

Use of Balanced Scorecard Method in Project Management as Support of Technical Development of the Company

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Abstract: *Project management is in itself a philosophy of thought that goes far beyond the boundaries of science or science. The main reason is the complexity and dynamism of securing project results. Other no less important factors contributing to the growing importance of project management are global competition, the explosion of knowledge and customer orientation. Current project management tools allow you to respond quickly and efficiently to unavoidable project changes, using sophisticated procedures and tools for time-limited scheduling of several different types of projects simultaneously in conditions of limited resources. These tools include the Balanced Scorecard method. Project management is therefore one of the basic components of organizational management. Project management is considered by many experts to be the most important activity of the future. Among other things, in the field of technical development.*

Keywords: *Project Management, Technical development, Balanced Scorecard method*

INTRODUCTION

21st century has come, the world has reached the edge of a new era. Project management is one of the standard ways of working for successful companies in Western countries, and Western management considers project management knowledge to be an integral part of the skills of managers and executives (Michels, 2015; Bea, Scheurer and Hesselmann, 2011). The trends of the last few years, commanded by ubiquitous globalization, growing complexity, dynamic markets, technical and environmental changes, reveal the background of the shift in social paradigms and give rise to new visionary ideas about the future direction of contemporary society in connection with the new scientific discipline - project management. Therefore, the project management has recently received the attention it deserves, which is becoming the company's macroeconomic strategy.

The main reason is the complexity and dynamism of securing project results. Other no less important factors contributing to the growing importance of project management are global competition, the explosion of knowledge and customer orientation. Current project management tools allow you to respond quickly and efficiently to unavoidable project changes, using sophisticated procedures and tools for time-limited scheduling of several different types of projects simultaneously in conditions of limited resources. Project management is therefore one of the basic components of organizational management. Project management is considered by many experts to be the most important "management" activity of the future (Pinto, 2013). Especially in today's dynamically changing market environment, it is becoming increasingly important and good management can bring any organization a significant competitive advantage. This is the main reason why more and more emphasis is being placed on it. Project management can also be understood as the process of making change itself (Drucker, 2006; Pugh, 1993).

Managing change is one of the managerial skills that is essential for a successful move forward. In addition to the change management process itself, the ability also includes anticipating change, adapting in a timely manner, preparing for it, and responding quickly. It is for these reasons that project management is also linked to the changes. According to Lewin (1998), the basic mechanisms for managing change are as follows: thawing - dismantling the current stable balance that supports existing behaviors and attitudes. This process must take into account the potential threats that change poses to people and the need to motivate those affected by change to achieve a natural state of balance by accepting change; change - creating new responses based on new information; freezing - stabilizing change by introducing and fixing new reactions to the personality profile of those affected.

An effective project manager anticipates and anticipates the need for change and is not the only one to respond to an event that could improve the functioning of the organization; and instead of wandering from crisis to crisis, it manages the process of change over time to be effective and acceptable.

MATERIALS AND METHODS

The aim of this work is to provide a comprehensive view of one of the important supporting methods of project management development, which can be applied in order to gain a competitive advantage, It is a balanced scorecard (BSC). The work is based on a quality theoretical basis related to domestic and foreign bibliographic sources, the above method is specified as a perspective for project management. Methods of analysis, abstraction, synthesis, induction, deduction and comparison were used in the work. The quality and numerical number of bibliographic sources is an attempt to describe the current state of the issue, which is extremely interesting for us and to predict its developmental perspectives.

RESULTS

Due to the dynamics of change, project management has growing importance in all types of organizations. The project helps us to solve fundamental transformational changes, product quality planning, introduction of new technologies, order management, development of new products, etc. Knowledge of the principles of project management becomes a mandatory part of every manager's professional equipment. Mastering successful project management is often described as a competitive advantage or as a necessary equipment for the survival of the organization.

Projects are not only tools for solving complex problems, but are also a new strategic option for designing the company's organizational structure. A project-oriented company is one that: considers project management as an organizational strategy, uses temporary organizations to implement complex processes, manages a portfolio of projects of various types, has specific permanent organizations for integration functions, applies a "new management paradigm", has an explicit project management culture and considers itself project-oriented (Hrazdilová and Novotný, 2010).

