MAIN OBJECTIVE

To design develop and deploy a comprehensive GIS based water management system.

SPECIFIC OBJECTIVES

- To develop a centralized database for all water related assets
- To develop a structured data catalogue to enable efficient data management
- To leverage on geospatial technologies to data analysis and improve decision making

FUNCTIONAL MODULES

Centralized database

This is the heart of the system. A scalable POSTGRES database is deployed to store various types of water related data.

Mobile data collection module

This is a mobile-app based solution that enables on-the-ground real time data collection and transmission to the database

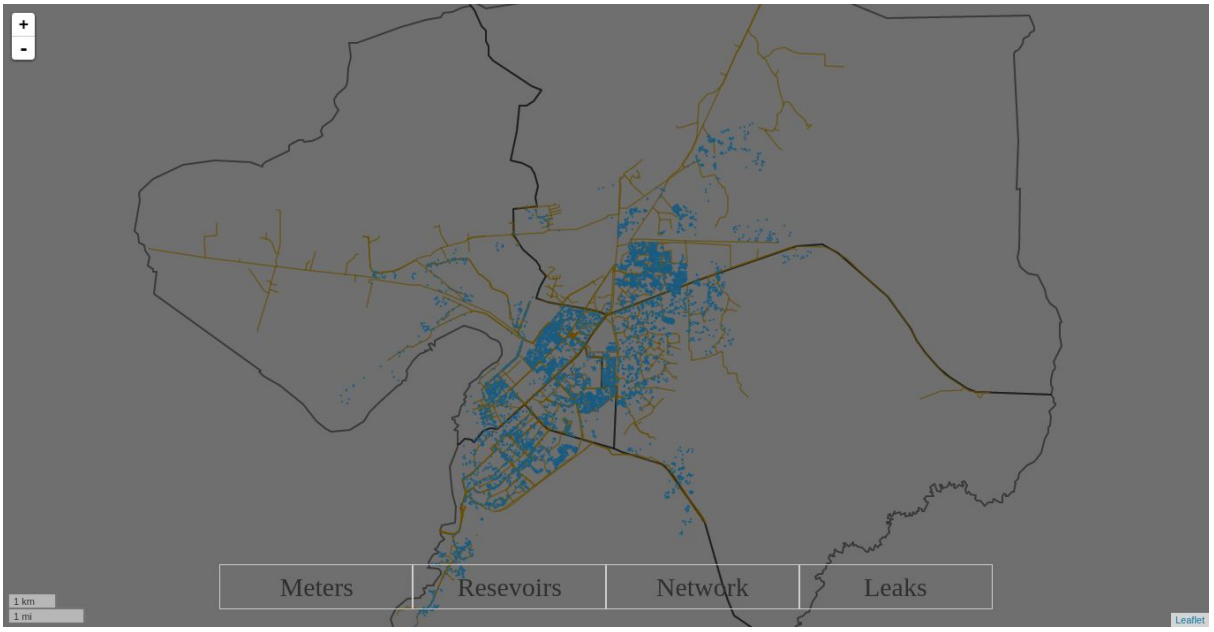
Desktop GIS module

The Desktop GIS environment is used for data capture, analysis and management.

