

Case

Designing a Sustainable Energy Management System

Discovery session + MVP development

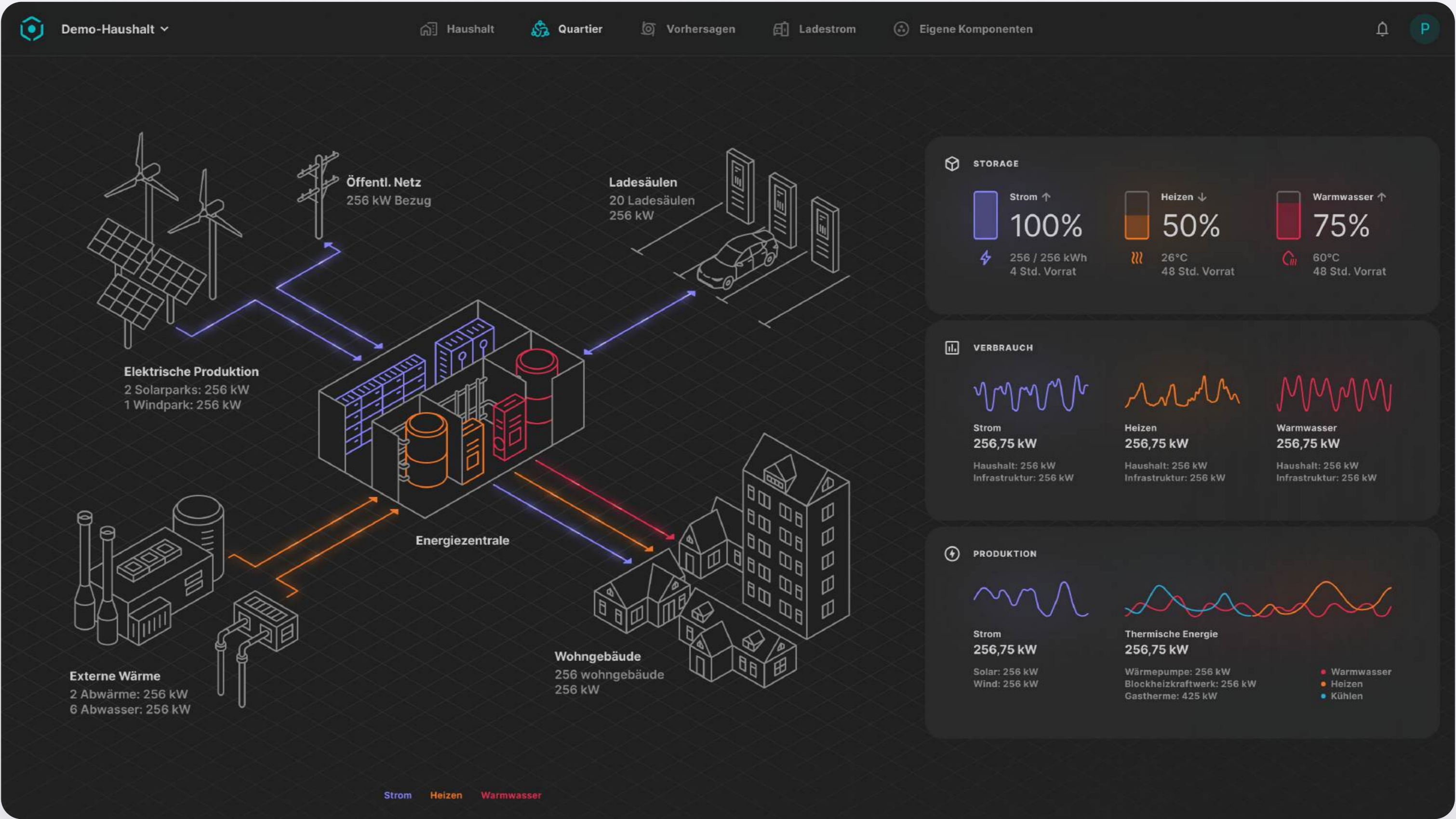
Industry: IoT Energy Startups

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From the initial vision to a clear, actionable roadmap, we refined, and solidified the client’s ambitious vision of a smart energy management platform.

