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## **MANAGING PRODUCTION ACTIVITIES USING THE BALANCED SCORECARD STRATEGIC MANAGEMENT SYSTEM**

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### ■ **Abstract:**

*The use of an adequate management method can ensure organizational success. If until now the focus was on the financial success of organizations, now more and more important are the customers, employees, collaborators. The Balanced Scorecard (BSC) is a strategic management system that manages the company's activities depending on its vision and strategies. Within the management instrument, the Balanced Scorecard analyses the four perspectives: the customers, learning-development, internal processes and the financial field.*

*The Balanced Scorecard looks at a business strategy from all perspectives and allows the division of the strategic objectives in individual objectives and actions down to the last operational level. The BSC can contain both quantitative and qualitative objectives.*

*For the present-day organizations information is no longer the basic component. Because the organizations administer a too big volume of data and information, the manner in which the relevant information is selected and used within the organizational actions and in decision-taking is of extreme importance. The ecosystem that underlies a Balanced Scorecard is made up of visions, missions, organizational values and competences, strategies.*

*The work deals with the way in which organizations should choose the BSC solution which meets the company's requirements best so as to fulfill its individual needs.*

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### ■ **Keywords:**

*Management, organization, balanced scorecard, strategy*

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### ■ **THEORETICAL CONSIDERATIONS**

*The leaders of modern organizations are confronting with a series of challenges, generated in the first place by the extremely dynamic character of the world in which we live. In order to keep up with the people around, it is necessary to create a permanent alignment to the novelties appeared on the economic*

*market, but also in the IT field. We are living in the century of speed, everything we do needs speed and precision, that is why all the activities undertaken tend to be automated.*

*The use of an adequate management method can ensure organizational success. If until now the focus was on the financial success of organizations, now more and more important are the customers, employees, collaborators.*

Within the management instrument, the Balanced Scorecard analyses the four perspectives: the customers, learning-development, internal processes and the financial field.

The Balanced Scorecard (BSC) is a strategic management system that manages the company's activities depending on its vision and strategies. This concept was presented for the first time in the 1992 February issue of Harvard Business Review by professors Robert Kaplan and David Norton.

The concept of Balanced Scorecard was developed in the early 1990's by Robert S. Kaplan and David P. Norton. They describe this innovation as follows: "The balanced scorecard retains traditional financial measures. But financial measures tell the story of past events, an adequate story for industrial age companies for which investments in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future value through investment in customers, suppliers, employees, processes, technology, and innovation."

At the highest conceptual level, the BSC is defined as "a frame that helps organizations to transpose the strategy on operational objectives so as to control both the organizational behavior and performance" [1].

The system consists in 4 processes:

- ✚ The transposition of the vision on operational objectives;
- ✚ The communication of the vision and its connection to individual performances;
- ✚ Business planning;

Feedback, learning and strategy adjustment depending on the course.

The Balanced Scorecard looks at a business strategy from all perspectives and allows the division of the strategic objectives in individual objectives and actions down to the last operational level. The BSC can contain both quantitative and qualitative objectives.

The strongest point of this instrument is the fact that it binds long-term strategic objectives with short-term actions. Most control and management systems of companies are built around financial indicatives and targets which place little emphasis on the long-term strategic objectives, thus a discrepancy being created

between strategy elaboration and its implementation.

The managers who use the BSC do no longer count only on the short-term financial indicatives to evaluate company performances. The BSC allows them to use the 4 processes which, used separately or together, contribute to the correlation of long-term objectives with the short-term actions [2].

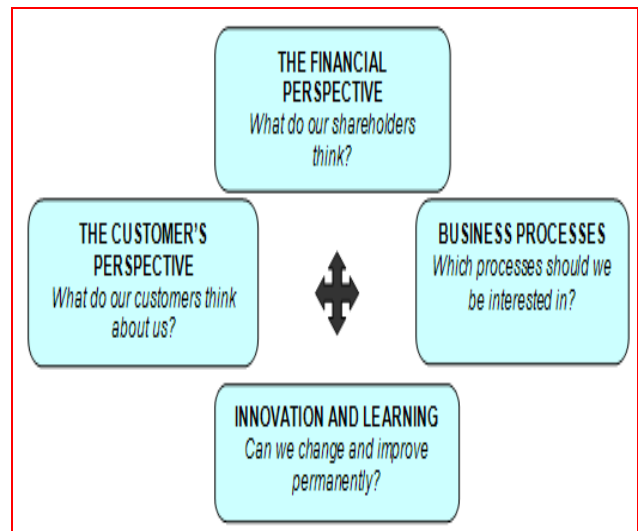


Fig. 1. The BSC principle from the 4 perspectives [1]

