Towards A Sustainability Balanced Scorecard

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1 Introduction

The last decade the Balanced Scorecard has emerged as a magic tool that is supposed to solve all existing management problems so far. This idea flickers in your mind when reading Kaplan/Norton, the inventors of the Balanced Scorecard and reading through companies’ stories of success. So why should it not be the same magic for Sustainability Management, which is yearning a long time for tools and methods to bridge the gap between bright Sustainability commitments of the Senior Management and the reality in companies all day operations?

In co-operation with the University of Lueneburg, the research team of the University of St.Gallen and INSEAD is working on this and other questions in the project “A Management Cockpit for Corporate Sustainability” until autumn 2002 funded by the German ministry for Education and Research (BMBF).

Eight partner companies ensure that it is not just a scientific blueprinting of concepts and procedures, but also smart solutions which can be used in the reality of a company. Partner firms either have a Balanced Scorecard in place or are now in the process of implementing one. IWOe-HSG partner firms include the Swiss bank UBS, the German automotive maker Volkswagen (VW), Unaxis, a Swiss supplier for the IT sector, as well as the Berliner Wasserbetriebe (BWB), a recently privatised water utility which is now partly owned by Vivendi Environment, a French group.

This paper will analyse how the Balanced Scorecard (BSC) can be improved towards a Sustainability Balanced Scorecard (SBSC) and used

a) to translate corporate sustainability strategies into action, and
b) to integrate corporate sustainability better into the core management systems.

Therefore the team presents its problem statements and its research questions to set the initial point. In the next step we try to grasp the term of corporate sustainability and fit it into a working definition for the SBSC. Third the concept of the classic Balanced Scorecard is explained to the readers who are not too familiar with the tool. In the fourth step we develop conceptually possible types of Sustainability Balanced Scorecards in order to fit them in the next step in the practical approaches of different company strategy types according to the concept of Dyllick/ Stelz/ Schreide (1997). This step also describes the mechanism of a SBSC and some generic examples for indicators. In conclusion, this paper presents the intermediate findings of the research project up to now.

2 Problems and questions as basis for research

Over the past decade corporate sustainability has conquered the policy statements of more firms than most optimists would have dared to hope at the 1992 Earth summit in Rio de Janeiro. Environmental (and in recent years increasingly social) management systems are implemented by companies as a means to manage and control their environmental and social performance. However, the real impact of such tools is rather low as research by the IWOe-HSG has found. Environmental and social sustainability remains separated from the traditional core business strategies and management systems which are geared nearly solely towards financial performance indicators (Dyllick/Hamischmidt 2000) and do not perform ecologically. In the words of an IWOe-HSG project partner: “We in the environmental department feel like the fifth wheel in a company - there is a need for better environmental and social management systems and to improve, finally, the environmental performance of companies.

One of the reasons why it is so hard to deal with corporate sustainability lies in the width of the concept itself. Critics say, sustainability is arbitrary and can be declared for almost every action and businesses companies undertake. Supporters of the concept stress the width of the concept as a chance to realise the company specific contributions to sustainable development (WBCSD 2001). For many years corporate sustainability has been more seen in the environmental perspective, but more and more the question of the social side of sustainability is gaining importance. This shows even more the necessity of defining clearer concepts and appropriate strategies for corporate sustainability. Primarily, the Balanced Scorecard is a tool to translate strategies into action - as you see further down – not a tool to formulate
strategies. Hence, a BSC has to be filled with strategies, i.e. well-defined strategies of Corporate Sustainability strategies are a prerequisite of a Sustainability Balanced Scorecard. These issues lead to the following research questions of the research project.

1. **What is Corporate Sustainability?**
   - How can Corporate Sustainability be defined?
   - How should a comprehensive approach look like?

2. **How can the Balanced Scorecard contribute to the management of Corporate Sustainability?**
   - How can it contribute to the management of Corporate Sustainability in the whole company?
   - How can it contribute to the management of Corporate Sustainability in the social and environmental departments of a company?

