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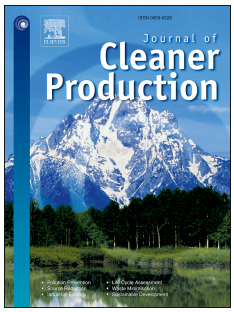

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STRATEGIC PERSPECTIVES OF CORPORATE SUSTAINABILITY MANAGEMENT TO DEVELOP A SUSTAINABLE ORGANIZATION

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Abstract

Sustainable development refers to an economic, environmental and social development that meets the needs of the present and does not prevent future generations from fulfilling their needs. In this context, businesses play an important role. However, progress towards sustainable development has been slow, indicating the need for more concrete guidance that will allow businesses to act strategically and successfully in a sustainable way. This theoretical paper connects three distinct, but complementary, dimensions of strategic management as viewed from the perspective of sustainability in order to encourage the integration of sustainability issues into corporate activities and strategies. These three dimensions are: strategy process, strategy content and strategy context. Sixteen propositions related to these dimensions have been developed to explore the contributions of corporate sustainability management to the creation of value for businesses, society and nature. This theoretical discussion contributes to existing research in that it reveals relationships between strategic management and sustainable development and provides an agenda for further empirical research.

Highlights

- Links between corporate sustainability management and sustainability are discussed.
- Perspectives of strategic management for sustainability management are explored.
- Ways to integrate strategic thinking into sustainability management are presented.

Keywords

Strategic management; sustainability; corporate sustainability management; strategy; sustainability performance; environmental and social governance

1 Introduction

Sustainable development, as defined by the Brundtland commission, tackles global environmental and social challenges and aims to provide a generic framework that allows the development of solutions that address these challenges (WCED, 1987). However, in its basic normative and ethical form, the concept of sustainable development offers no clear guidance with regard to which strategies, plans or activities need to be implemented. Consequently, a plethora of related guidelines and definitions have emerged. In order for the concept to become more binding, concrete and actionable, participation is required from numerous actors at various levels of society. Contributions from individuals, organizations, regions, states and societies are all relevant in any kind of sustainability-oriented development.

The focus in this paper has been placed on the role of industrial organizations in this process, since these play important roles in the transition of societies towards sustainability (the term sustainability is used here to describe the final goal of sustainable development, that is, a state where sustainability principles have been met (Broman and Robèrt, 2015)). Approaches such as corporate environmental management, corporate social responsibility (CSR) and sustainability reporting have all been developed to help corporations manage various aspects of sustainability. Other examples are the integration of sustainability issues into cost accounting (Atkinson, 2000), the discussion of change management processes for corporate sustainability (Benn et al., 2014), integrated management systems to support corporate sustainability (Oskarsson and von Malmborg, 2005), differences in institutional settings that influence corporate sustainability practices in the US and in Europe (Tschopp, 2005), or frameworks based on the EFQM model (van Marrewijk and Hardjono, 2003) However, the impacts of these approaches seem to be rather limited (Hopwood et al., 2005; Sneddon et al., 2006; Goncz et al. 2007). One reason for this is the lack of strategic orientation with respect to the introduction and implementation of sustainability-related practices and goals (Baumgartner and Korhonen, 2010). In this paper, it is our intention to describe how the strategic relevance of sustainability management may be improved (i.e., in the sense that both business success and sustainable development may be reinforced). This line of reasoning follows the approach of Korhonen, who distinguished between two different levels of sustainability theory: that of generating favorable planning and management outcomes with respect to sustainable development, and that of concrete and practical action (Korhonen, 2004). The propositions presented in this paper relate explicitly to the first level. Hence, the main objective of this research is a) to reflect upon the link between sustainability-oriented management and the attainment of sustainable development goals, and b) to improve the strategic relevance of management approaches in the sense mentioned above. The intention is to overcome a central limitation of current corporate sustainability management and CSR, namely, the difficulties inherent in identifying and attaining goals that contribute significantly to sustainable

development. Specific propositions are formulated related to sustainability-oriented practices and goals that can help overcome these barriers and provide support for decision makers during the strategic implementation and execution of sustainability management.
The following research questions are addressed in this paper:

1. How can a strategic perspective of corporate sustainability management be conceptualized?
2. How can strategic success of corporate sustainability management be defined?
3. How can corporations act more sustainably from a strategic point of view?

To answer the first research question, three strategy perspectives (i.e., strategy process, strategy content and strategy context) are introduced, and the relationships that can be correlated with corporate sustainability management are defined. To answer the second research question, the potential effects of corporate sustainability activities on the individual corporation, the business sector, the society and the natural environment are analyzed. To answer the third research question, the process dimension is operationalized. Key propositions are then presented to exemplify the answers to the research questions (see sections 3 and 4). In addition, an example for each key proposition is presented; however, the propositions themselves need to be verified through future research.
The paper is structured as follows: three strategic perspectives are introduced and discussed in section 2; the outcomes and impacts of corporate sustainability management with respect to business and society are described in section 3; an analysis of the process dimension of corporate sustainability management appears in section 4; and the research results are interpreted and discussed in section 5.

2 Strategic perspectives of corporate sustainability management

In the context of business management research and practice, Hinterhuber (2004) defines strategy as a way of using the resources and capabilities of an organization. Boddy (2005) describes strategy as a way to decide what business an organization should be in, where it wants to be and how it is going to operate. Strategic management theory distinguishes between the market-based view of strategic management (Porter, 1980), the resource-based view (Barney, 1991), the emergent strategies view (Mintzberg and Waters, 1985)) and the relational view (Dyer and Singh 1998).
In general, the use of the term ‘strategic’ implies that there is an overall goal, or some specific vision concerning the nature of success. All actors and their actions contribute to a common vision, an overall goal. A plan for attaining the

defined goals under conditions of uncertainty is named a ‘strategy’, and ‘strategic’ can, thus, be employed to describe anything that is believed to contribute to strategy implementation and goal attainment (Baumgartner and Korhonen, 2010). As used in this paper, the term ‘strategic perspective’ sheds light on two important aspects of corporate sustainability management:

1. The aspect of the goals and benefits of corporate sustainability management. Usually, environmental and social goals are embodied in all approaches to sustainability management. However, the question of who specifically will benefit from sustainability management is subject to much less discussion. For example, which individual, group, organization, or system is expected to be better off after the implementation of corporate sustainability management?
2. The aspect of how to implement corporate sustainability management. This is related to the process of identifying sustainability-related goals and determining how they may be implemented in an organization. Since the notion of sustainability often lacks clarity and can be subject to many forms of interpretation, the identification of appropriate goals and their effective and efficient implementation are challenging tasks in any type of organization.

By way of providing a theoretical starting point, three distinct, but complementary, dimensions of strategic management are used here: strategy process, strategy content and strategy context (Pettigrew, 1987; De Wit and Meyer, 2004). These dimensions were first introduced into the field of sustainability science by Baumgartner and Korhonen (2010).

Strategy process, content and context are distinct, but interrelated, components of strategy. These three dimensions provide a framework to explain and interpret strategic thinking in the present paper. Developing a strategy for a company entails the definition of the content of a strategy. Specifically, the ‘what’, ‘when’ and ‘how’ of strategic activities with respect to specific external and internal factors (the context) must be determined. The starting point for this process is the ‘why’; the purpose of the whole endeavor must be ascertained. The purpose can be, for example, to develop economically efficient and ecologically sustainable products. The three strategy dimensions may be defined as follows:

- The *strategy process* itself comprises the construction and development phase of a strategy.
- The conditions surrounding strategic activities are the *strategy context*. The context influences the possibilities and limitations of the strategy. For example, regulations, natural resource scarcities, or pressures/innovations arising from NGOs can impose limits on, or provide opportunities for, organizations and communities.
- The *strategy content* represents the output of the strategy process, what is termed the result of strategic activities. This covers what is offered, what is

created, the goals that the organization/community in question should pursue, what the organization/community in question needs to do to achieve their goals and the implications of the endeavor for the organization, community and its different shareholders and stakeholders (including the implications for the global social system and the natural ecosystem).

