



## Esperienze didattiche sul progetto e-learning SPARKLE, approccio allo smart-farming e agricoltura digitale

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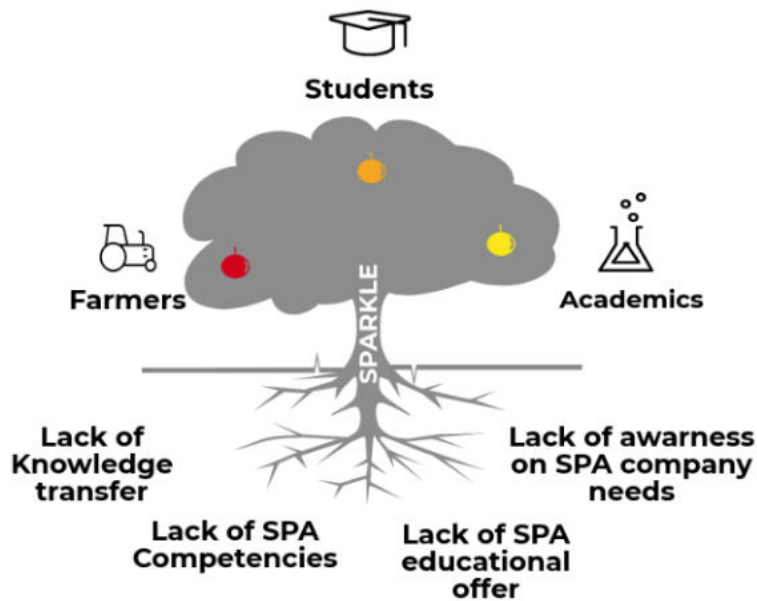
DAGRI University of Florence



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## Where we started



### Objectives:

- Fostering the introduction of the new paradigm in Agriculture: Sustainable precision agriculture
- Supporting the digitalization and High Tech Farming, providing new competencies as agro-electronics and agro-informatics.

“It is generally accepted that Precision Agriculture is an inevitable fact, as new information technologies will impact farming in Europe and worldwide”

European Parliament: Precision Agriculture: an opportunity for EU farmers, a potential support with the CAP 2014-2020

- Sustainable Precision Agriculture educational offers is lacking all around Europe.
- Some Universities have courses, but in a fragmentary way.
- There is hence a gap in the educational system

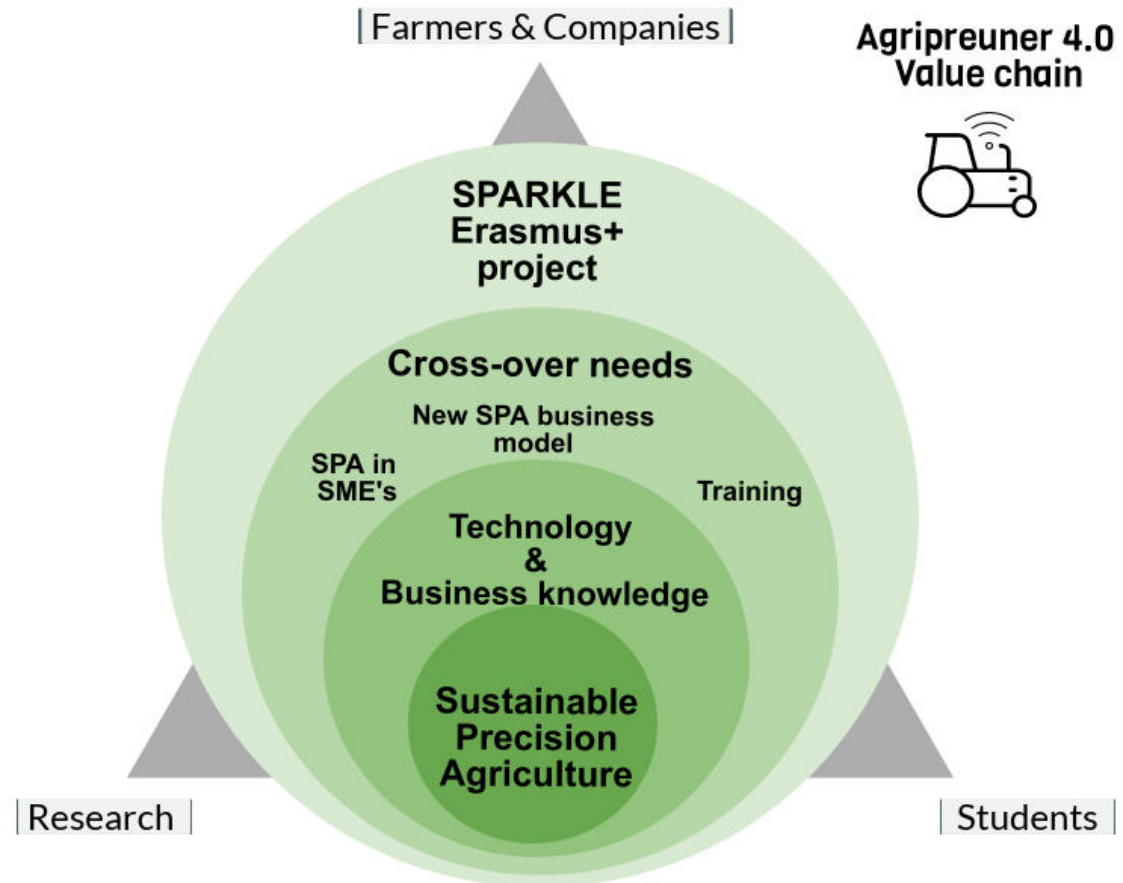
### Problems:

- Lack of innovation potentiality self-awareness of farm companies
- Lack of knowledge transfer of SPA
- Lack of SPA knowledge and entrepreneurial skills of agricultural science students
- Lack of SPA and entrepreneurial educational offer of Universities

# OUR INNOVATIVE APPROACH WHY DO THINK IT WILL BE SUCCESSFULL

## A Comprehensive Ecosystem

- 1) **Involving** the whole agricultural ecosystem
- 2) **Designing** the future of the sector and providing the required skills
- 3) **Mobilizing** digital knowledge through academics, students and farmers



# The SPARKLE assessment

## THE PARTNERSHIP

4 Universities  
from Italy, Spain,  
Greece, Portugal

4 Companies providing advanced  
services to companies/farms

3 Farms  
already adopting PA technologies



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FIRENZE



POLITECNICA

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UNIVERSIDADE DE EVORA

ERREQUADRO  
Ricerca e Sviluppo Agrario



CSIC

ValueD

MAZZEI  
1455

REZES  
BRANDS  
Delivering Value



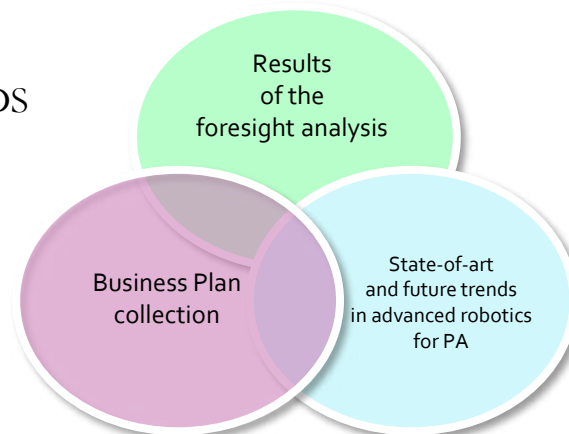
# The SPARKLE assessment

## TRAINING NEEDS ASSESSMENT

Providing field information on group targets for determining training needs

### PRECISION AGRICULTURE TECHNOLOGICAL AND FUTURE TRENDS

Preparation of supporting documents for students PA education



### E-LEARNING TRAINING EDUCATIONAL PACKAGE PREPARATION

definition of the e-learning course architecture, selection of topics and materials collection



PILOT TEST ON 4 AREAS, 12 LESSON 56 TOPICS ON MOODLE UNTIL OCTOBER for 400+ students

BMC COMPETITION for 3-4 group max and a winning team for each country with entrepreneurial experience





