

A photograph of an industrial facility at night, illuminated by warm yellow lights. The facility consists of several large, cylindrical storage tanks, tall distillation columns, and a complex network of pipes and scaffolding. In the background, a body of water and distant mountains are visible under a dark blue sky.

SUSTAINABLE INDUSTRY WATER MANAGEMENT

aquaINDUSTRY

powered by aquaWISE

www.vassarlabs.com

GOALS

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?

aquaINDUSTRY is designed to address the unique water management needs of industrial facilities. It goes beyond ensuring water neutrality by focusing on sustaining business continuity through robust water management practices. By integrating advanced monitoring, predictive maintenance, and real-time analytics, aquaINDUSTRY helps industrial facilities optimize water usage, reduce downtime, and ensure compliance with ISO regulations.



Business Continuity



Water Neutrality



Efficiency



Sufficiency



Compliance



Advisories

Digital Twin for Real-Time Monitoring

Digital Twin



A digital replica of the industry's water system is created to monitor supply, storage, and utilization in different divisions. Real-time visualization of these operations enhances overall operational visibility.

Source Water Monitoring



Track water quality using sensors to monitor water health from groundwater, rainwater harvesting, and municipal supplies, ensuring balanced water usage, and compliance and business continuity

Water Storage Monitoring



Monitor and manage water sourced from different tanks/ water storage structures within the industry.

Water Quality Monitoring

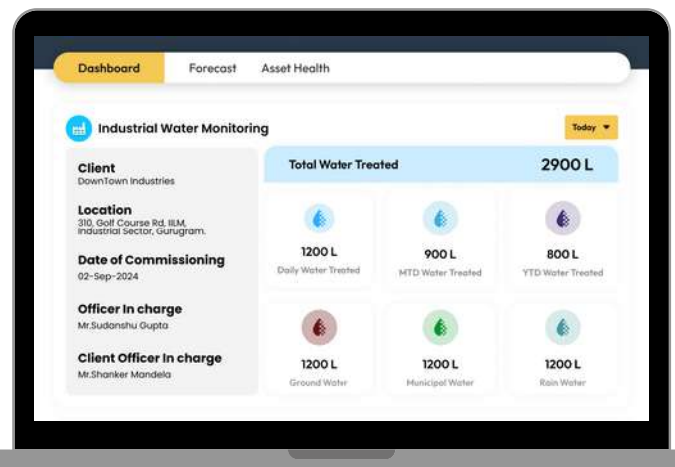


Measure water quality across industrial verticals, such as filtration, preparation, and sterilization, to ensure compliance with ISO standards. Monitor parameters like pH, turbidity, chlorine levels, and hardness at each manufacturing stage to maintain full regulatory compliance.

Waste Water Management



Optimize wastewater treatment within industries to enhance efficiency and minimize environmental impact through recycling and safe discharge. Track unit-level wastewater outflow, to ensure responsible water usage and compliance with effluent discharge regulations.



Water Reuse & Optimization



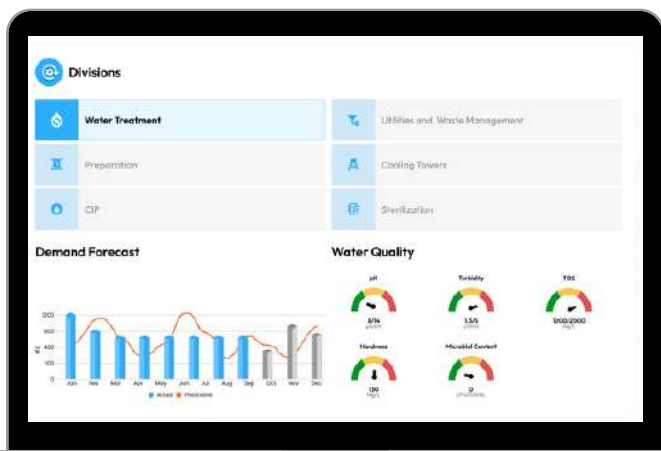
Optimize water reuse with analytics on recycled water for industry's use, measure water loss, and effectively conserve and reduce strain on freshwater resources.

Audit and Analytics

Water Usage Trends



Analyze water usage patterns across various industrial operations, focusing on high-consumption areas like preparation and sterilization to identify trends that drive resource allocation strategies. This approach enhances efficiency in processes.



Leak Detection System



Detect and pinpoint leakages in real-time to minimize water wastage, supporting water neutrality within the industry.

Demand Forecasting



Predict water needs across different divisions within the industry, using historical data and current trends. It aids in ensuring sufficient supply and preventing resource depletion.

