# CASE STUDY: SURFACT

**aimprosoft**

# Aimprosoft builds an intuitive portal to improve operational efficiency for the Norwegian company

## Client information:

Client: **Surfact**

Company size: **1-50**

Headquarters: **Norway**

Cooperation model: **IT outsourcing**
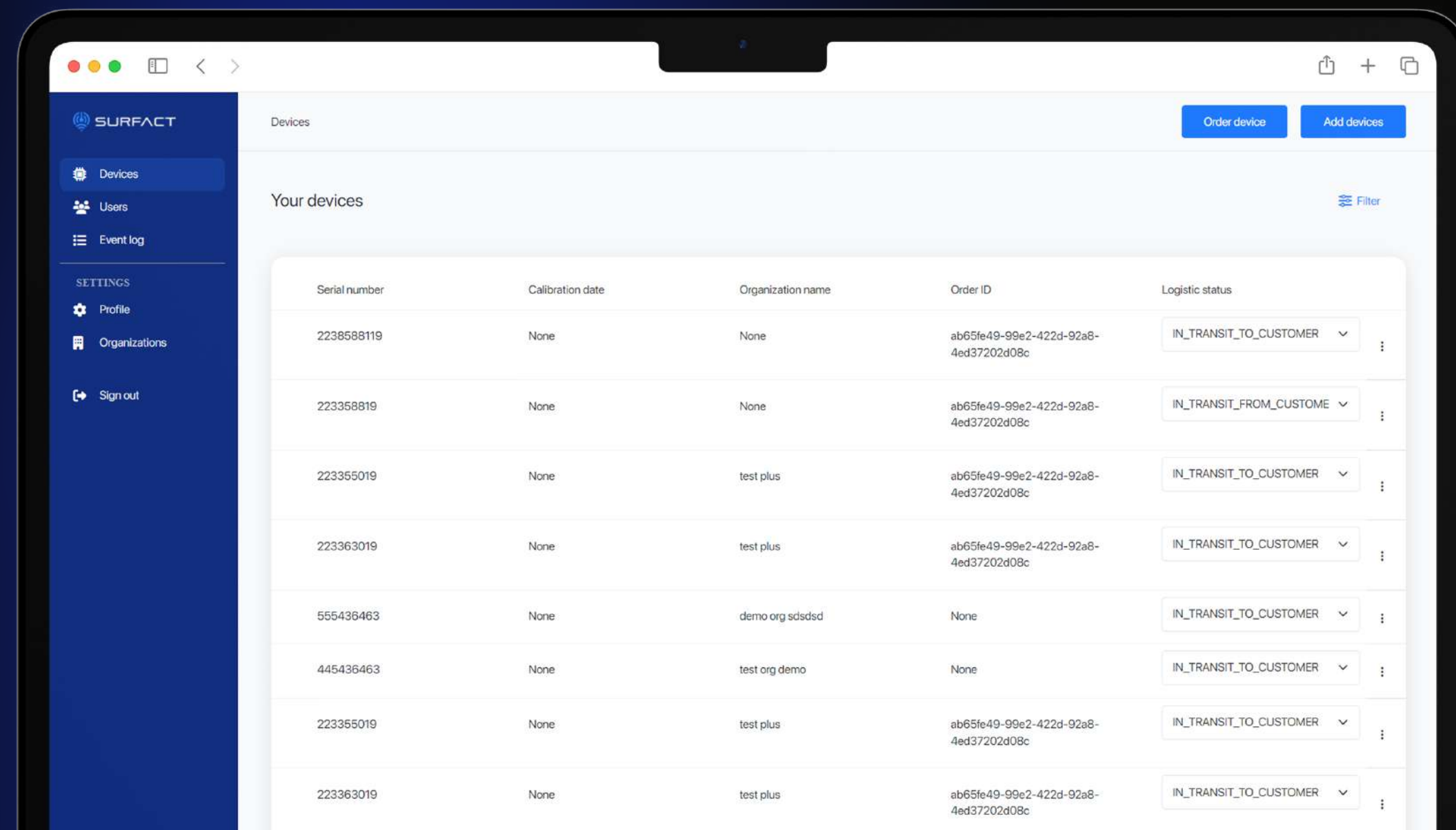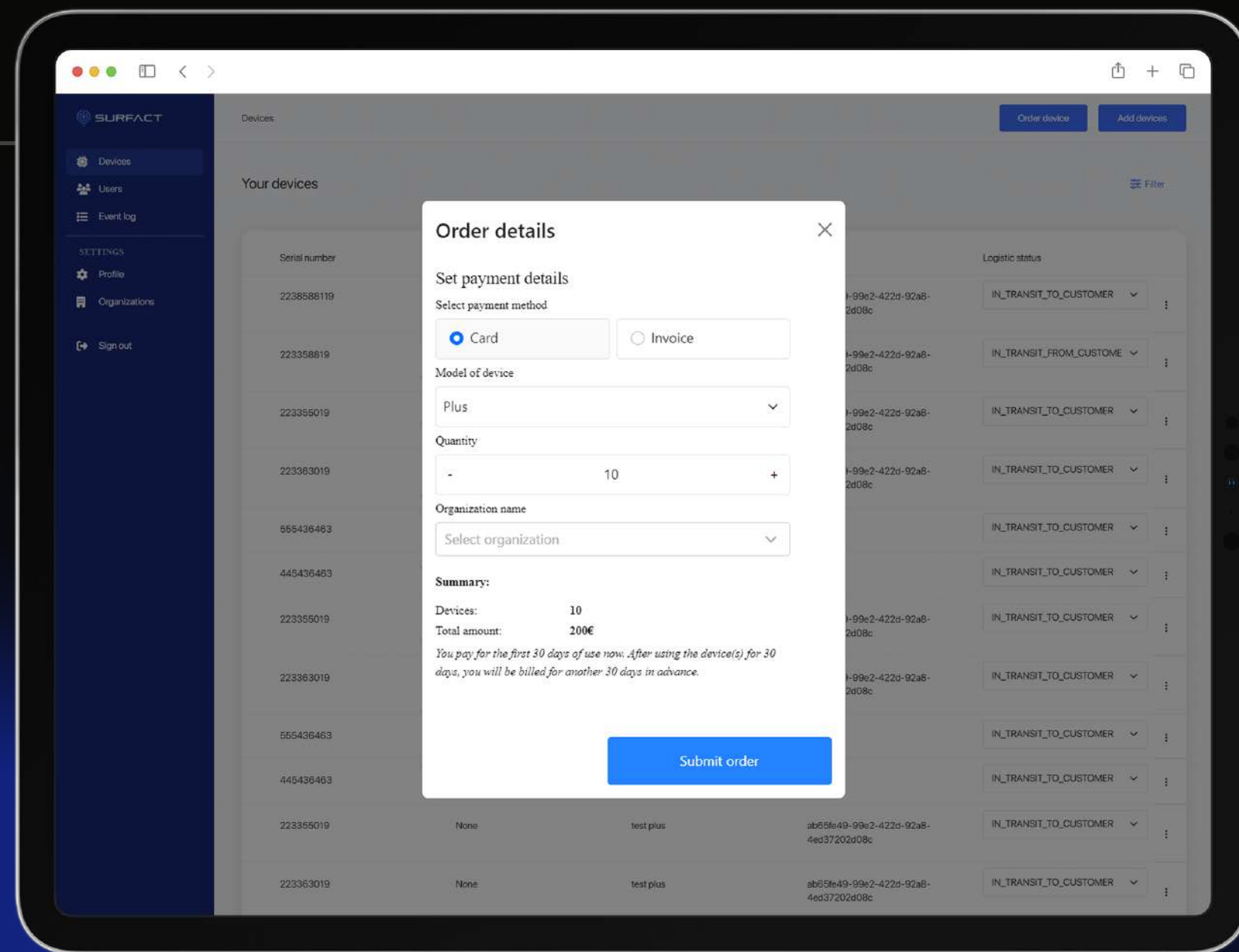
## Team size:

