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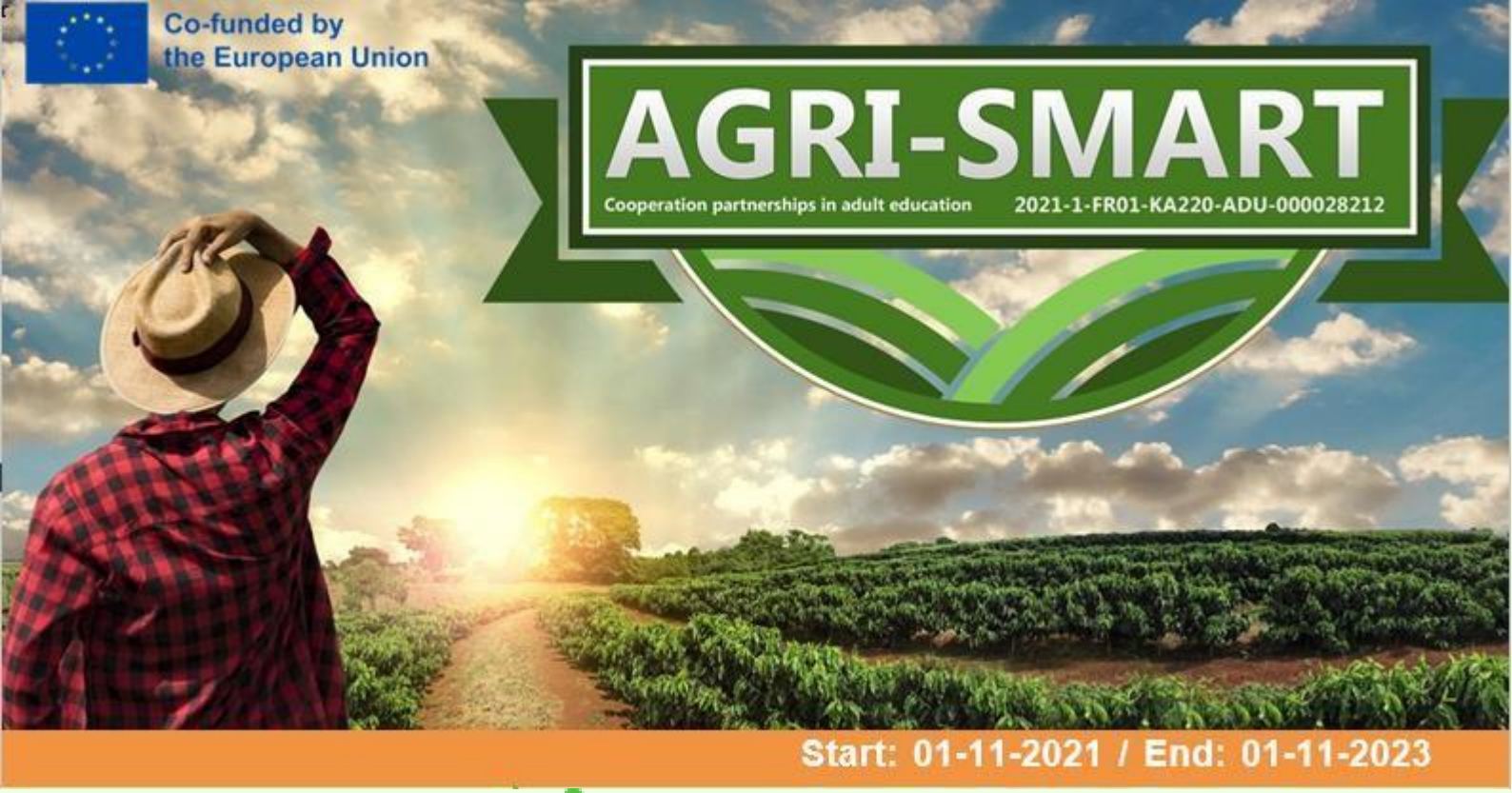

AGRI-SMART

Cooperation partnerships in adult education 2021-1-FR01-KA220-ADU-000028212

Start: 01-11-2021 / End: 01-11-2023

AGRI'S

TRAINING FORMAT

on

Agriculture Entrepreneurship

AGRI SMART Start: 01-11-2021 / End: 01-11-2023

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1.Introduction

AGRI's is a 24-month cooperation partnership in adult education involving 6 partners from France, Spain, Croatia, Bulgaria, Italy and Romania.