Water Auditing



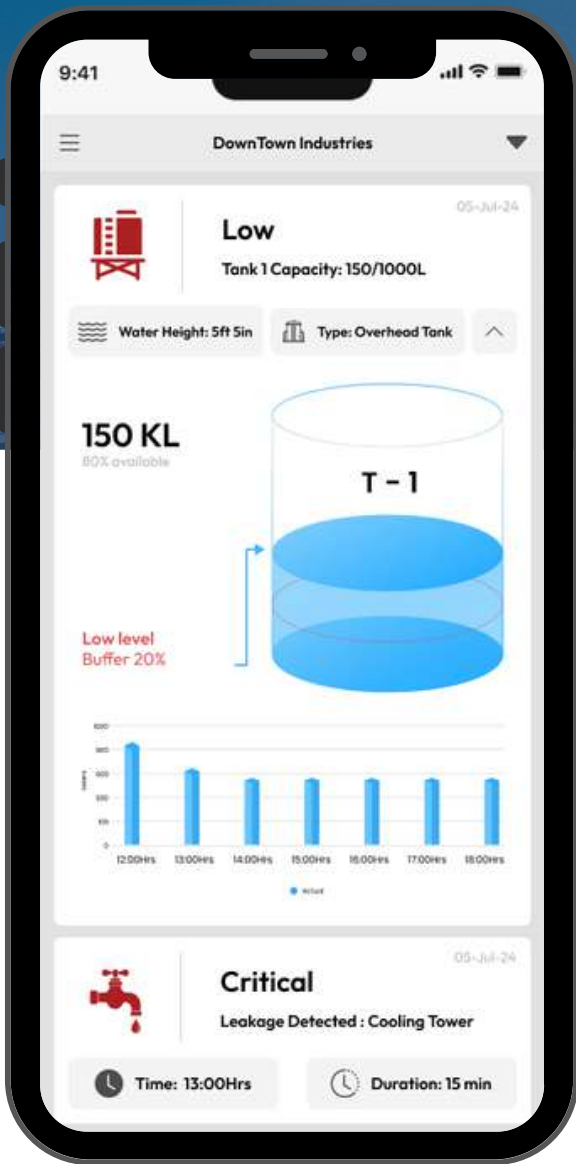
Monitor and analyze the amount of water collected and used across various industry divisions, including water treatment, sanitation, cooling towers, etc. ensuring efficient water management and resource utilization.

Automated Asset Control



Enable automated control of water management systems, including pumps, and cooling tower operations via sensors, to enhance operational efficiency. Automation reduces manual intervention, improves response times, and ensures adherence to industry-specific ISO protocols.





Compliance

Regulatory Compliance Tracking



Implement an end-to-end digital workflow for real-time tracking of SLAs and KPIs, ensuring alignment with ISO standards and monitoring all connections.

Alerts and Notifications



Provide timely alerts for excess water usage, low tank levels, potent leakages etc.

Industry Benchmarking



Compare your water utilization against similar industries to evaluate performance and identify opportunities for improvement.

Customer Grievances



Real-time tracking and allocation of grievance requests to service professionals. Industry Managers can track real-time progress.

Asset Health Monitoring

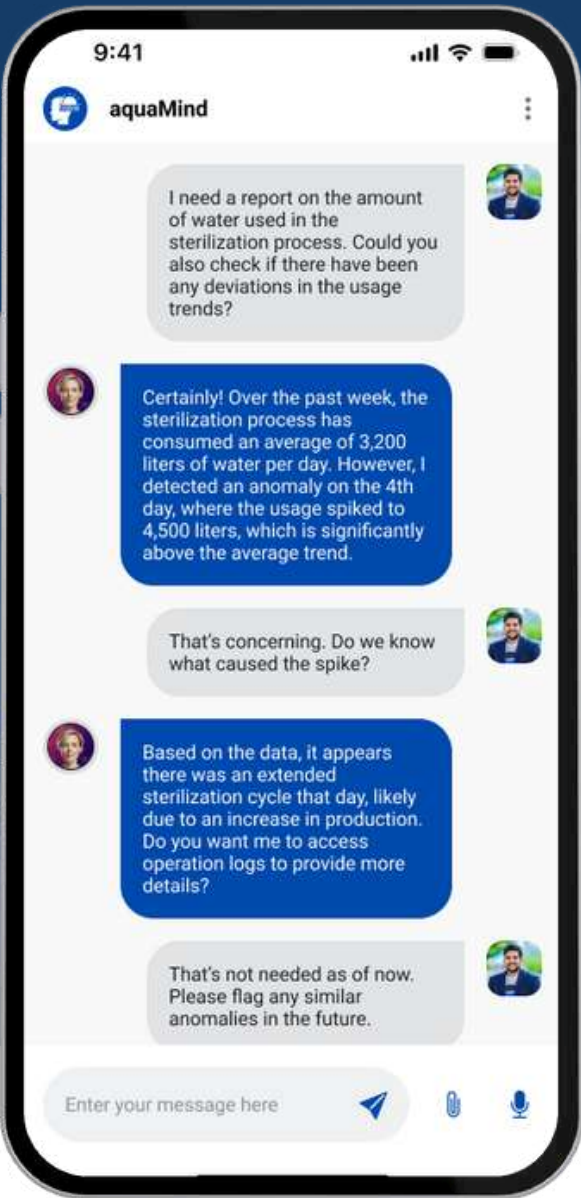


Get preventive and predictive maintenance alerts on the remaining useful life of assets like pumps, valves, etc deployed across the industry. Detect anomalies and potential equipment failures.

Optimization Models



Use advanced optimization models to efficiently manage pumping operations, minimizing water usage both on-premises and underground. These models reduce water waste and energy consumption, achieving significant resource savings while maintaining water availability for critical processes.



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 the facility at any given time

On Demand Queries



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

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



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.

Hourly Updates



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





aquaINDUSTRY

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