

CAN INNOVATIONS BE SUSTAINABLE?

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Abstract

If one started to play a round of 'Buzzword Bingo' in academic business discussions nowadays, the term 'sustainability' would probably be among the first five hits. On the one hand, every business activity seems to claim to be or to eventually become a 'sustainable' one. On the other hand does its prevalence in usage seem to be inversely proportional to its substance. Commonly the term implies demands for ecologically friendly products and production processes, socially acceptable business behavior and/or compliance with certain Corporate Social Responsibility (CSR) standards.

In a business context, however, such claims are only stable and enduring if they support or are integrated into the predominant business logic. In this respect, the majority of approaches indicate a significant lack of business acumen, which, in turn, leads to well-known trends of 'greenwashing' on the business part.

In this paper, the authors intend to examine the claim raised by the label of sustainability for the case of new products and services: Can innovations be sustainable?

In order to answer this question, it has to be clarified how the terms 'innovation' and 'sustainability' are being used. Based on these definitions, three strategies with regard to 'sustainable innovations' are being elaborated. The elaboration will, finally, lead to a recommendation for the integration of environmental and social concerns with new products and services.

By 'innovation', the authors denote a new product or service which is distinct from an 'invention' in three characteristic aspects (Hauschildt & Salomo 2010; Trott 2011; Tidd & Bessant 2013; Haines 2014): Firstly, the new product or service is technically feasible and deliverable within the given business context; secondly, it has a defined market on which it is

sellable; thirdly, it is economically advantageous in that it contributes a positive cash flow within a reasonable forecast period.

'Sustainable innovations', in addition, need to consider, measure and improve environmental and social impacts of new products and services. This concept of 'sustainability' encompasses the purpose and usage of the product or service, the use and re-use of materials and resources, the environmental and social impacts of purchasing, manufacturing and distribution processes as well as the selection and development of business partnerships (ISO 2010; European Commission 2011; Global Reporting Initiative 2013).

The optimisation of environmental and social impacts of new products and services can be implemented with the help of three different strategies (Gminder et al. 2002; Schaltegger et al. 2011):

The first strategy can be labelled as risk mitigation strategy: companies try to mitigate risks by addressing and communicating environmental or social topics in regard to newly introduced products and services. Said risks may arise from prevailing legislation, e.g. when electronic manufacturers adapted their development and manufacturing processes to the demands of lead free soldering due to lead restrictions on the electronics industry (Bath, 2010). They may also present themselves as reputation risks, as happened when NGOs and researchers started to examine health, safety and economic conditions under which sports goods and garments were produced by multinational companies (Mamic, 2005). From the point of view of the authors, this strategy may have positive environmental and social effects. However, said effects are pursued not on an active, voluntary basis, but in order to avoid or mitigate risks in business. Whenever the probability of risk occurrence and/or risk impact are low, the company will revert to 'business as usual'. Hence, this strategy cannot be named 'sustainability strategy' in a proper significance of the term.

The second strategy may be called 'cost optimisation strategy'. This strategy is being employed when companies try to match efficiency goals with environmental effects. It is applicable to projects making better use of all kind of resources, including energy, materials and waste. This strategy tries to integrate business and environmental effects and can therefore be assessed as a strategy that is 'partly integrated'. However, if environmental effects do not match with cost targets, the company will predictably not pay any price for being 'green'. Therefore, effects on society and environment will be limited and not very 'sustainable'.

From the perspective of the authors, solely the third strategy can be truly regarded as being a 'sustainable innovation strategy': companies actively identify, analyse and optimise environmental and social impacts of new products and services as part of their business model. A 'business model' depicts the way business with a new product or service is done and provides clear and specific answers to at least four basic questions (Osterwalder & Pigneur 2010; Schallmo 2013; Gassmann et al. 2014): Who are our customers? Which specific value do we offer to our customers? How do we create and deliver this value to our customers? What is the revenue and cost rationale for providing the customer value? A 'sustainable innovation strategy' adds one further question to this business model: which social and environmental impacts are being inflicted on, in executing the key activities (Fig. 1)?

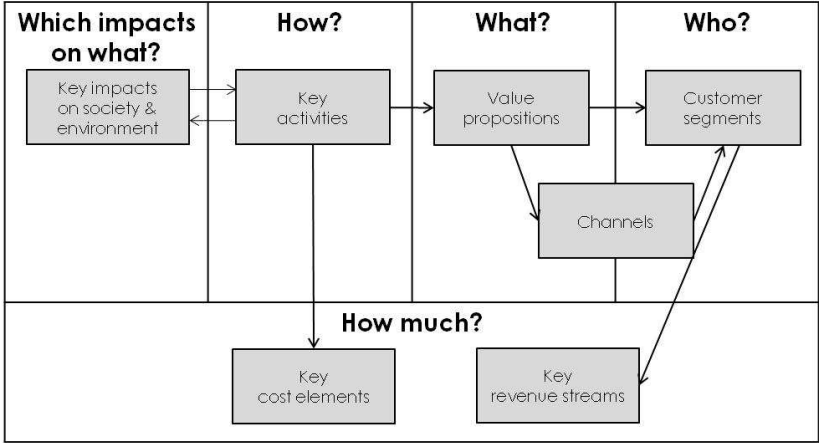


Figure 1. AN ENHANCED BUSINESS MODEL FOR SUSTAINABLE INNOVATIONS

By actively identifying, measuring, analysing and optimising the impacts of new products and services on the stakeholders and the environment, a company can claim to follow a 'sustainable innovation strategy'. This means that, firstly, important 'hot spots' have to be distinguished from less important impacts and, secondly, that the important 'hot spots' have to be actively addressed. The possible additional key activities with respect to impact reduction have, thirdly, to be balanced with feasibility issues and cashflow expectations to the best possible extent. This three-step procedure will result in very different sustainable innovation strategies.

Regarding the topic of this abstract, it can be stated that, yes, innovations can be sustainable in as much as they actively incorporate concerns for social and environmental impacts of new products or services in their business model. They are not sustainable if the respective company responds to possible legal or reputational risks or if it simply tries to grab 'low hanging fruits' by coincidentally bringing cost efficiency into line with eco-effects.

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