

A cutting-edge solution that leverages IoT, 5G & AI



1. Monitoring / Metering

- End Systems: Meters
- Infrastructure: Pipes, Pumping Stations, Reservoirs, Sources
- Parameters: Consumption, Flow, Levels, Energy, Vibration, Noise, Quality aspects (9+ parameters), Wastewater aspects



2. Al-powered optimization Monitoring – Metering +

- Water data Management
- Faulty Meter Identification
- Leakage Localization
- Water Quality Prediction
- Waste-Water Analysis
- Flood Prediction
- Irrigation Optimization
- Revenue Water & Water Use Optimization



3. Digital Twinning

Al-powered optimizations +

- Simulation Capabilities
- Advanced Capabilities.
 Strain Analysis, Predictive
 Maintenance
- Construction

Pumping station management

- Monitoring pumps / pipes / tanks
- Manage faults, reduced flows, overflows
- Performance optimization
- Security

Faulty meters

- Analysis of water-meter and consumption data
- Identification of faulty water meters, sorting with respect to defectiveness.
- Make predictions on unknown meters

Floods

- Monitoring water level and flow, weather conditions
- Al mechanisms for forecasting and early warnings
- Geospatial data visualization and alerting

Irrigation

- Electronic remote monitoring of sensor/ meter/irrigation/prepayment system in real time and at the desired measurement/data transmission frequency.
- Remote control and programming of watering.
- Recommendations according to the weather conditions, soil conditions, and seasonality

Water quality

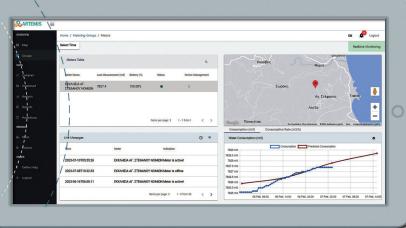
- Remote and real-time measurement of water quality parameters.
- Analytics of measurements on water quality
- Detection of contamination events
- Localization of incidents
- Identification of type and cause of pollution with data correlation

Revenue water maximization

- Discrepancies between supply and billed quantity
- Cause analysis
- Allocation per use of appropriate / sufficient water quality / quantity, associated charging







WINGS WATER **PACKAGE**

diTTo Digital Twin for sewage water treatment plant



diTTo Digital Twin for the Maeslant barrier



diTTo B.V.: Collaboration between AvecoDeBondt, WINGS, Dareius. diTTo delivers products and services for Digital Twins of Water Infrastructures https://ditto-engineering.com

CERTIFICATIONS & REGULATIONS

ABOUT WINGS

Smart Monitoring – Smart Gateways

- Interfaces to meters & sensors (e.g., water meters, water quality sensors) and transmits data & measurements over any available network (4G/5G/ (B5G), NB-IoT, GPRS, LoRaWAN).
- Over the air parameterization and customization of user defined measurement and transmission profiles.
- Versatile interfacing based on variety of protocols (pulse-counting, Wired/ Wireless M-Bus, OMS etc.).
- Edge Computing capabilities, identifying alerts at local level and adapting measurement and transmission profiles accordingly (e.g., more frequent measurements /transmissions in case of alerts – push notifications).
- Remote management capabilities (e.g., firmware updates).
- Alerts for meter / gateway tampering and violation.

AI-powered Cloud Platform

- Configuration of field devices and equipment, flexible configuration of network structures, configuration of virtual zones.
- Remote and real-time monitoring of any type of sensor, meter and equipment.
- Detection of faulty equipment (e.g., faulty meters) and incidents (e.g., leakages, water contamination, floods). Localization of incidents. Early warnings and notifications (email, SMS).
- Optimization of performance (IWA indexes), correct use of the network, increased rates of billed water, improved water quality, simplified irrigation management, increased water, and energy savings. Prediction of demand (and supply – demand matching).
- Security in facilities, field equipment, data transmission as well as cyber-security at platform and software level.
- CE IP68
- RED (2014/53/EU)
- ISO 9001:2015
- RoHS (2011/65/EU)

WINGS ICT Solutions is an SME that delivers solutions for various application sectors (air quality / environment protection, energy / water, transportation, aquaculture, agriculture, industry / logistics, health), based on IoT, Al advanced networks and visualization.



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