

Peran input personel konstruksi pada tahap perencanaan konseptual dalam meningkatkan kinerja biaya proyek konstruksi di Indonesia

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Abstrak

The Role of Construction Personnel in the Phase of Conceptual Planning in Increasing Construction Project Cost Performance in Indonesia Modern construction has been characterized as a complex and fragmented process. These conditions have been known to lower the quality and cost efficiency of projects. It has been proven that this problem can be partially overcome by implementing constructability, which is based on the integration of construction knowledge into the early stages of planning and design process. Prior research has found a lack of application of constructability by participants in the construction industry, especially general contractors. Because builders can play an important role in implementing constructability, this thesis has addressed constructability as practiced by the general contractors in Indonesia

Constructability since 1986 has been defined as the optimum use of construction knowledge and experience in planning, design, procurement, and field operations to achieve overall project objectives. The effective integration of design and construction offers important benefits and opportunities to achieve project objectives. In order to create maximum benefits, the construction input or constructability, has to be introduced at the earliest stages of the project.

This investigation describes the constructability improvement related to three key issues derived from literature study; developing the project plan, laying out the site, and selecting major construction methods. Project data for analysis were obtained by distributing questionnaires to corporations in the Jabotabek areas and in project locations in Indonesia which were acting as contractors. The sample questionnaires were also directed to a population of contractors categorized by the characteristics of the organization, the type of work performed, and the type of contractual arrangement.

The variables in the questionnaires that were related to constructability and cost performance were assigned scores by the contractor population in the research. The data was then processed for carrying-out correlation and multiple regression modeling analysis. The research proceeded to establish through regressions analysis a non-linear model relating cost performance to two significant constructability variables. Firstly the improvement of construction personnel knowledge and experience for the scheduling preparation, cost estimations and budget. Secondly the improvement of construction personnel knowledge and experience for pre-construction planning as a basic input in the design phase.

These findings then provided the basis for deriving conclusions and various recommendations on practical applications to improve constructability during the conceptual planning phase for increasing the cost performance of a project.