Journal of Cleaner Production 135 (2016) 1009–1022

Contents lists available at ScienceDirect

Journal of Cleaner Production

journal homepage: www.elsevier.com/locate/jclepro

Naturalizing sustainability in product development: A comparative analysis of IKEA and SCA

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ARTICLE INFO

Article history:
Received 31 October 2015
Received in revised form
15 May 2016
Accepted 24 June 2016
Available online 29 June 2016

Keywords:
Product development
Management system
Integrating sustainability
Culture
Behaviour
Tacit guiding

ABSTRACT

The aim is to analyse ways that sustainability can be successfully integrated into product development in large firms. This is done by a comparative study of two large firms, IKEA and SCA, during the time period 1990–2006. These were both among the pioneers to introduce sustainability into operations. The study is based on 24 interviews and one author's experience as an insider researcher. The analytical framework visualizes the relationships between what is explicitly expressed, in writing or speech, and what tacitly guides behaviour, and what is actually practised in product development. Although both firms have substantial experience working with sustainability and are role models, they chose very different strategies to integrate sustainability into product development. Their approaches reflect the logic of their company cultures and management systems. This indicates that sustainability practices must be adapted to fit the logic of a firm's existing management system.

1. Introduction

Sustainability has become an increasingly important issue on the corporate strategic agenda (Nattrass and Altomare, 1999; Tingström et al., 2006). Porter and Kramer (2006, 2011) established a broader acceptance of corporate social responsibility (CSR) as an integrated part of companies' strategic decision making. They argue that sustainability issues can be analysed in much the same way as other strategic considerations can, and such analysis includes identifying areas where a company can make an impact that provide shared benefits for companies and society. Some company leaders and some researchers claim that sustainability is the primary driver of innovation (Immelt et al., 2009; Nidumolu et al., 2009); however, other researchers talk about "green-washing" (Laufer, 2003) and doubt that data presented in corporate sustainability reports correspond to real changes in the ways choices are made. Therefore, the actual impact on company processes is difficult to discern (Porter and Kramer, 2006; Weber, 2008). However, Kurucz et al. (2008) argue that the business case for CSR could be based on four different rationales: (1) reducing cost and risk, (2) developing reputation and legitimacy, (3) gaining competitive advantage, and (4) creating win-win outcomes through synergistic value creation.

One way that environmental and social issues (CSRs) have entered the corporate agendas is through the use of management system standards, primarily ISO 14001 (environment), ISO 9001 (quality), and OHSAS 18001 (health and safety). However, the actual impact on improved sustainability of management system standards has been disputed (Rondinelli and Vastag, 2000; Castka and Balzarova, 2008). The new versions[1] of the management standards intend to reduce the risk of inferiour document structures and to improve sustainability performance, e.g. by focusing more on leadership, stakeholder needs and managing risk, but also by simplifying through a common structure across the standards.

The product-development function decisively affects sustainability outcomes, as it sets the basic conditions for downstream activities by its design decisions and material choices (Luttropp and Lagerstedt, 2006). Some studies report experience applying sustainability in product development (Tingström et al., 2006;

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[1] ISO 14001:2015, ISO 9001:2015 and ISO 45001:2016 (which is underway but not yet relesead).

http://dx.doi.org/10.1016/j.jclepro.2016.06.148
0959-6526/

Hallstedt et al., 2013), but most research focuses on developing new tools and methodologies. There is a lack of empirical studies evaluating broader applications and the impact of such tools and methodologies (Baumann et al., 2002; Ernzer et al., 2003; Lindahl, 2006; Sakao and Fargnoli, 2010). With some exceptions (Tingström et al., 2006; Clancy, 2014a; Egels-Zandén and Rosén, 2015; Siva, 2016), even less is known about the process of integrating sustainability into regular product development.

The present article aims to contribute to understanding how sustainability can be successfully integrated into product development in large firms. The primary research questions are the following: How have sustainability initiatives been introduced and utilized within the product-development function? How does the logic of different management systems influence sustainability work and the possibility of introducing new ideas and practices into product development?

This article intends to contribute to this understanding by presenting a comparative empirical study of two large Swedish multinational corporations that were selected based on their pioneering focus on sustainability already in the 1990s. Both companies can be viewed as role models for integrating sustainability in product development but as will be shown in the empirical section, their approaches differ and the article makes the point that this can be related to considerable differences in management systems. It is therefore essential to define sustainability and management systems.