Action Type: KA220-ADU – Cooperation partnerships in adult education

Project Title: AGRI Smart

Duration: Start: 01-11-2021 End: 01-11-2023

Digital farming integrates Artificial Intelligence, robotics, data analysis, and various digital tools and skills to enhance farm efficiency, promote economic and environmental sustainability. By harnessing the power of these technologies, it not only improves agricultural practices but also positively influences the quality of life in rural areas. Moreover, it has the potential to attract a younger generation to engage in farming and initiate rural business start-ups.

The primary goal of the "AGRI's" project is to equip adult educators with effective tools and methodologies. These resources are designed to enable educators to promote awareness and understanding of precision agriculture among young adults. Additionally, the project aims to empower young adults with the essential skills needed to thrive as entrepreneurs in the agro-food industry, specifically by leveraging digital technologies.

The AGRI Smart project addressed significant challenges posed by a growing population and the increasing expectations for food demand present significant challenges. As the global population expands, there is a greater need to produce more food to meet the growing requirements. This puts pressure on the agricultural industry to increase productivity and efficiency while ensuring sustainable practices. Addressing food demand challenges requires considering social and economic factors. It involves enhancing small-scale farming practices, supporting rural communities, empowering farmers with access to markets, and promoting equitable distribution of resources. The solutions require a holistic approach that integrates technological advancements, sustainability practices, resilience measures, and socioeconomic considerations.

With this premises “AGRISmart” (AGRI’s) Cooperation Partnership project aims at:

- Promote agriculture entrepreneurship as a sustainable farming model;
- Develop precision agriculture in Europe to answer the growing need of food and promote a new model of farming towards a more sustainable one;
- Empower young adults with digital and entrepreneurial skills in the agro-food industry to become actors of a sustainable future and become more competitive actors at the same time.

In order to reach these objectives, the project’s partners work on the following results:

- AGRI’s Handbook which explains the concept of precision agriculture and how it can help to reach a more sustainable model of producing. The guide is addressed to adults interested in the topic.
- Training Format for adults’ educators interested in promoting agricultural entrepreneurship in a sustainable way.
- Social community on a web platform where farmers can share their experience with precision technologies used in their agricultural business, discuss with other farmers regarding these technologies and the data they collected to improve the farming methods and get better quality and more sustainable products

2.Aim of the Training Format

Within the framework of the project priorities, partner organisations from 6 countries intend to comply with the priorities as follows:

Horizontal priority: Addressing digital transformation through development of digital readiness, resilience and capacity: The idea of this project is to develop digital skills and provide knowledge and awareness regarding precision technologies that can be used in the field of agriculture to make it more sustainable and of better quality. Digital skills of agricultural entrepreneurs appear to be needed for them to adopt methodologies in line with today's challenges in order to meet the needs of the world's growing population while reducing damages to the environment. The project will not only raise awareness regarding the existing precision technologies but will also provide the target group with digital skills to allow them to start an agri-business using these technologies.

Specific priorities for adult: Improving the availability of high-quality learning opportunities for adults: Adults' educators will be provided with tools and methodologies to develop adults' digital and entrepreneurial skills in the field of agriculture. They will learn how to develop a workshop adapted to adults that could be interested to further develop their business in the agricultural field using digital technologies.

To achieve the goals, a Training Format for educators (18 – 35 years old) interested in promoting agricultural entrepreneurship will provide the target group with some tools and methodologies to be used and reproduced at the local level in order to give new skills and knowledge to young adults. The Training Format will respond to the need to have better prepared actors in the field of agriculture, actors prepared to use sustainable ways of farming through digitalization and precision agriculture. Adults' educators will be provided with methodologies and tools to allow them increase adults' entrepreneurial and digital skills applied to agriculture.

In this way, adults willing to become entrepreneurs in the agri-food sector will be more competitive and well-suited to adopt a new way of farming. The innovative aspect of this material lays in the NFE methodologies to be used to improve new relevant skills in the field of agriculture and promote precision agriculture. The combination of digital skills to be applied to agriculture together with the introduction to precision agriculture constitutes in itself an innovation to promote innovative

ways of farming. By reproducing the methodologies contained in the Format, adults' educators will allow a new profile of farmer to emerge for a more sustainable and eco-friendly agriculture. The Format will contain the following modules:

- Ice Breaking and teambuilding
- Digital skills
- Management
- Decision process
- Communication & Marketing
- Evaluation workshops / Debriefing

3.1 Ice Breaking and Team Building

Introduction

In this module, you will learn how ice breaking and team building activities can be successfully used to promote agricultural entrepreneurship in a sustainable way. Icebreakers are activities to help people get to know one another. Instructors can use them to help acquaint students with course content and expectations. Icebreakers can also be designed to help warm up learning spaces and orient participants to the environment.

