

THE ECODESIGN TOOLBOX FOR THE DEVELOPMENT OF GREEN PRODUCT CONCEPTS – FIRST STEPS FOR PRODUCT IMPROVEMENT

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Abstract: In order to enable enterprises to find essential environmental improvement aspects of their products the ECODESIGN Assistant, an easy to apply tool for classifying a product, has been developed at the Institute for Engineering Design of the Technical University of Vienna (VUT). To be able to fulfill stakeholder requirements, especially the two directives WEEE and RoHS, a practical tool has been developed, the so called “Electric and Electronic Equipment–PILOT” (EEE-PILOT). This tool gives first information about the framework of the directives, i.e. target groups are mentioned as well as validity and deadlines for required reports are given. The EEE-PILOT is a software tool which helps product developers to find suitable strategies and tasks in order to improve a product in such a way that they fulfill the requirements of the WEEE and the RoHS directive. Both tools, the Assistant and the EEE-PILOT, are integrated in the actual project “ECODESIGN Toolbox for the Development of Green Product Concepts”.

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1. INTRODUCTION

This paper describes the first step of a project carried out at the Institute for Engineering Design of the Vienna University of Technology. The project aims at developing a method for sustainable product design and is called “ECODESIGN Toolbox for Green Product Concepts”. Innovative product concepts will be developed during this project in cooperation with partners from the industry. Two cases will be addressed on electronic products. This project is funded by the Federal Ministry of Transport, Innovation and Technology and the Austrian Research Promotion Agency. The project is still in progress and will be finished in August 2007.

2. OBJECTIVE

The objective of this paper is to describe how environmental analysis of a product and how specific stakeholder requirements from legislations such as the European WEEE directive [1] and the RoHS directive [2] as well as the new EuP directive [3] in the can be integrated in the ECODESIGN Toolbox for Green Product Concepts (see Fig. 1).

The ECODESIGN Toolbox for Green Product Concepts as shown in Fig.1. comprises of a six step process procedure.

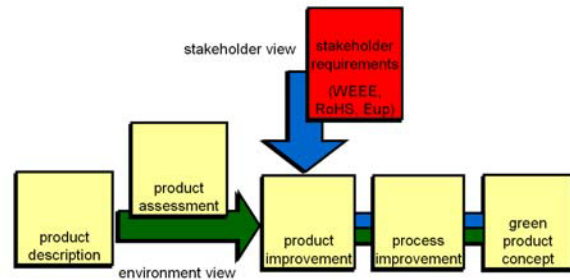


Fig.1: Six steps of the ECODESIGN Toolbox

The Toolbox will comprise of different tools for sustainable product development which will be tested and applied by the product design teams of three industrial project partners. The ECODESIGN Toolbox for Green Product Concepts supports product designers in improving the environmental performance of their products in two aspects: (i) environmental analysis and (ii) analysis of the stakeholder requirements. In the environmental analysis part the product is evaluated with the ECODESIGN PILOT (Product Investigation, Learn