

TOOL: TRAINING INSTALLERS

Abstract

In a smart grid project the installation of the smart meter and other smart energy devices is a deciding moment for getting the customer engaged. The project management of smart meter and smart grid product installation are who this guideline is aimed for. The objective is to describe how to prepare the installers to not only install the meter properly, but also to provide important information about the project to customers. The insights of this tool are created by the Portuguese DSO, EDP Distribuição.

What is it?

The Training Installer is a tool with as goal to deliver a set of tips to project managers to prepare the installers to make the most out of the installation process. This is of utmost importance, since the installers will be the face of the DSO and of the smart grid project to the consumer. Their training involves not only technical, but also soft skills and brand aspects. For more information about the installation process in general, see our guideline [Optimizing the meter installation process](#).

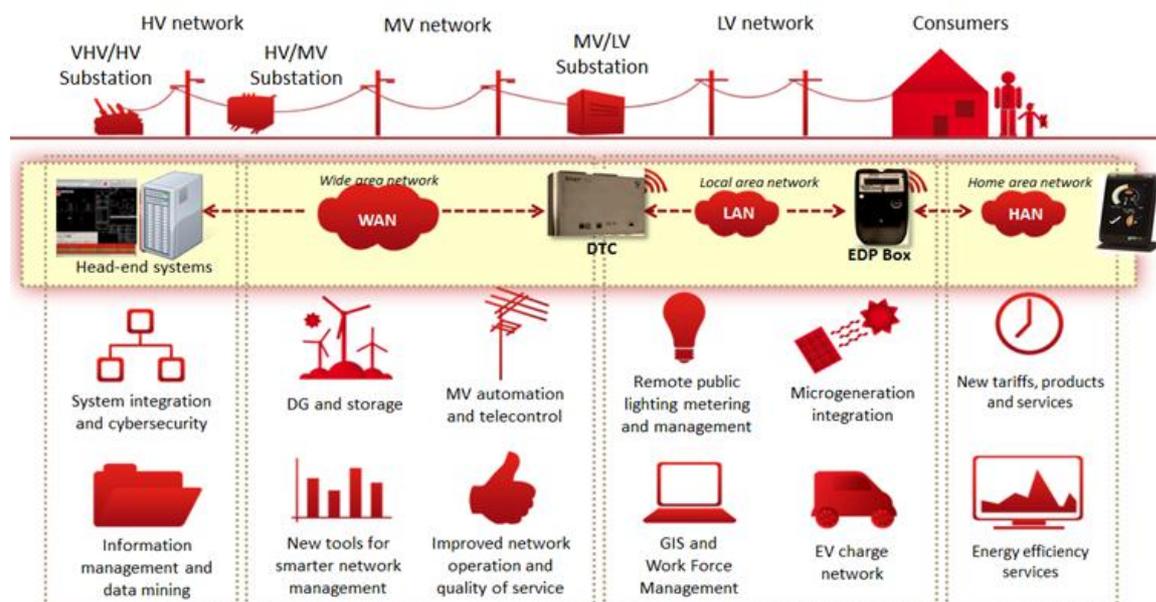


Figure 1: InovGrid Architecture

When to use?

The training of installers is part of the meter installation process that should happen right after the customer identification phase. At EDP Distribuição there is a technical board that selects and qualifies all the installers and suppliers, so the recruitment phase is previously arranged and follows independent procedures.

Training installers as part of large smart meter roll outs (InovCity, PT)

EDP Distribuição developed the installation process described above for the InovGrid project in Portugal. This project aims to install up to almost 300 thousand smart meters in three distinct phases: InovCity (pilot with 35 thousand smart meters and 350 Distribution Transformer Controllers), Expanded Pilot (7 cities, 100 thousand smart meters, a thousand Distribution Transformer Controllers) and Second Expanded Pilot (150 thousand smart meters, more than 5 thousand Distribution Transformer Controllers).

The installers who worked in this project attended several training sessions in which they were informed about the project and its goals for two entire days, with some extra sessions for refreshing concepts and best practices. The installers are certified once they passed through e.g., a broad training process in Low Voltage Operations. Those training sessions included also behavioural training, with some practical exercises (like a small role play) and also technical training.

During these training sessions the installers were given brochures about the smart meters functioning that they should pass to the customers, as well as fridge magnets which had the telephone number of the InovGrid call center. The importance of this project and the need for the installers to pass that information to the customers was emphasized in order to have create more acceptance from customers. In the whole process of the developing the tools and guidelines related to the installation process EDP used their own experiences but also other sources to improve its own practices and processes.

What do you need to do?

1. Train the installers

The smart meter installers, being a personal point of contact to end users, must have not only technical but also social skills.

