Detecting asset performance issues instantly

A case study of Voltalia with SynaptiQ

3E

voltalia

Company

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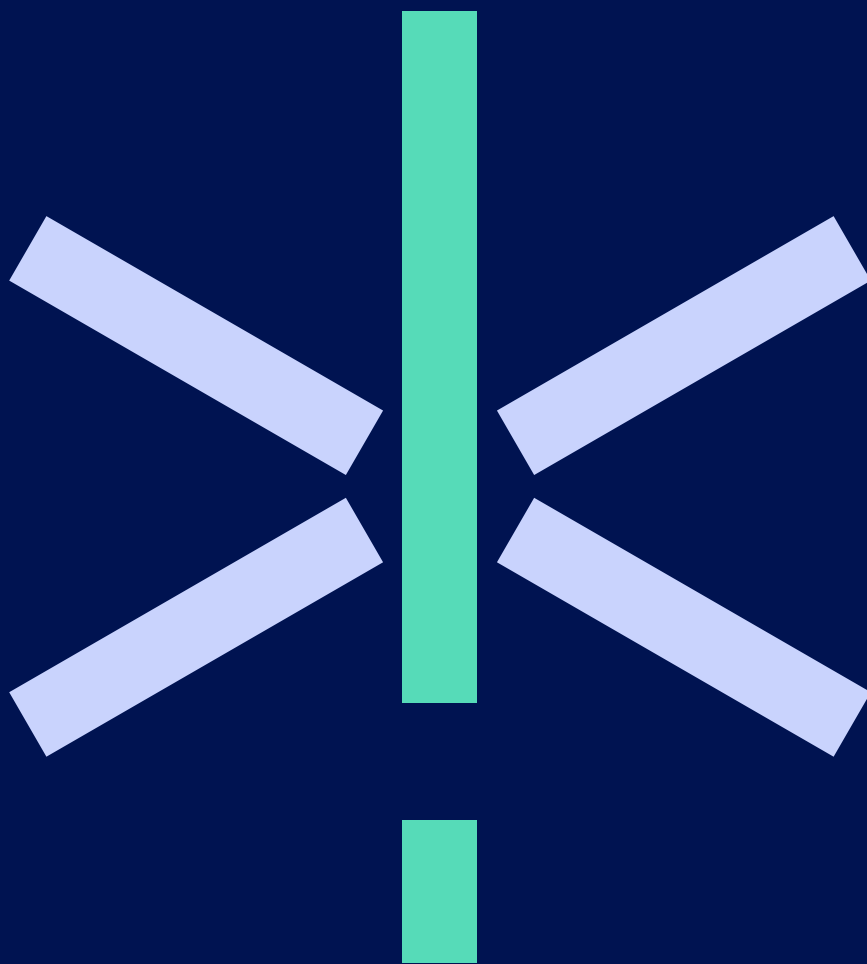
Name

Voltalia

Country

France

Industry

IPP

Asset types

Solar, wind, storage, biomass & hydro

Portfolio size

2.9 GW

SynaptiQ applications

Solar Analytics Asset Operations

The challenge

① **Prioritising alerts**

With our growing portfolio, we get thousands of alerts and it's extremely hard to spot the urgent issues and respond quickly to them. We need a system that can prioritise the alerts.

② **Optimising performance and availability**

Our biggest O&M challenge is to improve overall performance of the assets we manage. We need to guarantee that all assets are producing as much energy as possible.

③ **Scaling up effectively**

We are a growing company in a dynamic market, so we need our way of working to be scalable. This means automating what we can and making processes as efficient as possible.

④ **Data sharing**

We used to work with different tools, which resulted in a fragmented overview of our monitoring and maintenance activities, data losses and extra costs. Data sharing with our customers, developers and engineering teams tended to be limited or messy.
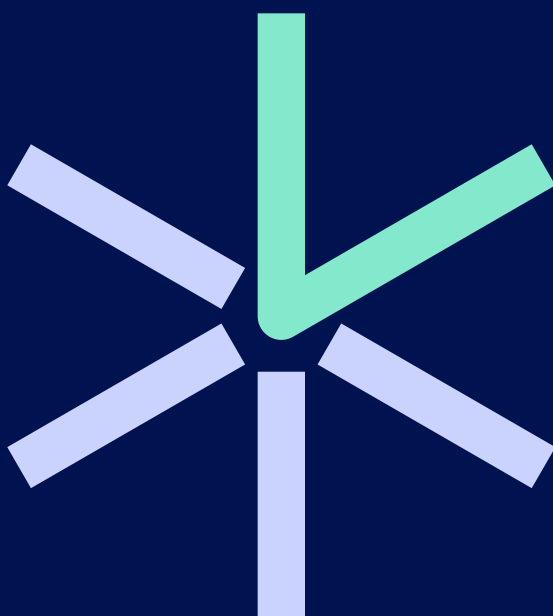
The solution

We use SynaptiQ for our solar PV and storage assets because it is an integrated platform for data collection, real-time monitoring and reporting.