# The SPARKLE main output – Entrepreneurship for precision agriculture

Sparkle moodle course is released in english and open access to everyone

SPARKLE Elearning Platform

SEARCH LOGOUT



## E-LEARNING COURSE

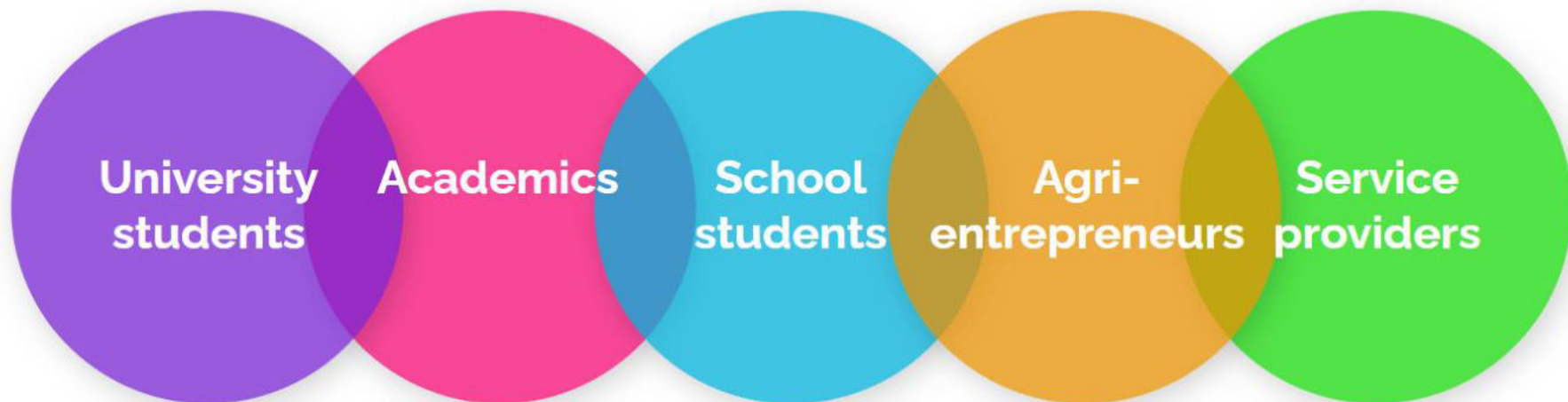
Entrepreneurship for Sustainable Precision Agriculture

<http://sparkle-project.eu/moodle/>



# SPARKLE– Entrepreneurship for precision agriculture

THE COURSE IS DESIGNED FOR:



WHO WISH TO DEEPEN THEIR KNOWLEDGE OF SUSTAINABLE  
PRECISION AGRICULTURE



## The SPARKLE generative learning community - a new approach

Sparkle grown as a generative learning community focalized

- on targets that benefit directly from the project output
- on the partner community itself that developed in a new learning process.

The network between the partners gave life to a system of collective construction of knowledge and negotiation of contents.

This kind of approach, that focuses on participation and negotiation in the Academy at European level, opens the path to a new approach.

This represent a turning point on the methods of learning technologies in agriculture.





# SPARKLE - Entrepreneurship for precision agriculture

The course last 25 hours

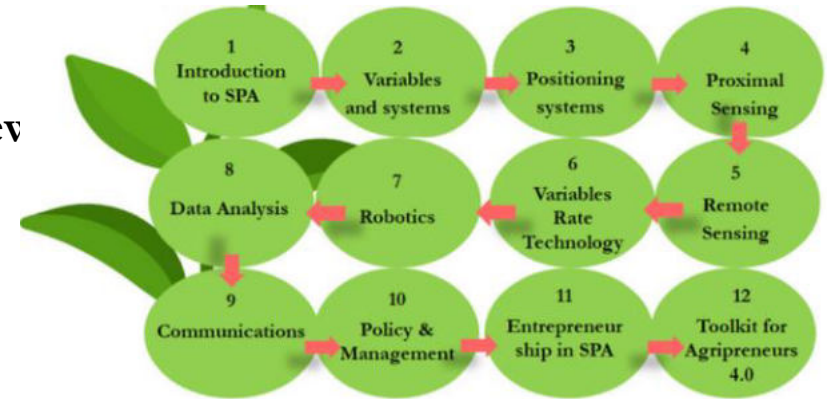
The course includes 4 general areas

- Sustainable Precision Agriculture Overview
- Technology,
- Social and Economic Aspects
- and Entrepreneurship in Farming

12 lessons in total

The course is designed to cover a multitude of technical and social, economic or environmental aspects and is therefore a holistic approach to precision farming and related entrepreneurship.

