

DIGITAL TWIN FOR URBAN WATER

Real-Time Monitoring of Water and Utility Systems

aquaCITY

powered by aquaWISE

www.vassarlabs.com

For Over 121 Urban Local Bodies

ENSURING UNINTERRUPTED SUPPLY
OF WATER. MINIMIZING LOSSES AND
MEETING SERVICE-LEVEL
AGREEMENTS



About Us

Founded in 2014 by MIT and IIT Alumni, Vassar Labs is a company of 370 plus dedicated climate tech warriors. Vassar Labs leverages technologies such as IoT, AI, GIS, Cloud Computing, Remote Sensing, Big Data, and Digital Twins to build solutions for effective monitoring and management of Water, Power, Disaster, Agriculture, and Smart Cities.

Why Choose Us?

Monitor water infrastructure, including distribution networks in real time. Gain insights into utilities' performance, oversee connections, and manage drinking water supply from the source to the end-user. A platform to manage urban water that creates a digital twin, so that you can measure, monitor, and manage in real-time, leveraging IoT and Artificial Intelligence.

Highlights



4.2 Millions + Connections
Managed by the Platform



35K Miles + Length of
distribution pipes managed



10K + IoT Devices for
realtime intelligence



1500 + Pump houses
operation are being managed



15 Millions + Visits per year as
admins, citizens, and public

Digital Platform for Water and Utility Systems

Real-time Decision Support

Demand forecasting



Analyze historical data to forecast future water demand at the residential complex, industrial units, IT parks at zone or ward level.

Water Supply Forecasting



Provide a holistic view of water availability for the next week or month, notifying treatment plants to adjust production accordingly.

Digital Twin of Water Utility



It creates a digital twin for real-time monitoring of water supply, demand, and pump operations to optimize efficiency and reduce power consumption. Additionally, it offers scenario simulations to analyze operational effectiveness for guiding daily water operations.

Distribution Monitoring



Real-time monitoring of water distribution by detecting leaks, predicting demand, and ensuring efficient resource management for fair water allocation and reduced wastage.

Connection Management



Integrate end-to-end digital workflow for new connections, manage existing customers and track SLAs & KPIs in realtime.

Water Billing & Collection

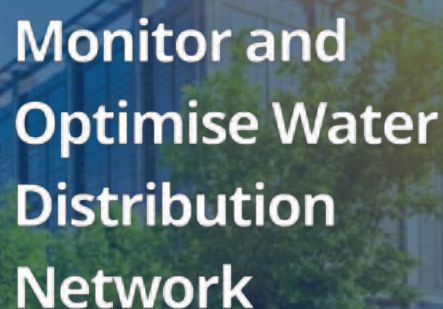


Leverage water accounting to support accurate billing based on actual water usage. Use interactive dashboards to track appropriate and timely revenue collection.

Consumer Grievances



Realtime tracking and allocation of grievances and requests. Ensure service level complaints are resolved within the SLA and further maximize productivity.



Monitor and Optimise Water Distribution Network



Water Quality Monitoring



Monitor water quality by assessing clarity, turbidity, color, and concentrations of optically active substances.

Waste Water management



Monitor and optimize treatment of sewage and grey water, improving efficiency, and reducing environmental impact by recycling and safe discharge.

Water Reuse & Optimization



Optimize water reuse with analytics on recycled water for household and industry use, effectively conserve freshwater resources, reduce strain, and further maximize water utilization.

Pump Optimization

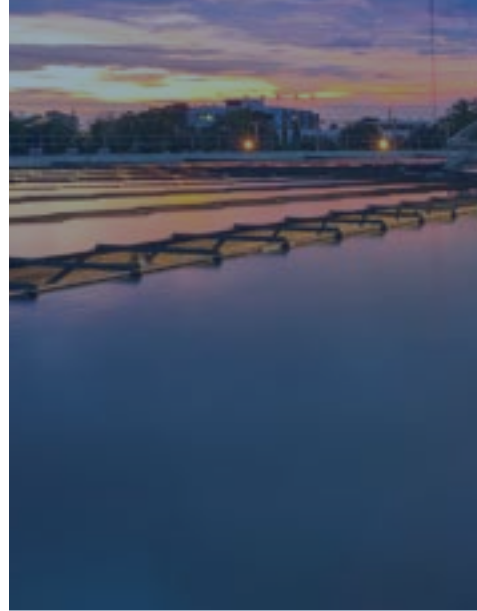


Get insights on pump scheduling, total runtime, energy consumption, vibration, pressure, etc. Further, it enables alerts on pump maintenance and usage.

