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*Poster*

## **Application of Analytic Hierarchy Process (AHP) in prequalifying contractors in decision making**

Planners and project managers are decision makers who carry out planning, developing, implementing, monitoring and evaluating the project in a systematic way. These decision makers will face multi faceted problems in projects which are complex in nature as they are based on multiple criteria and multiple decision makers. In order to make the best decisions it is essential to identify and analyze the elements of problems and their inter relationship. Human value and judgment systems are integral elements in project related problems. Analytic Hierarchy Process (AHP) is a decision making method which can be applied to quantify relative priorities for identified elements and human value and judgments of problems. The strength of this approach is that it organizes tangible and intangible factors in a systematic way and provides relatively simple solutions to the decision making problem.

This paper presents decisions making of a project team using the AHP while briefly reviewing the concept and its applications on contract prequalification problems. The contractor prequalification is a very important factor to be considered when selecting suitable contractors. Selection of most appropriate qualified contractor is half the effort of the project. AHP is a potential decision making method which can be applied to select best contractors to perform the project by prioritizing prequalification criteria. A sensitivity analysis can be performed to check the sensitivity of the final decisions to minor changes in judgments. Finally, we hope that this study will encourage the application of AHP by decision makers such as project managers, and planners in their line of work.

**Keywords: Multi Criteria Decision Analysis (MCDA), Contract prequalification, Human value and judgment systems**