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FORMULATION AND IMPLEMENTATION OF THE CORPORATE SUSTAINABILITY STRATEGIES

У статті розглянуті питання розробки та реалізації корпоративної стратегії сталого розвитку.

В статье рассмотрены вопросы разработки и реализации корпоративной стратегии устойчивого развития.

The aim of the full paper is to contribute to the successful implementation of the corporate sustainability strategies. First, starting from the new strategic challenges of the 21st Century, it summarizes the theoretical background of the sustainability. In the next step, it determines the objectives, rules of the sustainability strategic alternatives and the critical factors of the strategic choices. Then, it describes the framework of the conventional Balanced Scorecard (BSC) and the consequences of the simplistic addition of the social and environmental perspectives to the Balanced Scorecard. Based on this, it outlines the structure of the Sustainability Balanced Scorecard (SBSC) and the steps of its definition. Relating to this, it introduces the proposals for the elements of the SBSC for the different sustainability strategies. Finally, it demonstrates the phases of the formation, and introduction of the “Credible” strategy in a chemical industry case study.

Keywords: Sustainability, Corporate Strategy, Balanced Scorecard

The consequence of the compound effect of these tendencies is that the turbulent nature of the environment will be strengthening in the future. Today, globalization, sustainability, IT-applications, labour force diversity and ethical competences are core questions for companies, with a significant influence on the chosen strategy of most companies. The consequence of the compound effect of these tendencies is that the turbulent nature of the environment will be strengthening in the future. This is the reason why the role of strategy-making becomes more important and it is not only able to make companies stay afloat but contribute to their successful operations, by 'surfing' on the imperspicuous and unpredictable waves of changes.

Sustainability-oriented strategy options. Nowadays, corporate strategies take shape in the form of various sustainability strategies. According to Bieker's and his co-authors' wider interpretation, a special emphasis is given to the statement that corporate strategies have to meet the expectations of the company's present and future stakeholders without making any crucial compromises in terms of skills and capabilities (Bieker et al, 2002). Kerekes and Kindler (1997) came up with a more accurate formulation, according to which "sustainability strategy puts an emphasis on such responsible corporate activities that regard the issue of sustainability as development and growth opportunities for the company, and as such, they are enforced in all fields of activity." The essential condition for the success of sustainability strategies is how companies are able to resolve the contradiction between economic, social and

environmental interests as well as to create corporate interests in resolving them. In order to meet the requirements imposed by this condition, a conscious strategy planning is needed that expresses the company's default position on the subject of sustainable development. In the pioneering empirical studies written by Dyllick et al (1997) and Bieker et al (2002), competitive environmental strategies were classified based on the company's strategic orientation and strategic behaviour.

The orientation of a strategy can be classified by which one of the two prominent actors of the company's external stakeholders, either the market or the public, is in the centre of the company's strategy. While market-oriented strategies are designed to satisfy market needs in a better way, the main purpose of public-oriented strategies is to comply with societal expectations to the highest possible degree.

In terms of behaviour, Szigeti (2004) and Vágási (2004) make a distinction between the possible strategies of organizational behaviour based on two defining characteristics: strategies can be reactive and proactive. Reactive strategies give response to legal and economic changes later in time, they are characterized by follow-up reactions. On the contrary, proactive strategies take the opportunities provided by sustainable development as a challenge and exploit them to strengthen their strategic position. If the aspects of orientation and behaviour are linked together, the following types of sustainability strategies can be constructed as illustrated in Figure 1:

Strategic behaviour \ Strategic orientation	Public	Market
Reactive	„Credible” strategy	„Efficient” strategy
Proactive	„Transformative” strategy	„Innovative” strategy

Source: Bieker et al, 2002

Figure 1- The four different types of sustainability strategies

„Credible” strategy – Enhancing and fostering credibility and reputation: Due to the public and political importance of sustainability, the credibility and reputation of a company is a valuable non-tangible asset. Hence caring for a good image in society and politics in the sense of being a “good corporate citizen” is a sound investment. The objective of this strategy is to build up, foster, keep and protect the credibility or “reputational capital”. Measures can be either defensive or offensive and can be done by acting or communicating. Rather defensive measures focus on communicating issues to the relevant stakeholders and are closer to the above-mentioned type “safe” and often. Rather offensive measures aim at generating sustainable products and services and are in fact very close to the “differentiation” type.

„Efficient” strategy – Enhancing productivity and efficiency: Regarding environmental management this strategy is well-known and broadly applied as “eco-efficiency”. In industries, it seems to be the most prominent sustainability-related strategy, because it has successfully helped to reduce both costs and “the ecological footprint” by achieving better energy-, water and material-efficiency. On the social side, strategies of this kind may try to improve their “socio-efficiency”. This can be done by supporting employees in a way that both their productivity of work as well as their degree of job satisfaction (e.g. through flexible conditions of work and payment) can be increased. The objective of the strategy “efficient” is to enhance the eco- or socio-efficiency of the business processes.

