

IMPLEMENTATION OF PROJECT MANAGEMENT SYSTEMS AND TECHNIQUES IN SMALL & INFORMAL CONSTRUCTION FIRMS

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ABSTRACT

Small to medium sized enterprises play an enormous part in economic activity through employment, innovation and growth. Project management can play an enormous role in facilitating this contribution, however; SMEs require less structured kinds of project management than those employed by larger, traditional organizations. The small construction enterprises and carries out their systematization according to structure of costs of production of building and construction works, represents the general structure of costs of implementation of the innovative project by the small and medium-sized construction enterprises, systematizes the varied kinds of effects received by the enterprise at implementation of an innovative task.

Keywords: Project Management, Small Firms, Project, Performance, Quality.

I. INTRODUCTION

Project management isn't widespread in SMEs. Most of the paperwork and normal business activities are looked by the staff in a casual manner and in most cases with none project management training. This is often often to not say that their projects aren't successful. Many SMEs handle projects well and are successful. This might be due to their tactical knowledge and thus the individuals involved rather than a conscious effort. But these companies could be falling in need of their potential and will perform better if they follow an accurate formal system of project management practices. Management, produces a degree of predictability, focuses on systems, relays on control, organizes and staffs, accepts the established order and motivates people to suits standards. This project aims to review the approach of small and informal construction firms towards construction management and thus the varied techniques adopted by them and thereby suggest systems and methods in project management to reinforce their performance. A startup construction firm that did not have formal project management systems and techniques in place was identified and upon discussion with their owners and employees regarding their practices, they were willing to permit us to help them in their projects by fixing a project management function there by analyzing their work. During the course of the study, significant improvements were observed within the system adopted by the firm in various aspects like control, project monitoring & tracking and safety. It can thus be concluded that introduction of project management techniques albeit on a touch but systematic way can help bring improvement within the performance of the firm and contribute to the organization's growth within the top of the day.

II. LITERATURE REVIEW

1) Project Management: Perspective of small and medium-sized construction firms in Ghana(2010) Clinton Aigbavboa and Wellington Thwala According to the authors they focused on the execution phase of project management process i.e. mainly on the development stage. In any case reviews and observations they found that the tiny and medium-sized firms are mostly owned by solely one that controls and have adapted self-style project management techniques. SMEs (Small Medium Enterprises) need project management to manage their innovativeness during a focused manner and to realize growth and satisfy their strategic objectives an outsized number of construction SMEs(Small Medium Enterprises) in Ghana partially practice the quality Project Management techniques counting on the dimensions and sort of project as most of this construction SMEs(Small Medium Enterprises) in Ghana are family owned businesses and, therefore, adapt self-styled management for his or her operations.

2) The Need for Systematic Project Management in the Construction Industry (2003) - Ramli Mohamad This paper primarily tries to target the main aspects of Project Management, viz. scope, time, cost and quality along with the importance of Project Integration. Also level of complexness of projects will increase; the extent of the project management also becomes a lot more advanced and rigorous and can need the people who manage

such projects to possess certain knowledge, skills, experience, tools and resources. As projects get larger and complicated, the method gets even more scientific and systematic, because it becomes necessary to coordinate and integrate numerous human inputs and physical elements within the four basic constraints: scope, cost, time and quality. Project integration management is that the knowledge area that involves putting all the pieces together. It encompasses high level strategic planning and synthesis of data and inputs from multiple disciplines to modify decisions to be taken regarding numerous aspects and problems affecting a project. The most relevant conditions for integration management are leadership and knowledge that is wide enough for there to be awareness of what inputs from what disciplines are needed and how these inputs ought to be brought along in a very constructive way to add value to the project. Equally necessary for a project is defining and managing the scope of the project. Ideally, project scope ought to be outlined and frozen as early as possible, however this doesn't invariably happen. Usually, it is the owner who controls the scope; however a lot of more than not, it's also the owner who varies the scope. It is necessary that the scope is managed in a very conscious and systematic approach, with due relation to the aspects of cost, time and quality. In reality the four aspects of scope, cost, time and quality are intimately inter-related and need to be managed with equal importance. Each affects the others, and also the failure of managing one facet can jeopardize the full project. The breaking down of the project into practical work packages, referred to as the work breakdown structure, must be done first. Then the activities need to be outlined, along with their sequencing and durations. It is solely then that the schedules may be developed and used for managing the time aspects of the project. Another aspect of time management that is usually overlooked is the interface program. A project that features a well-developed interface program can progress smoother than one that has no interface program. Project time management additionally involves monitoring and correcting the plan as we tend to go on, using field situations as feedback in what ought to be a closed-loop system. Compared to time management, the way cost management is practiced within the construction industry is less objective. A lot of depends on human skills in negotiating contracts, variations and claims. The procurement knowledge area is also closely interrelated. Modern tools like earned value Management (EVM) isn't used a lot of in its true form in the construction industry. In the construction industry, quality is usually taken to mean the quality of the finished product and this is for the most part based on the specifications for the project. There ought to be a correct system for evaluating the overall project performance on a daily basis to provide confidence that the project can meet the required quality standards; and quality control, that involves monitoring specific project results and check data to see if they comply with specifications and standards and distinguishing ways in which to rectify defects or causes of unacceptable performance. Value engineering is additionally and a very important element of project management. It is an activity that encompasses project planning, project execution and project control and involves practically all the knowledge area.

