**USE OF PERFORMANCE KEY INDICATORS (KPI) AS USEFUL DECISION-MAKING TOOLS AND PERFORMANCE IMPROVEMENT IN ACCEPTANCE OF THE BALANCED SCORECARD CONCEPT**

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**Rezumat:** Conceptul Balanced Scorecard (BSC) este definit şi utilizat în practica managerială ca sistem de management al performanţei şi totodată ca sistem de planificare şi management strategic, fiind implementat în organizaţii de afaceri ori industriale, în sistemul public guvernamental sau în organizaţii non-profit.

Din perspectiva managementului performanţei, conceptul Balanced Scorecard utilizează Indicatori Cheie de Performanţă (Key Performance Indicators / KPI) pentru măsurarea performanțelor înregistrate în activitatea organizaţiei și prin care se corectează în mod direct proiectele, inițiativele și activităţile zilnice în scopul îndeplinirii obiectivelor strategice asumate de organizaţie.

Articolul de faţă prezintă rolul Indicatorilor Cheie de Performanţă în evaluarea acțiunilor întreprinse, luarea deciziilor și eficientizarea activităţii organizaţiei. Datorită conceptelor şi funcţiunilor dezvoltate în cadrul Balanced Scorecard (BSC), a determinării riguroase a performanţei şi contraperformanţei în cadrul unei organizaţii (KPI), BSC și instrumentele sale de evaluare sunt recomandate pentru utilizarea şi în instituţiile din cadrul sistemului de apărare, ordine publică şi siguranţă naţională.

**Cuvinte cheie:** Balanced Scorecard, Indicatori Cheie de Performanță, organizaţie, apărare naţională.

**Abstract:** The Balanced Scorecard (BSC) concept is defined and used in managerial practice as a measurement system, as well as a strategic planning and management system, being implemented in business or industrial organizations, in the government system, or nonprofit organization.

From the efficiency of management point of view, Balanced Scorecard uses Key Performance Indicators (Key Performance Indicators / KPIs) to measure performance within the organization and through which can add direct corrections in design, initiatives and daily activities for achievement of the strategic objectives of organizing.

This article presents the role of Key Performance Indicators regarding the evaluation of the actions taken, the decision making and the overall efficiency of the organization's activity. Due to the concepts and functions developed within the Balanced Scorecard (BSC), rigorous determination of performance and counter-performance within an organization (KPI), Balanced Scorecard (BSC) and its instrument of evaluation are also recommended for use in institutions within the defense, public order, and national security system.

**Keywords:** Balanced Scorecard, Key Performance Indicators (KPI), organization, national defense.

1. **Introduction**

The complexity and especially the dynamics that can be observed in the evolution of contemporary society on all levels of it’s economic, political, diplomatic, social, scientific and military impose proactive conduct on the part of the decision-makers, regardless of the field or level at which they are located. This behavior must be based on the forecast, on identifying the possible evolutions of the reference system, on the analysis of the existing risks and vulnerabilities, on the prioritization of the available resources, respectively on the elaboration of appropriate answers to all the predicted situations or to those situations that imply unpredictable developments.

Any organization, regardless of the nature and object of its activity, cannot be run without taking into account the functions of management[[1]](#footnote-1): forecasting, organizing, commanding, coordinating, and controlling. This whole process is under the direct command and responsibility of the management team, and become its main role in defining the strategy, the strategic objectives, in the development of policies and implementation plans, in the control of actions, in other words, in the general orientation of the entire spectrum of management of specific activities in long-term view.

The modern management is based on a scientific approach due to the various currents and principles stated and confirmed over time, the introduction of the command and control act automation within the organizations, the existence and development of the IT tools and technologies that ensure the support of the management activities. This impact can be observed throughout the whole range of specific managerial activities (planning, organization, management, training, communication) but with a higher impact in the analysis and evaluation of the own actions taken (control).

Also, it can be easily observed in the military organization the existence and application of all management functions, in each of the specific military fields, but also in all military daily activities and actions: *the forecasting function* - the field of military information; *organizational function* - personal and mobilization, training; *command and control function* - essential function in the application of military instruments and principles; *evaluation function* - function required to obtain the feedback on the ordered / undertaken actions.

