

Critical Success Factors in A Complex Oil and Gas Brownfield Project

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Abstract

A minimal number of studies have explored developing the critical success factors (CSFs) in a brownfield construction project in Malaysia. This study intends to understand the CSFs perceived from the construction practitioners, identify all the CSFs in brownfield construction projects, and establish the top five (5) most influential CSFs for a brownfield construction project. Brownfield project refers to a project that performs construction, modification, and rejuvenation work on the existing oil and gas platform and ongoing operations with intentions for major or minor expansion, debottlenecking, or rejuvenations in a live plant, to tie-ins of a new element. In the volatile oil and gas market prices, the O&G companies are preferable to perform redevelopment of existing fields that the underlying basis is lower capital expenditure (CAPEX) compare to greenfield projects and provide the higher return of investment (ROI). In this study, the literature review was performed, conducted a semi-structured interview, and distributed surveys to respondents from various oil and gas companies in Malaysia. From the questionnaires survey conducted, a correlation will be tested study on to tabulate the critical success factors for a brownfield construction project. Furthermore, the results from the questionnaires will be analysed using the Relative Importance Index (RII), then to define and to develop the top five (5) most influential CSFs in a brownfield construction project. The discussion further suggested that the management strategy can be taken to manage all the identified CSFs from the surveyed and analysed.

Keywords: Oil and gas, CSFs, success factors, brownfield project, offshore construction, project management