

# Retrofit of the Cost and Effectiveness Management Model in Large Enterprise

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## Abstract

What is a steam turbine retrofit and what are the advantages of such retrofit - hundreds of papers have been written on the subject and thousands of presentation, not to mention multi-million euro retrofit market and businesses devoted to this activity. Upon deeper reflection it may be concluded that the idea of retrofit may be applied not only to steam turbines but to large enterprises too, including those which supply steam turbines. As an old adage says: „medice, cura te ipsum”.

The analysis of cost and effectiveness management in a large enterprise indicates the occurrence of phenomena of „no man’s land” and „imaginary cost”. Even though they significantly influence the economic result, the classic management model does not account for these phenomena at all. This paper presents three propositions of retrofit packages of management system of large enterprises, functioning on the global market of complex products with strong competition.

## Keywords or phrases

Retrofit of the cost management model, No man’s land management, Enterprise imaginary costs, Total Project / Product Production Management System, Enterprise Key or Critical Areas Integrated, Management System EKoCAIMS.

## Introduction

Cost and effectiveness management models may be as different as the business activities themselves. Evaluation of the actual efficiency on the given development phase of the market and enterprise itself shall be first of all based on development of the market share of the company in the market where it operates. Simply speaking high and increasing market share of the company may indicate that an effective cost and effectiveness management model is being used.

Moreover it is indisputable that both the enterprise and the market environment are changing constantly. On one hand it means that the past efficiency of the model does not guarantee successful business in the future, on the other hand it points out to the significant benefits and advantage of those cost and effectiveness management models which take into account constant changes in the enterprise and market conditions as much as possible. An enterprise acting without clearly defined, rational, adequate, implemented and constantly developed cost and effectiveness management model may of course be imagined. Only can it be said of such enterprise that it has a development strategy as well as elementary tools necessary for effective operation on the global market with competition. The necessity to have such system in place is especially crucial when an enterprise operating in the market of developed technology plans to multiply its share by taking over the shares of much stronger competitors. In such situation it is probably the only feasible way to success. In case of companies trying to operate in the business of new, dynamically developing technologies working without implemented efficient system of cost and efficiency management, an attempt at competitiveness on the global market is doomed to fail.

## **Retrofit of the Cost and Effectiveness Management Model in Large Enterprise**

The majority of companies hold discussion on cost and cost reduction frequently and extensively. Employees are allocated to constant accounting and controlling of cost. However the scope of such accounting and controlling is suited mostly to the requirements of tax regulations, financial reporting and financial control regulations. However it seems that the main purpose is really a precise registration of cost [1], [2]. From time to time also cost reduction actions are initiated.

Therefore employees of most companies are convinced that their company has some sort of cost management system in place. Regretfully, in many cases these are illusions based on misconceptions. In fact, registration and controlling as well as periodical cost reduction actions may hardly be considered as “clearly defined, rational, adequate, implemented and constantly developed cost and effectiveness management model”.

To illustrate the situation an analogy may be now used comparing a company from the fifties in the 20th century with a quality control department to a company from the nineties in the 20th century with implemented and constantly developing Total Quality Management System.

The requirements concerning quality management systems have been standardized and described in details in ISO 9000 series standards, thus existing in the collective consciousness as a set of defined and established ideas, however the requirements and expectations towards the cost and effectiveness management system probably have not yet been similarly codified by ISOXXX series standards. Therefore let me allow to present the main features of the proposed concept.

### **Modernization package No. 1: Integration of Cost and Effectiveness Management system in Large Enterprise**

In fact, the process of cost of effectiveness management should provide a basis for organization of every enterprise operating on the market planning systematic success and long-term development with strong competition. When analyzing some of the contemporary models of large enterprises / industrial companies operating in the global market it is difficult to resist an impression that both their structures and assumed principles of operation somehow obstruct an effective cost and effectiveness management throughout the company as a whole.

Often in case of such large enterprises the significance of cost and effectiveness management is not appreciated (unnoticed) and practically omitted while building their organization and rules within those organization. Consequently it leads to decreased competitiveness of large enterprises with respect to small companies. The opinion stating that the large enterprises are less competitive than the small companies is generally prevailing. Still, does it really mean that a large enterprises is less competitive than a small company?

