

Improvement of the remote expert system based on software Otea

OTEAres Project

H2020 SOCIETAL CHALLENGES: Climate action, environment, resource efficiency and raw materials

PROBLEM DESCRIPTION

Development of a system that, through the platform of remote management of facilities OTEA, is able to predict maintenance incidents through the interpretation of the data monitored, and can apply rules that improve the efficiency of the system and extend the life of the equipment.

CHALLENGES AND GOALS

To multiply the value of the OTEA system by maximizing the efficiency of the facilities and minimizing the basic management resources.

To deploy a predictive tool which enables to detect maintenance incidents before they happen.

PRODUCTIVE SECTOR: Energy and Environment

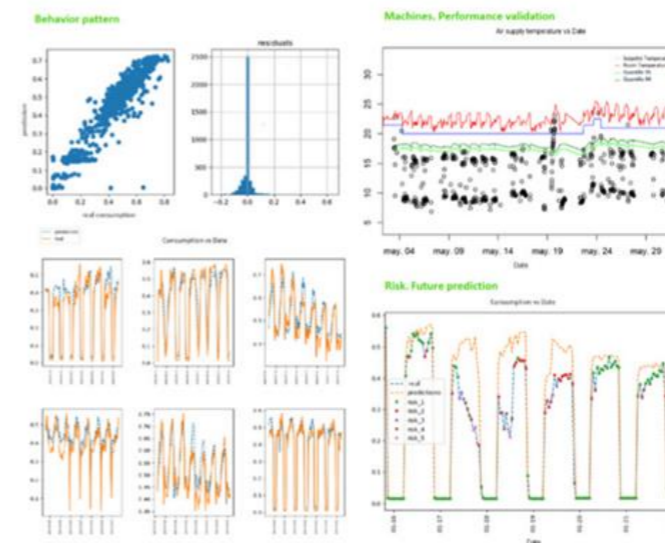
MATHEMATICAL AND COMPUTATIONAL METHODS

Neural Networks.

Random Forest.

Quantile regression.

Generalized additive models (GAM).



Incidence prediction models based on ML and statistical techniques



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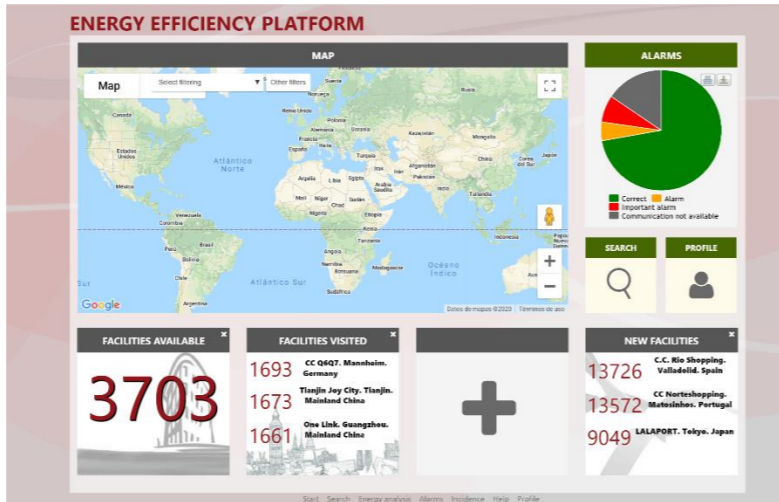
Results and Benefits

The implemented tool created applies mathematical and statistical algorithms in order to get a reliable predictive maintenance, improving the efficiency of the current system, extending the equipment life cycle and allowing a smarter management of resources.

In addition, an increment of the OTEA platform value has been obtained, and offers a more complete service to the clients whereas the maintenance cost are reduced.

OTEA enables decision support in real time offering a 24/7 service through its control centre.

It is estimated an energy saving of 7% per installation, a reduction of 30% in preventive maintenance visits and a reduction of 20% in corrective maintenance.



OTEA: controls, monitors and manages energy, synonymous of business intelligence



Spanish Network for Mathematics & Industry (math-in)

