



D4.3 PILOT PROJECT APPLICATION REPORT - SPAIN



QualitEE Project

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The QualitEE consortium comprises 12 partner organisations covering 18 European countries, an expert advisory board, including the European standards body CEN/CENELEC, and 59 supporters from major financial institutions, government bodies, trade associations and certification bodies.

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Disclaimer

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1 INTRODUCTION

During the project activities, quality criteria have been applied for new projects. Technical quality criteria and Financial Guidelines have been applied in new pilot projects. Partners have provided support to clients or ESPs from the procurement phase until the first measurement and verification phase if possible. Report follows the pilot project implementation in quantitative and qualitative manner and extract lessons learned.

During this report pilot project are described and description how and which technical and financial criteria had been used. Feedback on the application has been collected with the aim to refine and improve operationalised technical quality criteria and financial guidelines and to provide real-world insights and advice on the establishment of national certification frameworks.

2 DESCRIPTION OF THE PILOT PROJECT

2.1 Pilot project factsheet

Project details:

- Supermarket chain
- Project stage - concluded
- Updating of the telemetering of electricity consumption in all of the chain's supermarkets



Table 1 Distributed generation from solar energy

Energy Consumption kWh	Renewable generation kWh	Demand coverage	Value of investment EUR
349,184.85 ¹	NA	NA	162,000

Business case description/economic parameters

- Investment (VAT and IGIC included) of EUR 160,000
- Payback period of 1,5 years

Stakeholders/companies involved

Client – Supermarket chain

Facilitator - CREARA CONSULTORES, S.L

Overview:

Telemetric measurement of electrical supplies by replacing electrical tariff meters that allow the customer to access and display their consumption through the Swap&Play platform

Demand coverage:

2,57%

Cumulative economic savings:

EUR 580,000

Energy savings:

324 000 000 kWh/year

¹ Consumption throughout all of the chain's stores. Energy savings are also cumulative of all actions carried out by the chain

2.2 Technical aspects

2.2.1 Proposed solution - telemetering

Telemetering is the remote measurement of the energy consumption of any installation, whether gas or electricity, in order to carry out energy management and saving actions. Traditionally, this measurement is done in person since energy meters, even if they are digital, do not have a modem that sends the recorded consumption data. However, it is possible to monitor electricity and gas consumption if the corresponding meters have a modem. In this way, it is possible to make a remote measurement. This allows monitoring, management and energy saving actions to be carried out on the consumption of the installation.

When monitoring energy consumption one of the most convenient options is to have under control the variables that are paid for in the bill: active energy, power and reactive energy. Developing a project to optimize these three variables, by means of alarm systems and bill optimization tools, will allow generating savings thanks to the reduction of consumption, and the penalties paid for these concepts.

Another advantage of telemetering is its low cost. It will only be necessary to change the meter for one that has a modem or incorporate a modem to the existing meter. On the other hand, telemetering makes it possible to simulate the energy bill so that the amount can be predicted before the company sends it out. In short, knowing the consumption allows savings by having better information to negotiate the price of the contract and get a reduction in the amount derived from it.

The proposed solution designed by CREARA for the supermarket chain is described in Figure 1 below. Thanks to CREARA's software, the supermarket chain can have an online service in real time to monitor the main electricity parameters of their supply points.

