

Quality Improvement Program of Residential Building In Reference With Pmbok Using Microsoft Project

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Abstract- Quality has become one of the most important competitive strategic tools which many organizations have realized it as a key to develop products and services in supporting continuing success. Quality system is designed to set a clear view for organization to follow, enabling understanding and involvement of employees proceeding towards common goal. In the cycle of never ending improvement, quality measurement plays an important role. The measurement is considered as a trigger for the improvement. No improvement could be achieved if no measurement is applied and analyzed in order to assist in identifying opportunities for improvement. Defects within new buildings are areas of non-compliance with the Building Code of India, various Indian Standards and published acceptable tolerances and standards. Defective building construction not only contributes to the final cost of the product but also to the cost of maintenance, which can be substantial. Defective construction may lead to the complete failure of a structure.

quality and availability of housing on the basis of a new approach to the system of work on high-quality capital repairs and reconstruction of housing (construction services) and works on new construction.

The concept of quality planning in construction projects is to guarantee efforts to accomplish the necessary level of quality for the outcome which are well planned and organized. It is vitally required for a construction company to have an effective quality management system as it helps organizations in improving customer satisfaction whilst providing the organization with a competitive advantage over fellow competitors within the industry. It is about obtaining customers' satisfaction that would lead to long term competitiveness and business survival for the companies by maintaining the quality of construction activities at a mandatory standard.

I. INTRODUCTION

Housing is fundamental to economic and social development, priority need for each person. Quality of housing and living environment as a whole affects human health, psychological state, productive activity, an indicator of human well-being. The quality of the works of major overhaul and reconstruction of houses affected their durability and comfort. Under the terms of a modern market economy is necessary to improve the organizational and economic mechanism for construction, repair and reconstruction of real estate with the qualitative component of the operations. At present, the development of an effective reproductive system of real estate is an important socio economic problems of the state. That repair and construction sphere of reproduction is the basis of the housing stock, is one of the main sectors of the economy, is a priority of state policy in Russia and abroad. Consequently, for Russia today an important task is to provide qualitative component production work on the overhaul, new construction and other construction works and services. To solve this problem and thus improving the welfare and comfort of living of all sections of the population, an integrated approach to establish mechanisms to improve the

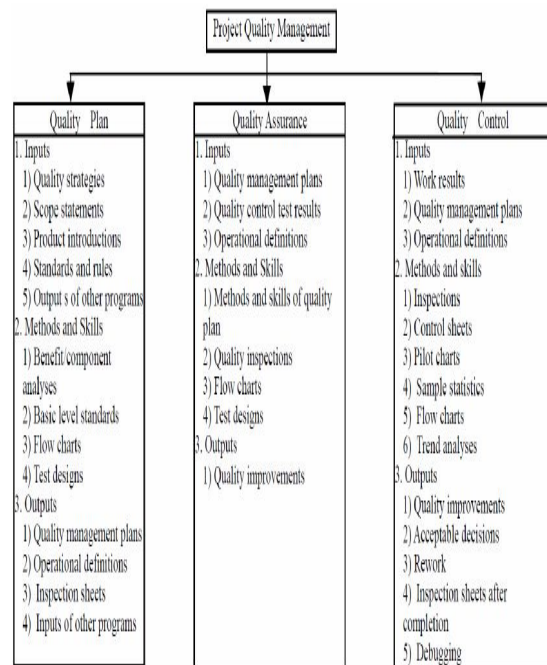


Fig 1. The main flow of project quality management.

II. STATE OF DEVELOPMENT

A.I. Romanova Creating a unified approach to the organization of the control system and the evaluation of the quality of construction at the facilities of the investment and construction of the complex is one of the most pressing problems of today. State power in the creation, implementation, management and control of such management system does not show an increased interest. Thus, the solution of this problem, namely, the introduction of a new quality management system, should be the task of self-regulatory organizations. In this regard, to prepare the article it is necessary to study the existing system of the construction quality control in the Republic of Tatarstan and the established self-regulation system to propose measures of improving the quality of construction products. To achieve this goal, the following tasks were considered: the prerequisites of self-regulation establishing; study of the foreign experience in the development of self-regulation in the construction; review and analysis of the existing quality control system in the Republic of Tatarstan designed to improve the quality of construction products in the investment construction complex of the Republic of Tatarstan through the process of improving the self-regulation system and insurance arms.

Vishal Vasant Waje The cost of quality are cost associated with the prevention, discovery, and resolving of defects. These costs can arise whether the product is in design stages, manufacturing plants, or in customer’s hand. It is important to identify the cost of quality so that one can determine the expenses associated with producing a quality product. The present paper aims at making a review associated with use of quality in construction industry. Data necessary to achieve the objective of the paper is collected from different projects in industry. The paper focus on construction defects on respective projects and poor quality cost measurement. It also shows that defective building construction not only contributes to added construction cost of the project but also the cost of maintenance, which can be substantial.