The solution is aimed to facilitate sector-coupled energy supply, improving its efficiency. Ultimately, this initiative aims to enhance sustainability and cut energy costs.



Project Highlights

MATA Energy sought for an external development team with the right experience and domain-specific expertise to assist in launching a product aimed at digitizing energy grids.



Client

MATA Energy is a German provider of platform-based solutions for energy hubs that support both traditional and renewable energy sources.



Project

Energy management platform designed around local energy hubs, which act as energy storage systems for both electricity and heat within residential communities.



Industry

IoT

Energy

Startups

Challenges

The company's primary focus is on delivering integrated energy-efficiency solutions across diverse energy sectors, including electricity, heat, and energy storage systems.

Client's Vision

The platform provides energy balancing services and enables two-way energy trading: surplus energy can be sold back to the supplier, while additional energy can be purchased during periods of higher demand.

The project utilizes solar panels, heat pumps, and energy storage systems for both electricity and heat. Energy balance tracking is based on IoT, using metering devices connected through LoRaWAN and other technologies.

Extended Strategic Session

A Strategic Discovery Session is a structured workshop that provides a deep analysis of the client's idea, quickly allowing for both investor pitching and/or project development. Our help can be provided both offline and online via video meetings.

For MATA Energy, the Discovery Session spanned a month. Before each meeting, we provided an agenda and, sometimes, preparatory tasks. After each session, we created essential materials (deliverables) ensuring a clear path forward.

"We picked WaveAccess as developers mainly because of their great strategic approach and understanding of startups, along with their extensive experience in IoT, cloud tech, and the energy industry. Before we started working together, we had an extended strategic session that helped us ensure that they knew how to use the best IT practices and technology while keeping costs down and sticking to our schedule"



Christopher Giesken

Managing Partner
MATA Energy

Pitching

During the strategic session, our team analyzed the client's idea, defining technical requirements and transforming the concept into a step-by-step plan with timelines and estimates. We guided MATA Energy from an initial idea to a fully realized project with clear, actionable artifacts.

The end product and MVP were specified, giving the client's team a clear understanding of development time and costs, along with all specified deliverables. Tech documents were prepared for pitch meetings. With a strong idea and a final presentation of deliverables, MATA Energy had the materials needed to gain investors' credibility.

"We're really happy with what we've got so far. An MVP of our platform for smart energy supply boasts great functionality and design, delivered right on time"




Christopher Giesken

Managing Partner
MATA Energy


MVP Development

MATA Energy re-engaged WaveAccess to build an MVP monitoring app. This IoT-based web application monitors and manages data from neighborhood energy devices, including solar generation, distribution efficiency, and energy consumption for heating, cooling, and car charging.


MVP key features:




Customized dashboards for property managers, house owners, engineers, internal energy operators, and public energy operators



