Role of Technology in Studying Traceability in Food Chain

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ABSTRACT

Food safety is becoming more and more serious issue globally. In order to handle food safety problems from the practical side, public want a trustworthy food tracing system that can monitor as well as trace the overall duration of food manufacturing, involving various stages from the raw material, farming/rearing, handling, shipping, warehousing, and retailing etc. In latest two eras, with the fast development of the financial system and the constant enhancement of public lifestyle, safety of food has slowly turn out to be the focus of consideration and has been established into a globally issue. Blockchains, the allocated ledger expertise underlying cryptocurrencies such as Bitcoin, show a brand new and pioneering technical method to achieve distributed trust less systems. Actually, the fundamental assets of Blockchain technique give system failure, fixed, lucidity and full tracking of the stored transaction data. In the current research work, we recommended, an Agri-Block-IoT, a completely dispersed, blockchain-based traceability explanation for (A-FSCM) Agri-Food supply chain management, capable to smooth incorporation of IoT gadgets making and exhausting digital information along the chain. In order to successfully evaluate Agri-Block-IoT, firstly, we specified a traditional use-case inside the provided vertical field, namely from-farm-to-fork. We are using IoT gadgets to change manual footage and authentication as much, which can diminish the human interference to the structure successfully. Then, we built and implemented such use-case, attaining traceability using two different blockchain applications, namely Ethereum and Hyperledger Sawtooth.

Keywords: Blockchain, Traceability, Food chain, Internet of Things, Performance improvement, food waste

 ISBN: 978-81-942709-2-8 (eBook), 978-81-942709-1-1 (Print); DOI: 10.21467/abstracts.82