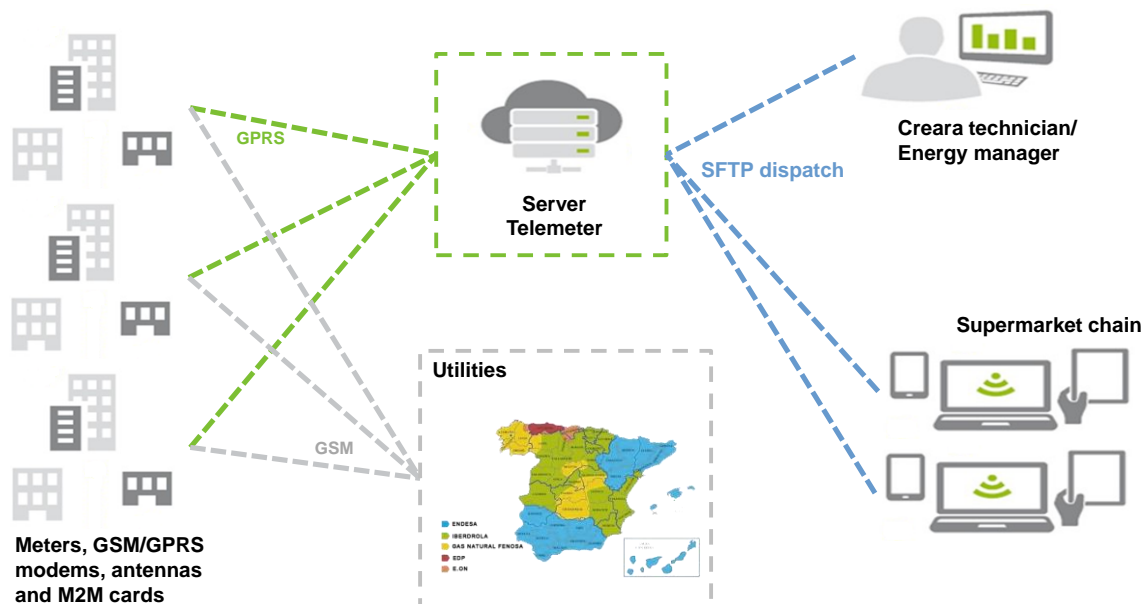


Figure 1. Proposed solution for the telemetry of the supermarket chain

2.2.2 Project execution

The timeline and steps followed by CREARA in the execution of the project are described in the image below.