Sepani Senaratne Within quality management efforts, modern organisations pay more attention to improving the quality planning process. However, construction contractors in developing countries such as in Sri Lanka still lag in their practice of effective quality planning. Thus, the key research question of this study was "how do Sri Lankan construction contractors approach quality planning?" Within this question, the study’s primary objectives were to explore whether the Sri Lankan construction contractors practice quality planning effectively and the extent to which they are ready to implement strategic quality planning. The research method

adopted for this study was qualitative and used three case studies representing three major contractors in Sri Lanka. The study revealed that ISO 9000 is the most popular quality management system practiced by Sri Lankan construction contractors. The contractors are not yet ready to implement strategic quality planning due to several barriers. Building on these case study findings, several prerequisites for the successful implementation of strategic quality planning are proposed that will be useful for contractors who operate in similar environments. The costs related to all activities to prevent defects from occurring and to keep appraisal and failure to a minimum. These costs include new product review, quality planning, supplier surveys, process reviews, quality improvement teams, education and training and other like costs.

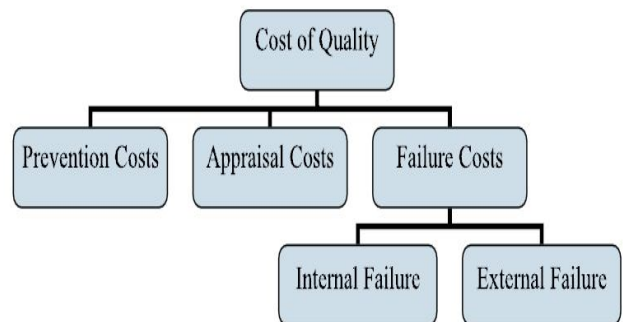


Fig.2. Quality Costs Categories

Nasir Shafiq The purpose of this paper is to investigate deeper on the factors that contribute to the effectiveness of quality planning, identifying the common problems encountered in quality planning, practices and ways for improvements in quality planning for construction projects. This paper involves data collected from construction company representatives across Malaysia that are obtained through semi-structured interviews as well as questionnaire distributions. Results shows that design of experiments (average index: 4.61), inspection (average index: 4.45) and quality audit as well as other methods (average index: 4.26) rank first, second and third most important factors respectively.

Minren Yan This research paper successfully proposes a resource-based optimization model, which can be used to identify an optimal schedule with the optimal quantities for each resource and the specific timing required to perform each activity to obtain the lowest overall project cost. The research results show that whenever there is a work disruption during the project execution stage, an after-impact optimal schedule can be built timely and the extra cost caused by the disruption of works can be conveniently identified. For

practical implications, the study demonstrates that project cost is highly associated with the float loss. Thus, if the project resource allocator has less and less room to modify the resource utilization plan, the project costs increase drastically. While work disruptions and project changes become parts of project management tasks, the proposed model would help project managers to handle the challenges of dynamic planning and cost management. By building an optimal schedule with the proposed model, project managers are able to be aware of the potential consequences of every incident during the project execution stage. Timely solutions to the encountered problems then can be engineered systematically.

Shrenik G Sohaliya The research paper introduces the term “Fast tracking”, its importance and its techniques. For delayed project, Fast tracking is more important technique to complete project within its time period. In real estate project, DSM is important model for application of fast tracking. It has useful to reduce duration of project and make better planning of project. The Work relation DSM shows the relation between the activities in consideration. These dependencies were being considered to prepare the new schedule. The risk probability DSM explains the probability of rework or delay that affects the succeeding activity in the project. The risk impact DSM explains the severity of impact of the delay or rework on the succeeding activity. The benefits of using DSM are realized at the end of the project since it leads to efficient application of fast tracking. If followed as per the plan, even the worst kind of situations on the site can be handled and managed efficiently. The effective savings in time achieved is around 25% to 30%, inspite of considering the delays by doing planning using this technique.

Jiangping Wan Case study on improving quality management of W company’s new product development project includes the analysis of the current situation within the quality management of W company’s new product development project (current situation and identify existing problems), improvement study (analysis the cause of existing problems and design the improvement scheme) and implementation. Through monitoring the implementation process, we have an evaluation analysis for the implementation results. The purpose of this study is to improve quality management of new product development project.

Col. B.K. Bhonde Identifying Key Performance Indicators in any critical activity is an essential part of any construction process to improve the quality and uniformity of the project. The need for KPI in construction projects has increased considerably in recent times due to significant changes, advancements in technology and high expectation of the users. The KPI maintain uniformity in construction process

and ensure more economical utilization of materials resulting in significant reduction in cost to the users. The additional cost involved to improve quality by identifying KPI is directly proportional to the benefits. A methodology has been developed for identifying the KPI for different construct activity. The methodology accomplishes the desired quality in construction process. Due to a lack of a standard quality assurance program that meets the needs of the construction industry, a back-to-basics and streamlined construction quality assurance program has to be developed. The goal is to develop a system that captures the essence of quality assurance, including: Assuring quality, Adding value, utilizing a risk-based approach (to minimize the cost of a quality system), Reducing the cost of quality (and increasing profit)The objective of this paper is to study the current scenario of construction industry with regards to quality, and to understand the guidelines to prepare the quality manuals.

III. CONCLUSION

In this paper quality planning, assurance and management is studied. From research work it is concluded that within quality management efforts, modern organizations pay more attention in order to improve the quality planning process. Therefore for quality assurance and quality control, quality planning must be precise.

As we get to know through various research work and field visits that there are paper focusing on construction defects on respective projects and poor quality cost measurement. It also shows that defective building construction not only contributes to added construction cost of the project but also the cost of maintenance, which can be substantial. By building an optimal schedule with the proposed model, project managers are able to be aware of the potential consequences of every incident during the project execution stage. Timely solutions to the encountered problems then can be engineered systematically.

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