

Exceptional meter reception lowers leakage, reduces maintenance and improves network efficiency



Case study: Mont de Marsan rolls out SUEZ smart metering across their network

Mont-de-Marsan is a city and capital of the Landes department, Nouvelle-Aquitaine, southwestern France, serving six municipalities with 500 km of drinking water network.



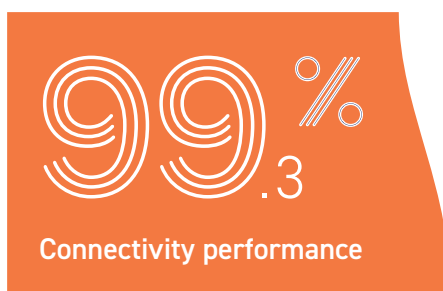
Client issue

To optimize water billing and reduce water losses on its territory, the Mont de Marsan water authority decided to implement smart metering on all its meters after a pilot in 2016.

Solution implemented

Following a successful trial involving 600 smart meters, the Mont de Marsan water authority decided to roll out smart metering across its entire area, with the aim of improving billing, enhancing meter management performance and, above all, preventing water loss.

Smart metering enables the utility and its customers to monitor consumption precisely, and to detect leaks and backflow that can affect water quality.



Results

Change management

The deployment of smart metering has led to a change in the way the team of operators organizes their work; they can now focus on supervision and alarm handling.

Reduced maintenance

The operational teams are able to manage the meter park much more efficiently and effectively with the automatic detection of anomalies. More can be achieved remotely and there has been a reduction of interventions in the field.

Non-revenue water

By making volumes and billing more reliable, smart metering helped improve network efficiency. It also gives an overview of major water backflows, enabling users to be made aware of these anomalies and, if necessary, to have valves installed.

Leakage and customer service

Customer are very satisfied with the improved level of services; they are able to monitor their consumption and, above all, to be alerted quickly in the event of a leak. The utility can now alert users when a leak is detected in their home so they can repair leaks in a few days before the bills get too high.



Implementation

- 2016: test deployment of smart metering on 600 meters
- 2017: meter replacement in the two main communes, phased over 3 years
- By the end of 2022: all 26,000 water meters within the scope of the water authority equipped for smart metering
- Deployment of AQUADVANCED® Water Networks and, in 2023, creation of a dedicated data analysis position for AQUADVANCED® Water Networks.



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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.

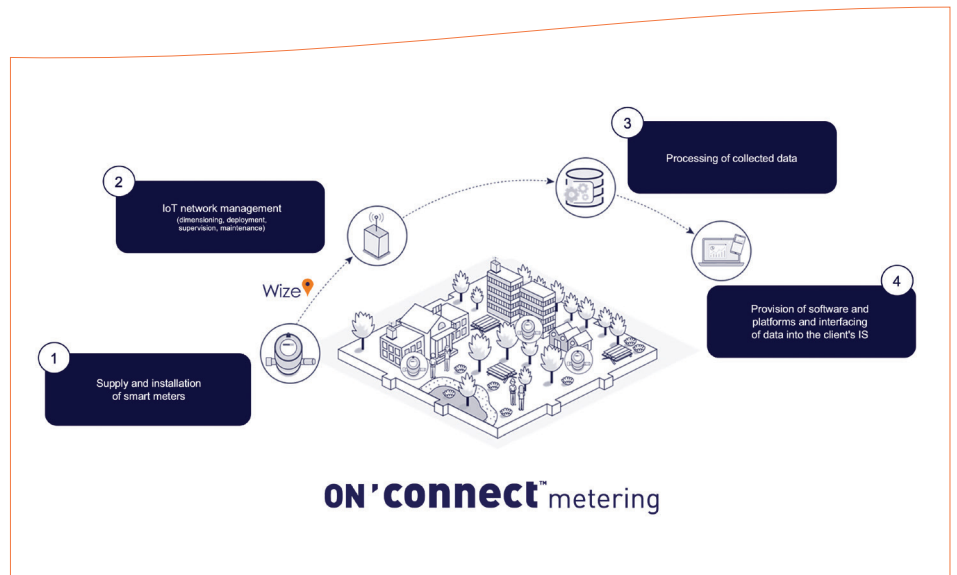
The smart metering system has four parts:

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 the performance of its water network, the company also chose AQUADVANCED® Water Networks, a real-time hydraulic management system, which will enable it to improve the sectorization of its network and detect leaks much more effectively.

“ At first, we were very sceptical about smart metering, but we were convinced by the efficiency of meter reception. Today, with 99.3% performance, we're very satisfied.

Thanks to remote reading, we can quickly warn users about their leaks; we sometimes get thanks from subscribers who have been notified of a leak they weren't aware of, and that's a source of satisfaction for the managers. ”

– Jean-Jacques Dubourg, Smart Metering Manager, Régie des eaux de Mont-de-Marsan