Management functions are characterized by interdependence and a certain succession over time. They are characterized by dynamism and are directed linked to scientific-technical progress. The functions of management have their characteristics but also universality in the whole spectrum of actions that are taken:

* The forecasting and planning function include analyzing existing and future risks and own vulnerabilities, establishing the strategy, objectives, policies, programs, procedures, initiatives, durations and budget;
* The organizational function determines the organizational structure, establishing the chain of command and control, delegating and empowering, defining the missions and tasks within the organization;
* The management function and the coordination realize the distribution of tasks and the uniformization of the efforts, the training of the military, the coordination of the budget execution, the concession of priorities to reach the goals, to motivate the personnel, to establish the space-time coordination, and the internal and external communication;
* The evaluation function is focused on stabilizing performance standards, interpreting the results recorded in the spectrum of efficiency, to ensure the processor's correction measures.

Strategic objectives are undoubtedly the central element of management. Approached as expressions in a quantitative or qualitative note, subsumed for the purpose of setting up and aiming to be the organization, they represent the reference points in the organizational transformation, the fulfillment of the strategy and the attainment of the vision. They generate responsibility at all the level of the individual, group or organization.

Characterized by the acronym SMART[[2]](#footnote-2) (Specific, Measurable, Achievable, Relevant and Time-bound), the strategic objectives also become the subject of the control and evaluation function. This process determines the factual status of the organization, compares the measured and recorded results with the planned level of ambition, analyzes the positive or negative evolution and makes the necessary corrections to align the effort with the strategic objectives.

Performance management applied at the organizational or individual level reflects the progress made and the results achieved in the implementation of the strategy and strategic objectives.

At the military-strategic level, the performance evaluation can be interpreted as the key to the successful implementation of the organizational transformation and the endowment with modern military equipment. At the military operative level, we can talk about the success achieved in aligning the entire institutional effort in implementing the strategy and in achieving the strategic objectives. The military tactical level corresponds to the evaluation of the performance at the individual and microstructure level, the performance of the tasks within the ordered terms, the quality of the works, performance in training and education, etc.

1. **Balanced Scorecard concept**

The Balanced Scorecard (BSC) concept, introduced by Robert S. Kaplan and David P. Norton in 1992, is focused on improving performance. It includes a series of measures regarding the evaluation of organizational, financial and non-financial performance, in a single score sheet and evaluation. Over time it has received several improvements, at the moment being considered a concept with multiple valences:

* Management and control systems;
* Performance management system;
* Strategic communication system.

The innovation of the BSC concept consists of introducing new concepts in the evaluation of the performance of an organization, in addition to the classical ones and mainly financial ones, such as: employees' competencies / skills, motivation of employees, innovation and continuous training of employees, as well as the classification of recorded and evaluated values, in four large quadrants/perspectives:

* The Financial perspective;
* The Customer perspective;
* The Internal processes perspective;
* The Learning and growth perspective.

BSC assists the command team in the early identification of the problems that have the potential to transform them into obstacles for the implementation of the strategy.

Due to the high level of flexibility, the applicability of the BSC concept in the military system is proven by the success of the foreign armies that adopted and implemented it[[3]](#footnote-3): Royal Navy, US Air Supply, Babcock International Group, etc.

The conclusions derived from analyzing the application of the BSC concept in the defense sector are the following[[4]](#footnote-4):

* The BSC should not be viewed strictly from the performance evaluation function, but must be approached as a tool for directing the evolution and transformation of the military organization;
* The BSC allows the strategy to be clarified and communicated throughout the organization, aligning the individual and institutional effort in achieving the strategic objectives;
* To ensure the successful implementation of the BSC, it is necessary the direct involvement and support by the command team.

The implementation of the BSC concept in the military organization leads to the improvement of the overall performance of the military field, the successful implementation of the reforms, the transparency of the activities and decision-making processes, the continuous adaptation of the military body to the internal and international realities, to the achievement of the strategic objectives.