A closer examination of corporate sustainability strategies and sustainable strategic management is also presented in this paper. Corporate sustainability strategies describe how sustainability issues are dealt with in practice. In profit-oriented organizations, these usually form a subset of the corporate competitive strategy. One essential item here is the advantage that is identified by the management board while pursuing sustainability, that is, the strategic reason stated for developing and implementing a specific corporate sustainability strategy. This strategic decision can be grounded in normative-ethical considerations or in (pure) economic rationality, or both. If it is the former, sustainable development is seen as a superior goal that is motivated by ethical issues. If it is the latter, the economic advantages that may be gained from improving sustainable behavior are stressed. The term ‘economic’ is used here in a relatively broad sense and encompasses such things as cost reductions, increased competitiveness, improved company image and reputation, all of which help ensure that corporate activities meet the legal requirements (Baumgartner, 2014). Viewed in an even broader context, this may also include the proactive influence that a company seeks with regard to their influence on public policy and regulations on sustainability.

The main reason for choosing a sustainability approach is to reduce the negative environmental and social impacts of corporate activities while improving (or at least not reducing) the economic performance of the corporation. In addition, corporate sustainability can improve the sustainability performance of other actors and systems. In principle, the individual company, business community, society and nature can all benefit from more sustainable corporate behavior.

Both external developments and internal strengths and weaknesses need to be considered when attempting to integrate sustainable development issues into strategic planning (Eccles et al., 2012; Engert et al., 2016). Consequently, a corporate sustainability strategy integrates social and environmental dimensions into the strategic management process and highlights the strategic position of a company with regard to sustainable development.

The integration of environmental and social issues into corporate mid-term and long-term goals demands that a careful balance be achieved between the needs of internal and external stakeholders. This is essential to maintain or improve corporate sustainability performance. As the needs of stakeholders and the environment tend to vary, both over time and according to the geographic setting, the strategic planning process must be sufficiently flexible. Basically, corporate sustainability strategies can be distinguished on the basis of whether they have

an internal focus (introverted or conservative) or an external focus (extroverted and visionary) (Baumgartner and Ebner, 2010). Operational and normative issues also impact the integration of sustainability (Baumgartner, 2014). The normative management level comprises those values that are shared by the management board and embedded in the organizational culture. For example, the degree to which the prevailing culture welcomes or resists the notion of sustainable development is likely to have a huge impact (Baumgartner, 2009; Linnenluecke and Griffith, 2009). At the operational level, clear, short-term, departmental goals must be derived on the basis of the corporate sustainability strategy. This means that it has to be clearly communicated throughout the organization (Baumgartner, 2014). Further cultural elements that support the adoption of a sustainable strategy are an ability and willingness to accept change, a commitment to innovation and the existence of high levels of trust within the organization (Eccles et al., 2012).

3 Societal and business outcome of sustainable strategic management

In this section, the societal and business values of strategic sustainability management are discussed. Here, two aspects are relevant: first, the definition of sustainability-related outcomes, and second, the question of which entity is expected to benefit from this sustainability-related outcome (on this point, also see the definition of the term “strategic perspective” in section 2). Regarding the latter point, it is necessary to distinguish between the societal and business values of corporate sustainability. Creating societal value[1] through corporate sustainability management requires the achievement of compatibility between the content of the strategy and the needs of society and the biosphere. This is discussed in section 3.1. Integrating the context dimension into strategy formulation enables corporate sustainability management to create business value. This is discussed in section 3.2.

3.1 Societal value of sustainable strategic management – the content dimension

In its most basic form, sustainable development meets the needs of the present generations such that the needs of future generations are not compromised (WCED, 1987). Once it has been agreed upon that all members of society are responsible for creating such a sustainable form of development, companies are also expected to act responsibly. All corporate activities have an influence on society and the natural environment and, therefore, may (or may not) contribute to sustainable development.

How can companies create societal value while contributing to sustainable development? To answer this question, it is necessary to look more closely at the

[1] Societal value refers to both society and nature.

impacts of business on societies and the natural environment. These impacts then need to be integrated into the content dimension of strategy. One must clarify how sustainable strategic management can reduce negative social and environmental impacts and contribute to improving social and environmental outcomes.

A company is a system that transforms resources (i.e., inputs) into saleable products and services as well as into unwanted by-products, waste and emissions (Hinterhuber, 2004). In order to do so, the company must deliver appropriate returns to those who provide the company with resources (see Figure 1). Management coordinates internal activities as well as its relationships with customers, shareholders, suppliers, partner companies, authorities, society and the stakeholders in general.

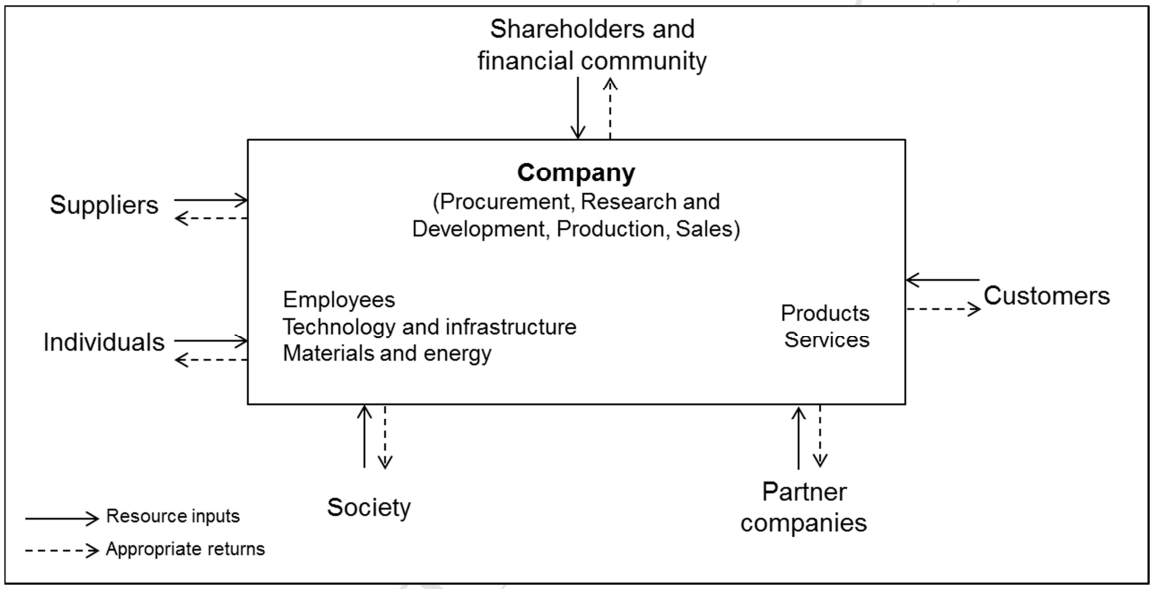

Figure 1: A company as a system for transforming resources (Hinterhuber, 2004)

Sustainability issues can be divided into economic (see Table 1), environmental (see Table 2) and social issues (see Table 3), and are related to all input and output flows. With regard to management methods and instruments, companies can implement and run environmental (e.g., ISO 14001; EMAS) or social (e.g., SA 8000) management systems, integrated management systems (Oskarsson and von Malmborg, 2005; Jørgensen et al., 2006), or use specific management instruments to address environmental or social issues (such as LCA or social LCA, sustainability balanced scorecards (Figge et al., 2002), or environmental cost accounting (Atkinson, 2000)).

Economic sustainability embraces several general aspects of an organization that need to be respected, in addition to environmental and social aspects, in order to maintain the competitiveness of the company (Baumgartner and Ebner, 2010). Financial stability and liquidity, profitability and financial benefits that are the result of sustainability activities are primary elements making up the economic dimension (Labuschagne et al., 2005). Therefore, issues such as

innovation and technology management, collaboration, knowledge management, organizational processes and purchase or sustainability reporting are important economic aspects of corporate sustainability (Baumgartner and Ebner, 2010).

