

THE IMPLEMENTATION OF THE TABLEAU DE BORD AT S.C. TURBOMECHANICA S.A.

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Abstract

This paper presents the positive aspects of the usage of the tableau de bord as a management instrument, being known for having beneficial effects on the efficiency of the managers' working processes and on the rationalization of the managerial information system. These aspects are highlighted through the creation of the tableau de bord for the general manager of S.C. Turbomecanica S.A

Keywords: Tableau de bord, Turbomecanica, Information system, Objective completion, Information needs.

1. INTRODUCTION

It is well known that the manager develops management processes (divided into prevision, organization, coordination, motivation and control and evaluation), which finally materialize into decisions adopted by him, the natural consequences being the actions initiated by the executants in order to apply the adopted decisions. The basis of the decision foundation and action initiation consists of information, which is given through the information system.

In fact, the most important functions that this system performs are the following: the decisional function, the operational function and the documentation function (Nicolescu and Verboncu, 2008). Through the decisional function, the information system delivers the elements needed in order to aid the manager in the adoption of quality decisions. The operational function provides the information that is used by the executants in the initiation of actions for the operationalizing of the decisions. The documentation function increases the level of knowledge in the organization, its role amplifying in the context of the knowledge-based management.

However, there are several deficiencies of the information system that generate its weak functionality. The most frequent ones are: the filtering and the distortion of the information content, the redundancy and the overload of the information routes. In order to reduce or eliminate the negative effects of these deficiencies, it is recommended to restructure the information system in its entirety.

Apart from the importance of the information in the decisional process, it is necessary to show the impact of another factor on the quality of the adopted decisions: the amount of time the manager has on his hands, this being the most important resource he has. Currently, it is well known that one of the most common negative aspects a manager confronts with is the lack of time, due to either objective or subjective causes. Objective causes include the increase of the decisional processes complexity level and the pressures coming from the stakeholders, while subjective causes refer to the inadequate organization of the workday or the insufficient use of the modern management tools. In these conditions, the available time for the analysis of the information reduces, therefore the quality of the decisions made decreases significantly.

The solution to the previous problems consists in the usage of the French tableau de bord or its American correspondent, the balanced scorecard, for delivering real-time information and for eliminating the deficiencies of the information system.

2. FRENCH TABLEAU DE BORD VERSUS BALANCED SCORECARD: THEORETICAL APPROACH

The tableau de bord and the balanced scorecard are two similar management instruments, both being used on a large scale in the organizations from the entire world, but, at the same time, the two have some particularities which differentiate one from another. The “tableau de bord” concept was born in France, while the “balanced scorecard” concept was developed in the USA, much later than its French equivalent.

According to the French specialists (Boix and Feminier, 2003), the tableau de bord is an enterprise control tool, containing relevant information, which helps the manager making decisions and acting in order to meet the objectives set. The same writers mention the main characteristics of the tableau de bord:

- it is simple, it doesn't contain too many indicators and it gives a global vision on the enterprise;
- it is custom-tailored to each manager, depending on his information needs;
- it is a real-time information providing tool, highlighting the changes of the parameters as they occur.

The German author Juergen Daum explains in one of its papers the context of the instrument's creation and how this influenced its features (Daum, 2005). The first managers of French industrial corporations were engineers. Their perspective on the companies was that they were complex dynamic systems, whose operative processes had to be tuned constantly in order to deliver optimized financial results in

the end. The engineer-managers sought a process-focused instrument that could allow them to steer their business individually and that is how, in the middle of the 20th century, the tableau de bord was created. As a result, this tool is centred more on the business processes and less (but not excluding) on the financial aspect.

