

Remote Management for Solar Paver Systems

AT A GLANCE

Challenges

- Lack of remote control
- Budget limitations
- No internal dev team
- Needed phased rollout

Methods

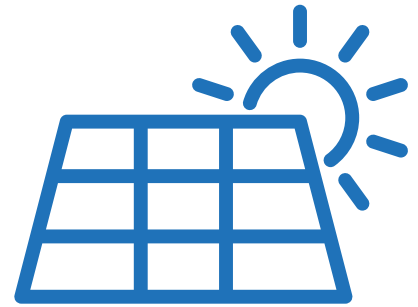
- Developed proxy adapter
- Created 2D control system
- Used phased development
- Applied real-time sync tech

OBJECTIVES

This renewable energy technology company designs and manufactures solar-powered modular pavers that integrate lighting and heating components for innovative infrastructure applications. Their goal was to enable remote management of these installations through a scalable and accessible platform for both engineers and end-users. Key priorities included maintaining low development costs and delivering core features in phases to align with evolving needs and funding availability.

SOLUTIONS

IntelliTect developed a custom proxy adapter that enabled secure remote access between the company's existing on-premise software and its distributed solar paver installations. To enhance usability, they created a 2D graphical control interface using Vue.js and Three.js, providing engineers and operators with an intuitive, visual way to manage LED lighting and heating configurations. SignalR technology was integrated to ensure real-time synchronization across all installations. This solution was delivered in a phased approach that carefully aligned with the client's budget constraints, internal timelines, and evolving feature requirements.



BENEFITS



Seamless Control

Intuitive, real-time management of paver installations.



Scalable Platform

Supports future feature growth with no disruptions.



Optimized Investment

Improved internal team skills through training and mentoring.