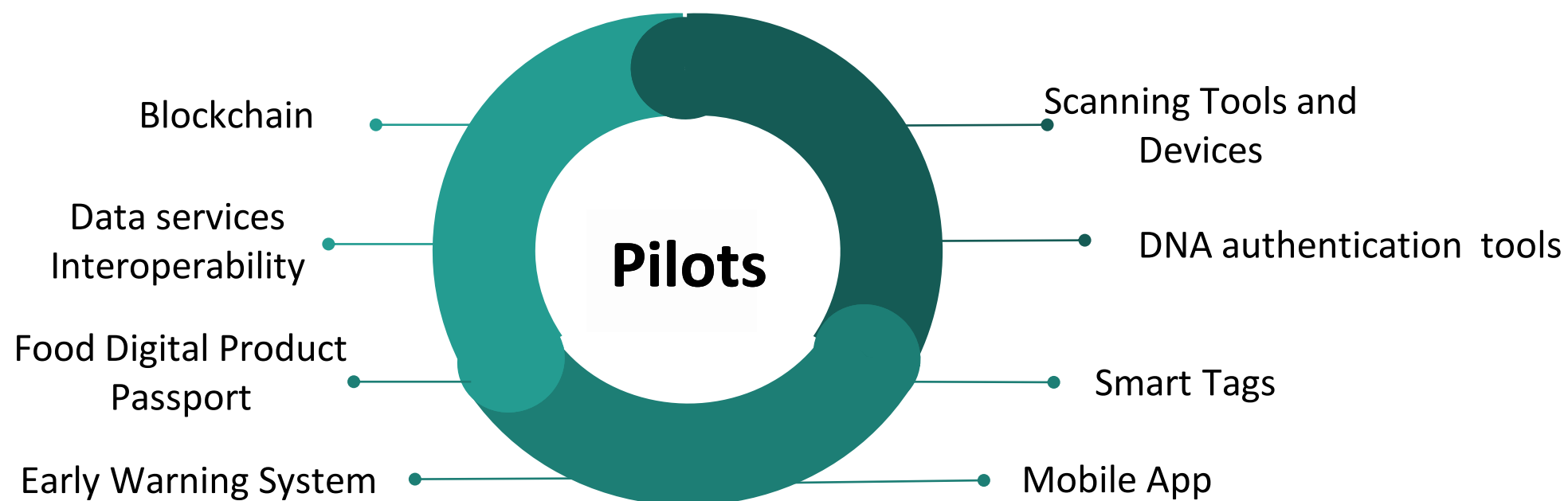A holistic frameWork with Anticounterfeit and inTelligence-based technologieS that will assist food chain stakehOlders in rapidly identifying and preveNting the spread of fraudulent practices.

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A methodological framework for improving traceability & integrity throughout food value chains

International Scientific Conference
"Global commodity chains from a risk **assessment perspective**"
Berlin, May 28th , 2024

Eleni Chatzidimitriou- *Project Manager*
eleni@foodscalehub.com

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Pilot Demonstration and Validation Campaigns Cycle

