

Risk Assessment of Building Information Modelling Adoption in Construction Projects

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Abstract : Building information modelling (BIM) is a new technology to enhance the efficiency of project management in the construction industry. In addition to the potential benefits of this useful technology, there are various risks and obstacles to applying it in construction projects. In this study, a decision making approach is presented for risk assessment in BIM adoption in construction projects. Various risk factors of exerting BIM during different phases of the project lifecycle are identified with the help of Delphi method, experts' opinions and related literature. Afterward, Shannon's entropy and Fuzzy TOPSIS (Technique for Order Preference by Similarity to Ideal Situation) are applied to derive priorities of the identified risk factors. Results indicated that lack of knowledge between professional engineers about workflows in BIM and conflict of opinions between different stakeholders are the risk factors with the highest priority.

Keywords : risk, BIM, fuzzy TOPSIS, construction projects

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