

**Boosting customer satisfaction
through automatisaton**

Electricity and Water Authority Case Study



2 698 m³

1.2 m³/h

8 487 m³

231 m³



BOOSTING CUSTOMER SATISFACTION THROUGH AUTOMATISATION

The island nation of Bahrain is home to 1.5 million people. All its energy and water needs are regulated by the government agency Electricity and Water Authority (EWA). Until 2015, the EWA network relied solely on mechanical water meters.

Working with Diehl Metering, EWA was able to transform its network with reliable ultrasonic HYDRUS meters that became the foundation for a complete fixed network solution.



1.5
MILLION
PEOPLE

Rely on the water network of EWA.



257,000
HYDRUS METERS

Supplied to Bahrain, with 150,000 already installed and the remaining meters gradually being installed.



157 IZAR
RDC BATTERY
UNITS

Supplied to help meet the challenge of Bahrain's old building structures.



95 IZAR
RDC PREMIUM

Supplied and installed as part of a complete wireless fixed network solution (AMI).



THE CHALLENGE: ENHANCE CUSTOMER SATISFACTION BY OPTIMISING THE KINGDOM'S WATER NETWORK

Established in 1965, the Electricity and Water Authority (EWA) is responsible for regulating the generation, transmission and distribution of electricity and water in the Kingdom of Bahrain. Historically, the country's water network had relied exclusively on mechanical volumetric meters.

EWA wanted to modernise the country's network to provide reliable billing and ensure customer satisfaction. However, it faced an additional challenge: Bahrain's building infrastructure. The Kingdom's cities are made up of old and new buildings, making the implementation of a fixed network challenging. It needed a customised solution that accounted for the type of installation, the area of coverage, and the existing infrastructure.

The priority for EWA was to install new meters that would be assets for the long term, allowing it to monitor and optimise the network. By collecting, analysing and exploiting data, EWA wanted to automate billing and reduce water losses due to leaks. To achieve these objectives, it needed a reliable partner that could deliver the high quality its customers expected.





THE SOLUTION: A WIRELESS FIXED NETWORK SEAMLESSLY INTEGRATING THIRD-PARTY METERS

From 2012, Diehl Metering began pilot projects with EWA, employing HYDRUS ultrasonic water meters in several residential areas. The meters soon proved their worth, and EWA made its first order with Diehl Metering in 2016.

Today, EWA water network features some 75,000 HYDRUS meters, which are read every 3 hours via 95 IZAR RDC premium receivers distributed all over Bahrain. The remaining 182,000 meters are currently in the process of being integrated with IZAR@NET. Thanks to integration with the EWA servers, all billing is now carried out automatically.

Working with local partner EMCO, the Diehl Metering team implemented a fixed network solution in commercial and residential buildings by installing around 100 IZAR Centres to remotely read M-BUS HYDRUS meters. The system is integrated with IZAR@NET, our software solution for collecting and managing meter data.

Within EWA's network, certain devices are third-party meters installed in underground chambers. Thanks to

its flexibility, IZAR@NET facilitates the transmission of data from third party meters and data loggers to the EWA servers, allowing EWA to monitor consumption, pressure and temperature across the entire network.