Topics of the Workshops

- They are changing places
- Thunder
- Chocolate river

Main Tasks and Goals

- Build and maintain stronger relationships among farmers
- Encourage farmers to break down barriers
- Help farmers work together to find solutions to problems

The ice-breakers can be freely usable before, during and after the workshops.

THEY ARE CHANGING PLACES	
Main Aim	Get to know each other, feel freer in group.
Used Tools, number of participants	Ice-Breaker, 2+
Timeline	10-15 minutes
Materials and Preparation	Chairs are placed in a circle, one less than the number of people in the group.
Session Description	The group sits in a circle. One participant stands in the middle and says something about himself. If it also suits the other participants, they should find a new place for themselves (for example, “I like vanilla ice cream or sundae” - and everyone who also likes it, looks for a new place). And the one who was in the middle takes someone's empty place. Thus, someone will still be left without a chair. He will continue. Perhaps an additional condition - you cannot sit in the place of a neighbour.
Debriefing	Suggested debriefing questions: How do you feel? Were there any difficulties in doing the exercise? What would you change?

THUNDER	
Main Aim	Warm up, return to the group, focus.
Used Tools, number of participants	Ice-Breaker, 2+
Timeline	15-20 minutes
Session Description	The facilitator asks the participants to imagine that they are in the forest. Gradually the wind increases, it starts to rain, then it rains more and more and, in the end, a storm begins, downpour and thunder. After some time, the thunder subsides, the storm subsides, the rain weakens, drizzles again, individual drops are heard, the wind subsides. The leader starts, then everyone joins in a clockwise direction, repeating his movements. Everything happens according to the principle of "waves in the stadium". No need to look at the leader and immediately switch to his movement, but you need to look at the neighbour on the right, and accordingly change your movements only when his movements have changed. • We rub our palms (the wind intensifies); • We rub our palms harder (the wind becomes even stronger) • With one finger we knock on the palm (sprinkling rain); • Knocking finger on finger (rain); • We knock with 3 fingers (rain is stronger); • Clap your hands (shower); • We stamp our feet (thunder); • Stomp your feet and clap your hands on the knees (storm and thunder); • We stamp our feet (thunder); • Clap your hands (shower); • We knock with 3 fingers (the downpour subsides);

Session Description	• Knock with 2 fingers (rain); • With one finger we knock on the palm (the rain subsides, sprinkles); • We rub our palms harder (wind); • Quieter and slower we rub our palms (the wind subsides); • Everything subsides.
Debriefing	Suggested debriefing questions: How do you feel? Were there any difficulties in doing the exercise? What would you change?

CHOCOLATE RIVER	
Main Aim	Develop teamwork skills; Learn to plan and carry out your work; Make conclusions and recommendations for further joint work.
Used Tools, number of participants	Team building NFE activity, 10-25 ppl
Timeline	7-10 minutes - preparation; 25 minutes - exercise; 10-20 minutes - discussion.
Materials and Preparation	A fairly large space, wooden boards about 10x30 cm in size, if the action takes place in nature, or A4 paper, if indoors. Space length = number of group members x 1.5 (for example, if there are 10 people in a group, then the recommended length of the room is 15 m).
Session Description	The group must cross the “river of hot chocolate” (cross from one bank to the other). You cannot walk on hot chocolate (i.e. touch the ground). Only magic stones (wooden boards or A4 sheets) can be used. The group gets one less magic stone than the number of people in the group. Additional terms: • You can move only on the "magic stones"; • "Stones" must be held all the time, otherwise they can “float away” (that is, someone must always touch the chocolate river, otherwise the group will lose them). If any then the stones “floated away”, the group must keep working with what's left. • Touching hot chocolate or you can't rely on it either. If the rule is violated, then the group comes back and starts the exercise again. • The task is considered completed when all • The group moved to the other side.

Session Description	Possible options: 1. You can allocate a certain amount of time for preparation and execution (eg 10 minutes for preparation and 20 minutes for execution). 2. You can forbid talking during the exercise (then the planning and preparation stage is more important). 3. If the group wants to take on a bigger challenge, then some members may have their eyes closed.
Debriefing	Debriefing can be done first within the team, and then in the general circle. Questions for debriefing: How was the decision-making process within the teams? Who and why chose certain tactics? What feelings did you experience throughout the process?

