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Energy-Efficient Elevators and Escalators

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Project website <http://www.e4project.eu>



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Framework of the Project

- In the EU-25 there are already close to **4 million elevators**. Elevators and escalators now represent **4% of the total electricity consumption in the tertiary sector**.
- Elevators and escalators are the crucial element that makes it practical to live and work several floors of above ground. Even in smaller multi-story buildings, elevators are essential for making tertiary sector and apartment buildings accessible to elderly and handicapped people. The aging of the European population further increases the need for increased vertical mobility.
- There is a lack of knowledge about the elevators electricity consumption and installed capacity in Europe. Over the years, few publications and or reports, or books have been published.



Objective of the project

- The present proposal aims to tap this gap of information and will collect information near the manufacturers, building owners and elevators associations, by launching a survey which will be distributed among a representative sample of the different types of buildings.
- to contribute to the market transformation of the service sector buildings and residential buildings, by improving the awareness of best practice solutions to provide vertical mobility
- to provide recommendations and guidelines to promote those practices
- Improvement of the energy performance of lifts, elevators and escalators, in the tertiary sector and in multi family residential buildings.



Results of the Project

- Identification of the elevators consumption in the different sub-sectors of the tertiary sector, and applications
- By improving the awareness of best available elevator technology options and practices in **education buildings, public administration buildings, hospitals, hotels, private and public office buildings, shopping centers, etc.**, it is expected to increase the penetration of energy-efficient elevator technologies
- implementation of the Directive on the energy certification of buildings and building passports, enabling improving the electrical performance of the buildings
- contribute to a market transformation of the lifts and escalator market, in both tertiary and multi-family residential buildings, leading to large cost-effective electricity savings
- Policy implications will be elaborated from the results in order to support the removal of barriers



Outcomes of the Project

- Characterization and projection of electricity consumption of EU elevators and escalator by technology type, by building sector, and installed capacity;
- Characterization of the total elevators electricity consumption of most relevant elevators and escalators systems, in each type of considered building.
- Technology assessment, including estimation of energy savings and the identification of market transformation potential.
- Identification of market barriers and development of strategies and tools to overcome those barriers, through several market transformation mechanisms.
- Providing dissemination of the project results leading to successful market transformations of the elevator and escalator market

