

# WES Scada

# Introduction

Wind Energy Solutions is proud to introduce a new SCADA monitoring system; i4Connected SCADA.

SCADA stands for Supervisory Control And Data Acquisition and has been especially designed to monitor WES wind turbines.

Whether you have just installed a new WES turbine or already have one spinning for a decade, the important thing to keep in mind is that a wind turbine is a mechanical machine.

Like for all machines, maintenance is critical to keep them in top notch condition and this is where monitoring is useful.

# Remote monitoring

Remote Monitoring of wind turbines means that there is real-time access to the status of the turbine, from every place, every time of the day.

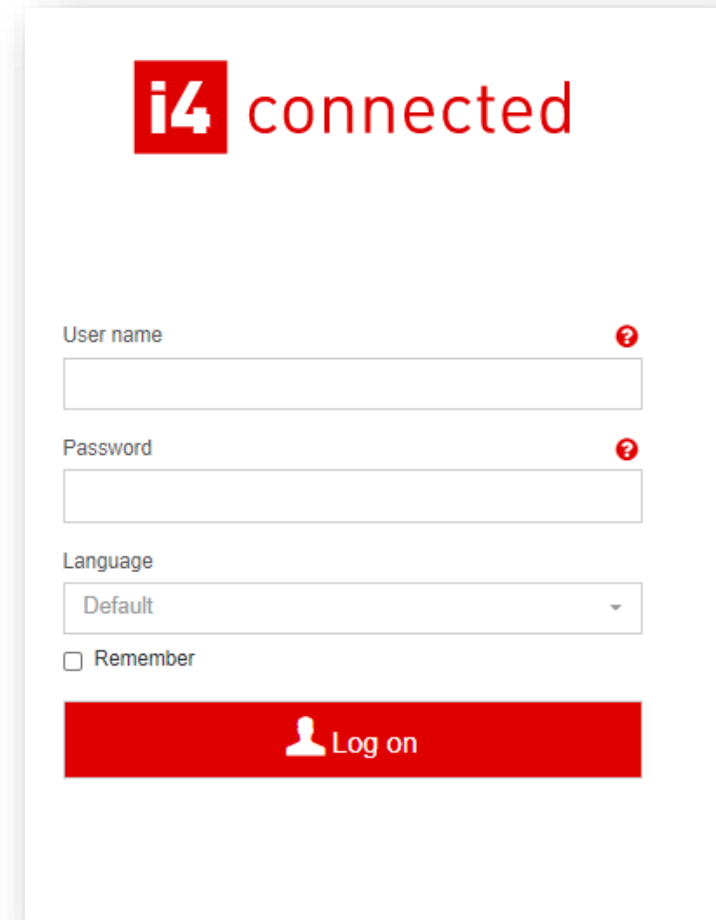
SCADA is recording and storing real time data. In SCADA, reports can be generated from historical data. This gives insight into the performance of the turbine.

This is extremely helpful in dealing with alarms, which, in return help to optimize the performance of the turbine.

# What is i4 Connected SCADA ?


“i4 Connected SCADA is a remote monitoring system which gives the user real time access and control of the WES wind turbine.”


“By purchasing a subscription to i4 Connected SCADA you will get a personal web portal giving you digital access to your wind turbine.”



The image shows a login portal for 'i4 connected'. At the top, the logo 'i4 connected' is displayed in red. Below the logo, there are three input fields: 'User name', 'Password', and 'Language'. Each of the first two fields has a red question mark icon to its right. The 'Language' field is a dropdown menu currently showing 'Default'. Below these fields is a checkbox labeled 'Remember'. At the bottom, there is a large red button with a white user icon and the text 'Log on'.


**i4 connected**

User name 

Password 

Language  
Default

☐ Remember

 Log on

# i4 Connected SCADA #Features

The full features of i4 Connected SCADA are listed below:

- ✓ Real time access and control of the turbine
- ✓ Remote Control and Monitoring
- ✓ Historical Data, Reports and Graphs
- ✓ Full access to Alarms and Alarm History
- ✓ Advanced Performance Information
- ✓ Support Helpdesk with a maximum of 8 hours per year\*
- ✓ Extensive User Manual

\* i4 Connected SCADA subscribers are allowed to make use of our helpdesk services for a maximum of 8 hours per year. In the occasion you use our helpdesk services for more than 8 hours per year a service fee of €70,- per hour will be charged.