3.2 Digital Skills

Introduction:

Interconnection of logically and/or physically related physical and virtual things to gather data to analyse, manage and make decisions.

IoT devices are growing at the rate of 10% per year Businesses already collecting data regarding your browsing behaviour for the purpose of targeted sales.

Why not expand the data collection by adding devices in a group that is beneficial to any decision making such as medical, farming, device management, weather, and sports to name a few.

IoT is a concept of connecting any device with an on and off switch to the Internet (and/or to each other). This includes everything from cell phones, coffee makers, washing machines, headphones, lamps, wearable devices and almost anything else you can think of. This also applies to components of machines, for example a jet engine of an airplane or the drill of an oil rig

– Forbes. The IoT is a giant network of connected "things" (which also includes people).

The relationship will be between people-people, people-things, and things-things. The dominant consumer IoT device, worldwide, is the smart TV. Between 25-35% cent of consumers worldwide own a television that can connect to the Internet, according to a Deloitte research. However, other areas of the IoT market are growing rapidly. Organizations in a variety of industries are using IoT to operate more efficiently, better understand customers to deliver enhanced customer service, improve decision-making and increase the value of the business. An IoT ecosystem consists of web-enabled smart devices that use embedded processors, sensors and communication hardware to collect, send and act on data they acquire from their environments. IoT devices share the sensor data they collect by connecting to an IoT gateway or other edge device where data is either sent to the cloud to be analysed or analysed locally.

Connect electronics, software, sensors, etc and allow them to communicate with each other to produce a better experience. Example an iPhone has gyroscope, compass, GPS, contact list, addresses, search engines, cameras, locks, parking, face identification, etc. Things that took hours now are on your fingertip saving great deal of time. Remote medicine, prescriptions, automated driving, drone fighters, etc.

iWatch has saved lives. We are dependent more on more on things.

- IOT interconnects, analyses, and integrates things:
- smart homes, smart cities, smart hospitals, Manufacturing, Retail, Security, etc.
- Unification of technologies: cloud computing, big-data, machine learning
- Applications: smart parking and traffic, smart lighting and air flow, smart grid, smart roads, health industry, safety, smart manufacturing, distribution and sales, etc.

IoT offers a number of benefits to organizations, enabling them to:

1. Monitor their overall business processes;
2. Improve the customer experience;
3. Save time and money;
4. Enhance employee productivity;
5. Integrate and adapt business models;
6. Make better business decisions; and
7. Generate more revenue.

In IoT-based smart farming, a system is built for monitoring the crop field with the help of sensors (light, humidity, temperature, soil moisture, etc.) and automating the irrigation system. The farmers can monitor the field conditions from anywhere.

This is highly efficient compared to the traditional/conventional approach. In terms of environmental issues, IoT-based smart farming provides great benefits including: better and efficient water usage, and optimization of inputs and treatments.

Therefore, smart farming based on IoT technologies enables growers and farmers to reduce waste and enhance productivity.

Some of the IoT applications in this area are:

I. Precision farming
II. Agricultural drones
III. Livestock monitoring
IV. Smart greenhouses

Urban agriculture

In the context of urban agriculture the paradigm is different because there is no need to manage the variability within fields. Therefore, among the main items of the precision farming, sensors and actuation systems are the ones to be implemented in the urban farms. Optical, lidar, ultrasonic sensors and cameras have to be introduced in the urban farms to manage the nutrient supply and the plant protection with respect to the crop needs at each growth stage to optimize the nutrition and the crop healthiness (of course in addition to all sensors and actuation systems controlling the environmental conditions, the light, the water supply). The aim is to have a dynamic management of the crops at the different growth stages to correlate all inputs to the achievable outputs, maximizing the economic and environmental sustainability.

TSecurity, privacy and data sharing issues

Because IoT devices are closely connected, all a hacker has to do is exploit one vulnerability to manipulate all the data, rendering it unusable. And manufacturers that don't update their devices regularly -- or at all -- leave them vulnerable to cybercriminals.

However, hackers aren't the only threat to the internet of things; privacy is another major concern for IoT users. For instance, companies that make and distribute consumer IoT devices could use those devices to obtain and sell users' personal data.

Challenges with IIoT: i. Security of data – same as above ii. Reliability and stability – of IIoT sensors iii. Connectivity of all the systems in IIoT setup – no maintenance envisioned? iv. Blending legacy systems – IIoT is new in the market.

