be aware, live secure

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CHALLENGES IN FLOOD MONITORING

Data Collection

- Data collection is limited to weather forecast and dam level data once in a day.
- Many of the information sharing and reporting processes are still manual and **time-consuming** to process.
- Lack of any **real-time** systems to analyze and monitor flooding events.

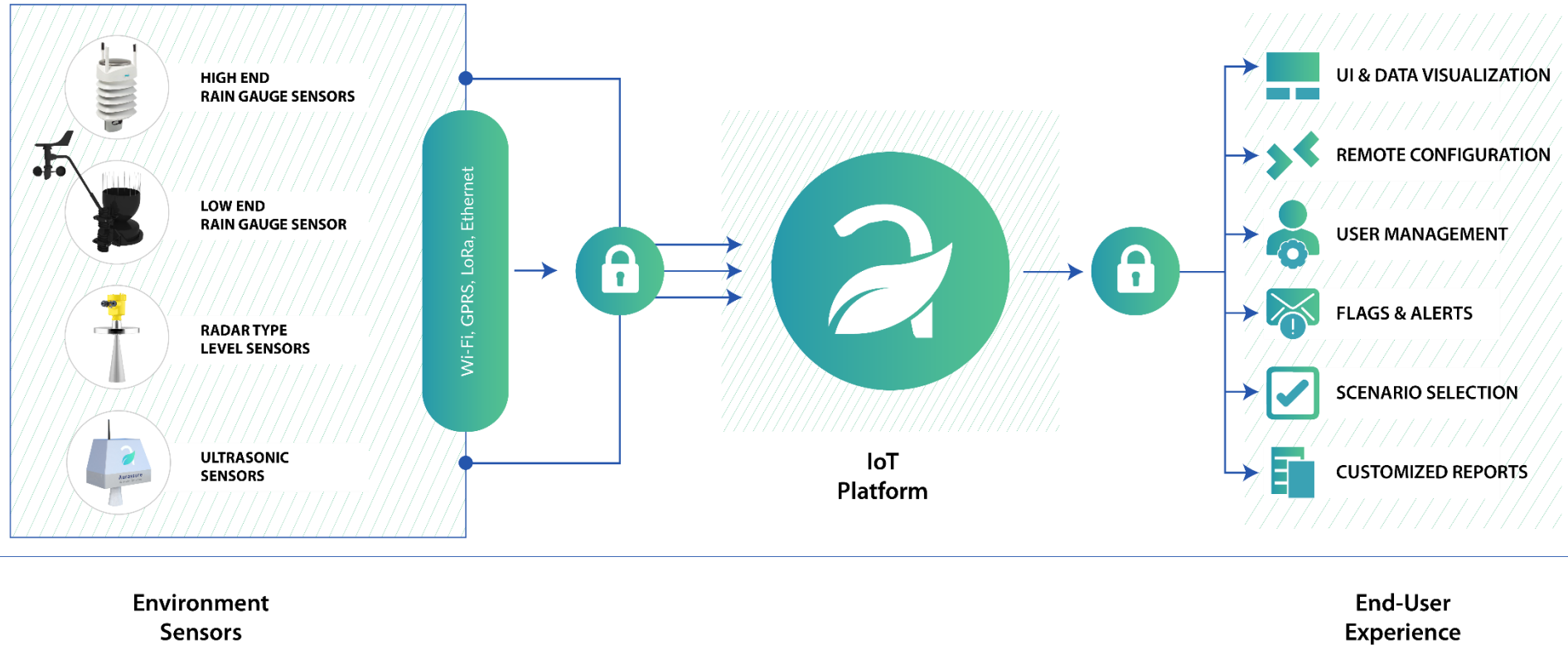
Forecasting

- Flood forecasting still very much depends on the human intervention.
- Existing models for flood forecasting are way too **conventional** and **simple**.
- The absence of computational and **analytic** tools to **predict** an event of a flood.