# i4 Connected SCADA #Features

## **#Support Helpdesk**

i4 Connected SCADA offers professional support of WES with a helpdesk support function, available during (Dutch) office hours, with a maximum of 8 hours a year. This provides you fast remote control, and access to your (customer's) WES turbines.

## **#Remote Control and Monitoring**

i4 Connected SCADA includes full remote control and monitoring of the turbine by WES for the best performance. Whenever you are online you can easily start, reset or switch off the turbine with only one click. The turbine overview gives a complete overview of all relevant parameters of the WES turbine, such as Wind Speed, Power Production, Rotor Speed, Wind Direction and Availability.

## i4 Connected SCADA #Features

### **#Historic Data, Reports and Graphs**

i4 Connected SCADA features an advanced view of various historic data, reports and graphs. Historic data of the WES turbine like Wind Speed, Power Production, Rotor Speed and Availability are displayed in a historic range over several time periods. All data reports and graphs can easily be downloaded and exported in PDF or Excel.

### **#Full access to Alarms and Alarm History**

i4 Connected SCADA will give you full access to all alarm features such as: current alarms, alarm history, alarm counter and alarm info. Furthermore, it offers the option to reset the WES turbine online when non critical alarms occur. E-mail service is available for important alarms.

# i4 Connected SCADA #Features

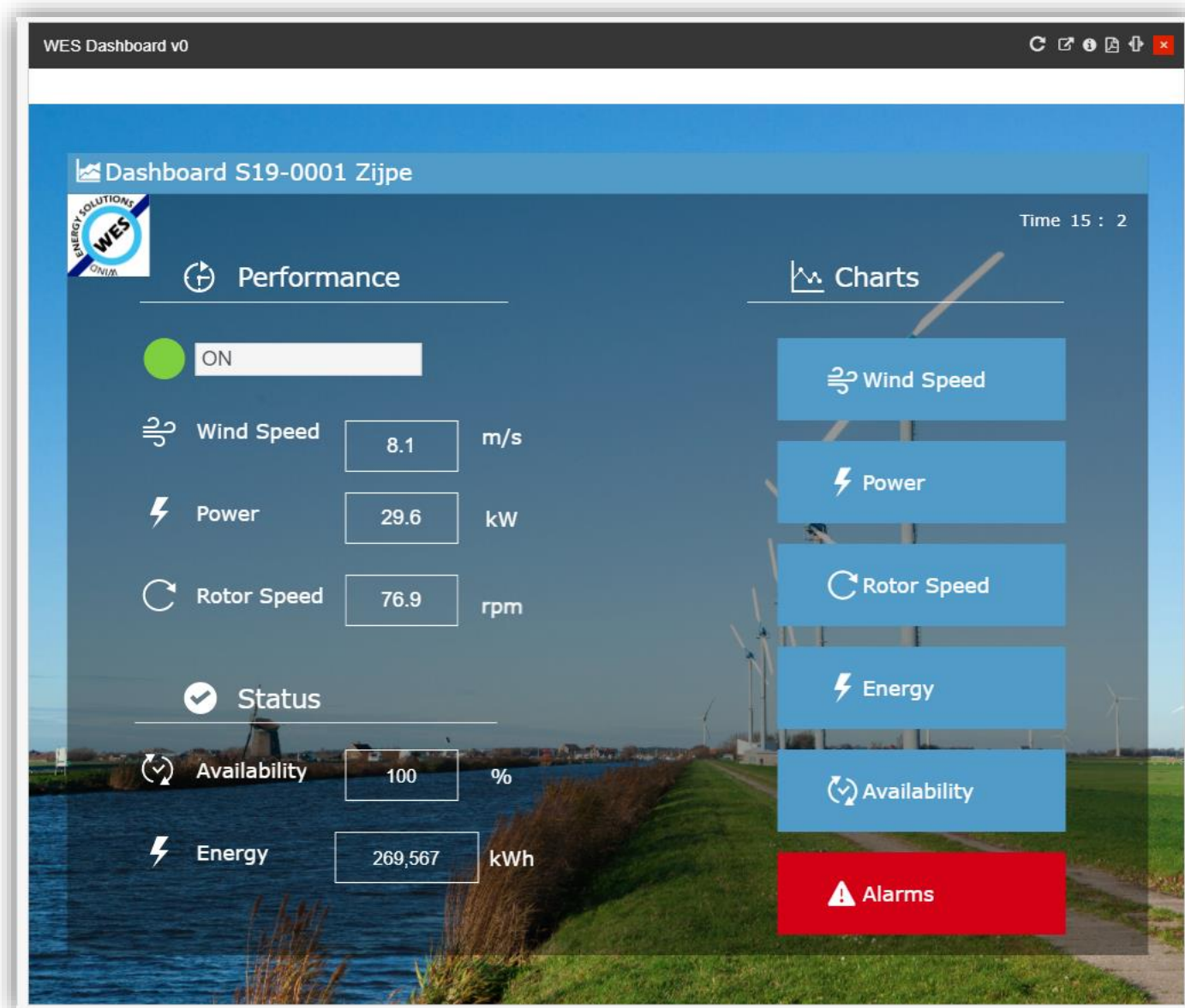
## **#Advanced Performance Information**

