

Performance Evaluation of Construction Projects by Earned Value Management Method, Using Primavera P6 - A Case Study in Istanbul, Turkey

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Abstract : Most of the construction projects are exposed to time and cost overruns due to various factors and this is a major problem. As a solution to this, the Earned Value Management (EVM) method is considered. EVM is a powerful and well-known method used in monitoring and controlling the project. EVM is a technique that project managers use to track the performance of their project against project baselines. EVM gives an early indication that either project is delayed or not, and the project is either over budget or under budget at any particular day by tracking it. Thus, it helps to improve the management control system of a construction project, to detect and control the problems in potential risk areas and to suggest the importance and purpose of monitoring the construction work. This paper explains the main parameters of the EVM system involved in the calculation of time and cost for construction projects. In this study, the project management software Primavera P6 is used to deals with the project monitoring process of a seven-storeyed (G+6) faculty building whose construction is in progress at Istanbul, Turkey. A comparison between the planned progress of construction activities and actual progress is performed, and the analysis results are interpreted. This case study justifies the benefits of using EVM for project cash flow analysis and forecasting.

Keywords : earned value management (EVM), construction cost management, construction planning, primavera P6, project management, project scheduling

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