3. **How can a Sustainability Balanced Scorecard enable the integration of environmental and social responsibility into the business management systems of a company?**

4. **Where does the BSC have strengths and weaknesses compared to other management tools regarding the pursuit of Corporate Sustainability?**

All these questions cannot be addressed and even answered within this paper, but intermediate solutions and findings will be presented in the following chapters.

### 3 Corporate Sustainability - a working definition

Corporate Sustainability is as easy to define as Sustainable Development. In the last section we stated the problems companies do have to define and translate Corporate Sustainability from the concept to action. In our research project we have not found and will not be able to find the complete answer.

In this paper we will not present you a big collection of definitions and approaches beginning from Brundtland on. But we will show our working definition for the project which bases on the triple bottom line and shear zone idea of Elkington and Hockerts (Elkington 1997, Hockerts 2001). Picking this up we developed the idea of having three "cases" which outline the basis intention how to handle Corporate Sustainability. Using the St. Gallen Concept of Management which distinguishes between the normative, strategic and operating levels in a company (Bleicher 1991), these cases will be corresponding to the normative level. They determine the strategies of Corporate Sustainability on the strategic level (which will be the input for the Sustainability Balanced Scorecard) which consequently determine the actions on operating level. The following figures show and explain the idea of the sustainability cases:

#### The Business Case

![The Business Case](image1)

**The Business Case** shown in Figure 1 is the one most of the companies prefer and also companies organisations like World Business Council of Sustainability (WBCSD 2000). The ethical position of this case is to do something for the environment and to show social responsibility - as long as it counts financially. Thus, all measures must be contribute to companies revenues at least in the long run. There can be two main strategies identified to fulfill the Business Case: Eco and Social Efficiency. How they can be described is presented in Figure 6.2.

**The Human Case** shown in Figure 2 looks at sustainability how it can serve the human beings. The one ethical position of this case is to do something for the people which may only cost and do not payback. This is one strategic impetus of the approach of integrative corporate ethics (Ulrich 2001). The other ethical position is the fact that environmental issues shall help people to develop themselves. Environmental protection is carried out in order to protect human beings in the long run. The environment serves as source of human wealth. We call this strategy anthropocentric ethics.

![The Human Case](image2)

#### The Green Case

![The Green Case](image3)

**The Green Case** shown in Figure 3 looks at sustainability how it can serve the environment. The ethical position of this case is to do something for the environment which avoids activities of people and of companies, because this has the least impact on environment. Companies renounce or abandon activities in particular business areas, e.g. wood logging. Or they do not bring products to the markets which, although being economically successful, in fact harm non-renewable natural resources. We call this strategy eco effectivity, but it can be also seen as another impetus of integrative corporate ethics (Ulrich 2001). On the social side people or societies give up consuming patterns which destroy or use nature too intensively. The strategy to reach this is known as sufficiency.

These working definitions show that the normative attitude of the managers and shareholders play an important role to define the basic settings for a SBSC design and implementation. Our chapter 6 is based on the "Business Case". In reality, a mixture is mostly found (cf. Dyllick/ Belz/ Schneidewind 2000, p.27).
4. The „classic“ Balanced Scorecard

Grafik BSC#

When conceiving the Balanced Scorecard, Harvard-professor Robert S. Kaplan and the consultant David P. Norton, maintained that companies facing modified conditions of competition in the era of information-technologies, were needing specific financial management and controlling systems in order to stay competitive. Moreover, firms were lacking management techniques for intangible assets such as employees, infrastructures or technologies employed.

On the one hand, the Balanced Scorecard (BSC) can be described as an instrument, a scorecard consisting of 4 dimensions (Finance, Customers, Processes and Organisational Development). The dimensions comprise leading and lagging Key Performance Indicators (KPIs) which are linked to each other by an architecture of relationships of cause and effect. On the other hand, the BSC is also a methodology to transform strategies into action. It derives consequently strategic goals into operating goals, actions and even incentives of employees. In addition to the financial „hard facts“, it provides sufficient potential to the integration of soft, qualitative performance indicators.

