



Smart water for everyone

Hiraya Water is the pioneer in smart water management in the Philippines. We offer innovative solutions for developing countries. Hiraya Water is the go to company for all needs in smart water management, covering data acquisition, monitoring, management, SCADA and DCS, general telemetry system, smart metering and data analytics for water supply operations.

R-TAP, Hiraya Water's flagship product, is an intelligent supply and pressure management system that transforms water distribution systems into their most efficient versions. The system is designed to work with the existing infrastructure of your water distribution networks. R-TAP takes charge to ensure you get the most savings in NRW and power consumption while getting water to those that need it most.

Benefits of R-TAP



Limited water supply is maximized to provide better service to customers. Water utilities in turn, increase their billed volume. In some instances, intermittent water supply is even avoided.



Accurate management of pressure with R-TAP's artificial intelligence translates to significant reduction in non-revenue water. Proper pressure and supply management also helps increase lifespan of pipes, valves, pumps and other assets.



Optimizing the operation of pumps and intelligently adjusting settings translate to energy savings. No excess pressure means no excess power consumption.



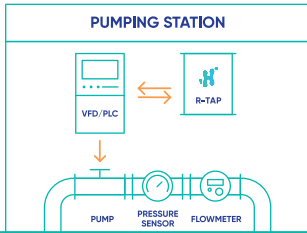
Controls are done conveniently through unsupervised intelligent operation (AI) or through supervised remote control (SCADA). Data analytics also allows detection of anomalous events, triggering alerts to allow immediate personnel response.

How R-TAP Works

1

R-TAP FOR PUMP OPTIMIZATION

R-TAP uses historical and real-time data from strategically identified locations within the network providing more accurate controls.



2

R-TAP FOR VALVE OPTIMIZATION

R-TAP guarantees compatibility with different levels of automation, from motorized valves with actuators, to manually operated valves.



3

R-TAP FOR TANK OPTIMIZATION

R-TAP ensures that existing reservoirs are used based on the actual needs of the network.



4

R-TAP'S ARTIFICIAL INTELLIGENCE

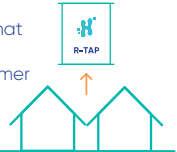
Dynamic and adaptive system that handles short term variations and long-term development in the water network.



5

R-TAP LOGGERS AT CRITICAL POINTS

R-TAP provides constant monitoring and ensures that the ideal service level is experienced at the customer side.



Technical Specifications

R-TAP AI AND SOFTWARE

Core of the R-TAP System that provides intelligent control through artificial intelligence. Enables remote monitoring and control of pumps, valves and tanks, with data visualization and analytics.

Number of user accounts: 10 (customizable, 9 regular accounts, 1 controller account)
 Mobile app: Yes
 Alarm threshold: Fixed and Dynamic
 Alarm system: SMS, dashboard notification, email (optional)
 Production report: daily or weekly
 Hydraulic model: YES

R-TAP CONTROLLER

Capable of both remote manual and intelligent automated control of pumps, valves and tanks. In the case of pumps, it may be integrated with pre-existing VFD.

Number of inputs: 14 - 16
 Number of outputs: 10 - 16
 Memory capacity: 100 KB - 8 MB for program
 Data storage (optional): 16 - 32 GB
 Industrial communication: Modbus OPC UA, MQTT, RS232 or RS485, PROFIBUS, PROFINET
 Wireless Communication: 4G, LTE, 3G or 2G, Wireless Ethernet (802.11)
 Human-machine interface: Yes

R-TAP LOGGER

Provides 24/7 real-time monitoring of pressure experienced by your customers at critical areas.

Data logging interval: 1 s - 1 day
 Analog inputs: 5
 Digital inputs: 3
 Serial input: 1x RS232, RS485 or SDI12
 Power supply: Lithium battery or rechargeable NiMH batteries with or without solar panels
 Enclosure: IP67(solar panels) or IP68
 Wireless Communication: 4G, LTE, 3G, 2G or GSM

Case Studies

Intelligently maximize your limited resources.

OPTIMIZATION OF LIMITED WATER SUPPLY THROUGH R-TAP VALVE CONTROL

Typical to a tourist center, Tagaytay experiences challenges with transient demand. And the bigger problem is the lack of sufficient supply, especially in the city's east areas.

With the entry of R-TAP, Tagaytay City WD was able to accurately rechannel available water supply from the west whenever available. This increases billed volume and helps get more water to those that need it, when they need it.

Transform your operations into their most efficient versions.

OPTIMIZATION OF PUMP OPERATIONS FOR INTERCONNECTED SOURCES

Managing water distribution networks is less complex if DMAs are in place. But for areas that have a mixture of water-rich and water-scarce areas, having a DMA setup is simply not applicable. With multiple pumping stations in the service area, optimization of operations to manage power costs while meeting the expected service level remains a challenge to a lot of water utilities.

Through R-TAP's smart water management system, Calumpit WD was able to optimize simultaneously the operation of its 2 pumping stations. This led to a significant increase in billed volume in the barangays covered by the pumping stations while at same time generating savings in power consumption. Also intermittent water supply and low pressure at certain areas during peak hours were addressed.

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Start your journey towards Water 4.0 with Hiraya Water.