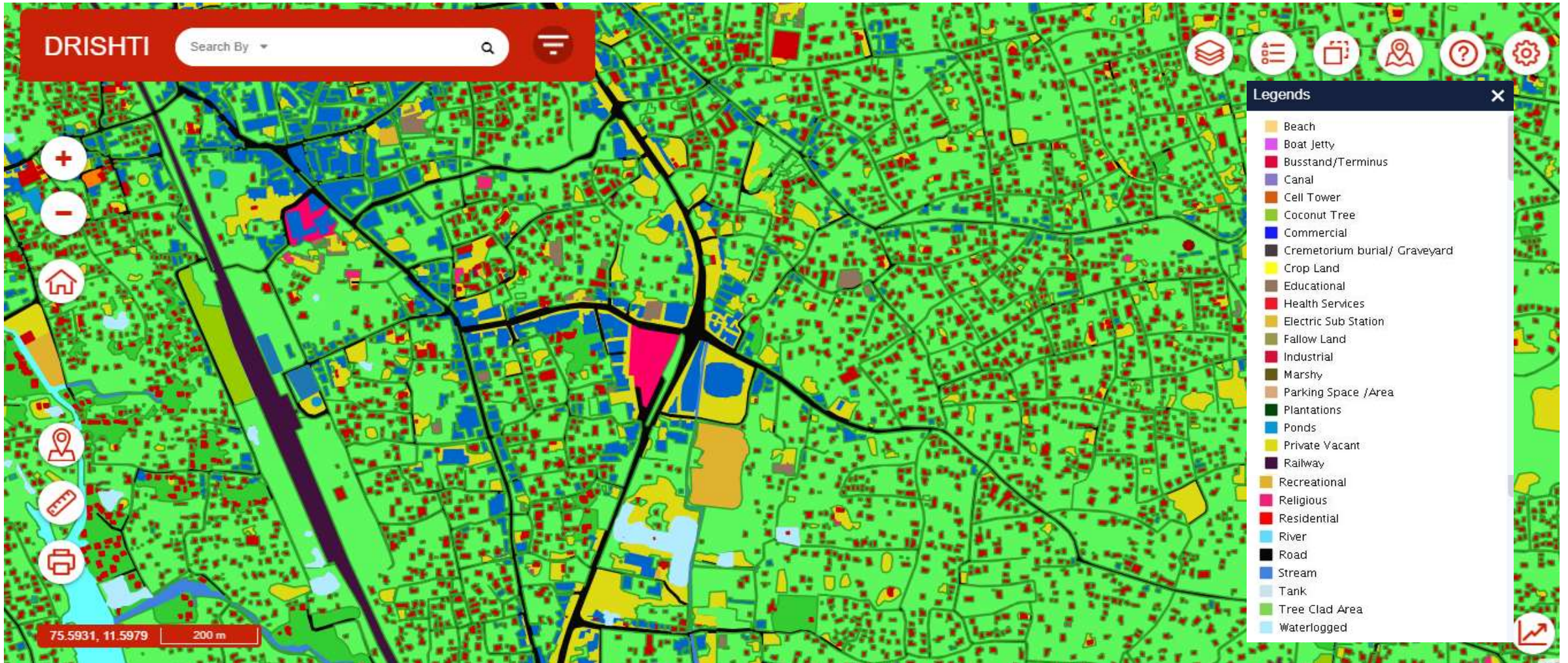
LOCATION	KOTTAKADAVU ROAD
WELL TYPE	Non Seasonal

