Urban Management DSS

Introduction

The UMDSS is one of the core and powerful tools in IMIS, it provides advanced capabilities for spatial analysis, mapping, data export, and dashboard visualizations. These tools empower city authorities to engage in evidence-based planning, management, monitoring, and decision-making for planning, management and monitoring and evaluation of sanitation system and services as well as a broader municipal urban management activity. In addition to the UMDSS module, there are IMIS Dashboard, Building Dashboard under BIMS, FSM Dashboard under FSIMS, Utility Dashboard of IMIS, CWISIMS Module including CWIS and KPI dashboard under CWISIMS are also has been considered as the components of UMDSS.

The UMDSS provides Export Data and Map Feature Sub-modules.

Export Data:

§ The Export Data sub-module enables users to export data layers in flexible formats such as SHP and KML. Users can customize exports by selecting specific ward(s) or combining layers to suit their needs.

Map Feature:

§ The Map Feature is a powerful interactive map interface which provides a dynamic platform to visualize and analyze spatial data created by various modules and sub-modules in IMIS. It displays all spatial information with categorical styling based on attribute information, presenting summarized layers at city, ward and 0.5 km grid levels.

§ The interface includes various spatial and complex tools that provide both basic and advanced functionalities, catering to a wide range of municipal operations. From navigation and visualization to sanitation-specific analyses and data updates, these features enhance decision-making by offering precise and actionable insights. These tools are – (i) Navigation and Map Interaction Tools (Zoom In & Zoom Out, Municipal Extent, Navigate, Info, Coordinate Information, Locate Point by Coordinate, (ii) Measurement Tools (Measure Distance, Measure Area), (iii) Printing and Support Tools (Print Map, Help), (iii) Sanitation-Specific Analysis Tools (Find Nearest Road, Find Building Connected to Containment, Find Containment Connected to Building, Find Associated Building, (iv) Editing Tools (Add Roads, Remove Markers).

The integration of tools like Find Nearest Road and Containment Analysis directly supports Citywide Inclusive Sanitation (CWIS) goals, while features like Measure Area, Print Map, and

Add Roads contribute to broader urban management and planning efforts. By using these tools, municipal authorities can efficiently monitor sanitation systems, plan infrastructure upgrades, and ensure equitable service delivery across the city.

§ UMDSS also offer some specialized tools – (i) Service Delivery Tools for tracking (Applications, Emptied Applications Not Reached to Treatment Plant, Containments Proposed to Be Emptied, Feedback Chart (FSM Service Quality), (ii) General Tools for tracking (Buildings by Structure Type, Property Tax Collection, Water Supply), (iii) Data Export Tools (Filter by Wards, Export Data Set, Building Owner Information), (iv) Decision Tools (Tax Due Buildings, Sewers Potential Buildings, Buildings to Sewer, Buildings to Road, Hard to Reach Buildings, Building Close to Water Bodies, Buildings Using Community Toilets, Area Population), (V) Summary Information Tools (Summary Information Buffer Filter, Water Bodies Buffer Summary Information, Wards Summary Information, Road Buffer Summary Information, Point Buffer Summary Information).

These tools enhance decision-making by providing targeted insights into property, utility, and demographic data. They allow municipalities to analyze specific areas, prioritize interventions, and support efficient planning, management and monitoring and evaluation of CWIS sanitation system and services, and overall urban management.