ELEMENT 8

KNOW YOUR LIMITLESS

CASE STUDY

Powering Through Challenges with an Innovative Approach to Remote Energy Management

PRODUCTS:	INDUSTRY:	INTEGRATOR:	END USER:
IGNITION	POWER	SARYX ENGINEERING GROUP	SOLASYNERGI

01

Introduction

Solasynergi is a leading renewable energy company in South Africa, specialising in solar and storage power solutions. With a focus on sustainability and innovation, Solasynergi designs, installs, and maintains solar energy systems for off-grid, agricultural, commercial, industrial and utility clients.

Their cutting-edge technology solutions, cloud-based asset monitoring, diagnostic systems and commitment to quality make them a trusted partner in the transition to clean energy. They thereby contribute significantly to reducing carbon emissions and promoting energy independence nationwide.

02

Problem

Addressing the challenge of supporting clients at remote sites, where deploying permanent technical staff is unfeasible, involves overcoming their reluctance to invest in complex technology outside of their expertise.

The varied locations of these projects often need more reliable internet and limited bandwidth, complicating fault diagnosis, settings adjustments, and system commissioning. Communication hardware reliability and minimising data loss are crucial for effective reporting.

Initially, the use of Thingsboard, despite its advantages, was abandoned due to its widget-based complexity, limitations in navigation, and the high technical demand for creating specific data displays, alongside difficulties in data querying. Additionally, safeguarding the cybersecurity of customer assets is paramount, requiring stringent protective measures.

03

Solution

Solasynergi sought a cost-effective, scalable, and cloud-based system that was hardware agnostic and could accept late data due to customer site internet failures. Their solution was to implement a system with a template feature allowing for rapid deployment across sites by substituting tags specifically for each customer, which could update autonomously across sites.

Ignition emerged as the capable platform meeting all these requirements. Solasynergi Loggers, the edge devices which run a Linux-based system with an application developed by Saryx Engineering Group, are equipped with interfaces for various technologies including IEC68150, DNP3, Modbus RTU, Modbus TCP, and HTTP. These devices schedule and transfer data to the server, utilising MQTT telemetry technology for reliable data delivery and store-forward capabilities in case of internet outages.

Packaged into templates with Sparkplug, data is received by the Mosquitto MQTT server, processed by the Cirrus Link MQTT engine, and then presented to the SCADA system with placeholder tags for swift site-specific screen deployment.

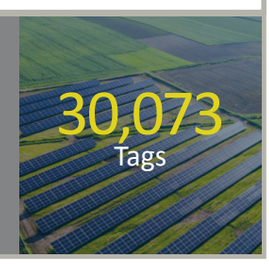
04

Results

SolaSynergi successfully implemented the Ignition platform to revolutionise their client site monitoring capabilities. It facilitates seamless monitoring across multiple sites, significantly improving navigation and data display through the use of customisable projects and templates.

Notably, data management is streamlined, allowing for separate storage and easy access specific to each site, directly addressing initial concerns over site remoteness and technological barriers. The introduction of mobile accessibility via the Ignition mobile app further amplifies the platform's utility, enabling on-the-go monitoring and ensuring that clients can effortlessly interact with their data anywhere, anytime.

This advancement represents a significant leap in SolaSynergi's ability to deliver a user-friendly, reliable, and efficient monitoring service that circumvents the limitations posed by diverse and challenging project locations.

 5316 Alarms	8 Devices Used	Solasynergi Logger, Linux, Node-red, MQTT (sparkplug-B), IIoT, PostgreSQL	9 Databases Used	 30,073 Tags

27 Screens	05 8 Clients