

OVERVIEW OF MANAGEMENT AND PROJECT PLANNING IN CONSTRUCTION INDUSTRY

VAIBHAV VIJAYKUMAR BHUSNIKAR

M.Tech. Scholar, Department of Civil Engineering,
Chatratapati Shahu Subharti Institute of Technology, Meerut, India

ABSTRACT:

The paper reviews various researchers' perspective on project planning applications and management role in the construction industry worldwide. Initially introduction to the concept is done in brief and later literature review has been carried out specifically focusing on management aspects and front end project planning aspects in construction industry. The construction industries now days have developed very rapidly. The growth of the industry leads to competition, and hence the need of the time is to plan properly the business and to have proper management.

KEYWORDS: Management, planning, construction industry.

INTRODUCTION:

Front-end planning is the process of developing information for owners and investors to validate risk and decide to allocate resources to maximize the probability of a successful project. It is also known as feasibility analysis or conceptual planning.

The team has to take very important decisions in the early stages of project which influence the project cost and completion time. Expenditure during the front-end planning stages of a project makes 10 to 25% of engineering cost and up to 8% of project cost.

FEP analyses the risks associated with the project and the specific project execution pathway is determined. It enables the project team to have a better control over the project. But, once the implementation stage commences the control factor declines and any changes in project are met with increased costs.

The first effort was done in Pre-project planning Handbook (1995). It stated that pre-project planning or front-end planning leads the project success by means of reduced project costs, lower deviation in cost, schedule and operating characteristics.

FEP consists of a detailed framework for project planning and scope definition. The level of efforts assured during scope definition stage defines the success during the design and construction phase. Poor or bad scope definition affects the final costs of a project due to unavoidable changes, lowers the productivity of work force and delays project completion time.

Front-end planning provides a better perspective for smarter execution of construction projects. This ultimately leads to profitability.

FRONT-END PLANNING PROCESS:

Front end planning process consists of the following phases:

- 1) Organization
- 2) Data Generation
- 3) Evaluation of Alternatives
- 4) Project Definition
- 5) Decision

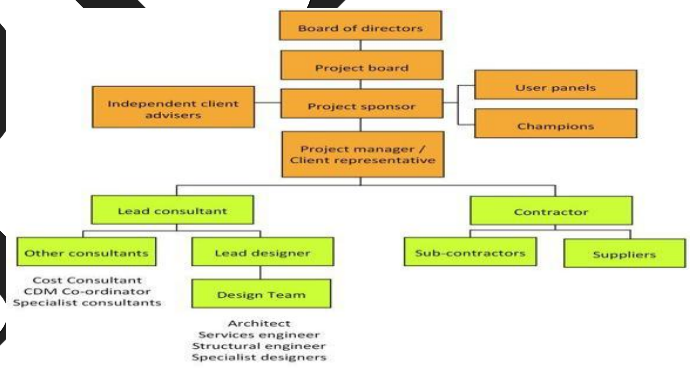


Figure1.Organisational Chart for a Constructional Project

BENEFITS OF FRONT-END PLANNING:

- 1) Reduction in the contractual disputes
- 2) Less design changes
- 3) Effective material supply
- 4) Selection of appropriate contractor
- 5) Easy financial management
- 6) Efficient labour supply
- 7) Improvement in operational performance and reduction in project failures.
- 8) Increased predictability of cost and schedule as well as better risk management.

LITERATURE REVIEW:

ZAYNAB U. B. AHMAD, KEFTIN A. NAMALA

In their paper Overview of the Practical Application of Essential Planning Tools in Construction Process Reviewed existing researches on construction planning tools in Nigeria and conducted interviews to determine the practices of their application in

construction processes. Also they concluded that not all contractors' uses planning tools, they choose the Gantt chart due to its simplicity. Also the cost of applying other tools is a limitation factor. Training on the application and importance of construction planning tools is therefore recommended to enhance its application for more effective construction management.

CLAES ANDERSSON & LINUS ROSENBERG

In their paper "The preconstruction planning process from a site manager perspective" described the preconstruction planning from the contractor's perspective and identified aspects that govern how managers plan for an appropriate production flow. The results revealed that the interviewed respondents managed to fulfill these factors to an adequate level. However, three main aspects that drive project are project characteristics, site managers' abilities and assigned resources.

ABDUL AZIZ ABDULLAH, MOHD NORHASYIM MUKMIN AND ZULKIFLI ABDUL SAMAD

In the paper "Application of Project Management Methods in the Construction of Bungalow House Project: A Case Study in Kuala Terengganu, Malaysia" revealed that close monitoring by responsible authorities would result in successful solution to the existing problems in construction industry. Also, it is believed that the current issues at site could have been minimized or resolved if the home builders adapt to the proper project management methods of construction. It is also suggested that government plays a vital role in assisting home builders, especially the inexperienced or the newcomers.

