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## Bringing Ecodesign to the Front Stage of Innovation: Action and Research at Natura Brazil

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Ecodesign or Design for Environment are still little known and used in Brazilian companies, and are more assimilated by consumers to handicrafts made of recycled or natural materials. On the other hand, Natura, a leading Brazilian cosmetic and toiletry company, recognized for its strong commitment to Sustainability, has launched, since the early 1980s, many initiatives to minimize its environmental impacts through new products, without using "Ecodesign" in its vocabulary and strategy.

This paper presents an overview of an original initiative to integrate Life Cycle Thinking into Natura's Product Development Process (PDP), through an action-research program, joining its Research and Development area with external experts and the Academia at the University of São Paulo. The approach follows a cyclical format characteristic of action-research (COUGHLAN; COGHLAN, 2002), and the initiatives and results of a first 2 year cycle are summarized. They include three main activities. First, a full initial diagnosis of the company's situation in Ecodesign was conducted, through a Maturity Model assessment, as well as an interview based study of drivers and barriers. Then, a qualitative benchmarking study originated the creation of an innovative Ecodesign iconic language and an electronic product library, used for the internal promotion of Ecodesign. Thirdly, Ecodesign tools and practices were customized to ensure their appropriateness to the specific context and culture of the company. This deeper applied research activity allowed developing three tools based on a formal process of customizing best practices, including trials and improvements in real conditions of product development projects. Beside classical technical artefacts (guidelines and semi-quantitative environmental assessment scorecard), the third tool consists of an original multistage Ecodesign procedure associating technical and environmental considerations with applied creativity based on Design Thinking principles. This stepwise procedure, inspired by a model created in Northern Europe and consolidating extended experience and practical training in Ecodesign, proved to be an adequate tool for training and practicing in multifunctional teams, particularly adapted to the early stages of product development projects. The results obtained in the tests showed that this process is a promising Ecodesign teaching approach, and especially, that it brings a high capacity of generating concepts for improving existing products or more radical innovation. The paper illustrates how Ecodesign has been practically adapted to the company context, so that it can be integrated as essential practices of the PDP, starting at the very early stages of projects. This program, now undergoing its second cycle and progressing towards the desired goal to conciliate innovation and sustainability in products, tries to reach an effective integration and application of Ecodesign а large company.

Conclusions and challenges of the first two-year cycle of activities will be summarized, both from the applied company viewpoint and the research perspective, identifying contributions to knowledge extension in the area. The discussion of the results as well as the observed challenges brings interesting learning to be shared with the community of practitioners and experts, particularly to the question of bottom-up versus top-down integration strategies.