„Innovative” strategy – Differentiating in the market: Environmental and social impacts frequently offer an opportunity of differentiating companies’ products in the market place. Sustainable products and services can be found in many markets and sectors (and contribute to a unique selling proposition (USP)). The objective of this strategy is to increase sales and margins through developing and selling environmentally and socially friendly product innovations. Possible measures can be found in the attributes of the products with sustainable advantages in the production, the consumption or the disposal phase. Sustainable value added products are better to market on the condition that the value is perceived by the customer in the consumption and disposal phase. What emerges memorably is that the latter is quite clear whereas sustainable value added in the production or supply chain needs to be strongly communicated.

„Transformative” strategy – Developing markets and society: This strategy seems to be much more fundamental than the others, because the transformation of existing or creating of new markets requires institutional changes within human needs, politics or institutional framework. In many cases, human needs or consumption patterns may be modified. The objective of this strategy is, consequently, to create or participate in structural changes in the institutional framework of markets and politics.

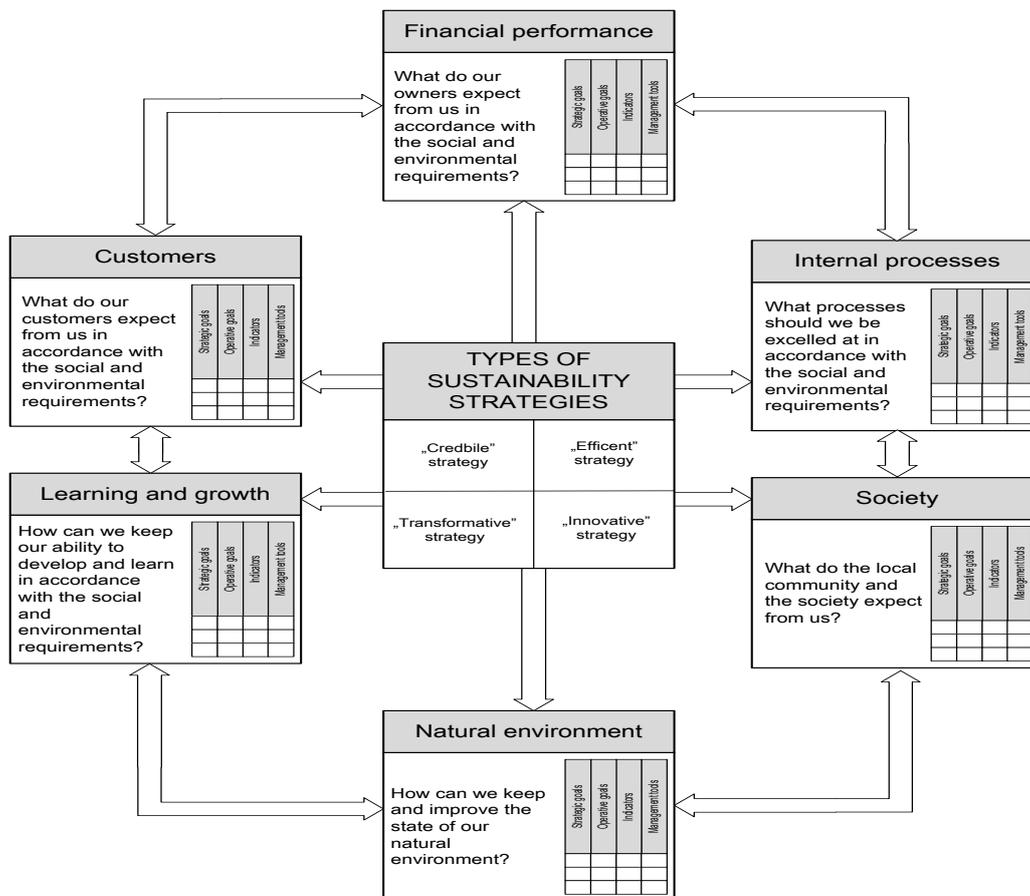
The structure of the Sustainability Balanced Scorecard (SBSC)

The Sustainability Balanced Scorecard develops the idea of the traditional BSC further by providing a wider framework for integrating other relevant stakeholders and perspectives, together with the three dimensions of sustainability. The idea to use this tool for environmental management purposes is not new, as it was previously suggested by Kaplan and Norton (1996). However, there are only a few studies, for instance Epstein and Wisner (2001), Figge et al (2001), Ferreira et al (2009) and Jones (2011) that deal with the introduction of the social and environmental perspectives into the Balanced Scorecard. Yet their integration results in a different content and a different structure.

