



Smart Droplets

Accelerating the achievement of EU Green Deal Goals for pesticide and fertilizer reduction through AI, data, and robotic technologies

#SmartWheatFarms
#Resilience #DigitalAgriculture #SmartApples
#SmartDroplets #Innovative #Sustainable #BigData
#Exploitation #Demonstrators #ReductionOfAerochemicals
#Competitiveness #SmartDroplets #Exploitation
#BigData #Data-centric #Capacity-building #Resilience
#Multi-layerApproach #SprayingSolution
#AISustainability #SmartDroplets
#SmartApples



PARTNERS



COORDINATOR

Kalliopi Kounani
kalliopi.kounani@aua.gr



smartdroplets.eu



Co-funded by the European Union



Visit our website for more!
smartdroplets.eu







Co-funded by the European Union

Call: HORIZON-CL4-2021
Duration: 01 September 2022 > 28 February 2026
Project ID: 101070496

OBJECTIVES |

Smart Droplets main objective is to **advance both hardware and software capabilities during chemical applications for resource optimisation and minimisation of chemical waste.** It will use existing technologies (>TRL7) developed within but not limited to the agricultural industry. The technologies need to accomplish the vision of delivering a complete system capable of translating large amounts of data from the field into meaningful information and impactful spraying commands in order to achieve the Green Deal goals.

THE ROAD TO ACHIEVING THE OBJECTIVES INCLUDES:

-  The innovative use of intelligent Data infrastructure and Digital Twins.
-  Introducing a robotic solution for autonomous spraying.
-  Optimizing technologies and demonstrating the Green Deal goals in real-life environments.
-  Community building, synergies, and results exploitation.

EXPECTED IMPACT |

IMPACT 1: Smart Droplets is **creating added value in the agricultural industry and its supply chain**, by leveraging the shift to reduce hazardous agrochemical application. Innovative and sustainable results of Smart Droplets will contribute to the resilience and competitiveness of the EU economy while identifying early opportunities and bottlenecks in the IP and exploitation aspects of such technologies.



#Innovative #Sustainable
#Resilience #Competitiveness

IMPACT 2: Smart Droplets offers the **necessary test bench for exploring disruptive technologies** that can offer global excellence and reduction of agrochemicals. The leading position of the European industry will be validated through **benchmarking of all technological aspects** during the project implementation. Moreover, real environment demonstrations will showcase the technological progress made within the project and validate their contribution towards the Green Deal. A comprehensive exploitation strategy will advance the adoption rate of robotic, AI and Data solutions, thereby reinforcing European industry leadership in the digital food supply chain.



#ReductionOfAgrochemicals
#Demonstrators #Exploitation

IMPACT 3: Smart Droplets takes a **multi-layer complementary approach** to tackle key parts of the supply chain, incorporating different components such as Digital Data Twins, robotics, AI, and Data Platforms to create an **optimized spraying solution.** This **data-centric approach** includes historic field data, 3rd party information services, and real-time sensory data of the deployed robotic system. Robust European industrial and technology presence requires strong engagement by stakeholders. Therefore, **community and capacity-building activities** will ensure proper transition and adoption of technologies.



#Multi-layerApproach #SprayingSolution
#Data-centric #Capacity-building

