Indah Water

Indah Water Malaysia Planning Tool

A fit-for-purpose sanitation management tool

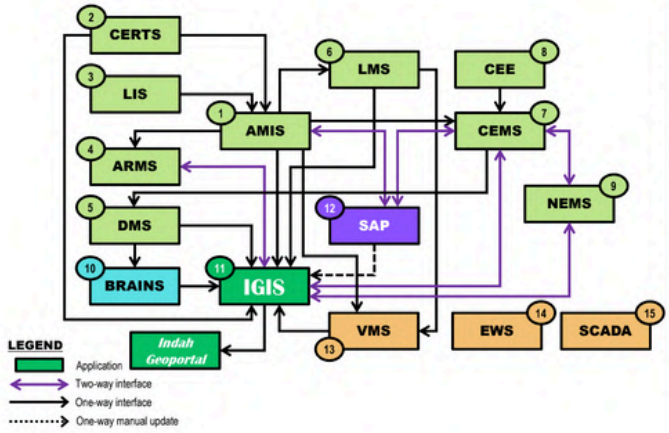
Indah Water Konsortium (IWK) implemented an advanced planning tool to elevate sanitation service delivery and management across Peninsular Malaysia and the Federal Territory of Labuan. This tool, aligned with ISO55001 Asset Management standards, integrates diverse data streams crucial for informed decision-making and strategic planning within the sanitation sector.

The IWK planning tools are utilized extensively by the following stakeholders at the national level across Malaysia:

1. **Public:** The Indah Geoportal is accessible to stakeholders, including the public, fostering engagement and information dissemination on sanitation services.
2. **Regulator:** Regulators like the National Water Services Commission (SPAN) leverage the tools for compliance reporting and guidance on strategic investments in sanitation infrastructure.
3. **Government Agencies:** Collaboration with government databases (PADU, MyGDI, WIBIS, MySPATA/IGMAS) enables seamless data sharing and interoperability among departments involved in sanitation management.
4. **Private Sector:** The Indah Geoportal serves as a platform to engage the private sector, enhancing stakeholder collaboration and participation in sanitation initiatives.

7.5: INFORMATION REQUIREMENTS

SYSTEMS INTEGRATION IN IWK'S ASSET MANAGEMENT



	SYSTEM
1	Asset Management Information System (AMIS)
2	Certification System (CERTS)
3	Land Information System (LIS)
4	Asset Risk Management System (ARMS)
5	Desludging Management System (DMS)
6	Laboratory Management System (LMS)
7	Customer Enquiry Management System (CEMS)
8	CEMS External Enquiry (CEE)
9	Network Management System (NEMS)
10	Billing & Revenue Information System (BRAINS)
11	Integrated Geographical Information System (IGIS)
12	System Application & Products in Data Processing (SAP)
13	Vehicle Monitoring System (VMS)
14	Early Warning System (EWS)
15	Supervisory Control and Data Acquisition (SCADA)

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Dev-Afrique Development Advisors, a DevGlobal partner, is currently implementing a BMGF-funded project called Public Service Data Systems: Landscaping, Learning, and Technical Assistance. The project aims to strengthen WSH public data systems - focusing on non-sewered sanitation – for effective performance management at the municipal and utility levels in selected countries across Africa.

Key Components and Functionalities

1. DATA INTEGRATION AND ASSET MANAGEMENT SYSTEM

The planning tool offers comprehensive asset management functionalities, covering both spatial (e.g., sewer networks, treatment plants) and non-spatial (e.g., operational data, customer feedback) aspects. It utilizes advanced systems such as IGIS (Indah Geoportal) and SAP (System Application & Products), along with IWK's proprietary software Moji5, uniquely designed to cater to the specific needs of sanitation infrastructure professionals.

- **Spatial Data Management:** IGIS visualizes and manages the geographic elements of sanitation infrastructure, including sewer networks, treatment facilities, and service coverage areas.
- **Operational Data Utilization:** SAP and Moji5 enable the integration of operational data, allowing for real-time monitoring of service performance, compliance metrics, and asset maintenance schedules.

