

Convergence Research into the Applicability of Smart Contracts in Construction Projects

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This study presents a new research into the applicability of smart contract approach (SCA) in construction projects, and it consists of two parts, including the identification of limitations and challenges associated with traditional construction contract approach in comparison with the SCA, and the establishment of a conceptual framework to facilitate further research and development in adopting SCA at tactical and operational level in construction projects. The study adopted a systematic literature review first to identify limitations and challenges to adopting SCA in construction projects, and then a system analysis and design to establish a conceptual framework in response to identified limitations and challenges at strategic level. This study shows a list of identified limitations and challenges of traditional construction contract approach in the digital construction era, and a strategic framework as one technical solution to overcome the limitations and to tackle the challenges. This study presents a list of limitations and challenges that traditional construction contract approach has in the digital construction era and a strategic resolution to adopting SCA in construction projects. These research outcomes are practice oriented with connections to further research, development and practice in relation to SCA. This research establishes a connection between the identified limitations and challenges of traditional construction contract approach and the adoption of SCA at strategic level. This connection including the strategic framework can well inform further research into tactical and operational solutions for adopting SCA in the digital construction era.

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