Web-App Module

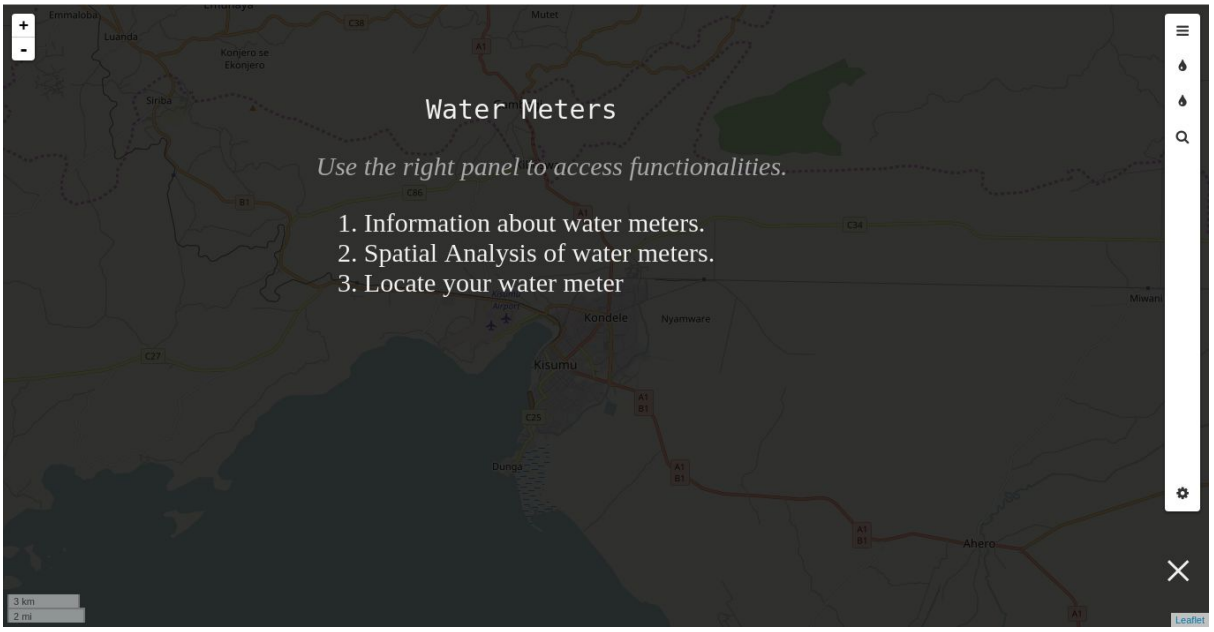
This is the main interface that will be accessible to management, field workers, and the general public. Below are screenshots of the developed system with descriptions of the system capabilities

1. Introduction

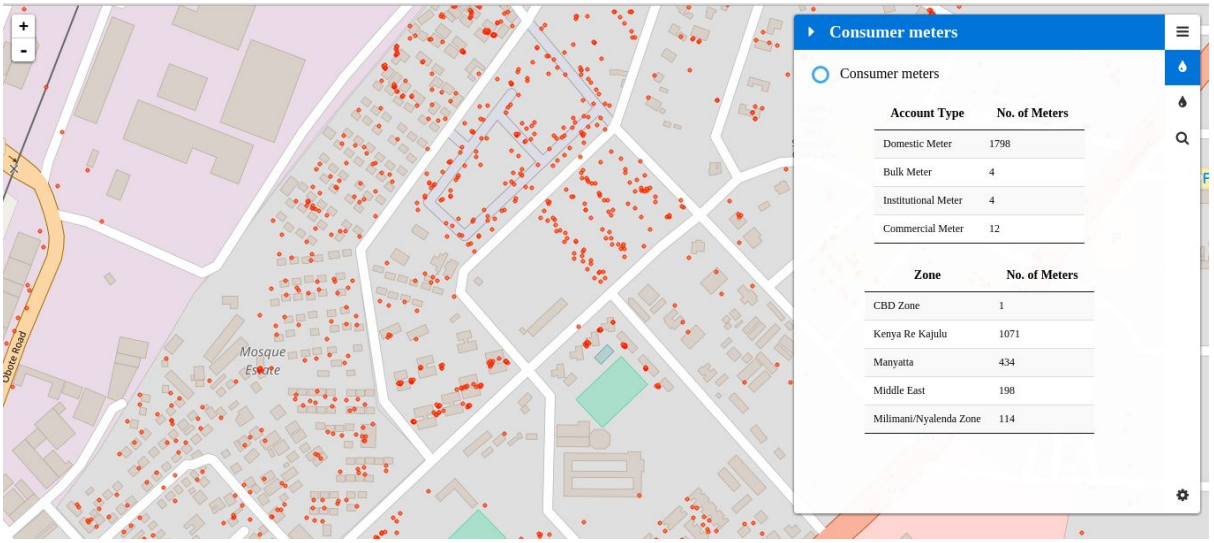


This introduces the various components of the system.