Table 1: Economic aspects of corporate sustainability (Baumgartner and Ebner, 2010)

Innovation and Technology	Effort made in sustainability-related R&D to reduce the environmental impacts of new products and business activities. Use of BAT (Best Available Techniques) and integrated environmental technologies, concentrating on cleaner production and zero emission technologies.
Collaboration	Good cooperation and active collaboration with various partners (e.g., suppliers, R&D institutions, universities). Working in shared programs and networks on the development of innovative products and technologies. Exchange of information and knowledge.
Knowledge Management	Activities and approaches that keep knowledge related to sustainability in the organization. Methods to plan, develop, organize, maintain, transfer, apply and measure specific knowledge and improve the organizational knowledge base.
Processes	Clear processes and roles are defined so that business activities are efficiently conducted, and every employee knows what the organization expects from him or her (also with respect to sustainability). Adaptations of process management to achieve sustainability necessitate the systematic implementation of corporate sustainability. Integration of sustainability into daily business life.
Purchase	Consideration of issues related to sustainability in purchasing. Awareness and consideration of issues related to sustainability in the organization, as well as throughout the supply chain. Relationships with suppliers, with a focus also placed on sustainability.
Sustainability Reporting	Inclusion of issues related to sustainability in company reports, either in individual sustainability reports or integrated in corporate reports.

Table 2: Environmental issues of business activities (based on Baumgartner, 2010; Baumgartner and Ebner, 2010)

Input	raw, auxiliary and working materials	• renewable resources (materials, energy) including recycling flows • fossil-fuel based and non-renewable resources (materials, energy) including recycling flows • land use • biodiversity
Throughput	production and service creation	• use of environmentally-friendly technologies (for example, cleaner production) • environmentally-oriented product and service design • efficient use of the production facilities and infrastructure • environmental impacts of transport
Output	products, co-products, waste and emissions	• air, water and soil emissions • waste and hazardous waste • impacts on biodiversity • product-related environmental impacts determined by the product design (usage and disposal phase)
Value chain	upstream	• environmental impacts of suppliers
	downstream	• environmental impacts of product user behavior

These sustainability issues provide the basis for the definition of a corporate sustainability strategy (Baumgartner and Ebner, 2010; Baumgartner, 2014). The strategies with an external focus (extroverted and visionary sustainability strategy) are likely to have a particularly strong societal impact. By achieving improvements in terms of the sustainability issues described above, both internal and external stakeholders (employees, customers, consumers, suppliers, neighbors and society itself) are likely to benefit.

Table 3: Social issues of business activities (based on Baumgartner and Ebner, 2010; ISO, 2010)

Internal social issues	• workplace health and safety, avoidance of workplace accidents • corporate governance • participation of employees in decision making • diversity and equality • employee orientation and employee development, attractiveness of the company to employees • respect for human rights in the company • protection of customer data • ethical behavior of the company (avoidance of corruption, cartelization)
External social issues	• company´s contribution to societal development on a regional, national, or international level (e.g., job offers) • integration of external stakeholders, ensuring stakeholder legitimacy • respect for human rights in the company´s sphere of influence (e.g., with respect to child labor, rights of indigenous people, a right to labor unions and collective agreements) • reporting on social aspects of the business activities • product descriptions and consumer information

An important task for management is now to identify the economic, environmental and social issues that are important to the company. This may be done by applying the Framework for Strategic Sustainable Development (FSSD) with its five-level model sustainability principles, ABCD-planning procedure and funnel-metaphor (Broman and Robèrt, 2015). The FSSD is recommended because it provides robust, comprehensive and generic principles for sustainability, as well as a logical process for integrating these principles into strategic planning. The funnel-metaphor is included in the FSSD to indicate how a current (non-sustainable) business practice will reduce the decision-making autonomy of companies in the mid- to long-term, since they are confronted with, for example, continually increasing social pressures and resource costs. This will lead to increased financial risks, and these are likely to be lower for more sustainable companies. By using the ABCD-planning process, a company can identify its options to comply with the FSSD sustainability principles and reduce the risk of sudden costs that jeopardize opportunities and are difficult to predict, as well as stay informed about cutting edge sustainability-driven business developments (Ny et al., 2006).

Not all businesses have a positive social value, however, and whether a company delivers a positive societal value or not is based on societal perceptions about the company's products and services, as well as its physical impact on the natural environment. There is, for instance, a considerable consensus that producing nuclear weapons does not generate positive societal values. In the case of conventional weapon systems, however, arguments concerning their relative social value are more mixed. Whether cars or coffee pods have a positive

value is even more controversial. While both products have positive impacts on individual users, they also have clear systemic disadvantages. However, identifying the societal value of business activities from a sustainability perspective requires the application of robust sustainability principles as defined by the Framework for Strategic Sustainable Development (Broman and Robèrt, 2015).

Below, four propositions are made, indicating how corporate sustainability management may enhance societal value.

> *Proposition 1a: Integrating environmental and social issues into the content dimension of strategic management is a prerequisite to creating societal value.*
> *Example 1a: Considering environmental (such as CO_2 emissions in production processes or the product portfolio) and social issues (such as working conditions throughout the supply chain) in strategic decisions to reduce negative impacts is beneficial for society and the biosphere.*

The measurement of whether a company creates societal values from a sustainability perspective requires a benchmark or reference point. With regard to economic criteria, indicators such as tax payments, investment in local communities, or R&D expenditures are commonly used. With regard to environmental and social sustainability criteria, the Brundtland definition of sustainable development must be operationalized. Environmental and social problems may arise, for instance, from damage caused by emissions or poor working conditions. For example, Labuschagne et al. (2005), Krajnc and Glavic (2005) or Cunha Callado and Fensterseifer (2011) provided frameworks that could be used to measure corporate economic, environmental and social impacts. However, defining all kinds of environmental and social impacts is highly challenging, not only because different spatial conditions that change over time apply, but also because of the interdependencies between different issues and their impacts. Nevertheless, by focusing on the major factors involved, relatively robust sustainability principles can still be defined (Robèrt, 2000). Using the principles as defined in the Framework for Strategic Sustainable Development (Broman and Robèrt, 2015) provides a solid, stable and comprehensive basis for assessing whether corporations create societal values or not. Additionally, these sustainability principles can be used as guides to define sustainability criteria (Hallstedt, 2015).

> *Proposition 1b: In order to measure the societal value of corporate sustainability management, the operationalization of sustainable development needs to be testable. The Framework for Strategic Sustainable Development offers this kind of operationalization.*

Example 1b: Companies that are aware of their sustainability activities measure them by using criteria and key performance indicators linked to the FSSD principles.

The sustainability performance of a company is based on the environmental, economic and social impacts of the resources used by the company, the products and services provided and the emissions, waste and by-products generated. The overall impact of these effects on society, however, also depends on the prevailing perceptions of the external stakeholders and the prevailing socio-cultural and economic conditions. The relationship between the company's performance and its impacts is referred to as the sustainability impact chain (see Figure 2). The existing level of welfare in a region will have an influence the acceptance level of the environmental or social impacts. For example, in times of economic crisis, the relevance of environmental protection might decline as compared to that of job opportunities.