Let's go back to the organization model of large companies / industrial enterprises. A classic form of such enterprise includes division into profit centres - businesses (or business units) and so called cost centres, factories in other words. The advantages of such model often spoken about are clarity and simplicity. There is also a belief that such advantages serve the interest of the effectiveness and competitiveness of the enterprise.

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However, the analysis of the actual functioning of such enterprises reveals significant disadvantages of the classic model of organization. One of them is disintegration of the cost management process. As a side effect of this disintegration a “natural” elimination of the whole set of important links in the cost management process took place. Since they did not fit to the classic mode of the enterprise organization, they simply do not exist. Disintegration of the cost management process also concerns the operation of businesses and factories. In this cases it mostly deals with reduction of cost management mostly to registration of cost and organization of periodical actions of cost reduction within internal competences. In practice, however, it means that the active use of elements and tools of cost management have been disregarded, not only throughout the whole company but also in the scale of individual businesses and factories. Cost management is not regarded as a process.

Could it be that this picture is one sided and exaggerated? Well, such is the logic of subjective vision of reality trying to distinguish the essence of the matter between the tangled nuances. Let’s get to the details.

If the description of the Quality & Process Management System of a business / business unit (profit centre) and if the Quality Management Manual of a factory (cost centre) includes many important subjects however is silent on the subject of cost management, it may mean that the cost (and cost management) are perhaps not so important for both the business and factory. Considering that the both examples quoted regard documents describing actually existing Integrated (more or less) Management Systems it may be concluded that the cost management aspect is undervalued and disregarded in practice in both cost and profit centres - at least formally.

It is worth reminding that the Integrated Management Systems are constructed separately for the needs of profit centre management system and needs of cost centre management system. A more detailed analysis of functioning of a real company allows us to notice that between cost centres and profit centres there lies something in the shape of “no mans land”. In general, the more complex and custom-made are the products the company is dealing with, the larger this “no man’s land” is. Moreover, from the formal point of view, in the classic model of large enterprise this “no man’s land” does not exist. Disregarding, at least from the formal point of view, the process of cost management in practice for both profit and cost centre results in further underestimation of the significance of the cost management process in the territory of “no man’s land”. In reality, in large enterprises in the territory of “no man’s land” accidental decisions hold sway, mainly taken “from abroad”. In such situation the cost minimizing aspects humbly give way to other considerations.

To make this reasoning more concrete. What is about this “no man’s land”? Still better: what is the proposed retrofit of the cost management model in large enterprise?

In the first place it means the integration of the cost and effectiveness management in a large enterprise as a whole, operating in the global market of very complex products, which are complementary in the large degree. The scope of this integration shall result from the purpose of the integration, that is from the maximization of effectiveness and profit of the company as a whole.

### Modernization package No. 2:

#### Total Product / Project Production Management System

There are at least several symptoms of “no man’s land” in the management large enterprise. Two examples to start with. From the point of view of effects, in my opinion, the most important symptom of “no man’s land” is to disregard in the structures of large enterprise (especially in the enterprise delivering very complex products) the link managing the production (production manager) of the project / product, located between the present structures of cost centre and profit centre. In the present system many decisions important from the cost of production project point of view are being taken as (at best) sum of accidents from near and distant past. In my opinion the links for management of production of projects / products shall be created and developed within profit centres - businesses. The main task of these management links would be: management of the production process (in particular including cost management) of the project / product in such a way, that while keeping the technical and quality requirements defined within present (traditional) structure of the profit centre and by using internal and external production potential to minimize the level of cost of the project/product.

The object of management in this case would be most widely understood (almost entire) production process of a project / product managed “globally”, that is, not only in the main cost centres co-operating with “our” profit centre, but also managing the process with the suppliers, sub-suppliers and contractors, as well as process links in cost centre co-operating with other profit centres (belonging to “our” holding) which are our sub-suppliers or contractors in the scope of a particular project/product.

