

Sustainability, Dynamic Capabilities, and Innovation

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Abstract

Hart and Milsten (2003) argue firms are ill equipped to address sustainability issues from a strategic perspective. Literature developed about sustainability practices so far tends to focus on matters such as knowledge of available tools and their use, pressures from stakeholders, regulations and product development (see for example, Sharma and Henriques, 2005; Schaltegger, Windolph and Herzig, 2012; Gond *et al.* 2012). At a macro level concern in the literature has been over the need to decouple economic growth from environmental impact (Zhang, 2000), whereas at the corporate level the reverse has become a focal point as firms seek competitive survival through their sustainability orientated investments (Burritt and Schaltegger, 2012). Investments in innovative cleaner process and product technologies and stakeholder engagement can be integrated, in a strategic way, through administrative innovations in order to leverage the full benefit from sustainability thinking. However, to date little research has been conducted on the internal dynamic processes that managers of organizations use to identify and develop long-term sustainability innovation and improved sustainability performance. Hence, the research problem explored is: *What are the internal capabilities of a firm which lead to innovations to secure strategic advantages from investments in sustainability.*

Using the Dynamic Capabilities perspective (Teece et al., 1997) this paper explores the internal dynamics of a firm that creates and maintains technological, product and administrative sustainability orientated innovations in order to survive in a competitive marketplace (Mansfield, 1968; Teece, 2005, 2014). Figure 1 illustrates the relationship between internal dynamics and sustainability development.

We follow Yin's (2003) case study design to undertake an in-depth study of the Volt-Air project of Siemens Belux. Siemens is a global market leader in the area of sustainability products and services innovation. The objective of the Volt-Air platform is to accelerate innovations concerning the integration and adoption of electric vehicles (EVs) in business fleets and the integration of EVs in companies' microgrids. The project facilitates the development and testing of new technologies, products, services and business models for the entire value chain of sustainable energy and sustainable mobility in Flanders, Belgium.

The study examines how relevant information flows within the organization are managed and used to identify and develop long-term sustainability innovation. It explores the internal dynamics of the Volt-Air platform, including information flows, involvement of various actors and departments, and decision-making and their relationship with sustainability innovation and sustainability performance. Semi-structured interviews with the CEO and 10 senior managers from various departments of the organization (operations, sustainability, HRM, supply chain management, marketing, finance, R&D) provide insights and explanations for the source of

competitive survival, and the dynamic capabilities that drive innovation in relation to the Volt-air platform.

The study contributes to the strategic sustainability management literature by detailing the internal administrative processes that help firms identify sustainability issues, and develop innovative solutions.

Key words: Sustainability, innovation, dynamic capabilities, Siemens case study

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