2. SPATIAL DATA MANAGEMENT (IGIS)

- **Geographic Visualization:** IGIS is used to visualize and manage geographic components of sanitation infrastructure, such as sewer networks, treatment plants, and service coverage areas.
- **Geospatial Analysis:** Enables spatial analysis to optimize infrastructure planning and management.

3.OPERATIONAL DATA UTILIZATION (SAP AND MOJI5)

- **Real-time Monitoring:** SAP and Moji5 facilitate the integration of operational data, enabling real-time monitoring of service performance, compliance metrics, and asset maintenance schedules.
- **Data Analysis and Reporting:** Supports analysis of operational data for decision-making and reporting purposes.

4. DECISION SUPPORT AND REGULATORY COMPLIANCE

The planning tool implemented by IWK offers essential decision support at the national level. It guides strategic investments in sanitation infrastructure and aids in compliance reporting to regulators such as the National Water Services Commission (SPAN).

5. DATA SHARING AND STAKEHOLDER ENGAGEMENT

The planning tool facilitates indirect collaboration with sewerage utilities by enabling data sharing with various government databases. These include “PADU,” a utility database under JUPEM (Department of Survey and Mapping Malaysia) for spatial data, “MyGDI” (National Geospatial Center), “WIBIS” (SPAN Database), and “MySPATA/IGMAS,” a government asset audit database linked to the Public Works Department and the Sewerage Services Department Malaysia. This integration ensures interoperability and enhances the collective management of sanitation assets and services.

6.USER ACCESSIBILITY AND STAKEHOLDER ENGAGEMENT VIA INDAH GEOPORTAL

The Indah Geoportal is a centralized platform that allows various stakeholders involved in sanitation management across Malaysia to easily access and participate.

7. DATA INTEGRITY AND INTEROPERABILITY

Data inputs into the planning tool are sourced from multiple channels, including financial records, operational reports, customer feedback, and asset condition assessments. The tool's architecture ensures data integrity through standardized definitions and protocols, supporting accurate analysis and informed decision-making.

Indah Water Konsortium, a company owned by Minister of Finance Incorporated, is Malaysia's national sewerage company which has been entrusted with the tasks of developing and maintaining a modern and efficient sewerage system for all Malaysians. Visit the website to learn more: https://www.iwk.com.my/

These key components and functionalities highlight the robustness and effectiveness of the planning tool in facilitating data-driven decision-making, compliance reporting, and stakeholder engagement within the sanitation sector in Malaysia.

Components Of the IWK Planning Tools

1. DATA GENERATION

The Planning and Engineering Department of Indah Water Konsortium (IWK) collects comprehensive data related to sanitation infrastructure. However, various departments within IWK, including OMD, PED, and CBCD, collect brownfield and greenfield data.

- These data types include activities, such as site verifications, surveys, mapping, and GIS data.
- Data collection encompasses both spatial (geographic components like sewer networks and treatment plants) and non-spatial (operational data and customer feedback) aspects crucial for effective asset management.

2. DATA ANALYSIS

The planning tools produce critical outputs that inform operational requirements, such as Equipment Effective Life (EEL), work orders, and the identification of risk hotspots.

- These outputs are compiled into monthly reports for regulators, offering comprehensive asset and operational information essential for decision-making.
- The generated data includes asset details, operational performance metrics, and compliance-related information crucial for strategic planning and regulatory reporting.
- The database management system presents these results in various formats, including reports, spreadsheets, dashboards, maps, and analyses.

3.DATA OPERATIONALIZATION

The planning tools are versatile and can be used to make various decisions, such as meeting operational needs, generating compliance reports, and monitoring asset status.

- Local stakeholders who are responsible for sanitation management use these tools to ensure compliance with regulations, effectively manage assets, and deliver services efficiently. These tools play a crucial role in shaping different aspects of sewerage management, including sewerage OPEX and CAPEX programs, planning for sewerage catchments, and developing operational and maintenance strategies.
- It is important to note that the decision-making of these tools is not limited to a specific organizational level. Both top management and operational teams are involved in the process.

This document was developed by Dev-Afrique Development Advisors in collaboration with Indah Water Konsortium (IWK), the Eastern and Southern Africa Water and Sanitation Regulators Association (ESAWAS), and Global Water Operators' Partnerships Alliance (GWOPA).