The balanced scorecard was created by the Americans in the 1990's, as a correspondent to the French concept. Some of the biggest promoters of the balanced scorecard, Robert Kaplan and David Norton, show in one of their books (Kaplan and Norton, 1996) that this tool contains indicators grouped in four different perspectives: financial, customer, internal business process and learning and growth. The financial performance measures indicate the final economic consequences of actions already taken. In the customer perspective, managers identify customer and market segments in which the company will compete and the measures of the performance in these targeted segments. The internal business process measures focus on the internal processes that will have the greatest impact on customer satisfaction and achieving the organization's financial objectives. The learning and growth perspective identifies the infrastructure that the organization must build to create long-term growth and improvement.

Due to its manner of structuring the indicators, the balanced scorecard is viewed as a rigid and inflexible instrument, unlike the French equivalent, which is more tailored on the manager's needs. There are more differences between the two concepts, both constructively and functionally: the balanced scorecard is a ready-to-use device, focuses more on the financial measures and emphasizes the reward of the employees, while the tableau de bord insists on the process of its own construction, focuses more on the operative processes of the organization and emphasizes the learning aspect, through which the employees accumulate more knowledge on how the activities inside the organization are developing. In a research paper (Bourguignon, Malleret, and Nørreklit, 2001), the authors related these differences to the cultural and ideological traits in France and USA. French are inclined to a theoretical and intellectual approach, have a less management education (the first managers were engineers) and value the social success, while Americans are inclined to pragmatism, have a higher management education and emphasize the hierarchy ascension and the value of work and achievement.

Given the fact that the two management instruments belong to opposite cultures, neither the French people nor the American people agreed with the other side's concept. The French authors' arguments developed on the conceptual field, rejecting the opinion stating that a business can be run only on the basis of the financial measures. On the other hand, the evidence that the Americans refused to take into account the other approach is given by the fact that the "tableau de bord" term was not translated in

English. In a specific publication (Epstein and Manzoni, 1997), the critics focused on the pragmatic field. Therefore, they claimed that the tableau de bord was emphasizing the financial measures (not how the books on the tableau de bord were recommending), that its indicators were not referring to the external influences and that the managers were using it in a distant management process, rather than creating discussions and meetings on the basis of the information provided.

In conclusion, both the French tableau de bord and the balanced scorecard are two efficient instruments for the organization's management and the choice for one of them must be made depending on the cultural traits in the involved area.

3. IMPLEMENTING THE TABLEAU DE BORD AT S.C. TURBOMECANICA S.A.

3.1. The presentation of S.C. Turbomecanica S.A.

S.C. Turbomecanica S.A. is a Romanian company whose main profile consists in the execution of products and offering of services for the civil and military aviation field, in both national and international markets. The company was founded in 1975 towards the manufacturing of aircraft engines and gear. In the period between 1975 and 1977 it was named Bucharest Engine Factory, from 1977 to 1990 it was named Turbomecanica, Bucharest, and in November 1990 it turned into a joint-stock company, since then its name being S.C. Turbomecanica S.A.

In the national market, the company's customers are The National Defense Ministry (MApN) and The Romanian Air Industry (IAR) from Braşov. In the international market, Turbomecanica has some important customers, such as: Rolls Royce plc (United Kingdom), AgustaWestland (Italy), SKF (France) or Unison (Poland). Among them, Rolls-Royce is the eldest and the most important customer, generating about 40% of the annual revenue. Another relevant customer was General Electric Aviation (USA), but as from 2014, the Romanian and the American companies broke the partnership.

Regarding the competitors from the national market, Turbomecanica is the only aircraft engine and helicopter kit producer and restorer. In the international aircraft engine market, the circumstances are again favorable to the Romanian company, because there is little competition worldwide (in Portugal, South Africa, Indonesia), also it is the only producer of the Rolls-Royce Viper engine and in the Eastern Europe it is the only enterprise to fabricate reaction engines using the western technology.

Despite the competitive advantage Turbomecanica has in the internal and external market, its financial position got worse since 2008, generating big annual losses. Firstly, this situation was caused by the financial recession that affected the global economic activities since 2008, so that the demand for the

aircraft components, mostly the internal one, decreased considerably. This led to the second aspect which caused the aggravation of the financial position: the incapacity of returning the credits given by banks. The consequence is that currently, the company has high long-term loans owed to the creditors, which cannot be returned earlier than 2019.

