



Technologies

NET, Azure, SQL, React, iOS, Android

Case study

Empowering end-users with flexible heating optimization powered by NordPool data and cloud expertise

A leading innovator in energy-efficient heating solutions leverages NordPool data and Proekspert's expertise to optimize heating systems across Europe.

Making smart heating customization a reality

A leading innovator in energy-efficient heating solutions needed to empower customers with smarter heating management while staying competitive in a fast-paced, technology-driven market. In an industry where leading-edge features quickly become standard expectations, the challenge lies in continuously improving products to deliver greater value and usability.

With a vast European market to serve, the company aimed to meet varying customer needs while exploring ways to address differences in energy pricing structures across regions. Their goal was to create a flexible, reliable, and user-friendly solution that would scale seamlessly to meet both current and future demands. Partnering with Proekspert, the company set out to build a cloud-powered platform integrated with their heating management system.

Delivering robust, cloud-powered optimization

Proekspert collaborated with the leading heating technology innovator to create a scalable, cloud-based optimization service integrated into their online heating management system, designed to adapt to industry shifts and provide a seamless user experience. The solution focused on reliability, usability, and scalability. Key areas of our contribution include:

- **NordPool API integration.** Automated collection of hourly electricity prices tailored to local market variations now supports multiple European countries, ensuring relevant data-driven optimization across diverse energy ecosystems.
- **Flexible device support.** Initially designed for one model, the solution is now accessible to users across Europe, with widespread adoption and continued growth. Proekspert ensured the system remains scalable as more device types are added.
- **Intuitive customization controls.** The algorithm enables users to independently adjust settings for room and water heating, balancing energy efficiency and comfort. Options range from energy-saving modes that respond more dynamically to pricing, to stable modes that prioritize consistent comfort. Proekspert's integration ensures these features are accessible and intuitive through the mobile and web applications.
- **Cloud-first, modular design.** Leveraging a secure Azure platform, Proekspert developed a service architecture that transmits energy pricing data as vectors to the client's devices. The client's internal team created the algorithm that calculates energy parameters and accounts for price trends, while Proekspert ensured the seamless functioning of the data pipeline and device integration. This modular approach ensures easy updates, distinct separation of energy price data from other system components, and efficient real-time performance.

Results: Driving continuous innovation for the client and their customers

Our collaboration allows the client to address current market demands while building a scalable foundation for continued growth and adaptability across regions.

How Proekspert empowered the client:

- Developed a reliable, cloud-based platform that enables real-time heating optimization for users across multiple European markets.
- Delivered a scalable and modular solution that supports more devices and regions as the client expands its offering step by step.

Impact on the client's end-users:

- Provided intuitive controls for room and water heating through an online platform, empowering users to manage energy usage in a simple and flexible way.

- Helped customers adapt to regional electricity pricing conditions, offering balance between comfort and savings.

The client aims to continue enhancing their offering to provide flexibility and value to their customers across various markets. Proekspert's scalable solution supports these efforts, enabling them to address evolving needs and challenges effectively.

Impact for the client's business

The client has strengthened its position as a leading name in sustainable heating technologies by delivering a robust and scalable heating optimization feature that adapts to the diverse needs of customers across Europe. The solution demonstrates the company's commitment to meeting evolving market demands while offering flexibility and ease of use for end-users.

Proekspert's scalable cloud-based platform enabled the client to expand device and regional support step by step, ensuring the solution works

seamlessly across multiple devices and markets. The intuitive integration of user controls further enhances the company's reputation for delivering

innovative, customer-focused solutions.

By equipping the client with a flexible and future-ready platform, our partnership ensures that they are well-prepared to continue delivering greater value to their customers as market requirements evolve.