CARE 4 BIO

# SENTIO-Agro:

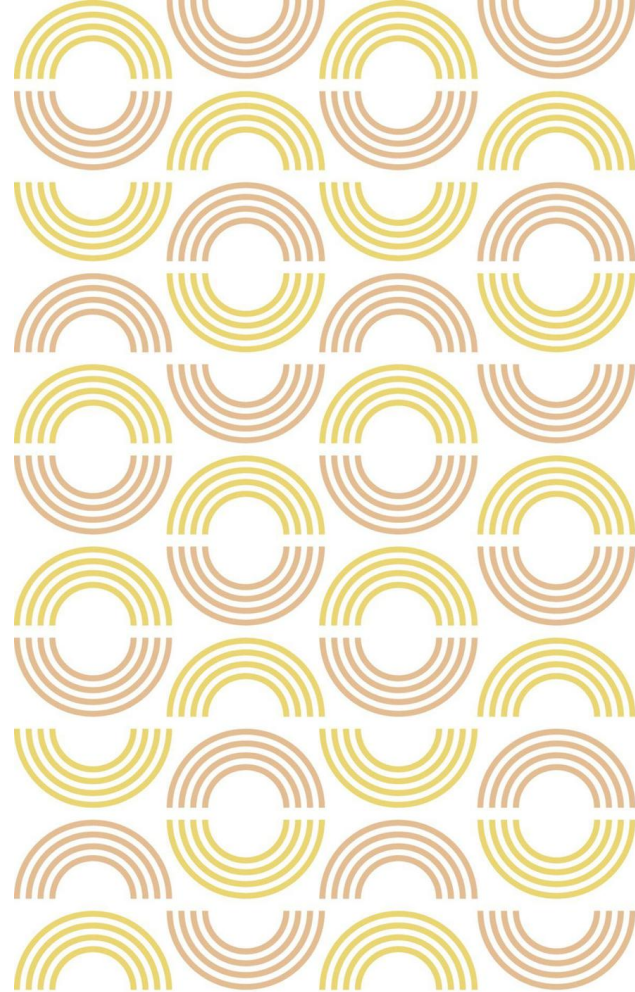## A Semantically-Integrated, Trustworthy IoT Platform for Smart and Resilient Agriculture.

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# About Ro Technology

Ro Technology was founded in 2011, by a group of professionals with long-standing experience in ICT systems engineering and design.

Our values, the basis of our corporate strategy, have always been shared by all company staff and they are applied everyday.



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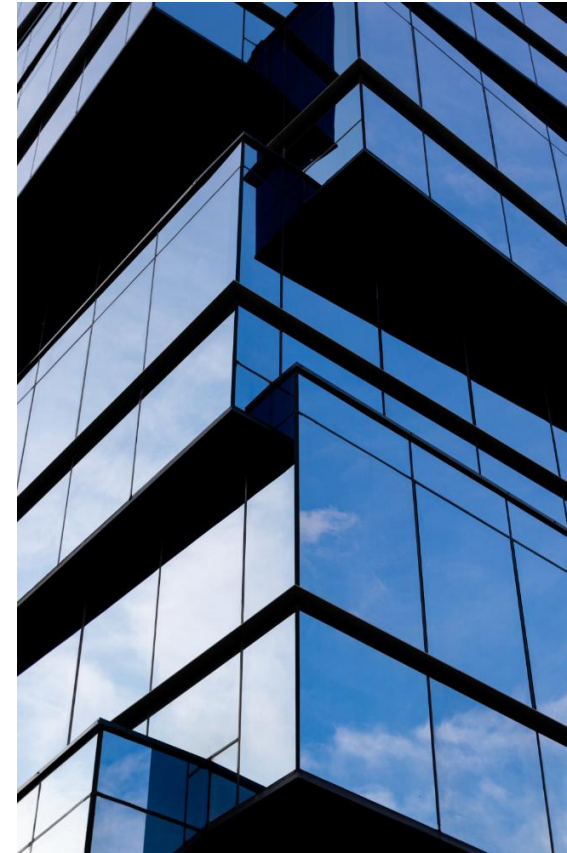
# Topic(s) addressed:

- HORIZON-CL6-2025-FARM2FORK-01-11: Data economy in the field of agriculture – enabling conditions for data-driven agriculture

Other topics of interest:

- HORIZON-CL6-2025-FARM2FORK-01-10: Digital solutions and e-tools to modernise the Common Agricultural Policy (CAP)

- HORIZON-CL6-2025-CIRCBIO-01-10: Open Topic: Innovative solutions for the sustainable and circular transformation of SMEs

- HORIZON-CL6-2025-GOVERNANCE-01-1: Improved understanding of interactions between rural and urban areas

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Project idea

SENTIO-Agro: A Semantically-Integrated, Trustworthy IoT Platform for Smart and Resilient Agriculture.

**ABSTRACT:**

SENTIO-Agro aims to create a **holistic, scalable, and interoperable IoT platform** for **sustainable, resilient, and climate-smart agriculture**. The platform will enable farmers, cooperatives, researchers, and policymakers to **collaborate through shared, trustworthy, real-time data** that respects data sovereignty and local contexts. SENTIO-Agro will unify fragmented data streams—soil sensors, weather stations, drones, satellites, and machinery—into an intelligent and semantically rich ecosystem.

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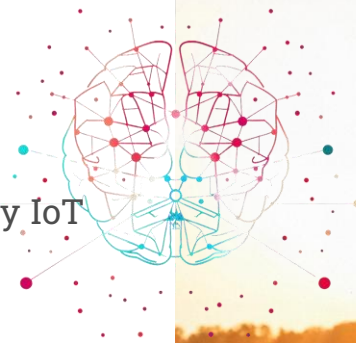
## Core innovations

- Semantic Data Fabric for Agro-Ecosystems
- Edge-AI for Climate-Smart Farming
- Digital Twins of Fields and Crops
- Trust Layer for Agri-Data Sovereignty
- Interoperability and Open Standards Toolkit

## Use case scenarios

- Precision Irrigation
- Early Pest and Disease Detection
- Carbon Farming and Soil Health Monitoring
- Short Food Supply Chains and Traceability

## Main expertise offered / sought

As Italian SME working in the IoT sector Ro Technology could participate as partner (technology provider).

Our expertise are mainly in collecting, managing and securing data through wireless sensors.
Our R&D area has a long experience in EU R&I projects, in particular in the agriculture sector (smart farming).

We are looking for other EU partners (Academia and industries) with complementary competences (AI, Digital twins, blockchain etc.)

**Contact details**

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