



ALLIANCE

Value proposition

To improve social and economic sustainability of quality labelled food supply chains by ensuring quality and authenticity, increasing food safety, while also considering climatic and environmental impacts of food products. This contributes to achieve the target of eliminating Food Fraud, aligned with the **Farm to Fork Strategy** that lies at the heart of the European Green Deal aiming to make future food systems fair, healthy and environmentally friendly.

Impact

Sustainable, productive, climate-neutral and resilient farming systems providing consumers with affordable, safe, traceable healthy and sustainable food, while minimizing pressure on ecosystems, restoring and enhancing biodiversity, improving public health and generating **fair economic returns for farmers.**

Sustainable, healthy and inclusive food systems delivering co-benefits for climate mitigation and adaptation, environmental sustainability and circularity, sustainable healthy nutrition, safe food consumption, food poverty reduction, the inclusion of marginalized people, the **empowerment of communities, and flourishing businesses.**

Context

People across the world are increasingly keen on consuming **quality-labelled food**. Organic food and geographic indication (GI) labels are a guarantee for consumers.

Problem

Food quality is tampered for economic profit in what is called **food fraud**. Food fraud is cause of economic losses and damages reputation within the food supply chain, especially to quality-labelled food.

Solution

ALLIANCE proposed solution is an holistic framework that safeguards data integrity and veracity, enhances traceability and transparency and reinforces interoperability in quality-labelled food supply chain and fosters evidence-based decision making for proactive interventions and actionable planning. Building on this, **ALLIANCE** fosters a more resilient ecosystem thanks to early warning systems and vulnerability risk assessment upon a **strengthened data governance.**

Scopes

ALLIANCE leverages emerging technologies to strengthen the traceability along the food supply chain and to enable proactive risk mitigation.

ALLIANCE renovates trust and ensures quality in the organic and geographic indication (GI) labels and it supports food quality and sustainability monitoring from farm to fork.

ALLIANCE drastically improves the resilience of quality-labelled food supply chains against food fraud advancing paradigm shift that increases transparency and traceability from the farmer to the consumer.

ALLIANCE implements an holistic approach to enable evidence-based risk assessment and decision-making by intervening at the bottlenecks of the digitalisation of the food supply chains.

Objectives

Develop a holistic framework that ensure data veracity and accelerate transparency and trust throughout the **EU quality-labelled food chains.**

Provide systemic solutions to the **issue of food fraud** that encompass early warning, vulnerability risk assessment, and decision-support systems for proactive action.

Increase transparency and traceability in quality labeled supply chains, of organic, PDO, PGI and GI food, through innovative and improved track-and- trace mechanisms from farm to fork.

Equip food actors, farmers, consumers, and policy makers with **meaningful insights** to have the complete awareness of the food supply chain.



Case studies



PDO/PGI Extra Virgin Olive Oil
This pilot will extract a genetic ID of extra virgin olive oil and olive oil. This will allow to ensure the authenticity of products while increasing the transparency for all stakeholders and granting full traceability to consumers.



PDO Feta Cheese
This pilot will enable all stakeholders in the Feta cheese food supply chain to retrieve and share information verified through a blockchain technology.



Organic Honey
This pilot will leverage the capabilities of BeeMark, a certification standard that applies decentralised verification to ensure the integrity of data. ALLIANCE will provide a fully integrated solution based on blockchain technology to ensure the integrity and automate verification processes along the complex honey supply chain.



PGI Asturian Faba Beans
This pilot will develop a portable solution to verify the authenticity of the PGI label on faba beans as an economic and accessible alternative to expensive instruments or expert judgement.



PGI Lika Potatoes
This pilot will drastically improve the traceability and transparency of Lika potatoes supply chain by moving from a QR-code based certification to a blockchain-based data storage that uses sensor data to verify the authenticity of Lika potatoes.



Organic Pasta
This pilot will enable an overarching control on pasta at the retail level to ensure the validity of the organic label close to the consumer.



PDO Arijje Raspberries
This pilot will improve the traceability and monitoring system of quantities and origin of the PDO Arijje raspberries based on a blockchain-ensured data integrity in the digitalised supply chain.

Architecture

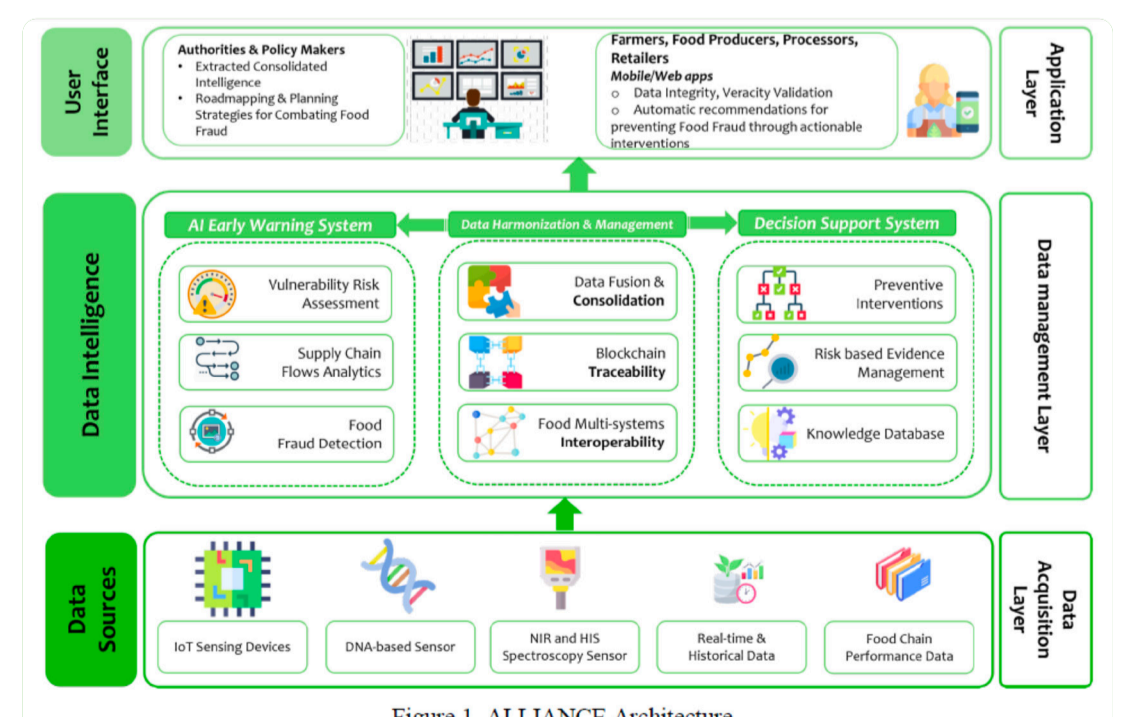


Figure 1. ALLIANCE Architecture.

A PARADIGM SHIFT
IN THE FOOD SUPPLY CHAIN
SYSTEMS MANAGEMENT
FOR THE COMBAT

against food fraud



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