i4 Connected SCADA includes various advanced performance information such as: Detailed Energy Production, Power Curve and Turbine Data. All parameters are graphically presented to provide the best possible overview. All Turbine Data and Graphs can be downloaded and exported to PDF or Excel. This allows you to tune your turbine on site conditions to produce its maximum efficiency.

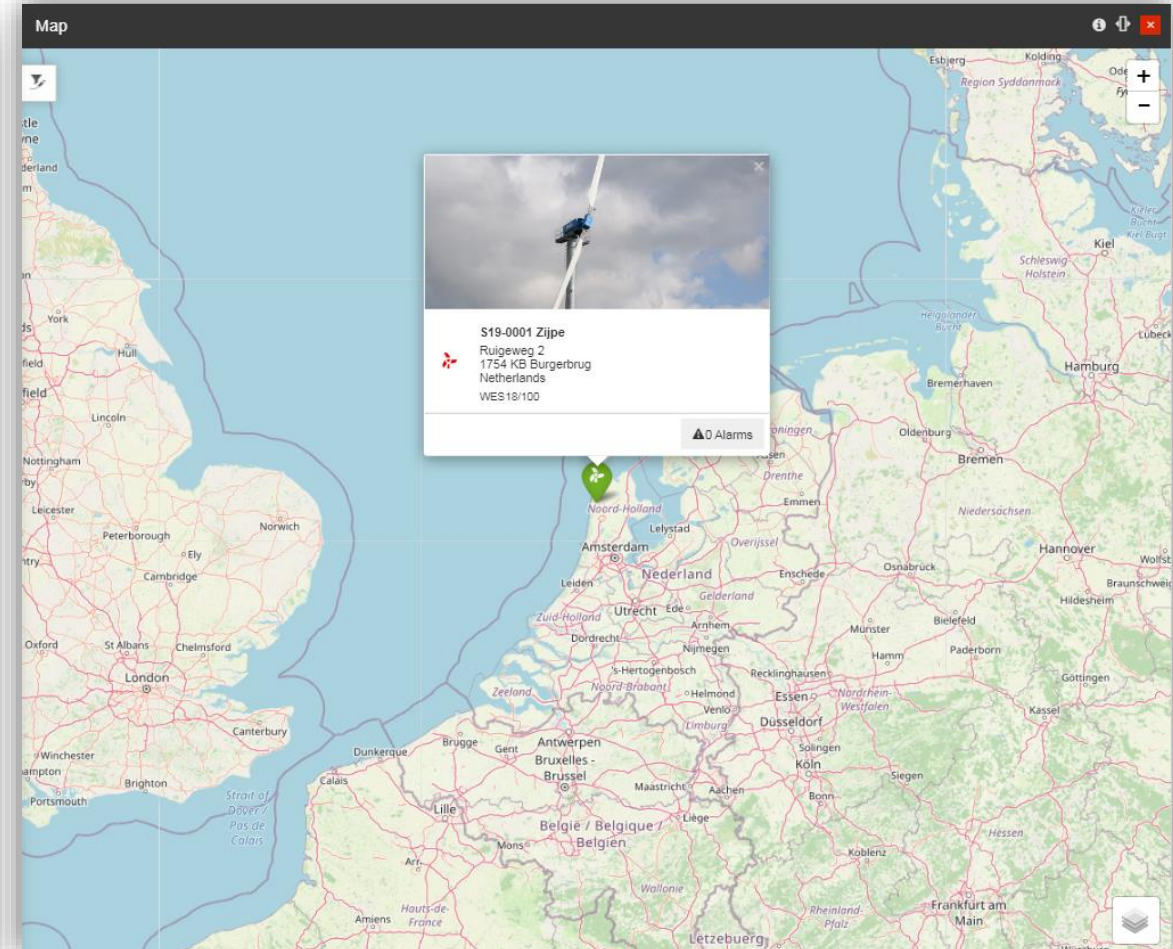
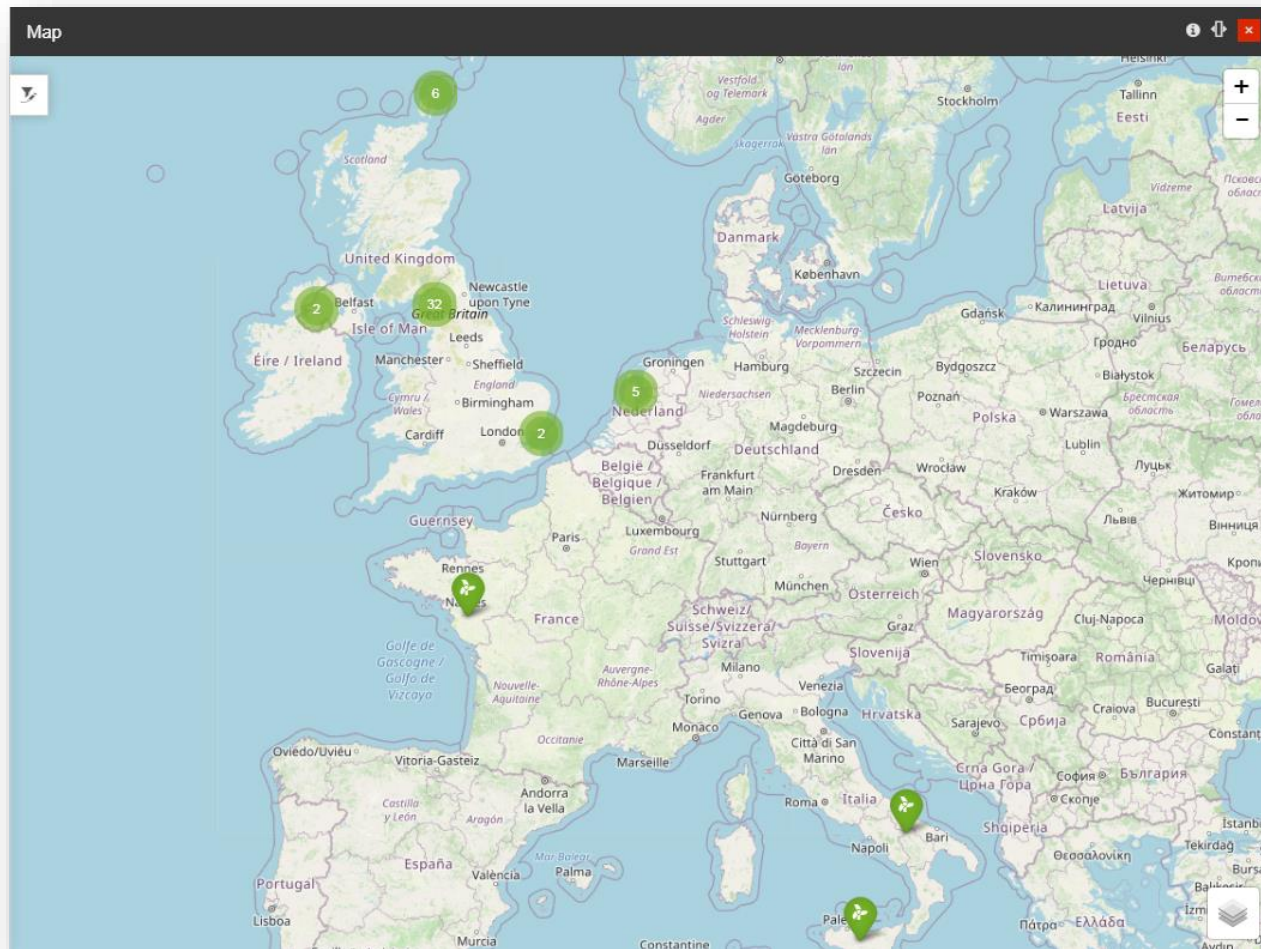
## **#Smartphone ready**