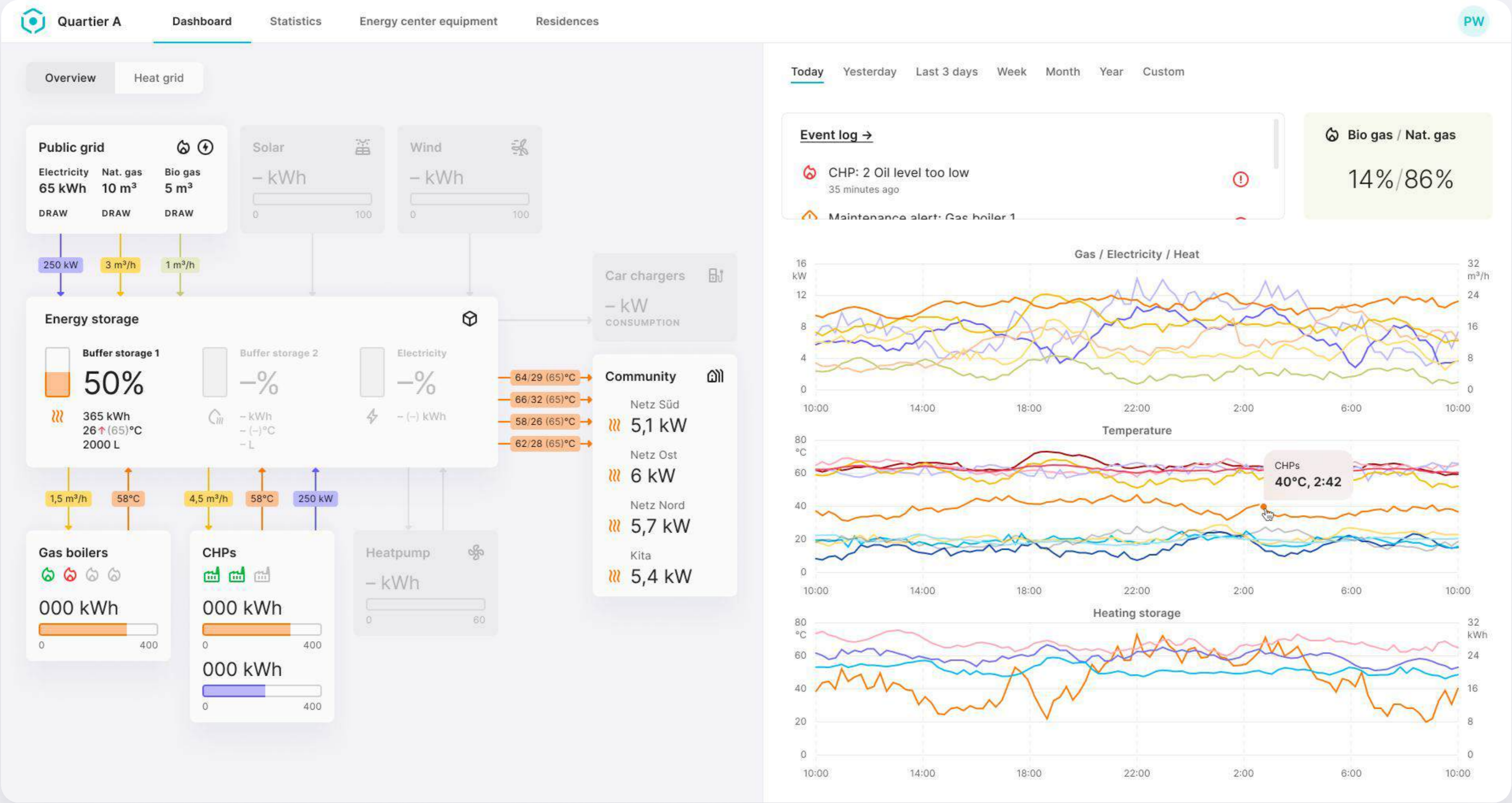
Real-time data gathering and visualization, combined with historical data analysis



The expected load for the MVP is 42 households, with an average of 30 devices per household, generating one message every 15 minutes



