

# BEST PRACTICE

*Asset data analysis for investment planning, risk assessments, and alignment of operation & maintenance*

## TOPIC:

AM1 – Asset data analysis crucial for investment planning, risk assessments, and proper O&M

## COP:

Asset Management

## WOP:

WOP – Uganda and Kenya



## MORE INFORMATION:



## CHALLENGE

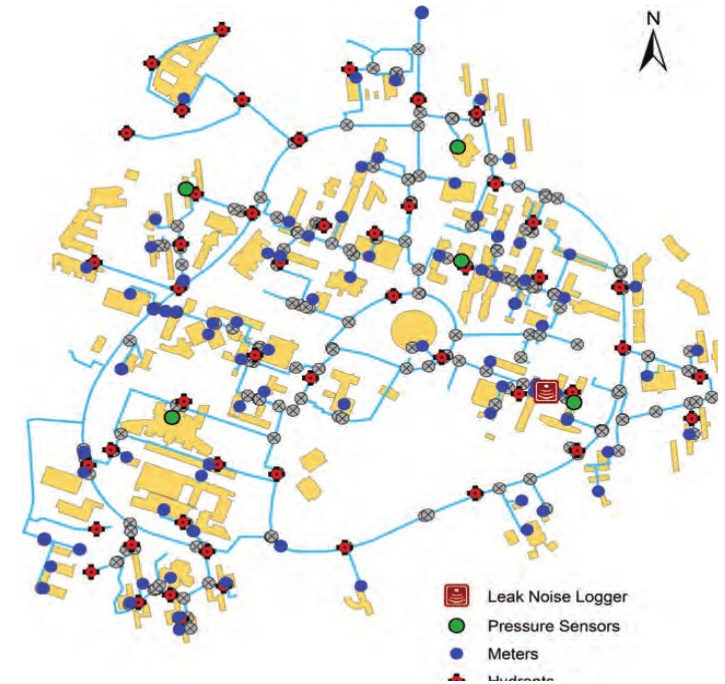
Asset Management Software is commonly used to record physical system elements and associated components. The asset manager's role is to construct a (GIS-based) asset database, incorporating accurate location and condition data. This database aims to enhance network planning and validate financial records pertaining to underground assets. Its purpose is to facilitate a common understanding among administrators, engineers, and operational staff, promoting data-driven decision-making in the management of water supply systems.

Lacking comprehensive information regarding the whereabouts, state, and worth of existing infrastructure, a water utility is unable to effectively assess future investment needs or ongoing demands for regular maintenance. In the absence of well-structured strategies for fortifying, expanding, substituting, and upkeeping infrastructure, a utility cannot maintain financial stability in its operations.

The huge amount of data that are collected are to be properly registered enabling future analysis and use to optimize a wide variety of working processes. Various software systems are available; MapKit is one of them and tends to be quite well fit for the job. It supports the reporting and handling of technical incidents (like leaks, bursts and water outages) and helps in major decision making at utility level.

## APPROACH

Mapkit software was since 2018 applied in 2 major NWSC branches in Kampala for testing. Integration with CRM improved handling of connections and leakage reports, and simplified branch managers' reporting. Ongoing assessment led to Mapkit's expansion to all Kampala Water branches and NWSC regions for water & wastewater operations. Four years later the Mapkit is a valuable instrument for utility management and core operations.



## RESULTS

Asset registration and digitalization significantly elevate the professionalism in managing system infrastructure, enhancing operational maturity. This process streamlines investment planning and fosters systematic water distribution while addressing water loss challenges. CRWB Malawi targets registering over 50% of distribution assets in GIS by 2025, surpassing 75% by 2026, and achieving complete registration by 2030. NWSC strategically recruited young professionals to expedite asset registration, boosting operational efficiency and structured investment planning. CRWB's asset database aims to curtail water losses and augment revenue from water sales. Initial GIS registration prioritizes all distribution assets, including mains, reservoirs, distribution lines, valves, customer connections, leaks, and faulty meters, despite challenges in evaluating current asset performance comprehensively.

## SUCCESS FACTORS

Success factors for the introduction of AM were (i) strong commitment from top management, (ii) support from VEI short term experts to introduce a systematic approach, (iii) opportunity to mobilise field employees (plumbers & meter readers) to participate in data collection, and (iii) the positive interaction with trained peers. The training and involvement of field staff was appreciated while **sharing the direct gains** from the collected data (detailed mapping) was most welcomed as it supported the operational work (**quick wins**).

## FURTHER INFORMATION

**Malawi:** Ed Nhlane (E: [Ed.nhlane@vei.nl](mailto:Ed.nhlane@vei.nl)) and Dennis Jansen ([D.jansen@wml.nl](mailto:D.jansen@wml.nl))

**Uganda:** Pauline (E : [namulipauline1980@gmail.com](mailto:namulipauline1980@gmail.com)) and Martin Nijse (E : [Martin.nijse@vei.nl](mailto:Martin.nijse@vei.nl))

Do also consult the peers and library of the CoP AM



## OTHER

The Global Water Operators' Partnerships Alliance (GWOPA) helps water operators help one another to provide quality services to all. GWOPA is an international network alliance supporting water operators to engage in WOPs. WOPs are peer support exchanges between two or more water operators, carried out on a not-for-profit basis with the objective of strengthening operators' capacity and performance to provide better services to more people ([www.gwopa.org](http://www.gwopa.org)).

WaterworX is a major Dutch WOP program engaging over 50 water operators in their joint effort to capacitate peers, strengthen their work processes, and ultimately improve performance ([www.waterworxprogramme.com](http://www.waterworxprogramme.com)).