

 SMART UTILITIES USE CASE



Leading the Digital Transformation of Water Management

BIRDZ INCREASES WATER NETWORK EFFICIENCY IN FRANCE



THE RAPID GROWTH OF SMART UTILITY METERING

IHS Markit forecasts almost 50 million smart water meters will ship globally in 2023, a number roughly four times its size in 2017. Globally, the proportion of smart meters will soon exceed half of all meters shipped annually and represent a market value over \$2 billion.

Implementing a smart metering infrastructure allows utility companies the ability to remotely collect data and streamline operations. Solutions leveraging noncellular low-power wide-area networking (LPWAN) technologies, such as Semtech's LoRa® devices and the LoRaWAN® open protocol, are expected to represent up to 20 percent of all smart meters deployed by 2026, according to ABI Research. Smart metering is one of LoRa devices' most successful market applications due to its unique long range, low power capabilities that offer several advantages for battery-powered meters.

FRANCE'S LEADER FOR SMART WATER MANAGEMENT

Birdz is a branch of Nova Veolia and has a key role in pioneering smart solutions, such as the remote metering of energy consumption and waste management applications for smart cities, which is a new key market for Veolia's business entities.

With 19 years of experience in smart water management, Birdz provides water utility operators with a wide range of services, including traditional remote index reading, billing support, leak detection, potential fraud monitoring, subscriber consumption modeling, and forecasting.

Birdz boasts a heritage evolving from a proprietary radio network operator to being one of first companies to partner with Semtech and leverage LoRa devices and the LoRaWAN protocol in the deployment of smart meter projects across Europe.

“Semtech's LoRa devices is perfectly suited for smart water metering solutions due to its long range performance, low power consumption and low cost of implementing and operating a complete end-to-end LoRa-based metering application.”

Xavier Mathieu, CEO, Birdz

With three million LoRa-based metering devices currently operational, Birdz announced plans to expand its metering deployments by adding an additional three million LoRa-based smart water meters throughout France. The key goal of Veolia Water, one of the world's largest water utility companies, is the remote reading of more than 70 percent of its installed water meters within the next decade.

LoRa® Use Case

IoT Challenge

- Replace labor-intensive manual water meter reading
- Reduce water utility consumption and waste
- Provide actionable insights to utility operators, municipalities and end-users

LoRa Devices Used

- LoRa devices delivers long range, low power sensing capabilities
- LoRaWAN®-based network provides end-to-end security encryption
- Wirelessly connected sensors communicate data to the Cloud

Business Value

- Increases operational efficiency by wirelessly measuring usage data
- Instantly detects failure points and leaks in piping networks
- Monitors total water footprint at a granular level

For More Information

About Semtech's LoRa devices for utility applications, go to semtech.com/LoRa

About Birdz, birdz.com

EAU DU GRAND LYON IMPROVES WATER GRID OPERATIONS

The Métropole de Lyon is responsible for the drinking water supply and sanitation services of its more than 2.2 million inhabitants within the city and surrounding area. Eau du Grand Lyon serves as the public water service provider defining strategy, determining the price of water and managing the day-to-day delivery of safe drinking water.

In 2015, Eau du Grand Lyon implemented a smart water network consisting of 400,000 smart water G2 sensors and gateways with integrated LoRa devices. The remote water management solution from Birdz included module meters for residential and business facilities, water quality probes and noise correlator sensors on the city's piping infrastructure. The noise sensors are equivalent to a stethoscope, measuring the sound of water flowing inside pipes to easily detect and accurately pinpoint leaks.

The LoRa-enabled water sensors access the LoRaWAN network to communicate, transmit data, and provide alerts. Birdz's grid management platform correlates the incoming data and displays daily calculations of several key performance indicators on a customized dashboard, including volume of water supplied, volume of water consumed, apparent losses, grid output, linear loss index (LLI), and nighttime flow.

"A smart meter can simply index volumes of water for easy billing. It can also quickly detect all kinds of problems within a water supply network"

Geoffroy Duplessis, Deputy CIO, Birdz

In just four years, Birdz's water management approach generated significant benefits. Eau du Grand Lyon utilized comprehensive data from the network to identify and repair more than 1,200 water leaks within its distribution grid. Additionally, the LoRa-based infrastructure saves the city up to one million cubic meters of water annually and yielded an overall eight percent increase in water network efficiency from 77 percent in 2014 to 85.2 percent in 2018.

