

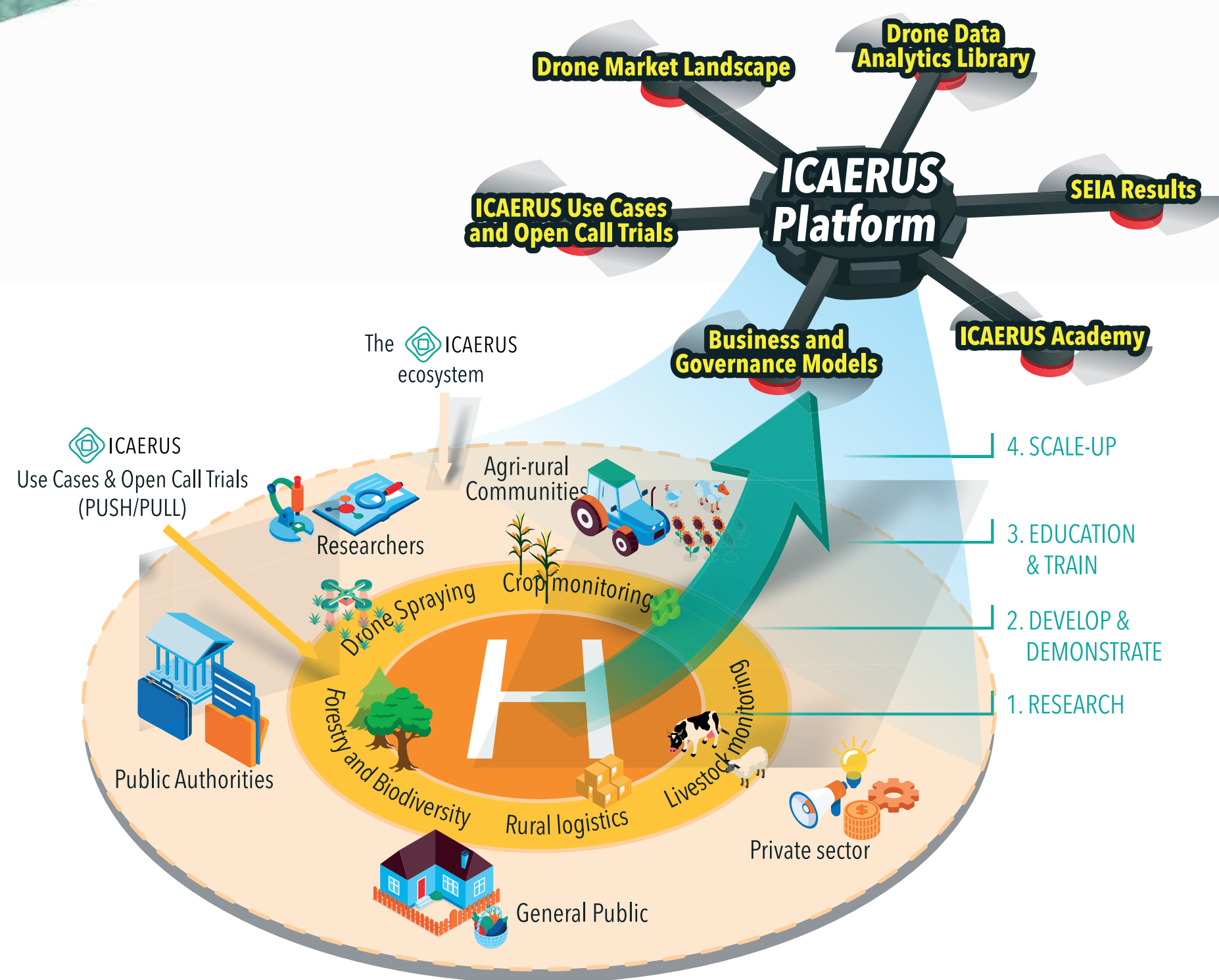
Innovation and Capacity Building in Agricultural Environmental and Rural UAV Services