This integration has a two-sided aspect. On the one hand, we introduce social and environmental perspectives in order to determine social and environmental goals in a direct way. On the other hand, we integrate social and environmental expectations into the traditional perspectives during the formulation of goals in accordance with the previously determined and currently implemented sustainability strategy. This is

illustrated in Figure 2, where strategies are positioned in the centre, enabling us to read the questions originating from the individual perspectives.

Based on this, the economic, social and environmental decisions and activities inside the organization become detectable in relation to the goals defined by the perspectives of internal processes and learning and growth. Therefore, the social and environmental impacts are also treated to a special economic effect (consumer demand, financial results). Therefore, social and environmental impacts should be treated separately from the economic impact (satisfying consumer demands, financial performance). It comes from the fact that the ‘financial’ perspective and its related goals also contribute to fulfilling social and environmental expectations. Thus, it should not be treated as a priority.



Source: own elaboration, 2012

Figure 2- The structure of the Balanced Scorecard of the types of various sustainability strategies

By making a ‘strategy map’ (see Horváth and Partners, 2008) as a benchmark, the cause and effect relationships between the solely economic, social and environmental goals become more comprehensible. The logical model of the strategic map adequate to the Sustainability Balanced Scorecard is shown in Figure 3.

3. The Sustainability Balanced Scorecard of the „Credible” strategy

In the previous section, we introduced a possible structure for the formulation of the Sustainability Balanced Scorecard. However, for a successful implementation, the

company has to accurately clarify its strategic intents relating to the sustainability, it needs to plan the system of its strategic goals, it has to determine the applied performance indicators and, finally, it has to select the most efficient management tools in order to its defined objectives, in other words, it has to formulate its complete Sustainability Balanced Scorecard. In the following passages, we make an attempt to propose one type of sustainability strategy structured in accordance with the previously presented perspectives, indicating some potential fields of their implementation.

According to Prahalad and Hamel’s (1990) statement, strategic intent designates a desirable market position and sets the criteria for measuring the progress of an organization in the adequate direction. At time same time, strategic intent cannot be viewed simply as a kind of unlimited ambition. This term also includes an active managerial process containing the following elements: focusing on the organization’s attention to the essential factors of success, motivating employees by communicating the value of the tasks they perform, creating opportunities for the contribution of individuals and groups, maintaining the level of enthusiasm by working out new operation conditions in case of both external and internal changes, and enforcing strategic intent consistently through the management of resource allocation.

STRATEGY							
Corporate mission, values and future prospects				Environmental and social responsibility			
ECONOMIC EFFECTS		SOCIAL EFFECTS		ENVIRONMENTAL EFFECTS		The economic, social and environmental consequences of the decisions and activities within the organization	
Financial performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		↑
Customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Internal processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Decisions and activities within the organization
Learning and growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Source: own elaboration, based on Jones, 2011

Figure 3- Strategic mapping for analyzing the coherence between activities and effects within an organization

The hierarchy of goals is formed by strategic and operative ones. According to Fülöp's (2008) interpretation, strategic goals have to deal with the achievable financial, market, technological, educational, social and environmental positions in line with the given situation and the determined level of different key performance indicators. Operative goals concentrate strategic goals around the given field of operation, define the achievable position in the competitive environment, together with the level of competitive advantages and capabilities.

The progress or discrepancy in the process of the realization of goals can be monitored and evaluated by applying indices in the Sustainability Balanced Scorecard. The role of these indices is to clearly express the defined goals and follow the process of achieving them. By measuring strategic goals, they are designed to steer organizational behaviour in the needed direction. During the selection of applied indices for the Sustainability Balanced Scorecard, it has to be kept in mind how they influence the activities performed by the members of the organization and how exactly they are able to express the actual degree of achieving a strategic goal. In order to keep the concentration level of a given strategic goal, two or three indices need to be included in every particular goal.

Strategic 'target-mindedness' needs to be facilitated by applying proven and efficient methods, procedures and tools. There are a number of management tools designed for reaching this purpose, ranging from the simplest, basic tools to the most complicated synthesizing ones. According to the systemic approach presented by Kerekes and Szilávik (2001), the criterion for selecting a management tool is whether it is applicable in the given circumstances or whether it can be applied without regarding it as a goal in itself. Even if a management tool is technically suitable, it may not lead to the desired result when it is applied within a specific organization. According to Have et al (2009), this can happen because there is no such thing as a bad management tool.

Management tools combined with knowledge and experience and applied at the appropriate time can help to find solutions to certain strategic problems inside an organization. The BSC of the „credible” sustainability strategy is formulated in accordance with the above presented structure and principles, summarized in Table 1.

