

Utilization of Project Management tool in Construction Industry : A Review

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ABSTRACT

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Attributable to an augmenting context of environment, Construction industry is ever upfront for the development and advancement in tools and equipment features, tools of communication, techniques of efficient management, educating the human resources about it. The acceptance of the software Primavera as a platform of scheduling is been on a boom in Multi National Construction Companies, but due to ignorance and lack of Project Management concepts and discourage towards the use of computer based programs, small and medium scale Indian construction companies confront various issues such as inefficient planning, project delays, inefficiency of resources and many other issues. Therefore, attempt to educate one such medium scale construction company about the advantages of Primavera in execution of any construction projects efficiently. This paper presents literature review of journals related to project management.

Keywords : Planning, Scheduling, Resources allocation, Primavera P6, Resource levelling.

I. INTRODUCTION

In today's world construction industry is one of the most widely used and rapidly booming industry of our nation and across the world. Hence, it is considered to be the second largest industry of India in terms of generating huge amount of revenue and employment. Though the construction and infrastructure industry being second largest industry of our nation (India), the identity and recognition of this industry has not been grown in all dimensions of the country. Especially, at the remote places like small villages, rural places and the large part our

country is by these small villages and rural habitats. Therefore there is a requirement of certain tools and techniques for the improvement of national economic upliftment, adequate land use and their environment planning to manage with the level of improvement in town and urban areas and the time required to tackle this goal can shortened. There is an intense necessity for effective Project Management.

To give a definite audit of the writing identified with task administration completely would be hard to address here. In spite of the fact that there has been a great deal of work demonstrated as development administration thinking about asset assignment. A

concise survey on primavera an administration method and code arrangement of past examinations is exhibited here. This writing survey centers around venture administration framework utilized in development field will be tended to by territory.

II. LITERATURE REVIEW

T.SIVA NAGARAJU et. al. (2018) actualize venture administration strategy in a metro rail venture utilizing administration programming primavera p6, give appropriate booking asset assignment to advocated a legitimate connection among expense and development of an undertaking. Additionally diminishes paper work require in a development venture.

P.M. WALE et. al. (2017) expressed that the venture may have a straightforward objectives that does not require numerous individuals or a lot of cash or it might be very intricate, calling for differing aptitudes and plenty of assets and furthermore gave near examination between customary way and Microsoft venture arranging. They inferred that Traditional route turns out to be uneconomical and expends additional time with numerous complexibility and huge mistake while Microsoft Project is the advanced apparatus of Project Management that guide to conquer the deterrents confronted attributable to customary method for Planning and Management.

A.R. NIKUMBH and S.S PIMPLIKAR (2016) suggested that the utilization of Project Management Consultancy (PMC) offers one of the powerful administration answer for increment and enhance the productivity and result of a venture in development and inferred that the Project Management Consultants deal with the Project by use of their Knowledge, Skills, and Experience at different stages and is viable and effective just when it is engaged

with Total Project Life Cycle from Conception to Closeout.

SHAIK MOHAMMAD MASOOD etal. (2014) H.N showed that numerous development venture experience the ill effects of time and cost overwhelms because of various variables. EVM is an erformance of venture assessment which is utilized for the application in undertaking administration. This method helps in correlation of planned expense of work to genuine expense of work performed.

HAMED et al.(2013) represented that each association, at any rate, has four sorts of assets to be distributed with the end goal to accomplish authoritative points. These assets are: HR, physical assets, budgetary assets, and innovation assets. Assets ought to be apportioned in a productive and fitting way since progress is accomplished when designs, workers, execution, controls and duties made act to keep up and survive dispensed assets.

P.DAYAKAR and M. UDHAYAKUMAR (2012) depicted best calendar so that meets the essential destinations of the aggregate undertaking. Those essential targets are to make a quality task, finished on time, inside spending plan, and in a protected workplace. Henceforth in this examination a continuous development venture is taken and the execution of the task is contrasted and the calendar with the assistance of Microsoft Project and inferred that it is critical to understand that there will be changes to the timetable rationale and contrasts between the arranged advancement and real advancement.