One of the important supporting methods of project management development that can be applied in order to gain a competitive advantage is - balanced scorecard (BSC). This approach is based on the fact that the market value of the company differs from the book value of the company. Only financial indicators to measure the company's performance cannot capture the "intangible value of the company",- it also consists of knowledge, skills, employee motivation, business processes, innovation and customer relationships. The concept of a balanced scorecard is often compared with the approach of stakeholders. The organization first defines the important interest groups that affect it - customers, suppliers, the public, etc. Subsequently, the requirements that each group (independent of the other) imposes are recorded. The task of the organization is to meet all these often conflicting expectations as optimally as possible, or. to align them. With the help of BSC, company management can measure how its business units create value for both current and future customers.

BSC can be a basic pillar of a modern system of strategic business management (project management with an appeal to the HRM dimension). It enables the creation of a strategy-oriented company, as it (as well as its organizational units) brings it a holistic focus.

Strategic management systems can be divided into four levels. The first is to clarify and translate the vision and strategy into concrete goals. This is where the creation of the BSC begins, which is the teamwork of the company's top management. Concretizing and clarifying

the strategy is crucial for the creation of BSC (Kaplan and Norton, 2005). The next part is communication and connection about vision and strategy. At this stage, the strategy is communicated to the following hierarchical levels and further specified. The goals of a specific area and individual goals are harmonized, which enables all employees to live with long-term goals. The third part is the process of planning and setting goals, including the alignment of strategic initiatives. Goals should be set for three to five years, and once they are achieved, the business can be transformed. BSC also enables the combination of strategic planning with the creation of corporate budgets.

This process allows you to:

- quantify the long-term outputs that the organization wants to achieve,
- identify the mechanisms and resources needed to achieve outputs,
- set short-term targets for both financial and non-financial benchmarks.

The last part is to improve the feedback and learning process. This process is the most important and innovative in the entire BSC, as it allows monitoring and continuous adjustment of implemented strategies and, if necessary, completely changes them (Kaplan and Norton, 2005).

The Balanced Scorecard, a system of balanced business performance indicators, is a method in management that creates a link between strategy and operational activities with an emphasis on measuring performance. It is one of the most comprehensive models of a strategic performance measurement system. The BSC method was created in response to the finding that a number of strategic goals were not put into practice.

Many companies have a problem with the real connection of strategies with operational activities, when the strategy is implemented in all business areas and it is possible to measure the achievement of strategic goals. One of the reasons for this is that the basis of operational plans are usually only financial indicators that cannot sufficiently characterize the entire company. Therefore, it is necessary to monitor and balance all metrics - in addition to financial indicators also indicators focused on customers, business processes and employees.

The origin of the Balanced Scorecard dates back to the early 1990s. However, the idea of measuring and evaluating in some way the performance of parts of a business is much older. Specifically, this method was developed by the research company Nolan Norton Institute. In 1990, the company sponsored a twelve-month study called "Measuring Performance in the Organization of the Future." The study was funded by the institution to make sure that existing metrics based on financial ratios are outdated.

The study leader at Nolan Norton Institute was David P. Norton. Robert S. Kaplan of Harvard University held the position of Academic Consultant. In the United States, in the study, they analyzed several companies, in the order of dozens. One of the companies was Analog Devices, which used the Corporate Scorecard tool to measure performance and included: financial metrics, metrics related to customer lead times, quality and number of cycles in the production process, and new product development efficiency.

The Analog Devices manager provided Norton and Kaplan with information on the practical use of the Corporate Scorecard, which resulted in modifications to the first Scorecard. The name has also been changed to

Balanced Scorecard. These findings were summarized in the late 1990s, but the Balanced Scorecard was not fully developed until early 1992. Norton and Kaplan published an article on BSC, which referred to the method as a performance-enhancing metric. As part of their practice in companies, they understood the limited ability of financial indicators to determine, measure and control the success of the implementation of corporate strategy. They also recognized the need to create a comprehensive model that would allow for real objective measurements

The Balanced Scorecard is therefore a tool for measuring business performance.

Specifically, it is a tool for strategic business management. In the analysed companies, there were often errors in the shift, which began with the preparation and went through the summarization of the strategic plan to the actual implementation. It is therefore important for the company to be able to measure the shift that aims to increase performance and quality, and also on the basis of the achieved values leads to conclusions and necessary changes in strategy.

The company's strategies are important for the use of the BSC method. The strategies are as follows: set the direction in which the company will be oriented and the goals it should achieve. Then the company derives sub-goals and sets metrics according to which the evaluation of whether it is approaching the set overall and sub-goals, or how many she achieved. These metrics can also lead to financial evaluation of employees.

