

Knowledge management and eco-innovation: Issues and organizational challenges to small and medium enterprises

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Abstract

Consideration of unbridled consumption of resources and waste generated has highlighted environmental concerns that have become crucial. At the design stage of a product or process, the environmental dimension is becoming a major issue, but designers are poorly equipped to handle it. The design or re-design expected in the product cycle is done with resources that are combined, which are associated, leading to the generation of new knowledge. To assist design teams in their creativity or SMEs in the development of their product, we propose a methodological approach that will allow driving potential users to eco-innovative concepts of product or process. As a starting point, a comprehensive and qualitative multi-criteria matrix will allow prioritization of impacts. A customized application of the inventive TRIZ principles (Russian acronym for theory of solving inventive problems *Teoriya Reshenija Izobretateliskih Zadatch*) will support considerations for choosing an eco-innovative solution. The testing of the proposed approach Eca TRIZ, based on new matrix, was done by the application to various situations in eco-design and the solutions proposed by teams of students that meet the challenges presented during the "24 Hours of innovation" competition. These were conclusive. We will propose some of them in this research paper.

Keywords

Knowledge management, eco-design, eco-innovation, eco-efficiency, TRIZ

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