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# The ABC-method (Activity-Based Costing) and the transversal organization of enterprises in the steel industry of Romania

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## Abstract

*This article deals with the problem of reorganization of the enterprises in the steel industry in Romania, starting from the general principles identified by experts. The orientation of these principles finally leads to the transformation of the vertical organization manner into one of a transversal type, as is that specific for the activity-based costing (ABC).*

Key-words: *transversal organization, steel industry, principles, steering, performance.*

*The reorganization of enterprises in the steel industry - a solution for surviving or for performance?*

By its nature, the enterprise represents a complex system based on the systemic principles. Any reorganization project will always start from an enterprise or from an organization. Thus, in its approach to the reorganization in compliance with the systemic principles, within the enterprises of the steel industry in Romania, several aspects and several levels will be highlighted. In order to catch the reality in an industrial context such as the metallurgic one, the reorganization attempt can evolve only in form of a process and, consequently, it can be steered. In other words, the reorganization is defined as a process. In order to achieve the reorganization of a steel plant in Romania, in the specialized literature there have been identified six principles on which this process is based, namely:

- the principle of interactivity and imprescriptibility of the reorganization;
- the principle of cyclicity;
- the principle of the organization on levels;
- the principle of modeling;
- the principle of performance steering;
- the principle of participating management.

## The Principle of Interactivity and Imprescriptibility of the Reorganization

The reorganization is a process that implies certain behavior. The measures to be taken for the reorganization of the enterprises in the steel industry do not represent merely an independent ensemble of procedures, but, on the contrary, they develop in time, depending on the context.

On the one hand, within the measures to be taken for reorganization, the process itself becomes interactive and reacts, becoming dynamic and following a specific behavior. On the other hand, the reorganization is not prescriptive (it has not an exact number of stages defined as being common and applicable to all the processes in different industrial branches. This is also the case of the enterprises in the steel industry).

This principle acts upon the selection and organization of the objective part that is to be reached in the reorganization of the enterprises in the steel industry, proceeding in this respect to the division of a certain process into several sub-processes or stages.

## The Principle of Cyclicity

The reorganization of the enterprises in the steel industry is based on the life cycle in spiral. The measures respond to a global cycle (findings–analysis–decision–reorganization–application) that repeats itself and that lies at the origins of Deming's rule. It follows a cyclic (or helicoidal) nature of the measures, in contrast

with the previous organization methods of linear nature. The analysis stage refers to the modeling of the existing facts and of the reorganization stage exactly as in the case of the conceptual elaboration of the new organization.

### **The Principle of the Organization on Levels**

The reorganization of an enterprise is made on levels. In order to have the reorganization of a complex system under control, it is advisable to achieve the majority of the stages of the measures to be taken on levels. Taking into account the complexity of the organization system, the analysis and reorganization of the enterprise is carried out on detail levels. Depending on the expected purpose of the enterprise's reorganization, the studies can be defined as preliminary studies, detailed studies, etc.

But what does this *detail level* mean?

The detail level is a level of permanent abstraction that focuses on a certain angle given by the complexity of the problem dealt with. A system level is characterized in relation with the detail angle or the description fineness of the system and consequently by the amount of information taken into account for this system.

### **The Principle of Modeling**

According to the experts' opinion, the reorganization responds to four essential aspects of the enterprises in the steel industry of Romania. In the specialized literature the following essential aspects are mentioned: the organizational structure (organizational entities – decision centers and levels, competence centers, coordination mechanisms); the operational processes (control and object flows); the treatment of the informational data and systems; resources (human and technical), in particular of the actors' competences and role.

The definition of the essential aspects that are taken into account in the study field of the enterprises in the steel industry, starting from their reorganization, represents in fact the primordial stage of the process itself. These aspects identify the essential levers of performance on the basis of which we shall decide to act.

Taking into account the four essential aspects of the enterprises in the steel industry, the reorganization is no longer proper to the analysis stage. It refers to all the reorganization processes. It acts in identifying all these aspects in order to treat them, then to study the interactions and the effects of the changes, some or the others, throughout the whole reorganization process.

