CASE REFERENCE · FINANCIAL SERVICES

WFS

FDX - Custom Electronics

WFS	Financial Services	Design · Develop	
CLIENT	INDUSTRY	DELIVERED AS	• ESP microcontroller • Inverter • Backup Power • SaaS BI

IOT AND AGENTIC ALERTING

Smart monitoring and agentic alerting for WFS's backup-power fleet

A custom ESP device that retrofits to thousands of basic 24V inverters, giving WFS live visibility of its remote backup-power fleet and an AI tool to interrogate the data.

01

THE CHALLENGE

To keep its first-line support call centre running through power outages, WFS had handed thousands of basic 24V inverters to staff working from home. It was solid redundancy, but it was a black box. Nobody could see the state of any given inverter, how it was being used, or whether the failures lined up with the published power-interruption schedules for the areas staff lived in.

02

THE APPROACH

Getting telemetry off hardware that was never designed to give it meant building our own. We made a custom ESP microcontroller that retrofits to the inverters without interfering with how they run or voiding the supplier's warranty. It reads the data we need and sends it over whatever wifi the staff member already has to a cloud service for processing, so the live state and health of every inverter shows up directly in the endpoint device-management tool WFS already uses.

03

THE OUTCOME

WFS can now act before an inverter fails, rather than after a staff member drops off a call. Beyond the real-time picture, the team holds deep historic and live data on how the inverters are actually used, and an LLM-based investigation tool lets them query the whole dataset in plain language, correlating usage patterns with known outages and the reports coming back from the inverters in affected areas.

04

SUMMARY & BENEFITS

- ✓ Real-time smart monitoring of otherwise "dumb" inverters.
- ✓ Intelligent feedback on the environmental conditions affecting each inverter.
- ✓ Proactive maintenance of failing inverters before they drop a call.

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