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QUALITY MANAGEMENT AND VALUE MANAGEMENT - CONCEPTUAL APPROACH IN THE CONSTRUCTION ACTIVITY

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Abstract: *Currently, global competition between companies in the technical field is tight, entrepreneurs have to assign new meaning to the notion of "value", not only by constantly introducing innovations at all levels of the company but also by the quality control while optimizing costs required to achieve quality.*
Using tools and methodologies specific to the two types of management: Quality Management and Value Management indicates significant results in meeting users requirements through superior quality of services provided at a reduced cost.

Key words: *Quality Management, Value Management, Quality Function Deployment, value analysis, value.*

1. Introduction

The notion of value is no longer a constant in the contemporary world - marked by fast changes - from economic, social and technological standpoint.

Modern society is marked by constant change. Therefore, entrepreneurs are forced to pay increased attention to the notion of "value" in order to obtain products or services that satisfy market requirements.

At the same time, quality control and cost optimization in the construction industry are necessary to obtain quality that is essential.

These two methods - quality management and value management - with the specific tools and methodologies complete this objective.

2. Quality Management

ISO standard 8402: 1992 defines quality system as "organizational structure, responsibilities, procedures, processes and resources necessary to implement quality management". [11]

The main goal of quality management in the construction industry is to satisfy the needs and demands of users. Therefore, to be realized this must be a continuous process to analyze, translate, meet and exceed the expectations of beneficiaries. [7]

Quality management system must be

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composed of very well developed strategies, which aims achieving quality objectives. In the current period, the needs and the expectations of building users are in constantly change, as well as competition and technological process. An essential condition to cope with these changes is the existence of a systematic and continuous activities that encompasses all activities which aim performance. [1]

At the basis of a project quality management in the construction industry are three specific processes: quality planning, quality assurance and quality control. [8]

First process - Quality planning - is to identify quality standards and methods by which the requirements can be fulfilled. Methods used in this process are: cost-benefit analysis, comparative analysis, charts cause - effect (Ishikawa diagram), experiments and simulations. These methods are materialized in the quality management plan, operational definitions and checklists.

Quality assurance is a process that includes a set of systematic actions to provide confidence and certainty that will be achieved planned quality standard. In this process will be used methods and techniques of quality planning and quality audits. At the end of this process will result improving quality.

The third process mentioned - quality control - according to the SR ISO 8402: 1995 is a series of activities with operational character used to meet the quality conditions.

Quality Control identifies several methods and techniques, such as inspection, control charts, Pareto diagrams, and flowcharts.

3. Quality Function Deployment

Quality Function Deployment is a technique for translating the client wishes in technical requirements. [1]

Yoji Akao was they one who developed the "quality function deployment" - QFD - for the first time in Japan in 1966. [4]

In the scientific literature this method is known as the "House of Quality".

In the model developed by Hauser and Clausing (1988) quality home is just the first step of these four QFD methods (Fig. 1):

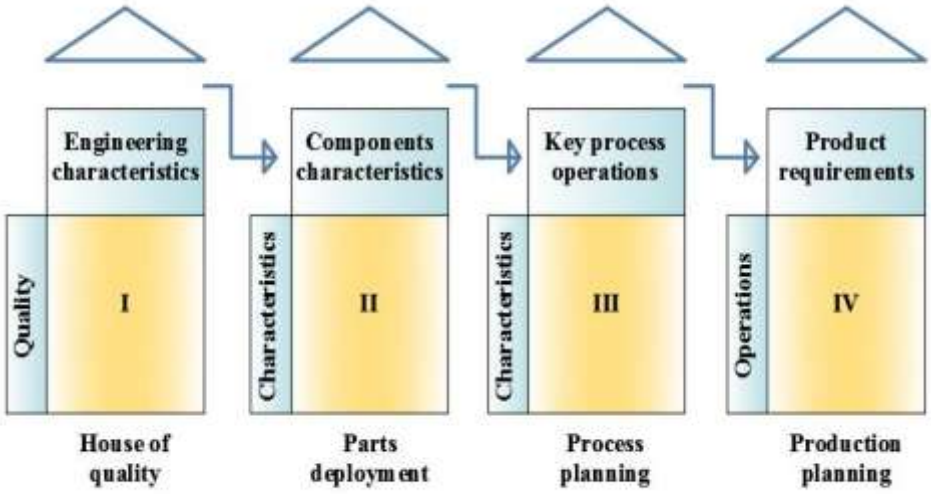

Fig. 1. *Four –phase QFD model* [6]

These four phase for QFD's development are:

1. Identify the beneficiaries needs and wishes;
2. The translation of these needs into features and technic specifications;
3. Identify critical products and processes and the development of the control points - process plan and quality control diagrams;
4. Building and offering a product or quality service by involving all for satisfaction.