① **Actionable insights**

By using historical and real-time data, and machine learning, SynaptiQ turns the noisy data of multiple alerts into clear insights, so it is easy to prioritise the alerts.

② **Quick response time**

SynaptiQ enables us to detect and fix faults fast. As a result, we have avoided over 73 GWh of energy losses in the past year. Fast intervention means we can maintain high performance standards for our own assets and our customers' assets.
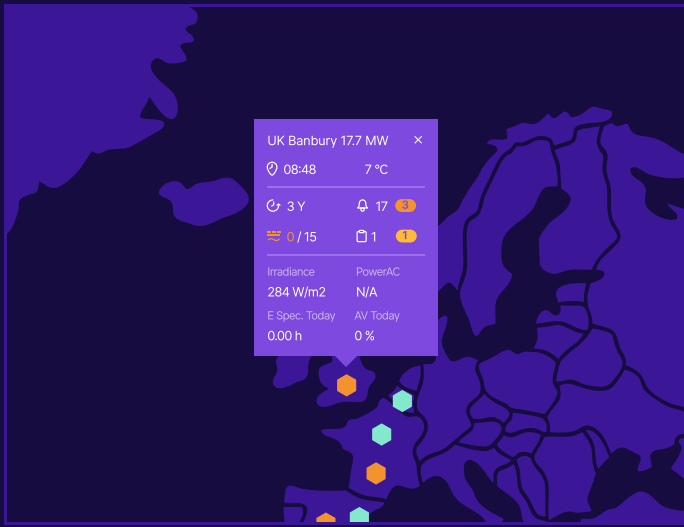
The solution
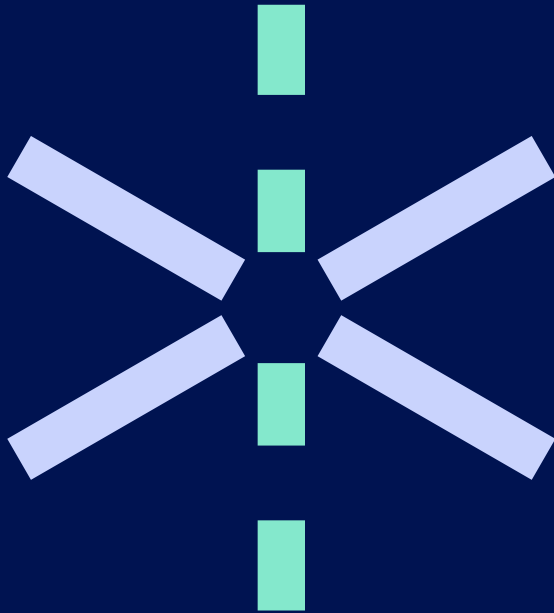
③ **Operations efficiency**

While featuring easy and predefined workflows, SynaptiQ Solar Analytics also helps us identify the root cause of issues. This allows our onsite & remote teams to work more efficiently.

④ **Quality data**

SynaptiQ's Digital Twin is fed with real-time modeling satellite data and enriched with bankable resource data to simulate the asset's expected behaviour. The resulting high-quality and accurate data enables us to perform more advanced performance analysis and to make better data- driven decisions.
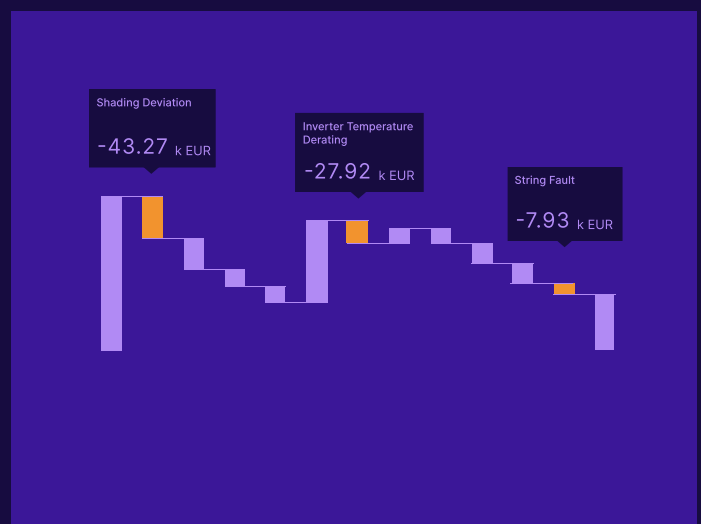
Results

UK Banbury 17.7 MW ×
08:48   7 °C
3 Y   17   3
0 / 15   1   1
Irradiance   PowerAC
284 W/m2   N/A
E Spec. Today   AV Today
0.00 h   0 %

Smart alarms

By aggregating alarms, SynaptiQ reduces the volume of false positives, making it easier to assess the portfolio's status and respond to the most critical concerns first. SynaptiQ has enabled us to increase the efficiency of our remote operations by 50%, which makes our company more scalable.