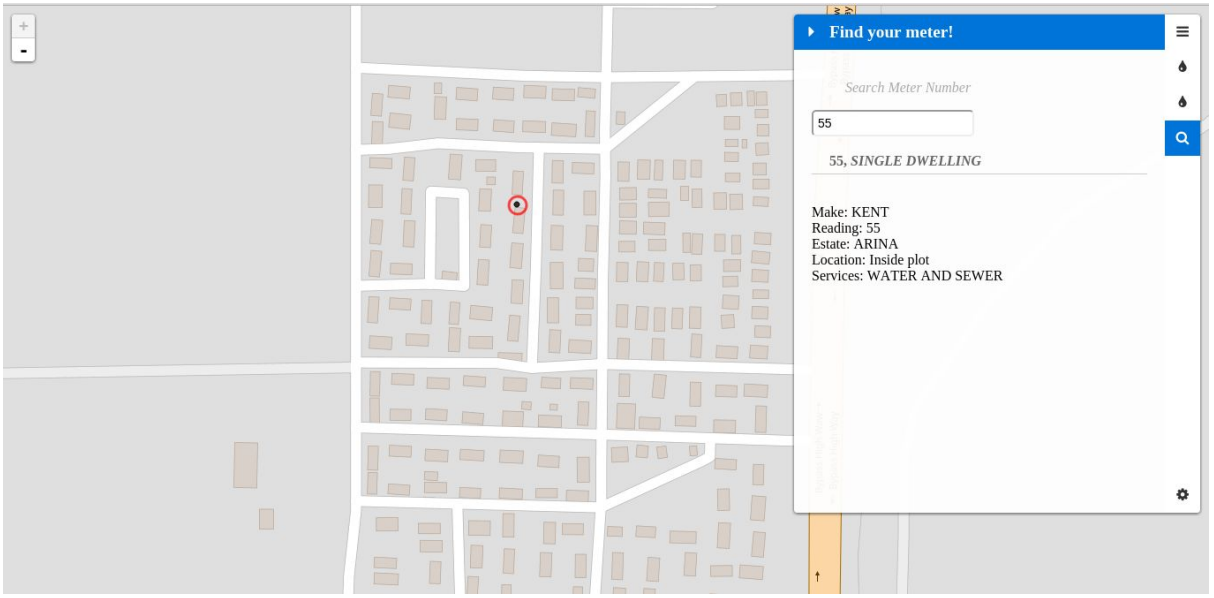
2. Meters



All the installed water meters are stored in the database and displayed in this section.

