

Practice Abstract

Improved traceability of Portuguese wines

Description

The need for effective traceability in the wine industry has greatly increased in recent years due to the growing consumer awareness of the safety and quality of products they buy, as well as the responsibility of practices involved. The lack of traceability to the origin of a product can cause significant disruptions in the production and distribution of goods but also poses serious fraud risks and adverse economic consequences.

In contrast, the promotion of traceability will contribute to consumer trust. According to the European Commission's science and knowledge service, wine fraud costs the regular EU wine sector an estimated 1.3 billion euro per year, around 3% of the total sales value. To overcome these aspects, public authorities perform controls and checks, which can achieve limited success as they cannot detect the roots of the problem. Moreover, the isotopic analysis performed by authorities must be done in laboratory with expensive equipment and the information is confidential.

In the Watson project, the wine pilot case focuses on a blockchain-based platform that enables stakeholders to access trustworthy information related to grapes and wine along the supply chain. The technologies used cover secure data sharing, real-time georeferenced data collection from IoT sensors and image analysis techniques.

The implementation of IoT technologies will facilitate monitoring environmental conditions in the vines and grapes transportation; integration of the information in the digital ledger and with the digital passport; wine colour analysis for information sampling and fast screening; and label processing for assisting visual impaired consumers. The last two focus on assistance and higher integration of consumers.

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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

Portugal



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



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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