Table 1. The SBSC of the „Credible” strategy

„CREDIBLE” STRATEGY				
Strategic intent: Preserving and strengthening the company's good reputation				
Perspectives	Strategic goals	Operative goals	Strategic indices	Efficient management tools
1. Financial performance	1.1. Preserving and increasing sustainable corporate value 1.2. Handling and reducing financial risks and losses	1.1.1. Increasing sales revenue originating from environmentally friendly products and services 1.2.1. Better exploitation of the positive effects of capital market	1.1. Return On Equity (ROE), Return On Capital Employed (ROCE), Economic Value Added (EVA) 1.1. Rate of sales revenue from environmentally	Green accountancy – Green controlling

	1.3. Securing capital necessary for continuous operation and additional investments	assessment 1.2.2. Securing sources for occasional credit applications 1.3.1. Making financial plans related to structural transformations 1.3.2. Securing budget discipline 1.3.3. Operating appropriate controlling and green controlling systems	friendly products 1.2. Rate of environmental taxes and penalties 1.2. The amount spent on green marketing activities 1.3. Rate of benefits received for environmental purposes 1.3. Rate of environmentally conscious investments	
2. Customers	2.1. Satisfying customer demands from the perspective of sustainability 2.2. Strengthening the price and value sensitivity of customers 2.3. Reaching eco-conscious customers, raising their proportion within the overall group of customers	2.1.1. Product development 2.1.2. Market development 2.1.3. Product/market diversification 2.2.1. Developing environmentally friendly products in good quality and affordable price 2.3.1. Broadening customer knowledge on sustainability 2.3.2. Applying green marketing tools 2.3.3. Introducing environmentally friendly industrial standards	2.1. Rate of customer complaints, reimbursements, costs of product replacement 2.2. Price difference compared to competitors 2.3. Share of eco-conscious product per market	Green marketing – Green public relations
3. Internal processes	3.1. Improving environmental performance 3.2. Environmentally conscious R&D 3.3. Establishing sustainability-oriented supply network 3.4. Implementing eco-conscious logistics solutions 3.5. Communication on the development of internal processes	3.1.1. Establishing cooperation with research institutes, authorities, social organizations 3.2.1. Environmentally conscious research and development 3.2.2. Implementing more environmentally friendly production processes (best practice) 3.2.3. Green logistics solutions	3.1. Resource productivity 3.1. Rate of up-to-date, environmentally friendly technology 3.1. Rate of waste and hazardous materials 3.2. Rate of eco-conscious R&D 3.3. Rate of green suppliers 3.4. Rate of eco-conscious logistics solutions 3.5. Rate of communication on development	Integrated Environmental Management System (IEMS)– Internal and external communication system
4. Learning and growth	4.1. Establishing sustainability-oriented corporate culture 4.2. Broadening the knowledge on sustainability	4.1.1. Integrating the principle of sustainable development and innovation into corporate values and decision-making 4.1.2. Supporting the	4.1. Importance of rules and procedures compared to results 4.2. Resources used for employee trainings	Trainings, conferences, presentations and publications related to sustainable

	strategies, systems and processes 4.3. Increasing employee satisfaction and commitment	realization of innovative ideas 4.1.3. Encouraging cooperation both inside and outside the organization, exploiting the advantages of team work 4.2.1. Recruiting, selecting, training and keeping suitable labour force based on sustainability aspects 4.3.1. Developing and operating information and communication system for supporting innovation	4.3. Fluctuation, number of workplace conflicts, rate of absence 4.3. Providing condition for creating green office or workplace	development
5. Society	5.1. Preserving and improving the local and regional population's quality of life 5.2. Establishing friendly, value creating relationships with the members of local and regional communities	5.1.1. Participation in the work of authorities and civic organizations to find innovative solutions to environmental problems, active participation in prevention 5.1.2. Green communication 5.2.1. Showing responsible corporate behaviour	5.1. Complex index of responsible operation 5.2. Rate of employees performing environmentally conscious activities 5.2. Number of workplace accidents 5.2. Frequency of information reflecting the negative perception of the company	Accountability rating Corporate social responsibility Applying the concept of „we open our gates as we have nothing to hide”, organizing open days, sponsorship activities
6. Natural environment	6.1. Preserving natural environment, reducing environmental load	6.1.1. Reducing the rate of non-renewable resources, increasing the rate of renewables 6.1.2. Active participation in lowering emission levels and reducing environmental pollution 6.1.3. Stricter self-imposed obligations for keeping environmental protection standards	6.1. Ecological footprint 6.1. Material and energy usage indicators 6.1. Emission indicators	Environmental performance assessment tools: eco-balance, ecopoints, Ethical code
Main fields of implementation				
In the stage of recovering from crisis In case of accidents or launching crucial business projects		Chemical, pharmaceutical, oil, car-manufacturing industry Food, textile, cosmetics industry Nuclear technology, mobile communication, chloride chemistry	Solar and wind energy, water management, organic management Multinational, global corporations Financing, public services	

Source: own elaboration, 2012

The content elements of the elaborated Sustainability Balanced Scorecard do not remain unchanged over time. The occasional revision of the SBSC serves as a starting point to reconsider the strategy from time to time and it needs to be evaluated in the light of whether the change of the strategic intent, the acceptance of new strategic goals, the achievement of temporarily more important objective goals or the application of new management tools make it necessary to actualize the content of the Sustainability Balanced Scorecard.

