

# **Summary of the doctoral dissertation**

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## **Urban logistics management and electromobility**

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The aim of the doctoral dissertation was to develop a model for implementing electromobility in the fleets of logistics operators and managing the fleet of delivery electric vehicles, considering operational and infrastructural conditions. The goal was achieved by conducting research and verifying the adopted hypotheses.

The basic cognitive approach used by the author was the inductive approach, which allows to derive inductive generalizations expressing the existence of certain dependencies from the studied phenomena. Such approach is characteristic of problems in the field of social Sciences. The inductive explanation carried out in the light of the research results allowed the author to verify the main hypothesis that the condition for the proper implementation of logistics processes in urban space using Solutions in the field of electromobility is the selection of appropriate electric means of transport, based on the analysis of its technical parameters, the structure of its charging systems and fleet management systems.

The research was conducted using the method of critical analysis of literature, documentation method, observational method and questionnaire research method. The subject of the research were selected companies from the KEP industry, the objects of the research were vehicles applied in urban logistics and the last mile delivery systems. The obtained research results allowed to confirm the hypothesis and were used to build the model using the method of mathematical modeling and Computer simulation. The conclusions from the conducted research allowed to figure out the determinants of the effective implementation and management of a fleet of electric vehicles in city logistics systems.

The work consists of five chapters. The first chapter is devoted to the origins and development of management science in relation of technological development, the second describes the problems and methods applied in urban logistics. The third chapter presents the legal and technical conditions of electromobility. The fourth chapter describes the conducted research, the fifth chapter presents the process of building and validating the model and the determinants of implementing electromobility in the fleets of logistics operators.