In order for the management of Turbomecanica to control and evaluate the realization of its strategic objectives, it is necessary to implement the tableau de bord for each management level.

3.2. The tableau de bord for the general manager

Considering the fact that the choice between different versions of tableau de bord must be made in correlation with the managerial practice and cultural traits in the involved geographic area, in this section, the tableau de bord will be created according to the Romanian approach on this management method. The first who developed this concept in the Romanian management field literature was specialist Ion Verboncu (Verboncu, 2001). In his paper, the approach is similar to the French one, so that the tool is custom-tailored to each manager and provides relevant and real-time information on the organization. The ways of expressing the information consists of tables and graphs. The tables contain:

- indicators, which point out the level of the objectives set and the current level of the economic processes;
- positive and negative differences between the current level of the economic process and the level of the objectives set;
- degree of objective completion;
- causes which influenced the occurrence of the positive or negative differences.

The following section presents the creation of the tableau de bord for the general manager of Turbomecanica, using the Romanian methodology, which has two phases: the conception and the filling of the tableau de bord. It is needless to say that the existence of a computer network in the entire organization is essential for an effective and efficient implementation and usage of this management tool.

- a) Conception - this is a preliminary, but fundamental phase, which provides the conditions needed in order for the tableau de bord to work properly.

The first step is the identification of the company's strategic objectives or the setting of new ones along with the top management, in case the existing objectives are not adequately defined. Then, the proper indicators must be selected, depending on the information needs of the general manager. In this

situation, the tableau de bord's pattern will contain information referring to the global economic activity of Turbomecanica, which is relevant in the present context. The formulas used for the determination of the level of the indicators are mentioned below. The indicators used in the conception of the tableau de bord are the following:

- Revenues;
- Loss;
- Cash-flow;
- Loans = Short-term loans + Long-term loans;
- Indebtedness = $(\text{Long-term liabilities}/\text{Equity}) \cdot 100$;
- Current liquidity ratio = $\text{Current assets}/\text{Current liabilities}$;
- Monthly average wage = $(\text{Total wage}/\text{Total number of employees}) / 12$;
- Labour productivity = $\text{Revenues}/\text{Total number of employees}$;
- Rotation speed of the current assets (annual number of rotation) = $\text{Revenues}/\text{Current assets}$.

The level of the objectives set will be filled in the tableau de bord's pattern. The next step is the assignment of the routes through which the information will pass, from the sender to the receiver, the figure below being relevant in this case.

