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Hybrid Risk Assessment Model for Construction Based on Multicriteria Decision Making Methods

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Abstract : The article focuses on the identification and classification of key risk management criteria that represent the most important sustainability aspects of the construction industry. The construction sector is one of the most important sectors in Lithuania. Nowadays, the assessment of the risk level of a construction project is especially important for the quality of construction projects, the growth of enterprises and the sector. To establish the most important criteria for successful growth of the sector, a questionnaire for experts was developed. The analytic hierarchy process (AHP), the expert judgement method and other multicriteria decision making (MCDM) methods were used to develop the hybrid model. The results were used to develop an integrated knowledge system for the measurement of a risk level particular to construction projects. The article presents a practical case that details the developed system, sustainable aspects, and risk assessment.

Keywords : risk, system, model, construction
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