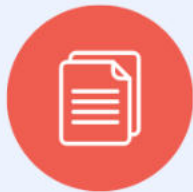
54 unità didattiche su 12 lezioni in 4 aree tematiche



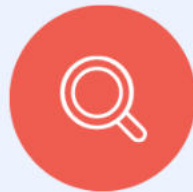
The SPARKLE main output – Entrepreneurship for precision agriculture

# THE RESOURCES

THE TEACHING MATERIALS AND ARCHITECTURE HAVE BEEN DESIGNED ON THE BASIS OF A PRIMARY NEEDS ASSESSMENT RESEARCH CONDUCTED ON A LARGE NUMBER OF EUROPEAN UNIVERSITY STUDENTS, RESEARCHERS AND FARMERS.



TRAINING NEEDS  
ASSESSMENT



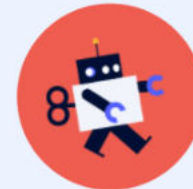
TOOLS FOR  
DESIGNING BUSINESS  
MODELS CANVAS



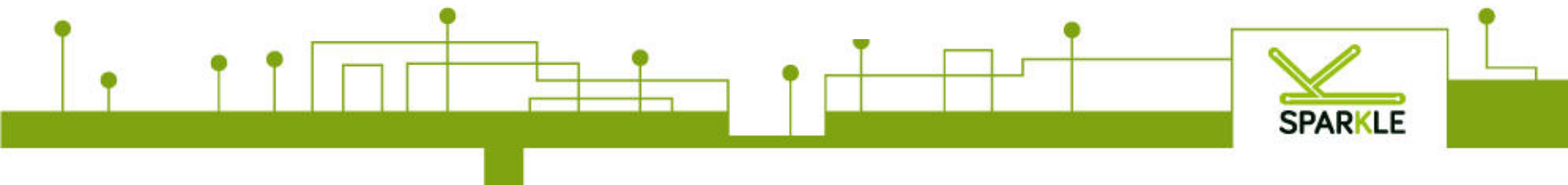
BUSINESS MODEL  
CANVAS COLLECTION



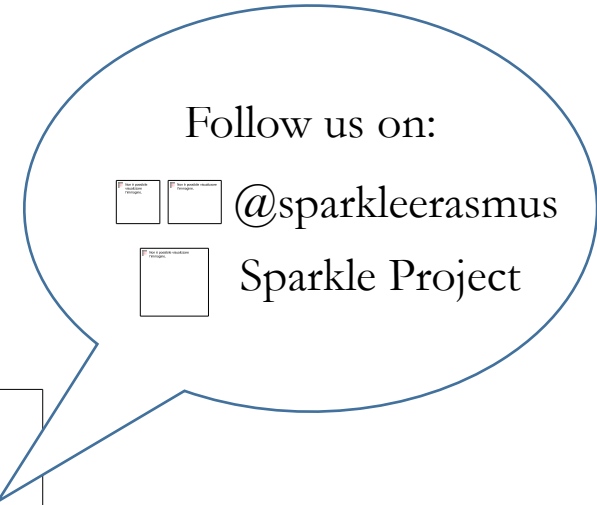
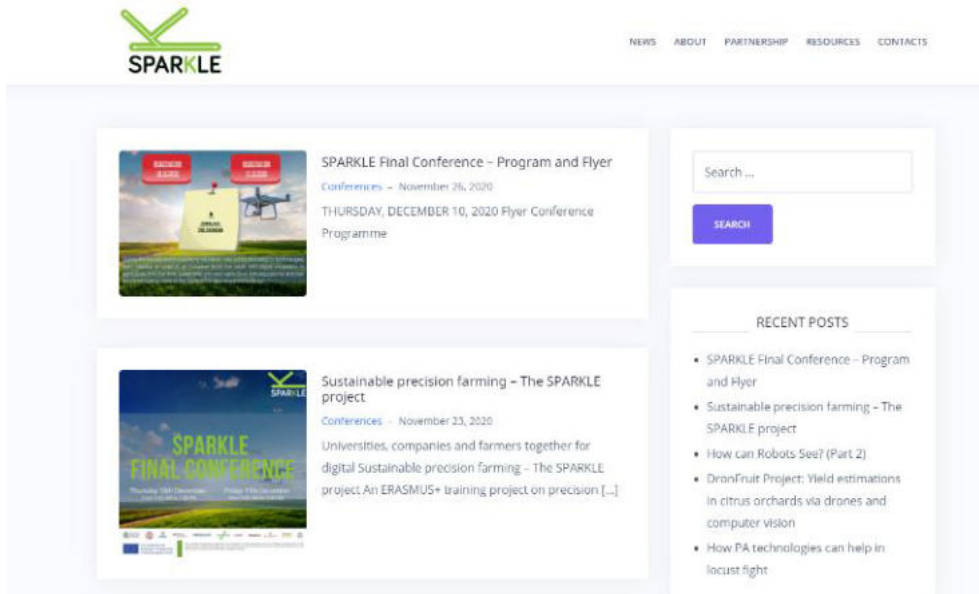
FORESIGHT OF  
APPLIED  
TECHNOLOGIES



