

# Replacing ageing water meters to optimise operational efficiency, identify leaks and improve customer service

## SUEZ smart metering case study in Armagnac

In 1967 in South West France, the intercommunal syndicat of Armagnac Tenezare was formed, made up of the Municipalities of Éauze, Bretagne-d'Armagnac, Cazeneuve and Lagraulet-du-Gers to manage drinking water supply and wastewater disposal.



### Client issue

SAT32 (Syndicat des eaux Armagnac Tenezare) serves 15 municipalities, 11,000 inhabitants via a 730km drinking water network. The utility, faced with an ageing stock of water meters, decided to introduce smart metering, renewing its 6,800 meters in order to improve the operational efficiency of the staff dedicated to meters as well as the quality of service provided to customers.

### Solution implemented

The water company turned to SUEZ to install a smart metering system to provide remote reading and billing based on actual consumption. The new system enabled customers to be alerted more quickly in the event of overconsumption and to react without delay when there was a leak.

### Results

- Standardisation of the meter fleet
- Improved customer service
- Detection of leaks so they can be addressed as quickly as possible
- Optimised operations
- Improved network efficiency.

#### Billing

By making metering and consumption data more reliable, the deployment of smart metering has facilitated billing management and reduced the number of requests for rebates, which was a real financial loss for the Syndicat.

#### Leakage

Customers are now alerted in the event of leaks or over-consumption and know their actual consumption, which has improved their satisfaction with the water service.

#### Non-revenue water

In addition, the deployment of smart metering has helped to improve network efficiency, which has risen from 62% in 2021 to 66% in 2022. This represents a 4% increase in network efficiency. The water volume counts are much better due to the metering efficiencies which reduces the amount that was previously considered to be water leaks.



"Smart metering has enabled us to see that there were a lot of leaks after the meter in our area, mainly from private homes and farms."

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## How it works

SUEZ metering is an integrated remote water meter reading solution that can be installed and operated by SUEZ.

It enables a utility:

- To automate the reading of meters remotely and in real time
- To monitor, control and influence consumption on a daily basis
- To receive alerts in case of breakage, peak or anomaly
- To invoice on the basis of actual consumption
- To identify leaks on the network as well as on the end-customer side
- To adapt services to changes in the environment and usage.

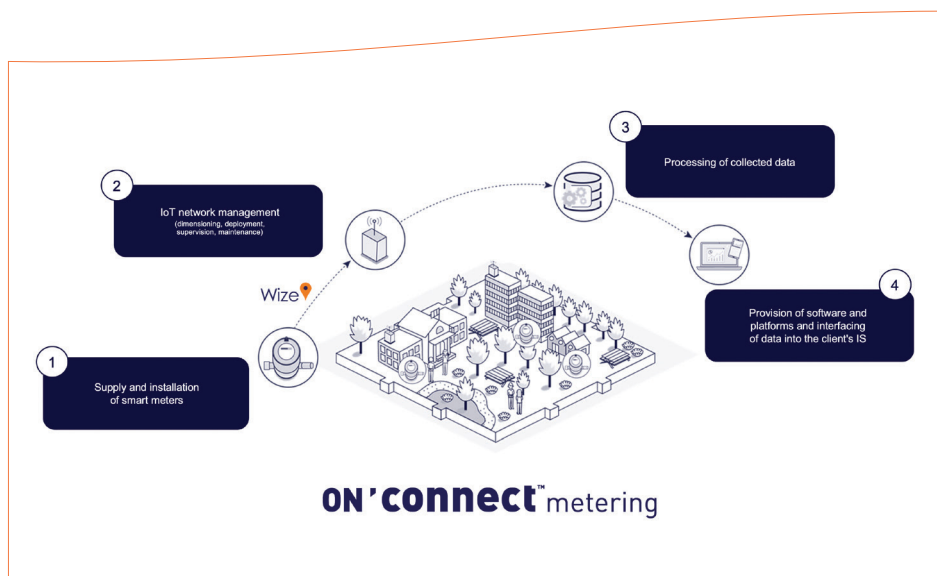
The smart metering system has four parts:

1. The supply and installation of smart meters
2. IoT network management
3. Management of the collected data
4. Provision of software and platforms that interface with the utility's IT systems.

Data is measured and then emitted by the smart water meter. The data is transmitted via a concentrator that collects the data locally and sends it to the servers. The data is deduplicated, decrypted and refined. The data processing is completed by algorithms pre-established by our SUEZ teams. Defined as key indicators, this data is made available to various actors through digital solutions: software supervision portal, online customer space, mobile applications, etc.

The metering systems consist of:

- Market leading meters supplied by manufacturers such as DIEHL Metering, Itron, Sensus, Honeywell etc.
- Specified according to the Wize protocol by the SUEZ teams to communicate with a fixed receiver (concentrator) or mobile receiver
- Collecting up to 24 indexes/day in compliance with the regulation on personal data protection
- Designed for daily transmissions: 1, 4 or 8 submissions/day
- Compact for easy installation in tight spaces
- Waterproof and durable with a 15 years life span
- Bidirectional, providing remote diagnosis and problem solving, software updates, setting, etc.



### ON'connect™ metering – support along the entire value chain

The network is sized according to the specificities of the territory to be covered to optimise radio performance. The concentrators are specified to receive data from meters connected with Wize technology and transmit it to the remote reading computer systems. The concentrators are fixed and installed on strategic high points and they are waterproof and durable with a lifespan of 15 years.

Wize technology operates at 169 MHz, an open and freely available frequency band in Europe. It is long-range and thus impacted less by obstacles and ideal for underground meters. Typical battery life is 15 years. It complies to EN13757 standard and AFNOR guidelines.

The ON'connect™ remote reading information system is:

- Dedicated to the business or remote, automatic and frequent meter reading
- Processes over 600 million pieces of data each day
- Designed to create new services for territories, whatever their configuration
- Built from open-source components to benefit from the latest technological innovations
- Enriched with a multitude of algorithms formulated by SUEZ data scientists to provide relevant indicators.

## The future

To improve its hydraulic network, the water authority has also chosen the AQUADVANCED® Water Networks real-time hydraulic management system. The use of this kind of tool, dedicated to operators, improves knowledge of the network and optimises interventions, thereby contributing to better operational performance. Integrating smart metering data into this drinking water network management tool will make it possible to considerably reduce water losses by optimising leak detection.

**“ Today, we've all found it easier to work, whether it's for billing or for the quality of service to customers, and we're getting very positive feedback from our customers. ”**

**Smart metering has enabled us to see that there were a lot of leaks after the meter in our area, mainly from private homes and farms. ”**

– Nicolas Bourdiol, Director of Technical Services for SAT32 (Syndicat des eaux Armagnac Tenareze)