Warning

- Warning is limited to pre-flood scenarios, no information is available for post flood events.
- Communication and actions sync still remains complex.
- No infrastructure or tools available to visualise real-time flood scenarios in various areas

END-TO-END SOLUTION USING IOT



An End-to-End solution which includes IoT Sensors (Rain gauge, Level Sensors), gateways, Centralised IoT Platform and a GIS modelling platform to access the pre-flood and post flood situation in real-time. The Sensors will transmit the real-time information related to rainfall, water levels in various zones along the river catchment and the sensor will also provide information related water levels at various flood affected villages to understand more on the post flood decision support system. The GIS platform will provide real-time data models or flood forecasts along with generate various alerts. The data will be available in the form of Mobile App and WebApp which can accessed from any where using authentic login credentials.

THE SMART WATER SOLUTIONS

High Resolution Monitoring

Hazard Mitigation & Better City Planning

Environmental Policies Driven by Data

Cost Effective & Scalable Model

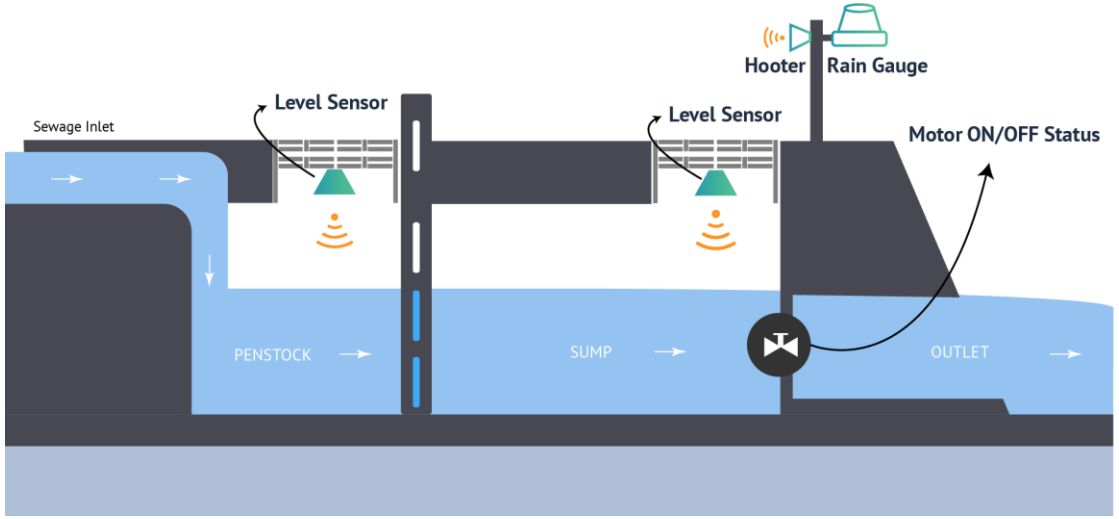
End-to-End Solution

Modular Design

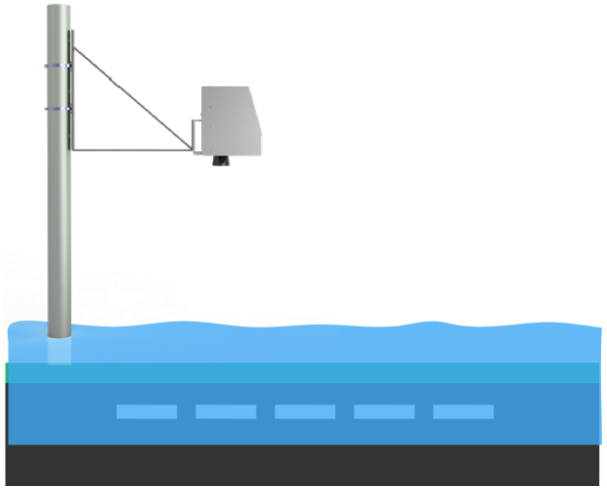
Easy API

Single Platform

