

Tracking and Scheduling of a Building Project Using Management Tool : A Review

Ajay Chanderiya¹, Vinay Kumar Singh Chandrakar²

P.G. Scholar¹, Associate Professor²

Department of Civil Engineering, Madhyanchal Professional University, Bhopal, Madhya Pradesh, India

ABSTRACT

Article Info

Volume 5, Issue 5

Page Number : 35-39

Publication Issue :

September-October-2021

Article History

Accepted : 10 Sep 2021

Published : 16 Sep 2021

Project management is the practice of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria at the specified time. The primary challenge of project management is to achieve all of the project goals within the given constraints. This information is usually described in project documentation, created at the beginning of the development process. The primary constraints are scope, time, quality and budget. The secondary – and more ambitious – challenge is to optimize the allocation of necessary inputs and apply them to meet pre-defined objectives. In this paper we are elaborating review of literatures related to management of construction project.

Keywords : Tracking, Scheduling, Analysis, Time Factor, Lagging, Building, Resources Allocation.

I. INTRODUCTION

Oracle's Primavera P6 is one of the most powerful and comprehensive project management tools available on the market today. Simply put, Primavera is a project management software specifically designed to help manage complex projects. It's role-specific functionality helps organize projects in a way that satisfies each team member's needs, responsibilities, and skills. Primavera P6 is not a single product, but a suite of products that helps manage a project over its entire lifecycle. You can use it to help manage risk versus reward, resourcing, and budget, among many other deliverables. With

Primavera, To provide a detailed review of the literature related to project management in its entirety would be difficult to address here. Although there has been a lot of work modeled as construction management considering resource allocation. A brief review on primavera a management technique and code provision of previous studies is presented here. This literature review focuses on project management system used in construction field will be addressed by area.

II. Literature Survey

Bagade et. al. (2018) [1] Explored that Planning, booking and Resource leveling assumes an imperative

part in any development venture perhaps it is development of building or development of street. Without appropriate arranging, booking and asset leveling development industry does not get benefit over the venture. For this reason, legitimate programming's and methods must be use. This paper is focussing on the benefits of Oracle Primavera P6 Software. The most recent rendition of Primavera is P6-17. In any development work tremendous measure of printed material is required, which makes the administration extremely oppressive. By utilizing Oracle's Primavera P6 Software printed material can be decrease, bringing about diminishment of weight. Primavera P6 give change in development administration. Primavera P6 is the time redeemable device, with legitimate asset enhancement.

Ghadge et. al. (2017) [2] Project cost is the one of the governing factor in project success. Project management is used to increase productivity in terms of human resource and materials. Earned value management (EVM) is a project performance evaluation technique which has been adapted for application in project management. The technique helps in comparison of budgeted cost of work to actual cost. The present study deals with the review of the project management involving earned value analysis.

Nimbal et. al. (2017) [3] Considered that owing to an expanding setting of condition, Construction industry is ever forthright for the improvement and headway in instruments and gear highlights, apparatuses of correspondence, systems of effective administration, instructing the HR about it. This exceptional specialization requires profoundly engaged whose development was intended to begin at Pune, Maharashtra, India. Undertaking Planning and Controlling devices or systems. In the present investigation we actualized the PC based Project Management programming/apparatus Primavera P6

for the Planning, Scheduling and Allocation of assets for a (G+8) private condo building It knows the likeness between the arranged the arranged advance of development work and real advance of the performed work. In this way the centrality and the benefits of utilizing Primavera will be sketched out through the information comes about acquired. The acknowledgment of the product Primavera as a stage of booking is been on a blast in Multi National Construction Companies, yet because of obliviousness and absence of Project Management ideas and demoralize towards the utilization of PC based projects, little and medium scale Indian development organizations go up against different issues, for example, wasteful arranging, venture delays, wastefulness of assets and numerous different issues. In this way we likewise endeavor to teach one such medium scale development organization about the upsides of Primavera in execution of any development extends proficiently.