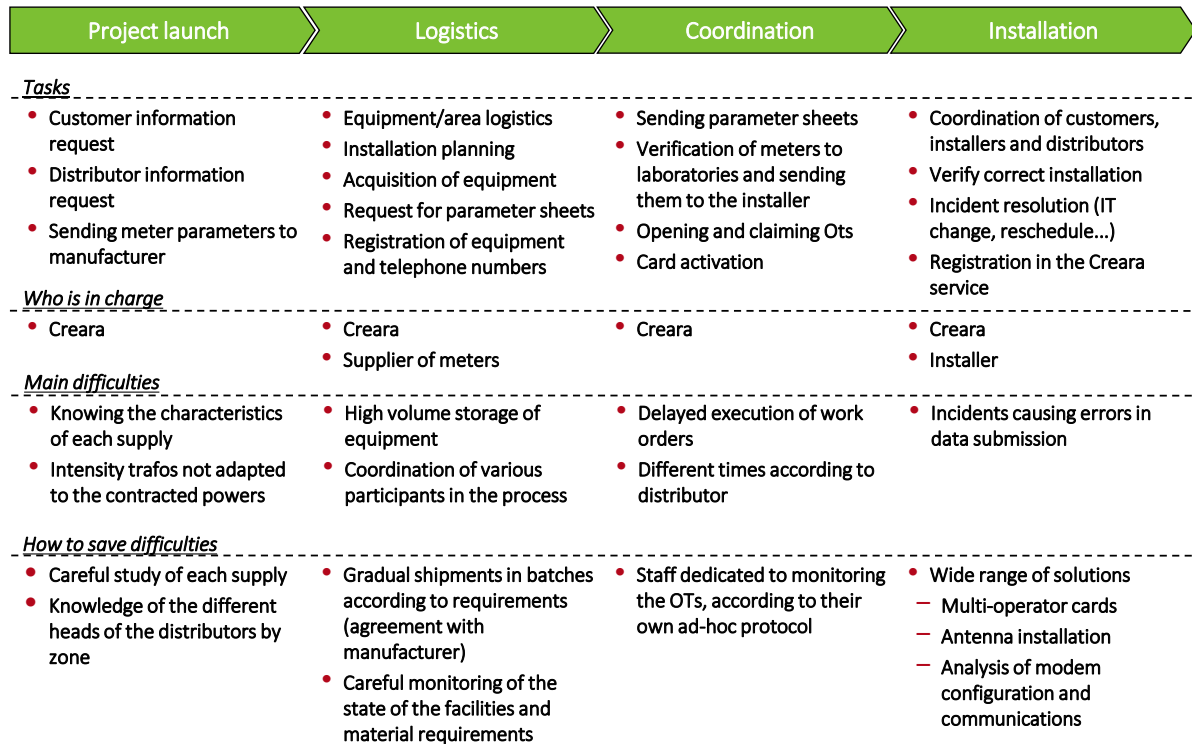


Figure 2. Racking used to support PV panels

CREARA offers full-after-sale service, so that the chain has a monthly reading of 100% of the supplies. This includes daily and monthly tasks, described below:

Daily tasks:




Communications status monitoring: daily monitoring of the status of communications, sending a monthly report with detailing the situation according to the criteria of the specifications:




- Correct reading
- Partial Communication
- Meter communication failure
- Communication failure of the telecommunication unit
- Coverage problems



Connectivity data maintenance: a database is shared via Google Drive in which the connectivity data is updated

-  Monitoring, and remote diagnostics: daily readings are taken, in order to check the reading and data processing, as well as the correct operation of the equipment

Monthly tasks:

-  Corrective actions: the necessary actions are carried out to restore measurement equipment, modems, etc., to ensure the correct reading and sending of monthly data
-  Change in meter settings: the necessary steps are taken with a distributor and/or marketer to change the meter settings
-  Equipment Warranty: CREARA guarantees the correct functioning of the equipment, meter, modems, cards, antennas and other equipment for 5 years

3 FEEDBACK ON QUALITY CRITERIA

Feedback from pilot projects was collected in the form of a questionnaire. It contained identical questions for each quality categories and some open-ended questions to collect qualitative information. For closed questions a limited number of options were given, and respondents were asked to evaluate quality criterion category separately. All nine quality criteria impact categories have been analysed. The impact categories are given in Figure 2 below.

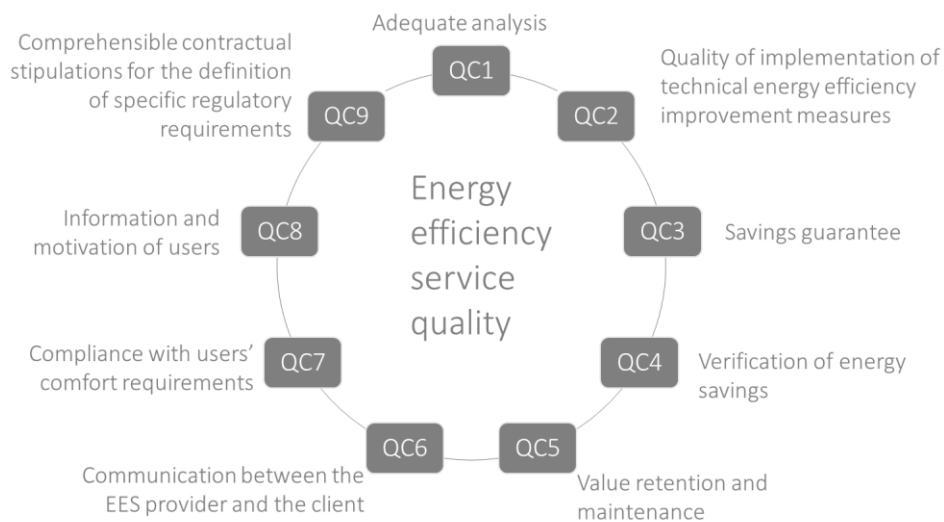


Figure 2. Categories of quality criteria

The main questions for each criterion are as follows:

1. How **important** is this criterion in assessing the quality of EES?

2. Is the criterion **specific** enough?
3. Is it possible to provide **evidence** (documents, references in contracts, measured data etc.) to assess the criterion?
4. How **time consuming** is the assessment of this criterion?
5. How many criteria have been used in the project?