ROBOTICS FOR  
FUTURE  
AGRICULTURE

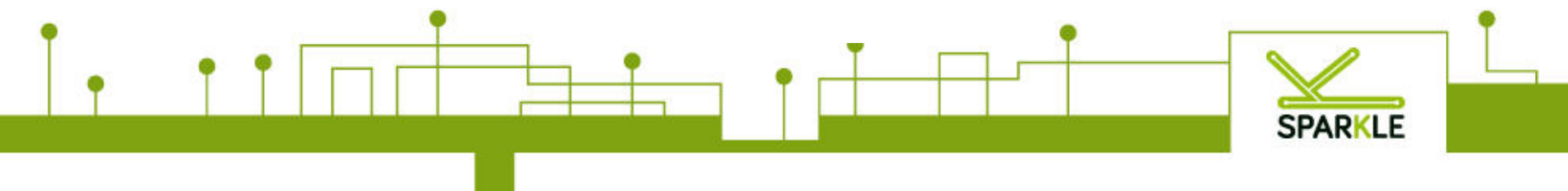


# The SPARKLE main output – the media

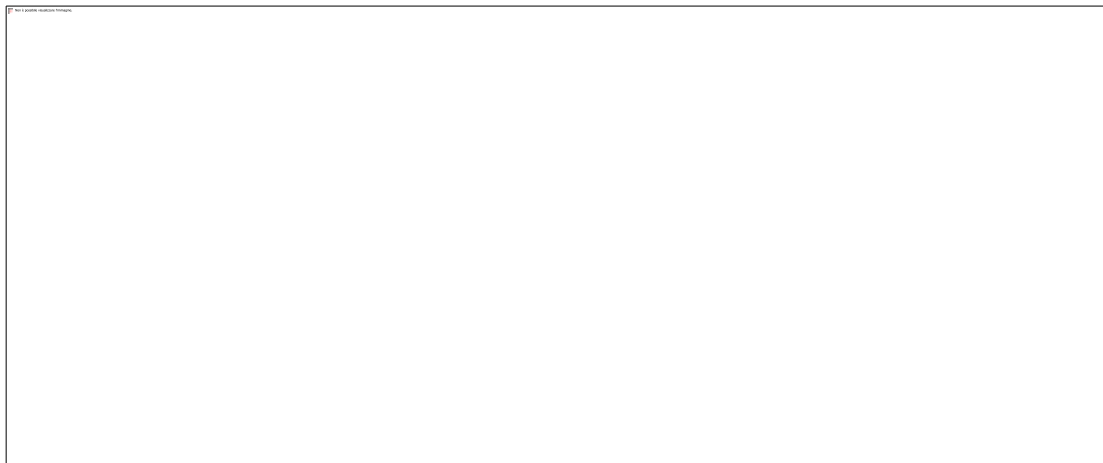


<http://sparkle-project.eu/>

Subscribe the newsletter!



# Alcuni risultati al 1 giugno 2021



Students' feedback about course online materials.



**ECPA**  
Budapest 2021

13th European Conference on Precision Agriculture

[97. Teaching precision farming and entrepreneurship for European students:](#)

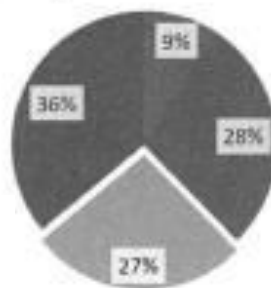
[Sparkle online course](#)

[C. Valero, S. Lombardo, D. Sarri, M. Vieri.....](#)

Published online: June 25, 2021

[https://doi.org/10.3920/978-90-8686-916-9\\_97](https://doi.org/10.3920/978-90-8686-916-9_97)

How many hours did it take you to complete the online part of the course? Please estimate.



- < 10
- 10-20
- 20-30
- > 30

Perception about the time needed to complete the course.

**Al 28 giugno 2022 circa 380 persone**



# Students' feedback about contents, structure, length and language of the course.