Each company sets metrics individually, as they are based on its strategy and goals. If he chooses the wrong metrics, the BSC method may not work or may go wrong. BSC is used only in the very end. It cannot be used unless, for example, the company's strategy or goals are specified. The set of tools provided by BSC thus measures the company's performance using four perspectives (Fig. 1):

- finance and financial indicators,
- internal business processes,
- customers,
- learning and growth (innovation).

Each measure should be an element of a chain of context that will lead to an increase in the company's financial performance. To understand an important aspect of BSC, namely its dynamism, it is necessary to be aware of the causality between different perspectives (Fig. 2).

The BSC should report on a strategy that begins with long-term financial goals linked to a sequence of actions in financial and internal processes, in the areas of customer and employee care, in order to achieve long-term economic performance. In most companies, financial plans such as increasing turnover, reducing costs, reducing risk, or increasing productivity allow the necessary interconnection of all four BSC perspectives.

Financial goals must play a dual role. They define the financial performance expected from the strategy and serve to evaluate the objectives and benchmarks of all other BSC perspectives. Financial goals can vary greatly in different phases of a company's life cycle. There are several types of strategies from which business units can choose. For simplicity, we list only 3 of them: growth, retention, and highest returns.

As part of its internal business process, the company examines emerging or hidden customer needs and then, based on the survey, adjusts products or services to meet those needs. The second step of the basic internal value chain is the operational process. This process begins when products and services are already created and delivered to customers. The third main step of the internal value chain is customer service after the sale of a product or delivery of a service, such as fast service in response to a current failure and downtime. In the BSC customer perspective, companies identify customer and market segments. In the past, companies have focused on their internal capabilities and focused on technological innovation. If they did not understand the needs of customers in time, they were surprised by the competition, which came up with a more advantageous offer of products and services. That is why companies are trying to shift their interest to customers.

In general, customers have different preferences and different ratings of product and service characteristics. The basic group of customer output measures is applicable to all types of businesses and includes the following: market share, customer retention, customer acquisition, customer satisfaction and customer profitability.

The fourth and final perspective of the BSC develops benchmarks and goals that support learning and growth. The goals set in the perspectives of financial, customer and

internal processes determine where the company should achieve a breakthrough in performance. Objectives in perspective and learning are enabled in order to achieve the objectives in the previous three perspectives. BSC emphasizes the importance of investing in the future. And not just in traditional areas of investment, such as new equipment or research and development of new products. A company must also invest in its infrastructure - people, systems and procedures if it wants to achieve long-term goals.

The three basic areas of the learning and growth perspective are: employee skills, information system skills, motivation and commitment. Perspectives make it possible to monitor not only financial results, but also how companies are able to provide the tangible and intangible assets needed for their growth and competitiveness; and how they create value for current and future customers and how the quality of human resources, systems and working methods that are necessary to increase future performance must be improved.

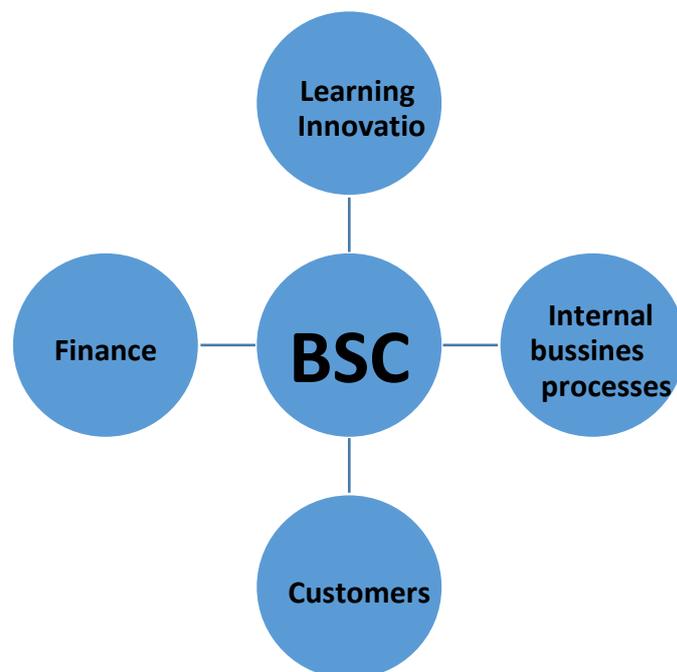


Fig. 1 Perspective of Balanced Scorecard conception, Source: Horváth & Partners, 2002