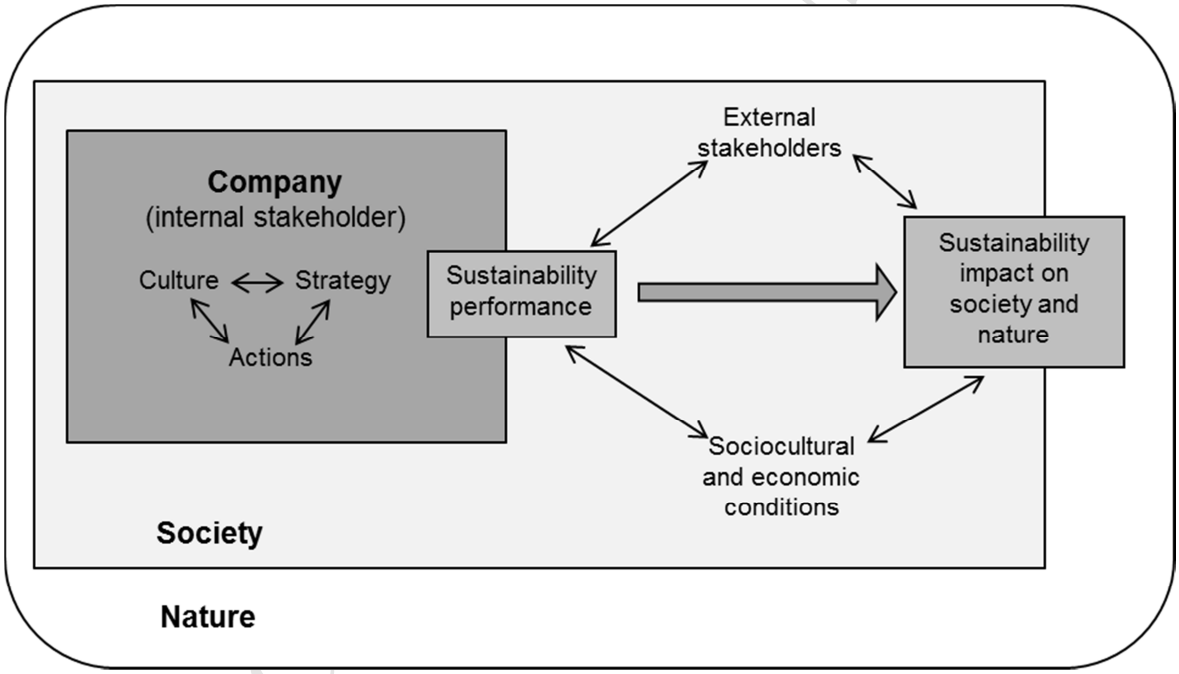

Figure 2: Sustainability impact chain (based on Laudal, 2011)

The environmental impacts on nature are not dependent on socio-cultural or economic conditions, since they are based on physical and chemical processes. However, the relevance of the extent of a given impact on nature with respect to societal and organizational decision processes depends on both the prevailing socio-cultural and economic conditions and the relevance of these impacts as perceived by the stakeholders. Within society, those negatively affected can articulate their problems themselves. Nature and the biosphere do not have this option. Therefore, they need some form of 'translator', or voice in society.

Proposition 1c: The sustainability performance of an organization is based on corporate activities. The extent to which the related impacts on society and nature are considered relevant and tolerable is additionally influenced by socio-cultural and economic conditions.

Example 1c: This proposition addresses the public perception of the relevance of sustainability issues and the perceptions of members of the management team. For instance, climate change is usually more often interpreted as a severe threat to society and nature than the loss of biodiversity due to corporate activities. When assessing a company's sustainability performance, the socio-cultural and economic conditions should be taken into account. The Framework for Strategic Sustainable Development offers principles that can be used for such an assessment.

The environmental and social performance of existing structures, systems and processes can be increased without altering the existing structures. In this case, the efficiency of the system (i.e., its probability of functioning correctly) is increased; this type of performance is defined as first-order sustainability performance. In many cases, however, increasing efficiency alone might not be sufficient and existing structures and systems must be challenged to increase environmental and social performance (Dyllick and Hockerts, 2002). The need for a second-order level of sustainability performance exists, which allows the systemic effects to be taken into account and integrates the idea of effectiveness (i.e., that the correct things are being done) into the analysis. Drawing a distinction between the first- and second-order sustainability performances highlights the difference between attempting to make short-term improvements in efficiency and creating a more systematic form of innovation with sustainable development in mind. Second-order sustainability performance helps both the organization and society, in general, to become more sustainable.

Proposition 1d: While assessing the impact of business activities, one needs to take both first- and second-order levels of sustainability into account. First-order levels are related to narrow issues of efficiency, while second-order levels are broader, and more closely related to systemic effectiveness.

Example 1d: Increasing the efficiency of existing processes and products, such as raising the fuel efficiency of gasoline-fueled cars or improving the efficiency of recycling processes are examples of first-order sustainability performance. Second-order sustainability performance involves the introduction of new technologies, products and services such as new closed-loop electronic waste management with a focus on reuse, refurbishment and remanufacturing.

These four propositions describe concepts of the societal value of corporate sustainability management, which is based on the integration of robust sustainability principles into the strategy content. The distinction made between

first and second order sustainability performance highlights the difference between short-term improvements to achieve higher levels of efficiency and systematic innovations that strive for sustainable development.

3.2 The business value of sustainable strategic management – adding the context dimension

Companies that want to achieve higher levels of sustainability emphasize the potential extra value that can be created for the business by choosing this path; the impact of their choice on society and the natural environment tend to be secondary considerations. Corporate goals must be more carefully examined, before a discussion of the business value of corporate sustainability management can be made. The analysis of corporate goals is a central topic in management research (Macharzina and Wolf, 2008). From the viewpoint of sustainability, the question arises as to what extent environmental and social goals are considered by companies, and how sustainability-related goals and other corporate goals are related. The relationships between environmental and/or social goals and economic goals can be complementary, competitive, or irrelevant (Wöhe and Döring, 2008). In the case of complementary relationships, fulfilling one type of goal helps achieve other types of goals; where relationships are competitive, pursuing one type of goal can have a negative influence on the attainment of other types of goals; and where relationships are irrelevant, no mutual influences between different goals, antagonistic or otherwise, can be observed.

Companies pursue environmental and social goals for two basic reasons. First, companies may be forced to do so by the owner, members of legislation, stakeholders, or market pressures. Second, companies voluntarily pursue sustainability, either because they are ethically motivated (Wöhe and Döring, 2008) or because they expect economic benefits to be gained (Kurucz et al., 2008). In other words, the desire to integrate sustainable issues may be driven by normative considerations, ethical rationality or economic rationality. The latter can be internally derived, when sustainable actions are combined with competitive advantages, or externally derived, when a company is forced to undertake sustainable activities (Baumgartner, 2014).

To understand the business value of sustainable strategic management, the interests or utility to the company must be analyzed. Corporate sustainability management can influence the productivity and efficiency of processes, support the development of more sustainable products and services, reduce the risks associated with environmental and social impacts and improve the credentials of a company. The resulting benefits may reveal themselves in the form of an improvement in financial performance or improved competitive strength. The former may arise in the form of higher profits, reduced costs, or increases in share prices. The latter are, in turn, derived from the increased innovation capacity, enhanced public image or reputation, increased revenues, increased employee satisfaction, productivity increases, or an increase in the market share.

For instance, Kurucz et al. (2008) differentiated among the following four benefits of corporate sustainability management:

1. reductions in costs and risks
2. improvements in competitiveness
3. improvements in reputation and legitimacy
4. creation of value by seeking win-win outcomes

Companies are part of the business sector, and sustainability orientation can also enhance the competitiveness of this business sector. However, the risk of path dependency also exists. Taking only first-order sustainability performance into account (see section 3.1) can lead to situations where the overall sustainability performance of a sector is lower as compared to situations in which second-order sustainability performance is realized. For instance, improving the efficiency of a given industry structure can increase its short-term competitiveness, but lower its opportunities to shift the whole sector to a higher sustainability level (Baumgartner and Korhonen, 2010). As mentioned above, the benefits in a narrow sense could have a positive influence on costs or revenues.

> *Proposition 2a: The economic benefit of corporate sustainability management in a narrow sense is based on reduced costs or increased revenues.*
> *Example 2a: Energy savings can be achieved in operations or higher margins can be gained by focusing on organic food. These so-called win-win-situations can be verified by examining the ensuing reductions in costs and environmental impact (e.g., where less energy is used to heat a building).*

Freeman points out the important role that stakeholders play in long-term company success (Freeman, 1984). Stakeholders may support or hinder the implementation of corporate strategies (Michelon et al., 2012). A credible CSR policy allows a company to expand its operations without incurring stakeholder resistance (i.e., on the part of neighbors, NGOs, or society, in general). It is, therefore, important that sustainability management policies are perceived as being legitimate and worthwhile.

> *Proposition 2b: When embarking on corporate sustainability, improving public and stakeholder perceptions with regard to the legitimacy and acceptability of company activities is likely to generate economic benefits.*
> *Example 2b: A policy of active stakeholder management (i.e., a policy that genuinely takes into account the expectations and wishes of stakeholders) can be used to heighten public acceptance of company activity.*

Decision makers must be open and reflect critically on their actions while considering the social and environmental aspects of products, services, processes and strategies. This is particularly true where systemic effects (i.e.,

second-order sustainability) are taken into account. Improving corporate environmental and social performance implies a readiness to engage in new ideas about how more sustainable technologies, structures, services and products can be employed and is, therefore, a potential source for organizational innovation. Moreover, a willingness to question the value of current services, products and processes, engage in critical self-reflection and provide room for organizational learning processes are fundamental for innovative activities (Vollenbroek, 2002; Schiederig et al., 2012; Bönte and Dienes, 2013).

