SEMTECH CASE STUDY

netmore

Yorkshire Water's Smart Metering Transformation: A LoRaWAN® Success Story

Yorkshire Water's deployment of 1.3 million LoRaWAN smart meters with Netmore Group enhances efficiency, cuts costs, and boosts sustainability. The initiative has already saved 1.22 megaliters of water daily and identified over 1,000 leaks, with long-term goals of reducing water waste and operational expenses.

QUICKFACTS

Company

Netmore
netmoregroup.com

Customer Profile

Yorkshire Water, a leading utility provider in the U.K., partnered with Netmore Group in 2024 to deploy 1.3 million smart water meters using LoRaWAN® technology. This large-scale initiative aims to revolutionize water management by improving efficiency, reducing operational costs and addressing water conservation initiatives.

Objectives

Yorkshire Water needed to enhance operational efficiency through automated smart meter readings, rapidly detect and resolve leaks to reduce water waste, lower operational and maintenance costs with long-lasting technology, and support environmental sustainability goals by minimizing water loss and energy consumption, all while ensuring compliance with regulatory requirements.

Results

Yorkshire Water's partnership with Netmore Group and the use of Semtech technology has led to the following outcomes:

- Over 1,000 customer-side leaks were identified in the initial rollout.
- 1.22 megaliters of water saved daily during the early phase.
- Anticipated reduction of 8 megaliters of leakage per day and a 2-liter per person daily drop in household consumption upon full deployment.
- Anticipated 15% reduction of non-household water demand by 2050.
- Meter batteries lasting up to 15 years, reducing maintenance costs.

Products and Services

- LoRaWAN®

> Our partnership with Netmore has allowed us to revolutionize water management with scalable, cost-effective technology.
>
> **James Wilson,**
> *Manager of Smart Metering Delivery, Yorkshire Water*

INTRODUCTION

Yorkshire Water is leading the way in modernizing water management through the deployment of 1.3 million smart water meters across the region. In partnership with Netmore Group, this ambitious project leverages LoRaWAN technology to enhance operational efficiency, improve leak detection and empower customers with greater insight into their water consumption. This initiative is setting a new benchmark for utility providers seeking sustainable and cost-effective solutions.

CHALLENGE

Yorkshire Water faced increasing pressure to reduce water leakage, improve operational efficiency and meet regulatory demands for sustainability. Traditional water metering systems, reliant on manual readings and cellular networks, posed significant challenges:

- **High Operational Costs:** Manual meter reading and maintenance of cellular-based systems were costly and inefficient.
- **Limited Coverage:** Cellular networks struggled to provide reliable connectivity in underground and remote locations.
- **Environmental Impact**: Water loss from undetected leaks and inefficient monitoring conflicted with sustainability goals.

SOLUTION

Yorkshire Water partnered with Netmore Group to implement a smart metering solution powered by LoRaWAN technology. This solution provided:

- **Robust Network Architecture:** A three-layer network combining high tower sites and monopoles for umbrella coverage, supplemented by mid-layer gateways and targeted indoor solutions to ensure 90% dual gateway connectivity.
- **Advanced Data Management:** Millions of daily meter readings processed through Netmore's platform, enabling real-time leak detection and detailed consumption insights.
- **Long-Term Sustainability:** LoRaWAN meters with up to 15 years of battery life significantly reduced maintenance costs and supported environmental goals by identifying leaks early and reducing water waste.

> *After thorough evaluation, we're confident that Netmore will help us achieve our goals in leakage reduction, water efficiency, customer experience, and operational carbon emissions.*

James Wilson, *Manager of Smart Metering Delivery, Yorkshire Water*

A NEW ERA OF CONNECTIVITY FOR UTILITY SERVICES

Advancements in wireless metering are transforming utility modernization. Network operators now play a central role in infrastructure projects, reinventing delivery with new protocols, pricing, and customer engagement models tailored to low-bandwidth IoT applications that use minimal power.

Key considerations for selecting the right network partner for AMI projects:

- **Domain Expertise:** Choose a partner with proven experience in building and managing scalable, secure, low-power networks across all phases, from design to maintenance.
- **Interoperability:** The network should support multiple LPWAN standards to improve coverage and reduce inefficiencies and costs associated with legacy systems.
- **Carrier-Grade:** The network must ensure fault tolerance, self-healing redundancy and high availability (99.999%) to meet the demands of critical infrastructure.
- **AMI Network Management:** Ongoing monitoring, proactive maintenance and quick issue resolution are essential for optimal performance and accurate data.
- **Cost Predictability:** Service pricing and SLAs should offer transparency and flexibility with customizable agreements to ensure project success and ROI.

THE POWER OF SEMTECH PARTNERS

The partnerships between Netmore Group, Yorkshire Water and Semtech bring significant benefits, including enhanced IoT connectivity solutions, improved water management through real-time data analytics and the ability to optimize resource efficiency, ultimately leading to better service delivery and sustainability in water management.

BENEFITS

Utilizing Semtech's LoRa® technology has provided many benefits for Yorkshire Water:

- **Enhanced IoT Connectivity:** Leveraging Semtech's LoRa technology to provide reliable, long-range communication for IoT devices.
- **Improved Water Management:** Real-time data analytics for monitoring water usage, distribution and quality, leading to more efficient management of water resources.
- **Optimized Resource Efficiency:** The ability to track and manage water resources more effectively, reducing waste and improving sustainability.
- **Cost Savings:** Reduced operational costs through automated monitoring and early detection of issues, minimizing manual interventions.
- **Sustainability:** Advancing sustainability goals by using technology to reduce water loss and ensure better resource conservation.
- **Better Service Delivery:** Enhanced decision-making through data-driven insights, improving the quality and reliability of water services to customers.
- **Scalable Solutions:** The ability to scale the IoT network across different locations and applications, offering flexibility for future growth.
- **Data-Driven Innovation:** Harnessing data for continuous improvement and the development of new services and technologies in the water sector.

About Semtech

Semtech Corporation (Nasdaq: SMTC) is a high-performance semiconductor, IoT systems and cloud connectivity service provider dedicated to delivering high-quality technology solutions that enable a smarter, more connected and sustainable planet. Our global teams are committed to empowering solution architects and application developers to develop breakthrough products for the infrastructure, industrial and consumer markets.

To learn more about Semtech technology, visit us at **Semtech.com** or follow us on **LinkedIn** or **X.**

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