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Facility Management and Its Importance in the Analysis of Building Life Cycle

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Abstract

Since buildings count for half of the primary energy sources consumption as well as half of all consumed raw materials, produce hundreds of million tons of waste and a third of the world's CO2 production, construction and building of low energy buildings has become an international trend. More than transportation, mining industry, or any other type of industry it is primarily the area of building industry and building administration that lead to better management of narrow resources as well as to the reduction of greenhouse gases emissions. In this area facility management also plays an important role. The aim of the article is via analysis of building life cycle to present possibilities of the influence of a facility manager on the investment and running costs of buildings with respect to the environmental management principle.

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Keywords: Facility management, life cycle assessment, competitiveness, facility manager;

1. Introduction

Facility management is a term which is closely associated with building management. More broadly, facility management should not only be understood as general building management connected with everyday building operation but it should also include long term planning and focus on its users. This should already be essential in the preparatory phase of investment process focused on construction of building itself. Major part of operation costs and effectiveness of facility management processes is defined already at project of building. An important factor is also

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the ecological aspect of building influence on the living environment due to materials used for its construction as well as energy consumption necessary for its operation.

2. Theoretical and methodological aspects of the issue

If we want to assess energy performance of buildings or its influence on environment, we have to analyse the whole building life cycle (starting with building materials up to the building deconstruction and its recycling) and not only the period of the building use. Such an analysis is called life cycle assessment. According to definition of Life Cycle Assessment by US Environmental Protection Agency Life cycle assessment is a technique for assessing the product influence on living environment connected with all life cycle phases (i.e. from raw materials extraction, material processing, manufacturing, distribution, use, repairs, maintenance, up to deconstruction or recycling). Life cycle assessment (LCA), is also known as life cycle analysis, ecological balance or from cradle-to-grave analysis). By the ISO 14040 (2006) LCA comes before the narrow view on environmental protection:

- creating the list of corresponding energetic and material incomes and outcomes (emissions, waste) into living environment,
- assessing possible influences (consequences) connected with the identified incomes and outcomes,
- interpreting the results which enable erudite (qualified) decisions.

To explain the scope of facility management we can use the definition of IFMA (International Facility Management Association, a respected representative of the majority of world facility managers) which defines facility management as *"a method whose task in organisations is to mutually harmonize employees, work activities and the work environment that includes principles of business administration, architecture and humanities and technical sciences"* (Vyskocil, 2009). Facility management (FM) is an effective form of outreach business management which aims to provide relevant, cost-effective services to support the main business activities (core business) and allow them to optimize. As follow from several studies Potkany (2011), or Stacho, Urbancova, Stachova, (2013) At present, marked by the financial crisis, is the application of facility management most current because it provides savings and optimization of operating costs promotes increased employee performance and thus contributes to increase the profitability of the enterprise. The most common forms of application of facility management in the enterprise is a partial or complete outsourcing. According to the definition facility management is characterised by the interconnection of the three following areas (Somorova, 2012):

- area relating to employees, i.e. human resources and sociological aspects,
- area of work activities, i.e. area of achievements and financing,
- area of work environment, i.e. architecture and engineering.

Fig. 1. Axis of Facility Management
Source: https://www.axispointe.com/axisfm/fm_diff_one.php