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Risk Factors Affecting Delays in Upstream Natural Gas Mega-Projects: An Australian Perspective

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Abstract

The rapid expansion of the Australian gas industry has seen massive investment in natural gas mega-projects but benefits from this have been impeded by the impact of severe project delays. Schedule overrun is becoming an alarming situation as its devastating influence leads to severe cost blowouts for the companies running LNG projects in Australia. Risks causing delays are quite high in upstream mega-projects hence they fail quite often. However, the absence of research concerning delays during this complex phase of mega-projects provides the opportunity to critically examine underlying challenges experienced by various project parties specifically involved in upstream gas projects in Australia. Towards filling this gap, this research provides an insight into the relationship between risks and schedule overrun by prioritising critical risk factors that predominantly affect delays in upstream natural gas mega-projects in Australia. Moreover, differences in perception in assessing the criticality of the risk factors influencing delays have been tested among the sample respondents based on their working experience, job position, and the type of respondents' company. Data was gathered through an extensive literature review, interviews with industry experts and a comprehensive survey. A list of risks extracted from the literature was checked with the industry experts for relevance in upstream megaprojects and any missing risks have been added. Finally, this research has identified 70 risk drivers and categorized into internal sources and external/nontechnical risk sources (Figure 1) that impact delays in upstream gas projects. The survey was circulated to respondents drawn from the client, consultant and contractor organizations directly involved in relevant projects.

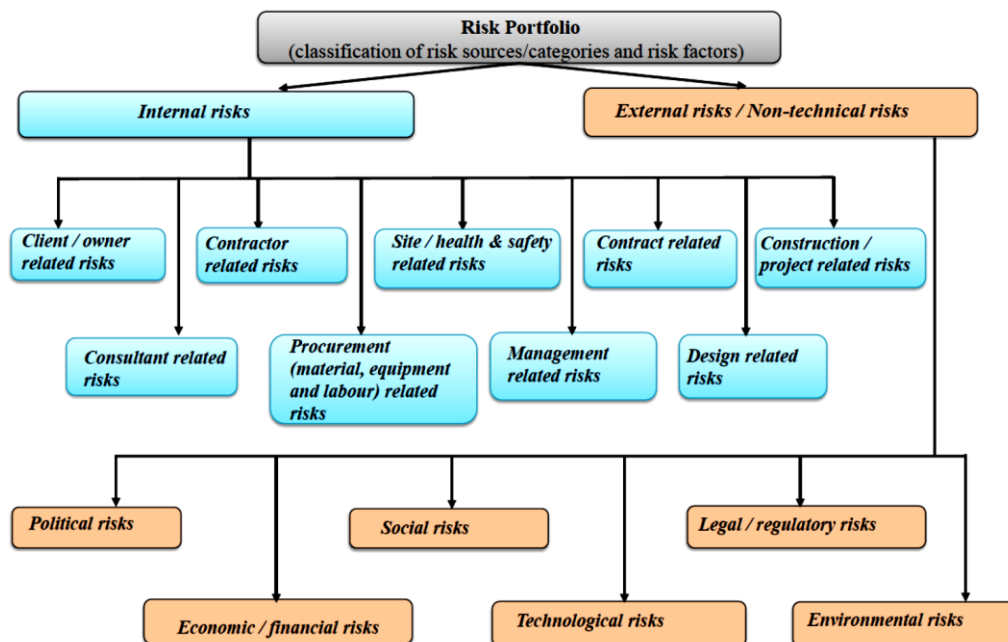


Figure 1- Risk classification structure