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BALANCED SCORECARD – AN INSTRUMENT FOR CREATING AND IMPLEMENTING DEVELOPMENT STRATEGIES OF AN ORGANIZATION

Summary

One of the strategic management instruments used to build and implement the plans of company development is balanced scorecard (BSC). Application of the BSC means for the organization the orientation of its strategy and management system to the improvement of effectiveness and innovativeness, what can be effectively used for its development. The paper presents the principles and methodological applications of the BSC for the construction of the strategy of organization development. It presents case studies covering the application of the BSC at the metallurgical company and benchmarking of technology parks.

1. Introduction

Economy situation that can be characterized by progressing globalization and crisis threats is related to continuous growth of intensity and scale of competition. Gaining and maintaining competitive advantage means that a company must develop, improve and implement modern management systems, almost always focused on the growth of effectiveness and innovativeness that enable their development. One of the strategic management instruments used to build and implement the plans of company development is Balanced Scorecard (BSC). Genesis and evolution of the balanced scorecard has been interestingly described by M.Ćwiklicki¹. Balanced Scorecard (BSC) according to the concept of its creators², is to represent innovative instrument or management system to enable improvement of an organization

¹ M.Ćwiklicki, *Hoshin kanri a zrównoważona karta wyników*, Zeszyty Naukowe Akademii Ekonomicznej w Krakowie, no. 713, 2006.

² R.S Kaplan, D.P. Norton, *Strategiczna karta wyników. Jak przełożyć strategię na działanie*, Wydawnictwo Naukowe PWN, Warszawa 2002, p.11-12.

operations. Balanced Scorecard treated as an element of Value Based Management (VBM)³. One of the basic applications of BSC (found as its important virtue) is first and foremost the ability to implement the organization strategy. One of the basic assumptions of the balanced score card concept is as follows: there are no applicable instruments to efficiently implement grandiloquent and generally couched strategy of a company. Common strategic planning was focused on issues related to strategic analyses, formulating missions and visions as well as general goals and possibly directions of operations. The goal of this paper is to present the idea and application of the Balanced Scorecard while implementing the strategy and benchmarking analysis.

2. Concept of the Balanced Scorecard- conditionings of application

While recommending the BSC application in practical strategic planning, we consider the fact its application means "translation" of the strategy into a set of specific goals, measures (yardsticks) and strategic initiatives. Placement of the balanced scorecard in the system of strategic planning of the company is presented in the Fig.1 In the configuration of the planning system elements presented in the figure, BSC is treated as an implementation instrument filling a gap between the developed strategy and the method of its realization.

Measures (yardsticks) and indexes given in the balanced scorecard should be selected so to maintain a balance within four dimensions:

- 1) Field of relations between investors (owners), customers and potential of a company. Means an equilibrium between external indexes characterizing satisfaction of the owner and customers and external indexes characterizing the processes of organization (including especially business processes).
- 2) Field of relations between indexes characterizing main strategic goals and indexes describing factors (stimulators) for realization of these goals, perceived as so called factors of success.
- 3) Field of the structure of generic goals. It covers financial indexes that include economical effects and relations as well as non-financial indexes that characterize the servicing of the market and clients, internal processes of the company, its know-how and development of the organization.
- 2) Field of relations between indexes characterizing main strategic goals and indexes describing factors (stimulators) for realization of these goals (perceives as so called factors of success).
- 3) Field of the structure of generic goals. It covers financial factors that include economical effects and relations as well as non-financial factors that characterize the servicing of the market and clients, internal processes of the company, its know-how and development of the organization.
- 4) Field of the goals structure due to the time of their realization. It covers indexes describing long-term goals as well as indexes characterizing short-term goals.

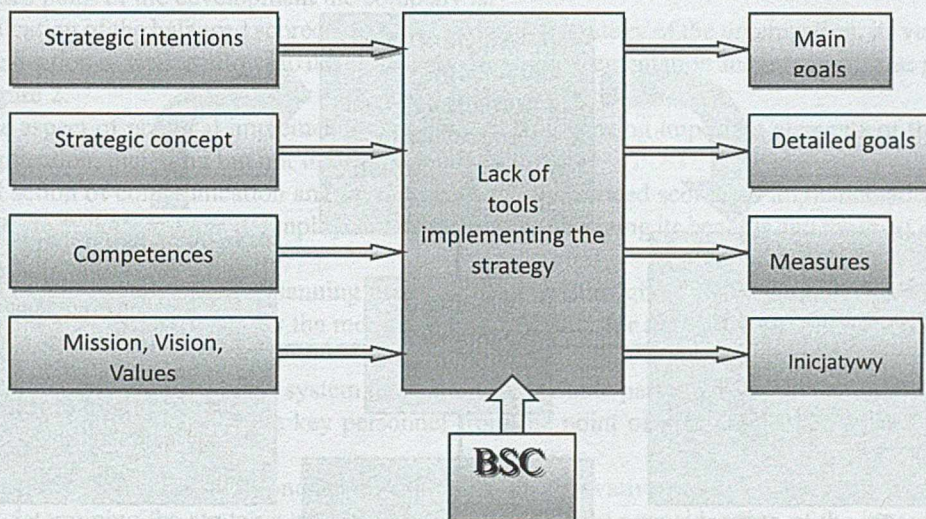
If companies want to compete at the market, they couch models of their businesses using among other things strategic planning whose basic product is strategy. From the point of view of constructing strategy, BSC can be treated as a multi-dimensional structure based on four separated perspectives:

- financial – that covers goals that characterize finances of the company and represent the base the given company is perceived by owners (investors) in the aspect of financial expectations (e.g. return of the invested equity, value of shares, use of equity, dynamics of sale, financial liquidity)⁴,

³ Wide and very interesting study concerning the VBM method is presented in: *Systemy VBM i zysk ekonomiczny... Projektowanie, wdrażanie, stosowanie*, ed. A. Cwynar i P. Dżurak, Poltext, PWC, Warszawa 2010.

