

VALUE MANAGEMENT IN DESIGN PLANNING: A SYSTEMS-BASED FRAMEWORK FOR MULTI-DISCIPLINARY TEAM INVOLVEMENT

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ABSTRACT

Value Management (VM) has proven to provide a structured methodology using specific supporting tools and techniques that facilitates effective decision-making on many types of projects, thus achieving ‘best value’ for clients. It offers an exceptionally strong approach to exploring project needs and functions in line with client’s objectives. The Functional Analysis, and Creativity and Evaluation Phases of VM crucially focus on understanding clients’ objectives for their projects and on finding innovative solutions to deliver those projects accordingly. However, the perception of VM as just another cost cutting tool has overshadowed this fundamental perspective causing VM to lose support in the construction industry. This research aims to investigate the VM processes currently being used by project clients and that effects project team participation in VM workshops during the design stage of the projects. The focus of the research is on how issues related to infrastructure design that can improve construction processes on-site are being identified, analysed and resolved through multi-disciplinary team participation.

The research uses a multiple case studies approach that comprises of a survey, interviews and document reviews as the main data collection methods. Five project packages from the on-going Kuala Lumpur International Airport construction project in Malaysia are selected as cases with 25 interviews conducted. Statistical and Content Analyses are used to analyse data collected from the fieldwork exercises. Validation of the findings from this research is achieved through triangulation of survey, interviews and document analysis results including an expert panel review. System-based frameworks with ten attributes were generated from this research. Findings from the case studies observed that project team member’s composition in a VM workshop during the design process has minimal influence on improving the subsequent construction process. However, the degrees of interaction, diversity of visualisation aids, certain cultural dimensions and the system thinking approach all have significant influence in maximizing participation among project team members during the entire VM workshop during the design process. The significant outcomes of this research are expected to offer alternative perspectives for construction professionals and clients to understand the constraints and strategies to implement VM, seen from the perspective of workshop participants.

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