CROP MONITORING AND DRONE SPRAYING USE CASES

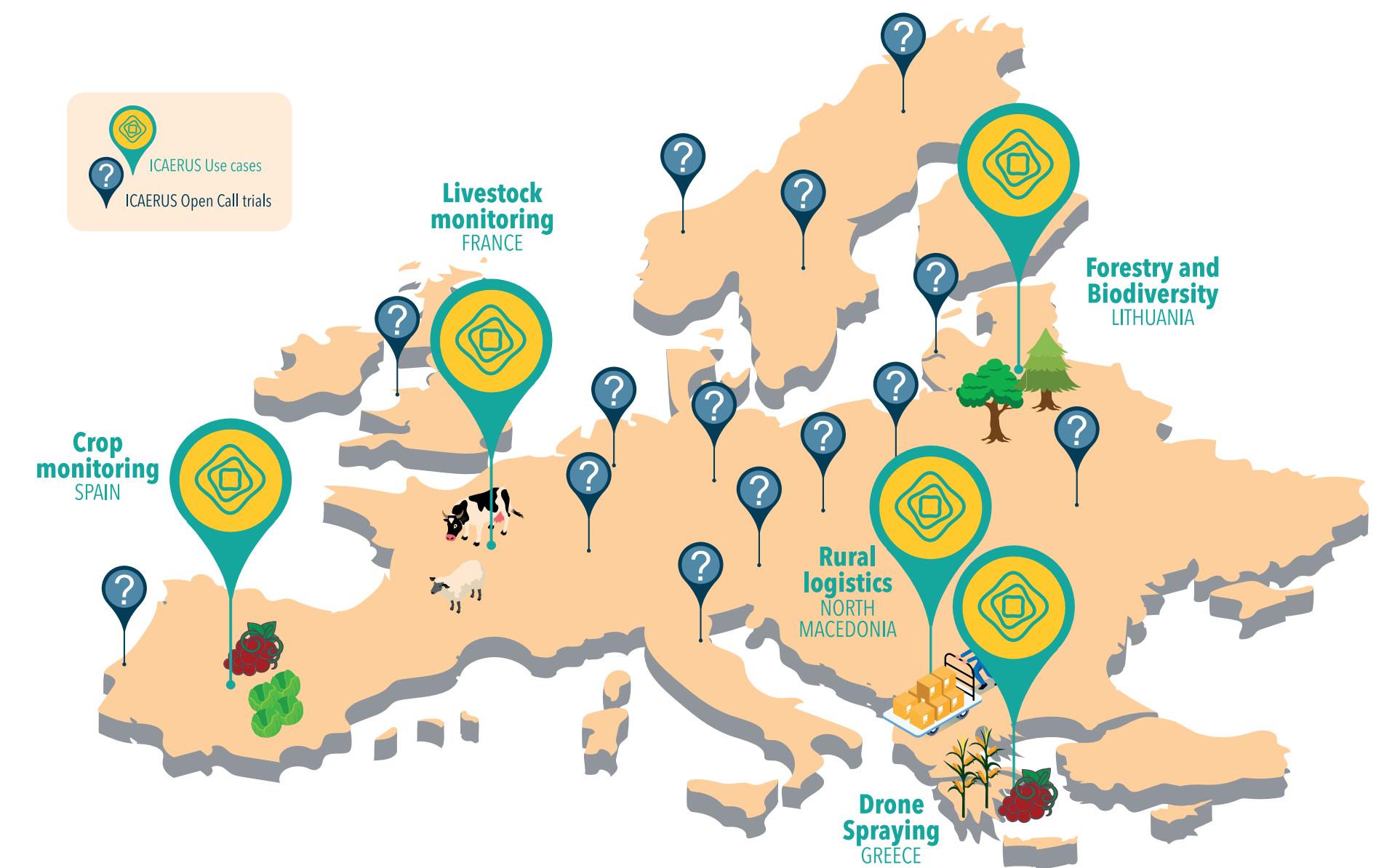


PROJECT OUTCOMES

- **ICAERUS Platform:** one-stop web-based platform for drone related information.
- **Drone Market Landscape:** an inventory of current drone market intelligence.
- **Drone Data Analytics Library:** a repository with emerging data analytics models.
- **ICAERUS Academy:** free online training on 8 drone related subjects, and onsite workshops.
- **Business & Governance Models:** with support services to help businesses apply them.
- **Policy Recommendations:** stakeholder driven guidelines for drone safety regulations.



ICAERUS' vision is to explore opportunities for drones and provide a complete, interconnected account of their potential and impact as multi-purpose vehicles in EU agriculture, forestry and rural areas.