A Sustainability Balanced Scorecard (SBSC) should hence be able to derive effectively operating goals and actions from the economic, social and environmental policies of a company, carry them out efficiently and measure them clearly by soundly designed Key Performance Indicators.  

4.1 Conceptual framework of a BSC

When analysing the contents of the BSC, there are several aspects covered: First of all, this instrument makes it possible for organisations (including non-profit ones) to manage the demands of its relevant stakeholders. Moreover, the BSC facilitates to improve the flows of information and communication inside the company. Furthermore, it tries to improve the conventional systems of controlling and accounting by introducing the above-mentioned non-financial, more qualitative „soft facts“ being discernible relevant value drivers for today’s organisations. So, the potential benefit of investments in such intangible assets becomes more visible (long-term view). Finally, an effective and efficient management of human resources is pursued through incentive-based payments and should foster the motivation of employees as well as the co-operation of internal Strategic Business Units (SBUs).

4.2 The Instrument

Die BSC tries to establish an equilibrium in various respects: First of all, short- and long-term related goals should be focused equally. In addition to this, it should cover internal aspects (such as Processes and Organisational Development) as well as external ones (i.e. Customers and Finance). Apart from that, it tries to consider enablers that relate to a goal in the future (leading indicators) as well as results (lagging indicators) to depict the effect of aims and measures in the past. Finally, Kaplan and Norton suggest a balance of quantitative, financial hard facts and qualitative non-financial soft facts. The instrument of the BSC provides KPIs that should be linked in a way of chains of cause and effect that emerge from the strategic orientation of the company. These causalities are not only important inside one perspective (e.g. training of staff enables higher motivation and better skills of management) but also between all dimensions. The better qualification of employees inside the perspective of Organisational Development enables, for instance, the organisation to improve its internal processes.

4.3 The Perspectives

The consideration of financial objectives is, similar to traditional systems of management and accounting of utmost importance. One important improvement the BSC provides, is the focus on so-called value drivers for the future value of the company. The Market perspective aims at the identification of relevant customer and market segments that contribute to the financial goals. In terms of a market-based management of the company, this dimension makes it possible to get the internal processes and products into line with the requirements of the markets.

Within the dimension of internal processes, firms should identify and structure efficiently the internal value-driving processes that are vital regarding the goals of the customers and the shareholders. The R&D processes are highly relevant because of the contraction of market-cycles and the, in general, observable phenomenon of extension of costly R&D-cycles.  

The Perspective of Organisational Development tries to depict all staff- and organisational-related aspects that are vital to perpetual organisational reengineering process. Because of the fact that the BSC is a management system, that tries to initiate learning effects through continuous reviews of the underlying strategic assumptions, the tool itself provides operative and, last but not least, strategic learning effects.

Figure 4: Chain of cause and effects, source: Kaplan/ Norton, p. 29

4.4 The Management System

Kaplan and Norton recommend an integration of the BSC into the existing management-systems of the firm. In this respect the phases of the setting-up and implementation of strategies, strategy-oriented budgets and a feedback process are discussed in depth.

The BSC being a tool to transform strategies into action, Kaplan and Norton stress the importance of extensive and regular training and internal communication of strategies (e.g. leaflets, circulars, intranet) and measures of defining goals throughout the company. In this respect, the authors stress the importance of incentives, to involve each employee in the vision and missions of the organisation. Through the setting of ambitious goals, definition of strategic measures, and the integration of long-term-related strategies into the annual process of budgeting, the BSC shall improve existing management systems of today’s companies.

Finally, a feedback-process tries to provide potential reasons for not having reached the initial goals and appropriate measures of adjustment. Kaplan and Norton put emphasis on the fact, that because of more

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1 Possible stakeholders could be shareholders, customers, employees or further strategic relevant ones like suppliers or societal stakeholders. Consequently, one main characteristic of the concept is its openness for integrating further relevant perspectives. Cf. Kaplan; Norton, 1997, pp. 33. Kaplan and Norton stress the importance of a certain strategic relevance when further dimensions are to be integrated.


