Staying ahead of potential performance issues

A case study of Solora with SynaptiQ Solar Analytics

3E solora energy services

Company

3E

Name

Solora NL

Country

The Netherlands

Industry

O&M

Asset types

Utility-scale and C&I solar PV

Portfolio size

1 GW

SynaptiQ applications

Solar Analytics Asset Operations

The challenge

① Teething troubles for newer plants

In the first year of operation, it is common to find wrongly installed components, manufacturing defects or early equipment failures such as inverter issues. To detect those issues proactively, SCADA data aren't good enough.
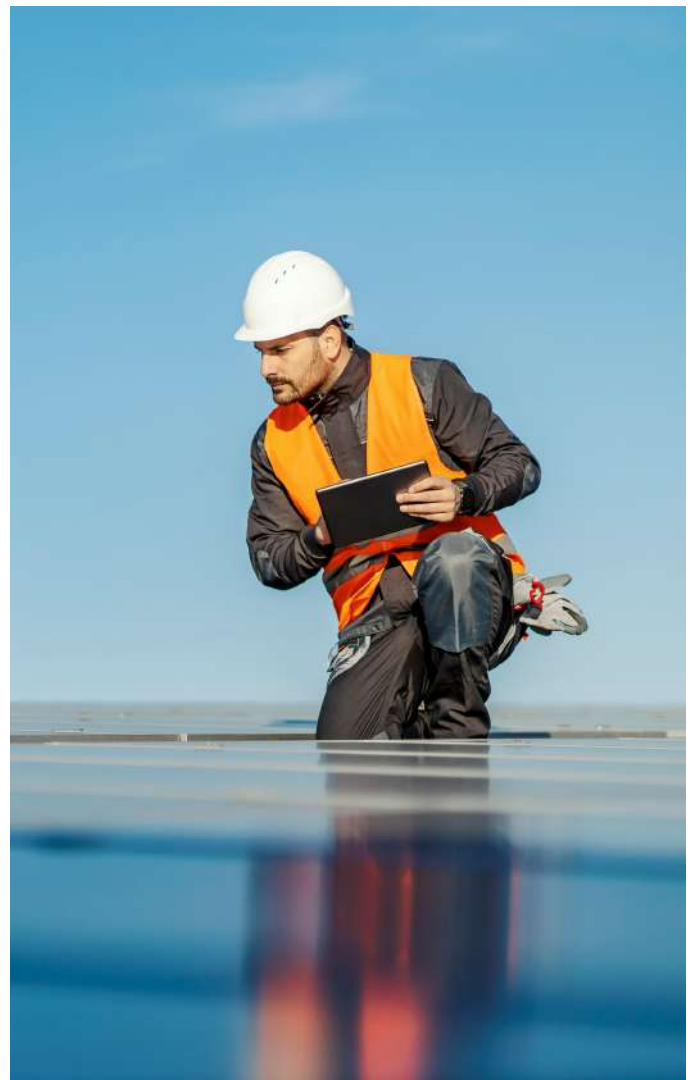
② Ageing issues for older plants

Our older plants suffer from problems such as module degradation, insufficient insulation resistance or performance degradation from environmental factors like plant overgrowth. A regular monitoring system can't identify what is exactly the issue.

③ The scale of our operations

We have a high number of solar PV sites. It isn't efficient to monitor each plant individually without some level of automation. At this scale of operation, it is also key to have centralised operation data and central oversight of maintenance activities.

④ Financial impact

Failure to identify and address issues early not only leads to immediate financial losses due to underperformance, but also to higher repair costs and falling KPIs. This can impact our revenue and our ability to meet our contractual obligations.

