
Predictive maintenance

What you get

> Latest Machine Learning models to automatically detect solar assets failure before they actually occur

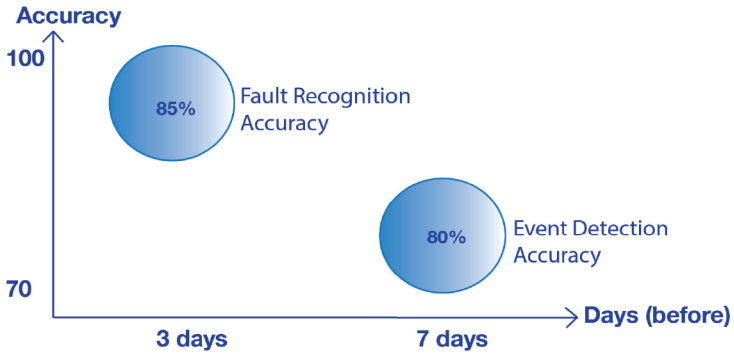
> Easy-to-use outputs to efficiently schedule predictive maintenance activities on your solar assets

> Warning levels, quality index trend, action to solve

> Services to avoid loss production period, increasing solar assets return on investment

Performance

The service reliability has been widely assessed through the whole software development cycle as well as during the real-time services to customers. The performances are continuously assessed by means of the usual classifcation metrics such as Sensitivity Specifcity, Accuracy and ROC curve.



The software has already shown outstanding capabilities to predict faults for several PV plants located in Europe and, currently corresponding, to hundreds of inverters manufactured by 5 well-known technology brands.
The application of this service reduces loss production typically achieving 10-15% of energy yield improvement.

Customers

> Solar asset managers

> Technical asset managers

> O&M contractors

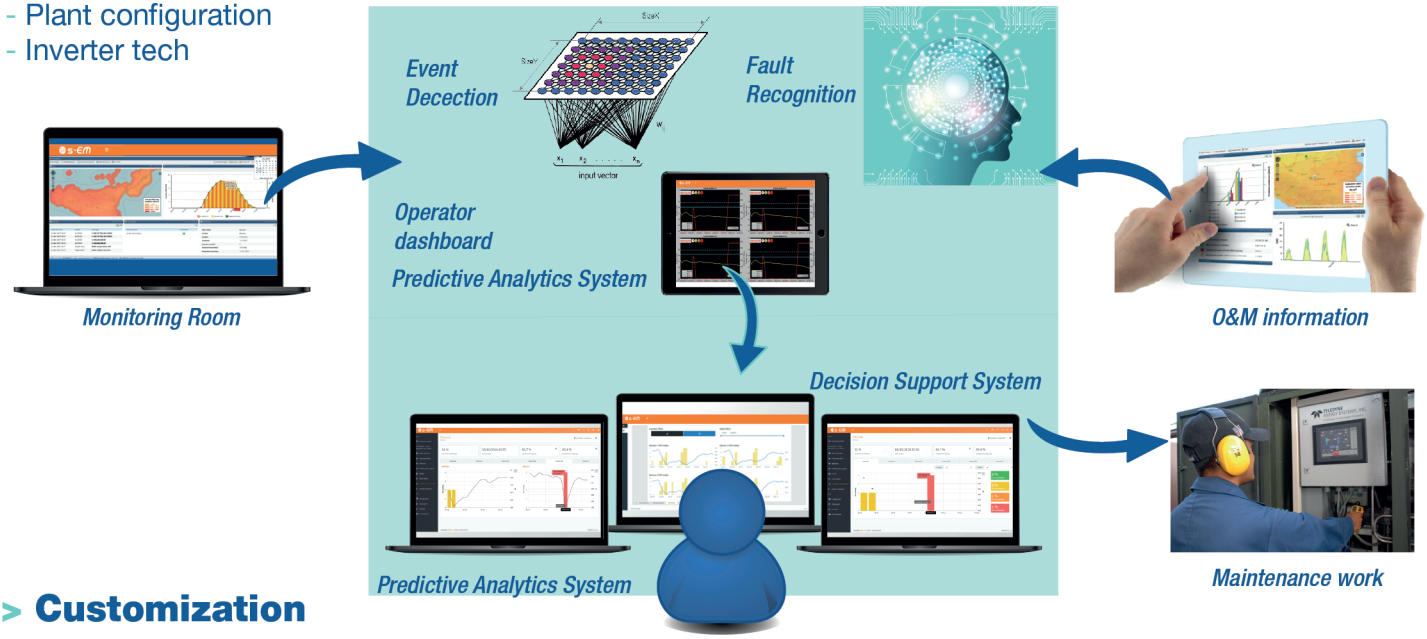
> Added value

The Big Data i-EM's IT infrastructure allows to ingest and manipulate large and heterogeneous set of data from customers' PV plants. The supervision model and the fault recognition model are trained exploiting different information (inverter, environmental, historical data on maintenance, plant information).

SCADA data
- Inverter data (AC&DC power, current, voltage)
- On-site sensors data (temperature, irradiance)

Historical data on maintenance
- Automatic alarms logbook
- Manual alarms logbook

Plant Information
- Plant configuration
- Inverter tech



> Customization

The service is highly customizable according to customers' PV plants features:

- Inverter technology and plant configuration represent a relevant input of the model, ensuring customized solution to customers' plants.

- Historical manual and automatic alarms logbook-based models training allow customers to fit their plants specific behavior.

Did you know that... ?

Value of predictive maintenance model

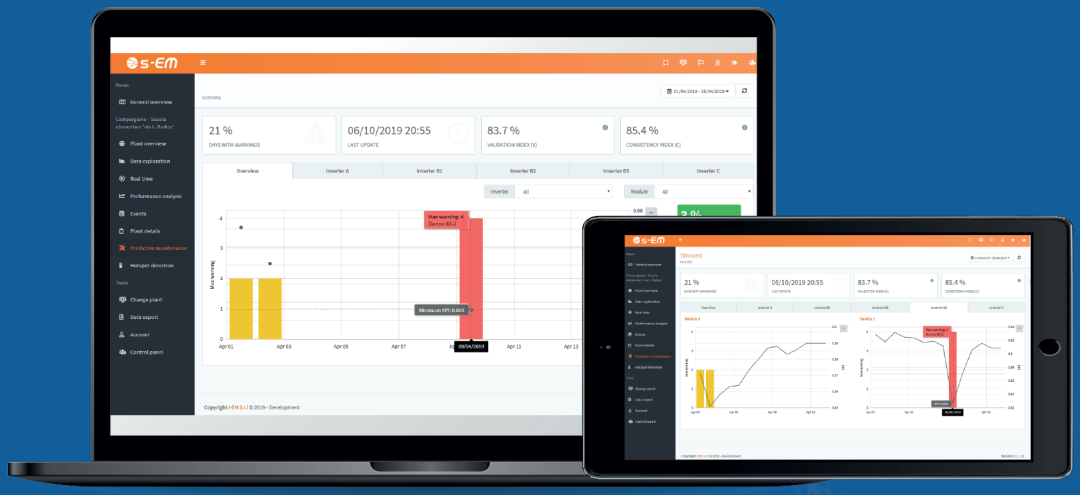
Key benefits

> Loss production period reducing

> O&M producers efficient planning

Revenue Increase

On average **+ 5%** of asset gross revenue



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