R. Kohli (2017) [4] Reasoned that Efficient task administration is the need of great importance and it is the sole duty of the undertaking director to guarantee the working of the venture as indicated by its dispensed spending plan and due dates. For any development venture, legitimate arranging, booking, compelling asset allotment and refreshing the exercises is to a great degree basic to improve the task and build up most extreme spending augmentation. Dishonorable planning, sporadic checking and poor treatment of the continuous exercises builds the venture term and sum with a significant edge. Subsequently, it is fundamental to embrace expansive scale administration extends effectively with the assistance of PC helped programming. The essential target of this paper is to comprehend the standards of arranging, booking, asset assignment and leveling alongside proficient undertaking administration of a development building. The well ordered strategy to embrace an undertaking has been clarified and a

definitive use of Primavera P6 Enterprise Project Portfolio Management (EPPM) has been condensed. P.M. WALE et. al. (2015) [5] expressed that the undertaking may have a straightforward objectives that does not require numerous individuals or a lot of cash or it might be very perplexing, calling for different abilities and plenty of assets and furthermore gave similar examination between customary way and Microsoft venture arranging. They reasoned that Traditional route ends up being uneconomical and expends additional time with numerous complexity and gigantic mistake while Microsoft Project is the cutting edge apparatus of Project Management that guide to conquer the hindrances confronted attributable to conventional method for Planning and Management

III. RESULTS

By Observing the Results, this can be concluded that the Comparative study between different W.B.S w.r.t Time & Resource cost for a proposed project plan is found most Economical. This can be understand by observing the overall duration actually consumed in completing the previous project ie. 943 days with the proposed plan prepared which shows the completion in 768 days. This indicate saving of 175 days & so saving of huge Indirect cost ie. Equal to Rs 4,78,000.

The logical sequence of activities with constraints were determined and assigned on the basis of work involved and past experience. Based on data obtained, network diagram is prepared and relations are assigned to activities to calculate critical path. The duration of project were defined at different level like sub project level, work package level, activity level, operations level. In construction project, the time duration is generally related to the quantum of resource employed.

The software also help us to calculate the duration required to complete the project according to the planned schedule and actual performance of activity at any time and it gives the idea about project is on schedule, ahead of schedule, behind the schedule. The manpower schedule is prepared which gives a clear picture of labour requirement in exact number during the execution period of the project.

A.R. NiKUMBH et. al. (2014) [6] suggested that the utilization of Project Management Consultancy (PMC) offers one of the compelling administration answer for increment and enhance the productivity and result of an undertaking in development and reasoned that the Project Management Consultants deal with the Project by use of their Knowledge, Skills, and Experience at different stages and is powerful and effective just when it is associated with Total Project Life Cycle from Conception to Closeout.

SHAIK MOHAMMAD MASOOD et al. (2014) [7] H.N represented that numerous development venture experience the ill effects of time and cost overwhelms because of various elements. EVM is an erformance of task assessment which is utilized for the application in venture administration. This method helps in examination of planned cost of work to real cost of work performed HAMED et al. (2013) [8] illustrated that every organization, at least, has four types of resources to be allocated in order to achieve organizational aims. These resources are: human resources, physical resources, financial resources, and technology resources. Resources should be allocated in an efficient and appropriate manner since success is achieved when plans, employees, performance, controls and commitments made act to maintain and survive allocated resources.

P.DAYAKAR et. al. (2012) [9] described best schedule in such a way that meets the primary objectives of the total project. Those primary objectives are to create a quality project, completed on time, within budget, and in a safe work environment. Hence in this study an ongoing construction project is taken and the execution of the project is compared with the schedule with the help of Microsoft Project and concluded that it is important to realize that there will be changes to the schedule logic as well as differences between the planned progress and actual progress.

J.A. FAPOHUNDA et al. (2010) [10] illustrated the management aspects of the project and the factors which causes delay at various stages. These factors are identified to be critical; the proper management of these factors will help to achieve best project performance results.

TRANNER et al. (2009) [11] demonstrated that the project schedule should display all the construction tasks from the beginning of the project through completion, the time periods for each tasks, and the sequence of these tasks in a logical order. He further explained the basic purposes of a project schedule as effectively depicting the construction plan to the project participants, permitting management to control and measure the progression of the work, and finally accommodating the participants with information for timely decisions.

