Practice Abstract

Expectation mapping – Use of blockchain in supply chains

Description

A systematic literature review is being carried out to investigate the current state-of-the-art of use of blockchain technology (BCT) in agro-food supply chains to increase traceability and transparency, screening and reviewing about 550 academic articles. Analysis of the data extracted from these articles, in particular the ones that ended up Included in the study (~35/550) is still ongoing. The detailed analysis of these papers will provide insight into the appropriate uses, and suitable implementations, of BCT in supply chains. Preliminary results include the following:

- Lack of mature applications: BCT is becoming mature as a technology. However, its practical application has so far only been tested for physical asset supply chains traceability.
- Difficulty of BCT past the prototyping stage: Many supply chain transparency initiatives utilising blockchain may reach a prototype phase but are subsequently not heard from again. This indicates that the technology is interesting from a development and research point of view, but not yet delivering on the promises from a business perspective.
- BCT may not be necessary: Some such projects have achieved laudable milestones through digitalising parts of the supply chain, providing data from sensors and other systems to blockchains, thus making data available and the supply chain more transparent. However, closer examination often reveals that the BCT itself was not necessary, as a shared or open data platform could have served the same purpose, but the novelty of BCT spurred the digitalisation groundwork.

Need for more research: The proper use of BCT requires additional research to map the capabilities of BCT to needs in supply chain management.

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Stakeholders

Food Industry
Food Safety Authorities
Policy Makers
Consumers
Academic and Research Community
Industry Association
Trade Organizations
Technology and Data Analytics Experts
Supply Chain Partners

Country

Worldwide

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A holistic frameWork with Anticounterfeit and inTelligence-based technologieS that will assist food chain stakehOlders in rapidly identifying and preveNting the spread of fraudulent practices

watson

About Watson

Watson is a 3-year project funded by the Horizon Europe programme, aimed at tackling fraudulent practices in the food supply chain. Our interdisciplinary consortium of 47 partners from 20 EU and non-EU countries is collaborating to develop a holistic traceability framework that integrates data-driven services, intelligence-based toolsets, and risk-estimation approaches, enabling food safety authorities to detect and prevent food fraud more effectively.

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