The first process, "Vision translation" is the process which helps managers reach consensus in the organization regarding organization vision and strategy. Most times, despite the good intentions of top-management, assertions of the following type: the best in the x category, number 1 supplier, cannot be easily translated in operational terms which deliver action directions at the local level. So as people to act according to the statements from the vision and strategy, they must be expressed in an integrated set of objectives and measures, agreed upon by all the executive directors, which should describe the success factors on the long-term.

The second process, "Communication and relating", allows managers to communicate their strategy upward and downward the organization steps and to tie it to individual objectives and the department objectives. Traditionally, the departments are evaluated according to the financial performances and the financial motivations are tied to the short-term financial objectives. The BSC gives managers the certainty that all the organization levels understand the long-term strategy and that both the individual

objectives and the departmental ones are in line with it.

The third process, "Business Planning", makes it possible for companies to integrate their financial and business plans. Almost all companies implement changing plans, each with their managers and project counselors, competing for the executive seniors' time, energy and resources, frequently leading to disappointments regarding the program result. But when the managers use ambitious objectives for the BSC, as a means for resource allotment and priority settlement, they can understand and coordinate those initiatives which lead to the long-term strategies previously set.

"Development and learning", the fourth BSC process offers the company the possibility of strategic learning. The existence of feedback and the process evaluation focused on the company, its departments or the individual employees, ensures meeting the financial objectives previously set.

#### **THE BSC WITHIN THE ORGANIZATION**

The BSC offers a valuable instrument to the employees for a better perception of the organizational environment. It also supplies information to the management when the organization starts to document itself and develop the control measurement indicatives, which will shortly lead to reaching the desired goals and fulfilling the organizational visions.

The result is that the day-to-day operations are created starting from a common point of view about where the organization is heading to on the long-term. If the scorecard is segmented on activity areas, the operation control will be perceived as being a lot more relevant than in the previous models. The employees will become more cooperative and motivated and thus more open to change and decided to implement the new decisions of the organization.

Thus, the organization becomes more open to the learning process, more receptive and it is developing its competences permanently.

All this make it necessary for the scorecard to be introduced and used continuously in best conditions. Taking into consideration the fact that the use of the scorecard is simple, the resource involvement and top management contribution are often underestimated. The

scorecard project is easily perceived as a more elaborated project on the measurement of organization performances. It can also meet with opposition from the employees, who could see in this project only a method of work inspection. So, how can then this process be conceived so as to avoid these impediments? The following structure can be used [3]:

- ✚ For what type of activities must the scorecards be created? The first decisions which must be reached are connected to the starting point. The scorecard usefulness for nonprofit organizations is also taken into consideration: personnel units, governmental agencies, etc.
- ✚ Initial scorecard development. Launching the project in the adequate direction is of vital importance.
- ✚ Scorecard introduction and use – process visualization. Continuing the previous item, the wished connection between strategy through control and learning and back to strategy is shown.

Only by continuous use of the scorecards can real wins be obtained for the organization. In this stage, the support for the project can decrease, because the managers believe that the scorecards have been introduced successfully.

#### **THE ADVANTAGES AND DISADVANTAGES OF THE BSC**

Balanced Scorecard is a tool of management which facilitates making decisions and gathers a coherent set of indicators which provide high directives and the responsible functions. It is also a comprehensive vision of the business and its area of responsibility. The information contributed by the BSC allows to focus on the directive equipment, on the units of business, on the resources and the processes with the strategies and organization.

The Balanced Scorecard has proven to be an efficient management work frame. It has the following functions [1]:

- ✚ Transforming strategy into action;
- ✚ Aligning the organization to the strategy;
- ✚ Strategy performance as everybody's task;
- ✚ Continuity of strategy performance;

The system is the basis of the organization's strategic success, but the strategy is implemented through initiative, innovation processes, by

heading the activities in the direction of organization development.