SENSOR COMPONENTS: URBAN FLOODING

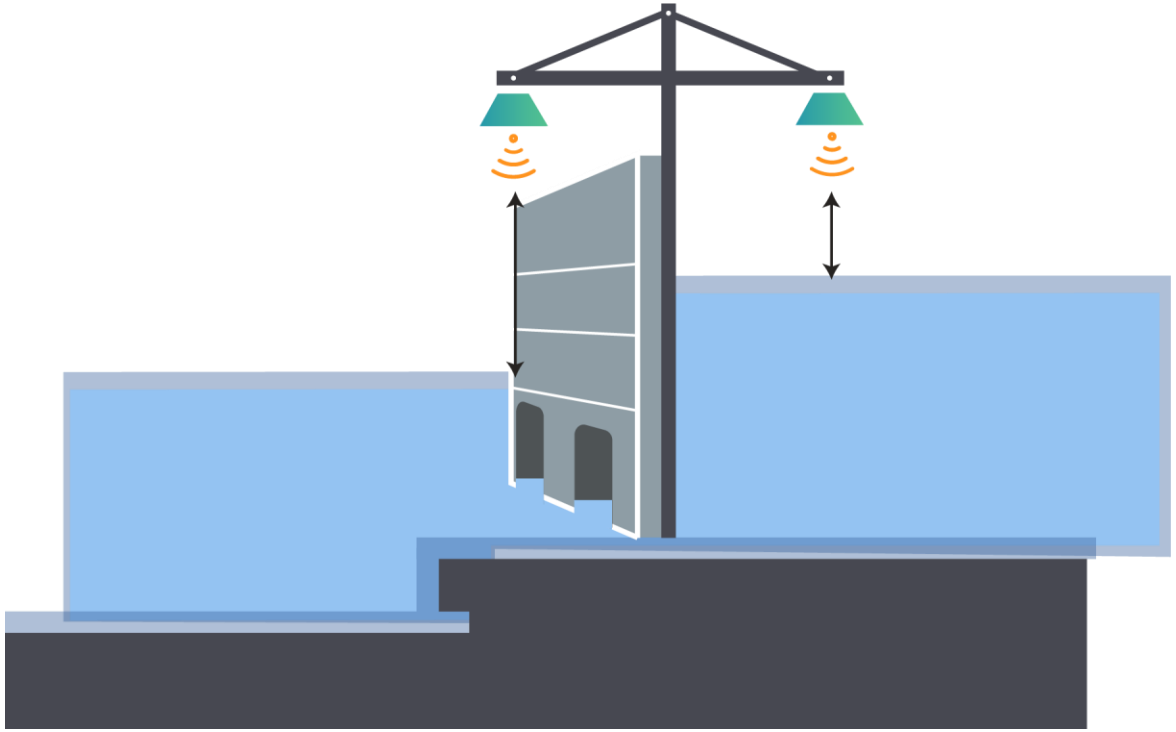


Pumping Station Operations

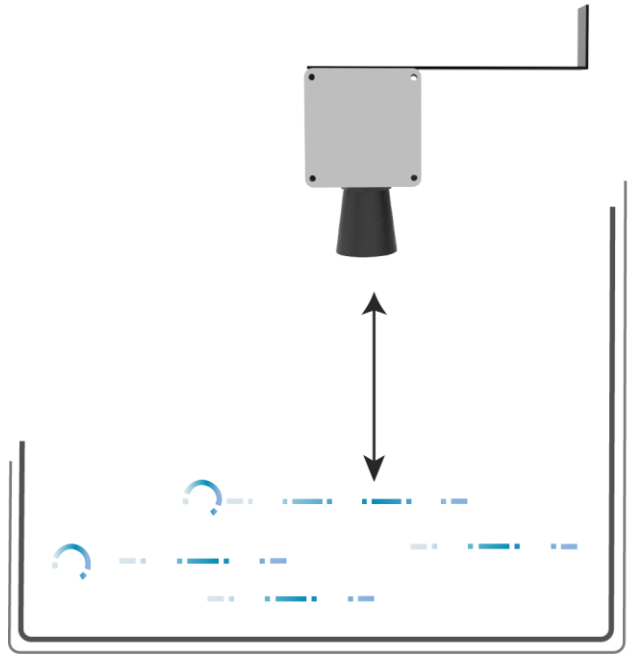


Street Inundation Sensors

SENSOR COMPONENTS: URBAN FLOODING



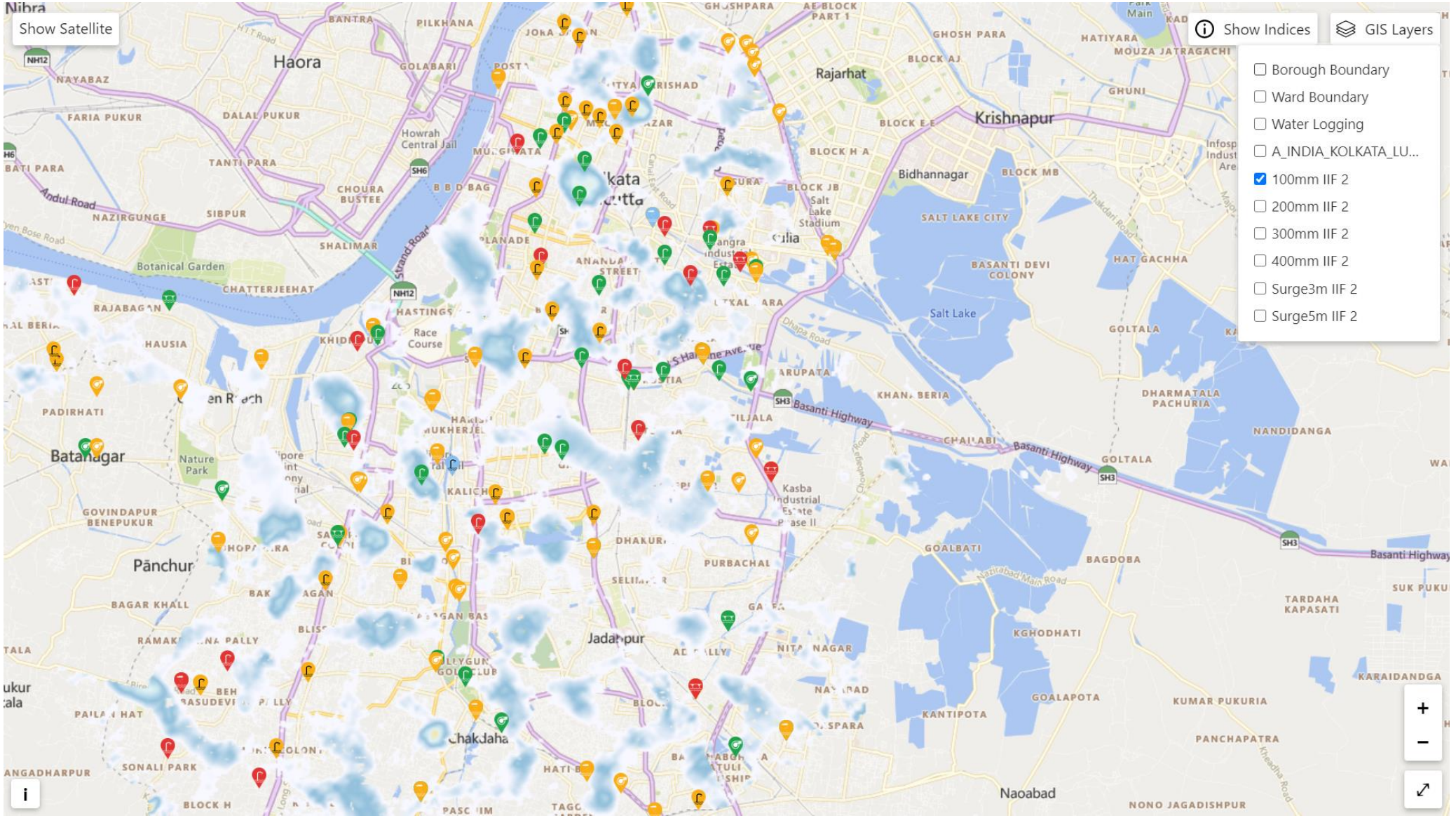
Canal Level Sensors



Sump and Penstock Water level

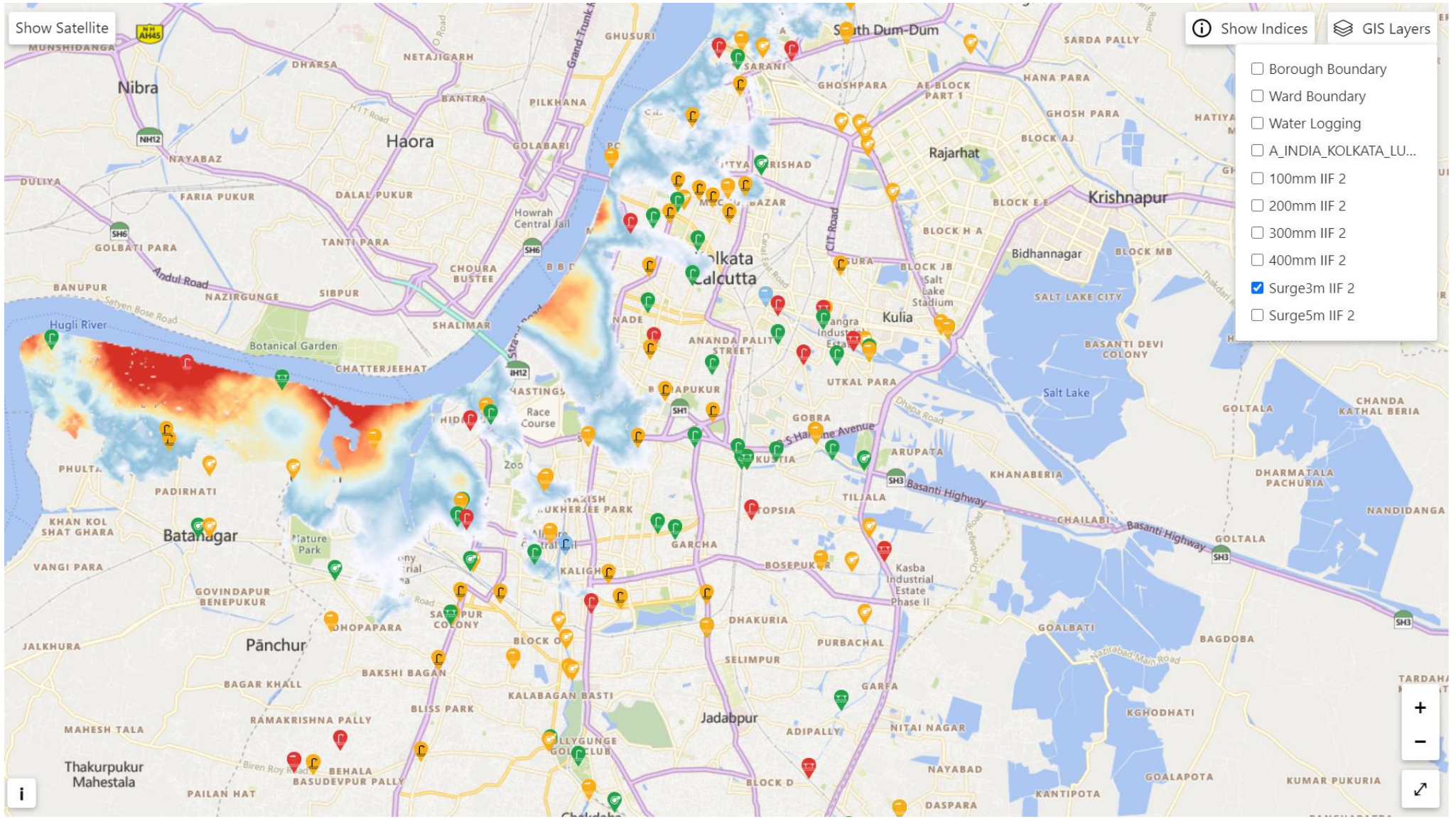
CASE STUDIES & USE CASES

Rainfall Analysis



CASE STUDIES & USE CASES

Water Surge (River)