A case study for the implementation of the „credible” strategy

The present case study shows the successful practical application of the principles of sustainable development through the example of one of the largest chemical companies in Hungary. The Tiszai Vegyi Kombinát Public Limited Company has 1114 employees today and its annual sales revenue is about 365185 million HUF. It is a production company which makes ethylene and propylene by processing naphtha and gasoline as raw materials that are further processed into small-, medium- and high-density polyethylene and polypropylene by applying state-of-the-art technologies. It supplies raw materials not only to domestic but also foreign plastic manufacturing companies throughout Central, Eastern and Western Europe.

The company's current strategic position

The business community has a crucial role in the support of promoting sustainable development. It becomes more and more evident that the responsible behaviour of companies in the field of social issues and environmental protection contributes to their long-term business success. Recognizing this, TVK's fundamental objective is to introduce a new system approach. It established a kind of behaviour that went well beyond solving local issues and tasks, since sustainable development requires a new type of global thinking and actions in order to frame the three dimensions of sustainability into both corporate strategy and daily operations. Naturally, there is not an appropriate formula that is suitable for everyone. Every industrial sector, every company has different goals, traditions and practices, therefore TVK individually identifies and determines the company's goals and objectives.

The company determined the following six focus areas within the framework of the three dimensions of sustainability for the upcoming period between 2011 and 2015: economic sustainability; health and safety; communities, human capital; environmental and climate change. These areas are further divided into twenty subtopics that are essential for responding successfully to the economic, social and environmental challenges in the long run.

Based on the predefined focus areas of sustainable development, TVK elaborated seven strategic initiatives for sustainable development that are closely related to one another. All of these initiatives affect the activities pursued by the company and should be treated as critical success factors in achieving the company's strategic objectives. TVK has launched several projects with the aim of bringing the company closer to the realization of its long-term goal that is performing sustainable operation.

Based on TVK's Sustainability Report issued in 2010, the defined objectives of sustainable development are the following:

- Strengthening appropriate leadership and the efficiency of risk management,
- Focusing on future portfolio for improving competitiveness,
- Concentrating on internal and external customer relationships,
- Strengthening trust and credibility among stakeholders,
- Reducing environmental load,
- Managing opportunities, risks and responsibilities in the value chain,
- Capitalizing on human resources.

As it can be seen from the above, TVK is committed to sustainable development and it communicates its achievements to its stakeholders. It pays particular attention to the creation of a cleaner, more livable environment and safer, healthier working conditions, as a consequence, prevention and responsible care is considered to be an essential condition. The principles of sustainability and environment-oriented thinking are deeply embedded in the company's long-term strategy.

4.2. The map of the „credible” sustainability strategy of TVK

Based on the previously outlined current strategic position of the company, and the characteristics of the types of various sustainability strategies, it can be stated that TVK follows the „credible” sustainability strategy.

The incorporation of the goals and elements into the overall corporate strategy and the cause and effect relationships existing between them are illustrated in the strategy map shown in Figure 4. This map describes how intangible assets lead to performance improvements in the internal processes of TVK that have the most significant influence on the value creation for customers, shareholders, social communities and the natural environment.

It is apparent that the company goes beyond the obligation to the minimum standards of the national and local regulations, which helps the company to gain operation rights in a given community. It intends to provide more than is required by certain regulation barriers in order to be respected as a reputable employer. Good reputation helps the company to attract, hire and keep the best labour force. It needs well-prepared and talented professionals with up-to-date knowledge for its continuous development. One of the most important requirements for the execution of its strategic goals is a highly-trained, motivated work force that is fully committed towards the company. Therefore, TVK pays intense attention to maximizing the commitment of its employees by providing challenging tasks and opportunities, the best working conditions and a remuneration package above the average. In order to promote the improvement of human resources, it organizes trainings both at group and individual levels, where a special emphasis is given to the integration of the principles of sustainable development into the company's core values.

One of the most determining elements of internal processes is innovation. In order to reduce damaging environmental impacts, the company conducts researches into producing biologically degrading plastic materials by developing new additives. There is another research programme designed for finding solutions to recycling waste, including plastic materials. The innovation process has an effect on the quality and price of new products, thereby helping the better satisfaction of customer needs.