- Automatic adaptation of the graphic resolution for PC, tablet, or smart phone.
- Easy visualization on all mobile operating devices.

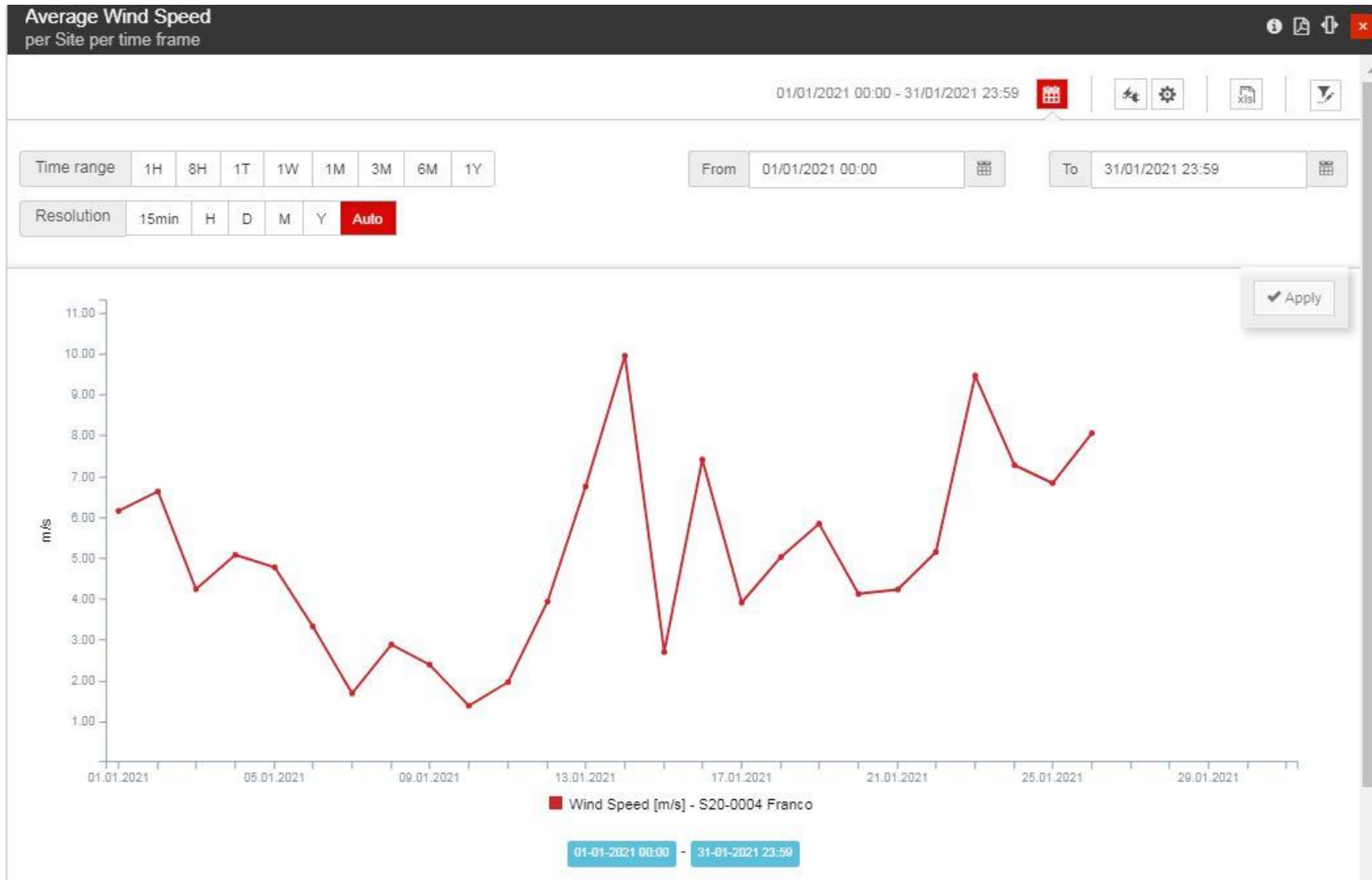
# i4 Connected SCADA #Real-time turbine dashboard