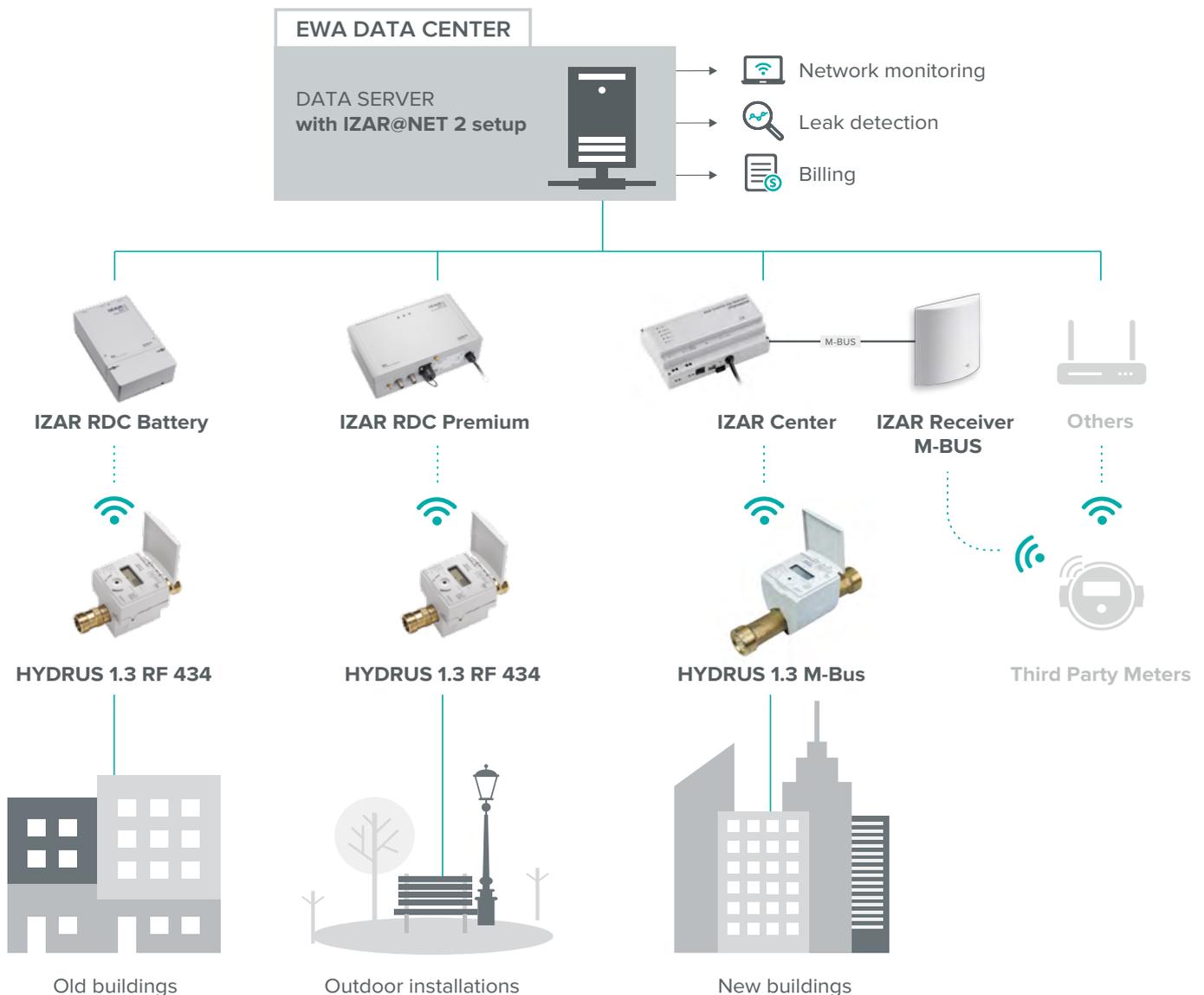
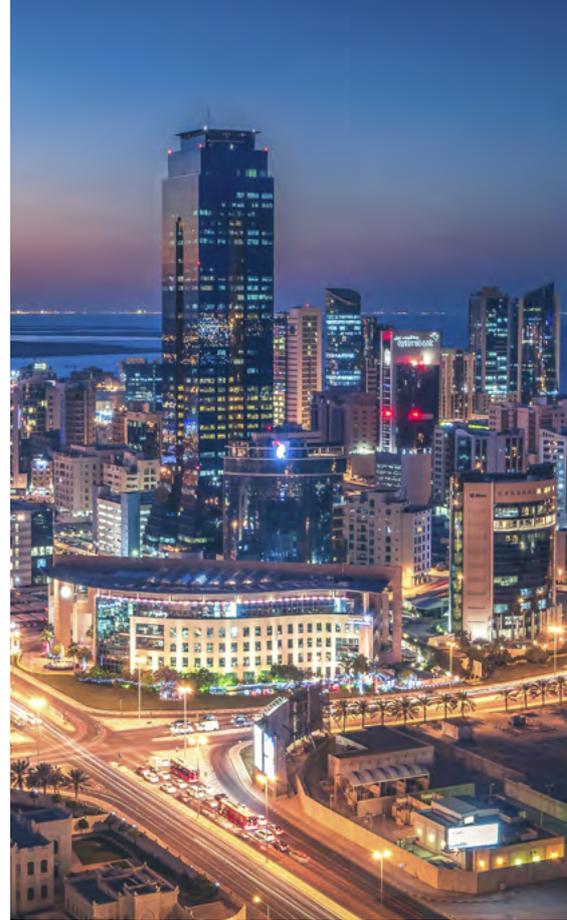
Furthermore, the solution overcomes the challenge of very old buildings without vertical risers. Faced with the impossibility of creating a wired fixed network, we designed and manufactured IZAR RDC Battery units to read and transmit data at pre-set times. A total of 157 IZAR RDC Batteries were supplied to fulfil EWA's requirement.



THE BENEFITS: FEWER LOSSES AND GREATER ACCURACY FOR RENEWED CUSTOMER SATISFACTION

Through the solution, EWA can now monitor and analyse consumer behaviour. IZAR@NET continually measures meter data, sending out alerts when units are dysfunctional or when an alarm or error is detected. This has helped to reduce external manipulation of the meters and significantly reduced water losses.

Furthermore, the new system automatizes the billing process, eliminating the potential for human error and ensuring customer satisfaction. By choosing to implement Diehl Metering's smart solutions, EWA has put itself on the path to achieve its vision of a sustainable future.





ABOUT DIEHL METERING

Diehl Metering is a worldwide leader in the design, manufacture and supply of smart metering solutions. With over 150 years of experience, we empower utilities, municipalities and industries to take control of their infrastructures, bringing new efficiencies to the way they manage water and energy.

Our extensive range of services and solutions includes data-driven insights, IoT connectivity, fully-flexible software, and seamless intelligent metering. We also utilise artificial intelligence to boost performance and deliver cost savings for our customers.

Headquartered in Germany, we are a family-owned business with an international reach. We are proud to maintain our founding principles of quality, reliability and customer proximity while proactively shaping a better future for our customers and the communities they serve.

Our approach is to think global and act local.

By anticipating trends and remaining agile, we adapt and develop our strategy with our customers and for them.

In supporting their long-term growth, we also contribute to the sustainability of the planet, crafting innovations that enable our customers to make ever better use of the natural resources we all rely on.