CROP MONITORING

MAIN OBJECTIVES

- Integrate automated solutions for disease detection on leaves and canopies of agricultural crop plants → to improve health monitoring and reduce chemical pesticide use.
- Locate and map diseased plants → to reduce the amount of time and effort for farmers to inspect and manage crops



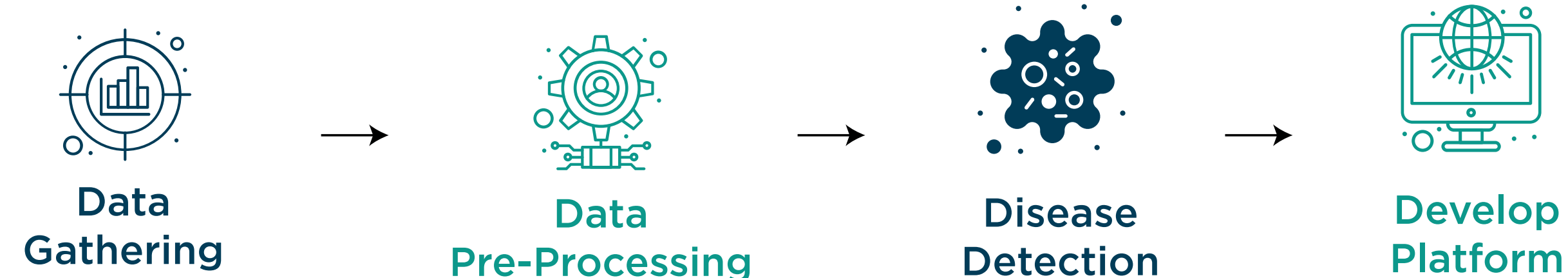
DRONE SPRAYING

MAIN OBJECTIVES

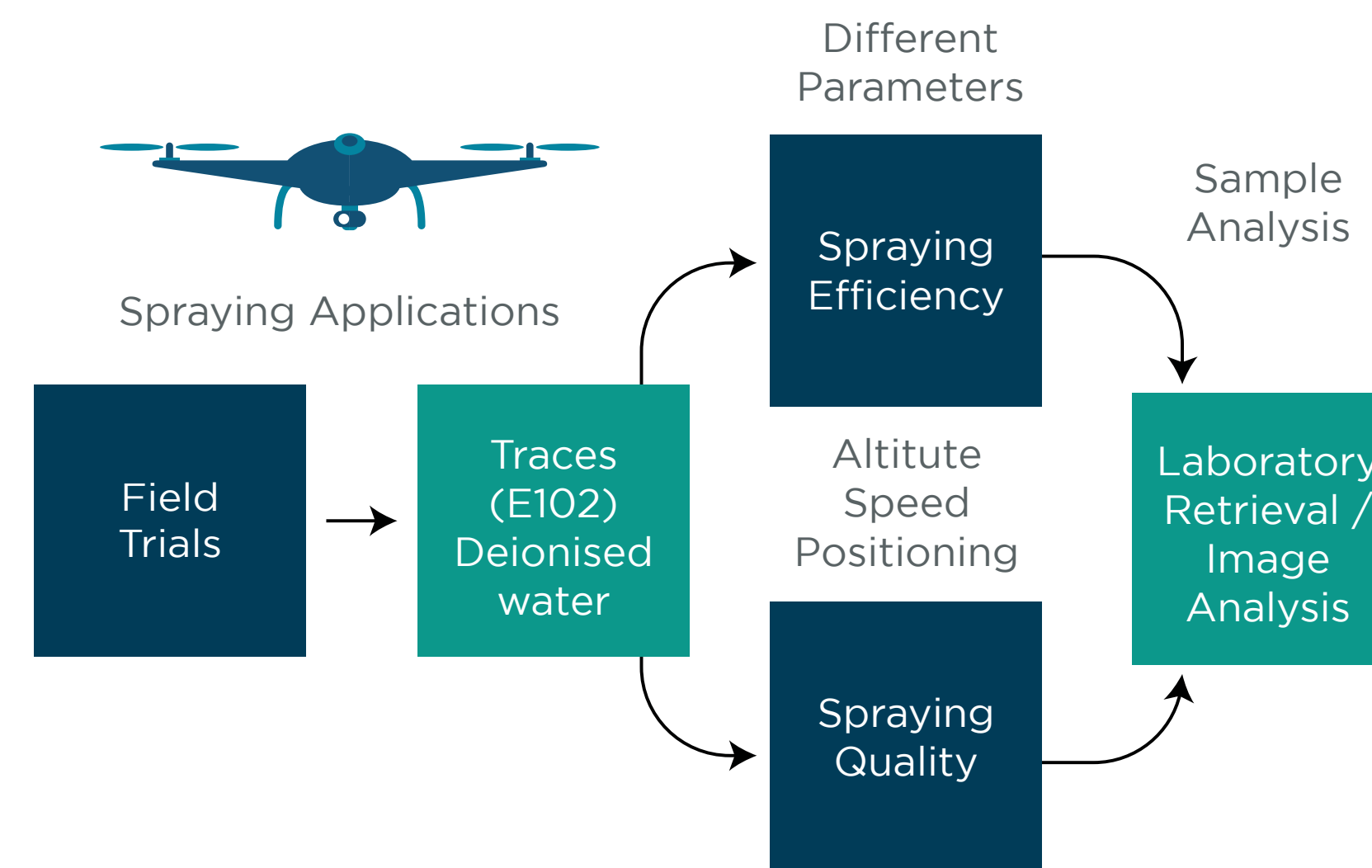
- **Test and assess** spraying configurations for optimal drone spraying applications in field conditions.
- **Compare** efficiency and environmental impact of conventional vs drone spraying practices
- **Identify risks** and develop mitigation strategies related to drone-based plant protection applications.