3 The integration of leading indicators was a result because of the criticism that organisations where managing issues of the future while making use of past-related data. This idea, of course, is not revolutionary: The concept of the European Foundation for Quality Management (EFQM) distinguishes in a very similar way enablers that comprise the impact of a company between results providing information of the outcomes achieved. Cf. European Foundation for Quality Management, 1999, p.8.

4 This makes sure that intangible assets (e.g. infrastructures, Know-how and skills of employees) are considered in a sufficient way to provide strategic potentials for success in the future.

5 Cf. Kaplan/Norton, 1997, pp. 89. This perspective comprises all links of the value chain, i.e. the R&D, purchasing department, production and sales department.

6 Kaplan and Norton suggest the integration of KPIs for an effective and efficient management of innovations, because of the fact that either production costs and product-related services (e.g. maintenance) are determined in this phase. They provide KPIs such as sales of new innovations/total sales or laps of time for the development of new products or break-even-analyses for innovations placed on the market. Cf. Kaplan/Norton, 1997, pp. 96.


complex-structured strategies and high dynamism in the competitive sphere of companies, companies have to check continuously their chosen strategies and make use of a so-called „Double-loop-learning“:

4.5 Conclusion

The BSC (being an openly-structured tool) provides high potential as far as the integration of aspects of sustainability are concerned. Moreover, it helps companies to cope with many well-known problems (e.g. focus on intangible assets, improvement of processes „from strategy to action“ or market-oriented strategies). But this is often tied to the fact that strategies can easily be put into action without being reviewed critically within the organisation. To overcome this potential side-effect, Weber et al. 2000, pp. suggest a BSC for the setting-up of strategies as well as a strategic feedback-process afterwards.

Some authors (e.g. Weber et al., 2000) claim that the BSC is just an integration of various approaches of management. We hold the opinion that because of the convincing integration of several approaches, the BSC provides high potential to cope with structural obstacles of traditional corporate management and accounting systems.

According to Kaplan and Norton companies should try to integrate the BSC into the existing management systems if it is to overcome traditional problems of management systems. If one considers the non-integrated Environment and Quality Systems, the BSC could cope with these obstacles and provide suitable solutions for company reality.

5 The architecture of a Sustainability Balanced Scorecard

The definition of consistent and adequate environmental and social strategies of the company is a prerequisite for the setting-up of a Sustainability Balanced Scorecard and different strategies of sustainability are to be discussed in the chapter hereafter. These sustainability-related strategies are to be transformed “into action” by means of the architecture and mechanics of a SBSC.

Research on the implementation of social and environmental strategies into the BSC is very recent and, consequently, only few publications exist on the topic (i.e. Epstein and Wisner, 2001, Figge et al., 2001, Hockerts, 2001, Zingales et al., 2001). All literature so far is largely conceptual and virtually no systematic analysis of empirical data is available so far. Therefore, the remainder of this paper will be dedicated to developing research objectives that will be tested through qualitative empirical research to be carried out at the WGo-HSG over the next year.

Basically, one can differentiate between five possibilities of integrating social and environmental issues into the methodology of a SBSC:

• A “partial approach” consists of integrating one or two sustainability indicators into some well-chosen dimensions of a “traditional” BSC that are most susceptible for the integration of these issues (e.g. perspectives of internal processes or customers). Although such a partial approach being basically able to increase the integration of sustainability management, we suppose it to have only limited effects in practice.

• A completely different option would be an “additive SBSC” approach in which a fifth dimension for environmental and social sustainability is added to the four “traditional” dimensions. Such a solution would considerably enhance the status of sustainability in the firm and will probably be found only in companies with a very high exposure to sustainability issues.

• A “total SBSC” approach aims at integrating environmental or social aspects into all dimensions of the tool promoting, in consequence, the organisation’s awareness of strong sustainability.