Asset Management



Get predictive maintenance alerts on remaining useful life of assets, detect anomalies and potential equipment failures.



Non Revenue Water tracking



Identify water sources via sensors & AI models. Receive leak alerts on mobile & website for prompt action to reduce water losses. SLA metrics and service delivery monitoring in the cloud use automated algorithms to track performance parameters like baseline performance, lower performance and breaches.

Water Budget and Audit



Streamline water audits and budgeting by providing detailed, real-time data on water usage, identifying inefficiencies, and forecasting future needs. Further, enable cities to allocate resources more effectively, optimize costs, and ensure sustainable water management practices.

**Track Every Drop:
From Source to Tap**

Our Approach

Technology for Water

Digital Twin



It creates a digital twin for real-time monitoring of water supply, demand, and pump operations to optimize efficiency and reduce power consumption. Additionally, it offers scenario simulations to analyze operational effectiveness for guiding daily water operations.

Geospatial Intelligence



Geospatial Intelligence helps in managing water pressure & flow, energy consumption & efficiency, and provides health monitoring of each pump to enable alerts and predictive and preventive maintenance. This enables performance monitoring in real-time with analytics on seconds, hourly, daily, monthly, or yearly.

Internet of Things



Vassar Labs provides real-time insights into asset performance, environmental conditions, and operational processes, enabling proactive decision-making and efficiency improvements across industries.

Artificial Intelligence

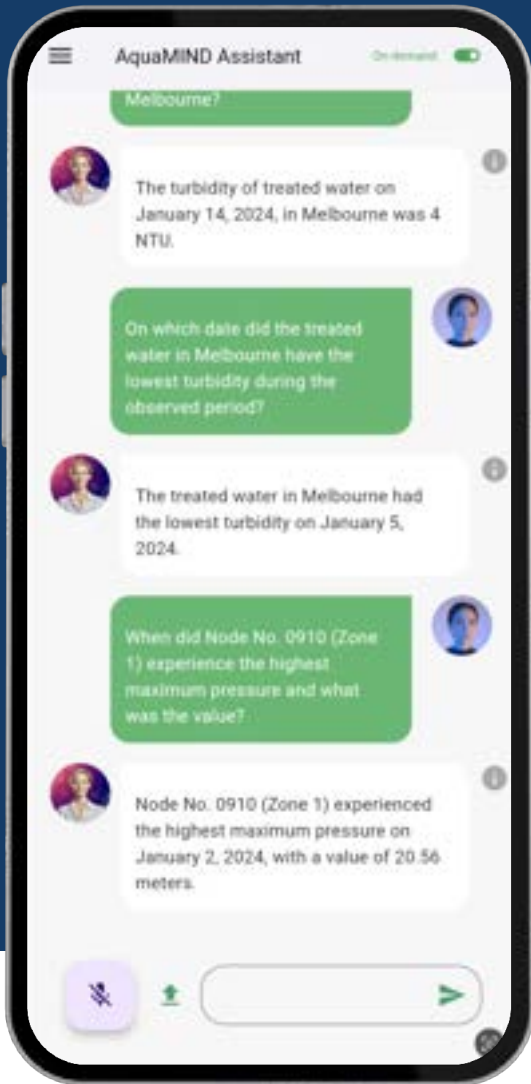


The platform leverages artificial intelligence to automate water quality analysis, route optimization, water demand planning and optimize energy consumption.



GenAI Assistant for Water Management

aquaMIND is a GenAI-based smart co-pilot that provides real-time insights into water availability, demand, supply, and usage across different scales at any given geography.



On Demand Queries



Get near-real-time alerts on water leakages, along with location of the leak detected, also get insights into any asset that might have malfunctioned.

Listening Mode



The co-pilot can also be a listening assistant that transcribes meetings, creates reports, and corrects facts. It sends reports about water demand, availability, and usage directly to your mobile phone.

Real-time Alerts



Ask aquaMIND about any queries from the whole water network, be it connection, grievances, energy utilization, asset monitoring, etc.

Hourly Updates



Hourly updates regarding the status of water across all active connections network along with insights on key events of past hour.





aquaCITY

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