

Blockchain Technology as an Approach for Enhancing Communication in the Construction Industry

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Abstract. The construction industry has long grappled with the challenge of establishing effective communication and collaboration systems among its stakeholders. Consequently, there is a pressing need for a digital platform that can seamlessly connect all relevant parties and enhance communication. One promising solution lies in the adoption of blockchain technology (BCT), which operates as a distributed ledger system supporting triple-entry accounting. The problem that motivated this work is the inefficient communication between multiple parties within a specific part of the chain. This inefficiency results in the exchange of erroneous and outdated documents, including frequent design changes and engineering drawing errors. The research aim is to investigate the role of BCT in enhancing communication within the construction industry. To achieve this aim, a qualitative approach is employed. First, a comprehensive literature review explores the impact of BCT on communication enhancement in construction. Second, a case study is presented, focusing on the implementation of BCT during the construction of a new bridge. The results from both the literature review and the case study underscore the strong correlation between BCT adoption and improved communication and collaboration among diverse stakeholders in the construction industry.

Keywords: Blockchain technology, Communication, Collaboration, Efficiency, Constructuion Industry.