• A “transversal approach” tries to focus on sustainability issues being the enabler or value driver for future success in all dimensions of an organisation. Hence, social or environmental aspects are integrated as leading indicators in all four dimensions. This approach requires a very high intra-organisational conscience of the potential of sustainability but it can strongly increase the integration of sustainability management.

• In addition to the four previously presented approaches, firms may also resort to a “Shared Services BSC” in only some parts of the organisation. This approach being generally possible for all above-stated alternatives, constitutes another dimension of promoting the idea of sustainability inside the organisation. The shared services unit being responsible for environmental sustainability could be integrated in such a SBSC, because sustainability managers can focus their incentives and better communicate them throughout the organisation. A SBSC of that type falls short of the integration objective underlying this paper. We therefore, assume it have no or only very limited impact on the integration objective.

Because of the fact that there is in reality an upper limit of twenty aims on one BSC, i.e. five in one dimension, the organisation should consider thoroughly the potential or significance sustainability represents. As a consequence, the number of sustainability-related goals depends on the company and its context.

On this basis, through the mechanics of a SBSC, social and environmental goals are to be defined and linked to each other by chains of cause and effect. Suitable KPIs (as leading and lagging indicators) should be identified afterwards.

On the condition that the BSC can be a tool to better integrate environmental and social management systems into core business processes, research at WGo-HSG, and CMER (INSEAD) aims at understanding how the degree of integration and effectiveness of the tool itself varies depending on the different types of a SBSC solution as well as the extent of the roll out through the firm.

6 The mechanics of a SBSC according to sustainability strategy types

This chapter explains how the models drawn before can be used according to four different types of company strategies regarding corporate sustainability. The concept of this strategies bases on the four types of ecological competition strategy set up by Dyllick/ Belz and Schneidewind (1997: 76-176): 13

1. clean : environmental market buffering strategies – in order to defend existing markets;
2. efficient: environmental cost strategies in order to be cost and environmental efficient;
3. innovative: environmental differentiation strategies in order to differentiate by environmental products;
4. progressive: environmental market development strategies in order to develop markets environmentally.

In reality these types overlap and cannot be distinguished so sharp and clearly. Their order as mentioned above of these types represents an environmental learning curve of companies, so that environments of type 2 and 3 are also contained in type 4. The environmental competition strategies give a good foundation to describe the mechanics of Sustainability Balanced Scorecards in the context of reasonable strategic scenarios. The mechanisms are described in the next sections by examples of generic objectives, indicators and cause-effect-relationship diagrams. They are used to illustrate the transaction of sustainable strategic scenarios into SBSCs in order to control action.

6.1 SBSC for the clean type (Sustainable Market Buffering Strategy)

In order to follow sustainable market buffering strategies, companies try to anticipate emerging stakeholder demands by complying legislation and observing carefully competitors or markets. They try to show their business as green and responsible as possible to the public, because they do not want to lose their “license to operate”. Means of self-limitation such as communicated business principles, codes of conduct, standards or labels employed, intend to cover existing markets or fields of business concerning the relevant stakeholders (Dyllick/ Belz/ Schneidewind 1997, pp.75). It is the aim of this strategy to pre-empt public demands in the ecological or social sphere and to be approved by the public by trying to stop or to retard a sustainability-induced structural change. Strategies of that type may refer to production sites, technologies or products. Focussing on legal compliance and on regular dialogues with the public, these companies try to enforce trust and acceptance in politics and the public. They want to maintain their „license to operate” on the relevant site or concerning the technologies employed.

The SBSC for market buffering companies will follow the partial approach of integrating issues of Corporate Sustainability in the methodology of the BSC. Because of the fact, that only some of the
perspectives are of major importance for their strategies this appears most suitable. Additionally, a SBSC for shared services areas (e.g. the marketing or PR department having an exposed position) may be helpful to promote the idea of Corporate Sustainability in their daily business. Thus, we hypothesise that the relevant dimensions of the SBSC for the above-described strategy are the following ones:

Means of communication and training that try to establish a corporate identity within the perspective of organisational learning to help to enhance commitment of employees. This contributes to the general ecological and social image of the firm in the public. Moreover, in this perspective, employees should be provided with the necessary know-how so that they are acquainted with the current environmental legislation, i.e. industrial health and safety standards. Leading KPIs could be the number of days of training per capita or the numbers of means of internal corporate communications.