The future of IoT

Bain & Company expects annual IoT revenue of hardware and software to exceed $450 billion by 2020.

McKinsey & Company estimates IoT will have an $11.1 trillion impact by 2025.

IHS Markit believes the number of connected IoT devices will increase 12% annually to reach 125 billion in 2030.

Gartner assesses that 20.8 billion connected things will be in use by 2020, with total spend on IoT devices and services to reach $3.7 trillion in 2021.

By 2023, the average CIO will be responsible for more than three times as many endpoints as this year – Gartner Garter forecasts that worldwide IoT Security Spending will be 3.11 billion by 2021 largely driven by regulatory compliance.

Great improvements in the security of IoT devices driven by manufacturers' own initiatives as well users' demand for better secure devices.

Global manufacturers will use analytics data recorded from connected devices to analyse processes and identify optimization possibilities, according to IDC and SAP.

Business Insider forecasts that by 2020, 75 percent of new cars will come with built-in IoT connectivity.

BRAINSTORMING	
Main Aim	Be aware of the benefit of digital tools of smart agriculture through a study case with precise performance indicators.
Used Tools, number of participants	Brainstorming, storytelling, world cafe 6+ participants
Timeline	2h
Materials and Preparation	Paper board (for each group), markers, pencils
Session Description	**5 min:** The participants are divided into subgroups of 3-4 people. The facilitator distributes to each group a pre-printed scenario for the exercise. The task for the first part of the exercise on the paper: to read the scenario in subgroups and answer the suggested questions. **15 min** for the discussion. Text to be printed: “Situation: Traditional Farming vs. Smart Agriculture In the picturesque countryside of France, there lies a small farm called "La Belle Ferme." It is run by a farmer named Jean, who has been practising traditional farming methods for years. Jean cultivates various crops, including wheat, barley, and vegetables. He relies heavily on manual labour and traditional techniques to manage his farm. One year, the farm was hit by an unexpected outbreak of a devastating plant disease. The disease quickly spread throughout the fields, affecting a significant portion of Jean's crops. As a result, he experienced a substantial loss in yield and revenue. The outbreak also required extensive labour hours and additional costs to combat the disease.

Session Description	To make matters worse, a sudden and severe storm swept across the region, causing extensive damage to Jean's crops and infrastructure. The storm resulted in the loss of valuable produce, further diminishing his already reduced yield. Traditional Farming Impact: • Loss of yield: The plant disease caused a 30% reduction in overall crop yield. • Financial impact: The reduced yield resulted in a loss of €50,000 in revenue for Jean. • Labour hours: Managing the disease outbreak took approximately 500 additional hours of work. • Ecological impact: Jean had to increase the use of pesticides and fungicides, which adversely affected the environment. Unpredictable Weather Behaviour: • Crop damage: The storm destroyed crops covering an area of 10,000 square meters. • Financial impact: The storm damage resulted in a loss of €20,000. • Labour hours: Jean and his team spent around 300 hours cleaning up debris and repairing infrastructure. • Ecological impact: The storm led to soil erosion, and the repair work required additional resources. **Discussion for the group:** Now that we have examined the challenges faced by Jean in the traditional farming scenario, please discuss among yourselves and write down your opinion: • What do you think were the major issues and drawbacks of Jean's approach? • What aspects could be improved to address the challenges more effectively?"

Session Description	**20 min**: After the small group's discussion facilitator invites people to share their outcomes in a big circle, one group by one. 2nd part: **5 min:** The facilitator divides the group into 4 subgroups. In each of 4 subgroups facilitator chooses 1 person to be the leader of the question they will receive. **40 min** (10 min per question) The task - 4 people (1 from each group) receive 1 question (4 in total) and should stay in a certain room for the rest of the discussion. The rest of the groups will change from 1 question to another and discuss it. The leader of the question should take notes on the flipchart paper and collect the common ideas from each group. 1. Crop Disease Management. 1) Time to discuss. 2) (For the leader of the question to present the group after the discussion: 3) To address the plant disease outbreak, digital tools can be integrated into the farming process: 4) Soil monitoring sensors: These sensors provide real-time data on soil conditions, helping farmers optimise irrigation and nutrient application, reducing the risk of diseases. 5) Remote crop monitoring: Drones equipped with multispectral cameras can scan the fields, identifying areas affected by diseases at an early stage. This enables targeted treatments, reducing the need for excessive pesticide use. 6) Disease prediction models: Advanced algorithms can analyse various factors like weather, soil conditions, and historical data to predict disease outbreaks accurately. This allows farmers to take preventive measures in a timely manner.) **7) Based on the scenario you studied in the first part of the exercise, discuss what Digital Tools and Solutions can be made in**