The following ten assertions come to support the argumentation of using the Balanced Scorecard method:

1. Cost reduction, productivity increase;
2. Such a valuable measurement system enables an organization to align its activity to the suggested strategy. With this system, the organization can receive the desired answer so as to guide its future actions.
3. The measurement of process efficiency enables a rational settlement of the process fulfillment order.
4. Enables managers to identify the best practices for activity performance.
5. The information obtained based on the system allow quicker and better budget decisions, and also offer control on the processes made in the organization. It can also reduce the risk.
6. The accountancy and the financial department are working with concrete data.
7. Performance indicatives are obtained, which can be compared with the financial results of the competition, thus setting the organization situation and position.
8. The estimation of future costs can be done with great accuracy, all this due to the experience gained in previous projects.
9. The method allows the measurement of performances and initiatives following the strategy.
10. The system makes it possible to measure the indicatives and to determine the likelihood of their increase in value.

Since its first appearance in 1992, the Balanced Scorecard concept has been adopted as a new approach of the control management both in business and by governments.

It is used to describe the ambitions and achievements of the organization. It has proven useful for [2]:

- ✚ Communicating the strategy of both the employees and managers;
- ✚ Fulfilling the activities that follow the strategy before the fulfillment of the activities whose end is to meet current needs;
- ✚ Monitoring and awarding these activities;

The Balanced Scorecard is based on the following principle: "doing the things that are

necessary, doing them properly, rewards will be obtained in the future".

The benefits of using this method can be synthesized as follows:

- ✚ The Balanced Scorecard contributes to aligning the performance indicatives with the strategy at all organization levels;
- ✚ Offers management a full business image;
- ✚ The method facilitates communication and understanding the business goals as well as the strategy at all organization levels;

Some authors state that the system is not a new method of measuring and interpreting a firm's situation, but rather a logical presentation of what has to be done so as to follow the chosen strategy. The Balanced Scorecard is an organized split work frame which enables the strategy implementation and fulfillment at all the levels of an enterprise by binding the initiative with the objectives and actions. The system offers a full image of the enterprise performance, combining the financial indicatives with other important performance indicatives within the relationships with customers, internal processes, research and development.

As any other method, the Balanced Scorecard has certain disadvantages:

- ✚ This approach is not fix, it takes a lot of time to define a set of scorecards;
- ✚ The implementation of a Balanced Scorecard system in an organization implies the detailed study of all the existing problems, then defining an action plan, all these involving a long period of time.

For example, Kalpan and Norton divide the life cycle of a business in three stages: growth, maturity and decline. Three financial themes are also usually set: income growth, cost reduction / productivity increase, and resource user. In fact, instead of wishing to increase the level of the performance indicatives, a lot of companies concentrate on the risk of not fulfilling these indicatives.

Then, when it is strategically important, these organizations will want to incorporate the management risks within the financial perspective. In conclusion, it is important for all objectives and indicatives set in the other perspectives to be tied to one or more objectives of the financial perspective.

The creation of a Balanced Scorecard involves a considerable period of time for everybody whose performances are being measured.



Setting the strategy is time-consuming, but it does not use so much time as finding and defining the performance measurement indicatives for each perspective does. Usually, people hardly agree on what and how is being measured.

Moreover, a large number of people are involved in building a BSC, and these people's approval is very important both for building and implementing the instrument. It can happen that a Balanced Scorecard is well-built, but its disapproval by the employees, as well as their lack of involvement will make the model useless. There is also the risk of too many indicatives being selected. This is a problem because it is very difficult to use and interpret too many results.

Before the described perspective, we need tools to describe the intangible assets, the Balanced Scorecard by means of elaborating an strategic map, relates and transforms these intangibles assets into tangibles, as money. The Balanced Scorecard through his four perspectives, uses indicators to describe the intangible assets, therefore we can monitor and control the intangible activities which add value to the company.

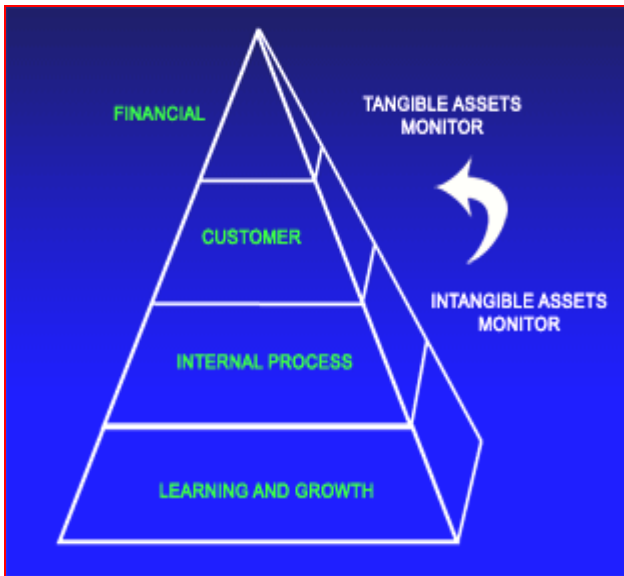


Fig. 2. The BSC strategic maps and the organizations assets [4]