Birdz plans to roll out similar systems to utility providers in the city of Toulouse, a number of Paris suburbs and other communities across Europe to increase efficiency and productivity while driving down costs.

BIRDZ RESULTS



1,200
water leaks identified,
located and repaired



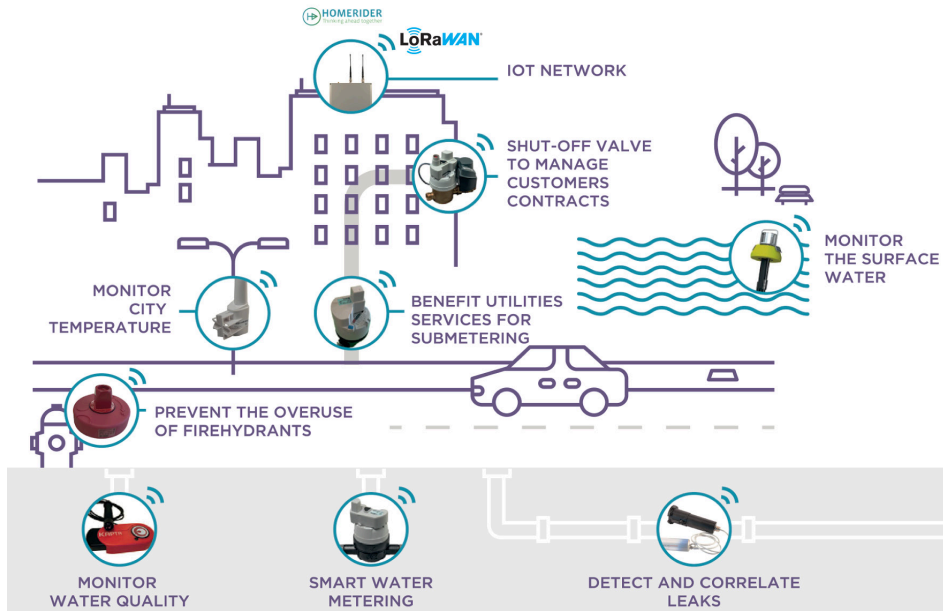
1 million
cubic meters of water
saved annually



8%
increase in water
network efficiency



FROM SENSOR TO SERVICE: DIGITAL SERVICES FOR WATER



Birdz strives to unify all water sensors in a multiservices connectivity network to support the digital transformation of water utilities.

Contact Us:

Learn about Semtech's
LoRa Devices

www.semtech.com/LoRa

Visit the LoRa Developer Portal
to Access the LoRa Catalog

www.lora-developers.semtech.com

Become a member of the
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Semtech's LoRa devices a widely adopted long-range, low-power solution for IoT that gives telecom companies, IoT application makers and system integrators the feature set necessary to deploy interoperable IoT networks, gateways, sensors, module products, and IoT services worldwide. IoT networks based on the LoRaWAN® specification have been deployed in over 100 countries and Semtech is a founding member of the LoRa Alliance®, the fastest growing IoT Alliance for LPWAN applications.



Semtech Corporation is a leading supplier of high performance analog, mixed-signal semiconductors and advanced algorithms for high-end consumer, enterprise computing, communications, and industrial equipment. Semtech, publicly traded since 1967, is listed on the Global Select Market under the symbol SMTC and has more than 32 sales and application support offices in 14 countries as well as representatives and distribution support locations in more than 30 countries. Semtech is dedicated to providing proprietary platforms, differentiated by innovation, size, efficiency, performance, and reach.



The LoRa Alliance is an open, nonprofit association that has become one of the largest and fastest-growing alliances in the technology sector since its inception in 2015. Its members closely collaborate and share experiences to promote the LoRaWAN protocol as the leading open global standard for secure, carrier-grade IoT LPWAN connectivity. With the technical flexibility to address a broad range of IoT applications, both static and mobile, and a certification program to guarantee interoperability, the LoRaWAN protocol has already been deployed by major mobile network operators globally and connectivity is available in over 100 countries, with continuing expansion ongoing.