GURU PRAKASH PRABHAKAR (2008) [12] focuses on the role of careful and continuous project planning in the success of a realization of a project; and also observes that the activities of producers, designers, suppliers, workers and contractors, and their resources must be adjusted mutually and integrated with the objectives of contractor. Today organizations are competing with each other to produce high quality output with the minimum budget and be delivered at the

right time; the most appropriate way to achieve this goal is using project management.

IV. CONCLUSION

Researchers determine the use of project management software in construction work but none of them analyzed or compare the project with past scheduled project of same aspect.

- Authors determine the use of project management software in resource allocation but none of them determine the levelling of resources.
- In past researches author's determine that risk analysis is possible but none of them shows any factors to minimize risk analysis and not even determine the losses occurs due to it.

V. REFERENCES

- [1]. Piyush Pramod Bagade and Prof. Abhijit Bhirud, "Review on construction project management software primavera p6" international journal of engineering sciences & research technology, ISSN: 2277-9655, January, 2018, PN (110-117).
- [2]. Poonam Raykar and Ghadge A.N., "Analyzing the Critical Factors Influencing the Time Overrun and Cost Overrun in Construction Project" International Journal of Engineering Research, Volume No.5, ISSN:2319-6890, 9 Jan 2016, PN (21-25).
- [3]. A. Ray Chaudhuri, B. Sivakonda Reddy and S.K. nimbhal, "Resource Management in Construction Projects – a case study" Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol.2, No. 4, August 2017 PN (660 – 665)
- [4]. A.R. Nikumbh and S.S. Pimpliker, "Planning and controlling of a National Highway Project-

- A case study”, Journal of the Indian Road Congress Paper No.613, April – June 2014 PN (91 – 102).
- [5]. P M Wale1 , N D. Jain , N R Godhani , S R Beniwal and A A Mir, «Planning and Scheduling of Project using Microsoft Project (Case Study of a building in India», IOSR Journal of Mechanical and Civil Engineering, ISSN: 2320-334X, Volume 12, Issue 3 Ver. III (May. - Jun. 2015), PN 57-63.
- [6]. Shaik Mohammad, Kunal B. Badgujar, B.A.Konnur and Amarsinh B. Landage “A Review of EVM Analysis with Primavera”; International Journal of Engineering Research ISSN:23196890(online),2347-5013 Volume No.5, Issue Special 1 9 Jan 2014 PN: 164-167
- [7]. Hamid, R. Gupta, Parag S. Mahatme and Taran C. Bhagat “The cost controlling and monitoring of Construction project through earned Value management system” International Journal of Advanced Technology in Engineering and Science www.ijates.com Volume No 03, Special Issue No. 01, March 2013 ISSN (online): 2348 – 7550
- [8]. P.Dayakar and M.Udhayakumar, «Study on Project Management of an Ongoing Construction project Using MSP Sub Structure” Volume2 Issue 5 Number2–Oct 2012, PN 202-212.
- [9]. Stephenson, P. and Fapohunda, J.A. “Optimal Construction Resources Utilization: Reflections of Site Managers’ Attributes. The Pacific Journal of Science and Technology, Vol. 11. No. 2. November 2010 (Fall) PN 105-109.
- [10]. Tranner, D. S. Stephan Jabasingh and J. Jayalakshmi “Analysis of Cost Controlling In Construction Industries by Earned Value Method Using Primavera”; Int. Journal of Engineering Research and Applications www.ijera.com ISSN : 2248-9622, Vol. 4, Issue 6(Version 1), June 2009, PN.145-153.
- [11]. Prabhakar, G. P. What is Project Success: A Literature Review. International Journal of Business and Management. September, 2008.
- [12]. Kerzner, H. . Project Management: A Systems Approach to Planning, and Controlling. New Delhi. CBS Publishers and Distributors Pvt. Ltd. 2003.

Cite this article as :

Ajay Chanderiya, Vinay Kumar Singh Chandrakar, "Tracking and Scheduling of a Building Project Using Management Tool : A Review", International Journal of Scientific Research in Civil Engineering (IJSRCE), ISSN : 2456-6667, Volume 5 Issue 5, pp. 35-39, September-October 2021.

URL : <https://ijsrce.com/IJSRCE21555>