

An aerial photograph of a dam and reservoir. The dam is a concrete structure with several spillways, situated in a lush, green, forested area. The reservoir is a large body of water that reflects the sky. The surrounding landscape is hilly and covered in dense trees. In the background, there are some buildings and a clear blue sky.

# TRANSFORMING WATER MANAGEMENT AT REGIONAL SCALE

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**CUSTOMER CASE  
LOIRE FOREZ AGGLOMERATION  
MONTBRISON, FRANCE**



“Water is life, and managing it effectively is an absolute priority for our region. Faced with droughts and increasing water scarcity, we must maximize the efficiency of both our network and our teams.”

Patrice COUCHAUD, Vice-President in charge of Drinking Water  
Loire Forez Agglomeration, Montbrison, France

Loire  
FOREZ  
Agglo

## ABOUT LOIRE FOREZ AGGLOMERATION

Loire Forez Agglomeration is a French intermunicipal authority located in the Auvergne-Rhone-Alpes region. Its mission is to secure water resources and ensure the quality of both the network and the water supplied to end users.

84 CITIES

2 400 KM OF WATER NETWORK

140 WATER RESERVOIRS

55 000 SUBSCRIBERS

113 000 INHABITANTS

450 AGENTS

## THE CHALLENGE

# SIMPLIFY METER READING AND ENHANCE THE PERFORMANCE OF A DIVERSE NETWORK

Loire Forez Agglomeration manages a vast rural area spanning towns, countryside and mountainous terrain. When it came to modernizing the water network, the agglomeration had to deal with municipal management practices that varied from one area to another, low-interoperability infrastructure and fragmented data.

An aging network, at times low efficiency levels and increasingly frequent droughts are putting water resources under growing pressure. Meter readings, still largely manual and infrequent, limit rapid leak detection, make network management more complex and hinder the prioritization of public investment.

## OBJECTIVE

To manage water resources more effectively, improve network performance and adapt its practices to environmental challenges, the agglomeration decided to embark on a transformation of its water management system with the following objectives:

- **Preserving water resources** by reducing abstraction,
- **Improving network efficiency** by reducing leakage,
- **Modernizing and securing the water network** to deliver lasting performance improvements,
- **Using data** to drive the network more effectively by automating meters reading,
- **Harmonizing water management** across the region and securing the supply, especially during periods of water scarcity,
- **Improve customer service** based on actual readings and improved responsiveness in event of anomalies.

## KEY CONSIDERATIONS

The project brings together all the municipalities across the region. It requires securing the commitment of elected representatives and technical teams to adopt a new technology, coordinating multiple stakeholders and harmonizing internal processes.

The transformation must be rolled out progressively over the years, with a meter renewal plan and the evolution of meter reading methods carefully phased in, while ensuring continuity of service. The project's success also depends on clear communication with customers.

Lastly, effective change management is essential: upskilling teams in digital tools, enabling them to take ownership of new solutions, training them in new working methods and redefining staff responsibilities to move from a manual meter reading model to a more automated, data-driven approach.

# AN END-TO-END HYBRID SOLUTION

## 5 STEPS GLOBAL APPROACH

From analysis and solution design to deployment and team support, Diehl Metering supports the agglomeration at every stage of its water management transformation.

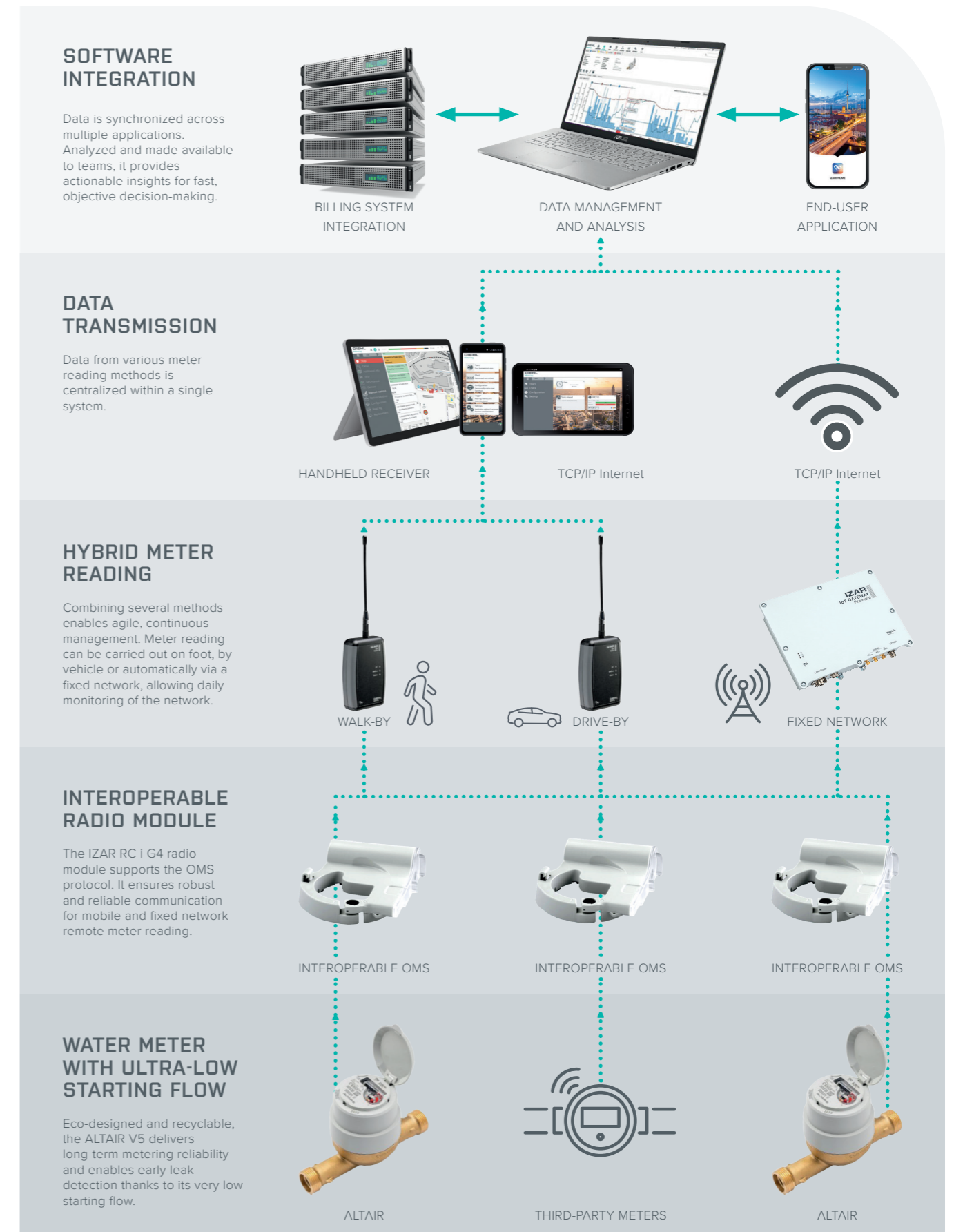
- 1 Analysis of the territory needs**  
Our teams assessed the specific characteristics of the region. Based on this data, a digital twin of the network was created to simulate radio coverage and determine the most appropriate technical architecture.
- 2 Testing and validation of the solution**  
Tests were conducted to verify radio transmission quality and equipment reliability in a variety of environments, from urban centers to rural and mountainous areas.
- 3 Staged rollout**  
The deployment was planned in stages, starting with the most densely populated areas in order to quickly cover a large number of meters, before being progressively extended to the rest of the region.
- 4 Team training and support**  
The water department teams were trained in the new meter reading methods and software tools, enabling them to progressively take ownership of the system and ensure its day-to-day operation.
- 5 Continuous improvement**  
Together with the teams at Loire Forez Agglomeration, our experts monitor the system and provide regular guidance to optimize operations and support its long-term evolution.

