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OF ECONOMICS
AND BUSINESS

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Economic conditions of environmental technologies implementation in the warehouse management

Ekonomiczne uwarunkowania implementacji technologii środowiskowych w gospodarce magazynowej

Summary of doctoral dissertation

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1. Importance and justification of the research problem

In the trend of environmental protection, which has been held going on for several decades, more and more often emphasis is placed on reducing emissions of harmful substances. Reduction of greenhouse gas emissions (GHG) is the subject of discussions, negotiations and agreements at the national, European and global level. Contemporary requirements of ecology are an important premise for the attention of the scientists and harmonisation of the investments, strategies and operational plans of the companies. Currently, the emphasis is placed on maximizing business benefits that may result from pro-environmental undertakings.

In the case of logistics, most greenhouse gas emissions are related to road transport. However, they also come from storage facilities, which account for about 13% of emissions of harmful substances in the whole of logistics.

The warehouse facilities may use modifications, typical for all sustainable buildings, creating so-called green warehouses. Warehouses, however, are specific infrastructure facilities that stand out from other buildings due to their construction, operation and warehousing process. Therefore, the spectrum of sustainable solutions, characteristic for all buildings, can be extended to include solutions that can only be used in warehouses. It is the duty of socially responsible entrepreneurs to look at the warehouse, its equipment and the way it functions from the perspective of the natural environment and future generations with the use of modern and often innovative solutions. It is the duty of scientists to provide theoretical and practical support in this area.

Not without significance is the interest of practitioners in the issue of sustainability of the enterprises, which gives it an empirical character. Support for entrepreneurs planning to improve the environmental sustainability of warehouse facilities is possible through the identification of environmentally and financially effective projects, carried out in the conditions of Polish reality. Logistics professionals face the challenge of identifying, researching and popularising sustainable solutions that will lead warehouse facilities to achieve the parameters characteristic for green, sustainable buildings.

Of the numerous studies on sustainability in logistics in recent years, only a limited part concerns the utilities consumption of the warehouses. Different ways of using energy and emission sources in the field of warehouse management have not been sufficiently and holistically researched. There is, therefore, a need for a coherent approach to energy