Inside the perspective of internal processes, the organisation should try to comply with all relevant environmental and industrial laws to avoid any negative public attention. They try to reduce the number of accidents at work and maintain legal compliance of the production process. Last but not least, the customer perspective should try to improve the company’s goodwill by activities of charity or donation. The firm should like to get the image of a “good corporate citizen” (see Ulrich, 2000, p. 462). Moreover, marketing campaigns showing the ecological and social performance of products and services can be launched.

The following Figure 5 gives an example how a cause-effect-relationship diagram can look for a company following the environmental market buffering strategy.

![Figure 5: Example of a cause-effect-relationship diagram of a SBSC of a company type “clean”](image)

### 6.2 SBSC for the efficient type (Sustainable Cost Strategy)

A company which follows the corporate sustainability strategy of efficiency will focus on environmental and social objectives and measures in order to reduce their costs. It will strive for identifying and exploiting “win-win-situations”, and will thus aim for measures that help to assess whether environmental and social standards are met in the most cost efficient way. In the environmental field this comprises the strategy of Eco-Efficiency. Its main objective is to minimise the cost-related ecological damage per product or service unit, typically realised by savings of materials, energy, water and waste. Measures would look at cost savings from pollution prevention rather than monitoring end-of-pipe solutions. The social field is more, because social efficiency is frequently linked with rationalisations, reductions of job and more stress for the remaining employees. This is not, of course, sustainable. Only if processes are trimmed in a way that employees are more satisfied, e.g. because they have less hard times with routine work and process problems, and that the working productivity rises, social sustainability can be achieved. In conclusion “social efficiency” needs much more a careful and aware management understanding their employees in order to realise appropriate measures.

The SBSC for cost efficient companies will follow the partial approach of integrating issues of Corporate Sustainability in the methodology of the BSC. Because of the fact, that the strategy focuses on the internal objectives to optimise production the process, learning and finance perspectives are of importance. Additionally, a SBSC for shared services areas may be helpful in daily business.

In the process perspective companies aiming for “efficiency” will implement objectives, indicators and measures in order to enhance process efficiency from a financial perspective as well as form an environmental and social point of view. Optimising the operating process is the core, but the innovation process gets more important when the company realises that only through product innovation also production innovation gets feasible. From mid-term on the innovation process is an important enabler of the operating process. Typical lagging indicators are the material, energy and water use and waste production in ratio to the product output. Leading indicators are the number of resource intense processes, the reducing measures and the product innovations leading to pollution prevention. Also the reduction of hazardous substances and accidents as well as the increased use of recycling processes can be put as goals into the process perspective (BMU/UBA 2001, pp.57).

While “efficiency”-based strategy would probably focus mostly on the process dimension it might also consider supporting measures in the finance and development perspectives. In the financial perspective the main objectives as well as lagging indicators are the costs of material, energy and water use. A ratio of turnover or earnings or economic-value-added to material, energy and water use can express the objective to unhitch the resource use from the value creation of the company. Concerning waste costs accounting methods like the Total Cost Accounting of EPA can help to discover the real potentials of waste when adding purchasing and handling costs of materials which ended up in waste to their disposals costs (EPA 1995). In addition to this, costs can be saved for the company when realising cost reducing co-operations along their supply chain by using the concepts of life-cycle-costing (Schaltegger/ Buritt 2000, pp.109). The stakeholder value in the definition and calculation of Figge/ Schaltegger could be an indicator for the efficiency of the employees and the state (Figge/ Schaltegger 2000).