Shading Deviation
-43.27 k EUR

Inverter Temperature Derating
-27.92 k EUR

String Fault
-7.93 k EUR

Early root cause detection

SynaptiQ's advanced analytics enables us to spot and solve performance issues in advance. This feature brings more awareness about energy losses and helps focusing our efforts on the most relevant issues.

Results
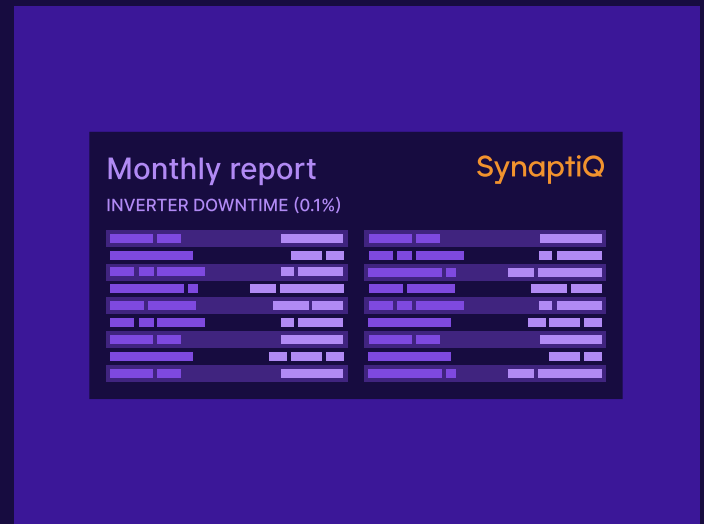
Timely intervention

Thanks to SynaptiQ's seamless integration with Voltalia's field management system, information like incident details, pre-analysis of the issue, recommendations and an intervention checklist, is directly sent to field technicians. This automated process enables Voltalia to resolve onsite issues faster, ensuring consistently high energy production.
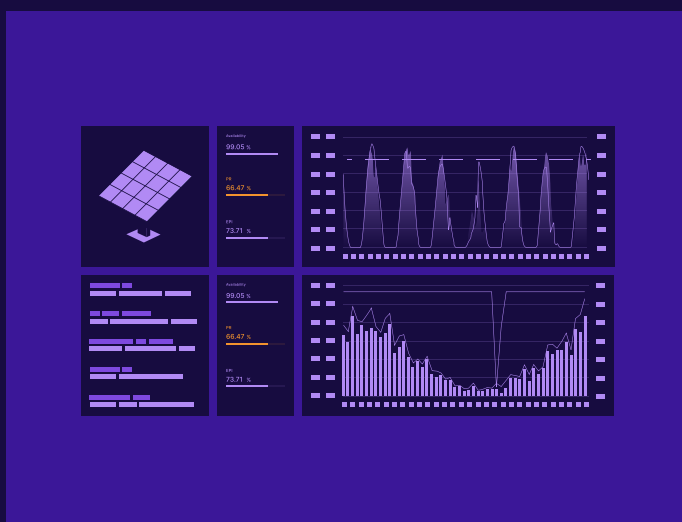
Transparent reporting

All the monitoring data, analyses and field activities are consolidated on SynaptiQ. Based on that, the system generates automatic reports on energy production, availability, interventions, business plan comparisons and other customizable KPIs. This automated and centralized reporting not only saves time for everyone, but also ensures that all the stakeholders have access to the information they need.

Why SynaptiQ?

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SynaptiQ's Digital Twin shows us when our assets are not performing as expected and detects issues early so that we know exactly when maintenance is needed.

Through features like predefined dashboards, SynaptiQ offers consistency and automation in routine processes. This is essential for scaling up our operations efficiently.

The platform ensures seamless data sharing for stakeholders, providing easy access to automated reporting on plant performance and customizable KPIs.

SynaptiQ's software compatibility means it integrates smoothly within our existing field management system and we are not limited in our future software choices.

"We can do the same job with 50% fewer people in the control room thanks to SynaptiQ's advanced analytics, predefined dashboards and automated reporting."

"SynaptiQ allows us to respond faster to performance issues, preventing over 73 GWh of energy losses annually."

Vasco Vieira

Head of Remote O&M at Voltalia

About 3E

3E is a market-leading SaaS and advisory company for the renewable energy sector.

Our team of over 150 experts works with developers, asset managers, operators, investors, public entities, EPC contractors and IPPs. Our job is to enable them to make informed decisions across the full lifecycle of their projects – whether that's solar, wind or energy storage.

Based on our 25 years of global experience, we provide both digital solutions and expert advisory services, which is unique in the sector. Our SynaptiQ platform offers a comprehensive suite of SaaS solutions that optimises the development and operations of renewable assets. In parallel, our consultancy team delivers technical, engineering and strategic advice to ensure bankable projects.

Powered by collaborations with universities and industry pioneers, we drive innovation and deliver the industry's most advanced energy intelligence solutions.