Corporate sustainability management can, thus, help trigger innovation on several fronts:

> *Proposition 2c: The economic benefit of corporate sustainability management, in a broader sense, can be based on increased innovation.*
> *Example 2c: The integration of sustainability topics into the product design process may lead to more innovative products as compared to those generated using a conventional product design process. For instance, introducing a lightweight design in industry strengthened technological competence in several sectors.*

Offering sustainable products and services provides an opportunity for market differentiation and segmentation and to meet the specific demands of 'green' or 'fair' consumers. Sustainable products and services can address the needs of sustainability-oriented consumers and, therefore, help a company gain a selective advantage over its competitors. For instance, higher prices may be charged in customer segments such as LOHAS (lifestyle of health and sustainability) (Aburdene, 2007):

> *Proposition 2d: The economic benefit of corporate sustainability management, in a broader sense, can be based on increased market differentiation.*
> *Example 2d: Toyota's introduction of its hybrid car "Prius" in the US is one example. In general, at the operational level, companies also need to critically analyze services and products offered, the related turnover and market developments over a certain period of time in order to better understand whether sustainability management has led to increased market performance.*

One important aspect to consider when providing sustainable products and services is the minimization of negative environmental and social impacts throughout their lifecycle. This is often associated with the 'dematerialization' of a product or service, which can lead to product-service systems (Roy, 2000; Mont, 2002; Tukker, 2004; Tukker and Tischner, 2006; Gelbmann and Hammerl, 2014). The resulting systems tend to be characterized by the fact that the need for a 'product' as a service, rather than the product or service itself, is the selling point

for customers. In such cases, customers no longer wish to buy a product, they merely wish to pay for the use or service the 'product' delivers.

> *Proposition 2e: The change from classical product-selling business models to product-service systems can significantly reduce the negative environmental and social impacts of a product.*
> *Example 2e: Product life cycle analyses are used to reveal the impact of a product on the environment and illustrate which respective actors are responsible for various impacts (producer, consumer, or disposer). This helps introduce changes into the business model (although potential rebound effects also need to be considered) where the economic rationale supports selling services, rather than only products.*

A business model describes how a company delivers products and services to customers and how revenues are generated (Zott al., 2011, Boons and Lüdeke-Freund, 2013). In proposition 2e, the number of services sold within the product-service system, rather than the number of products sold, determines economic success. This represents a new type of business model. Another example is related to the creation of a stakeholder value as opposed to a shareholder value (i.e., an essential element of second-order sustainability performance). Such arrangements are often referred to as "sustainable" or "green" business models (Bocken et al., 2014; Rauter et al., 2015).

> *Proposition 2f: The economic benefit of corporate sustainability management, in a broader sense, can be based on the development of new business models.*
> *Example 2f: Looking for ways to increase corporate environmental and social performance can provide an impulse to redesign the current business model and/or develop a new business model. This is done in the textile industry when companies fully restructure their supply chains, taking sustainability issues into account* (e.g., Rauter et al., 2015*).*

Capturing the potential business value that will be derived from corporate sustainability management is only possible when relevant opportunities are identified. To do this, the various aspects of sustainability need to be integrated into the 'context dimension'. The business value gained in a narrow sense is based on the ability to reduce costs and increase profits. In the broader sense, benefits are based on improved competitiveness, improved innovation capacity and the introduction of new business models.

4 Developing and initiating a sustainable organization – the process dimension of sustainable strategic management

While sections 3.1 and 3.2 dealt with strategy content and strategy context, this section focuses on strategy process. The strategy process concerns the

construction and development of strategy (i.e., the 'how', 'who' and 'when' of strategy formation) (Baumgartner and Korhonen, 2010). In terms of corporate sustainability management, the strategy process must ensure that sustainability issues are integrated across all relevant corporate levels and systems such that the resulting business and societal values may be adequately captured. This means that sustainability issues are integrated into the organizational culture, the strategic goal setting, learning and feedback loops and into the daily activities of the company.

Three management levels can be distinguished (Ulrich, 2001), which are also relevant for corporate sustainability management (Baumgartner, 2014): the normative, strategic and operational levels. The normative level encompasses the basic management philosophy: the values, attitudes, beliefs and judgments, which together make up the organizational culture. This culture provides the basis for managing the organization (Baumgartner and Zielowski, 2007; Baumgartner, 2009; Linnenluecke and Griffith, 2009). The normative level guides issues that are related to the question "Who are we and who do we want to be?" This leads to the following proposition that refers to the normative level:

> *Proposition 3a: The organizational culture has a strong influence on the different steps necessary in the development towards a 'sustainable organization'. The higher the level of sustainability awareness within an organization, the more ambitious the goals and strategies deployed when pursuing sustainable development.*
> *Example 3a: Baumgartner (2009) provides the example of a global mining company in order to illustrate the relationships between basic values, assumptions and strategic orientation.*

Long-term goals and product/service-market combinations are defined at the strategic management level. From a sustainability perspective, it is important that the business and societal values of corporate sustainability management are clearly identified and developed (see section 3.1 and 3.2; again, the FSSD with its backcasting approach and sustainability principles is very helpful). This requires the identification of specific contextual factors and evaluation of the relevance of sustainability issues for the company:

> *Proposition 3b: Defining short-term and long-term goals in corporate sustainability management requires the clarification of the societal and business values that will be derived.*
> *Example 3b: A short-term goal could be the reduction of energy consumption per employee per year. A corresponding long-term goal might be the constant reduction in energy consumption together with the exclusive use of renewable energies in energy production.*

Implementing a corporate sustainability strategy at the operational level requires the integration of non-economic issues of sustainability. Matters that are not normally considered to be part of the remit of standard business administration must be addressed. The need to rely on and enhance employee capabilities is a key point. Specific feedback and learning loops must be established across different management levels. Most importantly, it must be possible to transfer the experience gained at the operational level to the strategic and normative levels, or experience gained at the strategic level to the normative level (Baumgartner, 2014). Furthermore, all organizational departments need to be involved in sustainability implementation, at least to some extent. To summarize these issues, the following proposition has been developed:

> *Proposition 3c: A corporate sustainability strategy matches its goals with its organizational capabilities, the organizational responsibilities of different departments and the geographical and temporal system boundaries.*
> *Example 3c: To define and implement a corporate sustainability strategy, it is necessary to identify the capabilities needed within the organization (e.g., the respective competencies in LCA or materials technology), and the departments involved in corporate sustainability activities (e.g., marketing, engineering, R&D). Additionally, decisions must be made in terms of time, location and operational technique.*

Implementing corporate sustainability management requires change and learning processes in any organization. Usually, three different levels of organizational learning may be distinguished: adoption-learning (single-loop-learning), change-learning (double-loop-learning) and learning to learn (deuteron learning) (Argyris and Schön, 1978). From a sustainability point of view, the organizational learning processes raise a number of interesting questions, such as those that address the extent to which it is possible to communicate and understand the long-term aspects of sustainability, or those concerning the nature and extent of the uncertainty associated with long-term development and interactions among environmental, social and economic issues from local, regional and global perspectives (Carrillo-Hermosilla et al., 2009; Probst and Büchel, 1994; Müller-Christ, 2001). According to Siebenhüner and Arnold (2007), sustainability-oriented values must be integrated into an organization before any sustainability-oriented learning processes can take place. It is essential, therefore, to gain sufficient qualifications and receive enough training support.
Change processes are doomed to failure unless the members of an organization possess the sufficient ability to learn (Bieker, 2005). The newer the strategy, structure and processes are to a company, the less compatible they are with the prevailing organizational culture, and the more intensive the organizational change and learning processes needed (Schein, 1995). This consideration led to the development of the following proposition:

Proposition 3d: Corporate sustainability management should facilitate mutual learning processes to address challenges related to sustainable development. These learning processes are based on feedback loops in and among all organizational departments and management levels.
Example 3d: Goal-oriented learning mechanisms, the integration of milestones into existing R&D processes, formalized instruments of communication, self-organized working groups, guideline-oriented learning processes and project work for learning processes all illustrate how learning may be embedded in the context of corporate sustainable development (Siebenhüner and Arnold, 2007).