In the learning perspective companies strive to enable their employees to deal with the natural resources as well as with their own manpower resources in efficient and saving way. Trainings and education programs can be counted as well as incentives for eco-efficient behaviour.

The following Figure 6 gives an example how a cause-effect-relationship diagram can look for a company following the environmental efficiency strategy.

![Figure 6: Example of a cause-effect-relationship diagram of a SBSC of a company type “efficient”](image)

### 6.3 SBSC for the innovative type (Sustainable Differentiation Strategy)

A company following the strategies of this type tries to tackle proactively ecological matters which are market-related (Dyllick/ Belz/ Schneidewind 1997, pp.123). They are recommended for saturated or mature markets, in which products or services of competitors have become more or less interchangeable
and, hence, ecological aspects represent a potential for differentiation. Moreover, companies can successfully resort to such strategies when there the dynamism of legislation, technology or customers' behaviour breeds new fields of competition. To realise a competitive advantage, the ecological and social quality of the product or service has to relate to an important issue for the customer, must be perceived by the potential buyer and has to be durable. The original business strategy of ecological differentiation conceived by Dyllick/Belz/Schneidewind can also be linked to social aspects. These can be either employee- or society-related. As far as employees are concerned, sound working-conditions (e.g. payment, training, working conditions) can be resorted to. In order to meet society's requirements as a 'good corporate citizen', social issues should be tackled proactively.

When following a strategy of that type, companies are most likely to follow the partial approach of integrating issues of Corporate Sustainability in the methodology of the BSC. Here, the perspectives learning, processes and marketing are of major importance.

Because of the fact, that an intra-organisational conscience concerning sustainable issues has to be set up, if products or services are to be placed successfully on the market, a total integration could also be a possible solution. In addition to this, a SBSC for areas of shared services (e.g. the R&D or Marketing-department) could foster the idea of sustainability inside the organisation.

Companies are recommended to focus the intra-organisational processes and the skills of employees in order to enhance its credibility in the field of eco-related products. Thus in the learning perspective the company should aim developing the employees' or the organisations' know-how of corporate sustainability and corresponding skills. In consequence, an organisational conscience of sustainability should grow. To achieve this, leading indicators could be the amount of days for training per capita and year. As a lagging indicator, suggestions for improvement could prove the effectiveness of training.

The process perspective should contain objectives and indicators in order to enable the organisation to develop and manufacture sustainable product solutions. The reduction of time-to-market, or the management of costs in the R&D-department might be of major importance (criteria of efficiency). A leading indicator could be the total of training in the field of sustainability-related products and services or the amount of working days dedicated at examining customers' needs in that area. Lagging indicators that demonstrate the effectiveness and efficiency of R&D can be the time period of a R&D-process, or the ratio of inventions coming up in final products.

Because of the facts, that ecologically-related aspects are frequently not perceived by customers, cannot be examined after purchase and, consequently, suffer credibility problems concerning their (ecological or social) quality, companies have to emphasise a potential customer's supplementary benefit and have to introduce him or her into the relevant market segments. Objectives trying to reduce the risk for the customer could be the use of eco-labels. Because of the uncertainty of success, companies should carefully examine the relevant market segment (e.g. competitors, existence of substitutes, customers' needs) and choose an appropriate way of timing when bringing eco-innovations to the market19. Sound marketing practices should be used in order to emphasise the company's unique selling proposition. As a result, first-mover-advantages can be realised, barriers of market-entry for potential competitors can be built and premium prices can be achieved.

The market perspective should contain objectives and indicators in order to realise for instance the aim of a successful introduction into the market with an adequate timing, a company could e.g. collect leading indicators such as the number of competitors in the relevant segment, customers willing to purchase the item in question or total of potential outlets acquired in the distribution channel (e.g. retailers). To depict relevant aspects relating to the past, the organisation may use lagging indicators such as the number of introduced sustainable products compared to conventional products or the ratio of sustainable products launched as a pioneer. All three dimensions underlying the financial performance should contribute to increased profitability through additional sales or reduction of costs (e.g. in R&D or Marketing).