From the customer perspective, one of the key objectives of TVK is to increase customer satisfaction by providing high-quality services and meeting customer demands in an efficient way. By establishing mutually beneficial, long-term and value-creating partnerships, the company intends to acquire and keep its customers, which is achieved by the introduction of new products and quality improvement. Deepening the relationship with its existing customers and satisfying customer demands at the highest possible level eventually contribute to the company's overall value.

Achieving a good reputation in the society also means that the image of the company is improved in the eye of the conscious customers and investors, which facilitates establishing value-creating partnerships. Through exercising corporate social responsibility, the company aims at preserving the cultural heritage, it provides support in the field of culture, sports, science and education. In order to improve its social acceptance and the recognition of its useful activities, the company has launched programmes for disseminating the activities and operations performed by the chemical industry, including TVK as well. Such programmes as 'TVK Week' and 'Around TVK In One Day' have effectively improved the acceptance of the company's activities.

As the protection of the natural environment has become one of today's most important issues, TVK identified it as one of its main strategic priorities. The company has introduced a number of measures to reduce environmental load, for instance giving importance to the reuse of waste and reducing the emission of pollutant and fresh water consumption in the production processes. To determine and achieve these goals, the wider acceptance of the principles of sustainable development, innovation and the implementation of green logistics solutions are needed.

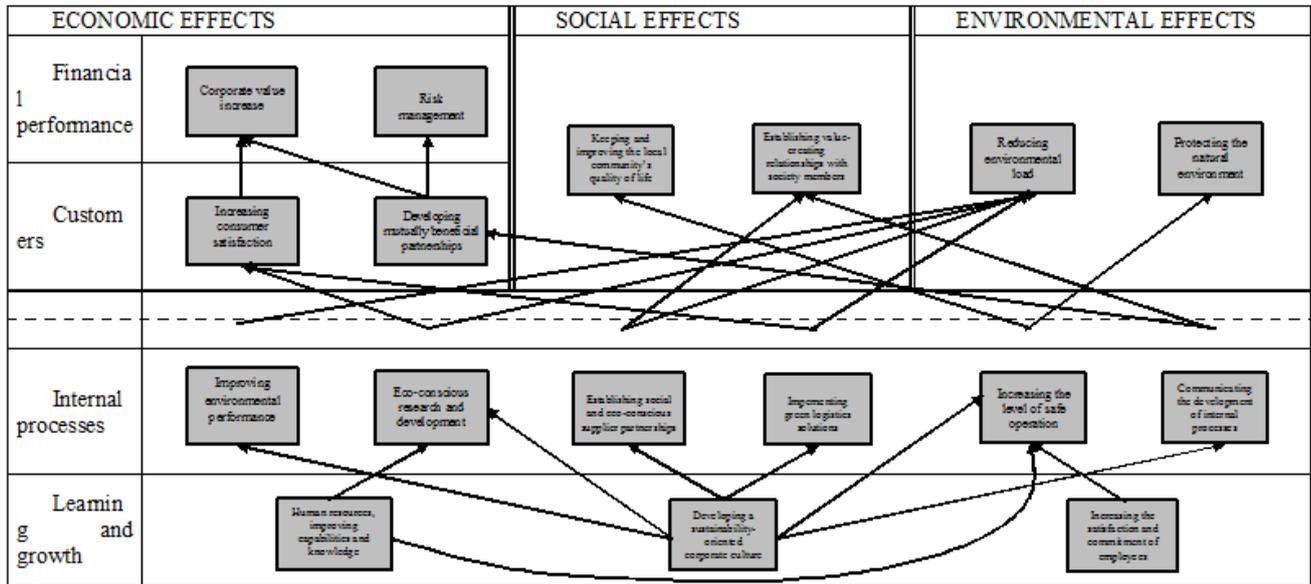
The Sustainability Balanced Scorecard of TVK's „credible” strategy

The company is fully aware of the fact that the indices of long-term success and social acceptance are not reflected only in economic indicators. Its performance is increasingly evaluated in the light of the company's ability to reduce its negative social and environmental impacts.

<p>The Sustainability Balanced Scorecard of TVK's „credible” strategy was constructed in accordance with the above-mentioned revelation (see Table 2), which clarifies the operative goals related to strategic goals, the indices applied to monitor the realization of goals, together with modern management tools that facilitate their implementation. With the application of this structure, it makes it easier for the company to monitor the realization of its goals more efficiently.</p> <p>Corporate mission</p> <p>As a member of the MOL Group, supplying its customers with high-quality olefin and polymer products, providing excellent services through continuous developments. Increasing the company's competitiveness, reducing risks, improving its social acceptance and the recognition of its usefulness. Taking serious environmental and social responsibility in the field of environmental protection, health and safety, education and culture.</p>
<p>Core values</p> <p>Highly qualified, creative and motivated employees</p> <p>Quality awareness and innovative approach pervading the company's operation</p>

Responsibility-focused commitment to safety, health and the natural environment
 Lasting business relations built on mutual benefits

Vision
 Maintain TVK's regional leadership in the petrochemical business by improving efficiencies, competitiveness and profitability continuously, by exploiting the growth of regional polymer consumption and by developing a mutually beneficial partnership and by optimising and diversifying its portfolio of products.