Zoom To More

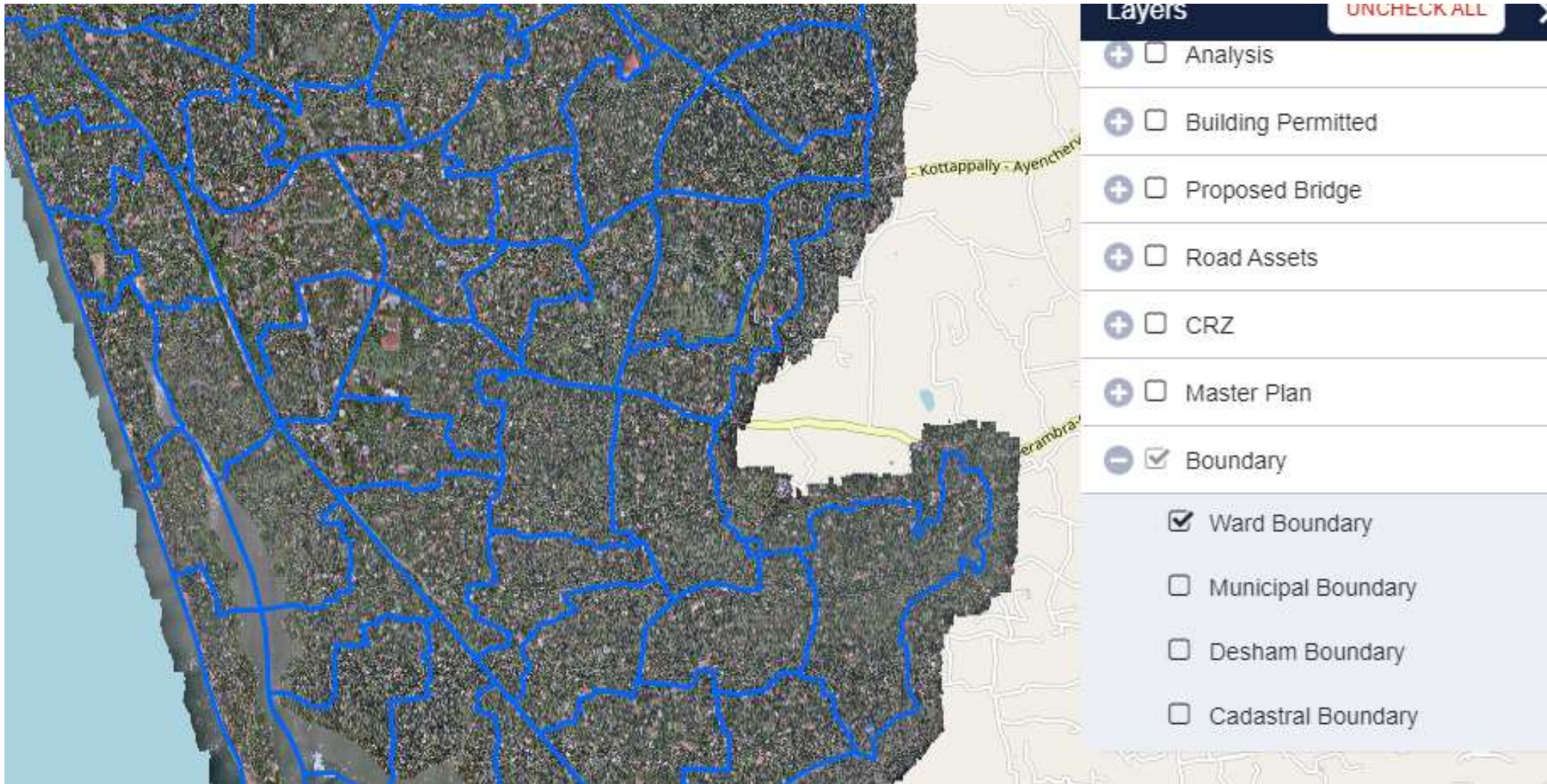
usage_condition	In_Use
WELL TYPE	Non Seasonal

LAND USE

- Land Use/ Land cover layer is provided within the portal.
- It is used for development planning, identifying change detection patterns etc.
- It is used for comparison with masterplan to check if development happens in accordance with it.



BOUNDARIES



All kinds of boundaries are available in the portal such as ward, municipal, desham and cadastral. These boundaries comes in handy while planning various activities in and out of the LSGD

PLANNING



Correlating Manmade Asset Layers With Planning & Governance Layers

Possibilities within portal:

- Comparison to check if ongoing development is done in accordance with master plan.
- Insights regarding critical infrastructure and their location.
- Analyse landuse/landcover , masterplan that aids in planning.

Layers:

Planning and Governance

- Building Permit
- Proposed Bridge
- CRZ
- Land use Land cover
- Masterplan
- Administrative boundaries

Manmade Assets

- Buildings
- Culverts
- Canals
- Wells
- Parks & Playgrounds
- Stadiums
- Mobile Towers
- Parking area
- Schools
- Hospitals
- Industries

DRISHTI

Search By




75.5951, 11.5935

100 m


Legends



Bus-stand terminus

 BUS STAND TERMINUS

Bus Terminal Complex

 Bus Terminal Complex

The Present Bus Terminal

Bus Terminal As Per Master Plan

Bus Terminal Complex



TOWARDS SUSTAINABLE DEVELOPMENT GOALS

Correlating Natural Assets, Sustainability And Socioeconomic Data

Possibilities within portal:

- Identifying areas of waste dumping and other forms of pollution and its effect on environment.
- Understanding vulnerable population and health risks involved.
- Propose locations for safe waste disposal.
- Protecting natural resources and assets through measuring levels of degradation and acting accordingly.

Layers:

Sustainability

- e-governance
- Waste Management
 - Waste dump
- Change detection
- Sustainable Development Goal Parameters

Natural Assets

- Rivers
- Ponds
- Vegetation

Socioeconomic Data

- Citizens details
- Education
- Health
- Pensions
- Ration cards
- Cattle and Poultry

Need of the hour...

- A One India GIS Act
- Rules
- Investment

THANK YOU !



*MAY I THANK ONE AND
ALL FOR GIVING ME A
PATIENT HEARING !*

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