⁴ Financial indexes and goals for example are presented in the paper of M. Krall in "Bankovníctví a jeho produkty" Vydavatelství GEORG, Zilina (Czech Republik) 2009, p.19.

Figure 1. Place of the balanced scorecard (BSC) in the strategic planning system of the company



Source: Developed based on: M. Nair, *Essentials of Balanced Scorecard*, Emerge Inc. John Wiley&Sons, New Jersey 2004, p. 5.

- customer – showing goals and methods of their achievement that characterize the value created by the organization for its customers by delivering and selling products to them. The created related value should be and contribute to the loyalty of customers and their satisfaction;
- internal processes – presenting the most important internal processes in the organization from the point of view of delivering value to the owners and customers. This especially relates to the processes generating direct value for the clients thus business processes.
- development – characterizing development of employees and their satisfaction from the performed tasks and other elements of the system managing the knowledge.

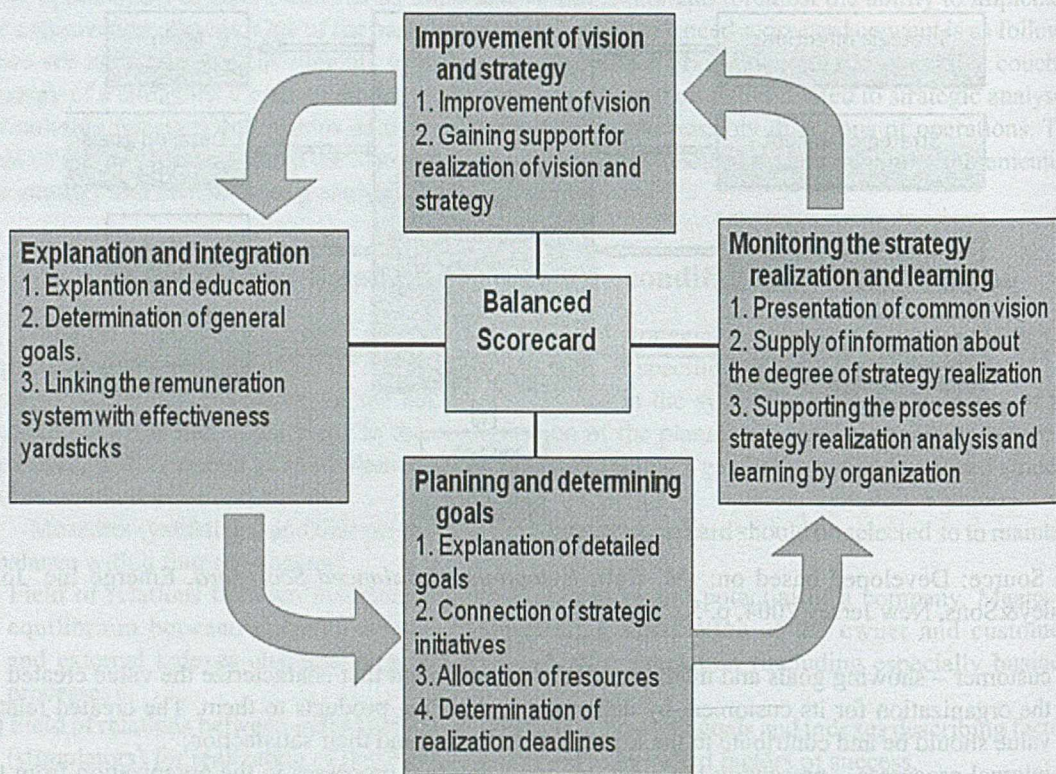
Model of the balanced scorecard in the aspect of strategic management is presented in the figure 2.

Each of the four presented perspectives is very important for the evaluation of current and future standing of the company. Goals of the financial perspective measure the financial success of the company as a business organization. Perspective of the customer shows the most important sources of this success, i.e. market standing, loyalty and customers satisfaction. To achieve market and financial success, the company must realize specified goals of which business processes are the most important. Their effectiveness is measured in the perspective of internal processes. Future success of each organization also depends on its ability to change and further growth, it is conditioned by issues measured in the perspective of development. Goals of each perspective are strongly related to each other, for example opportunities to achieve financial goals depend on realization of non-financial goals.

Balanced scorecard combines the following in balanced way:

- long-term goals (most often couched within 2-5 years) and short-terms,
- financial and non-financial yardsticks (e.g. amount of profit and the level of customers' loyalty),
- indexes of operational activities effects and strategic indexes (selling out),
- external and internal effectiveness (e.g. economical profit but also process output)

Figure 2. Balanced scorecard as the method of implementing strategy



Source: R.S Kaplan, D.P. Norton, *Strategiczna karta wyników. Jak przelożyć strategię na działanie*, Wydawnictwo Naukowe PWN, Warszawa 2002, p.30.