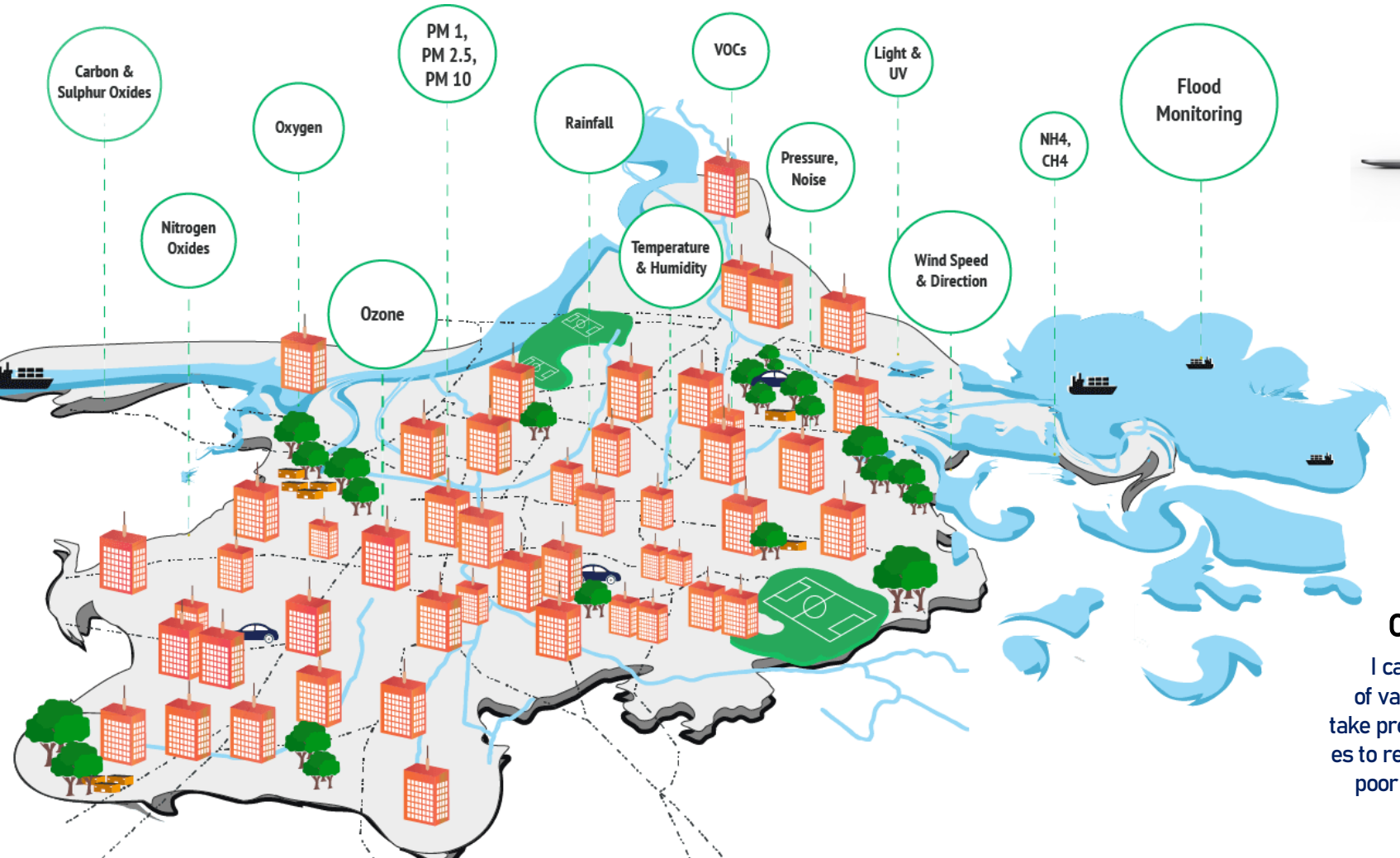


CASE STUDIES & USE CASES

Spatial Analysis

Air quality & Flood data captured over distributed locations represented in a heatmap.

A USE CASE FOR A SUSTAINABLE CITY:



- Real-Time Information
- Scenario Selections
- Sensor Data
- Warning System

System & Components

- Canal Level Sensors
- Pumping Station Sensors
- Rain Gauge/ Weather Sensors
- GPS Vehicle Tracking
- Street Inundation Sensors
- Air Quality Sensors

Stakeholders Role

CITIZENS

I can make use of valuable data to take preventive measures to reduce impacts of poor environment.