The intangible assets are the most important sources of the organization that grant competitive advantages to other companies. The organization that has an excellent operative process, knows their segment in the market and possess the knowledge to develop a unique

product, and has the ability of motivating their employers, will have a guaranteed success.

The tangible assets are considered the goods of material nature they can be perceived by senses like :

- ✚ Row material and stocks
- ✚ The furniture
- ✚ The machines
- ✚ The lands
- ✚ The money

The intangible assets are considered the goods of immaterial nature:

- ✚ The science of knowing what to do
- ✚ Our relations with the clients
- ✚ Our operative processes
- ✚ The technology of information and databases.
- ✚ Capacities, abilities and innovations of the employers.

Certain indicatives can be objective, others subjective. The subjective indicatives, by definition, involve the judgment of a person, so there are chances for them to be wrong. There is always a question, namely "must the indicatives set subjectively be used"?

The Balanced Scorecard is a management system, not only a measurement one which allows the organization to set its strategy and vision and to put them into practice. The instrument offers the feedback of the business internal process and external indicatives, instead of wishing to continuously increase the strategic performances and results. After being fully developed, the Balanced Scorecard instrument transforms the strategic planning from an academic exercise into a nervous center of the organization.

In terms of Customer Satisfaction, the approach analyzes the organization's ability to provide quality goods and services and their effective delivery, while the financial perspective of the Balanced Scorecard generally represents the clear long-range targets. Now in order to lead to the success of the above two mentioned perspectives, the internal business indicator provides data regarding the internal business results against its measures. The fourth and the last major perspective concerns with learning and growth, which aims to align all of the above toward an overall organization's success.

■ CREATION AND DESIGN OF THE BALANCED SCORECARD (BSC)

The steps to follow the making up, the creation and the development of the Balanced Scorecard BSC must proceed from the steps presented in fig.3.

As we can see the methodology to create the Balanced Scorecard BSC, has many the first one (blue), we define the plan of the company, later we go the confection of the own Balanced Scorecard BSC (green).

If in the organizations has already an strategic plan well defined, it will not be necessary to realize the blue stage, anyway it is convenient to make an internal and strategic analysis of your company, to check our mission and vision, to know the current situation and objectives we have to reach.

Frequently, the process of creation of the Balanced Scorecard allows the executives to review the strategies and to define new ones, according to the situation where the business is developed.

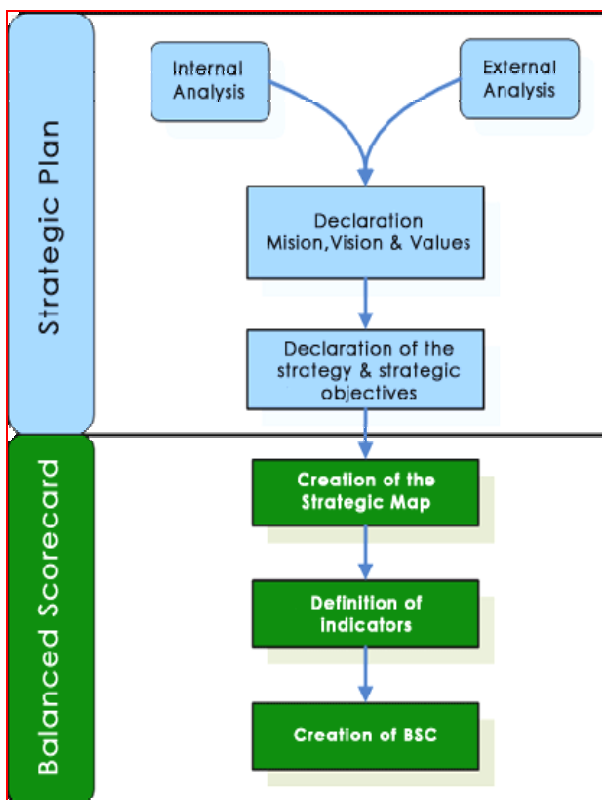


Fig. 3. Creation and the development of the Balanced Scorecard [4]

■ CONCLUSION

The Balanced Scorecard (BSC) is a conceptual framework enabling an organization in clarifying its vision and strategy, thus effectively translating them into action. This performance management approach provides feedback around both the internal processes and external outcomes, essentially focusing on four indicators: Customer Perspective, Internal-Business Processes, Learning and Growth and Financials.