Source: own elaboration based on company reports, 2012

Figure 4. TVK's map of „Credible” sustainability strategy

Table 2. The Sustainability Balanced Scorecard of TVK's „Credible” strategy

Perspectives	Strategic goals	Operative goals	Strategic indices			Efficient management tools	
			Indices	2008	2009		2010
1. Financial performance	1.1. Corporate value increase 1.2. Risk management	1.1.1. Increasing ROACE 1.1.2. Reducing environmental reserves	1.1. ROE	-0,1			Business Continuity Management (BCM) Enterprise Risk Management (ERM)
			1.1. EBITDA (mFt)	17703	5099	13699	
			ROACE (%)	1,53	-13,08	-7,17	
			1.2. Environmental reserves (mFt)	2563	1971	2030	
			1.2. HSE-related fine	0	0	0	
2. Customers	2.1. Satisfying consumer demands 2.2. Developing mutually beneficial partnerships	2.1.1. Product portfolio enlargement 2.1.2. Product quality development 2.1.3. Extending product life span 2.2.1. Increasing consumer satisfaction 2.2.2. Communicating the importance of	2.1. Customer satisfaction index (%)	14,39	19,52	15,52	Customer Relationship Management (CRM) Reports on sustainable development

		sustainable development towards customers					
3. Internal processes	3.1.Improving environmental performance 3.2.Eco-conscious research and development 3.3. Establishing social and eco-conscious supplier partnerships 3.4.Implementing green logistics solutions 3.5.Increasing the level of safe operation 3.6.Communicating the development of internal processes	3.2.1.Developing new, biologically degrading plastic materials 3.2.2.Research programmes aimed at making plastic materials more environmentally 3.5.1.Introducing direct measures for handling safety risks	3.1. Environmental investments (mFt)	36,7	110,4	974	Integrated Management System (IMS) Quality Control System (QCS) Total Quality Management (TQM) Process Safety Management (PSM) Energy Monitoring and Information System (EMIS) Supplier assessment system
			3.2. Services related to research and development (mFt)	no data found	235	230	
			3.4. Amount of recycled hazardous and non-hazardous waste (t)	900	4602	488	
			3.5. Number of fire accidents (pcs)	0	0	3	
4. Learning and growth	4.1. Improving human resources, capabilities and knowledge 4.2. Developing a sustainability-oriented corporate culture 4.3. Increasing the satisfaction and commitment of employees	4.1.1. Attracting the most talented individuals 4.1.2. Keeping and improving existing labour force 4.2.1. Promoting HSE consciousness among newly appointed managers	4.1. Cost of education and training per capita (Ft)	150000	76212	74500	Sustainable Development Management System (SDMS) Sustainability reports HSE management system Idea Support Management (ISM) Carrier Management System (CMS) Performance Assessment System (PAS) Performance Management System (PMS)
			4.1. Number of training hours per capita	no data found	31,59	79,8	
			4.3. Number of employees left from TVK (person)	52	44	60	
			4.3. Rate of sick leave (%)	15,8	16,4	15,3	
5. Society	5.1. Keeping and improving the local community's quality of life 5.2. Establishing value-creating relationships with society members	5.1.1. Reducing the number of accidents resulting in lost working hours 5.1.2. Reducing the frequency of all reportable occupational illnesses	5.1. LTIF (Lost Time Injury Frequency)	0,49	0,50	0,50	Ethical code Occupational Health and Safety Management System (OHSAS) STEP programme Safe workplace project Safe transport programme
			5.1. TROIF (Total Reportable Occupational Illness Frequency)	0	0	0	
			5.2.	66,7	66,9	49,89	