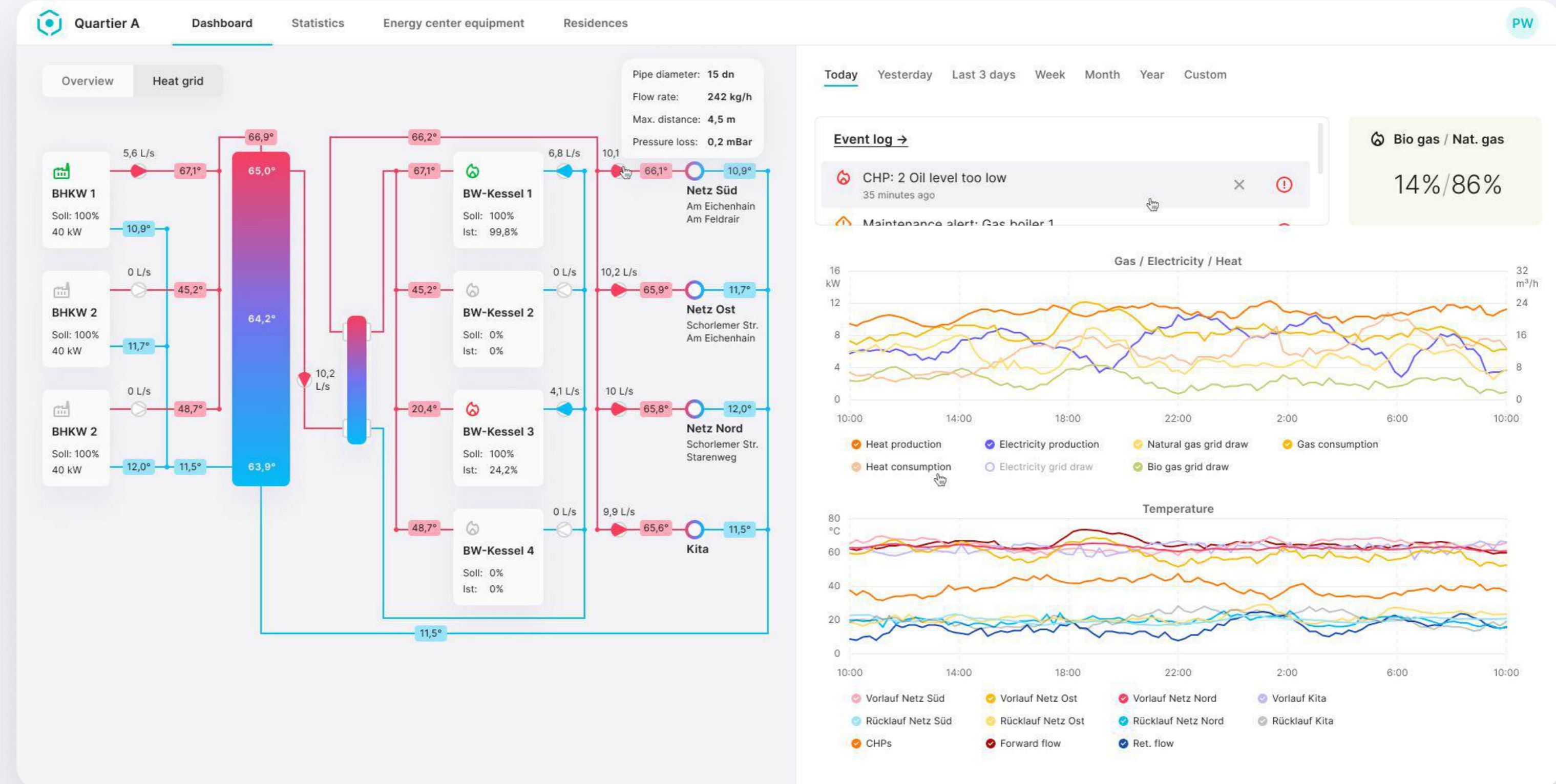
Heat grid diagrams. Automated alerts for equipment malfunctions