The following Figure 7 gives an example how a cause-effect-relationship diagram can look for a company following the environmental differentiation strategy.

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needs behind their products and probably come up with new services to satisfy old needs (Belz 1998). For developing the market in closer meanings as indicators the activities related to creating industry standards can be measured and the activities related to inform and educate the consumers. An important role playing the retailers as gate keeper. Activities, incentives and relationships can be measured.

Adapted to the market perspective the process perspective objectives and indicators should ensure that the company is capable of producing sustainably when the market has been achieved. Therefore they can use objectives and indicators of type 2 and 3. Not to underestimate is the fact that also the supply chains used by the company will be tracked when companies advertise themselves as sustainable. Is an energy saving, environmental friendly product which is produced in China under non-human conditions really sustainable? Methods and tools like Life Cycle or Product Line Analysis can help to check the supply chains and be included in the measures mentioned in the SBSC (ISO 14040ff., cf. ISO 2001, pp. 216; Pichel 1995).

In the learning perspective the main objectives and indicators are also focused on creating the capability of the employees to act sustainably when the market has been developed. Because sustainable products and processes require more information and understanding, information sources and systems play an import role. Numbers of systems, suggestions for improvement, employees reached by trainings etc. can be indicators. The financial perspective takes into account the revenue made by sustainable products, but even more the financial potentials the companies products and services will have in the future when the markets are developed.

The following Figure 8 gives an example how a cause-effect-relationship diagram can look for a company following the environmental market developing strategy.

First of all, we hold the view that it contributes to clarifying Corporate Sustainability, because the procedure to set up a SBSC forces managers to clearly define sound sustainability strategies and identify relationships of cause and effect (e.g. as far as the financial performance of their organisation is concerned). Another advantage a SBSC provides is that it requires sustainability strategies, although it is not a tool to formulate strategies, but to translate strategies successfully into action. If and how sustainability strategies are set up cannot be managed primarily with a SBSC. In the end, these are basic decisions of managers and shareholders about their approach towards Corporate Sustainability. But the methodology of a SBSC makes it possible, to review the effectiveness and efficiency of strategies followed in the past in terms of a “Double-loop-learning” and to redefine them or adapt them to reach the overarching vision and mission of the company.

Strategies being basically a collection of implicit or explicit hypotheses of causes and effects that emerge from different experiences, know-how or assumptions of managers, can be classified in a two ways: The above-presented examples of the Business, Human or Green Case help to understand in general different ethical positions practitioners may resort to. In addition to this, the four presented types of ecological and social competitive strategies, require a different architecture and different mechanics of a SBSC. So one of our research objectives of the SBSC aims at developing different SBSC approaches according to different strategies employed by the respective companies.)

Secondly, the SBSC as a management system would be, that corporate sustainability managers cannot withdraw back to their well-known ISO 14000-world and have to focus a few well-chosen objectives which are really important for the company. In positive: this prevents them from drowning in the hundreds of sustainability problems a company has in average. The environmental and social management systems can be integrated into the existing, traditional (business-related) managing systems of a company. Consequently, an SBSC is supposed to be recognised by practitioners as a suitable tool to clearly define the slippery notion of Corporate Sustainability and transform it into the operational processes of a company.

Thirdly, the SBSC is a tool that provides a good chance to integrate environmental and social objectives and measures into the existing, common business systems. But as there are approximately only 20 objectives on one BSC, an integrated approach will – realistically speaking – comprise up to a maximum of 5 sustainability objectives. Thus, the SBSC does not substitute other tools of Corporate Sustainability like ISO 14000 or SA 8000, but it helps to promote the notion of sustainability inside the processes and structures of a company and to link it to “traditional” strategic business. Another interest of research emerges directly from this phenomenon: In how far do different structures of companies impact the effectiveness of the integration objective and in how far do they require modified approaches of SBSC?

Further intermediate findings of our research project are to be presented in autumn 2001 by IWOe-HSG.