The first question was asked to evaluate how important the particular criterion is.

3.1 Importance of the criterion

The client was asked to rate the criteria in order of importance, with the three most important ones being:

1. QC1 – Adequate analysis
2. QC2 – Quality of implementation of technical energy efficiency improvement measure
3. QC4 – Verification of energy savings

3.2 Was the criterion specific enough?

In general, the QC is really thorough and considers the most relevant factors to be taken into account. In fact, a few of the subpoints of the QC were considered to be “nice to have’s” rather than “must have’s” in the implementation of the project.

3.3 How easy is it to provide evidence?

Feedback was also collected with the aim to evaluate the ease of availability of evidence – documents, references in the contract, measured data etc. – to assess a specific criterion. Respondents were asked to evaluate each impact categories and the possibility to provide evidence by rating each criterion from not possible at all (1) to easily possible (5). The answers have been summarized in Figure 4.

Overall, many of the elements were included in the contract, which helps provide evidence from the get-go and provides contractual obligations with which the executer complied.

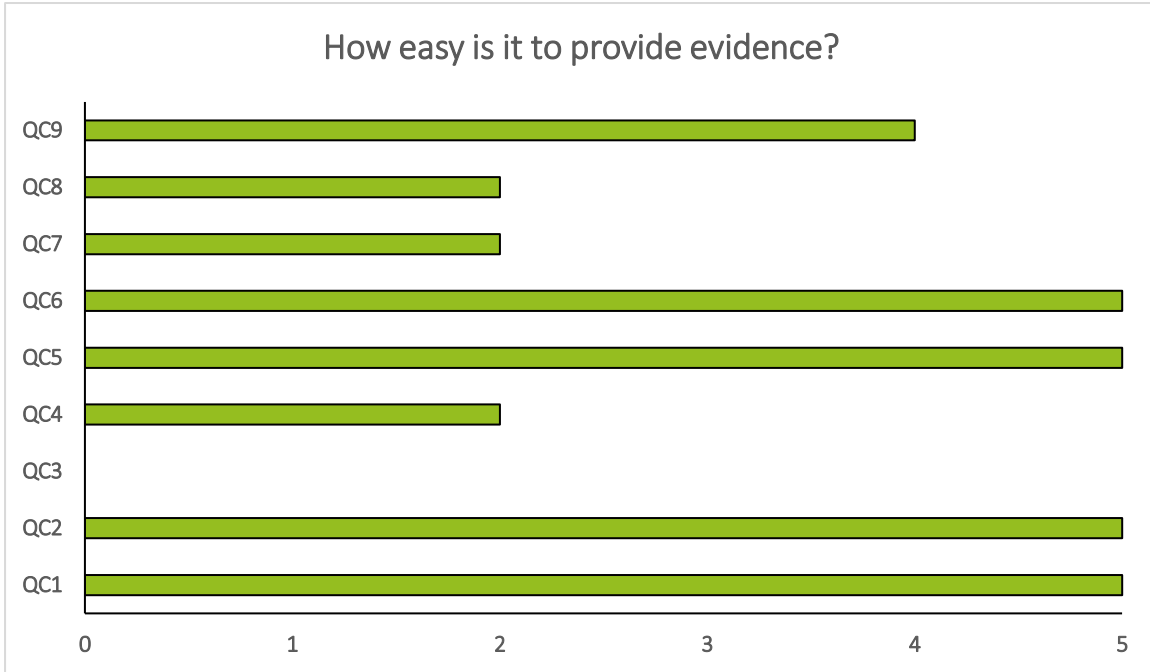


Figure 4. Availability of evidence

3.4 How time consuming is the assessment of the criterion?

Respondents rated each impact categories from very time consuming (1) to not time-consuming (5). Answers have been summarized in Figure 5 below.