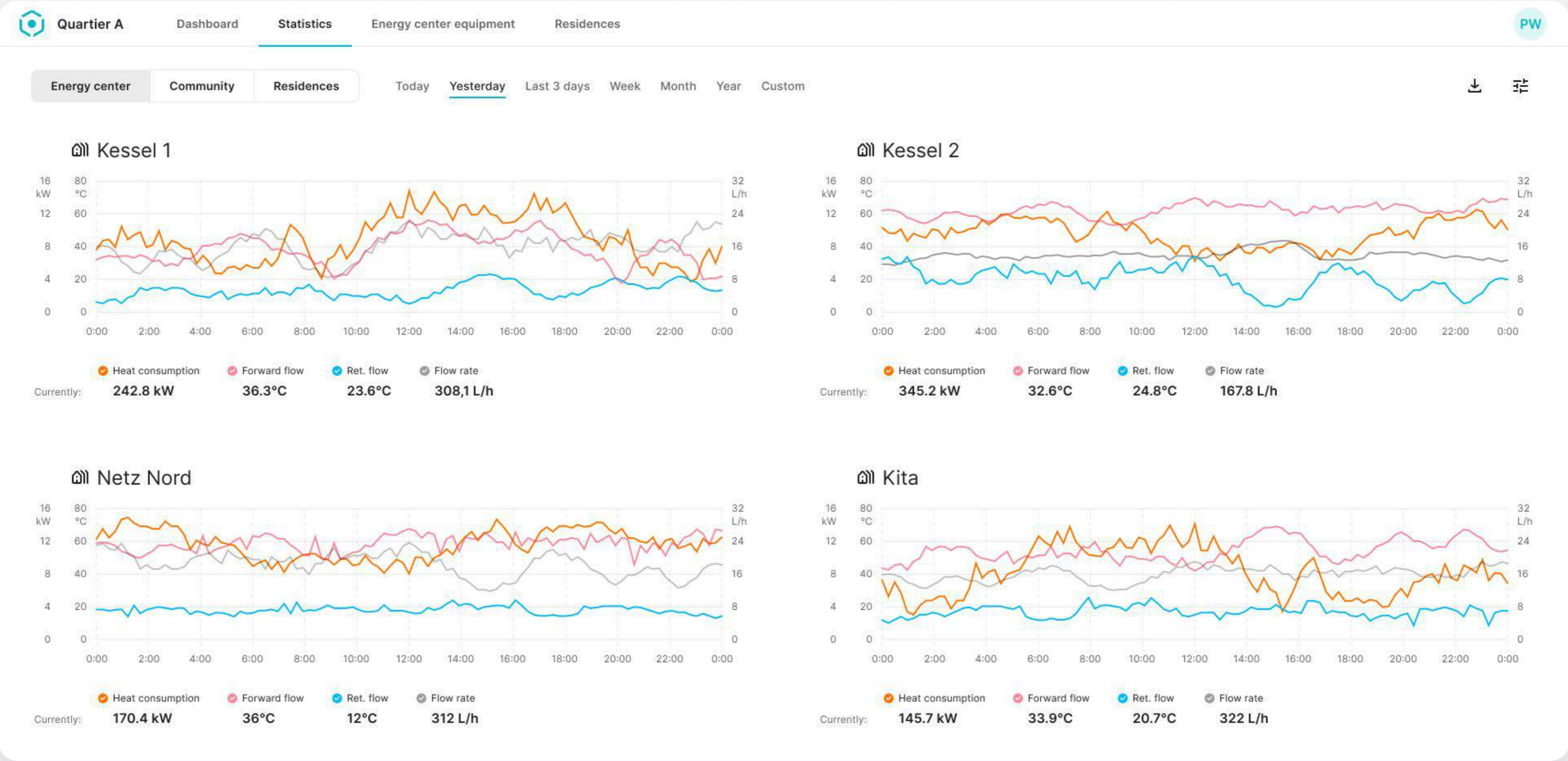


Technical Challenge

The primary challenge encountered during the project revolved around creating accessible and user-friendly visualization of complex data gathered from various technological assets and equipment.

Despite the tight timeline, WaveAccess's development team successfully tackled this task, and also envisioned the essential feature for complete customization of the visualization.