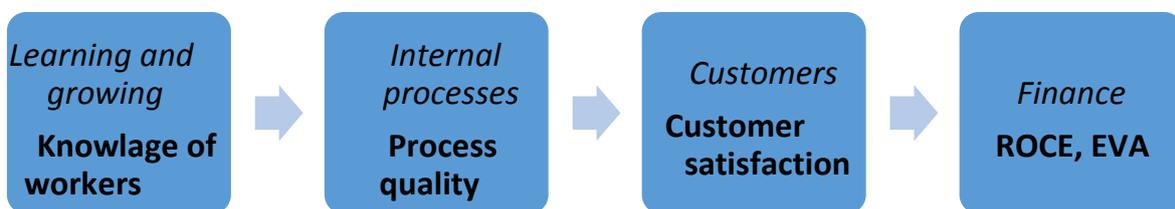


Fig. 2 BSC Perspective, Source: Horváth & Partners, 2002

It is human nature to trust and pay more attention to hard factors (that is, to all variables that can be measured, calculated, or weighed) than to soft factors. However, the success of an organization does not depend only on hard factors. At least as strongly (if not even more strongly) the success of a company is determined by "soft" factors such as: image, employee satisfaction and the quality of the management system.

Balancing in relation to benchmarks means not only using quantitative, easily measurable indicators, but also causal, qualitative measurement systems. In recent years, there have been significant changes in the understanding of the needs of employees and their management. The image of an attractive employer again means a competitive advantage, especially in recruiting the best employees - the so-called high potentials - with high potential. The more important employees are in terms of strategy implementation, the more important is the connection of BSC with the employee management system. In most cases, employees are most important in the implementation of the strategy (Horváth & Partners, 2002).

The effectiveness of the BSC increases with the degree of mutual integration with the employee management system: individual goals are agreed with the employees, which increases the level of personal commitment, strengthens their awareness of the need to achieve goals and responsibility. According to Kaplan and Norton (2005), the goal of each measurement system is to motivate managers and employees to successfully implement the strategy. Companies that are able to transform their strategy into a measuring system then implement this strategy much more easily. They can communicate their goals and intentions.

The three basic principles of linking BSC benchmarks with strategy are: cause-and-effect relationships, performance drivers, and financial links. Building a new strategic management system, the framework of which consists of BSC, is its main goal of the project. The project is divided into two basic stages: Stage 1: building a basic BSC, as a strategic system for measuring company performance; the implementation period of the first stage is 4-6 months. Stage 2: use of the basic BSC as a framework for creating a new strategic management system. The implementation period is estimated at approximately two years.

Grasse et al. (2010) formulated the implementation of the BSC method into the following seven steps: specifying specific objectives, setting indicators and plan of target groups, compiling a strategic map, deciding on perspectives, discussing and approving the results of previous activities, identifying strategic activities and expanding BSC. Horváth & Partner (2001) present four steps of implementing the BSC concept:

Phase 1: creation of organizational preconditions for implementation - in this phase it is a matter of defining conceptual rules, which will later apply to all organizational units in which the BSC will be implemented. The perspectives of the BSC and the organizational units for which it will be created must be set out. In addition to the basic BSC perspectives, so-called above-standard perspectives can be selected. At this stage, it is also important to lay down rules concerning project management. This includes, among other things, determining the organization of the project, the progress of the project and the provision of information. BSC should be created for strategic business units, which should include all activities from the value chain. These activities are innovation, operation, marketing, distribution, sales and service. A strategic business unit should have its strategy, produce its own products and have its customers.

Phase 2: Clarifying the Strategy - The BSC process begins with management teamwork and translating the strategy into specific strategic goals. Therefore, it is necessary that the company's strategy is clearly defined and known to all employees of the company. At this stage, therefore, the strategy must be clarified. The company should clarify its vision. Where he is heading and how he wants to be perceived. This is followed by an update of the strategy and an introduction to all levels of management with the strategy.