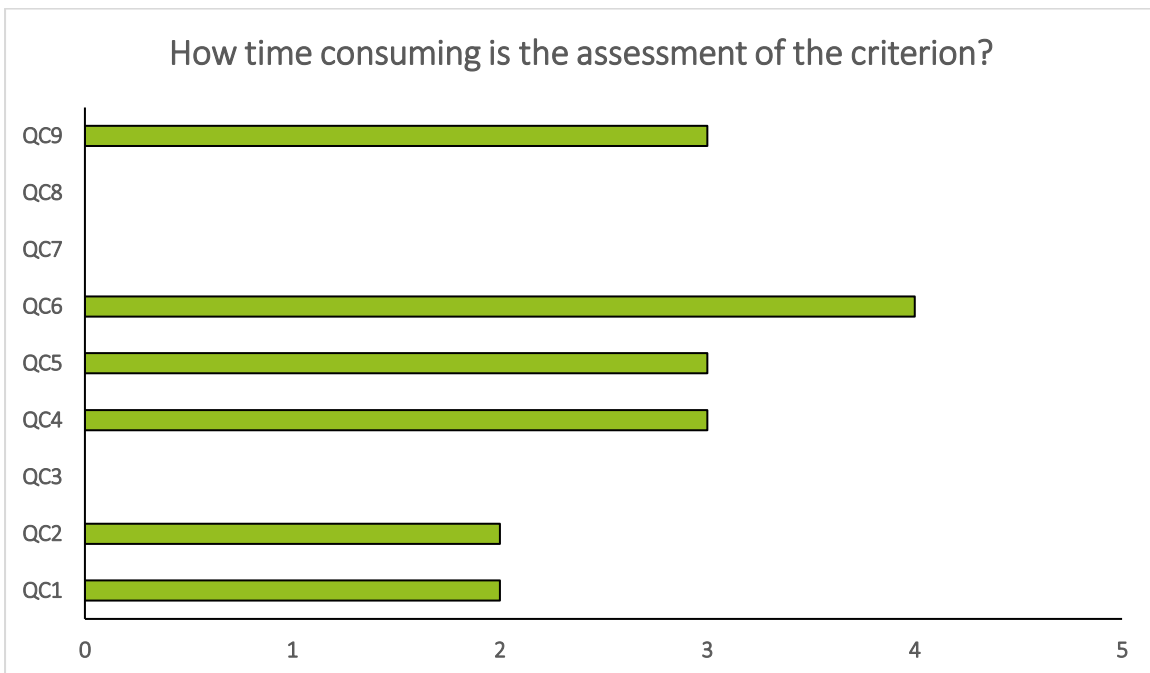











Figure 5. Time taken for evaluating criteria

3.5 How many criteria have been used in the project?

The criteria used are listed below:

-  QC 1 ADEQUATE ANALYSIS
-  QC 2 QUALITY OF IMPLEMENTATION OF TECHNICAL ENERGY EFFICIENCY IMPROVEMENT MEASURES
-  QC 3 SAVINGS GUARANTEE
-  QC 4 VERIFICATION OF ENERGY SAVINGS
-  QC 5 VALUE RETENTION AND MAINTENANCE
-  QC 6 COMMUNICATION BETWEEN THE EES PROVIDER AND THE CLIENT
-  QC 7 COMPLIANCE WITH OF USERS' COMFORT REQUIREMENTS
-  QC 8 INFORMATION AND MOTIVATION OF USERS
-  QC 9 COMPREHENSIBLE CONTRACTUAL STIPULATIONS FOR THE CONTRACTING OF SPECIFIC REGULATORY REQUIREMENTS