III. RESEARCH METHODOLOGY

OBJECTIVE OF CASE STUDY:

A pilot study can be defined as a 'small study to test research protocols, data collection instruments and other research techniques in preparation for a larger study. It is conducted to identify potential problem areas and deficiencies in the research instruments and protocol prior to implementation during the full study. In this research, a pilot study was undertaken to get an idea about the various problems faced by a new organization, working on its first project; the shortcomings of the project in terms of management of the resources available, documentation, planning, scheduling, quality control, and safety. The current factors of the firm were to be studied and based on the workings and the resources available with the organization, suggestions and inputs were given to enable the firm to improve their performance in the various aspects mentioned above.

DETAILS OF PROJECT:

Name of Company	: K.G.N Construction Company
Address	: Near Sahara Park ,Dudhe Layout, Pusad, Yavatmal
Email	: ayyubsheikh@gmail.com
Year of Establishment	: 2018
Organisation	: Private Limited Company
Owners	: Sheikh Ayyub Sheikh Shakur

No. of Full Time Employees	: 3
Size of labour force	: 15 labourers
Machinery	: Rent : Tractor, Breaker, Drum Mixture Owned: Electric Vibrator
Project Details –	
Building Type	: Residential cum Commercial
No of Floors	: G+2
Flats/Shops	: 1BHK - 8units
	: 2BHK -4 units
	: Shops- 6 units

PROBLEMS IDENTIFICATION

This firm was established in 2018, performing on its first land project i.e. the event of a Residential cum Commercial Building. Being a replacement firm, there was tons of novelty involved and therefore the systems adopted were highly unstructured. The problems faced by the firm were:

- Lack of a correct plan and schedule
- Absence of internal control Guidelines & System
- No measures to trace productivity
- Inconsistent Labour availability
- Ignorance of Safety Practices
- Not adhering to a strict timeline for the project
- Document Management
- No preparation for problems faced during monsoon the issues caused thanks to these unorganized management practices were that thanks to unavailability of a planned schedule of activities and standard operating procedures, major rework had come up at a couple of instances which caused delay within the project and also cost escalation. The scheduling and planning of activities were done supported the experience of the supervisors at site. Document and stakeholder management issues were also faced, because the delay in procuring the specified drawings from the architects on time prevented proper planning of procurement of resources. Improper material storage & housekeeping and lack of safety practices also are problems observed at the location which could lead on to accidents.

PROJECT CONTRIBUTION

Consistent with the issues identified, an effort was made to induce project management techniques into the execution phase of their project. This allowed us to measure the response of the firm and accordingly suggest improvements in their practices. The main contribution on our part was preparing an inventory of internal control (QC) Checklists and Weekly report (WPR) format to be used during the execution. A basic MSP schedule was also prepared for the core and shell work on site supported the quantities provided by the location engineer and therefore the productivity of the labourers supported experience.

QC CHECKLIST:

A checklist consists of things that are important or relevant to a specific issue or situation. Checklists are used under operational conditions to form sure that each one important action or steps are taken. Their primary purpose is to guide operations. The QC checklists would enable the firms to attenuate errors during the execution of every activity, ensure all steps are followed and thereby avoid rework at a later stage.

WEEKLY PROGRESS REPORT:

A weekly report typically is supposed to convey the status of a project. It helps to trace the progress of labor, keep a record of the number of labor planned, the resources consumed therein week. Identifying the report by date is invaluable to recordkeeping. If certain problems persist, reading past status reports offers a chronological view of the difficulty and insight into it. The obstacles faced and implemented solution during execution also can be recorded within the report which can help the team just in case such a problem arises within the future. the thought behind going for Weekly report format instead of a Daily report format is that,

since the pace of labor at a newly started enterprise isn't very high, a more practical volume of completed works are often tracked by WPR.

MSP SCHEDULE:

Preparing a correct schedule helps determine the timing and sequence of activities during a project and provides a basic timeline to be followed for the project. The method of scheduling uncovers flaws within the plan, resulting in revisions of the plan. Having a schedule gives the firm short term targets to be accomplished and plan the procurement of resources accordingly.

SUGGESTIONS & RECOMMENDATIONS

The measures suggested for project management were gradually integrated as a neighborhood of the firm's routine procedures. The effect was that there was proper documentation available at the location for the materials used and therefore the labourers employed. This also aided the location engineers during billing. The occurrence of errors also went down considerably thanks to the utilization of checklists at the location and therefore the delays were also brought right down to a particular extent by following the schedule prepared. The most achievement within the whole run was to line up a proper mechanism for the firm which could then be improved and updated supported the need and therefore the results observed.

IV. CONCLUSION

The construction process could also be a posh system. The aim of this work was to identify the relation between the project's problem and thus the utilization of project management processes in Small and unorganized firms in construction. There will be significant improvement within the general performance of the projects. It are often concluded that so on reduce project management problems for the event field SMEs, these companies should devote additional efforts on the systematic use of project management processes. Companies will enjoy some advantages such as: systemic vision of the projects, process optimization, deviation minimization, communication improvement and more. The most challenge lies in convincing these small and unorganized firms to adapt these practices in their firm by informing them of its advantages and thus the time and price saving it can cause in their projects. With better performance, the credibility of the organization also increases and thus helps in growing the construction industry.

V. REFERENCES

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