### **The Principle of Performance Steering**

The reorganization represents that „*axis mundi*” of an enterprise's performance. The performance indices play the essential part in „*judging*” the status of the reorganization and steering system of the process and even more, of the other organization systems. The reorganization is „*centered*” on performance, in the sense that the whole process must be oriented towards performance improvement, an essential aspect within the defining of the goals. More clearly, these are the indices that express the relative performance of meeting the reorganization targets. In the enterprises of the steel industry they help to study the interactions between the aspects taken into account and the development of the relationship cause-effect among the inductors of these aspects.

Within the reorganization, the term of performance is integrated at all the levels and is achieved in two manners: either starting from the application of those indices and of the instrument panel to different decision levels envisaged by the enterprise, or by the joint use of those resulting indices for the control of the evolution of the process or of the processes, for the steering of the reorganization process in a reactive manner.

### **The Principle of Participating Management**

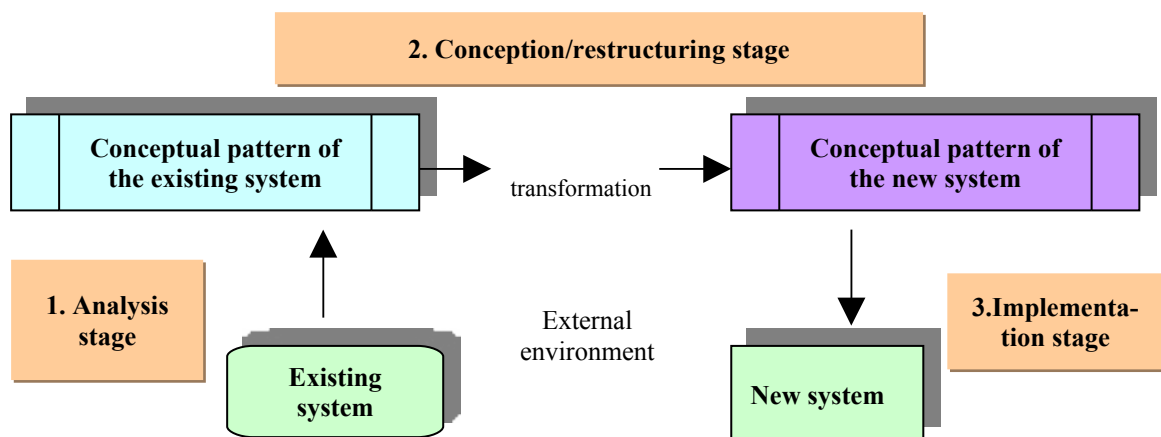
According to this principle, the reorganization process is managed in a participating manner. In the case of reorganization of the enterprises in the steel industry, the whole process is defining, representative and must be observed as *a significant project*. Its behavior must respond to logic of the project management. The whole reorganization must be conceived and achieved in a participating manner, involving the majority of employees as participants. The reorganization success of the enterprises in the steel industry is ascribed to all the employees, participants in this process. In this sense, a synthesis group is founded, that supports and steers the

project, and an analysis group that performs the reorganization. This group includes also the users who participate in the reorganization as counselors of the enterprise (either internal or external).

Based on the facts found out during the debate upon the reorganization principles of the enterprises in the steel industry, we propose that the whole process should be divided into three large stages, according to the scheme presented here below. Due to the extent of the reorganization process, the majority of experts in Romania and from abroad recommend the use of the three stages:

- the analysis stage that envisages the reproduction of a situation of very accurate links which are based on the existing situation. The purpose is to put the question, to examine the causes of the dysfunctionalities and to identify the improvement possibilities;
- the conception /restructuring stage complies with the extent of the improvements to be made. A conceptual pattern of the reorganization system is proposed, under which a better performance level than that of the present (previous) system is shown;
- the stage of the implementation of the new system, of the proper achievement of the reorganization in comparison with the possible adjustments, if the envisaged performance levels are no longer expected from the first action.

Picture no. 1. Scheme of the reorganization process of the enterprises in the steel industry of Romania according to the division on stages



*Is the ABC-method the ideal solution for the reorganization of the enterprises in the steel industry or not?*

In the last decade, an increase of the offers launched by small and medium-sized companies has been recorded, fact that lead implicitly to a decrease of the life cycle of the goods manufactured, the work carried out or services supplied by them. Under these circumstances, an enterprise must be able to meet the more and more varied requirements coming from the customers and to succeed in obtaining performances at company level. The two aspects mentioned before impose a flexible and evolutionary organization at company level. In other words, the redefinition of the organization manner of the enterprise becomes the most important stake of its performance.

