

Milesight Deploys Hundreds of LoRaWAN® Sensors to Support New Zealand's SMART Economy Initiative

Project Has Delivered Measurable Benefits in Water Distribution and Leak Detection, Building Automation, Energy Efficiency, and Indoor Air Quality in Cook Islands, New Zealand

Xiamen, China and Barcelona, Spain, November 8, 2023 – Milesight, a global sensing products provider, announced that a smart island project featuring LoRaWAN® products has grounded with IQnexus in Rarotonga, Cook Islands, New Zealand. In 2021, the government of New Zealand introduced the SMART Economy Initiative, aiming to further enhance its development. As part of this initiative, the Smart Islands project was launched, encompassing following key sub-projects: efficient water distribution management, water tank level monitoring and indoor air quality enhancement through a closed-loop and centralized HVAC systems. By incorporating more than 600 of Milesight's LoRaWAN sensors into these projects, overall efficiency and sustainability in both work and daily life on the islands are being improved, reducing costs by approximately 15-20 percent generally.

“Scalability was the key in choosing the right technology to develop the Cook Islands into truly smart islands. As we start with Rarotonga to launch, building IoT infrastructure across 15 islands is no simple task, but the strong capabilities of Semtech's LoRa devices and the LoRaWAN standard provided an ease of deployment and scalability this comprehensive project requires to succeed.”

—— Tai Kauraka Tangaroa, CEO at ICTnexus



Overall deployment map

Efficient Water Distribution Management

At each intake point, various LoRaWAN sensors from Milesight are employed to monitor different parameters, including buffer tank levels, pressure, and water volume produced. To regulate water flow and pressure, Milesight EM500-PP Pipe Pressure sensors using LoRaWAN are strategically placed along the main loop. From the central ring, smaller distribution pipelines extend to individual consumers, delivering water to their respective locations. As part of future plans for the intakes and distribution, EM500-PP Pipe Pressure sensors and EM500-SWL Submersible Water Level Sensors will be installed to accurately monitor water pressure and consumption, further enhancing the efficiency of the system.



On-site deployment of Milesight sensors

The ultimate goal of the water distribution system in Rarotonga is to provide residents and businesses with reliable and efficient access to water. Through meticulous design, continuous monitoring, and proactive maintenance, the system guarantees the delivery of clean and safe water for everyday needs.

Water Tank level Monitoring

In residential and commercial settings, it is common to have a buffer water tank connected to the main water supply, which is equipped with a pump to facilitate efficient pressure for water distribution. Milesight Submersible Water Level Sensors plays a significant role, particularly in situations where the buffer tank is partially filled with rainwater. By monitoring the level of rainwater accumulation, the sensor enables precise tracking of the availability of rainwater as an alternative water source. This reduces reliance on the main water supply and promotes sustainable water management practices.



Water tank level monitoring charts

Monitoring the buffer tank level and analyzing water consumption contributes to cost savings and promotes sustainable water management. By identifying opportunities to utilize rainwater or implement water conservation measures, dependence on the main water supply is reduced, resulting in lower water bills and a decreased environmental footprint.

Indoor Air Quality Enhancement

Enhancing indoor air quality (IAQ) in closed-loop HVAC systems is essential for establishing a healthy and comfortable indoor environment. By harnessing the capabilities of Milesight's LoRaWAN sensors and implementing outdoor air intake strategies, it becomes possible to improve IAQ while also addressing the associated higher energy consumption and its impact on energy management.



Indoor air quality monitoring chart

By integrating Milesight IAQ sensors and incorporating outdoor air intake strategies, building operators can effectively manage IAQ while mitigating excessive energy consumption. This approach allows for the provision of a healthy and comfortable indoor environment while optimizing energy usage and promoting sustainable energy management practices.

LoRaWAN Devices Are the Right Choice

Scalability is the key in choosing the right technology to develop the Cook Islands into truly smart islands. The LoRaWAN standard provided an ease of deployment and scalability this comprehensive project requires to succeed. Milesight's LoRaWAN devices conquered all challenges in the Cook Islands due to its unique location and climate, including poor network coverage, installation, harsh environmental conditions, etc. With LoRaWAN sensors monitoring water level, pipe pressure, CO₂ concentration, temperature and humidity and more, the occupants and facility managers can now enjoy energy-saving operations and contribute to overall sustainability in the Cook Islands.

LoRaWAN[®] is a mark used under license from the LoRa Alliance[®].

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