J.A. FAPOHUNDA et al. (2010) shown the administration parts of the venture and the components which causes delay at different stages. These variables are recognized to be basic; the correct administration of these elements will accomplish best task execution results.

TRANNER et al.(2009) demonstrated that the undertaking calendar should show all the development assignments from the earliest starting point of the venture through finish, the eras for every errand, and the succession of these assignments in a legitimate request. He additionally clarified the fundamental motivations behind a task plan as adequately portraying the development plan to the undertaking members, allowing administration to control and measure the movement of the work, lastly obliging the members with data for auspicious choices.

GURU PRAKASH PRABHAKAR (2008) centers around the job of watchful and persistent task arranging in the achievement of an acknowledgment of a venture; and furthermore sees that the exercises of makers, creators, providers, laborers and contractual workers, and their assets must be balanced commonly and coordinated with the destinations of temporary worker. Today associations are rivaling each other to create top notch yield with the base spending plan and be conveyed at the correct time; the most proper approach to accomplish this objective is utilizing venture administration.

KERZNER (2003) delineated the venture administration is the use of information devices and methods to meet undertaking prerequisites of a development venture. It is the arranging, sorting out, coordinating and controlling of assets for some particular target to achieve objectives of the task. Task administration is satisfied using procedures, for example, starting, arranging, executing, controlling and shutting. In some cases, venture administration is utilized to portray an authoritative way to deal with the administration of progressing activities. Similarly numerous parts of continuous tasks are treated as undertakings in order to apply venture administration practices to extend.

LOCK (2003) clarified that a huge mechanical

venture includes various distinctive exercises which center around a last target. From the earliest starting point of the attempts to the fulfillment and giving over of the task, the venture group needs to run easily based on pre-arranged work and connection to meet the commitments embraced towards the customer. Thinking about this point, it is fundamental for an organization to have awesome ability and involvement in arranging and enhancing the different task exercises, alongside profoundly propelled administration instruments and techniques to control time and cost factors and to meet the testing prerequisites of developing productivity.

SOU-SENLEU et al. (2002) clarified the need of asset leveling in development arranging and administration i.e. to meet the physical furthest reaches of development assets, to maintain a strategic distance from everyday change in asset necessity, and to keep an even stream of use of development assets, asset leveling is required in the development business. Conventional asset leveling test accept movement length to be deterministic.

PMBOK Guide (2000) characterized that a task is an impermanent exertion embraced to make an interesting item or administration. Brief implies that each task has an unmistakable begin and a clear end. One of a kind implies that the each undertaking is distinctive somehow from all other venture.

K.K. CHITHKARA (1998) characterized the undertaking administration as a science and craft of activating and overseeing HR, materials, types of gear and cash to finish the relegated errand inside indicated term and pre evaluated costs and determined specialized execution measures.

A.K. MUNNS AND B.F. BJEIRMI (1996) contemplated that the cover between the meaning of the undertaking and task administration and talk about how the disarray between the two may influence their relationship. It distinguishes the

distinctive people required on the undertaking and venture administration, together with their goals, desires and influences. and reasoned that for a task to be fruitful there must, first, be an enhanced valuation for the job of task administration inside activities, and this job must be set inside the setting of a more extensive undertaking nearby other outside criteria and long haul desires. Second, the task administrator must enable the customer to contribute effectively in the arranging.

AUSTENAND NEAL (1995) shown dealing with an undertaking is very unique in relation to dealing with a routinely working association. An undertaking has a particular start and an end so venture is one of a kind. Then again, the frequently working association run persistently like large scale manufacturing industrial facilities where generally routine work are completed.

GITTINGER (1982) expressed that task is an action for which cash will be spent in desire for returns and which demonstrates the arranging, financing and executing as a unit. It is a particular action, with a beginning stage and a particular complete point, to meet the focused on targets. Normally it is a special action perceptibly unique in relation to the past comparable speculations, and it is probably going to be not the same as succeeding ones, not a standard section of continuous tasks.