As aid before, the balanced scorecard is a management tool that support communication of strategy and its effective realization. Based on it, among other things, it is possible to determine main relations taking place between four perspectives and their influence on correction of results of the given organization.

BSC has become in many organizations the base for strategic planning and more and more frequently it is used for operational planning. The first step of its application is obviously the determination of strategic vision and goals. Strategic goals, for sure, are the most transparent elements of the strategy for significant part of organization members. Value of BSC is the option to communicate goals of the organization among its employees and control their realization by modern monitoring. The goals must be put into measurable indexes that express full, complete scope and field of the company operations as far as applicable. It is important to select the set of indexes that would influence the non-financial results and at the same time would be the stimulator for the financial indexes. For example, achievement of high level of customer's loyalty enable stable profits on sale that generate income. It is the higher and burdened with less risk the more effective the processes while its application are.

Particularly, when selecting and constructing proper indexes of BSC, one should bear in mind the following conditions:

- measures (yardsticks) must be related to the system of value and vision of the company,
- selection of yardsticks should reflect the whole picture of the company operations,
- yardsticks should only determine the significant elements that influence the company operations,

- indexes should not be too rigidly defined that is why they must be verified, in order to obtain information at which point of the development the company is.

Application of the balanced scorecard allows to develop strategy of the organization, its verification and actualization as well as allows to develop the system of implementation and monitoring, as presented in the figure 2.

In the aspect of practical implementation of BSC, the following important elements of the system of its application, including but not limited to:

- broad action of communication and presentation of the balanced scorecard implementation project directed to as large number of employees as possible, emphasizing its benefits and the most important requirements,
- development of the strategic planning process characteristics given in the form of understandable procedure that explicitly shows the mode and responsibility for individual operations and products of the process,
- option to build new motivation system that condition variable part of pay on the executed tasks and goals, especially in case of the key personnel from the point of view of the strategy of company oriented at growth of value,
- application of incentives and conditions to stimulate the innovativeness by cooperation of employees while determining the strategic goals and initiatives as well as consideration of the innovativeness issues in the motivation system.
- creation of the system for monitoring the realization of strategic plans (and subsequently operational plans) that generate reports enabling learning by organization,
- development of the system of employees evaluation that contain criteria related to realization of goals and tasks as well as to increase of the company effectiveness,
- application of task contracts as the basic form of bonuses for specialist and management personnel,
- indication of tasks, fields and processes that are key from the point of view of creating values that condition long-term financial and market success of the company,
- proper selection of processes that speak for the potential of material resources of the company important for shaping the value,
- determination of short-term effectiveness goals (mostly in the perspective of finances and processes) that are important for the efficiency of operational functioning of the company (e.g. financial liquidity, minimization of stock costs).

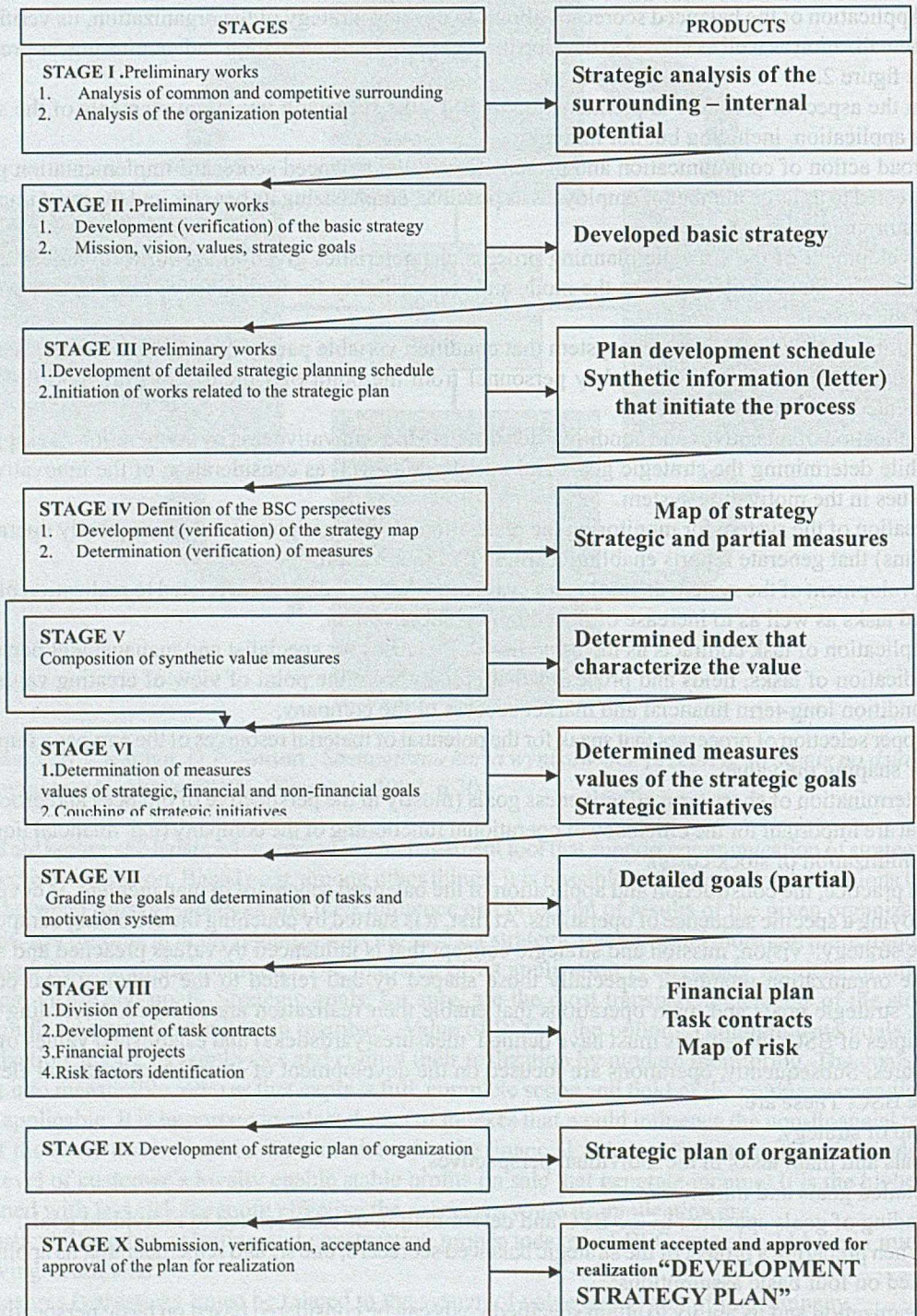
In practice, the construction and application of the balanced scorecard in management, is developed employing a specific sequence of operations. At first, it is started by couching the following components of the strategy: vision, mission and strategic concept that is influenced by values preached and shared by the organization members, especially those shaped by and related to the organizational culture. Then, strategic goals and main operations that enable their realization are couched. According to the principles of BSC, these goals must have defined measures(yardsticks) and established values of these measures. Subsequently, operations are focused on the development of so called operational elements of the BSC. These are:

- map of strategy,
- goals and main tasks in the individual perspectives,
- detailed goals and initiatives,
- grading of goals specified in the BSC and determination of tasks related to individual goals.

When preparing a project of the strategic balanced scorecard, one should remember that its application is based on four basic assumptions:

1. Organization and its ability to attain specified goals can be considered based on basic perspectives. In case of the companies, four perspectives are most common: financial, customer, internal processes as well as development and learning. This number of perspectives should not be treated as an imperative

Figure 3. Diagram of developing the organization development strategy plan using the BSC



Source: own study.

or methodological doctrine. Due to the sector specificity or development vision, the construction of the scorecard can be supported by more perspectives. Beside the commonly accepted four perspectives, these could be: perspective of human resources, perspective of environment preservation, perspective of material resources. Acceptance of each additional perspective necessitates, of course, new look at the balancing of the company goals and equality of each of the perspectives. This may hinder showing the dependency between these goals and the strategy map construction is more complicated.

2. BSC related concept and implementation works necessitate organization of systematized process in which many divisions of the given organization cooperate. Most frequently such process consists of proper stages where documents are being developed which are treated as products of the given stage. Exemplary diagram of developing strategy plan using BSC is presented in the figure 3.

3. Equivalence of meaning and role of all perspectives should be maintained. Knowing this principle is important not only formally but may especially contribute to the change of mentality of employees, particularly management personnel. The fact that between goals and tasks in individual perspectives there are casual connections should be strongly emphasized. Awareness of the fact that realization of financial goals, especially the basic goal which is goodwill, depends on achieving assumed results in other perspectives of the organization, contributes to better inter-personal relations, reinforcement of mutual respect and regard of co-workers achievements.

4. In each of the four perspectives, it is possible to couch strategic goals (of general characters) as well as detailed goals, yardsticks of their realization and tasks. We must determine specific, expected and real results, that is why, while couching the goals, it is important to bear in mind the SMART principle: S-specific, M- measurable, A-ambitious, R-realistic, T- timeframed.

3. Application of BSC – working out the strategy of metallurgical company development

Based on this methodology, the BSC has been applied in a metallurgical company modifying it however so that the first three stages were developed in variants (creating strategic variants of development) and then, a selection of a strategic model was selected based among other things on evaluation of risk factors. The preferred strategic model was defined in general as: flexible supplier of metallurgical servicing operations provided to small and average companies. This shall be a company that supply high quality services of steel processing closely adapted to the needs of customers.

3.1. Strategic variants

The carried out sector examinations based on the internal and external development, after discussion with experts, have been limited to four main concepts:

- 1). Model of effectiveness – current domain – basic strategy
- 2). Service Centre
- 3). Cooperating party for the construction and steel structures discipline
- 4). Cooperating party for the road infrastructure

All models have been discussed according to the following structure:
development scenario

- vision
- mission
- strategic goals
- execution methods
- necessary resources

As a result of thorough research and consulting works, a selection of the strategic variant was made, i.e. service centre.