In general, as one of the modernization package of the management system in large enterprises, I propose to create and implement something which as an analogy to TQM System may be described as “Total Project / Product Production Management System”. Such TPPPM System in future may naturally become one of the elements of Integrated Management System of a large enterprise allowing to eliminate the problem of the aforementioned “no man’s lands” as well as to eliminate the financial loss, low competitiveness of the product and other detrimental effects resulting from the existence of excessive cost.

### Modernization package No. 3: R&D of Management System Process

Apart of the aforementioned term “no man’s land” it is worth to note and define - for the purpose of analysis of operation of a large, real enterprise supplying complex products - the term of “imaginary cost”.

In general, the greater the number of profit centres included in the enterprise and the more complex and custom-made are the products the enterprise is dealing with, the greater such “imaginary cost” are. At the same time, from the formal point of view, in the classic model of a large enterprise the term “imaginary cost” does not exist. Therefore, let’s assume that if between the cost centre and the customer there is one profit centre of a large enterprise, then the „imaginary cost” of this project are equal to zero (irrespective of the level of net margin and mark-up rate. Let’s assume that to the profit centre of a large enterprise have an inherent net margin equal to 12 % and the total level of mark-up rate reaches value of 41 %.

Now, if in the path of the product (or a component of a complex product) between cost centre and a customer there is more than one profit centre, for example two, three or four

profit centre arranged in a series, then the “imaginary cost” of such product (or a component of a complex product) shall be respectively: 57.8, 139.3 and 254.3 % of the actual cost spent in the cost centre and first of the profit centre. Of course, assuming that both net margin and the total mark-up rate level are zero in the cost centre (which is not true in case of some large enterprises). If in such conditions it is possible to conclude a contract, then naturally the Contractor is happy: there is another position in the order’s received list and in all other profit centre participating in the project, since each profit centre participating in the project may report the expected net margin equal at least 12 %. In case of a concluded contract such “imaginary cost” are very useful - in the “no man’s land” a significant part is converted into additional net margin, or, to be more precise and fit into the convention of this reasoning, into something that may be defied as “no man’s land net margin”.

As long as good market situation and competition “allow” to conclude a sufficient number of contracts, in principle everything is in order. Model seems to be good enough. However, will it be good enough when the market situation deteriorates and the cutthroat competition tries to take away our slice of the pie? At first the number of concluded contracts will drop dramatically. It will turn out that the competition offers prices 15 to 30 % lower than ours. Then, as in all large company, alarm bells will ring and in the profit centres (as well as in the cost centres) another edition of real cost reduction program will be launched. The only thing is, that in many respect it will somehow resemble hopes to drastically reduce the losses in the generator in order to increase the turboset output. Total (and virtually impossible) reduction of losses in generator may bring about the increase of the turboset output in the region of 1.1 to 1.5 %. Is it worth our attention to concentrate only in the elimination of the losses in generator when we expect the increase in the turboset output by 25 %? In such situation even a huge technical success and total elimination of the losses in generator will mean only a slightly smaller failure: as a result we will be short of turboset output not by 25 but “only” by 23.5 %.

If the situation in the orders received becomes difficult or when we plan significant increase in our market share I propose to include in the management process also, or even primarily, the aforementioned “imaginary cost” and “no man’s land net margin”.

I am of the opinion that the present model of management of large companies does not take into account such parameters. Is it possible using such model to effectively manage the enterprise acting with strong competition in the global market? It is more or less similar situation to a plane flying in the vicinity of stalling speed for some reasons the elevator may only be displaced within limits from +12° to +6°, and the pilot not having the current flight parameters available and not knowing the flight velocity.

Mildly speaking, the situation is not very comfortable both for the pilot and passengers, and also perhaps a little uncomfortable for the plane owner, too. Coming back to the effectiveness of an enterprise.

I propose to treat the effectiveness management of a large enterprise as a second important area worth improving by introducing specially tailored modernization packages.

Let us assume at the beginning that the main features and rules of the model of operation of a large enterprise, including the division into cost centre and profit centre shall remain. Let us further assume that a large enterprise is a widely understood tool (a kind of a flexible production line) for making money in the selected area of the market. It is in the nature of a good tool to be as much suited to the activities and/or tasks for which it was

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designed as possible. It seems quite obvious, that in order to be suitable such tool should be first of all properly designed. Moreover it should, be depending on the needs, sharpened, adjusted, calibrated and when the time is ripe, also modernized. The precondition of designing a suitable tool is a precise definition of activities and/or tasks for which it is to be used.