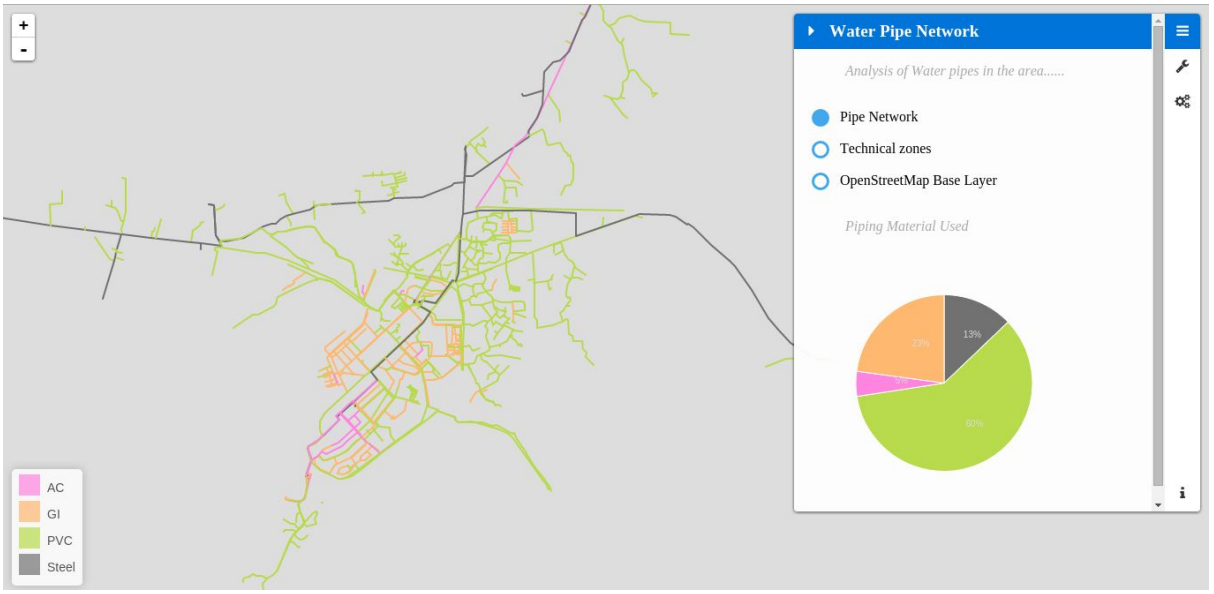


A user can view the spatial distribution of water meters, types of meters, functional status per zones and network pipe that it is connected to. Further analyses on payment analysis can be performed here.



A user can search for a specific meter and view details such as its location, metre type, current readings, and services billed.

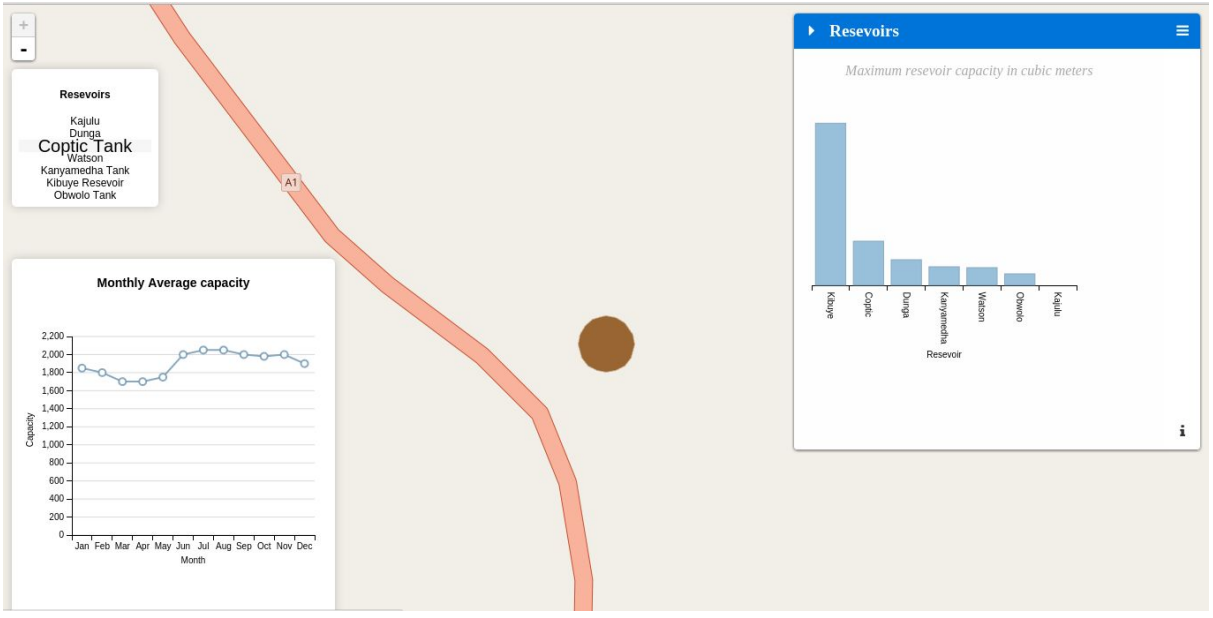
3. Network



From the database, a user can have a quick snapshot of the current status of the pipe network including details such as pipe material, size(diameter) distribution of the network, age installed, service status.