Blockchain

Data services Interoperability

Food Digital Product Passport

Early Warning System

Pilots

Scanning Tools and Devices

DNA authentication tools

Smart Tags

Mobile App

Pilots Overview and Mapping
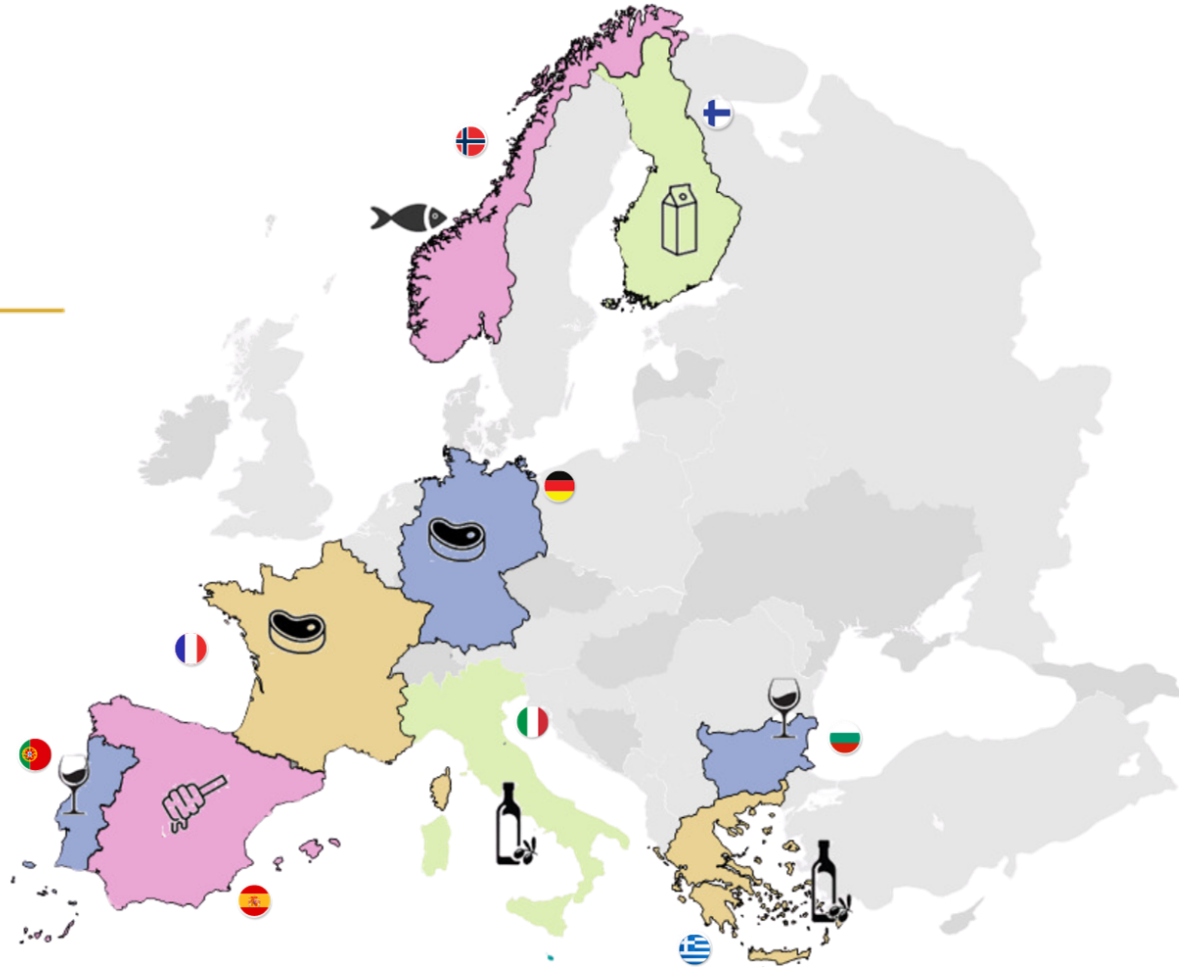
WINE: Improving traceability of Wine