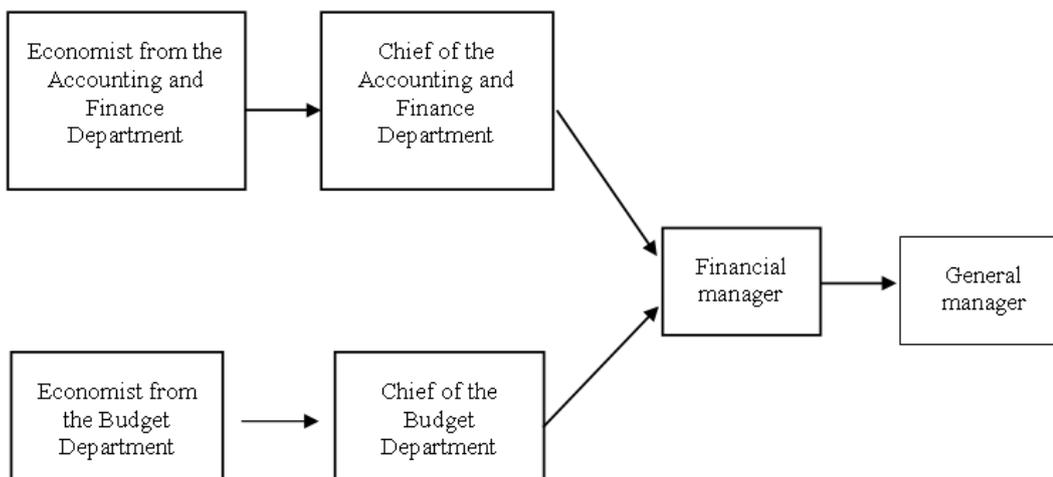


FIGURE 1 - THE INFORMATION ROUTES
Source: made by author

The last step in the conception phase implies the determination of the tableau de bord's filling and distribution periodicity. In the case of Turbomecanica, the information expressed through the indicators above must be updated monthly, in order for the general manager to control efficiently the company.

- b) Filling - in this phase, the tableau de bord takes shape on the basis of the aspects established in the conception phase and the information collected from the financial manager. The filling is done either by the two departments mentioned above or by a specialist from the company who is charged with this duty. Below, the tableau de bord which will be used by the general manager of Turbomecanica is expressed through a table containing the indicators chosen in the first phase.

TABLE 1 - THE TABLEAU DE BORD TAKING THE FORM OF A TABLE

Indicator	Unit of measurement	Objective (Q1 2014)	Current level (Q1 2014)	Deviation (+/-)	Degree of completion (%)
Revenues	lei	2.305.995	5.250.811	+2.944.816	227,7
Loss	lei	4.874.155	4.162.749	-711.406	85,4
Cash-flow	lei	11.580	14.327	+2.747	123,72
Loans	lei	53.280.740	70.338.534	+17.057.794	132
Indebtedness	%	102	120,54	+18,54	118,17
Current liquidity ratio	-	1,1	0,98	-0,12	89
Monthly average wage	lei/employee	1.200	1.035	-165	86,25
Labour productivity	lei/employee	7.440	16.938	+9.498	227,66
Rotation speed of the current assets	annual number of rotations	0,05	0,07	+0,02	140

Source: made by author

The table above refers to the first quarter of 2014, thus the general manager can use this information in order to analyze whether the objectives set for this period have been fulfilled or not.

In addition to the previous way of providing the information, the general manager needs to know the evolution of certain indicators, from one period of time to another, therefore, the tableau de bord will take the form of a graph. For the exemplification of this manner of viewing the information, the next figure will present the quarterly evolution of revenues, from Q1 2012 to Q1 2014.

Unlike the tableau de bord conceived as a table, whose key role is to highlight the variations from the goals set, the graph offers a visual perspective over the trend of different indicators. This is useful when the management wants to analyze quickly and to form a general opinion on the processes in the organization.



FIGURE 2 - THE QUARTERLY EVOLUTION OF REVENUES
Source: made by author

4. CONCLUSION

In this study, we accentuate the positive impact that the tableau de bord has over the managerial practice. The instrument provides relevant information on the organization's activity and assists the manager in making the adequate decisions for reaching the objectives set. Also, the lack of time most managers confront with is ameliorated, because the information is delivered in real-time, facilitating the decisional process. The choice between the French tableau de bord and the American balanced scorecard should be based on the organization's culture and style of management, but the instrument could be modified according to local requirements, as well.

The process-based management at Turbomecanica needs the implementation of the tableau de bord for the entire management of the company and this paper exemplifies the creation of this instrument for the general manager. As noticed, the best way of providing a full perspective on the company's activity is combining both the tables and the graphs. Using the table form, the general manager will monitor better the indicators which have high interest in the case of Turbomecanica, such as: revenues, loans, current liquidity ratio or labour productivity. Instead, the graph offers a vision on the evolution of the indicators and facilitates the understanding of the influence of time over them.

As demonstrated, the tableau de bord is a management method which improves the decisional process and the control of the organization, rationalizes the information system and optimizes the managers' working processes, therefore it should be used in as many organizations as possible.

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