The strategic assumption was to create the service centre of steel structures for minor receivers, performing maintenance services for minor receivers. The service centres within the iron and steel metallurgical sector represent extension of the steel processing and machining process. Their importance from the sector point of view increases together with the customers' requirements, who demand products not only inexpensive and suitable as regards quality but also adapted to specific needs (cut, bent, drilled, etc.).

Dynamics of common surrounding :

- Increase of the demand for maintenance services – occurrence of large number of entities interested in performing maintenance services.
- Increase of interest in additional services (drilling, painting, welding the structures).
- As it results from PIKS [Polska Izba Konstrukcji Stalowych – Polish Chamber of Steelworks] and CIBEH data, steel structures production in Poland within a few last years amounted ca. 760 K tons and continuously increases.
- Admittedly, the national demand for steel structures has decreased within the period of the largest regression in the construction industry, but even in that time, the companies saved themselves by means of export.
- Within the last two years, all indexes regarding production, consumption and export show increasing tendency.
- Profitability of the companies manufacturing the structures increase.
- Good financial results originated both at increasing incomes on the business and higher prices of structural elements at the national and foreign markets.
- Over 80% of the exported structures is in the form of not processed elements. Over 7% of the exported volume concerns the scaffolding elements.
- The largest receivers of Polish structures are European Union states, where almost 84% of products are sold.
- Construction industry development – dynamics of steel consumption in 2002-2009 was 12%-20%.

The basic conditions which are considered within the scope of the service centres operations are as follows:

- Minimum volume of purchase
- Quality and price
- Product differentiation that determine technological processes
- Average maturity
- Average period of collecting the outstandings
- Average period of agreement Distributor - Customer
- Often used means of transportation
- Average distance for dispatches
- Average logistic cost
- Entry barriers

Value system – competitiveness considerations:

- technological level – possessed machine fleet significantly influences the final product, reduces the claim risk from the Customer; modern machine fleet guarantees high quality of performance. Customer's satisfaction is formed at the beginning of the contractual relationship,
- quality of products – there are many companies which would like to pay more for high quality of ordered products,
- manager technical support – some companies place the orders at companies where they can count on experienced process engineers, technical advisors. Completeness of the offer is perceived by such

- Customers as complementarity of the basic product and technical advisory basically increases the customer's satisfaction,
- time of response for the Customer's needs (Customer orders and practically receives the product at the same time),
- prices of the products adapted to current market, i.e. the offerer cannot shift the costs for storing the product and exchange rate risk to the customer.

Strategic intentions:

- concentration of the maintenance services within the construction and structural sector
- finding a market niche related to supplies for receivers of minor steel structures
- emphasis, within the framework scope, on performing the services at the
- Customer's site

Scenarios:

A.independent development of competences that enable execution of maintenance service .

B.Joint venture with Polish or foreign company having experience in functioning at the construction and steel structures market

Construction of the balanced scorecard was started for such specified strategy model. Goals, their measures, strategic initiatives and resources at the strategic level were presented in four perspectives: financial, customer, development and processes and shown in the tables: 1-4.

Table 1. Goals, strategic initiatives and risk factors related to customers perspective

Goals (goals yardsticks)	Methods of realization and resources	Risk factors	Risk factors
Concluding a contract with strategic customer related to processing services (value of the concluded contract)	Development of a marketing plan for new operations Determination of target market segments Development of	1. Withdrawal of strategic customer from cooperation. 2.New processing company established in the region.	1. Withdrawal of strategic customer from cooperation. 2. New processing company established in the region.
Increase of customers loyalty (number of regular customers)	competitive price policy of services Implementation of customer service and loyalty program tools Employment of new	1. Threat in the form of relevant competition. 2. Lack of customer service systems development	1. Threat in the form of relevant competition. 2. Lack of customer service systems development
Recognition of new sales areas and gaining customers for service operation (number of new customers)	qualified employees for marketing and trade operations Creating pro-consumer networks	1. Threat in the form of relevant competition. Low level of marketing competition	1. Threat in the form of relevant competition. Low level of marketing competition
Maintenance of market standing within sales of sections (percentage share at the Polish market of steel section)		1. Threat in the form of global competition. 2. Increase of internal costs	1. Threat in the form of global competition. 2. Increase of internal costs

Source: own study.

Risk factors were specified using the experts' evaluation technique. The risk was evaluated by 9 experts representing among other things metallurgical sector and its research and development area.

Table 2. Goals, strategic initiatives and risk factors related to finances perspective

Goals (goals yardsticks)	Strategic initiatives and resources	Risk factors	Risk factors
1. Gaining the determined level of effectiveness (economic value added - EVA)	Gaining favour of shareholders for the method of financing the development Shaping the structure of costs of new operation providing stable profitability Efficient negotiating of bargain prices of materials	1. Contraction within building and road industry 2. Competitiveness of prices of major players and Far Eastern suppliers 3. Growth of capital costs – higher expectations of owners	1. Contraction within building and road industry 2. Competitiveness of prices of major players and Far Eastern suppliers 3. Growth of capital costs – higher expectations of owners
2. Maintaining profitability of sales of sections at the present level (return on sales - ROS)	Shaping cash flows that would provide financing for the start of operations within new field Development of advantageous agreements with financial institutions.	1. Competitiveness of prices of major players and Far Eastern suppliers 2. Increase of suppliers impact	1. Competitiveness of prices of major players and Far Eastern suppliers 2. Increase of suppliers impact
3. Diversification of incomes sources (value of incomes on service operations) (number of service operations)	Ability to manage costs. Ability to create good image for financial institutions Ability to manage investment projec	1. Creation of new companies providing service operations 2. Contraction in the metallurgical and building industry 3. Difficulties in mastering new technologies and methods of customer service	1. Creation of new companies providing service operations 2. Contraction in the metallurgical and building industry 3. Difficulties in mastering new technologies and methods of customer service

Source: own study.