The ABC-method (Activity Based Costing) introduces the concepts of transversal, processes and responsibilities, thus supplying the necessary framework for the companies' adjustment to a flexible manner of organization. The notions proposed by this method allow the visualization of the contribution to the achievement of the company's global performance. Based on the information received from the competitor environment, the enterprise is constantly stimulated to meet the customers' requests, anticipating the steps to be taken, at short intervals of time.

In order to become performing, an enterprise of the steel industry must resort to the reorganization of its organizational structure in two manners: it chooses either the transversal organization or finds a transition mode

between the existing organization system and the transversal one proposed by the ABC-method (Activity-Based Costing).

*What does this transversal organization imply?*

As it is known, the ABC-method is based on a detailed presentation of activities, and within them, on a detailed presentation of the operations. In order to obtain the transversal organization, the mapping of activities will be carried out, not only of the contents of the actions but also of the interactions between them. In order to describe the object of the actions that are established at internal organization level, the transversal cutting out follows logic of purpose and cooperation. Thus, a strong link between the proposed strategic targets and their fulfillment is achieved.

*As a matter of fact, what do we intend to achieve and why do we achieve?*

In order to answer these questions from the practical point of view, we must think about the envisaged targets and about the „price” of the activities that will be performed. The enterprises must produce and sell, thus putting into practice the strategic goals of development and meeting the customers’ requirements. When making an analysis of the ABC/ABM method, the two questions are taken into account that contributes to the reduction of the number of known activities, in contrast to the other activities with general character. In order to effect the cutting out of a company in activities, it is necessary to regroup a number of more or less important actions or operations. In the specialized literature the following levels are used: family of processes, processes, activities and operations.

The family of processes represents a group of processes that can be linked together by the information or material flow. The families of processes can be assimilated to some large optimization functions (example: purchase, production, selling).

The processes represent a group of activities participating in the same goal, linked together by the information or material flow. These activities are generally considered main activities, but not always, as they can also be mixed. The process supplies a product or an internal or external service. The connection of the activities within a process is achieved logically. From the formation of the process „output” we pass to the activities situated upstream towards the downstream activities (example: the definition of the policy of purchasing, selling in large quantities, etc.).

The activity represents the grouping of operations participating in the same goal, which use a homogeneous „savoir-faire”. Its „output” will be identified. The activities are linked and follow a flow of materials, services or information (e.g.: the searching for supply sources, information about the suppliers, etc.). Practice has shown that we can talk about two categories of activities: main activities and partial activities or supporting activities.

Many authors consider that the supporting activities are nothing else but resources at the disposal of the main activities and that, without the latter, they must disappear. But, between the main activities and the partial ones (support) can exist a relationship concentrating several partial activities within a main activity, concentration that can be made totally or only partially, being based on different measure units. The essential difference consists in the different levels on which the settlements within the cost calculations are made. In most of the cases, a number of 3-7 cost stimulators influence 80% of the amount of indirect costs. The choice of the cost inductors must be made with great precaution, because the wrong choice of some of them can lead to errors of wrong allocation on cost bearers and finally to inaccurate costs which do not reflect the reality.

If it were to take into account the manner in which the activities related to the management period are performed, we could identify three types of activities:

1. *activities preceding the production. Here we can include those activities referring to production planning, product project and development;*
2. *supporting activities (auxiliary). Here we can include activities that cause the existence of objects costs (products, work, and services) directly linked to the contribution to the overall success of the main*

activities. (Example: the delivery of the customers' orders at the established date, issue of invoices for the forwarding of goods, etc.);

3. *current activities. Here we can include all the logistic activities necessary for the insurance of the continuation of the company's whole activity.*

The operation represents the basis for the analysis of the actions of the staff involved in the achievement thereof. (Example: visiting the show rooms, conclusion of contracts, etc.). The operation requires the compulsory participation in an activity. The level „activity” and especially „operation” are operational elements to which the analysis is heading, that allow the optimization of the internal organization.

Based on the facts analyzed in this article, we propose the vertical reorganization of the enterprises in the steel industry of Romania. The proposed variant can be the ideal solution that will contribute to the structural arrangement of the enterprises in the steel industry, being more flexible than the variant existing at present. In future, we shall revert with more deep-going studies meant to adapt the ABC-method (Activity-Based Costing) to the specific features of the steel industry of Romania.

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