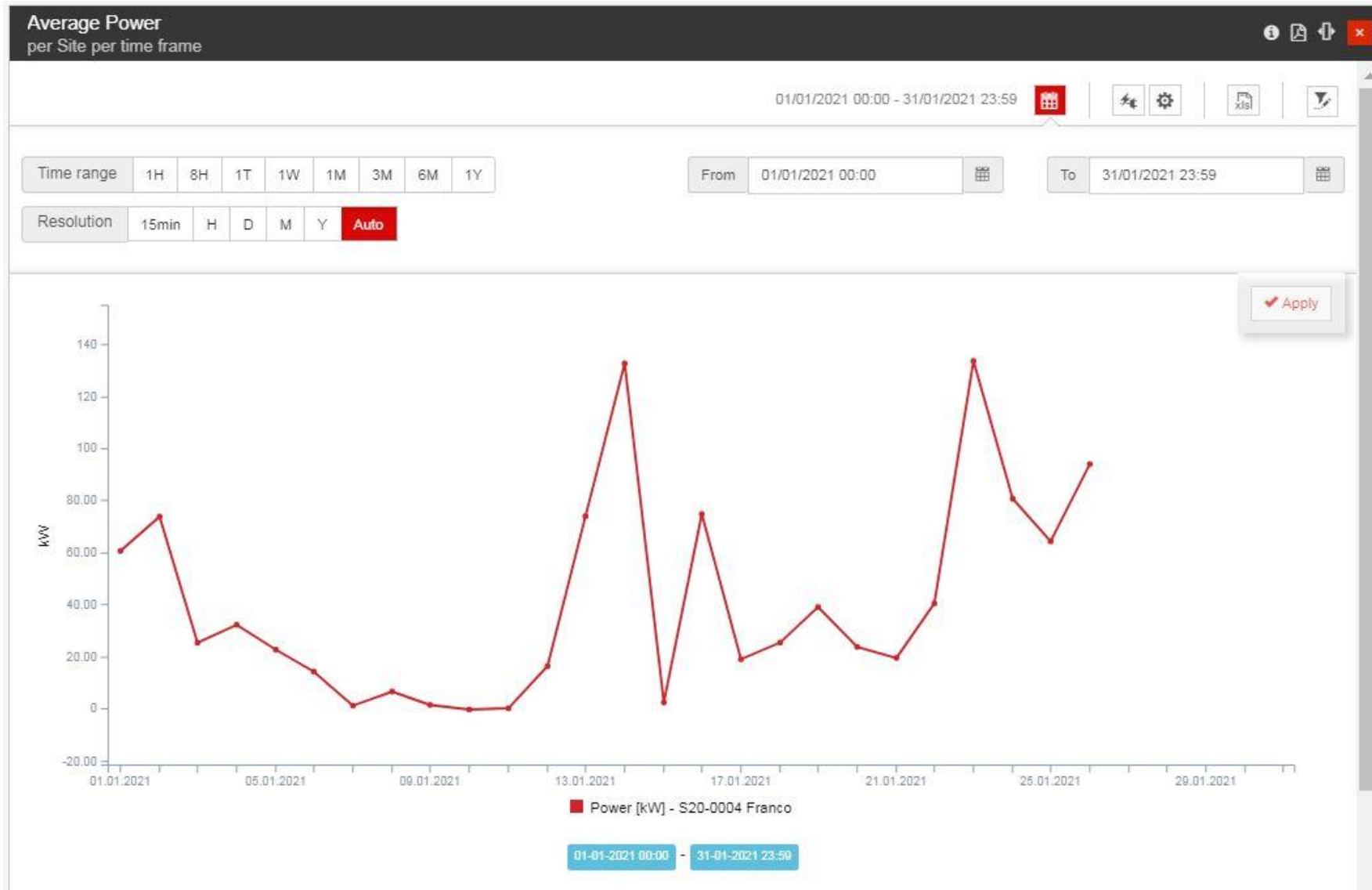
# i4 Connected SCADA #Geographic map



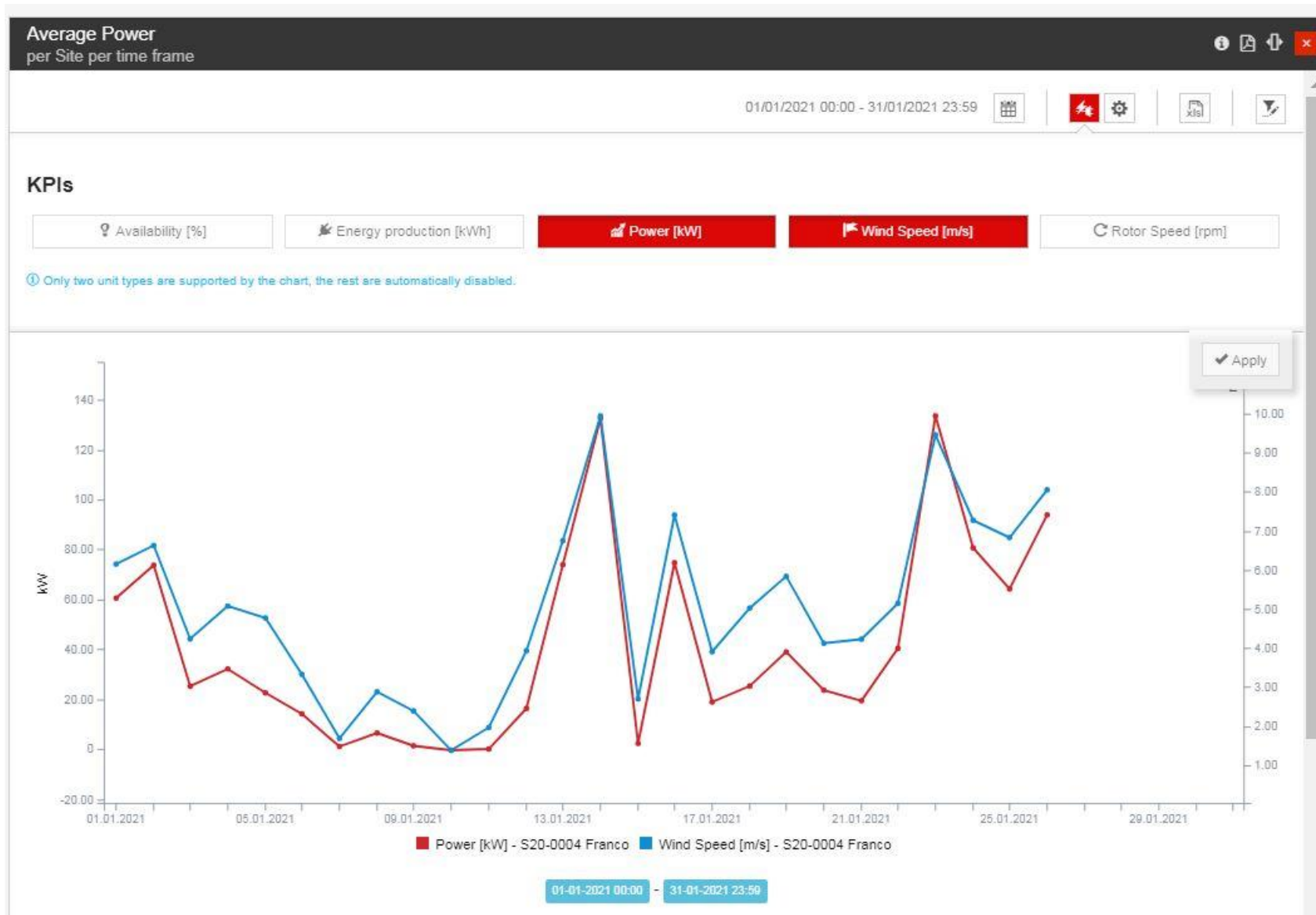