HONEY: Preserving the Authenticity of Spanish Northwest Honey

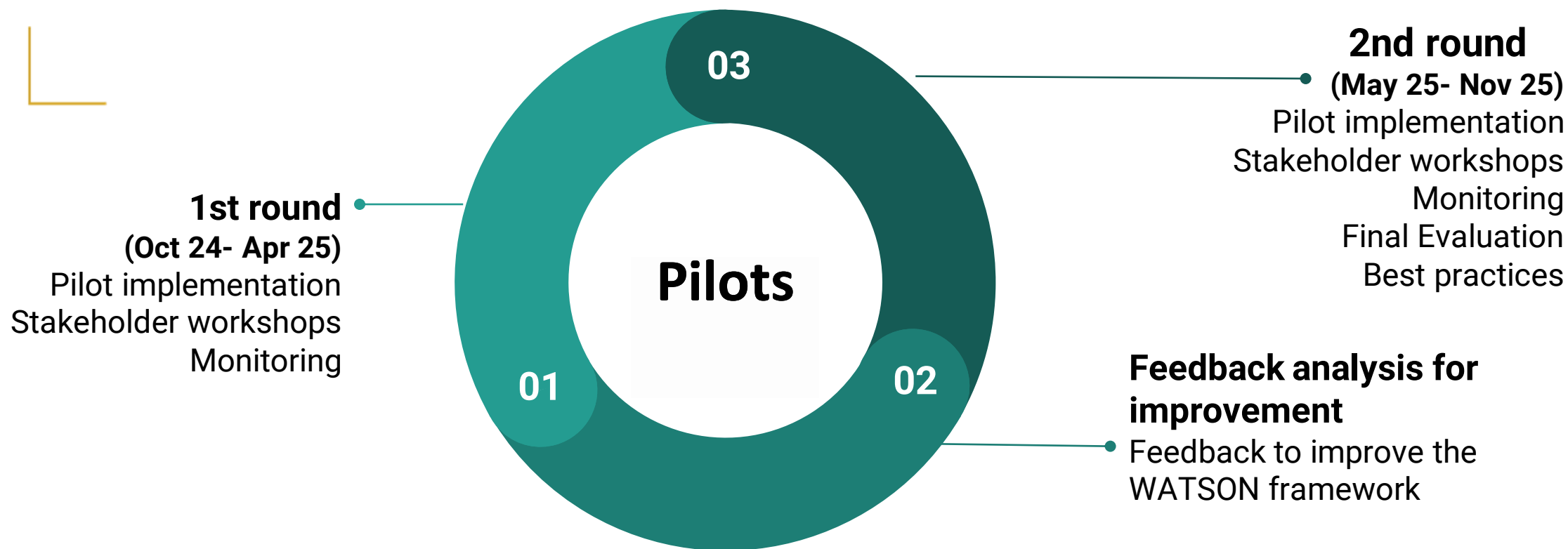**EVOO:** Rapid Traceability of Greek and Italian Extra Virgin Olive Oil

MEAT: Identification of Possible Manipulations of the Meat Chain

DAIRY: Improved Traceability of High-value Products in Cereal and Dairy Chain

FISH: Improving traceability of Norwegian White Fish

Pilot Demonstration and Validation Campaigns Cycle

Pilots

03

01

02

1st round
(Oct 24- Apr 25)
Pilot implementation
Stakeholder workshops
Monitoring

2nd round
(May 25- Nov 25)
Pilot implementation
Stakeholder workshops
Monitoring
Final Evaluation
Best practices

Feedback analysis for improvement
Feedback to improve the WATSON framework

Co-funded by the European Union

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Pilot Design Methodology
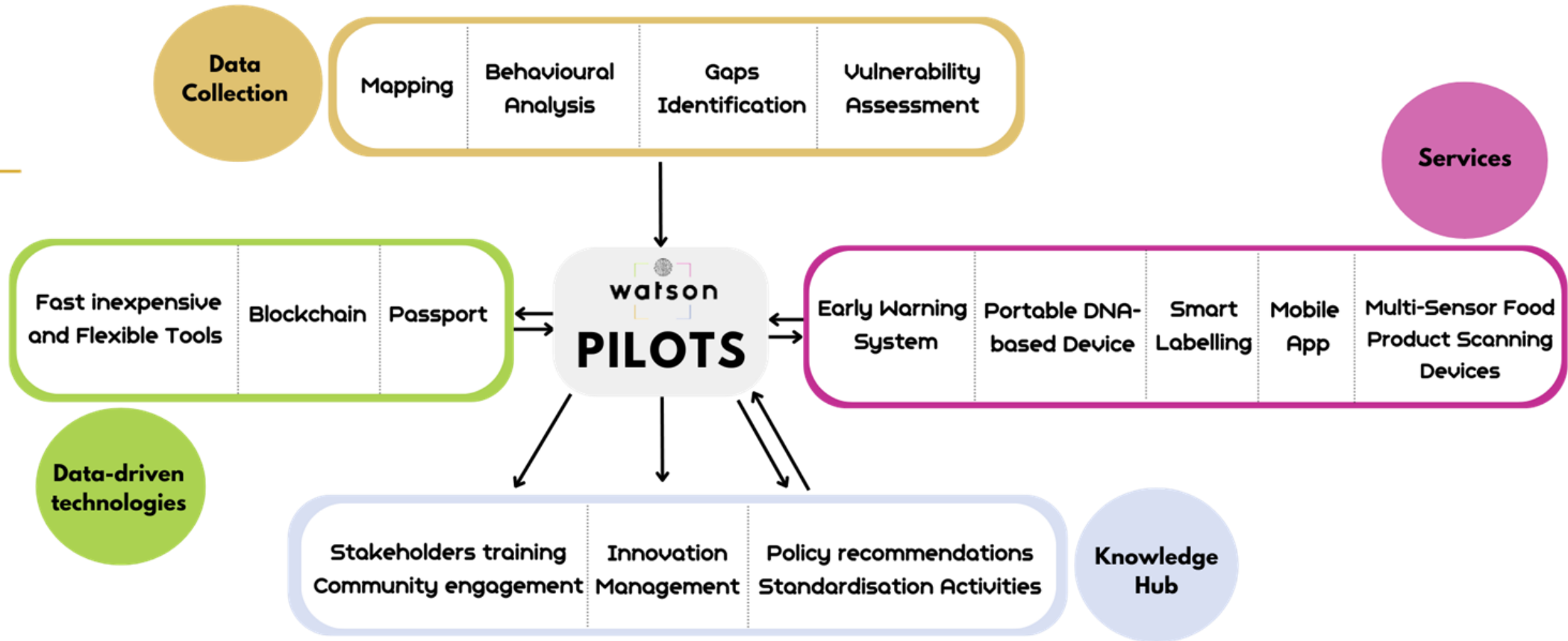
Target stakeholders

