



Circular Economy and Sustainable solutions
for Agrifood in the Mediterranean

Challenge C10 CESAM SME linked to this challenge: TERRACOR

TERRACOR

BACKGROUND:

Terracor is a company from the Balearic Islands (Spain) dedicated to the agricultural production of fruits and vegetables. It focuses on cultivating fresh, high-quality products, emphasizing sustainable farming practices that respect the environment. In addition to its commitment to local production, Terracor also aims to bring its products directly to consumers and various markets, including hotels, restaurants, shops, and supermarkets, through its other brands and distribution channels.

In essence, Terracor is a company that not only produces fresh and healthy food but also integrates into the supply chain culinary experiences to offer products that represent the best from farm to table.

CHALLENGE DESCRIPTION

Challenge line	C10
Title of the challenge	Development of Innovative Controlled Irrigation System / Water Efficiency for agriculture
Objective(s) of the challenge	<ol style="list-style-type: none">1. Optimize Water Usage:<ul style="list-style-type: none">Goal: Develop and implement an intelligent irrigation system that uses real-time data to minimize water waste in agricultural fields.Outcome: Achieve a significant reduction in water consumption by ensuring that crops receive only the necessary amount of water.2. Improve Soil Health:<ul style="list-style-type: none">Goal: Monitor and manage soil conditions through the installation of sensors that measure humidity, temperature, and nutrient levels.Outcome: Maintain optimal soil health, leading to better crop yields and reduced dependency on chemical fertilizers.3. Reduce Fertilizer Usage:<ul style="list-style-type: none">Goal: Utilize precise data from soil nutrition sensors to avoid excessive application of fertilizers.Outcome: Decrease the environmental impact of agriculture by minimizing fertilizer runoff and promoting more sustainable farming practices.4. Enhance Crop Yields:<ul style="list-style-type: none">Goal: Create a controlled agricultural environment that fosters optimal growing conditions.Outcome: Increase crop yields and improve the quality of produce, leading to higher profitability for farmers.5. Implement an Intelligent Control System:<ul style="list-style-type: none">Goal: Establish a closed-loop system that provides absolute and objective control over the irrigation process.Outcome: Enable farmers to make data-driven decisions that optimize resource use and improve overall field management.6. Demonstrate Scalability and Replicability:<ul style="list-style-type: none">Goal: Develop a pilot project that can be scaled and replicated across different agricultural contexts.Outcome: Create a model for efficient irrigation systems that can be adopted by other farms, enhancing the project's impact on a larger scale.

	<p>7. Promote Sustainable Agriculture:</p> <ul style="list-style-type: none"> • Goal: Contribute to the sustainability of agricultural practices by reducing resource waste and improving efficiency. • Outcome: Position the company as a leader in sustainable agriculture, with a focus on innovation and environmental responsibility.
<p>Expected results of the challenge</p>	<p>1. Environmental Relevance:</p> <ul style="list-style-type: none"> • Water Conservation: The project addresses one of the most critical environmental challenges—water scarcity. By implementing a controlled irrigation system that optimizes water usage based on real-time data, the project significantly reduces water waste, promoting sustainable agricultural practices. • Reduction in Chemical Runoff: Excessive use of fertilizers is a major environmental concern, leading to soil degradation and water pollution. By monitoring soil nutrition levels, this project ensures the precise application of fertilizers, reducing chemical runoff and protecting surrounding ecosystems. <p>2. Economic Relevance:</p> <ul style="list-style-type: none"> • Cost Savings: Efficient water usage and precise fertilizer application lead to substantial cost savings for farmers. By reducing input costs, the project enhances the profitability of agricultural operations. • Increased Crop Yield: The controlled environment provided by this system ensures optimal growing conditions, which can result in higher crop yields and better-quality produce. This has the potential to increase revenue for farmers. <p>3. Technical and Innovation Relevance:</p> <ul style="list-style-type: none"> • Advancement in Agricultural Technology: This project leverages cutting-edge technology, including sensors and intelligent control systems, to revolutionize traditional irrigation practices. It positions the company at the forefront of agricultural innovation. • Scalability and Replicability: The success of this pilot project can lead to broader implementation across various agricultural sectors, demonstrating the scalability of the technology. It serves as a model for future innovations in precision agriculture.
<p>Relevance of the challenge in the frame of CESAM project</p>	<p>The Controlled Irrigation System / Water Efficiency Innovation Project is highly relevant for its potential to drive environmental sustainability, enhance economic efficiency, and foster technological innovation in agriculture. By focusing on water conservation, reducing fertilizer usage, and optimizing crop production, this project not only addresses current agricultural challenges but also sets a precedent for future advancements in sustainable farming practices.</p>

Type(s) of SME(s) we are looking for	SME specialised in agricultural technology and automation.
Expected work for the applicant SME	<p>Controlled Irrigation System / Water efficiency innovation project</p> <p>Development of a pilot project to obtain a closed and intelligent circuit with humidity, temperature and soil nutrition sensors. Application in greenhouse plants for around 20.000m². Depending on the moment, products could range from tomatoe, cucumber or aubergine.</p> <p>The applicant SME will work closely with Terracor and meet regularly in order to insure a proper match with the needs.</p>
Maximum amount granted for this challenge	40.000€
Funding rate	100%
Duration of the work and proposed starting period	Up to 12 MONTHS starting from May 2025
Effort for the applicant SME	<ul style="list-style-type: none"> Personal cost R&D Costs Consumables / equipment Travels Subcontracting
Intellectual Property Rights dispositions	IPR will remain with the applicant SME
Other information (if applicable)	