The specialized literature highlights the essential characteristics specific to the control-evaluation process:

* Relevance – the process must be tailored to the specific activity of the military organization and its personnel;
* Flexibility – the dynamics of external factors also manifests itself within the military organization; for this, it is necessary to continuously adapt the control-evaluation process to the realities in the field;
* Focus on critical issues – analysis and evaluation should be directed to the results of those processes with major impact in carrying out actions that contribute to the achievement of the objectives;
* Simplicity, clarity – the evaluation must be easy to perform, and the results must be easy to analyze; the time factor is most often decisive in adopting a corrective or prophylactic response;
* Cost-efficient – the control and evaluation process are a cost generator; they must not exceed the activity under analysis.
1. **Key Performance Indicators**

The control and evaluation function is very important for the evaluation of the organizational performance, although it is given less attention in the managerial processes.

Performance management is a process by which the progress made in meeting the objectives is evaluated, including here the efficiency of using the available resources (human, financial and informational) for achieving the orderly measures, the quality of the results and the evaluation of the alignment of the individual and collective effort to the strategic objectives. Performance management starts with determining what we want to evaluate, identifying methods of collecting data and information, collecting, analyzing and evaluating them, interpreting and making corrective decisions, when it’s necessary. The control-evaluation process must be continuous to become effective, with increased intensity on the key points, at key moments, and on the staff in charge of the duties.

Among the benefits of the performance management process, there are three important aspects which must be highlighted:

* Provides the necessary feedback in the decision-making process at all levels - strategic, operational or tactical;
* Ensures the preservation of excellence in the processes, initiatives, plans that contribute to the accomplishment of missions and tasks;
* Ensures the implementation of the corrective measures on the processes, initiatives, or plans even from the initial manifestation phases that reflect a deviation from the planned natural course; identifying centrifugal sources and trends and correcting them supports continuous and consistent improvement.

The BSC concept places at the disposal of the command team a set of tools through which the image of the military organization is realized, up to date and without distortions: the critical success factors and the key performance indicators. By implementing this set of factors, further by analyzing and interpreting them, a system of levers is created through which the organization continuously improves its performance.

Critical Success Factors (CSF) and Key Performance Indicators (KPIs) are two very common terms meet in the literature. The difference between the two terms is represented by the difference between cause and effect.

Within the strategic management, the determination of the strategic objectives represents a process by which the management team transmits to the organization the long-term directions of action. The BSC concept teaches us that they have to be evenly distributed across the four quadrants, they do not have to be numerous, their role being to guide the daily activity of the staff.

A CSF is, in fact, a high-level performance objective, associated with a strategic objective, which the organization must achieve. Critical success factors are the cause of success, they determine what needs to be done to be successful.

The CSF is constituted as a benchmark preset by the management team that becomes an objective of the joint efforts of the personnel, obligatory to be reached or even exceeded. Once these benchmarks/thresholds are established, achieving them ensures alignment of the organization with the defined strategic objectives.

We emphasize that our approach to determining the performance within the military organization starts from the hypothesis of the existence of the state of peace, in all other military states (pre-conflict, deterrence, conflict, post-conflict, armed struggle) is based on other principles, methods, and tools through to ensure success in facing the opponent.

To be effective, a critical success factor must be[[5]](#footnote-5):

* “Be vital for the successful implementation of the organization's strategy;
* To bring benefits to the department responsible for its implementation, but also the entire organization;
* Be synonymous with a high-level objective;
* Be directly connected with the strategy of the military organization”.

To identify the critical success factors, a comprehensive and interdepartmental internal analysis is needed to identify the key elements of the strategic objectives that support the vision and mission of the military organization. While the strategy sets the mission and objectives of the military organization (ie what we aim/want to achieve), the CSFs show us how we will achieve it, the minimum accepted thresholds that we must reach.

The literature offers a series of analysis methods that lead to the correct identification of critical success factors:

* OAS (Objective, Advantage, Scope) statement and analysis;
* SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis;
* Analysis of the strategy implementation plan;
* Structural change/modification of the military organization.