- Grape producers
- Wine producers
- **Consumers**
- **Visually impaired consumers**

- **Control authorities**
- Honey Producers
- **Consumers**

- Retailers
- Olive producers
- Olive oil producer
- **Consumers**

- **Control authorities**
- Retailers
- Quality control industry
- **Consumers**

- **Control authorities**
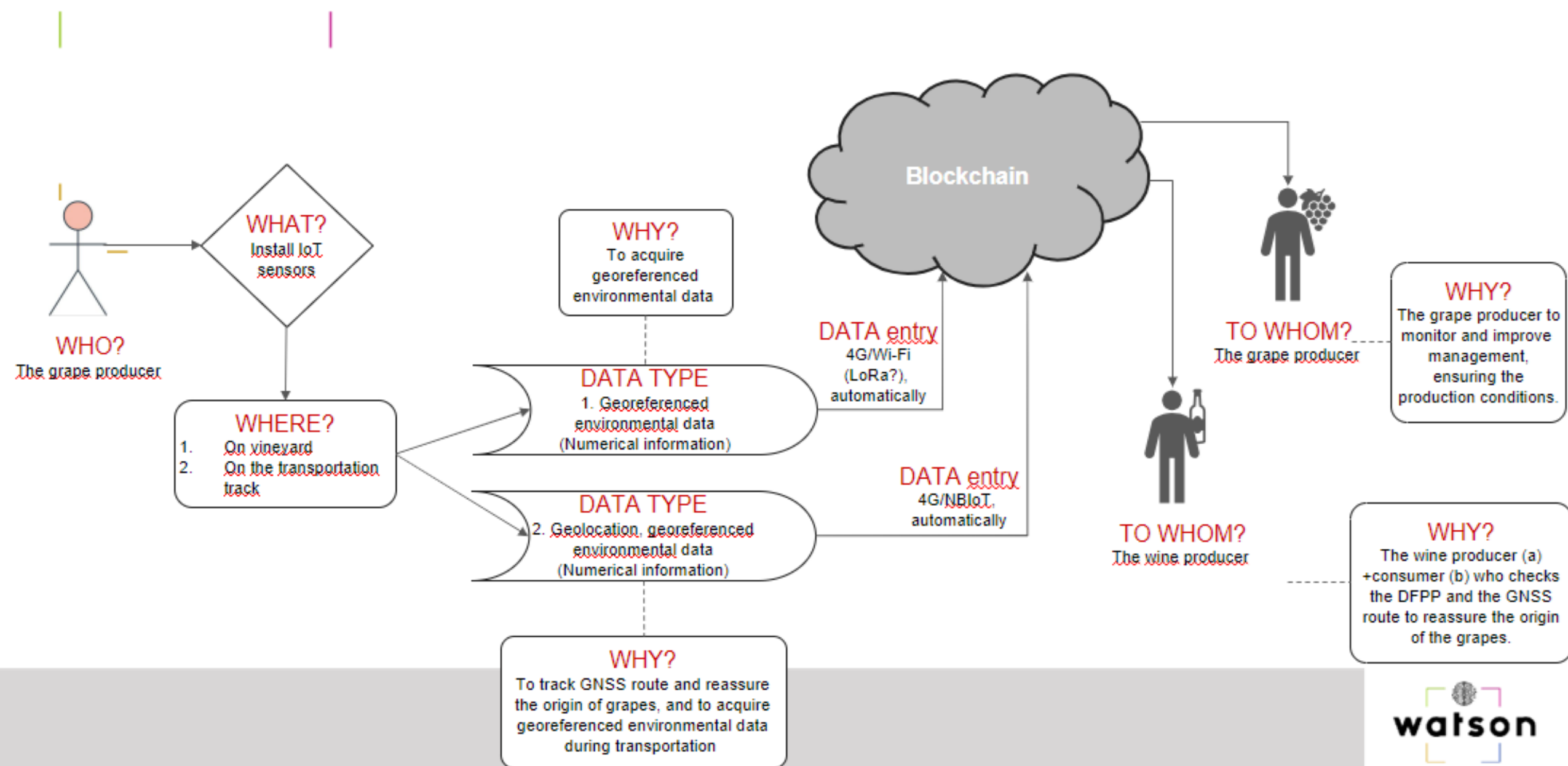- Retailers
- Dairy products producers
- **Consumers**