Table 3. Goals, strategic initiatives and risk factors related to development and learning perspective

Goals (goals yardsticks)	Methods of realization and resources	Risk factors
Building HR potential for performing the strategic reorientation (number of employed manager and manager technical support)	Creating new centre of competences that realize service domains Implementation of recruitment, selection and professional adaptation process of potential discipline specialists	1. Improper methods of recruitment and development of HR 2. Inefficient motivation systems
Creation of IT system for building prospective marketing of relations (availability of IT system) (number of persons actively using the system)	Building a design team for realization of implementation tasks in new domain	1. Badly selected IT system. 2. Low level of system utilization
Adaptation and professional satisfaction of service centre employees (level or professional satisfaction of employees)	Development and implementation of new motivation system Implementation of new management systems (BSC) and IT	1. Mental and content-related difficulties that hinder adaptation to new strategy 2. Possibility that human relations would deteriorate
Creation of the system of specialist qualification improvement related to new product orientation (number of employees covered by the system)	Development and realization of training system in the aspect of strategy reorientation	1. Difficulties related to professional reorientation of older group of employees

Source: own study.

Table 4. Goals, strategic initiatives and risk factors related to internal processes perspective

Goals (goals yardsticks)	Methods of realization and resources	Risk factors
Implementation of new customer service process considering relationship marketing system (number of customers covered by the system of relationship marketing)	Analysis of the technologies suppliers market, purchase of a project and its application Financial installation – financial optimisation Training of employees Mastering new technology and work organization	1. Employees mentality barrier 2. Competence barrier, legal company syndrome
Gaining high productivity and effectiveness of work Improvement of production process and quality assurance (percentage of rejects, quality standards)	Environment certification, implementation of TQM Development of supplies and shipments transport system Analysis and verification of current portfolio of suppliers	1. Exceeding budget for modernization 2. Failure to keep the quality parameters
Implementation of new technologies of service operations (time, production and cost parameters)		1. Financing difficulties 2. Mastering new technology
Reengineering of the process of supplies – implementation of the system based on Just In Time (cost of logistics, on time deliveries)		1. Mental barrier 2. Selection and agreements with suppliers 3. Risk related to infrastructure

Source: own study.

4. Application of BSC for benchmarking research of technology parks

The main goal of benchmarking research of technology parks in Poland was to identify best practices and transfer of this knowledge to all participants of the research in order to improve efficiency of their operation and intensify their development. The Balanced Scorecard was used as a tool that enable determining business and strategic standing of the organization. Due to specific nature of the technology parks – parks manifest qualities of network organization, customer perspective has been replaced with stakeholders perspective, emphasizing wide scope of entities interested in technology parks operations. Each of the perspectives has been additionally divided to two research areas (Figure 4).

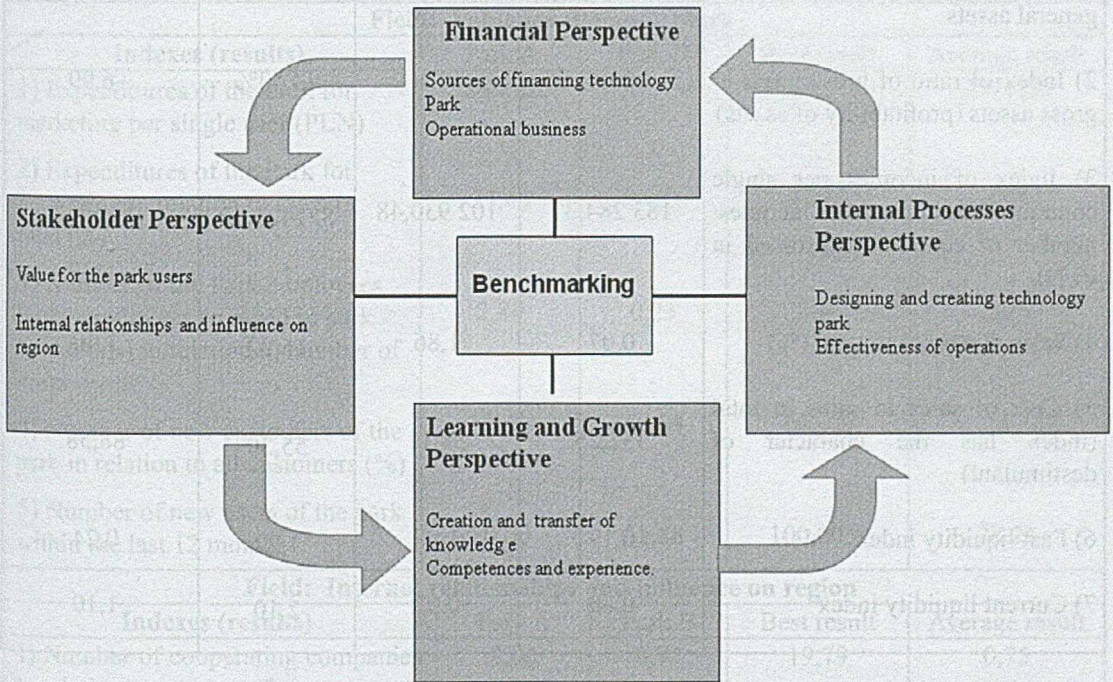
As a result of that, eight areas have been created and evaluated in the course of the benchmarking research.