Session Description	Unpredictable Weather Behaviour. 1) Time to discuss. 2) (For the leader of the question to present the group after the discussion: 3) Digital tools can assist in managing the impact of unpredictable weather events: 4) Weather monitoring systems: Installing weather stations on the farm provides real-time weather data, allowing farmers to receive accurate forecasts and take preventive measures. 5) Smart irrigation systems: These systems adjust the irrigation schedule based on weather forecasts, preventing overwatering and optimising water usage. 6) Crop insurance platforms: By leveraging digital platforms, farmers can access weather-based crop insurance, providing financial protection against unforeseen weather-related damages.) **7) Based on the scenario you studied in the first part of the exercise, discuss which Expected Results with Digital Tools are in the frames of:** 1. Crop Disease Management. 1) Time to discuss. 2) (For the leader of the question to present the group after the discussion: 3) Yield improvement: With early disease detection and targeted treatments, Jean's farm could reduce yield losses to 10%, significantly improving revenue. 4) Financial impact: The improved yield could result in an additional €25,000 in revenue. 5) Reduced labour hours: By implementing digital tools, Jean could save around 200 labour hours. 6) Ecological impact: With targeted treatments and reduced pesticide use, the environmental impact would be minimised.) **7) Based on the scenario you studied in the first part of the exercise, discuss what Digital Tools and Solutions can be made in**

Session Description	2. Unpredictable Weather Behaviour. 1) Time to discuss. 2) (For the leader of the question to present the group after the discussion: 3) Crop damage reduction: By implementing weather monitoring and smart irrigation, Jean's farm could reduce crop damage by 50% during storms. 4) Financial impact: The reduced damage would save €10,000. 5) Reduced labour hours: The use of technology could save around 100 labour hours in cleanup and repairs. 6) Ecological impact: Preventive measures and optimised irrigation would mitigate soil erosion and reduce resource consumption.) **35 min:** After the circle completed, all participants come back in 1 circle to listen to the results presented by the leaders of the questions + debriefing.
Debriefing	Suggested questions for the debriefing: What did you manage to learn during this exercise? Did you encounter any difficulties while doing the exercise? What new methods have you discovered for yourself? What is the difference between the used methods described in the script? Closing part, if needed: In this workshop, we explored the benefits of digital tools in agriculture through a real-life scenario set in France. We witnessed the challenges traditional farming methods face and how digital solutions can transform the industry. Farmers can enhance productivity, reduce costs, optimise resource utilisation, and minimise ecological impact by adopting these tools. Let's continue embracing the possibilities digital tools offer in smart agriculture.

3.3 Management

Introduction:

In this module, participants will learn basic definitions from the field of management and entrepreneurship, as well as their role and significance for the agricultural economy. Participants will study the factors that influence the formation of organisations, the theory and practice of management, leadership and human resources management. The main goal of the module is to point out the specifics of the basic functions of management in agriculture.

Topics of the Workshops:

1) Concept and definition of management
2) Specifics of agricultural production and the role of management in agriculture
3) Market analysis by which we look at the situation, find opportunities and threats on the market, evaluate and position ourselves and our organisation
4) Concept and types of financing
5) Management skills
6) Basic determinants of planning: concept, content, levels and types of planning
7) Mission, vision, goals and SWOT analysis
8) Key success factors

Main Tasks and Goals:

Participants will be able to correctly define the basic terms in the field of management. As a result of participating in the workshop, they will understand and be able to analyse the market.

Through this module, participants are enabled to understand the basic functions of management, and to recognize their importance and how they are applied in agriculture.

Along with knowing the factors that affect planning, they will also learn to define and create a mission, vision, goals and SWOT analysis.

Through the active participation of participants in the exercises, the skills of analytical thinking, synthesis and critical thinking are developed.

Participants develop the ability to cooperate and work in a team, to lead a team and to motivate others. They also develop presentation skills.