As a method for the choice of the critical success factors, a set of questions can be used to highlight their weight in the process of implementing the strategy[[6]](#footnote-6):

* Does the choice of this factor lead to the desired result?
* Are the conditions ensured to achieve the desired result?
* What resources are needed to achieve this objective?
* Do the personnel of the organization possess the skills necessary to achieve this objective?

The identification and selection of critical success factors must also take into account their distribution equally in the four perspectives, the success of the implementation of the strategy being based equally on the success in the whole spectrum of actions of the military organization.

In this way, the CSF provides the necessary context for the personnel of the military organization to route their daily effort towards the essential activities and on the priorities in which the tasks must be accomplished, setting the minimum threshold necessary for the accomplishment of the tasks.

On the other hand, KPI represents a punctual measure in the evaluation of an objective, a value that refers to the threshold defined by the CSF and that by comparison gives us indications regarding the degree of achievement of the measured objective.

The key performance indicators are the basic tools in the evaluation, obtaining important data and information concerning the definition and achievement of the objectives.

KPIs are tools that by their application return data and information of a qualitative or quantitative nature, variable in time and space and which by their further interpretation describe the degree of achievement of the set objectives.

KPI is a specific measure of performance, specific to an organization, in a particular area. The units of measurement used in the description of the measurement made could vary from fundamental one-dimensional units (hours, meters, kg, liter, etc.) to multidimensional units of measurement (personal ratio in / out of the system, consumption recorded per kilometer / nautical mile, number of training exercises per year, etc.), the measurement offering complex and qualitative information related to the different parameters that need to be evaluated.

***Strategic objectives.*** Continuous action taken to achieve success.

***The strategy map.***

Tool for visualizing the strategy.

***KPIs.***

Evaluation of organi-zational performance.

***Objectives.***

Levels of ambition set up for each indicator.

***Strategic initiatives.***

The whole spectrum of actions that compete to achieve thestrategic objectives.

***Strategy.***

Elements defined in the highest degree of abstraction.

|  |
| --- |
| **Mission / Vision / Values / Strategic directions / Results** |
| **The strategy map****Strategic objectives** | **KPIs** | **Targets** | **Initiatives/plans** |
| **Financial** |  |  |  |
| **Costumers (the population of the country)** |  |  |  |
| **Internal process** |  |  |  |
| **Learning and growth** |  |  |  |

*Figure 1. The role of performance indicators in the Balanced Scorecard concept*

Source: Adapted from https://www.balancedscorecard.org/BSC-Basics/About-the-Balanced-Scorecard, accessed on 26.08.2019.

The best Key Performance Indicators are those that are linked to strategic goals and priorities. The popularity of tables and graphs gives an overview of the entire spectrum of activities in progress, at one point – the score table.

The literature offers thousands of KPIs and, if we set out to measure everything, it would be a completely meaningless, costly and time-consuming exercise. It should not be overlooked that the registration of the values ​​for the KPIs established to be monitored at the command level will be carried out to by the personnel of the unit, increasing the responsibilities in the job description and reducing the time required to carry out the current activities. Therefore, key performance indicators should be thought of as a way to easily quantify the organization's goals and priorities in quantifiable measurements. Using these values, in tabular or graphic format, the command team will be able to evaluate the performance of the military organization, at the level of the individual, microstructure, department or the organization as a whole.

The key performance indicators, when evaluating the activities of a department in relation to the operational and strategic objectives, can return values ​​that reflect: the recorded result, which can then be evaluated in comparison with the planned one; the evolution trends of the activities included in the plans; the general effect generated in the organizational set: internal and external strategic communication.

Also, the key performance indicators can still return values ​​that can detect:

* Where the military organization is at any given time;
* Performance evolution, comparatively, at predetermined time intervals;
* Reaching previously defined thresholds (maximum or minimum) to ensure rapid corrective responses;
* Diagnosis of the military system for identifying the problems of process, human, technical, organizational, budgetary, time bound;
* Predictability in the strategy implementation process.