JOÃO VARAJÃO, CAROLINE DOMINGUEZ, PEDRO RIBEIRO, ANABELA PAIVA

In their paper "Critical Success Aspects in Project Management: Similarities and Differences between the Construction and the Software Industry" claimed that the project success is highly dependent on the project management process, and there are several different aspects that need to be carefully considered. Also they concluded that the two currently most important project management success aspects are common to both industries: "project planning" and "well defined objectives and requirements". The "project manager efficiency" is also in the top of the critical success aspects.

LAWRENCE MWANGI GITAU

In His paper "The Effects of Risk Management at Project Planning Phase on Performance of Construction

Projects in Rwanda" He found out that the consulting engineers and architects were often selected before the design phase of a project. That means that many projects did not benefit from professional input at early planning stage. The most used method of selection was the quality and cost based selection method. 45.2% of the projects surveyed had poor time performance while 35.7 % of the projects had poor cost performance.

UNMESH. Y. POLEKAR, ROHIT. R. SALGUDE

In their paper "Planning, Scheduling and Tracking of a residential Project using Primavera Software" stated the use of software in construction industry by making plan, schedule, and tracking of a residential project with help of primavera software, study the results generated, it is possible to suggest which method is suitable for the selected residential project. Also to recommend measures to the organization for enhancing their project planning skills for similar projects in future.

CONCLUSION:

Authors have presented the importance of the planning and effective management of the construction project in this paper. According to the problems faced and the solutions proposed by various researchers, its need of time to change the approach for risk management in the construction project. The project managers in this present competent world have to take in to consideration of all the factors affecting the construction projects. The policy makers have to make it mandatory for construction industries to follow the norms. The construction industry has to implement the technologies available to reduce the time required for construction processes. The effective management of the project with proper planning is necessary.

REFERENCES:

- 1) Zaynab U. B. Ahmad¹, Keftin A. Namala *Overview of the Practical Application of Essential Planning Tools in Construction Process* International Journal of Emerging Engineering Research and Technology Volume 3, Issue 7, July 2015, PP 108-113 ISSN 2349-4395 (Print) & ISSN 2349-4409 (Online) International Journal of Emerging Engineering Research and Technology V3 • 7 • July 2015 108
- 2) *The preconstruction planning process from a site manager perspective* Master of Science Thesis in the Master's Programme Design and Construction Project Management **CLAES ANDERSSON & LINUS ROSENBERG** Department of Civil and Environmental Engineering Division of

Construction Management Chalmers University of Technology

- 3) Abdul Aziz Abdullah, Mohd Norhasyim Mukmin and Zulkifli Abdul Samad* *APPLICATION OF PROJECT MANAGEMENT METHODS IN THE CONSTRUCTION OF BUNGALOW HOUSE PROJECT: A CASE STUDY IN KUALA TERENGGANU, MALAYSIA* International Journal of Economics and Management Sciences Vol. 1, No. 2, 2011, pp. 42-58
- 4) João Varajão, Caroline Dominguez, Pedro Ribeiro, Anabela Paiva *CRITICAL SUCCESS ASPECTS IN PROJECT MANAGEMENT: SIMILARITIES AND DIFFERENCES BETWEEN THE CONSTRUCTION AND THE SOFTWARE INDUSTRY* ISSN 1330-3651(Print), ISSN 1848-6339 (Online) UDC/UDK 658.5.012.2:[624+004.42]
- 5) *LAWRENCE MWANGI GITAU THE EFFECTS OF RISK MANAGEMENT AT PROJECT PLANNING PHASE ON PERFORMANCE OF CONSTRUCTION PROJECTS IN RWANDA* A Research Project Report Submitted to the Department of Entrepreneurship, Technology, Leadership 2015
- 6) Rohit R. Sarde *An Overview of Front-End Planning for Construction Projects* International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056 Volume: 03 Issue: 07 | July-2016 www.irjet.net p-ISSN: 2395-0072 © 2016, IRJET | Impact Factor value: 4.45 | ISO 9001:2008 Certified Journal | Page 1
- 7) Unmesh. Y. Polekar Rohit. R. Salgude *Planning, Scheduling and Tracking of a residential Project using Primavera Software* ISSN: 2321-7782 (Online) Volume 3, Issue 5, May 2015 International Journal of Advance Research in Computer Science and Management Studies - Research Article / Survey Paper / Case Study Available online at: www.ijarcsms.com