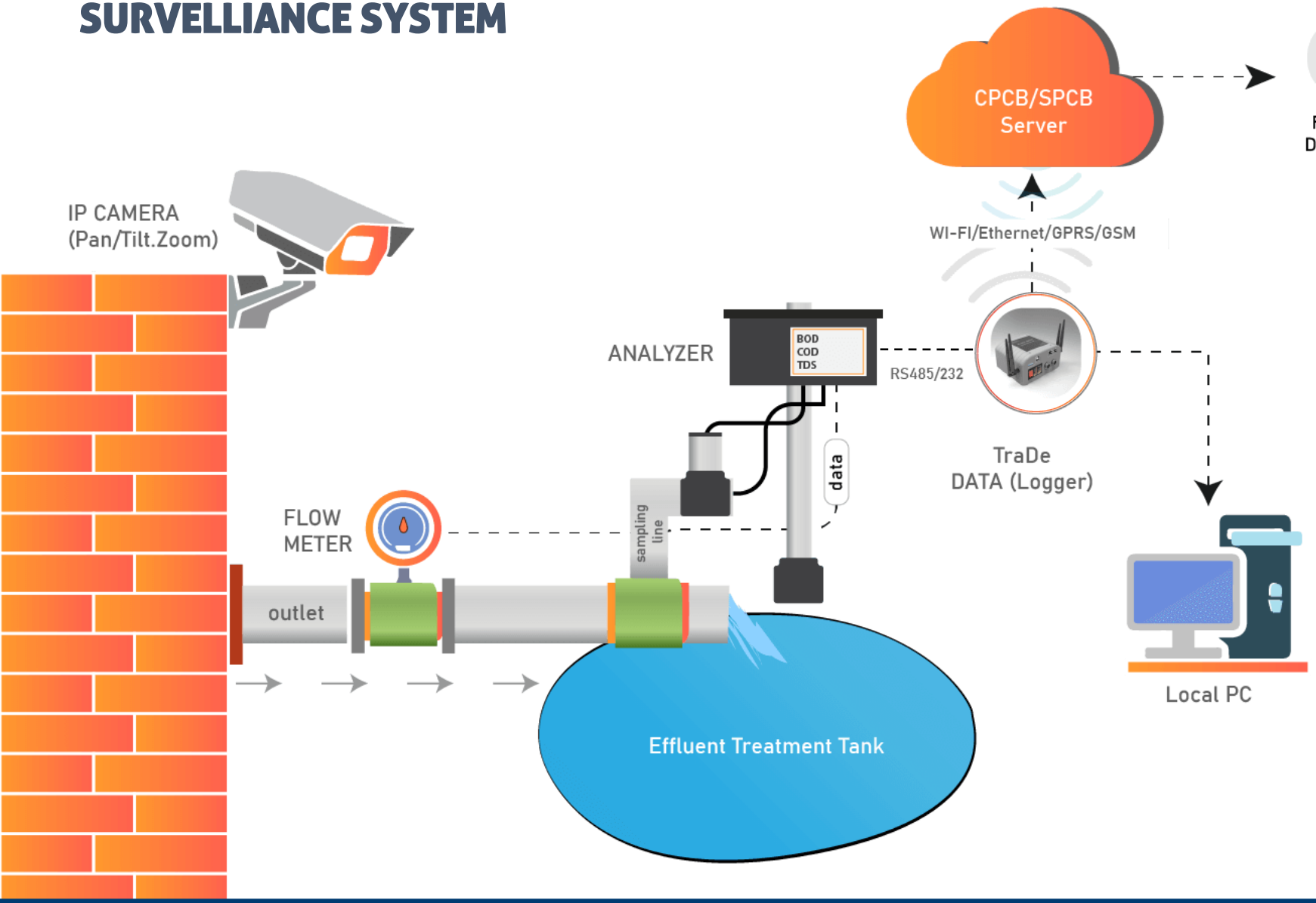
CITY OFFICIALS

I will frame better policies with the help of real time data and improve resilience and response.

COMMUNITIES

We can plan responses based on early warning and real-time status and can warn and help each other.

CONTINUOUS EFFLUENT MONITORING & SURVELLIANCE SYSTEM



ANALYTICAL PARAMETERS

- pH (Potential of Hydrogen)
- BOD (Biochemical Oxygen Demand)
- COD (Chemical Oxygen Demand)
- FLOW
- TDS (Total Dissolved Solids)
- TSS (Total Suspended Solids)
- Temperature
- NH3-N (Ammonical Nitrogen)
- As (Arsenic)
- Phenol (C_6H_5OH)
- Chromium (Cr)
- Cyanide (CN^-)
- AOx (Adsorbable Organic Halides)
- Nickel (Ni)

Effluent/Sewarage Treatment Plant | Analyzer/Sampling System | Monitroing Parameters

Thank You

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