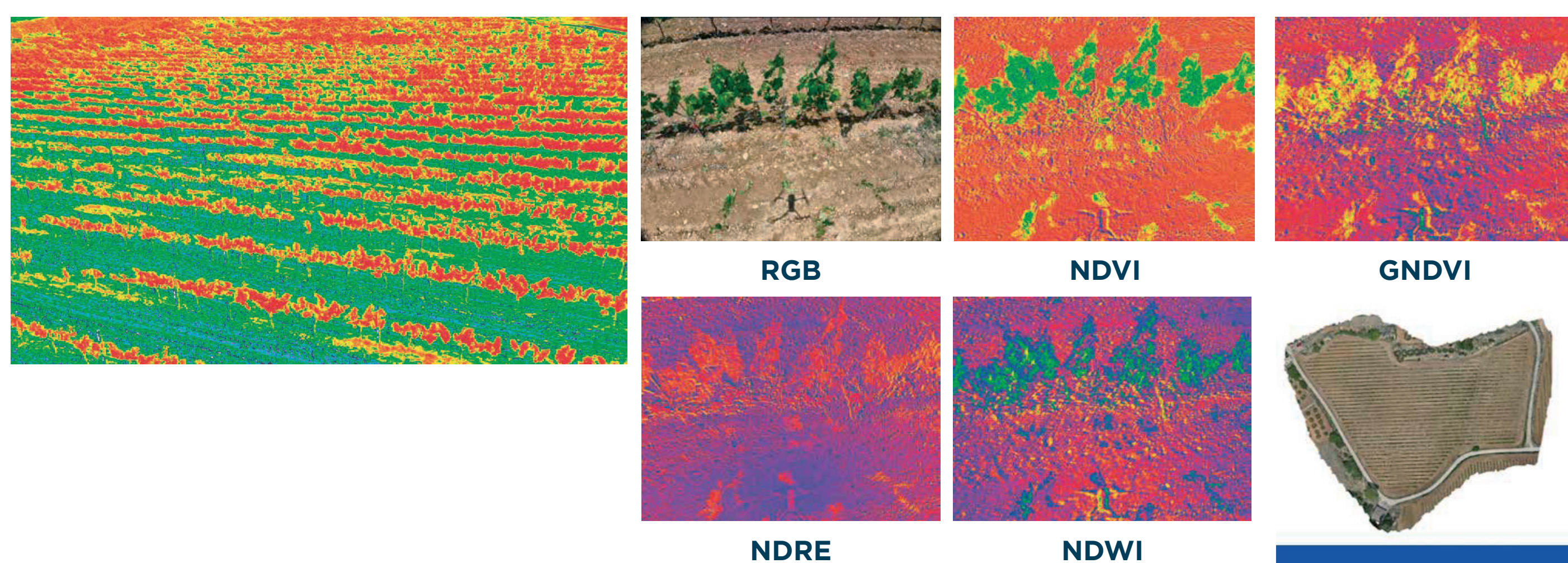
EXPERIMENTAL DESIGN



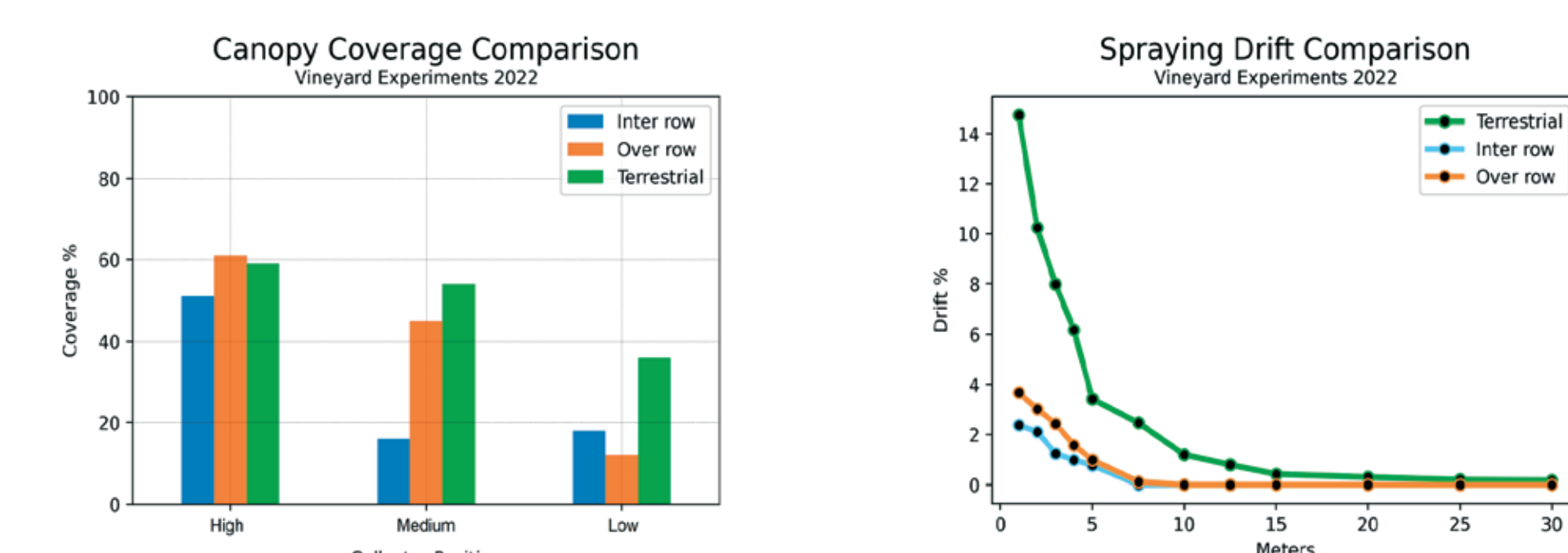
EXPERIMENTAL DESIGN



KEY PARAMETERS



COMPARISON WITH CONVENTIONAL SPRAYING



FINAL AIM

Utilise a **platform visualisation** mechanism with a comprehensive 3D model to help comprehend the overall condition of the plans and facilitate the identification and localization of diseases Location

FINAL AIM

- Provide evidence for the advantage of drones-based plant protection and need for new regulations
- Achieve precise and safe applications
- Develop and promote best-practice guidelines and risk mitigation strategies

PROJECT PARTNERS



icaerus.eu



EO for Agriculture under Pressure 2024 Workshop - Contribution ID: 155 Title: ICAERUS: Innovations and Capacity Building in Agricultural, Environmental, and Rural UAV Services - Crop Monitoring and Drone Spraying Use Cases Author(s): **KASIMATI**, AIKATERINI (akasimati@aua.gr); **PSIROUKIS**, VASILIS; **VERA**, ESTHER; **SOLLAZZO**, ALDO; **FOUNTAS**, SPYROS