In case of a large enterprise - in particular an enterprise delivering a whole range of complex products - it is of crucial importance to precisely define these products basing on the needs of the market. Needless to say, the needs of the market shall be constantly monitored and analyzed so as to react in time to properly correct definitions of individual products.

As soon as the task is defined, there comes the time to design a suitable tool - in case of a large enterprise time to optimize a widely understood structure. The elements of this process include: optimization of the division into cost centre and profit centre, optimization of the allocation of competences to individual cost centre and profit centre as well as optimization of the business model with respect to each product.

Therefore I propose as one of the modernization packages in the area of effectiveness management in a large company to create at the level of holding and on the selected lower level (segments, sectors (?) organizations/departments responsible for the R&D process of Management System Process (R&D of MS Process).

Initiation and proper management of this process shall ensure, that in future many key decisions important from the long perspective for competitiveness and effectiveness of a company may be taken basing on the rational factors in greater extend than now. What would be the actual task of R&D process of Management System Process.

R&D processes operating, for example, for gas turbine, steam turbine or generator business are mainly dealing with the development of these products and development of tools for designing of these products.

R&D process (processes) of Management System Process should be dealing with the development/improvement of the company by optimization of its structures and optimization of business model of individual products (among others). In this case it is especially important to collect and analyze the internal signals concerning chances to conclude a contract lost due to the unsuitability: of the offered delivery scope of the product (often strongly depending on the structure of the enterprise) or the business model to the current needs of the market. Even the largest enterprise may not without consequences be blind and deaf to the needs of their customers. It may not fail to notice the behaviour of the competition. The next area of activities may also be to develop methods and tools used within the aforementioned Total Project / Product Production Management System. Other areas may be current comparative research of effectiveness of alternative business model of selected products as well as current comparative research of effectiveness of alternative models of a large enterprise delivering with strong competition a concrete (defined) complex products for the global market.

## Conclusions

First of all, the proposed above modernization packages of the cost and effectiveness management model serve the optimization of efforts leading to a significant increase of effectiveness of operation of a large enterprise. This reasons is in fact an indication of a

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few areas, where, according to the author's opinion, there is still a potential and where the retrofit activities are most justifiable. Several dozens of years ago, a Soviet seamstress, comrade Korabielnikova proposed a cost reduction method based on a motto „I save threads from Monday to Friday, and hence on Saturday I sew with a threads for free”. In case of this very simple and obvious method, the decision to implement may be taken on a lowest level.

The proposed above modernization packages of management system are addressed to large industrial companies supplying very complex products in the global market with strong competition. Effective use of the whole potential of these proposals is undoubtedly a huge undertaking, at least because in order to implement them it is necessary to break many stereotypes and take decisions on a very high levels.

However, I am of the opinion that the use in practice of the proposed solutions (all or only selected packages) is worth undertaking since it creates an opportunity to significantly increase the competitiveness of the company as a whole.

I hope that the above proposals could be in the near future applied first of all in the big European companies as the essential part of the “Enterprise Key or Critical Areas Integrated Management System” - („EKoCAIMS”) concept. I think that such Enterprise / Business Key or Critical Areas (domains) will be in the future identified and tabulated as a basis of Enterprise / Business Management Strategy building.

I am convinced that cases of utilization of proposals described in a present paper as well as utilization of the mentioned only in the conclusions EKoCAIMS concept could be considered as examples of Lisbon Strategy practical application.

### References

- [1] Robert S. Kaplan, Robin Cooper, 2002, *Zarządzanie kosztami i efektywnością*, (original title: *Cost & Effect. Using Integrated Cost Systems to Drive Profitability and Performance*), Krakow: Oficyna Ekonomiczna.
- [2] Edward Nowak, Robert Piechota, Marcin Wierzbiński, 2004, *Rachunek kosztów w zarządzaniu przedsiębiorstwem*, Warszawa: PWE.