MANAGEMENT	
Main Aim	In this module, participants will learn basic definitions from the field of management and entrepreneurship, as well as their role and significance for the agricultural economy. They will learn more about the basic functions of management: planning, organising, leading, managing human resources and controlling. Participants will learn to define and create a mission, vision, goals and SWOT analysis.
Used Tools, number of participants	The workshop will be delivered using a combination of theoretical presentations, group discussions and practical activities. Participants will engage in interactive exercises, case studies, and creative practical tasks to apply their learning in a hands-on context.
Materials and Preparation	Create a detailed agenda and schedule for the workshop Provide the necessary equipment or technologies such as Paper, Pencils, Screenboard, Useful Web Pages, Notebook, Projector, Chairs And A Big Table Find resource pages related to scientific articles written by experienced experts in the field Create presentation and brochures Prepare questions for group discussion Prepare case studies and find examples of good management practice Prepare quizzes which are a great way to review important points made during the workshop
Session Description	**Introduction and welcome:** Begin the workshop by introducing the topic and objectives, and provide an overview of the agenda. List key points so participants know what topics to expect below. The aim of the module is to introduce participants to the subject of management studies, and to the issues that the discipline deals with.

Session Description	**Presentation:** The workshop trains participants to understand the basic functions of management and their importance for agricultural enterprises. Participants are introduced to different farm management systems, problems of planning and organisation of production, Conclusion and feedback: Summarise the key takeaways from the workshop and gather feedback from the participants on what they benefited from the workshop and what they knew before it all started and after it ended. Provide resources for further learning and support. Close the workshop with a final Q&A and thank the participants for their participation. *Other ideas for creating practical tasks:* 1. Market analysis • The goal of this exercise is to enable participants to acquire entrepreneurial and managerial knowledge and skills for the agricultural sector • The participants are divided into groups • They use the default PEST and SWOT analysis form • Analyse the market where they want to market a specific product • Through active participation, the skills of analytical thinking, synthesis and critical thinking are built • Participants will then present their analyses to the rest of the group and receive feedback • Discussion 2. Finances • The goal of this exercise is to provide specific knowledge and skills in the field of business finance that are needed in management • The participants are divided into groups

Session Description	• Each group chooses one financing (short-term, medium-term, long-term) • List the key financing features that should be applied to the previously selected product • Participants will then present their results to the rest of the group and receive feedback • Discussion 3. Creation of a business plan • The goal of this exercise is to learn to correctly interpret basic concepts from the field of management • The participants are divided into groups • In the business plan, participants will present the most important information about their company, its activity and development goals • Creation of a SWOT analysis for a specific business case of an agricultural company • Creating a mission and vision for a specific business case of an agricultural company • Self-presentation of the seminar by the participants according to the chosen topic in the field of management (ten-minute lecture) • Discussion
Debriefing	Thanks to the participants for participating in the workshop. With their arrival, they showed that promoting agricultural entrepreneurship is extremely important. An overview of what they learned thanks to the presentations they prepared and the ten- minute presentation. Examining the impact of the workshop with final questions and answers. Discussion after which we will receive feedback on the quality of the workshop and encourage participants to further apply unlearned concepts in everyday life.

3.4 Decision Process

Introduction:

Welcome to our workshop on decision-making during non-formal training about smart technologies in agriculture. In this workshop, we will explore how farmers can use smart technologies to make better decisions during the energy crisis in the EU agriculture sector. We will discuss the challenges faced by farmers and how smart technologies can help them manage resources and improve their decision-making process.

Topics of the Workshop:

1. Understanding the Energy Crisis: In this session, we will discuss the impact of the energy crisis on agriculture and explore the challenges faced by farmers in managing resources.
2. Introduction to Smart Technologies: We will introduce participants to different smart technologies available to farmers and how they can be used to make better decisions.
3. Decision-Making Process: Participants will learn about the decision-making process, including how to identify problems, generate options, and evaluate alternatives.
4. Risk Management: We will discuss the concept of risk management and how it can be used to minimize risks in decision-making.
5. Strategic Planning: Participants will learn how to develop a strategic plan for their farms, including setting objectives and identifying key performance indicators.
6. Guest Speaker Sessions: We will invite experts to share their experience and knowledge about smart technologies and decision-making in agriculture.

Main Tasks and Goals:

1. Develop an understanding of the energy crisis and its impact on agriculture.
2. Explore different smart technologies available to farmers and how they can be used to make better decisions.
3. Learn key concepts, strategies, and techniques for effective decision-making and risk management.

4. Develop skills in strategic planning and setting objectives for the farm.
5. Apply learning through interactive exercises, case studies, and creative practical tasks.