Project manager: 1
Full-stack developer: 1
Frontend developer: 1

Backend developer/
Software architect: 1
QA engineer: 1
DevOps engineer: 1

# PROJECT OVERVIEW

## Summary:

Surfact is on a mission to tackle the growing problem of waste in the food and pharmaceutical sectors through innovative technology. The company needed a comprehensive solution to streamline IoT device order management, so they hired Aimprosoft to develop a custom web portal from the ground up. This collaboration focused on creating an intuitive platform to enhance operational efficiency.

We developed a solution that not only met the immediate needs of the client but also positioned them for future growth and sustainability in the logistics and IoT industries.
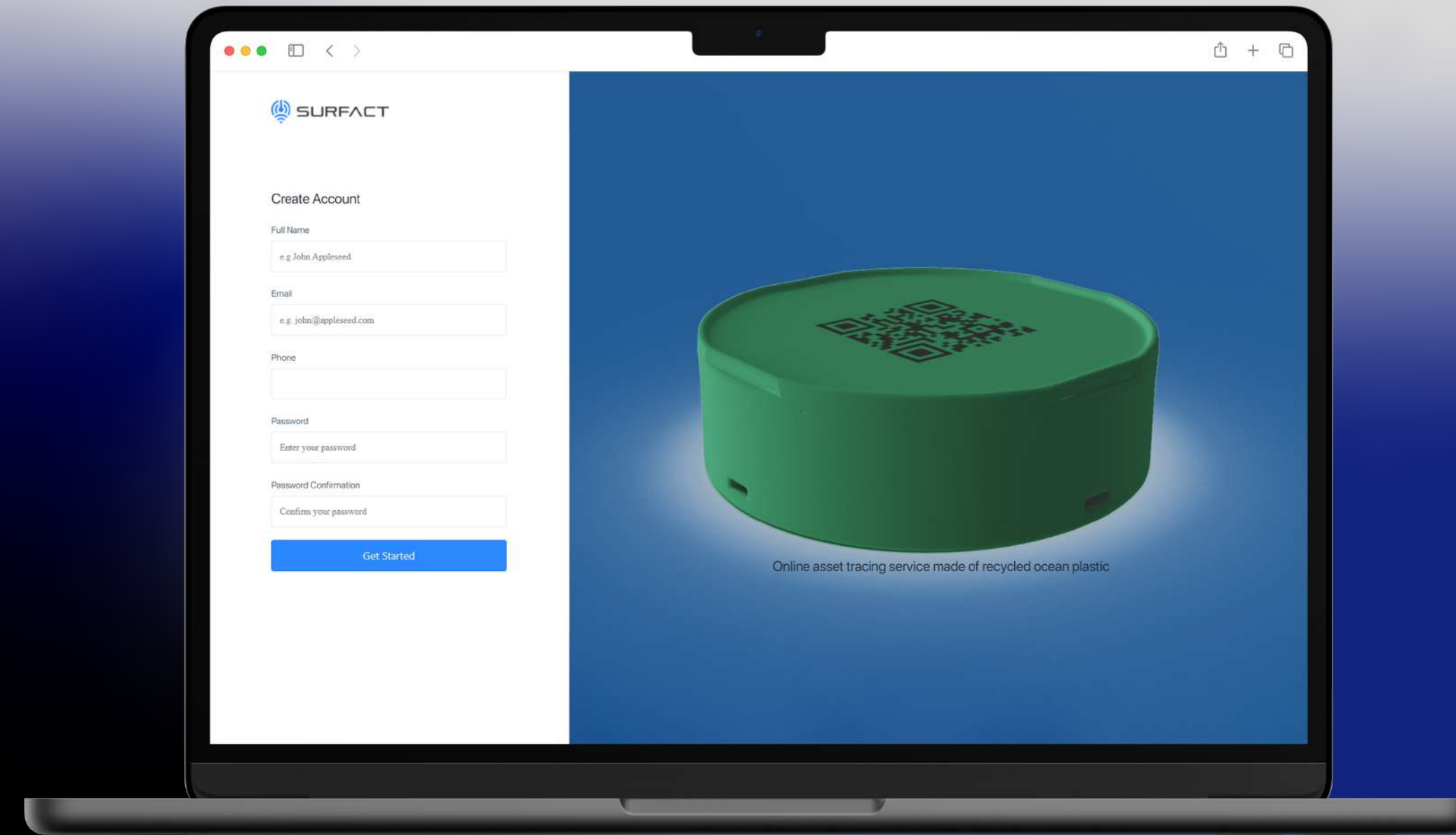


## Provided services:

- Web development
- Project management
- QA & software testing
- DevOps services

## Technologies & tools:

- **Platform** - Node.js
- **Frontend** - React, Redux, React-Bootstrap
- **Backend** - Nest.js, TypeORM
- **Databas** - PostgreSQL
- **Cloud platform** - Microsoft Azure
- **QA** - Manual Testing
- **Third-party tools** - Sendgrid, Ubidots, Stripe
- **Additional tools** - Git, Docker

# REQUIREMENTS & CHALLENGES

Surfact came up with the idea of creating a solution to address the challenges of waste in the food and pharmaceutical industries. They hired us to develop a web portal for management of IoT device orders, subscriptions, and financial transactions, ensuring users can easily access information in one place.