The solution

SynaptiQ is our solution of choice because we can use it to track the performance of our whole solar portfolio without losing oversight.
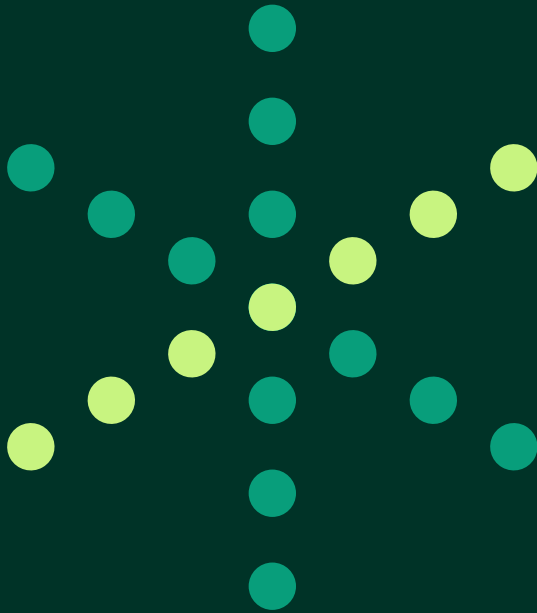
① Automated data analysis

SynaptiQ's algorithms automatically conduct in-depth analysis, showing us patterns and providing insights for decisions. Given the volume of data to analyse, this saves us time and makes our operations more efficient.

② Data-driven interventions

SynaptiQ Solar Analytics doesn't just tell us that something is wrong. It tells us exactly what the cause is and guides us towards the right action. This means a quicker response on defects.
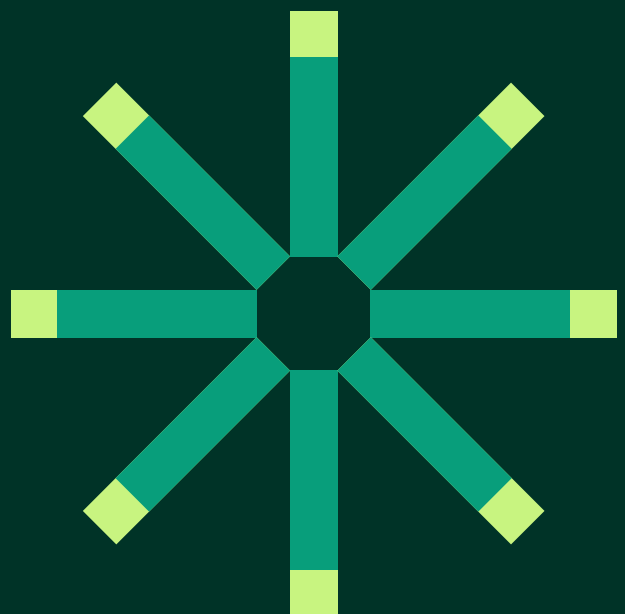
The solution

③ **Future-proofing**

The data we get from SynaptiQ lets us plan for the future and spot patterns. This makes it easier to create a long-term strategy and carry out preventive maintenance to avoid future downtime.

④ **Portfolio-wide monitoring**

SynaptiQ gives an overview of our entire portfolio on a single platform. We can access data up to 15' granularity, from component to site level.
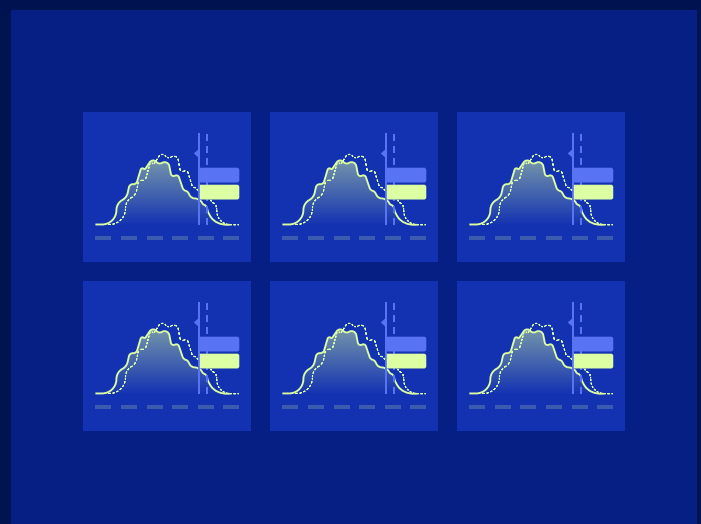
Results

