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Introduction

IMIS is an open-source GIS-based Digital Public Infrastructure (DPI) which functions as both a municipal information system and a software solution, integrating data, processes, and services to enhance municipal governance—particularly in sanitation management with Citywide Inclusive Sanitation (CWIS) approach to achieve SDG 6.2. It offers municipalities data-driven decision-making tools to strengthen governance across various sectors. By leveraging open-source technologies and Geographic Information Systems (GIS), it facilitates:

- Planning, management, and monitoring of sanitation systems using the CWIS approach.
- End-to-end FSM (Faecal Sludge Management) service chain oversight, including real-time data tracking.
- Generation and visualization of CWIS indicators for performance assessment.
- Intuitive dashboards for tracking CWIS indicators, Key Performance Indicators (KPIs), and other essential municipal governance metrics.

IMIS as a sub-national public data system contributes to national-level monitoring by feeding data into centralized systems, supporting CWIS indicators and other critical metrics for achieving sanitation targets. Beyond sanitation management, with its modular and scalable design, Base IMIS empowers local authorities by providing a unified, data-driven framework that enhances efficiency, accountability, and service delivery in municipal governance.

Citywide Inclusive Sanitation (CWIS)

CWIS is an approach to achieve SDG 6.2 for safe, equitable and financially viable sanitation systems and services. CWIS ensures everyone in a city has access to safely managed sanitation, and human waste is safely managed along the whole sanitation service chain ensuring protection of the environment and human health.

| CORE CWIS OUTCOMES | EQUITY | SAFETY | SUSTAINABILITY |
|--|--|--|---|
| Services reflect fairness in distribution and prioritization of service quality, price, deployment of public finance/subsidies | Services safeguard customers, workers and communities from safety and health risks by treating everyone with safe sanitation | Services are reliable and continually delivered based on effective management of human, financial and natural resources | |
| CORE CWIS FUNCTIONS | RESPONSIBILITY Authority(ies) execute a clear public mandate to ensure safe, equitable and sustainable sanitation services for all | ACCOUNTABILITY Authority(ies) performance against its mandate is monitored and managed with data, transparency, and incentives with data, transparency, and incentives | RESOURCE PLANNING AND MANAGEMENT Resources (human, financial, natural, assets) are effectively managed to support execution of mandate across timespace |

UN Water SDG 6 Global Acceleration Framework

CWIS approach focuses on service provision and its enabling environment rather than on building infrastructure, therefore, reliable data is the key success factor for CWIS. UN Water SDG 6 global acceleration framework has also identified data and information as one of the five accelerators of SDG 6 outcomes.

Key Features

- Spatial context for municipal data - infrastructure, services, and resources.
- Efficient storage and management of municipal data, including infrastructure and essential services.
- Integration of CWIS data to support planning, management, and evaluation of sanitation systems and services.
- Decision support tools for decision-making based on spatial analysis and modelling.
- Real-time dashboard for monitoring KPIs and CWIS indicators.
- User-friendly interfaces with access control features.
- Scalability to adapt to the evolving technology and information needs.
- Mainstreaming CWIS service chain into the city's business process.
- Interoperable with external data sources, including tax/revenue, public health, emergency response data and more.
- Robust security measures to safeguard sensitive data, ensuring city data privacy compliance.

System Architecture

IMIS Driven Service Model

Digitalizes the entire sanitation service chain, starting from customer requests for emptying service to the disposal of fecal sludge in the treatment plant, and reuse/recycle of the treated waste.

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