The objective of operational management is to execute strategic guidelines and plans and attain the set strategic goals in the most efficient way. The corporate sustainability strategy is implemented at the operational level of management, in terms of how the vision, mission, long-term goals and strategic plans are executed within the company. The focus is placed on the various corporate functions such as on logistics and materials management, production, maintenance, marketing, public relations, human resources and communication. Innovation and continuous improvement are seen as cross-functional areas, which are integrated into other corporate functions. Specific sustainability-oriented activities must be carried out as part of each corporate function. The specific activities required depend on the type of strategy involved. Thus, the following proposition is suggested with respect to the operational level:

Proposition 3e: Developing a sustainable organization requires the integration of issues of sustainability into the operational management level and the consideration of their relevance for all activities, routines and processes.
Example 3e: Sustainability needs to be operationalized for all activities, processes and routines, for instance, with the implementation of ISO 14001 with regard to environmental issues. Additionally, various aspects of sustainability need to be specified and should appear in all relevant organizational and decision processes (e.g., in descriptions of functional specifications, criteria for the selection of suppliers, eco-design-principles).

While, in theory, the focus tends to be placed on so-called win-win situations, in reality, companies must deal with the conflicts and trade-offs among economic, social and environmental goals. They must often choose between generating business value and societal value in corporate sustainability management. Companies are embedded in a dynamic form of interplay that involves economic, societal and natural systems (Hjorth and Bagheri, 2006). To deal with any emerging or prevailing antagonisms and trade-offs, decision makers need to understand the nature of the economic, environmental and social benefits and how these are related to corporate activities.

Proposition 3f: In order to deal with trade-offs and win-lose situations that are related to economic, environmental and other social goals, decision makers need to consider both short- and long-term effects of their decisions on the company, society and natural environment.
Example 3f: One example is the difference between the investment cost of new production equipment, the total costs of ownership (TCO) and the environmental impact over the product life cycle. Sometimes, higher investments can lead to reduced TCO and environmental impacts. The question is whether decision makers are aware of the respective trade-offs involved and are willing to accept the long-term consequences.

This last proposition presents the final component in our discussion of the strategy process of corporate sustainability management. The FSSD provides support (see section 3.1) for overcoming trade-offs in win-lose situations and provides businesses with general assistance that enables them to gain a cutting-edge position in sustainability-driven markets, while achieving a balance between sustainability compliance and return on investment.

5 Discussion and Conclusions

Businesses are central actors in any societal transition towards sustainability. However, even though concepts such as CSR, environmental management and corporate sustainability management have been subjects of discussion for many years, the advances that have been achieved are still limited. In fact, to date, only limited progress towards sustainable development has been observed.

The underlying goal of this paper was to introduce strategic management into the discussion of corporate sustainability in order to clarify various aspects related to corporate sustainability management. This should enable companies to create business and societal value through their sustainability-related activities. Arguments posed in this paper not only suggest theoretical propositions, but also provide concrete examples of how these propositions could be practically applied (see Table 4).

Table 4: Propositions for integrating strategic thinking into corporate sustainability management

Societal value of sustainable strategic management – the content dimension	
Proposition 1a	Integrating environmental and social issues into the content dimension

	of strategic management is a prerequisite to creating societal value.
Proposition 1b	In order to measure the societal value of corporate sustainability management, the operationalization of sustainable development needs to be testable. The Framework for Strategic Sustainable Development offers this kind of operationalization.
Proposition 1c	The sustainability performance of an organization is based on corporate activities. The extent to which the related impacts on society and nature are considered relevant and tolerable is additionally influenced by socio-cultural and economic conditions.
Proposition 1d	While assessing the impact of business activities, one needs to take both first- and second-order levels of sustainability into account. First-order levels are related to narrow issues of efficiency, while second-order levels are broader, and more closely related to systemic effectiveness.
Business value of sustainable strategic management – the context dimension	
Proposition 2a	The economic benefit of corporate sustainability management in a narrow sense is based on reduced costs or increased revenues.
Proposition 2b	When embarking on corporate sustainability, improving public and stakeholder perceptions with regard to the legitimacy and acceptability of company activities is likely to generate economic benefits.
Proposition 2c	The economic benefit of corporate sustainability management, in a broader sense, can be based on increased innovation.
Proposition 2d	The economic benefit of corporate sustainability management, in a broader sense, can be based on increased market differentiation.
Proposition 2e	The change from classical product-selling business models to product-service systems can significantly reduce the negative environmental and social impacts of a product.
Proposition 2f	The economic benefit of corporate sustainability management in a broader sense can be based on the development of new business models.
Developing and initiating a sustainable organization – the process dimension	
Proposition 3a	The organizational culture has a strong influence on the different steps necessary in the development towards a ‘sustainable organization’. The higher the level of sustainability awareness within an organization, the more ambitious the goals and strategies deployed when pursuing sustainable development.
Proposition 3b	Defining short-term and long-term goals in corporate sustainability management requires the clarification of the societal and business values that will be derived.
Proposition 3c	A corporate sustainability strategy matches its goals with its organizational capabilities, the organizational responsibilities of different departments and the geographical and temporal system boundaries.
Proposition 3d	Corporate sustainability management should facilitate mutual learning processes to address challenges related to sustainable development. These learning processes are based on feedback loops in and among all organizational departments and management levels.

Proposition 3e	Developing a sustainable organization requires the integration of issues of sustainability into the operational management level and the consideration of their relevance for all activities, routines and processes.
Proposition 3f	In order to deal with trade-offs and win-lose situations that are related to economic, environmental and other social goals, decision makers need to consider both short- and long-term effects of their decisions on the company, society and natural environment.

The lack of strategic orientation in corporate sustainability management is one major reason for lack of progress in this field. This can be offset to some extent by clarifying the respective opportunities, benefits, risks and trade-offs associated with the implementation of corporate sustainability. Three dimensions of strategic management – strategy content, context and process – have been introduced in order to clarify how corporate sustainability management can help create economic, environmental and social value. The various propositions presented highlight the relationships among the three strategic dimensions and the various elements of corporate sustainability management. Propositions 1a-d show how (first- and second-order) sustainability performance may be linked to the generation of added value for society. Propositions 2a-f describe the benefits that may be derived from corporate sustainability management for a company. Finally, propositions 3a-f describe how the various aspects of sustainability may be integrated into organizational structures at the normative, strategic and operational management levels.

Figure 3 provides an overview of the relationships among the three strategy dimensions and societal and business values by making use of a sustainability impact chain.

