

DELIVERABLE T3.2.2

D.T3.2.2 – Pilot action reports

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A.T3.2 Evaluation of pilot actions for EE improvement

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1. Introduction and aims

This document is a post-investment report describing the pilot action. This determines the results of the investment and other accompanying activities.

The aim of this document is to present the achievements of the implemented measures and their usefulness.

2. PA report

This chapter presents in tabular form all interesting information about the pilot action. The table below is the business card of the pilot. It contains attractive information that not only shows the course and achievements of the pilot action but can also be a tip for people interested in similar energy efficiency improvement measures or owning similar buildings. It was demonstrated in document D.T3.1.6 that pilot action in Plonsk is a good practice, so it is a testimony to how such investments should be implemented.

Name of the pilot action	PA5 to monitor and control energy flows in a public building in Plonsk
Type of the pilot action	Investment
Location	City of Plonsk, Poland
Number of modernized buildings (with building's type)	1 educational building
Modernized area of the buildings	2155,25 m ²
Main problems in the buildings	Too much electricity consumption caused by a lack of care from users and insufficient lighting in the toilets sunlight, the light is lit there earlier
PA goals	<ol style="list-style-type: none"> 1. improvement of energy monitoring 2. modernization and control lighting system 3. increasing the comfort of the building use 4. easier operation of the building 5. promoting and disseminating knowledge about energy efficiency measures in building
Type of energy efficiency improvement method used	<ul style="list-style-type: none"> - installation of the EE LED system with motion sensors (4 LED lamps 56W, 3 LED lamps 12W) - smart metering system - 2 energy monitoring systems and 2 lighting control systems (electricity meters LE-01M MID and 2 converters)
Number of smart meters (with their purpose)	4 electricity smart meters
Pilot action duration	29.06-05.09.2018
Partners involved	CMoP, MAE
People number involved to implement the PA	5
Investment value	16 639,55 €
Description/Details of the PA	The pilot action in Plonsk includes an investment in a demonstration installation consisting of the use of EE LED lighting system with motion sensors in 2 classrooms and 2 toilets and smart metering (2 energy monitoring systems and 2 lighting control systems) with similar parameters in terms of



	<p>location in the building and dimensions. Smart metering system is connected to the WI-FI Network and is able to send the gathered data on e-mail or allowing user to view the data in “real-time”. The intelligent remote energy meters enable automatic data transmission on energy consumption. In addition, it can monitor energy consumption on an ongoing basis, which in turn will allow to manage this consumption and reduce electricity bills. Control of the level of energy consumption will allow to optimize the level of contracted power, which in turn will generate savings. The equipment installed includes four LED lamps (light source power 56W, color temperature 4000-4500K, luminous flux 7650 lm, color rendering index > 80), three LED lamps 12W (light source power 12W, color temperature 3600-4200K, luminous flux 850 lm, color rendering index 80-89), four measurement systems LE-01M MID (single phase, active import, electricity meters, with RS485 comms.) and two converters ATC-1000 (low cost TCP/IP to RS-232/422/485 Converter).</p>
<p>Type and number of the stakeholders reached</p>	<p>Number of reached target groups in the framework of pilot action: General public – 11 Local public authority – 11 Regional public authority – 4 Sectoral agency – 6 Infrastructure and (public) service provider – 3 Higher education and research – 2 Education /training centre and school – 6 SME – 13 Business support organisation – 22</p>
<p>Achieved effects/results</p>	<ul style="list-style-type: none"> • Improving energy efficiency in Plonsk. • 1787,76 kWh annual reduction of energy consumption. • 241,10 € annual cost savings. • 1,39 tons annual reduction of CO₂ emission. • Building users will gain experience in how smart metering works and how it should be monitored. • Change in people's behavior by raising public energy awareness. • Increasing the comfort of the building use. • Easier operation of the building. • Promoting and disseminating knowledge about energy efficiency measures in buildings. • The exchange of experiences and practices of carrying out similar investments in various political, social and technical conditions.
<p>Satisfaction of users</p>	<p>The building managers have in practice learned about the benefits of lighting modernization and energy monitoring in the form of lower electricity bills. Users largely claim that the platform is easy to use and perceive the tool as offering significant potential, but there is a need for further development to make it even more functional. In general, the comments show that there is a great interest in the tool and its practical application. However, some say that it does not provide the expected results.</p>
<p>Possibility of replication</p>	<p>The solution can be replicated in the other three primary schools, which are similar in energy consumption habits and building parameters or can be</p>



	extended to other rooms in the pilot building.
Distinctive feature of the pilot action	<ul style="list-style-type: none"> – the primary school is the only building in Plonsk with a smart metering system – cooperation between the project implementation team, the contractor and school staff was very good
Number of promotional meetings – focus group meetings, seminars	3

Table 1: Pilot action business card

The results presented above clearly show that the pilot action has brought and will bring so many benefits that one can speak of success.

The analysis of activities showed that all intended plans were implemented and met expectations.

3. Conclusions

This study is a summary of the pilot action in Poland. The main results are measurable benefits achieved in selected buildings, including cost and energy savings and reduction of CO₂ emissions. In addition, it can be concluded that the OnePlace platform is useful for preparing, conducting and monitoring EE investments as a tool supporting the entire investment process.

The identified replication possibilities of the pilot action in other buildings or locations as well as the transfer of acquired knowledge and experience prove that the pilot can be successfully continued and developed.

The information contained in this document is based on deliverable D.T3.1.6, D.T3.2.1, Output 3.1 and PA5 fact sheet.