Shading Deviation

-43.27 k EUR

Inverter Temperature Derating

-27.92 k EUR

String Fault

-7.93 k EUR
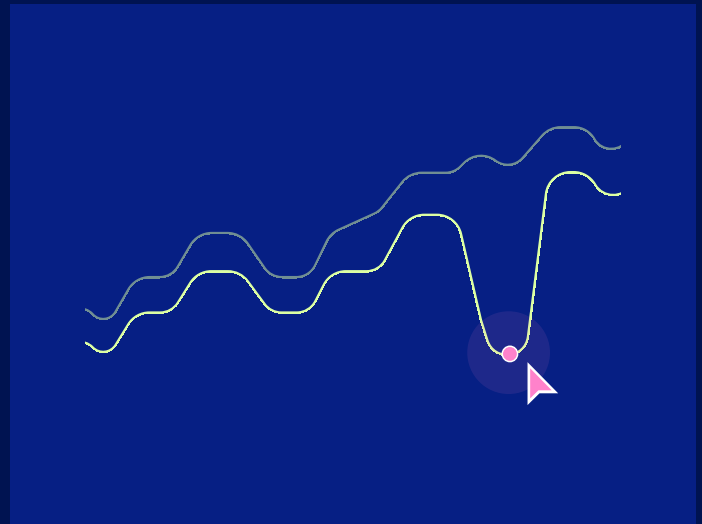
Fast root cause identification

SynaptiQ quickly identifies and analyses the root causes of energy losses, allowing us to easily fix avoidable issues, like soiling or shading due to overgrown vegetation.
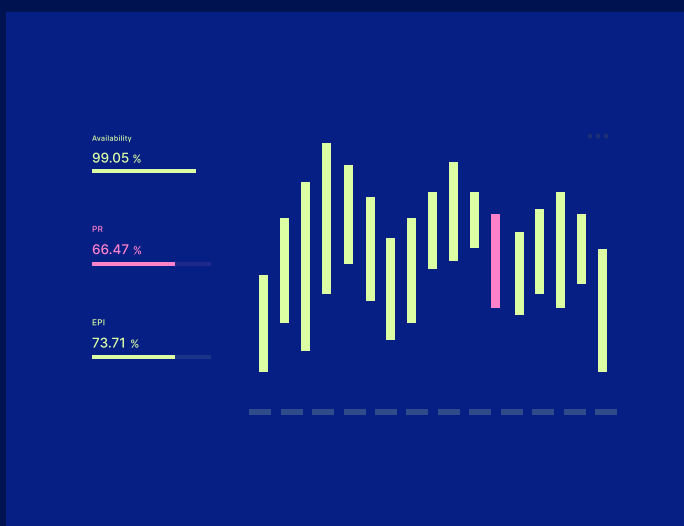

Detailed & complete data collection

SynaptiQ tracks generator performance at every level, from individual components to plant and portfolio level.

Results

Early detection of hidden losses

SynaptiQ uses a Digital Twin, i.e. a detailed virtual model of each plant, to detect any deviations from expected performance. Thanks to this, the system allows us to spot issues that need preventive maintenance, before the KPIs are noticeably impacted.

Availability
99.05 %

PR
66.47 %

EPI
73.71 %

Smooth & accurate reporting

The accessibility and accuracy of the data and dashboards in SynaptiQ make it easy for us to show customers exactly how well their plant is performing. In addition, those reports are generated automatically, which saves us valuable time.

Why SynaptiQ?

3E

Its automated alarms reduce the human workload required for monitoring and flagging issues.

SynaptiQ precisely identifies the root cause of any energy losses by classifying them into 23 categories.

Its smart alarm system distinguishes false alarms, and offers ROI-based recommendations on which recoverable losses can be tackled with priority.

Early detection of performance losses allows speedy fixes and proactive maintenance.

SynaptiQ's reporting engine allows any stakeholders to access to the data they need and presents it in a pre-defined or customizable way according their own KPIs.

"Staying on top of potential issues is crucial for us, and that's why we use SynaptiQ."

Ivo Stroeken

Solora,
Business Unit Manager

Why SynaptiQ?

"SynaptiQ's automated alarm system gives us the tools we need to react fast to defects and keep output as high as possible."

Ivo Stroeken

Solora,
Business Unit Manager

"SynaptiQ Solar Analytics identifies and analyses the root causes of energy losses, allowing us to easily fix avoidable issues and ensure high performance."

Mahgdi Ossaili

Solora,
Technical Asset Manager

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.