For the present-day organizations information is no longer the basic component. Because the organizations administer a too big volume of data and information, the manner in which the relevant information is selected and used within the organizational actions and in decision-taking is of extreme importance. The ecosystem that underlies a Balanced Scorecard is made up of visions, missions, organizational values and competences, strategies.

It is important for certain fundamental observations which express the BSC's importance and value to be reiterated:

- ✚ Only 10% of the organizations that define a strategy are capable of successfully fulfilling it;
- ✚ The strategy of an organization must be clear and synthetic;
- ✚ The BSC is a strategic management and performance system;
- ✚ The BSC translates the organization's strategy into concrete actions;
- ✚ The BSC explains and clarifies an organization's strategy from both the management's and employees' point of view;
- ✚ The BSC is a communication instrument, not one of control/constraint;

The BSC allows the alignment of the component structures and organization members to the strategy set by the management team.

Implementing the balanced scorecard methodology in the projects gives quick access to important metrics - for example cost, expected return of investment (IRR) for the project, customer satisfaction, innovation etc. All these help continuously monitor the performance of the projects.

■ REFERENCES

- [1] OLVE, N., ș.a. – *Making Scorecards Actionable. Balancing Strategy and Control*, Editura John Wiley&Sons, England;
- [2] <http://www.balancedscorecard.com>
- [3] <http://www.balancedscorecard.org>
- [4] <http://www.webandmacros.net/Balanced-Scorecard>
- [5] AKKERMANS, H. A. and OORSCHOT, K. E., *A Case Study of Balanced Scorecard Development Using System Dynamics*, *Journal of the Operational Research Society*, Vol. 56, No. 8, pp. 931–941, (2005)
- [6] AKKERMANS, H. A. and van OORSCHOT, K. E., "Developing a Balanced Scorecard with System Dynamics", *Proceeding of 2002 International System Dynamics Conference, 2002*
- [7] MOORAJ, S. and OYON, D. H. D., *The Balanced Scorecard: a Necessary Good or an Unnecessary Evil?*, *European Management Journal*, Vol. 17, No. 5, pp. 481-491, (1999)
- [8] RICHARD D. HANKS and JOHN CROFTS, *The Balanced Scorecard: A Practical Approach, 2002–2009*, Mindshare Technologies
- [9] KAPLAN, R. and D. NORTON, "The Balanced Scorecard: Measures that Drive Performance.", *HBR*, Jan 1992
- [10] KAPLAN, R. and D. NORTON, "The Balanced Scorecard: Translating Strategy into Action", *HBS Press*, 1996
- [11] KAPLAN, R. S., & NORTON, D. P. *Strategy maps: Converting intangible assets into tangible outcomes*. Boston: Harvard Business School Press, 2004
- [12] \* \* \* *The Balanced Scorecard - Measures that Drive Performance*", *Harvard Business Review*, Feb. 1992
- [13] COBBOLD, I. and LAWRIE, G., "The Development of the Balanced Scorecard as a Strategic Management Tool", 2002
- [14] COBBOLD, I. and LAWRIE, G., "Classification of Balanced Scorecards based on their effectiveness as strategic control or management control tools", 2002
- [15] NIVEN, PAUL R., "Balanced Scorecard. Step-by-step. Maximizing Performance and Maintaining Results", 2006
- [16] PAPALEXANDRIS, A., IOANNOU, G. and PRASTACOS, G.P. (2004), *Implementing the Balanced Scorecard in Greece: a software firm's experience*. *Long Range Planning*, 37(4), 347-362
- [17] PAPALEXANDRIS, A., IOANNOU, G., PRASTACOS, G.P. and SODERQUIST, K.E. (2005), *An integrated methodology for putting the Balanced Scorecard into action*. *European Management Journal*, 23(2), 214-227
- [18] NORREKLIT H. (2000), *The balance on the balanced scorecard - a critical analysis of some of its assumptions*, *Management Accounting Research*, 11, pp. 65-88

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