Integrating sustainability into new product development

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Abstract
Consumer recognition, understanding and concern about sustainability are increasing. Irrespective of regulatory requirements, companies across different industrial sectors are responding to this by being more pro-active on sustainability issues. Corporate sustainability – creating long-term shareholder value by embracing opportunities and managing risks associated with economic, social and environmental developments – has two main levels of impact: the operations level (often part of a corporate social responsibility strategy) and the products/services level. We know that at the products/services level, there are a number of tools that can, in theory, enable sustainable new product development (SNPD): design for the environment, eco-design, environmental effect analysis, eco- and carbon- footprinting, method for sustainable product development, etc. However, in practice, these tools are often onerous in terms of resources (many require life cycle data or detailed product compositional information for instance), tend to focus on environmental rather than social impacts, and do not 'fit' easily with the stage gate process of new product development. This paper evaluates alternative models advocated in the academic literature, explores company SNPD practices and develops generic guidance for companies to engage in SNPD.

There is a need to understand why and how firms from different sectors integrate sustainability criteria into their new product development process. Semi-structured interviews were conducted in summer 2007 with 12 firms from four different industries: food and drink manufacturing, construction, chemicals and automotive. This paper highlights the key drivers of SNPD and explores how companies' formulate sustainability criteria, how they measure the criteria and how decisions are taken with respect to different dimensions of sustainability. The findings reveal that internal capabilities and external factors – what we might refer to as the socio-technical landscape – are important in driving companies' engagement in SNPD, often to a level beyond the legislative minimum requirements. The current SNPD practises highlight the need for simple tools that can be integrated into the stage gate process for considering primarily economic and environmental sustainability.