III.CONCLUSION

- Authors presented resource allocation using management tool primavera or Microsoft project but no one explained allocation of resources using I.S. 7272 provisions.
- Authors presented scheduling of a residential or commercial live project but no one explained scheduling of a bridge structure using management tool.

- In past researchers explained the importance of risk analysis in a construction project whereas in the study, project analysis in several activities is considered.
- In past researches Primavera visualizer and tracking is not implemented till date.

IV. REFERENCES

- [1]. Prof. A. Beam Chaudhuri, B. Sivakonda Reddy, Prof. A. Beam Chaudhuri, "Asset Management in Construction Projects – a contextual analysis" Engineering Science and Technology: An International Journal (ESTIJ), ISSN: 2250-3498, Vol.2, No. 4, August 2012 PN (660 – 665)
- [2]. Indrasen Singh, P. Venkateswaralu, "Arranging and controlling of a National Highway Project- A contextual analysis", Journal of the Indian Road Congress Paper No.613, April – June 2014 PN (91 – 102)
- [3]. Antony Prasanath MA, Thirumalai Raja K, "Investigation of expense and calendar Performance of Residential Building Projects by EVM system", Journal of Construction Engineering, Technology and Management ISSN: 2347-7253, Vol. 4, (2014) PN (1-7)
- [4]. Tarek Hegazy, Wail Menesi, "Basic Path Segments Scheduling Technique" Journal of Construction Engineering and Management ASCE/(Oct 2010) PN (1078-1085)
- [5]. Awad Hanna, Aviad Shapira, Mounir Asmar and Craig Taylor, "Effect of group planning on task execution", Practice Periodical on Structural Design and Construction ASCE (2013) PN (35 – 44)
- [6]. Robert B. Harris, "Pressing strategy for Resource Leveling", Journal of Construction Engineering and Management © ASCE, vol no 116, June 1990 PN (331 – 350)
- [7]. Khaled El-Rayes and Dho Heon – "Advancing Resource Leveling in Construction Projects", Journal of Construction Engineering and

Management © ASCE, Vol. 135, No. 11, November 1, 2009. PN (1172 - 1180)

- [8]. James E. Seibert and Gerald W. Evans, "TimeConstrained Resource Leveling", Journal of Construction Engineering and Management, ASCE Vol. 117, No. 3, September, 1991. PN (503 – 520)
- [9]. O. Shaked and A. Warszawski, "Conshed : Expert System for Scheduling of Modular Construction Projects", Journal of Construction Engineering and Management, ASCE/vol 118, Sept. 1992 PN (488 – 506)
- [10]. Piotr Jaskowski and Anna Sobotka, "Booking Construction Projects Using Evolutionary Algorithm", Journal of Construction Engineering and Management, ASCE/Aug 2006 PN (861 – 870)
- [11]. Daniel Castro-Lacouture, Gürsel A. Süer Julian Gonzalez-Joaqui; and J. K. Yates, " Construction Project Scheduling with Time, Cost, and Material Restrictions Using Fuzzy Mathematical Models and Critical Path Method" ASCE , ISSN 0733-9364/2009/10-PN (1096– 1104)
- [12]. A. Kastor a, K. Sirakoulis, "The viability of asset leveling apparatuses for Resource Constraint Project Scheduling Problem", Science Direct International Journal of Project Management 27 (2009) PN 493– 500
- [13]. Liberatore MJ, Pollack-Johnson B, Smith CA. Undertaking n development: programming use and research heading. J Constr Eng Manage 2001;127(2):101– 7.
- [14]. IS : 7272 (Part I) – 974 "Suggestion For Labor Output Constants For Building Work Part I North Zone (Sixth Reprint February 2001)
- [15]. Maharashtra Jeevan Pradhikaran (Government of Maharashtra Undertaking) Schedule Of Rates For The Year 2012 – 2013 (Effective from 24th December 2012)
- [16]. "Estimating, Costing, Specification and Valuation in Civil ENGG.

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