

## **Contractual challenges for BIM-based construction projects: a systematic review**

*Ahmad Huzaimi Abd Jamil<sup>ab</sup>; Mohamad Syazli Fathi<sup>ac</sup>*

<sup>a</sup>Razak Faculty of Technology and Informatics, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia

<sup>b</sup>Faculty of Industrial Management, Universiti Malaysia Pahang, Kuantan, Malaysia

<sup>c</sup>Occupational Safety and Health (OSHE) Unit, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia

### **ABSTRACT**

Purpose; Building information modeling (BIM) has been proven to enable outstanding results in construction processes by enhancing knowledge sharing with regard to a building or facility throughout its life cycle from the conceptual design to facility management. The purpose of this paper is to investigate the extent to which the use of BIM has impacted the legal and contractual implications of the existing construction contracts for aligning the three sets of relevant development domains: BIM functionality, contract procurement methods, and BIM legal and contractual issues to enhance the efficient use of valuable resources. Design/methodology/approach; This exploratory study was undertaken by analyzing the literature using a novel approach involving a matrix that juxtaposes BIM functionalities for each project life cycle with contract procurement methods. As part of the study, 28 interactions of BIM legal and contractual issues have been identified, as representing positive and negative interactions.

### **KEYWORDS:**

Procurement; Contracts; Construction management; BIM; Contract law; Project management; Building information modelling; Contractual challenges