In choosing those parameters to be measured, quantified and recorded, a balance must be established between the quantity (total number of KPIs, the frequency of recording and reporting, the level of detail established to be quantified, the reporting chain, etc.) and the quality of the results obtained. In the quantitative evaluation of the key performance indicators, both the accepted minimum thresholds and an accepted range/margin can be introduced in which the measured values ​​can be located.

In addition to the key performance indicators, another set of indicators must be analyzed and introduced in the equation of efficiency and effectiveness of actions carried out by the military organization: risk indicators. Defined in a broader sense, the concept of risk refers to the extent of the mismatch between different possible outcomes, more or less favorable or unfavorable, in a future action. It expresses the possibility of recording deviations from the planned purpose[[7]](#footnote-7).

Within the actions carried out in the military organization, the daily analysis of the situations provides data and information based on which the command team and the General Staff identify, analyze and accept risks or plan actions to avoid/diminish their impact.

The risks encompass the entire spectrum of activities and all areas specific to the military organization. Within the organizational framework, risk designates a complex phenomenon resulting from the relationship between the probability of success and the failure of an action aimed at the goal, with significance at the individual or collective level[[8]](#footnote-8).

The key risk indicators constitute a warning system for the command team in case the direction of action of the military organization departs from the ordered direction.

If performance indicators answer the question of What should we do to achieve the strategic objectives? the key risk indicators answer the question What can prevent us in achieving the strategic objectives?

The key risk indicators can be defined independently, measured and recorded separately or associated with the key performance indicators by setting minimum or maximum thresholds/intervals in their metric evolution, manifesting outside the established margin, constituting a risk in achieving the strategic objectives.

All measured values, at predefined time intervals, will be entered into a database. By interrogating it and using defined interfaces, we can illustrate, in real-time, the current situation on the ground and the evolution trends of the initiatives. The interpretation of the results and the application of the corrective measures on the actions of the subordinates take both the preparation of the command team, the experience gained, and also the intuition of the commander in the perspective evaluation of the phenomenon.

In conclusion, the algorithm proposed by the Balanced Scorecard concept for evaluating the management implementation of the strategy starts with the clear definition of the vision, the mission and the strategic objectives, the establishment of the implementation plans, the definition of the CSF factors that must be established in order to reach these objectives and the evolution of things with the support of the KPI, in order to observe if the military organization carries out its entire spectrum of activities at an optimal level of performance.

The focus of the command team must also be focused on the choice of those initiatives, plans, processes, specific processes that allow the action of the individual and the whole organization to achieve the strategic objectives.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Vision/mission of military organization** |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| **Strategic objectives:**Strategic objective 1Strategic objective 2 |  | **Operational objectives:**Objective 1Objective 2Objective 3 |  | **CFSs**CSF 1CSF 2CSF 3CSF 4 |  | **KPIs**KPI 1KPI 2KPI 3KPI 4 |
|  |  |  |  |  |  |  |
| **Why?** |  | **What?** |  | **How?** |  | **Initiatives** |
|  |  |  |  |  |  |  |

*Figure 2. Matrix map regarding the interconnection of the strategy and the operational level*

Source: Adaptation to Notes on Balanced Scorecard by Glen Alleman (Performance-Based Project Management: Increasing the Probability of Project Success, American Management Association, 2014).

The analysis and capitalization of the results obtained from the field by following the threshold reached in the implementation of the operational objectives will allow the command team to evaluate the alignment of the military organization to the strategic objectives and, if necessary, to make the necessary corrections. The measures adopted start from minor corrections (reviewing implementation initiatives, assignments and including project managers, allocating resources, etc.) and can reach the following range of deeper measures[[9]](#footnote-9):

1. Organizational restructuring. It involves reducing staff, reducing the number of departments or combining them, reducing the number of hierarchical, pyramidal structures. The reduction of military personnel must be viewed from the perspective of international commitments, the degree of stability and regional, and international security;

2. Reengineering. The basic idea from which we start from this concept is the following: essential for the success of the implementation of the strategy is not primarily the availability of resources (financial, material, human, informational), but an optimal organization of the activity, based on criteria of prioritizing the wanted effect. It focuses on optimizing internal processes, redefining and redistributing tasks and improving internal performance criteria. In other words, the personnel structure of the military organization and its degree of readiness correspond to the requirements for the fulfillment of the strategic objectives, but an internal reorganization is needed regarding the distribution of tasks and the allocation of financial and material resources to optimize the entire process and achieve the strategic objectives.