Phase 3: creation of a BSC - after setting the organizational prerequisites and clarifying the strategy, a BSC can be created for a selected strategic business unit. In this phase, the following steps will be taken: specification of strategic goals - strategic goals can be considered those that are really important. They are the basis of the creation of the BSC and all the further steps for its creation are based on them. The strategy is concretized and strategic goals are assigned to individual perspectives. Each perspective should contain 4 to 5

strategic goals. Linking strategic objectives through a cause-and-effect relationship - Creating a cause-and-effect relationship is most often based on the objectives of the financial perspective, which are the first to be linked. Then it is good to ask the question: "What subordinate goals lead to the achievement of a superior?" Furthermore, the goals of the financial perspective are linked to the goals of the customer perspective, process perspective and learning and growth perspective. Selection of benchmarks - it is necessary to set financial and non-financial benchmarks for individual goals, by means of which we can monitor how the strategic goals are met. No more than two benchmarks should be set for each objective. Most of them should be quantitative, but it may happen that a qualitative measure is set. Setting target values for scales - a target value should be set for each scale. This should be challenging and difficult to achieve, but not unrealistic. Target values are set in the horizon of 3 to 5 years. First, the value to be achieved over the entire time horizon is determined, and then it is broken down into target values for individual years of the time horizon. Finding strategic actions to strategic goals - Strategic actions must then be set for strategic goals, which are ways in which the company wants to achieve the fulfillment of strategic goals. For strategic actions, it is necessary to identify the persons who will be responsible for their implementation. (Kaplan and Norton, 2005)

Phase 4: roll-out expansion process - in this phase, the creation of the BSC is extended from the selected strategic unit to other organizational units of the company. The procedure is the same as in phase 3. The roll-out process in a company proceeds in two directions. Horizontally, when business units are interconnected at the same organizational level, and vertically, when individual levels of BSC management are interconnected, it emphasizes the communication of the corporate vision to lower levels. Common goals, their evaluation, revision, creation and control lead to more open communication and force mutual cooperation. The BSC methodology thus leads to a mental unification of the company's management and employees over the vision, strategy and strategic goals.

The BSC management method represents a thoughtful approach to integrating corporate know-how into a comprehensive management system. Just as this method is important for society as a whole, it can also be used to manage individual organizational units. Its principles are generally valid and it therefore depends on each organization how it implements its own BSC methodology and how it connects it with the existing strategy and uses the synergy effect.

BSC means: clarification and transfer of vision and strategy into specific goals (through the company to organizational units and departments), thought unification of management and employees of the company in terms of visions, goals and procedures for achieving goals, implementation of the strategy as a whole, a comprehensive system for monitoring the company's performance, planning and setting goals, harmonization of strategic initiatives, communication and interconnection of strategic plans and benchmarks, ensuring measurability and updating the corporate vision and strategy, correcting the corporate strategy based on measuring the efficiency and profitability of key processes and the principle of feedback, improving feedback and the learning process.

The novelty or rather today's topicality of the BSC method lies mainly in the fact that it forces managers to change their way of thinking and managerial procedures. Successful implementation of BSC can help eliminate a number of shortcomings that suffer from the management practice of many Czech companies. These are mainly three of them (Houser, 2005). First of all: our companies often completely lack strategy, or have a formal character or it is not implemented in the end. Operative moments of management and unwanted improvisation get the word out. BSC allows you to break away from the operation and focus on key issues of long-term development and competitiveness. Second, managers tend to be "looking back." They do not pay adequate attention to the achieved results, which, moreover,

are not confronted with the goals. You can't drive according to the rearview mirror. The BSC methodology requires a windshield. In the BSC concept, the focus of managerial work becomes a corporate perspective. Thirdly, drowning is another ailment of Czech managerial practice in information details. Managers take a microscope rather than binoculars in their hands. The BSC forces decisions to be made comprehensively, in a long-term context and balancing goals.

Management methods are deployed today more or less successfully. However, it is always necessary to think about the basic principles of the method and the benefits of its application for society. BSC is a tool for promoting strategic change. It is used to "turn the strategic helm" of the company. Thus, BSC is not a multi-year business plan focused on inertia and continuity, nor a fashionable term for operational reporting, for which this method is sometimes issued. We consider such BSC degradation to be inadequate.

CONCLUSION

The Western world considers project management knowledge to be the standard knowledge that every manager needs to have. The use of project management is a best practice that successful organizations use to ensure good competitiveness. If organizations want to succeed in the market, whether local, European or global, they must learn to use project management well.

ACKNOWLEDGEMENT

The article was published with the support of the Visegrad Grants no. 22020162 Training of farmers V4 in techniques for environmental protection and soil water management.

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