4. Value Management

According to EN 12973 European standard value management is defined as: "Value Management is a management Style, particularly for mobilizing individuals, developing skills and promoting development and innovation, having objective of maximizing an organization overall performance. MV brings a new way to use the many existing management methods. "[3-10]

In other words, value management imply a methodology that combines assembly of means that contribute to achieving competitiveness.

Through a functional approach that provides products market (projects) that meet user's requirements, increase profit organizations and contribute to their development and society in general.

Solving a problem by Value Management method involves the following judgements types (Figure 2):

Currently, many managers looking for a success formula to implement into an well harmonized act by financial policies, production, marketing and development of a new products, quality services and ensuring a better life by satisfying their expectations and employees.

All this determines the recourse to methods that have precisely match user needs, their expectations, for their products, provided services ensure something better and possibly cheaper.

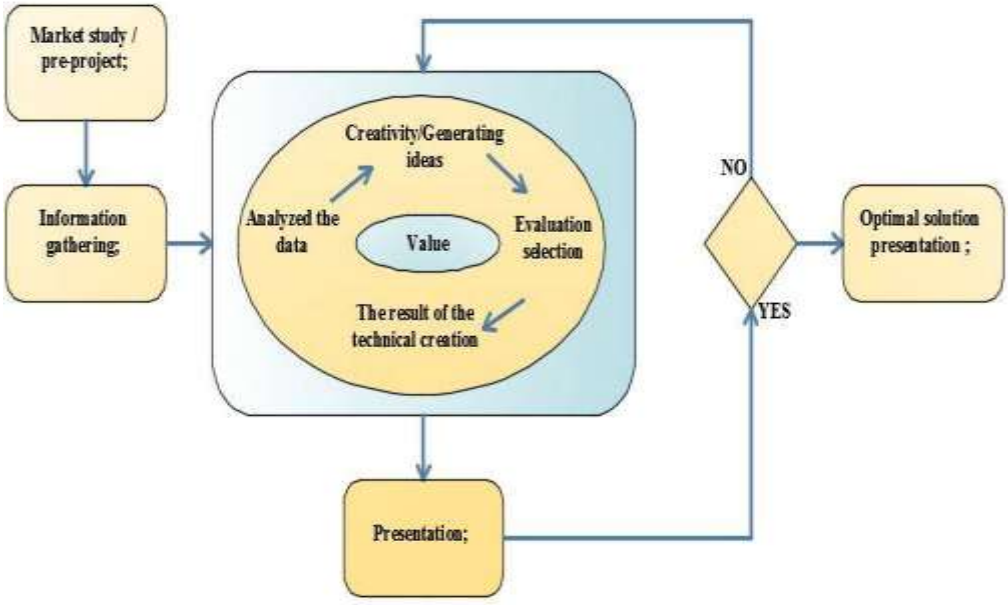

Fig. 2. *Value management – reasoning [2]*

Value management is not framed only as a means to reduce costs, but she can be considered and a managerial methods complex too, a consistent and rigorous management system with phases, components, rules, precisely outlined which will, throughout the study, by the various methods and management techniques, management and creativity, all used for the purposes management functionality and efficiency. [9]

5. Cooperation Between Quality Management and Value Management

Cooperation of the two types of management - Quality Management and Value Management - contributes to a new approach to improve continue performance. This "way" guides you so that you know "what" and "how" to do. In the built environment technical and technological competition is becoming stiffer with a notable impact on the natural environment and the economy.

