EcoStruxure resource Advisor - energy performance evaluation platform for buildings

Smart solution 4
Local renewable energy production

Estimated impacts

5%
reduction in CO_2 emissions

1
platform to manage results

+48.000
users of the EcoStruxure Energy Advisor (also outside GrowSmarter)

Barcelona

Technical partners

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What is it?

The EcoStruxure Resource Advisor is an Internet-of-things (IoT) platform fully aligned with the Clean Energy Package that empowers citizens to increase their sustainability by socializing energy preservation.

The EcoStruxure Resource Advisor aggregates multiple types of data from every part of a building in order to centralize information. This cloud-based software allows assessment of Key Performance Indicators (KPIs) to evaluate the impact of energy retrofitting works in a building. It identifies outliers and provide opportunities to increase energy efficiency in the building which ensures the projected energy savings can be achieved over time.

What did GrowSmarter do?

In Barcelona, Schneider Electric has used its cloud-based platform called EcoStruxure Resource Advisor to centralize the monitored data from some of the buildings retrofitted within
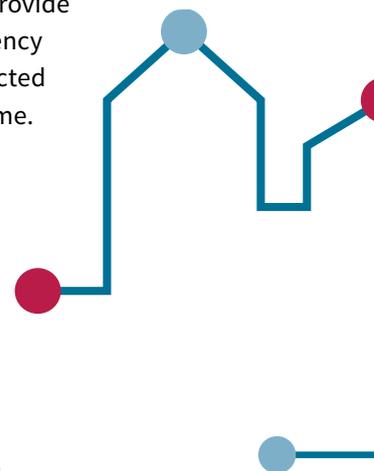
the project. The tool shows KPIs based on the gathered data for the evaluation of the impact of energy retrofitting works in the buildings and informs citizens of the impact.

Lessons learnt

Automatic data gathering should start well before the retrofitting works to ease the creation and follow-up of the baseline and to avoid the strong dependence of monitoring systems with the finalization of retrofitting works.

Also, clarity on who is responsible and accountable for Data Quality across the data transmission chain is necessary. Privacy as well as any Information technology (IT) security concerns should be tackled at the beginning of the project. The EU General Data Protection Regulation (GDPR) required additional security measures, software development and legal considerations, which resulted in an increased development cost and therefore selling prices – even for industrial-based applications such as this one.

User engagement is of critical importance when dealing with solutions such as the Ecostruxure Resource Advisor. The final consumer should be made aware of the real benefits of the measure, and the industry partner could highlight the potential economic savings that a building energy management system is able to provide. Schneider Electric estimated 15 percent CO_2 reducations are achievable. The public sector could promote the measure, with the purpose of fulfilling environmental targets.

Upscaling & replication potential

The integration of this type of monitoring platforms in Energy Performance Contracts (EPC) is regarded as a promising option to increase replication potential. The setup, use and maintenance of the software are subject to a contractual agreement.

In a commercial environment, this type of tool is usually necessary for the stakeholder responsible for guaranteeing the energy savings and becomes a regular tool to follow the sustainability performance and the goals achievement.
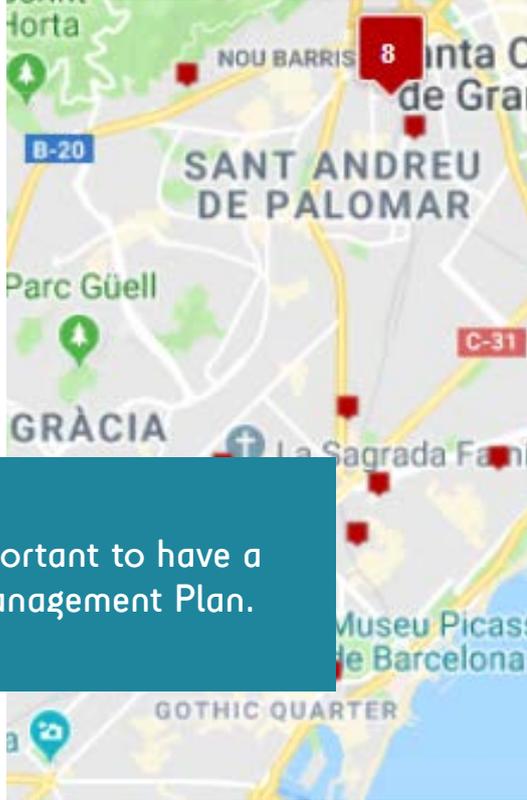
It is important to have a Data Management Plan.

How did the measure work?

Technical feasibility

The standardization of communication protocols would significantly facilitate the technical feasibility of the measure.

Economic feasibility

The platform is usually financed within a recurring services contract. As it is difficult to attribute savings to a monitoring platform, the measure is not intended to be self-financed as a standalone, but as a necessary part of self-financed solutions of active energy efficiency measures.

Replication potential

Improved and adequate regulatory frameworks for the energy management industry (in terms of standards and protocols) would enhance the replication potential.