		5.1.3. Raising the rate of employee participation in health improvement programmes in the workplace 5.2.1. Extending support and sponsorship activities	<table border="1"> <tr> <td>Sponsorship and donations (mFt)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5.2. Rate of female employees compared to the total number of employees (%)</td> <td>34,5</td> <td>32,5</td> <td>32,6</td> </tr> </table>	Sponsorship and donations (mFt)				5.2. Rate of female employees compared to the total number of employees (%)	34,5	32,5	32,6									
Sponsorship and donations (mFt)																				
5.2. Rate of female employees compared to the total number of employees (%)	34,5	32,5	32,6																	
6. Natural environment	6.1. Environmental protection 6.2. Reducing environmental load	6.1.1. Protection of natural resources 6.2.1. Rationalization of raw material and energy consumption needs 6.2.2. Minimizing the consumption of surface fresh water 6.2.3. Reducing the emission of greenhouse gases	<table border="1"> <tr> <td>6.1. Total amount of recycled and reused fresh water consumption (m3)</td> <td>934770</td> <td>859944</td> <td>1372293</td> </tr> <tr> <td>6.2. Natural gas consumption (GJ)</td> <td>no data found</td> <td>1403194</td> <td>1693172</td> </tr> <tr> <td>6.2. Electricity consumption (GJ)</td> <td>no data found</td> <td>1938093</td> <td>2015495</td> </tr> <tr> <td>6.2. CO2 emission (t)</td> <td>1147068</td> <td>1056552</td> <td>1127707</td> </tr> </table>	6.1. Total amount of recycled and reused fresh water consumption (m3)	934770	859944	1372293	6.2. Natural gas consumption (GJ)	no data found	1403194	1693172	6.2. Electricity consumption (GJ)	no data found	1938093	2015495	6.2. CO2 emission (t)	1147068	1056552	1127707	Integrated Pollution Prevention and Control (IPPC) Integrated Environment Management System (EMS) Sustainable Development Management System (SDMS)
6.1. Total amount of recycled and reused fresh water consumption (m3)	934770	859944	1372293																	
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6.2. Electricity consumption (GJ)	no data found	1938093	2015495																	
6.2. CO2 emission (t)	1147068	1056552	1127707																	

Source: own elaboration based on company reports, 2012

Conclusions

Our study aims at facilitating the implementation of the types of sustainability strategies and the Sustainability Balanced Scorecard within a wide range of companies. In this respect it can be concluded that the successful implementation of the SBSC is generally related to the chosen strategy, corporate culture, organizational structure, processes and methodological factors.

As it is in the case of the Balanced Scorecard, the Sustainability Balanced Scorecard also includes various strategies. However, only few strategies can be found in the area of sustainability management that explicitly express the requirements of sustainability. Therefore, selecting the appropriate type of sustainability strategies is important in the strategy-planning process. Starting from this point, it becomes possible to determine strategic objectives, key performance indicators and management tools. The results of several empirical studies (Kaplan and Norton, 1996; Bieker, 2005; Pelczné Gáll, 1997) prove that companies introducing the

traditional Balanced Scorecard have a better knowledge on the routine of planning and implementing strategies. In other words, these companies already have well-defined and consistent strategic objectives.

The significance of corporate culture is enhanced by the fact that the introduction of the SBSC as a new performance evaluation system causes fundamental changes in the management. The new SBSC may question earlier strategic structures and processes both from contentual and methodology perspectives. Therefore cultural factors may play an important role in the integration process. These factors are as follows:

In his study, Hernádi (2009) states that the commitment of the top management is one of the most important factors in the realization of corporate sustainability. The same applies to the SBSC as well. It has to be expressed when emphasizing the importance of sustainability issues. Moreover, the management has to take into account the reluctance of employees and take steps to handle it proactively. This can be achieved by discussing the problems with the involved and asking for their opinion on possible decision alternatives in advance.

Corporate organizational structure also belongs to the factors of effectiveness. The SBSC has to reflect the structure of the organization its strategy is about. The reason for this is that the strategy is usually interpreted at the level of different organization units. The condition for accepting the Sustainability Balanced Scorecard inside the organization is that the requirements imposed by the sustainability strategy of a given company or business unit have to appear in the goals determined for organizational units, groups and individuals. Instead of doing this, departments often have to focus on being in line with the financial framework, determined as a part of the traditional management system. The goals of groups and individuals within the organizational units are linked to operative goals which exclude the development of such capabilities that facilitate the achievement of sustainability objectives. This problem can mainly be attributed to the fact that human resource managers are often unable to match the goals of individuals and groups to higher organizational goals.

In addition to the above, there is a significant result potential hidden by the factors related to both process and methodology. Among these factors, the most important approach is the one the Sustainability Balanced Scorecard is built on. The traditional Balanced Scorecard recommends a methodology moving from top to bottom which means that strategic goals are determined by the top management. However, this often leads to internal resistance because it fails to take the individual aims of employees into consideration, which, in turn, may endanger the available resources.

The coordination of the entire organization in accordance with the vision and the defined direction is a complex process involving many people. Thus, corporate experience together with a clever combination of 'top-to-bottom' and 'bottom-to-top' approaches may strengthen the commitment of employees towards strategic goals as well as management tools. On the other hand, such strategic inputs – defined by the top management – as corporate mission, values and vision combined with the elaborated sustainability strategy provide managers at both middle and top levels a guidance to determine operative goals, indicators and tools. Naturally, this is a time-

consuming process that requires a lot of internal consultation but it is worth performing it.

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