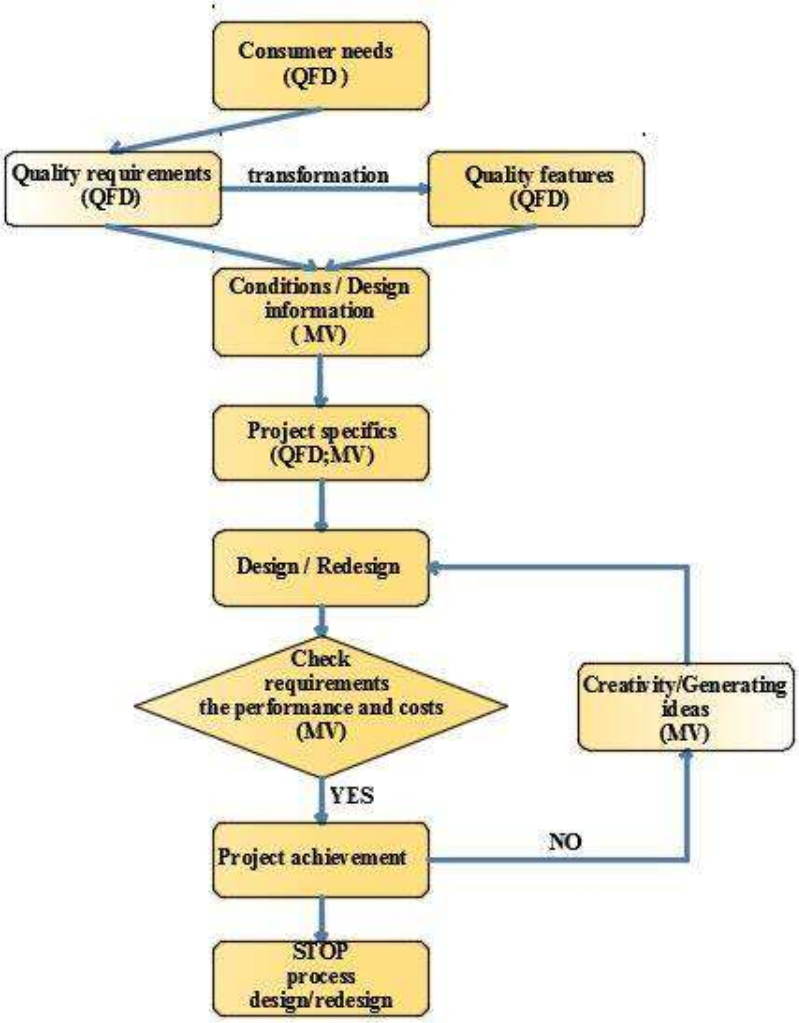

Fig. 3. *Approach to the process design / redesign through MQ and MV methodology [5]*

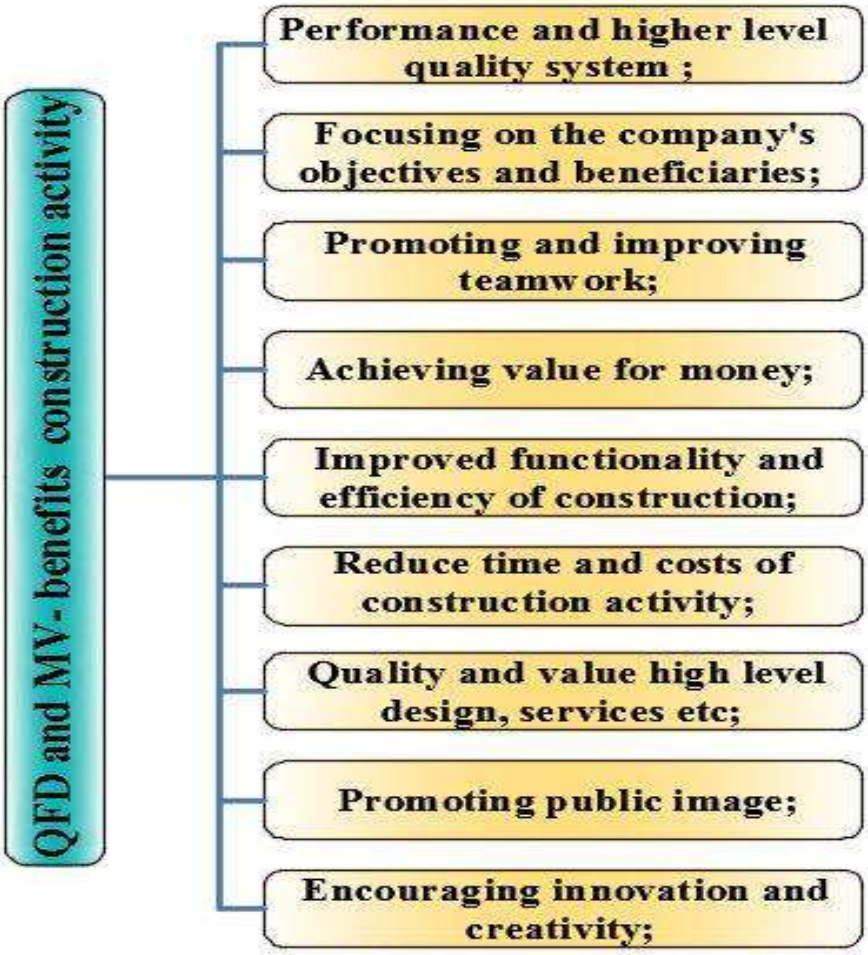

Fig. 4. *QFD and MV methods – benefits construction activity*

Figure 3 shows the simplified model of the process design / redesign in construction and highlighting also the interference between the two methods.

Analyzing the two methods - QFD and MV - and interference between them can identify some benefits (Fig. 4).

6. Conclusions

This system composed of the combination of two types of management – Quality Management and Value Management – focuses on increasing the efficiency and effectiveness of the delivery process to final product quality or service to satisfy users.

This current approach is aimed changing the traditional system.

Companies in the construction industry will be able to satisfy consumer needs, to achieve quality construction and up to an international standard of quality.

The value of the improvements and achievements should provide competitive advantages.

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