



## TERRATECH Erasmus+ Project:

### Enhancing specialisation on smart agriculture for the future generations

Agriculture is an ancient industry that has shaped our society and allowed us to evolve. Over the years it has evolved immensely, fuelled by the new scientific discoveries and the consequent technological developments. Precision agriculture is among the newest advancements in this sector. It consists of using the latest technology to monitor crops and the surrounding environmental conditions in real-time, with the ultimate aim of supporting better management decisions to boost crop productivity and sustainability, under challenging environmental conditions. Its growing popularity among farmers, alongside its rising market demand, created the need for professionals with a dual background in agriculture and in IoT (Internet of Things) engineering. To address this market gap, a new postgraduate Master's course on Smart Agriculture is under development. Funded by the ERASMUS+ program of the European Commission, the "TERRATECH" project brings together six academic institutions, five SMEs, one research centre and two agricultural/farming related entities, residing all over Europe in Austria, Bulgaria, France, Greece, Hungary, Italy, Latvia, Netherlands, Portugal and Spain.

The project aims to develop an advanced interactive certified MSc course related to Agricultural IoT applications that will train individuals with the necessary skills and knowledge to work in the rising "Smart/Precision Agriculture" industry. The innovative curriculum is comprised by interactive teaching methods and partnerships with agriculture association and companies able to provide technical and engineer-based solutions to give to the students a solid theoretical and practical background for starting a fruitful career in the rising field of smart precision agriculture. The course duration is 8 months, plus a 1-month training experience at the partner companies. During the course, two mobility periods will allow students and educators to visit each other, participating in large-scale laboratories that will provide crucial hands-on experience.

Students completing this course are expected to be trained in the use of new technologies in the field of agriculture, including sensors, positioning technologies, new data analysis tools, advanced networking through Internet-of-Things (IoT) and Machine-to-Machine (M2M) communication. These technologies allow real-time monitoring of crop field physical parameters, local climatic conditions and a precise control of irrigation, fertilisation, pests diagnostic through automation. The graduates will provide the European labour market with technicians capable of incorporating technologies in agriculture production systems, developing new solutions adapted to the needs of farmers, as well as new agribusiness ideas.

In addition to the University of Porto in Portugal, which coordinates the project, other participating universities include the University of Debrecen (Hungary), the University Pompeu Fabra (Spain), the International Hellenic University (Greece), the Vidzeme University of Applied Sciences (Latvia) and the Catholic University of the Sacred Heart (Italy). The rest of consortium consists of five SMEs (Cerca Trova Ltd – Bulgaria, ECQA GmbH – Austria, Evolutionary Archetypes Consulting SL – Spain,

AgriWatch – The Netherlands, Agroop Lda – Portugal), a research centre (Mediterranean Agronomic Institute of Chania – Greece) and a farmer cooperative (Fédération Régionale des Cuma de l'Ouest – France) and a farming company (Ktima Filippou-Schoinoplokakis -Greece). More information and updates are available at TERRATECH's website (<https://www.terratechmsc.eu/>).