# i4 Connected SCADA #Wind Speed chart



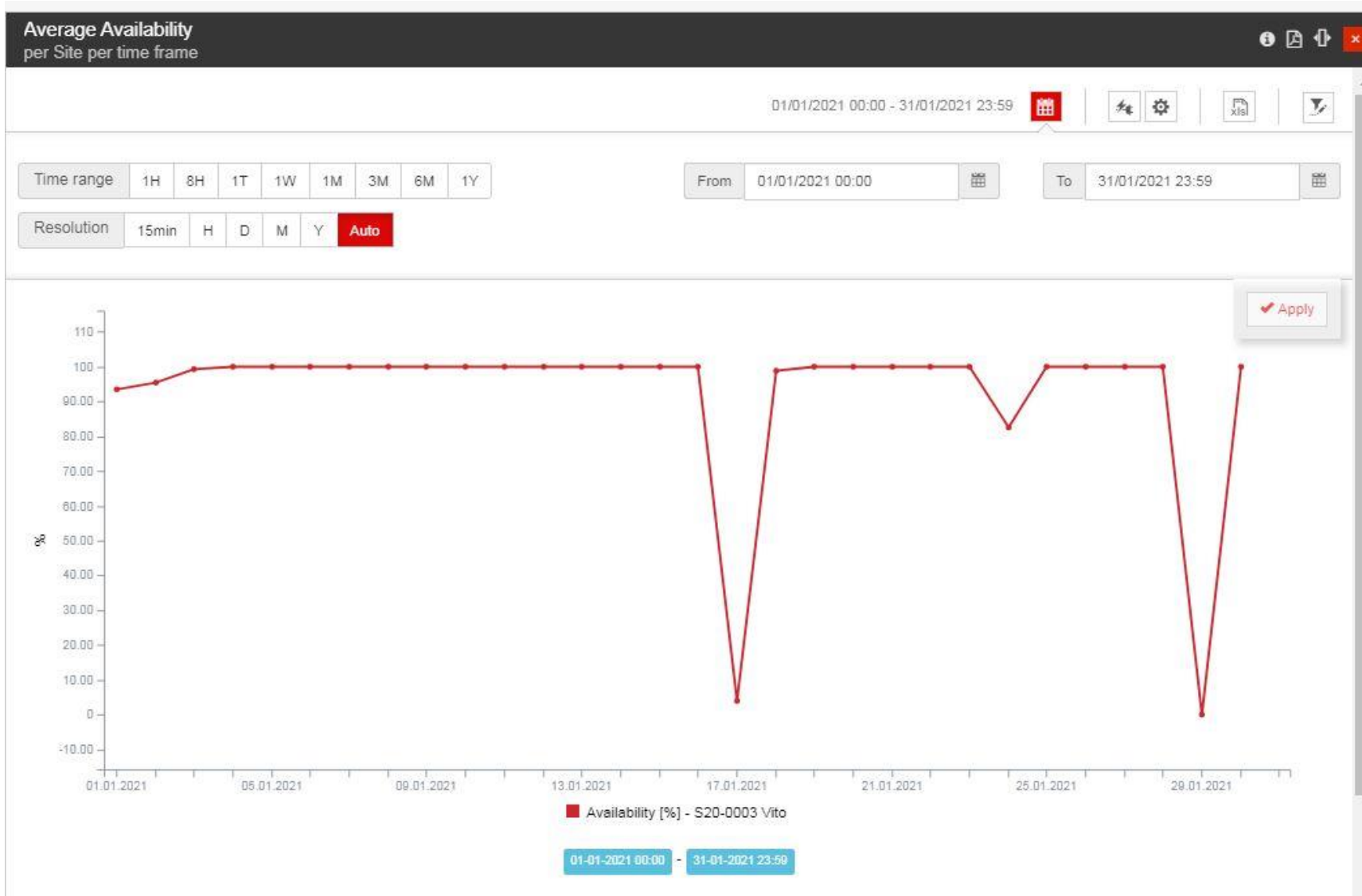
# i4 Connected SCADA #Power chart



# i4 Connected SCADA #Power chart (combined KPI's)



# i4 Connected SCADA #Availability chart



# i4 Connected SCADA #Real-time Mobile Dashboard