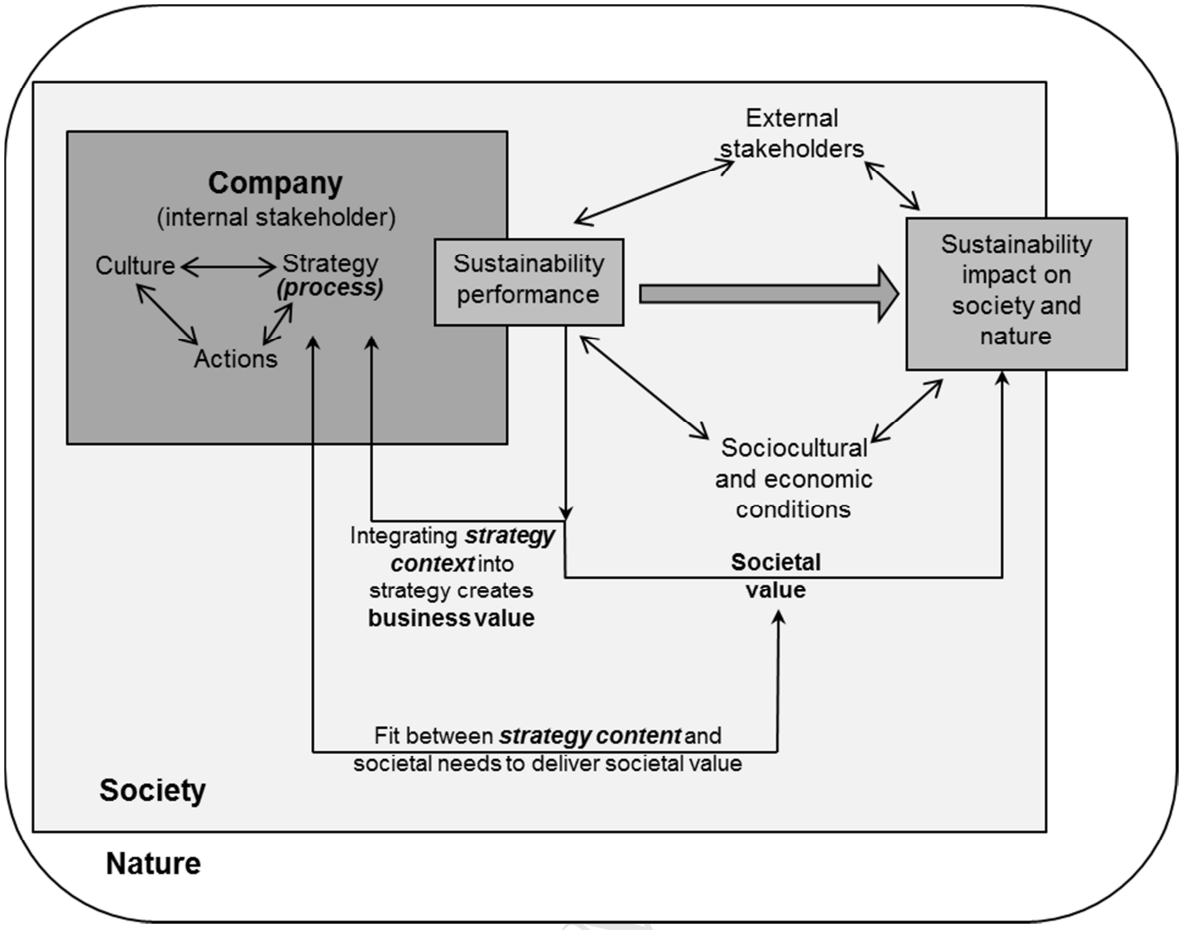

Figure 3: Strategic perspectives integrated into a corporate sustainability impact chain

The answers to the research questions (see section 1) are discussed below.

The first research question ("How can a strategic perspective of corporate sustainability management be conceptualized?") was addressed by introducing three dimensions of strategic management: strategy process, content and context.

The second research question ("How can strategic success of corporate sustainability management be defined?") was addressed by distinguishing between the societal value and business value of corporate sustainability management. By making use of first- and second-order sustainability performance levels, the various elements relevant to the assessment of the success of corporate sustainability management were clarified. First-order sustainability performance focuses on the maximization of economic, social and environmental efficiency, whereas second-order sustainability performance is characterized by its focus on systemic effectiveness.

The third research question ("How can corporations act more sustainably from a strategic point of view?") was addressed in section 4 through a description of the process dimension and related propositions. Figure 3 shows how the strategic perspectives are integrated in the sustainability impact chain (as described in section 3.1). Integrating sustainability considerations into the strategy context is necessary to create business value. In the absence of the latter, companies

would ignore the relevant sustainability issues. Matching strategy content to societal needs allows a company to create societal value.

The paper offers both scientific and practical contributions. By combining the currently somewhat distant fields of classical management and sustainability, the paper makes a scientific contribution in that it provides, to the best of the authors' knowledge, the first holistic perspective on corporate sustainability management. This helps fill gaps in the ongoing discussion about connections between issues of (strategic) management and sustainability. The practical contribution consists of specific examples, which were given to support the theoretical propositions made. This provides managers with a comprehensive overview of topics that are relevant to the integration of sustainability into daily business activities. Scholars and practitioners are invited to improve, test and amend these propositions as part of further research.

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References

Aburdene, P. (2007): Megatrends 2010: The Rise of Conscious Capitalism. Charlottesville: Hampton Roads Pub.

Argyris, C.; Schön, D.A. (1978): Organizational Learning: A Theory of Action Perspective. Reading: Mass.: Addison-Wesley.

Atkinson, G. (2000): Measuring corporate sustainability. In: Journal of Environmental Planning and Management, Vol. 43, No. 2, 235-252.

Barney, J.B. (1991): Firms Resouces and Sustained Competitive Advantage. In: Journal of Management, Vol. 17, No. 1, 99-120. s

Baumgartner, R.J. (2009): Organizational Culture and Leadership: Preconditions for the Development of a Sustainable Corporation. In: Sustainable Development, Vol. 17, 102-113.

Baumgartner, R.J. (2010): Nachhaltigkeitsorientierte Unternehmensführung: Modell, Strategien und Managementinstrumente (Sustainable business management: framework, strategies and management instruments (original in German)). München: Rainer Hampp Verlag.

Baumgartner, R.J. (2014): Managing Corporate Sustainability and CSR: A Conceptual Framework Combining Values, Strategies and Instruments Contributing to Sustainable Development. In: Corporate Social Responsibility and Environmental Management, Vol. 21, No. 5, DOI: 10.1002/csr.1336, 258-271.

Baumgartner, R.J.; Ebner, D. (2010): Corporate Sustainability Strategies: Sustainability Profiles and Maturity Levels. In: Sustainable Development, Vol. 18, No. 2, 76-89.

Baumgartner, R.J.; Korhonen, J. (2010): Strategic Thinking for Sustainable Development. In: Sustainable Development, Vol. 18, No. 2, 71-75.

Baumgartner, R.J.; Zielowski, C. (2007): Analyzing zero emission strategies regarding impact on organizational culture and contribution to sustainable development. In: Journal of Cleaner Production, Vol. 15, No. 13-14, 1321-1327.

Benn, S.; Dunphy, D., and Griffiths, A. (2014): Organizational change for corporate sustainability. Third edition. London: Routledge.

Bieker, T. (2005): Normatives Nachhaltigkeitsmanagement: Die Bedeutung der Unternehmenskultur am Beispiel der F&E der Automobil- und Maschinenbaubranche (normative sustainability management: the relevance of organizational culture using the example of R&D in the automotie and machinerey construction industry (original in German)). Bamberg: Difo-Druck.

Bocken, N. M. P., Short, S. W., Rana, P., and Evans, S. (2014): A literature and practice review to develop sustainable business model archetypes. In: Journal of Cleaner Production, Vol. 65, 42–56

Boddy, D. (2005): Management; Prentice Hall/Financial Times

Bönte, W.; Dienes, C. (2013): Environmental Innovations and Strategies for the Development of New Production Technologies: Empirical Evidence from Europe. In: Business Strategy and the Environment, Vol. 22, No. 8, 501-516.

Boons, F.; Lüdeke-Freund, F. (2013): Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. In: Journal of Cleaner Production, Vol. 45, 9-19.

Broman, G.I., Robèrt, K.-H. (2015): A framework for strategic sustainable development. In: Journal of Cleaner Production, http://dx.doi.org/10.1016/j.jclepro.2015.10.121

Carrillo-Hermosilla, J.; del Río González, P.; Könnölä, T. (2009): Eco-Innovation. When Sustainability and Competitiveness shake hands. Palgrave Macmillan.

Cunha Callado, L.A; Fensterseifer, J. E. (2011): Corporate Sustainability Measure From An Integrated Perspective : The Corporate Sustainability Grid (CSG). In: International Journal of Business Insights Transformation, Vol. 3, No. 3, 44-54.

De Wit, B.; Meyer, R. (2004): Strategy: process, content, context. 3rd edition, London: ITP Press.

Dyer, J. H., Singh, H. (1998): The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage. In: The Academy of Management Review, Vol. 23, No. 4, 660-679

Dyllick, T., Hockerts, K. (2002): Beyond the business case for corporate sustainability. In: Business Strategy and the Environment, Vol. 11, 130-141.

Eccles, R.G.; Miller, K.; Serafaim, G. (2012): How to become a sustainable company. In: MIT Sloan Management Review, Vol. 53, No. 4, 43-50.

Engert, S.; Rauter, R.; Baumgartner, R.J. (2016): Exploring the integration of corporate sustainability into strategic management: a literature review. In: Journal of Cleaner Production, Vol. 112, 2833-2850.

