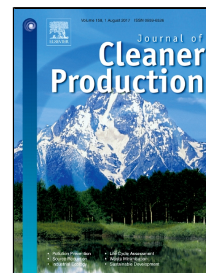


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Towards true product sustainability

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1. Introduction

Product sustainability (PS) looks at how products can provide economic benefits to companies while at the same time providing environmental and social benefits to society in general. Or, in other words, PS aims at balancing the contributions of products to the triple bottom-line, thereby creating multiple and shared values for different stakeholders. There have been a great number of different approaches of how this balance can be achieved and preserved through eco design, design for sustainability, cradle-to-cradle, product service systems or handprinting. While early approaches were focusing on balancing economic and environmental benefits, the discussion later moved on to address sustainability problems in all its dimensions. And while the discussions revolved for long around minimizing the negative impacts of products, more recent approaches have started to focus on positive impacts, thereby aiming for net-positive products. The evolution of these different approaches to PS presents a remarkable development that is rarely perceived.

From a business perspective PS serves to keep companies competitive in times of changing consumer and public demands, asking for an improved sustainability performance of the products offered (e.g. Nielsen Company, 2015). It may either help companies to prevent or reduce product related risks, or it may help to differentiate the products from those of their competitors. From a societal perspective PS is seen to contribute to sustainable development, by reducing the ecological footprint or by improving the social condition. Sustainable production and consumption has been on the global political agenda since the first “Earth Summit” 1992 in Rio de Janeiro, and it figures prominently as a Sustainable Development Goal in the U.N. “Agenda 2030” (U.N. General Assembly, 2015, Goal 12: “Ensure sustainable consumption and production patterns”). However, finding the right balance between private benefits and public values remains a continuous challenge. This becomes even more dynamic with political and standard setting bodies (e.g. EU, ISO) intervening to adapt the economic rules of the game.

While the business success of PS can be measured easily by looking at economic success indicators like sales, market share or customer satisfaction of sustainable products, its sustainability contribution remains vague at best. From a business perspective any sustainability improvement relative to the previous product or compared to the prevailing products on the market may be seen as satisfactory, because the new product displays an improved sustainability performance. From a sustainability perspective this is not so simple, as there are many different dimensions and degrees of sustainability improvements involved. In looking at the product sustainability literature we quickly realize there are many types of sustainability improvements and many shades of green or sustainable products. And as time goes on, the number of different approaches seems to be increasing. It is not just the eco-efficiency or the socio-efficiency of a product that is in question, but its aggregate contribution, and it

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