3. E-Engineering. This is the equivalent of the previous measure, in which the IT dimension is amplified in the entire spectrum of activities of the organization. Expanding the computer network, increasing the level of network security, increasing the level of classified information conveyed in the network, acquiring specialized software to support the daily and specific activity of each department, training of IT personnel are all challenges that support such an approach.

Finally, we propose a relevant example that demonstrates the need to align all aspects that contribute to the success of implementing a strategy. The example we propose it is developed for a military tactical-level logistics unit intended for current repairs within the Navy Forces.

**Mission:**

The military unit will ensure the maintenance of the fighting technique on board the military ships.

**Strategic objectives:**

* Strategic objective 1: maximizing the operational level to ensure the full spectrum of current repairs onboard military vessels;
* Strategic objective 2: continuous improvement of personnel training.

**Performance objectives:**

* Performance objective 1: ensuring the hiring of qualified personnel and their continuous training;
* Performance objective 2: endowment with state-of-the-art technical equipment;
* Performance objective 3: ensuring the repair of defective equipment during the shortest time;
* Performance objective 4: contracting of specialized courses from the manufacturers of
* military equipment.

**Critical success factors:**

* CSF 1: active promotion in the local and national media of career opportunities in the naval field;
* CSF 2: the allocation of financial resources for the purchase of last-minute diagnostic equipment and equipment and for carrying out external specialization courses;
* CSF 3: training of the staff in the use of existing and newly acquired equipment;
* CSF 4: training of staff so that each person is double specialized.

**Key performance indicators:**

* KPI 1: staffing degree> 90%;
* KPI 2: technical assurance degree with repair equipment / diagnostic equipment> 90%;
* KPI 3: daily allocation of a 1-hour interval for on-the-job training using existing or newly purchased equipment;
* KPI 4: staff turnover by 10%, within the technical departments, at 6 months.
1. **Conclusions**

Human society is going through a new era, informational era, characterized by easy access to information and a great capacity for trading information. The informational avalanche on the management team has a direct and not always positive impact on the decision-making process. More information increases the degree of uncertainty, which can be easily manipulated for purposes contrary to strategic objectives.

The dynamics of changes in the external organizational environment require flexibility and adaptive and rapid responses. The impact assessment on the effects generated by the decisions made is included in the same equation of the relatively short time available. Current conditions also focus on the workforce that has skills and knowledge above the average recorded in previous years, but also on the expectations it has from the environment in which they work.

The clear definition of a strategy, the vision regarding the organizational path, the description of the strategic objectives, the expectations from the staff facilitate the daily activity of the individual in the present information bombardment. The objectives, strategic or operational, act as institutional benchmarks in the decision-making process at the individual, microstructure or command team level. It also supports aligning the individual and institutional efforts to achieve the vision and implement the strategy.

One of the dimensions of the Balanced Scorecard concept that can be adopted and which can determine immediate effects within the military organization is the use in the process of evaluating the institutional performance of critical success factors (CSF) and key performance indicators (KPI).

Obtaining the correct data from the right person at the right time allows the command team to make better informed, faster and fully consistent decisions with the reality on the ground.

The control and evaluation of the organizational path becomes a mandatory component in the managerial process. The use of Key Performance Indicators, with the support of computer applications, leads to a real and overall picture of the entire spectrum of activities carried out by the military organization. The selection, measurement, analysis, and evaluation of the key indicators also eases the task of the command team in the decision-making process, focusing on the revealing and impact factors recorded during the implementation of the strategy.

By implementing performance management, it will be possible to keep the course of the military structure in the parameters of excellence in relation with its missions, national or derived from the ally status of Romania.

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