1.1. Definition of sustainability and management system

First, *sustainability* refers both to environmental issues and to CSR. A quote from the United Nations Brundtland Commission's (1987) report provides background for our view: "Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs."[2] From an organizational level, companies must address stakeholder needs, and a *sustainability oriented organization* is characterized by taking responsibility and striving towards long-term success by creating value for and with stakeholders, and balancing their needs in a short- and long-term perspective (Book et al., 2014). Similarly, *sustainability initiatives* can include introducing ideas or theories that focus on addressing stakeholders' needs that are traditionally not managed as a part of doing business. Companies traditionally consider their stakeholders to be owners or financers, customers, and employees, but Book et al.'s view of a sustainability oriented organization broadens the focus to include additional stakeholders and issues. The cases in this article take this broader focus by addressing environmental issues and considering other stakeholders and issues (cf. Reed et al., 2009).

Second, we define a *management system* as the organisation/operations viewed as a system of interacting elements. Viewing organizations as systems is not a new approach. Scott and Davis (2006) described a number of systems perspectives on organizations in reference to three main views of theory: rational, natural, and open systems. Our definition aligns with all three views and is similar to the ISO 9000:2000 definition of management system: "A set of interrelated or interacting elements to establish policy and objectives and to achieve those objectives." We did not use the ISO definition because it is limited to the rational organizational perspective.

1.2. Earlier studies on introducing sustainability into product development

Baumann et al. (2002:421) conducted a literature review and identified several research gaps within the environmental product-development field. They found research with "too many normative suggestions, with little practical relevance or testing" that focused "too much [on] tool development … [rather] than on studying the use of existing ones." They also pointed out that the link between strategic intent and content was limited, resulting in top-down policies that did not meet bottom-up approaches in terms of daily activities. The product-development process was poorly linked – internally and externally – to other processes. The researchers also identified a need for a more systemic perspective in the field of green-product development. It is not sufficient to deal with environmental issues only on a single-firm level. Instead, there is a need for an actor-network perspective in which governmental actors facilitate the process and create incentives for economic actors. Bauman et al. (2002) argued for management and social-science research that would facilitate understanding and develop the processes and drivers involved in incorporating socially desirable issues and their operationalization into daily business activities.

In line with Baumann et al. (2002), several other researchers have examined the tendency to focus on new-tool development and the relative lack of studies exploring how to successfully integrate Design for Environment (DfE) or Ecodesign tools and work approaches within corporations (Ernzer et al., 2003; Lindahl, 2006; Sakao and Fargnoli, 2010). Ammenberg and Sundin (2005: 412–413) suggest that a combination of a standardised EMS (Environmental Management System) and DfE (which is not commonly the case) could assist "the integration of environmental aspects into the product development process" and also "to the integration of the product development process into the management system of the company." Referring to companies that had developed their own integrated systems, Ammenberg and Sundin (2005) noted that a common trend was to develop these systems based on the PDCA (learning cycle for continuous improvement), which facilitated the integration of DfE activities into ISO 9001, ISO 14001 and EMAS. However, in the latest version of ISO 14001:2015 there are references to other standards aiming to address the problem identified by Ammenberg and Sundin (2005), such as the Guidelines for incorporating Eco-design (ISO 14006:2011), and the Requirements and guidelines for Life cycle assessment (ISO 14044:2006). The different standards are now also written according to a general common structure, which should make it easier to work with the requirements in coordinated and effective way, which would also support dialogue between QEHS professionals working with the standards.

Other researchers have addressed the question whether other tools from Quality Management could support sustainable product development, e.g. robust design methodology that originated from the perspective of the quality loss to society (Gremyr et al., 2014; Siva, 2016). Recently many researchers have focused on linking new product development and sustainability, including developing conceptual frameworks including life-cycle management and product life-cycle management (Gmelin and Seuring, 2014; Brones and de Carvalho, 2015).

Other researchers have focused on a number of issues related to integration of sustainability in product development: the availability of sustainability information for product development (Aschehoug and Boks, 2013); hindrances and perceived risks preventing companies taking sustainability on board (Short et al., 2012; put attention

[2] UN Brundtland Commission (1987), *Our Common Future: From One Earth to One World*, paragraph 27: From A/42/427. Our Common Future: Report of the World Commission on Environment and Development http://www.un-documents.net/ocf-ov.htm (Accessed 13 September 2015).