Benchmarking research of technology parks covered eight areas:

- Sources of financing a technology park

- Operational business
- Value for the park users
- Internal relationships and influence on region

Figure 4. Perspectives and areas for benchmarking research of technology parks



Source: A. Jabłoński, M. Jabłoński, T. Marona A. Szwej, M. Musztyga-Dawidowska, A. Lech, *Metodologia benchmarkingu parków technologicznych w Polsce*, PARP Warszawa 2009, p.10.

- Designing and creating technology park
- Effectiveness of operations
- Creation and transfer of knowledge
- Competences and experience.

According to the adopted methodology, research of 17 technology parks has been performed based on 56 indexes characterizing these fields, defined within the scope of four perspectives of the balanced scorecard. For comparison purposes, median method was used, because the span of results was very wide due to differentiation of parks. The identified, best results obtained in the examined sample of parks enabled to specify good practices within the scope of indexes within eight identified areas, which fact can be used in practice in management.

The balanced scorecard was used for index based benchmarking of individual parks. Comparison analysis of the results achieved by individual parks allowed to specify position of each of them. Tables 5-8 present indexes that characterize results obtained in individual areas of four perspectives of examined parks.

Table 5. Results obtained by the examined technology parks in the financial perspective

Field: Operational business				
Indexes (results)	Park A	Park B	Best result	Average result
1) Productivity of assets expressed by the ratio of general incomes to general assets	4,27	33,84	240,70%	13,99
2) Index of ratio of gross profit to gross assets (profitability of assets)	0,06	0,78	44,53%	-6,99
3) Index of incomes per single contract (index of ratio of incomes/ number of contracts expressed in PLN)	183 284,37	102 930,48	821421,22	18152,05
4) Sales dynamics in total (%)	0,07	1,86	16,92	1,40
5) Cost of sales to sales in total (index has the character of destimulant)	332,25	58,11	55,30	88,58
6) Fast liquidity index	0,19	1,88	1,22	0,24
7) Current liquidity index	0,80	0,03	2,10	1,10

Field: Sources of financing a technology park				
Indexes (results)	Park A	Park B	Best result	Average result
1) Value of public resources in relation to incomes (%)	3483,45	18,92	3974,17	48,96
2) Value of resources obtained from the European Union (or as grants from other international organizations) to incomes in total	3483,45	18,92	3483,45%	41,81
3) Investment expenditures of park to expenditures in total	0,00	26,14	88,74%	30,38
4) Incomes by virtue of renting the area to incomes in total	29,55	5,00	81,59%	22,68
5) Amount of financial assistance for the park users in total to incomes in total	0,00	0,00	50,90%	0,21

Source: own study.

When analysing data in table 5, one may find that the examined parks generate relatively low incomes and profits in relation to the possessed property. Indexes that characterize the dynamics of sales, productivity of the property and financial situation of the Park are relatively low and diverge from average data.

Table 6. Results obtained by the examined technology parks in the perspective of stakeholders

Field: Value for the park users				
Indexes (results)	Park A	Park B	Best result	Average result
1) Expenditures of the Park for marketing per single user (PLN)	38886,20	7997,54	108642,51	2971,00
2) Expenditures of the Park for marketing in relation to sales in total (%)	27,46	11,92	47,00	4,97
3) Number of the Park employees (only employees engaged in park operations) in relation to number of users	2,80	0,23	7,45	0,48
4) Number of new customers of the park in relation to all customers (%)	87,50	40,54	100,00	57,69
5) Number of new users of the park within the last 12 months	20,00	31,88	100,00%	28,21
Field: Internal relationships and influence on region				
Indexes (results)	Park A	Park B	Best result	Average result
1) Number of cooperating companies in relation to number of users	8,00	0,75	19,79	0,75
2) Number of cooperating scientific entities in relation to number of users	2,80	0,10	5,00	0,13
3) Number of cooperating independent experts in relation to number of users	4,20	1,54	4,2	0,46
4) Number of cooperating advisory companies per one user	1,40	0,33	1,40	0,12
5) Number of projects realised by the Park cooperation with other institutions	3,00	2,00	8	3,00
6) Number of cooperating financial institutions: venture capital, seed capital or other per single user	0,60	0,03	0,6	0,03

Source: own study.

Table 6 presents indexes characterizing two areas of stakeholders perspectives:

- value area for the park users,
- internal relationships and influence on region.

Within the area "Value for the park users", the examined parks have a relatively strong position. The indexes are the result of proper expenditure of resources for marketing and the number of engaged employees in relation to the Park users. The examined Park achieves very good indexes such as the number of cooperating independent experts, number of cooperating advisory companies or Venture Capital financial institutions which fact provides the leading position within these areas of cooperation.