Technical training: As installing the smart meters is not yet a daily routine of most installers, a detailed technical training is required. The goal of the training is to assure that the installation procedure at citizens' homes is as good as it can possibly be, without delays and technical mistakes, covering the most common problems that may occur during installation. Smooth installation is a critical issue to gain and keep user confidence in a project;

Soft skills training: Beside technical skills, the installers have to be equipped with soft skills mainly related to engagement, such as communication skills and conflict resolution skills. There might be citizens that show resistance to a project and to the installation itself. To tackle this, you should emphasize to the installers that it is essential to display an ethical conduct and keep professional integrity. To face customer's resistance when installing a smart meter, we instruct the installers to listen to the customer and give simple and transparent answers, so customers understand the advantages of the instalment.

Brand training: Provide training on the DSO brand values to the installers, through some workshops with the installers and some annual meetings where results and best practices are shared. In some cases, you have to depend on installers that might not be familiar with your brand, its values and the desired procedures in dealing with users. Regarding brand training, EDP shares with the outsourcing service providers (installers) their vision of a global energy company, a leader in value creation, innovation and sustainability. EDP instructs the installers to work with both positive behavior and a positive attitude, this means we inform them on the themes that EDP embraces: Trust; Excellence; Initiative; Innovation and Sustainability.

Project training: The installers will be one of the visible contacts of your smart grid project and it is important that they are able to respond promptly when requested by the consumers. The training should include a set of questions that are most likely to come up during the meter installation process, for which you could use our tool [Collecting FAQs during the installation process](#). As the project representative visiting the customers, they will have to provide general information about the project and programme as well;

Also, for additional or future enquires it is advisable that the installers communicate the available project informational channels such as the project website or the project hotline. More information on this can be found in our guideline about [Setting up customer support in a smart grid](#).



Figure 2: Meter Installation process. Source: Guideline [Optimizing the meter installation process](#).

2. Monitor the installer's performance

- It is important to measure the knowledge of the installers through inquiries, after training sessions.
- Define and implement realistic but demanding SLA's (service-level agreements), mainly related to the number of smart meter installations per week and to number of complaints from the customers.
- A way to assure the quality of the installation process is to perform a quality survey to a representative sample of end users.



Figure 3: Installers training session in EDP's InovGrid project

A training centre for technicians (Vivint, US)

Vivint, a US provider of Smart Home Solutions, has recently opened a smart grid-training center to prepare technicians for full-scale deployment of smart meters. The training center is also used to provide qualified training for the installation of Home Energy Management networks and EV chargers. The training includes all safety aspects, meter reading, handheld use, work order management, and customer service skills. When concluded, the installers are certified in classes, from a D-level technician to a A-level technician.

More information: <http://www.vivint.com/>

Do's and don'ts

- **Use professional installers as field force technicians.** They will be one of the faces of the project and most likely one of the first to consumers to establish a first impression. To assure that installers are trustworthy, EDP has an internal board that defines all the rules and work agreements (SLA's, contract's, etc.), on themes such as which certification is need for electrical installation, environmental aspects or health and safety management.
- **The installers need to be well informed before the installation.** Make sure all the important information (project, equipment, processes, timing, etc.) is provided to the installers at the right time; so before they visit the customers.
- **Integrate an evaluation process before the installer's start.** With the knowledge evaluation, the DSO can be sure the installers correctly understood the information they have received.

- **Review the training process.** The training process should be reviewed every now and then, to make sure that the installers understand all updates on the equipment and processes. And you know if you have to address complaints, change work routines, or adjust the FAQ for the installers.
- **Use the feedback from the installers.** The utility should not forget to listen to the tips the installers will give, since their experience is valuable to the improvement in processes and in the project itself. This can be achieved through inquiries, workshops, focus groups, etc.

Further reading

- Guideline [Optimizing the meter installation process](#)
- Tool [Collecting FAQs during the installation process.](#)

This guideline was developed in the S3C project, and is freely available from www.smartgrid-engagement-toolkit.eu.

S3C paves the way for successful long-term end user engagement, by acknowledging that the "one" smart consumer does not exist and uniform solutions are not applicable when human nature is involved. Beyond acting as a passive consumer of energy, end users can take on different positions with respective responsibilities and opportunities. In order to promote cooperation between end users and the energy utility of the future, S3C addresses the end user on three roles. The *smart consumer* is mostly interested in lowering his/her energy bill, having stable or predictable energy bills over time and keeping comfort levels of energy services on an equal level. The *smart customer* takes up a more active role in future smart grid functioning, e.g. by becoming a producer of energy or a provider of energy services. The *smart citizen* values the development of smart grids as an opportunity to realise "we-centred" needs or motivations, e.g. affiliation, self-acceptance or community.

S3C (2012-2015) performed an extensive literature review and in-depth case study research on end user engagement in smart grids, resulting in the identification of best practices, success factors and pitfalls. The analysis of collected data and experiences led to the development of a new, optimised set of tools and guidelines to be used for the successful engagement of either Smart Consumers, Smart Customers or Smart Citizens. The S3C guidelines and tools aim to provide support to utilities in the design of an engagement strategy for both household consumers and SMEs. The collection of guidelines and tools describe the various aspects that should be taken into account when engaging with consumers, customers and citizens. More information about S3C, as well as all project deliverables, can be found at www.s3c-project.eu.