

Turning around an underperforming smart metering network

A LoRaWAN / Wize case study

Connectivity performance increased to 99% across both networks

99%

WIZE CONNECTIVITY
WITHIN 10 DAYS

10%

IMPROVEMENT OF THE
LORA CONNECTIVITY
WITHIN 10 DAYS

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Utilities are increasingly looking for ways to maximise the value of existing smart metering assets. This deployment illustrates how a hybrid communications strategy can deliver rapid performance improvements, operational simplification and a clear pathway to long-term scalability.

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David Racher, Head of Smart Metering, SUEZ

Context

SUEZ was faced with a client looking for a solution to their underperforming smart metering network; to balance immediate performance improvements with a sustainable long-term strategy. The client, a French water utility, is responsible for water and wastewater services for almost 300,000 people has an estate of over 100,000 meters.

When SUEZ took over the client's smart metering estate, it inherited a technically complex and

underperforming proprietary 868 MHz LoRaWAN environment.

Rather than replacing the full system outright, SUEZ adopted a pragmatic and value-driven strategy that balanced optimisation of existing assets with targeted upgrades.

The overarching approach combined three key principles:

1. Preserving value by maintaining recently installed LoRa compatible meters

2. By migrating to Wize, performance improved, with 99% Wize meters reporting daily

3. Simplifying operations by consolidating all data (Wize + LoRaWAN) within ON'connect single platform.

This hybrid strategy enabled SUEZ to deliver rapid performance improvements while ensuring continuity of service, mainly by running in parallel with both technologies.



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Client Issue

At transition, the client's estate faced several interconnected challenges that impacted reliability, visibility, and scalability.

Connectivity levels were below expectation, with only 86% of meters reporting at least once within a 10-day period. The underlying architecture had become increasingly fragmented, with data passing through multiple legacy systems and monitoring and diagnostic functions spread across different platforms.

In addition, many field assets were operating under poor radio conditions or experiencing coverage limitations, further impacting network performance and reliability. These issues were compounded by limited operational visibility, making it difficult to identify and resolve problems quickly, while the existing infrastructure lacked the flexibility and scalability required to support future expansion.

Together, these factors resulted in inefficiencies in both operations and data management, requiring a structured and carefully executed transformation.

Solution

SUEZ designed and implemented a solution that addressed both immediate performance challenges and long-term operational goals. The response combined infrastructure reuse, technology integration, and selective modernisation.

Strategically, the solution focused on:

- **Deploying a complementary Wize network:** the Wize communication standard uses an open protocol over the 169 MHz frequency band.
 - Installed using the same physical sites as existing LoRa gateways
 - Providing robust coverage for new and problematic meters.
- **Optimising the existing LoRa estate**
 - Retaining meters with strong performance
 - Upgrading underperforming meters with WIZE transmitters.
- **Introducing ON'connect as a unified platform:** the central AMI platform that securely communicates with smart meters, collects and manages meter data, and enables remote monitoring, control, and firmware updates across the utility network.
 - Replacing the legacy network server and MDM layers
 - Integrating LoRa and WIZE data into a single operational system.

This was supported by **targeted technical enhancements:**

- Developing a custom frame decoder within ON'connect (with DIEHL support)
- Migrating from Kerlink LNS and Birdz MDM to Netmore LNS and ON'connect
- Establishing of ON'connect as both operational Head-End System (HES) and the data aggregation and normalisation layer.

The result was a simplified and future-ready architecture with a single interface for downstream applications.



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Implementation

SUEZ executed the transformation in a controlled and efficient manner, minimising risk while accelerating time to value. A key success factor was the ability to reuse existing infrastructure and operate both technologies in parallel.

The implementation approach included:

- Full reuse of infrastructure
 - All 64 LoRa gateway sites were retained and upgraded
 - Deployment of bi-mode LoRa/WIZE gateways
 - No additional lease, planning, or landlord challenges.
- Parallel network operation
 - LoRa and WIZE networks ran simultaneously from the outset
 - Uninterrupted service during transition.
- Targeted asset migration
 - Changing the protocol across the LoRa transmitters to an open protocol
 - Replacing LoRa meters as necessary on a case-by-case basis
 - Focus on meters with poor connectivity or maintenance issues.
- Seamless data integration
 - ON'connect unified data flows across both technologies
 - Consistent outputs provided to customer applications.

Importantly, data integrity and billing continuity were preserved throughout. Each meter operated with a single transmitter (LoRa or WIZE) and no duplicate reads were generated. The transition often improved service; from manual or missing reads to automated AMI data.

Results

The transformation delivered clear, measurable improvements in performance, reliability, and operational efficiency. Connectivity gains were particularly notable, validating SUEZ's hybrid approach.

Key outcomes include:

- **Significant improvement in LoRa connectivity:** An increased from 86% to 97.6% (meters reporting within 10 days), 89.3% of meters now report daily and 99.0% report within 30 days
- **Outstanding WIZE performance:** Over 99% connectivity within 10 days. Strong reliability even at greater distances from gateway sites
- **Improved operational visibility** with centralised monitoring of connectivity and data completeness as well as meter alarms, battery status and gateway performance
- **Simplified architecture:** Consolidation into ON'connect reduced system complexity and a single interface for all downstream applications
- **Efficient asset utilisation:** The high-performing LoRa meters were retained and underperforming assets were upgraded with precision.

In addition, the infrastructure upgrade was completed without disruption and with full reuse of all 64 sites, demonstrating both cost efficiency and operational agility.



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Delivering Long-Term Performance

SUEZ's work with this client demonstrates its ability to transform complex, inherited metering estates through a pragmatic and forward-looking approach. Faced with an existing LoRaWAN deployment that was not consistently delivering the required performance, SUEZ developed a solution that balanced immediate operational needs with long-term strategic goals.

As the only provider offering dual-mode Wize and LoRaWAN capability, SUEZ was able to integrate both technologies into a single, cohesive network, leveraging existing infrastructure while enhancing connectivity, reliability and coverage. This approach avoided unnecessary asset replacement, protected previous investments and delivered a clear path to improved performance.

Through selective modernisation, intelligent system integration and the application of Wize where it delivered the greatest value, SUEZ created a scalable, future-ready platform capable of supporting evolving utility requirements. The project not only resolved existing connectivity challenges but also demonstrated how multiple communication technologies can work together within a unified smart metering ecosystem.

The success of the deployment highlights that, with the right strategy, utilities can improve reliability and operational efficiency, maximise the value of existing assets and build a resilient foundation for future growth. By combining technical expertise with a flexible, technology-agnostic approach, SUEZ positioned the estate for sustained long-term success and reinforced its leadership in managing and optimising hybrid smart metering environments.

About SUEZ

Faced with growing environmental challenges, SUEZ has been delivering essential services that protect and improve our quality of life for more than 160 years.

SUEZ provides its customers with innovative and resilient solutions for water and waste services.

With 40,000 employees across 40 countries, the Group works with customers to create value over the full lifecycle of their assets and services, and to drive their low carbon transition.

In 2025, SUEZ provided drinking water for 67 million people worldwide and sanitation services for more than 36 million people. The Group generated 8.7 TWh of energy from waste and wastewater. In 2025, SUEZ generated revenues of 9.5 billion euros.