The client wanted to create a toolset to simplify management processes and ensure seamless payment integration. On top of that, Surfact needed a partner who could not only build a robust platform but also adapt to evolving needs and deliver on time.

The project posed several challenges to our team. We dealt with the limitations of the payment processing system, enabled smooth integration with 3rd-party services, and ensured open communication to meet the client's expectations. Our proactive approach allowed us to overcome these hurdles and deliver a solution that enhanced operational efficiency while positioning Surfact for future growth.

## PAYMENT INTEGRATION LIMITATIONS

The selected payment system—Stripe—came with certain limitations. It initially offered only credit card payment options. So, our team had to find a way to let customers pay via invoices, empowering a better user experience.

## DEPENDENCY ON THIRD-PARTY TOOLS

The portal required integrating multiple third-party services, including Ubidots, Sendgrid, and Stripe. Consequently, the Aimprosoft team kept a close eye on the logic and security to guarantee smooth integration and proper performance in the long run.

## FIXED DELIVERY DATE

We had to adhere to a strict timeline for the project's completion. This meant prioritizing tasks and maintaining open communication with the client to ensure milestones were met without compromising the quality.

## TECH STACK WITH SCALABILITY IN MIND

Our team assisted with selecting the optimal technology stack for the project. We took into account the client's expectations in terms of seamless scalability, performance, and easy maintenance. This involved carefully evaluating various options to support seamless integrations and user-friendly experiences, allowing for future enhancements as the platform grows.

# HOW WE WORK

## COLLABORATION APPROACH & PROCESS

Since the **product was built from scratch,** our dedicated team started by engaging closely with Surfact to **understand their specific needs and create a realistic roadmap.** We ensured that our solution was not only aligned with their vision but also adaptable to their evolving business needs.

Working on development tasks, we leveraged Scrum to **ensure a flexible approach to planning and delivery.** We had two-week sprints, which allowed our team to adjust the scope, make consistent progress, and maintain transparency. Additionally, we had regular calls with the team and the client to **improve collaboration** and facilitate progress discussions and feature demos.

All that resulted in a solution that not only **supported Surfact's mission** but also **enhanced operational efficiency** for their users, allowing them to manage their organizations, handle device orders, and conduct payments seamlessly. We are proud to have contributed to this next-gen project, **reinforcing our commitment to innovation and client success.**

## CLIENT TESTIMONIAL:

*We engaged Aimprosoft to create special B2B solutions in ecology, logistics, and IoT domains, and we are pleased with our partnership.*

*Their deep tech expertise, outstanding performance, and effective communication are remarkable. Even challenging circumstances in their country did not stop Aimprosoft's team from consistently delivering high-quality output on time.*

*Clear process and transparent communication, involvement of the team, and proposed solutions for any case became pillars for seamless collaboration. If you need to rely on a software vendor with a proactive and responsive approach to providing robust solutions, we recommend Aimprosoft.*
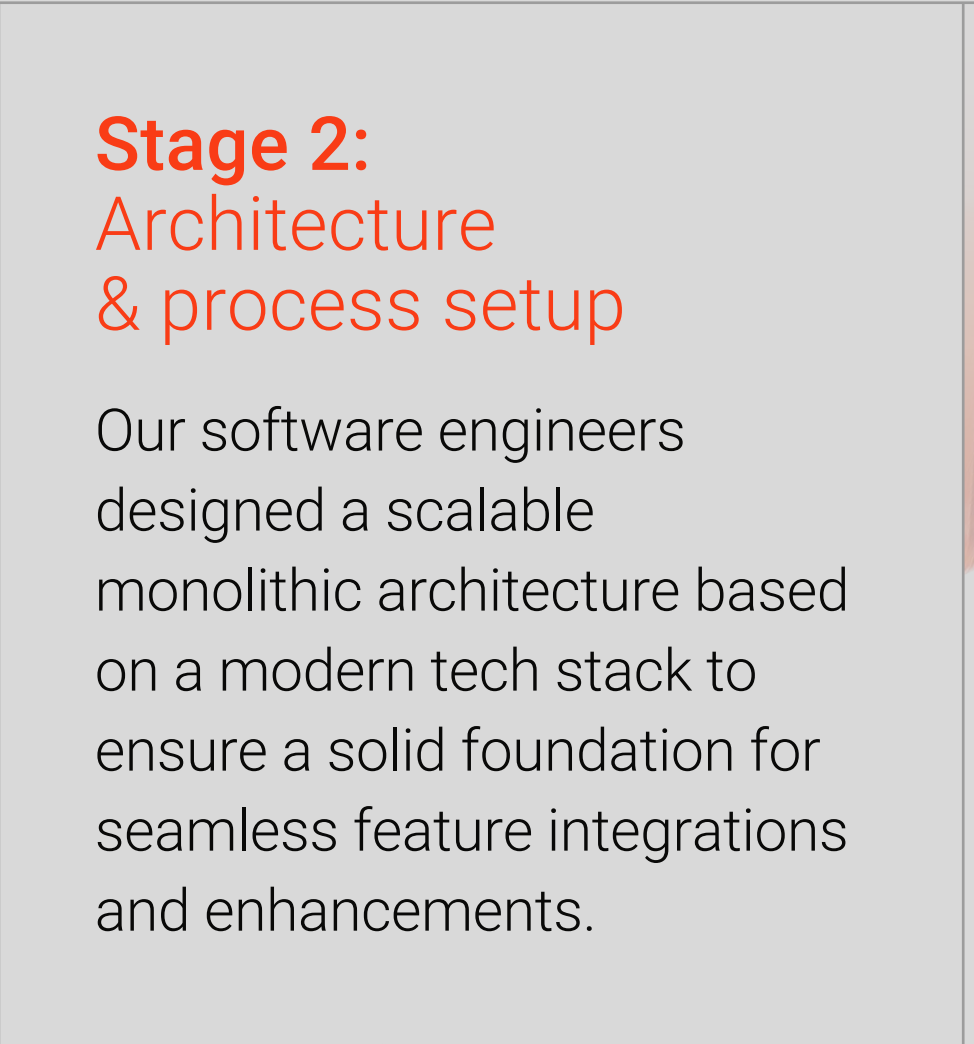
Knut Nygård, CEO

