mainlink | AXIØMA METERING

case study

How Smart Metering Cuts Water Use by 30% in Húsafell, Iceland

About The Project

Client: Utility, Ferdathjonustan Húsafelli ehf.
Scope: 233 single-family households
Project Duration: One year

The Challenge

Until recently, Húsafell's district heating and water distribution system was billed on a flat fee basis with no individual metering. This created several challenges:

- **Excessive water use:** Residents had little incentive to conserve water resources, driving up overall consumption as a result.
- **System overload:** High usage caused frequent pressure drops across the network.
- **Growing investment needs:** Over consumption pushed the utility toward costly infrastructure upgrades.

The Solution

- **233 ultrasonic water meters** installed in single-family households
- **1 Kerlink outdoor LoRa® gateway** for full coverage across the community
- **Mainhive Data Management Platform** enabling billing exports, leak and burst detection, and network monitoring
- **Resident Mobile App** providing daily usage visibility, consumption comparisons, and instant alerts

Why Mainlink

Ferdathjonustan Húsafelli ehf. chose Mainlink through its strategic partnership with Axioma Metering. The decision was based on the ability to deliver a one-stop solution: high-accuracy ultrasonic meters, a reliable LoRa® communication network, and Mainhive data management platform.

> ***The Axioma-Mainlink smart metering solution was a perfect fit for our distribution system providing excellent user interface for monitoring and billing with low implementation cost compared to other solutions'***
> *— Arnar Bergthorsson, IT and Digitalization Specialist.*

Results & Benefits

Reduced Consumption

- **Overall water usage dropped by at least 30%** after smart metering installation.
- **Pipe bursts were detected** in the early stage, preventing losses and damage.

Lower Infrastructure Costs

Accurate water monitoring **reduced the need for new pumping stations, long transmission pipelines**, and additional wells - saving capital investment.

Improved Resident Experience

- **Fewer complaints**: Pressure-drop issues caused by network overload were significantly reduced.
- Residents gained **real-time visibility of usage** through the mobile app, increasing trust and satisfaction.

Operational Efficiency

- **Transparent billing** with accurate consumption data
- Remote monitoring **reduced the need for site visits**
- **Custom alerts** for leaks, burst pipes, and unusual consumption behavior improved response times

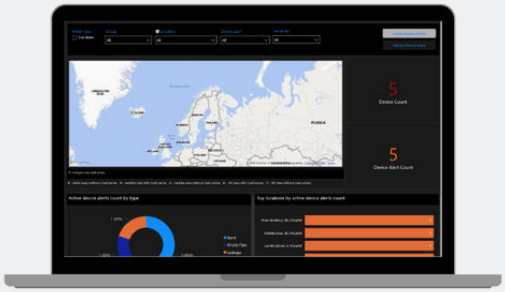
Map of the city with water meter infrastructure

- water meters
- gateway

Key Mainhive features used by the client

Billing Exports: streamlined invoicing with precise data

Custom Alerts: automated notifications for leaks, bursts, and anomalie



Network Health Monitoring: ensured reliable LoRa® signal and full system performance

Conclusion

The Húsafell project demonstrates how digital water management strengthens a community already powered by renewable energy. With Mainlink & Axioma Metering's complete smart metering solution, **the utility now benefits from accurate billing, proactive leak detection, and long-term efficiency - while residents enjoy transparency and reliable water service.**

The transformation resulted in a 30% reduction in water consumption, fewer complaints, and avoided costs for major infrastructure expansion. Even in a location fully sustained by clean energy, smart metering proved to be a critical step toward smarter, more sustainable living.