Figge, F.; Hahn, T.; Schaltegger, S.; Wagner, M. (2002): The Sustainability Balanced Scorecard - Linking Sustainability Management to Business Strategy. In: Business Strategy and the Environment, Vol. 11, 269–284

Freeman, R.E. (1984): Strategic Management. A Stakeholder-Approach. Boston: Pitman Publishing.

Gelbmann, U., Hammerl, B. (2015): Integrative re-use systems as innovative business models for sustainable product-service systems. Journal of Cleaner Production, Vol 97, 50-60. doi:10.1016/j.jclepro.2014.01.104.

Goncz, E.; Skirke, U.; Kleizen, H.; Barber, M. (2007): Increasing the rate of sustainable change: a call for a redefinition of the concept and the model for its implementation: Sustainable Production and Consumption: Making the Connection. In: Journal of Cleaner Production, Vol. 15, No. 6, 525-537.

Hallstedt S. (2015) Sustainability Criteria and Sustainability Compliance Index for Decision Support in Product Development. In: Journal of Cleaner Production. doi: 10.1016/j.jclepro.2015.06.068.

Hinterhuber, H.H. (2004): Strategische Unternehmensführung: I. Strategisches Denken (strategic management: I. strategic thinking (original in German)). 7, Berlin, New York: Walter de Gruyter.

Hjorth, P.; Bagheri, A. (2006): Navigating towards sustainable development: A system dynamics approach. In: Futures, Vol. 38, 74-92.

Hopwood, B.; Mellor, M.; O´Brian, G. (2005): Sustainable Development: Mapping different approaches. In: Sustainable Development, Vol. 13, No. 1, 38-52.

International Organization for Standardization (ISO) (2010): 26000: Guidance on social responsibility Geneva, Switzerland: ISO (International Organization for Standardization).

Jørgensen, T.H.; Remmen, A; Mellado, M.D. (2006): Integrated management systems: three different levels of integration. In: Journal of Cleaner Production, Vol. 14, 713-722

Korhonen, J. (2004): Theory of industrial ecology. In: Progress in Industrial Ecology, Vol. 1, No. 1/2/3, 61-88.

Krajnc, D., Glavic, P. (2005): How to compare companies on relevant dimensions of sustainability. In: Ecological Economics, Vol. 55, No. 4, 551-563.

Kurucz, E.C.; Colbert, B.A.; Wheeler, D. (2008): The business case for corporate social responsibility. In: Crane, A.; McWilliams, A.; Matten, D.; Moon, J.; Seigel, D. (Ed.): The Oxford Handbook on Corporate Social Responsibility. Oxford: Oxford University Press.

Labuschagne, C.; Brent, A.C.; van Erck, R. (2005): Assessing the sustainability performance of industries. In: Journal of Cleaner Production, Vol. 13, No. 4, 373-385.

Laudal, T. (2011): Determinants and Impacts of Corporate Social Responsibility: A Market Centric Approach. Stavanger: University of Stavanger.

Linnenluecke, M.K.; Griffith, A. (2009): Corporate Sustainability and Organizational Culture. In: Journal of World Business, Vol. 45, 357-366.

Macharzina, K.; Wolf, J. (2008): Unternehmensführung: Das internationale Managementwissen; Konzepte-Methoden-Praxis (Business Management: the international management knowledge (original in German)). 6, Wiesbaden: Gabler.

Michelon, G.; Boesso, G.; Kumar, K. (2012): Examining the Link between Strategic Corporate Social Responsibility and Company Performance: An Analysis of the Best Corporate Citizens. In: Corporate Social Responsibility and Environmental Management, Vol. 20, No. 2, 81-94.

Mintzberg, H.; Waters, J.A. (1985): Of strategies, deliberate and emergent. In: Strategic Management Journal, Vol. 6, No. 3, 257-272.

Mont, O. (2002): Clarifying the concept of product-service system. In: Journal of Cleaner Production, Vol. 10, No. 3, 237-245.

Müller-Christ, G. (2001): Umweltmanagement: Umweltschutz und nachhaltige Entwicklung (Corporate environmental management: environmental protection and sustainable development (original in German)). München: Vahlen.

Ny, H.; MacDonald, J.P.; Broman, G.; Yamamoto, R.; Robèrt, K.-H. (2006): Sustainability Constraints as System Boundaries: an Approach to Making Life-Cycle Management Strategic. In: Journal of Industrial Ecology, Vol. 10, No. 1-2, 61-77.

Oskarsson, K.; von Malmborg, F. (2005): Integrated Management Systems as a Corporate Response to Sustainable Development. In: Corporate Social Responsibility and Environmental Management, Vol. 12, 121-128.

Pettigrew, A.M. (1987): Context and action in the transformation of the firm. In: Journal of Management Studies, Vol. 24, No. 6, 649-670.

Porter, M.E. (1980): Competitive Strategy. New York: Free Press.

Probst, G.; Büchel, A. (1994): Organisationales Lernen: Wettbewerbsvorteil der Zukunft. Wiesbaden: Gabler.

Rauter, R.; Jonker, J.; Baumgartner, R.J. (2015): Going one's own way: drivers in developing business models for sustainability. In: Journal of Cleaner Production, DOI 10.1016/j.jclepro.2015.04.104.

Robèrt, K.-H. (2000): Tools and concepts for sustainable development, how do they relate to general framework for sustainable development, and to each other? In: Journal of Cleaner Production, Vol. 8, No. 3, 243-254.

Robèrt, K.-H.; Schmidt-Bleek, B.; Aloisi de Laderel, J.; Basile, G.; Jansen, J.L.; Kuehr, R.; Price Thomas, P.; Suzuki, M.; Hawken, P.; Wackernagel, M. (2002): Strategic sustainable development - selection, design and synergies of applied tools. In: Journal of Cleaner Production, Vol. 10, No. 3, 197-214.

Roy, R. (2000): Sustainable product-service systems. Futures, 32, 280-299.

Schein, E.H. (1995): Unternehmenskultur. Frankfurt/New York: Campus Verlag.

Schiederig, T.; Tietze, F.; Herstatt, C. (2012): Green innovation in technology and innovation management – an exploratory literature review. In: R&D Management, Vol. 42, No. 2180-192.

Siebenhüner, B.; Arnold, M. (2007): Organizational learning to manage sustainable development. In: Business Strategy and the Environment, Vol. 16, No. 5, 339-353.

Sneddon, C.; Howarth, R.B.; Norgaard, R.B. (2006): Sustainable development in a post-Brundtland world. In: Ecological Economics, Vol. 57, No. 2, 253 - 268.

Tschopp, D. J. (2005): Corporate social responsibility: A comparison between the United States and the European Union. In: Corporate Social Responsibility and Environmental Management, Vol. 12, 55-59.

Tukker, A. (2004): Eight types of product-service system: eight ways to sustainability? Experiences from SusProNet. In: Business Strategy and the Environment, Vol. 13, 246-260.

Tukker, A., Tischner, U. (2006). Product-services as a research field: past, present and future. Reflections from a decade of research. Journal of Cleaner Production, Vol. 14, 1552-1556.

Ulrich, H. (2001): Systemorientiertes Management: das Werk von Hans Ulrich (Systemic management: the opus from Hans Ulrich (original in German)). Bern: Paul Haupt.

van Marrewijk, M.; Hardjono, T. W. (2003). European corporate sustainability framework for managing complexity and corporate transformation. In: Journal of Business Ethics, Vol. 44, No. 2/3, 121-132.

Vollenbroek, F. (2002): Sustainable development and the challenge of innovation. In: Journal of Cleaner Production, Vol. 10, 215-223.

Wöhe, G.; Döring, U. (2008): Einführung in die allgemeine Betriebswirtschaftslehre (Introduction to business management (original in German)). 23., vollständig neu bearb, München: Vahlen.

World Commission on Environment and Development (WCED) (1987): Our Common Future. Oxford: Oxford University Press.

Zott, C.; Amit, R.; Massa, L. (2011): The Business Model: Recent Developments and Future Research. In: Journal of Management, Vol. 37, No. 4, 1019-1042.