# STEP-BY-STEP PROJECT FLOW

**Stage 2:**
Architecture & process setup

Our software engineers designed a scalable monolithic architecture based on a modern tech stack to ensure a solid foundation for seamless feature integrations and enhancements.

**Stage 4:**
Backend & frontend development

The developed web portal allowed users to manage their orders and subscriptions effortlessly. The platform was designed with usability in mind.

**Stage 1:**
Concept refinement & discovery

We engaged in in-depth discussions with Surfact to clarify their vision for the web portal. Such an approach allowed us to define project requirements and create a detailed roadmap.

**Stage 3:**
DevOps & infrastructure

We established a scalable cloud environment and configured CI/CD pipelines. This infrastructure facilitated development and deployment processes while ensuring reliability.

**Stage 5:**
Quality assurance

Our QA engineers performed comprehensive manual testing across the portal's functionality to guarantee the product was stable and ready for a successful release.

# DELIVERED FUNCTIONALITY
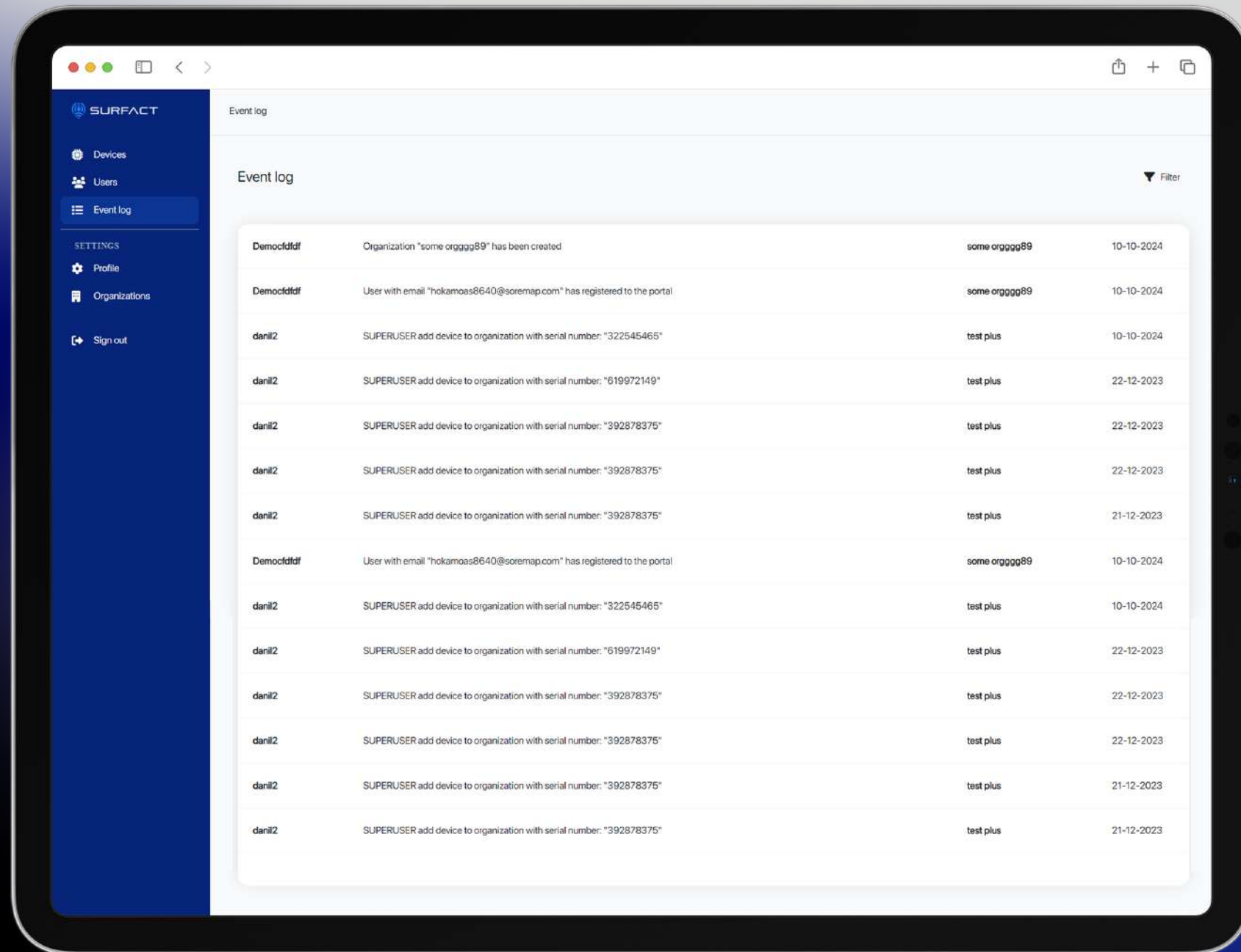


**Device monitoring:** Administrators have access to a user-friendly dashboard for managing orders. They can view device statuses, including model selections, registrations, organization assignments, delivery statuses, and other activities.

**Event logging:** The system tracks user actions within the portal, enabling easy auditing and monitoring of changes. The goal was to enhance accountability and system transparency.

**Additional features with 3rd party tools:** The portal has integrations with external APIs (i.e., Stripe, Sendgrid, Ubidots) to enable secure payment operations, user notifications, and data management, resulting in improved operations for the client's team.

**Financial management:** Integration with payment systems like Stripe enables users to handle payments for device orders and manage subscriptions efficiently, providing flexibility in payment options.

