

Training on energy audits as an Energy Efficiency DRIVER for the automotive sector

KEY WORDS: Energy efficiency, energy auditing, automotive sector, capacity building

AIM:

To create an innovative learning platform that fosters capacity building in energy efficiency and energy auditing in SMEs of the automotive industry

DURATION:

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FUNDING AND BUDGET:

- Horizon2020 (EU Framework Programme for Research and Innovation)
- 1 999 997 €

COUNTRIES OF IMPLEMENTATION: Germany, Spain, France, Italy

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ENERGY CONSUMPTION IN THE AUTOMOTIVE INDUSTRY

As a rapidly growing industry, the automotive sector uses substantial amounts of energy in the manufacturing of its products, making it essential to the global effort to use energy more efficiently. Given the sector's complex production process, energy consumption must be assessed across the entire supply chain to optimise energy use. Small- and medium-scale (SME) automotive suppliers consume about 90% of the total energy in the production processes, yet energy use receives little attention there. Creating awareness and building capacity on cost-effective energy efficiency improvements in the automotive industry is therefore paramount to reducing energy consumption and associated climate change risks.

OBJECTIVES

The overall goal of E2DRIVER is to overcome the lack of knowledge and awareness in matters of energy efficiency in the automotive sector's supplier SMEs. The project thus aims to boost the efficiency of capacity building programmes in energy auditing by establishing a co-operative network and an innovative learning platform.

The successful application of energy audits in target SMEs hinges on a careful analysis of companies' specific competencies. The E2DRIVER project will develop a training methodology that specifically addresses companies' and employees' needs. Another cornerstone of the project is creating a hub for a community that engages stakeholders, where the aim is to involve 40 SMEs, 650 employees and 60 trainers. They will have access to the E2DRIVER platform to share knowledge to boost the learning process, connect to energy experts and track progress on energy saving.





THE E2DRIVER CONCEPT

Company	Energy	Energy
managers	staff	experts
 Improvement of organisational structure Financial planning 	 General training – behavioural and cultural insights Generating own knowledge and sharing it inside and outside the company 	 Additional training for 60 trainers Facilitating right interventions and behaviour towards energy efficiency

Several obstacles hinder the implementation of proven energy reduction measures, such as SMEs' organisational structure, behaviours and awareness on energy efficiency. The centrepiece of the E2DRIVER methodology are an adaptive learning environment (a) and an ontological flip-teaching model (b) as solutions to this issue:

- (a) Managers and employees are stimulated to actively engage in the learning material on energy efficiency. The type of specific training received depends on their company role and their individual needs and motivations.
- (b) Trained employees will share experiences among peers and make improvements that are displayed on the E2DRIVER platform (table above).

Further training will promote selected external trainers into energy experts to ensure the continuous application of efficiency measures.

E2DRIVER will train managers and selected employees in energy efficiency by means of:

- Online lessons and face-to-face training
- Interactive workshops
- Energy and financial tools
- Virtual reality modules

IMPACT

- Capacity to implement 65 energy efficiency measures
- Energy savings of 13 GWh/year (on average, 20% of energy savings)
- €2.5 million/year of potential savings
- 3.5 ktCO₂/year emissions avoided

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ACTORS OF E2DRIVER – NOW AND TOMORROW

The initial 12 companies implementing the learning programme will be automotive supply industry SMEs that manufacture electrical equipment, windows, car interiors, spare parts and other components. They have high energy consumption and display great commitment to improving their energy footprint. Apart from learning and skill-sharing, SMEs will continuously apply self-assessment energy tools in their facilities. Furthermore, E2DRIVER trainers will be equipped with skills to monitor their company's implementation of measures and evaluate their performance. The results will be put on the platform and used to improve the methodology for further use in 28 replication companies.

The E2DRIVER platform will play a core role in the company in disseminating all results to the wider community. As a hub for new ideas it will allow for E2DRIVER trainers to inform other trainers on replicating successful interventions, continuously updating information and improving the method.

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