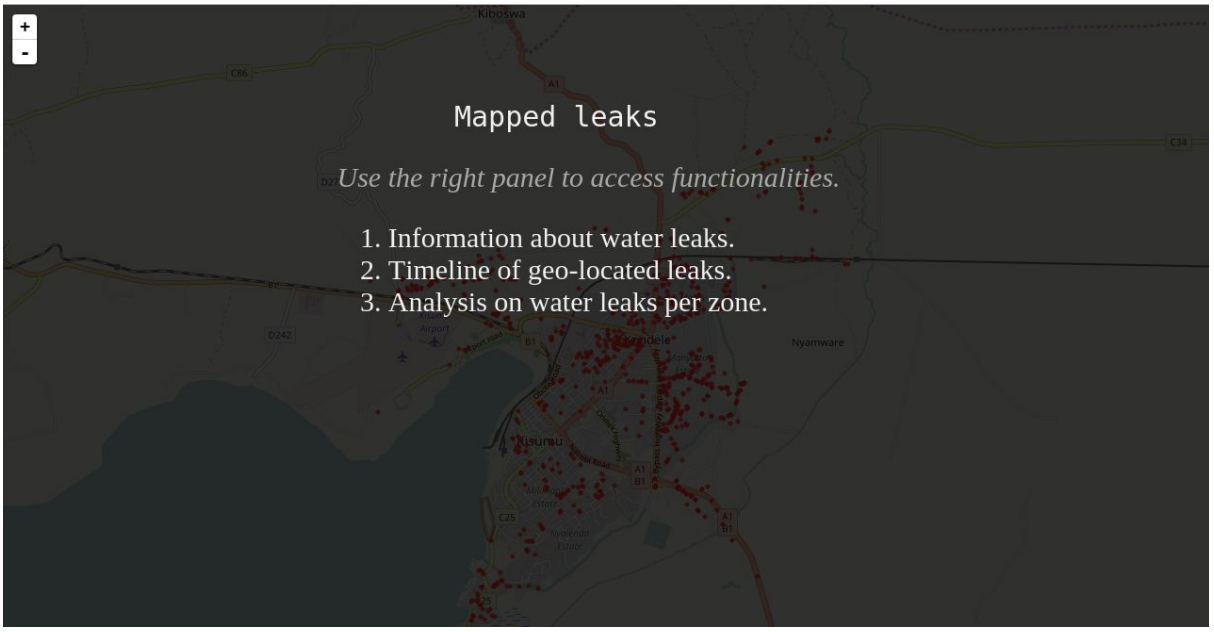
Analysis of the pipe network can also be conducted.