Table 7 presents indexes and their intensity that characterize two areas of internal processes perspectives:

- area of designing and creating technology park, area of value for park users,
- effectiveness of operations

Table 7. Results obtained by the examined technology parks in the perspective of internal processes

Field: Designing and creating technology park				
Indexes (results)	Park A	Park B	Best result	Average result
1) Park construction time	9,00	21,00	1,00	22,00
2) Park location	24,00	25,00	25,00	23,00
3) Park area	1,83	528,83	528,83	5,45
4) Park buildings area	5980,5	3163,00	23444,0	4442,53
5) Number of park users	5,00	69,00	97,00	97,00
6) Number of park partners to the number of its users	2,00	0,57	2,67	0,42
7) Number of spin-off companies to the number of newly established companies	2,00	0,05	2,00	0,25
8) Number of start-up companies to the number of newly established companies	2,00	0,68	9,00	1,00
Field: Effectiveness of operations				
Indexes (results)	Park A	Park B	Best result	Average result

1) Level of usage of building areas	98,5	31,65	99,70%	86,85
2) Number of services provided to users within the last 12 months to the number of users	15,20	0,38	35,53	3,67
3) Number of services types proposed by the park to the number of users	3,60	0,10	5,00	0,27
4) Number of users debuted at the Stock Exchange, including New Connect to the number of users (%)	0,00	0,00	10	0,1
5) General evaluation of the institution managing the Park given by the users	4,22	4,31	4,64	4,20
6) Evaluation of Internet strategy (number of points)	13,00	17,00	20,00	15,00
7) Index of relation of new sales to sales in total (%)	65,38	34,62	100,00	4,19
8) Number of venture capital investments performed within the last 3 years	0,00	0,00	0,33	0,03
9) Number of technological and innovative implementations at park users to the number of cooperating scientific entities	0,14	no data	12,50	0,62
10) Number of technological and innovative implementations at park users to the number of partners	0,20	no data	4,17	0,42
11) Number of technological and innovative implementations to the number of users	0,40	no data	1,47	0,15

Source: own study

Data given in table 3 show that indexes characterizing the location of parks, number of parks and spin-off type companies are very good, which fact should contribute to the parks development. Within the field of "Effectiveness of operations", the parks are well positioned as well. This consists of high level of building area utilization, good evaluations obtained based on the questionnaires completed by users, wide range of rendered services. Activity within the scope of technological and innovative implementations is evaluated slightly lower, there are no investments financed using Venture Capital.

Table 4 presents indexes and presentation of their intensity that characterize two areas of the learning and development perspective:

- creation and transfer of knowledge,
- competences and experience.

Table 8. Results obtained by the examined technology parks in the perspective of learning and development

Field: creation and transfer of knowledge				
Indexes (results)	Park A	Park B	Best result	Average result
1) Expenditure for training in relation to sales in total	1,71	0,49	1,71%	0,46
2) Expenditures for ICT technologies	8,95	8,56	207,75%	2,28
3) Number of innovative companies in relation to the number of Park users (%)	100,00	21,74	100,00%	57,14
4) Number of park users running R&D operations in relation to the number of Park users (%)	100,00	13,04	100,00%	17,65
Field: Competences and experience				
Indexes (results)	Park A	Park B	Best result	Average result
1) University education employees to general number of employees (%)	92,26	100,00	100%	86,67
2) Number of employees with scientific degree (at least doctor) or scientific title to general number of employees (%)	14,29	12,50	18,28%	6,06
3) Number of new employees in relation to general number of Park users (%)	50,00	31,25	0,00	25,00
4) Within the last year, any of the employees left the work at the Park	0,00	0,00	0,00	0,00
5) Number of managers to total number of Park employees (%)	42,86	37,50	10,81%	30,00
6) Number of patents and trademarks protected with law to number of users	0,60	0,03	0,67	0,04
7) Number of scientific and industrial teams performing scientific initiatives	6,00	55,00	55,00	2,00

Source: own study.

Within the area of “Creation and transfer of knowledge”, position of the Parks is good and it is provided by the number of innovative companies and users engaged in R&D operations. Parks training and ICT technologies expenditures are high which fact may significantly strengthen competences of employees and this is a proper attitude of the operations performed in the parks. As regards “Competences and experience”, the examined parks obtain good results as well that speak for high competences and experience of the Park employees. Especially, the level of education of employees and the number of patent and trademark applications submitted by the Park users is high.

5. Conclusion

The strategic scorecard is the management instrument that enable to translate the general vision to specific, measurable strategic goals, operative actions and detailed goals, understandable for employees at all levels of organization. In practical application of the BSC, one should draw attention to the following important elements of the system of its implementation:

- as wide communication and presentation of the balanced scorecard implementation project among the company employees as possible; without their support, implementation of a project may not be successful,
- utilization of the scorecard to build new motivation system that condition variable part of pay on the realized tasks and goals; task contracts could be used to support that.

One of the conditions of the economy development is utilization by the companies and other organizations representing their elements, efficient, modern management instruments. One of them is balanced scorecard supporting the strategic management of organization of creating innovativeness. This instrument is used to higher and higher extent not only within the companies but also in other entities important for the economy growth.

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