- **Control authorities**
- Fish catchers
- Fish products producers
- **Consumers**

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WINE Pilot: Use case scenario 1-2

Wine producer wants to have information on the origin of the grapes

WHO?
The grape producer

WHAT?
Install IoT sensors

WHERE?
1. On vineyard
2. On the transportation track

WHY?
To acquire georeferenced environmental data

DATA TYPE
1. Georeferenced environmental data (Numerical information)

DATA TYPE
2. Geolocation, georeferenced environmental data (Numerical information)

WHY?
To track GNSS route and reassure the origin of grapes, and to acquire georeferenced environmental data during transportation

DATA entry
4G/Wi-Fi (LoRa?), automatically

DATA entry
4G/NBIoT, automatically

Blockchain

TO WHOM?
The grape producer

WHY?
The grape producer to monitor and improve management, ensuring the production conditions.

TO WHOM?
The wine producer

WHY?
The wine producer (a) +consumer (b) who checks the DFPP and the GNSS route to reassure the origin of the grapes.

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Olive Oil Pilot: Use case scenario 4

The consumer wants to have information for the Olive Oil along the stages of production, including DNA information

WHO?
The Olive Oil Retailer/Shop

WHAT?
DNA test Olive Oil

WHERE?
In Retail Shop

TECHNOLOGIES
On-site DNA device T4.2 and inter-face

DATA TYPE
Genetic data (yes/no), date arrival, bottles received storage tank number/Lot number

WHY?
To match the Olive Oil genetic profile in the bottle with the genetic profile of the original batch.

DATA SOURCES
Bottle, Label, Mobile phone app

DATA entry
mobile camera scan

Blockchain

TO WHOM?
Consumers

WHY?
to access the alignment of the genetic profiles along the different stages of the supply chain, plus other data

TO WHOM?
SHOPS COMPANIES

WHY?
The olive oil company gains more consumer trust. The consumer is assured of the correspondence between label and content.

TECHNOLOGIES
T3.2 DLT and Smart Contract
T3.3 Interoperability in Food System
T3.5 Toward a Digital Passport
T4.3 Smart Labelling and Packaging
T4.4 Mobile application for Traceability
T4.5 Multi-Sensor Food Product Scanning Device

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Thank you for your attention!

Questions and Discussion....

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