4. Reservoirs

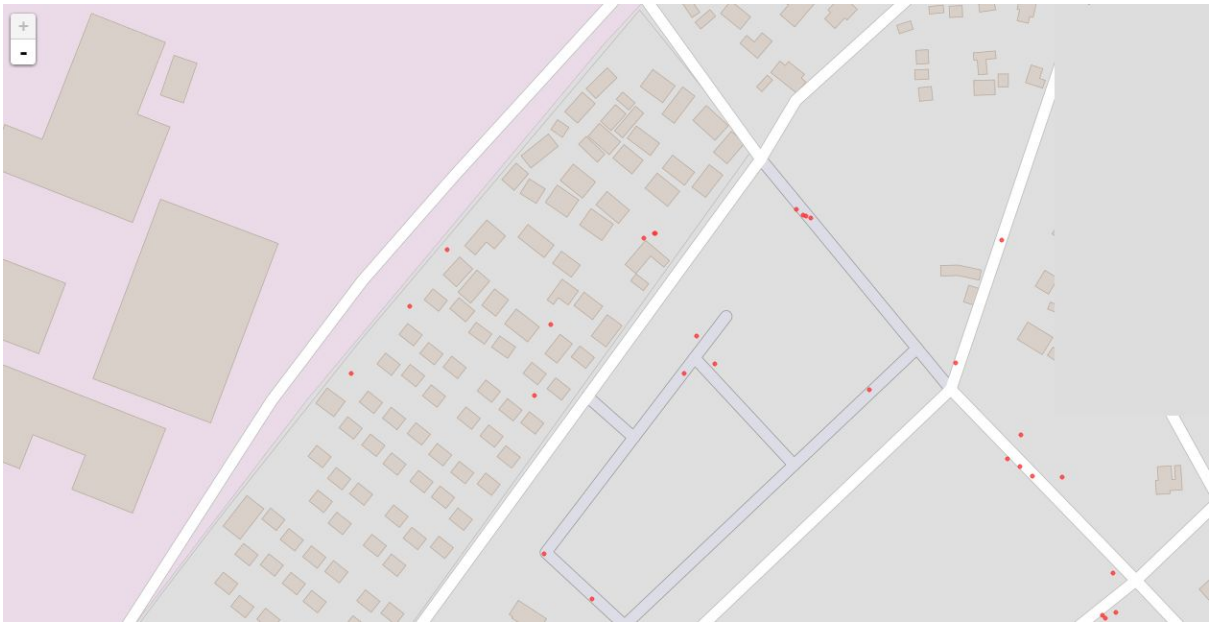


A database of reservoirs detailing their capacity, monthly average capacity, service area.

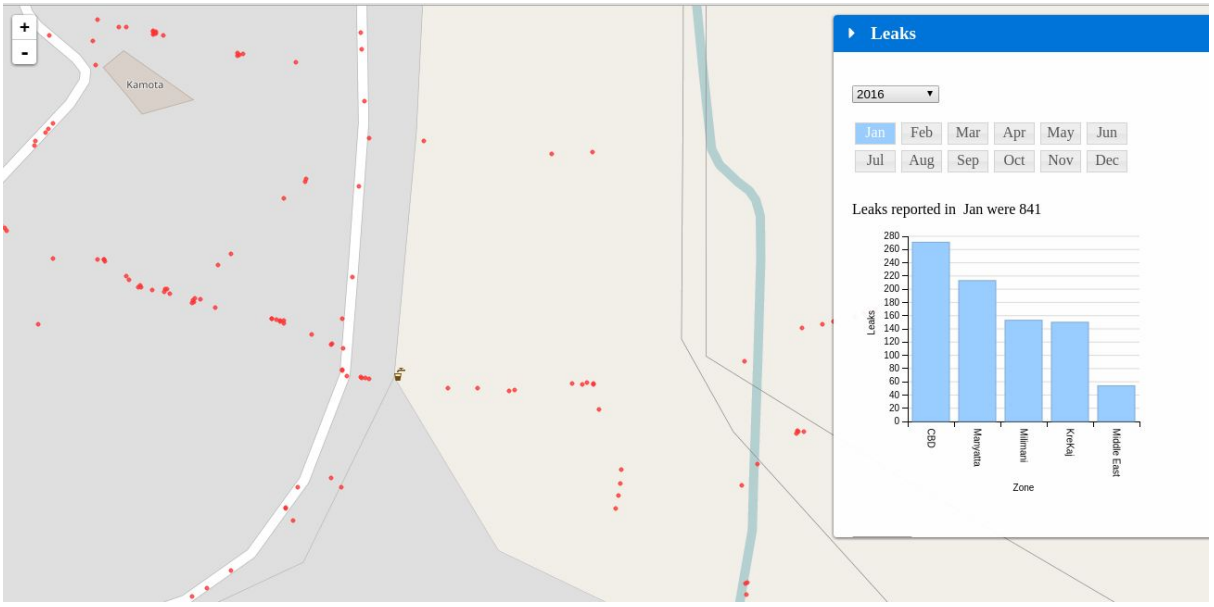
5. Leaks management



A realtime database of leaks showing their location, source, date reported, status(fixed or not)



Real Time updates of leaks as reported from the field



Temporal analysis of water leaks that could be used for decision making. For example old pipes, vandalism etc.