## INTEROPERABLE, SCALABLE ARCHITECTURE

Diehl Metering deployed an end-to-end water management solution combining smart meters, radio technologies and data integration into a single software platform for centralized management. The selected architecture seamlessly integrates mobile and fixed meter reading methods, which can coexist across the region to cover areas with widely varying population densities. The data collected is synchronized and centralized within one system, providing a consistent and actionable view of consumption.

This flexible and scalable approach allows practices to be gradually adapted to the agglomeration's needs. It supports the controlled rollout of automated fixed network reading without modifying existing installations, while ensuring a sustainable long-term solution.

## FULLY INTEGRATED ECOSYSTEM





**RESULTS**  
**NETWORK  
 EFFICIENCY  
 AND SERVICE  
 RESPONSIVENESS**



“Previously, our teams spent an entire day reading 100 meters. Thanks to the automated reading of the new smart meters, they can now read 1,000 per day, which is ten times more. This time saved allows us to focus on what matters most: repairing leaks and supporting our customers.”

Martial VERNAY, Head of Drinking Water Service  
 Loire Forez Agglomeration, Montbrison, France

The implementation of the solution is already delivering tangible results for Loire Forez Agglomeration in terms of network performance, operational responsiveness and quality of service for customers.

<p><b>90%</b>        NETWORK EFFICIENCY INCREASED TO UP TO 90%</p>	<p><b>50%</b>        WATER LEAKS REDUCED BY UP TO 50%</p>	<p><b>X10</b>        METER READING UP TO 10x FASTER</p>
<p><b>20</b> CENTILITERS PER HOUR        METER STARTING FLOW FOR EARLY LEAK DETECTION</p>	<p><b>CO<sub>2</sub></b>        REDUCED EMISSIONS FROM METER READING OPERATIONS</p>	<p><b>ACTUAL BILLING</b>        ALIGNED WITH REAL CONSUMPTION</p>

**Reduced water abstraction**

Thanks to improved leak detection, water abstraction is reduced and water losses are limited, contributing to more responsible drinking water management.

**Greater service responsiveness**

Anomalies are detected more quickly, enabling earlier intervention and shorter response times. Billing also becomes simpler and faster thanks to more frequent meter readings.

**Operational efficiency**

Modernizing the system helps reduce emergency interventions, meter reading operations and maintenance work, freeing up time for higher value-added activities.

**Enhanced strategic management**

Teams can monitor consumption across the region by sector, refine investment planning and adapt resource management, particularly during periods of drought.

**Customer satisfaction**

End users are alerted in the event of domestic leaks and can track their consumption through an app, promoting transparency, water savings and a more modern image of the public service.

The agglomeration is now moving towards fully data-driven water management. The project was designed as a progressive transformation journey: extending remote meter reading to outlying areas and steadily renewing the meter fleet to accelerate the rollout of smart metering across the region.

Alongside the local authority, Diehl Metering remains committed to supporting the system's long-term evolution and progressively integrating new functionalities driven by its latest innovations.

# ANY QUESTIONS?

**CONTACT US**



## Your partner in transforming water management

We support public utilities with innovative, data-driven solutions for more efficient water and energy management. By combining smart metering, reliable communication networks and advanced software platforms, we help regions improve operational performance and preserve resources sustainably.

This document presents how Loire Forez Agglomeration partnered with Diehl Metering to improve network efficiency and enhance service responsiveness.



**Discover the Loire Forez project in our video report.**

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FUTURE**