**Organization management:** Users can manage their registered organizations, add new ones, and handle subscription details. This includes updating address information and deactivating organizations if needed.

**Automated inventory management:** The portal includes automation for device status updates, allowing superusers to manage device assignments effortlessly. This feature enhanced operational efficiency and minimized manual oversight.

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# PROJECT OUTCOMES

## END-TO-END SOLUTION DEVELOPMENT

Our team successfully built a robust web portal from scratch, helping Surfact to streamline their IoT device order management. This involved clear planning and execution, ensuring that all project requirements were met efficiently.

## EXPERT TECHNOLOGY STACK GUIDANCE

Our developers provided valuable insights into the optimal technology stack, selecting tools and frameworks that boosted performance while aligning with Surfact's long-term objectives.

## ENHANCED OPERATIONAL EFFICIENCY

The web portal became a centralized platform for managing device orders, subscriptions, and financial transactions, serving as a single source of truth for users. This solution reduced time spent on manual processes and minimized errors, allowing organizations to focus on core activities and improve productivity.

## STREAMLINED DEVELOPMENT PROCESS

We maintained flexibility and transparency throughout the project by using the Scrum approach. This allowed us to adapt to changing requirements and deliver timely solutions that exceeded client expectations.

## TIMELY DELIVERY

Though the project had dynamic requirements and certain limitations of selected third parties, the project was successfully launched on schedule, proving our commitment to meeting deadlines while maintaining quality.

## SECURE PAYMENT PROCESSING

Our developers successfully configured webhooks for Stripe, enabling real-time updates on subscription changes and device management. This automation improved efficiency and ensured accurate data handling, ultimately enhancing the user experience.

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