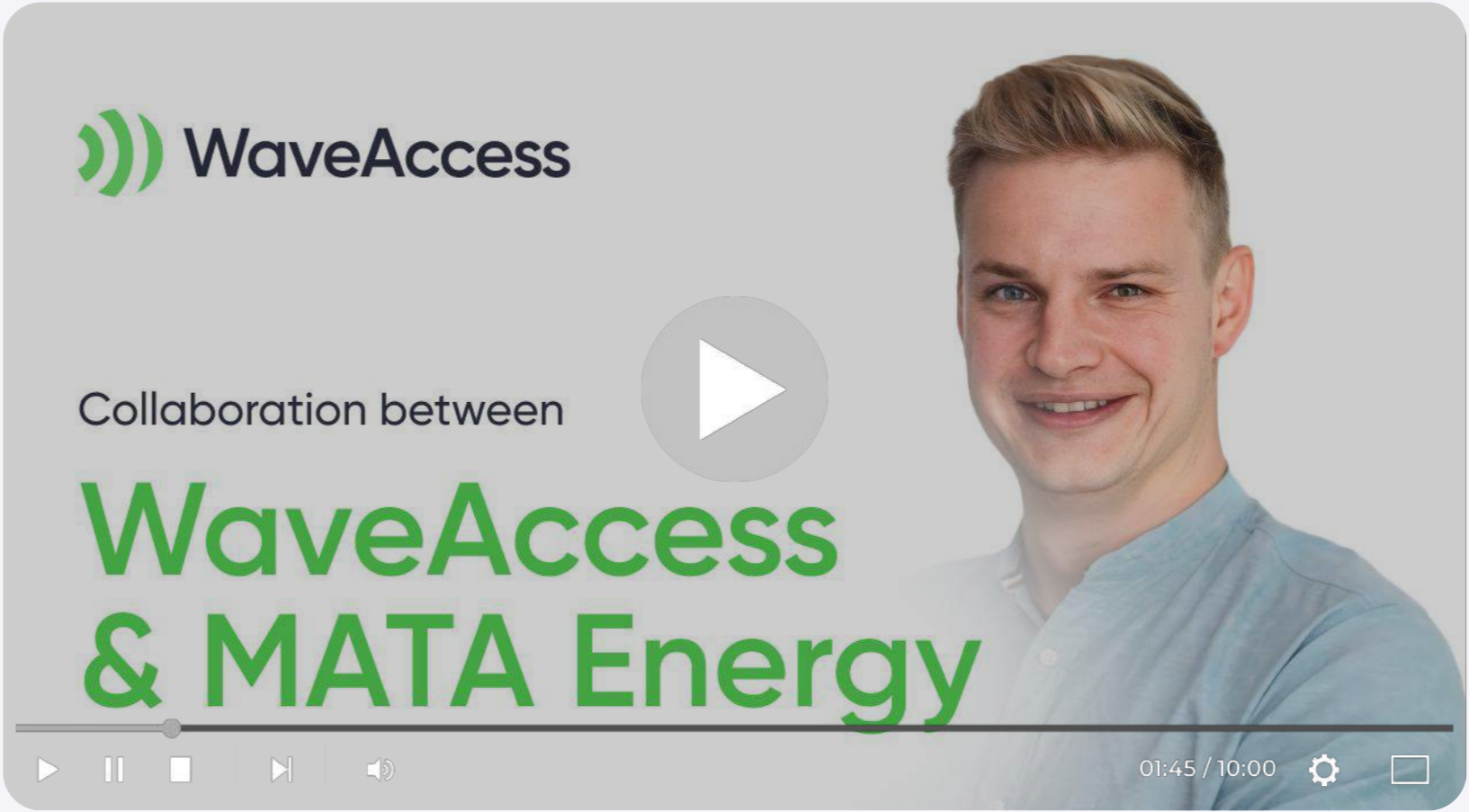
Result

With WaveAccess, MATA Energy gained access to rare expertise, saved time and money, and could expand the team as needed.

The company is currently collaborating with a municipal energy provider to build a new energy hub, for which we have created and integrated connectors for Modbus and LoRa energy meters.

The MVP launch marks the beginning of a larger project, and we are thrilled to continue our collaboration with MATA Energy as we progress to the next steps!

Testimonial



Technologies

- Azure Pipelines
- Flutter
- .NET MVC
- .NET
- Microsoft Azure
- Microsoft Azure IoT Hub
- Python
- Terraforms
- TestFlight

Thank you!

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