Value of Developing Specific Skills: The skills and knowledge developed in this workshop will be valuable for farmers who want to make better decisions and manage resources during the energy crisis. By learning how to use smart technologies and develop a strategic plan, farmers can improve their productivity, minimize risks, and maximize their profits. Participants will also learn how to adapt to changing situations and make decisions that benefit their farms in the long term.

In conclusion, this workshop will provide participants with the skills and knowledge they need to make smart decisions and manage resources during the energy crisis in the EU agriculture sector. By using smart technologies and adopting a strategic approach to decision-making, farmers can overcome the challenges they face and thrive in the industry.

DECISION-MAKING PROCESS	
Main Aim	The main aim of this workshop is to provide our participants with a comprehensive understanding of the smart decision-making process in EU agriculture during the energy crisis. Participants will learn key concepts, strategies, and techniques for effectively making decisions and managing resources during a crisis situation.
Used Tools, number of participants	The workshop will be delivered using a combination of theoretical presentations, group discussions, practical activities, and guest speaker sessions. Participants will engage in interactive exercises, case studies, and creative practical tasks to apply their learning in a hands-on context.
Materials and Preparation	Develop a detailed agenda and schedule for the workshop Create presentation materials, including slides and handouts Prepare discussion questions and exercises for group work Identify and invite relevant experts and guest speakers to participate Research and prepare case studies and examples of successful EU agricultural decision- making during the energy crisis Reserve and set up any necessary equipment or technology
Session Description	• Introduction and welcome: Begin the workshop by introducing the topic and objectives, and provide an overview of the agenda. • Presentation: Deliver a comprehensive overview of the key concepts and strategies related to smart decision-making in EU agriculture during the energy crisis. This can include information on resource management, crisis management, and risk assessment. • Group work: Divide the participants into small groups and assign them case studies to analyse. Facilitate discussion and provide guidance as needed. • Guest speakers [optional]: Invite experts and guest speakers to share their experiences and insights on the topic. Encourage participants to ask questions and engage in discussion. • Practical activity: Assign a creative practical task for the participants to work on in breakout rooms. This could include developing a crisis management plan for a specific EU agricultural scenario or creating a resource management strategy during an energy crisis.

Session Description	• Conclusion and feedback: Summarize the key takeaways from the workshop and gather feedback from the participants. Provide resources for further learning and support. • Close the workshop with a final Q&A and thank the participants for their participation. *Other ideas for creating practical tasks:* **1. Developing a crisis management plan:** 1.1Purpose: The purpose of this practical task is to provide participants with an opportunity to apply the concepts and strategies learned during the workshop in a realistic scenario and to develop a comprehensive crisis management plan. 1.2Preparation: • Develop a specific EU agricultural scenario related to energy crisis for the participants • Provide participants with necessary materials such as templates for SWOT analysis, PESTLE analysis, Scenario planning, budget and timeline templates, resource allocation plan, emergency response plan, and continuity of operations plan templates • Identify and train facilitators who will provide guidance and feedback throughout the task 1.3Execution: • Participants will be divided into small groups and will be given a specific EU agricultural scenario related to energy crisis • Participants will conduct a SWOT analysis, PESTLE analysis, and scenario planning to identify potential risks and vulnerabilities

Session Description	• Participants will then develop a communication strategy for internal and external stakeholders, including emergency communication plans, and crisis communication templates • Participants will develop an action plan for addressing the crisis and managing resources, including resource allocation plan, emergency response plan, and continuity of operations plan. • Participants will develop a budget and timeline, including cost-benefit analysis and return on investment calculations • Participants will develop an evaluation and measurement plan, including key performance indicators and success criteria 1.4Presentation and feedback: • Participants will present their crisis management plans to the rest of the group • Facilitators will provide feedback and guidance on the plans, and participants will have the opportunity to make revisions as necessary. • Facilitators will provide feedback **2. Resource management strategy** 2.1Purpose: The purpose of this practical task is to provide participants with an opportunity to develop a resource management strategy during an energy crisis and to apply the concepts and strategies learned during the workshop. 2.2Preparation: • Provide participants with necessary materials such as templates for energy audit, resource allocation plan, budget and timeline templates • Identify and train facilitators who will provide guidance and feedback throughout the task

Session Description	2.3Execution: • Participants will be divided into small groups and will be given a specific EU agricultural scenario related to energy crisis • Participants will develop tactics for conserving energy, such as energy audits, energy-efficient equipment, and renewable energy sources • Participants will develop strategies for managing resources in a sustainable way, including recycling, composting and reducing waste • Participants will develop a budget and timeline, including cost-benefit analysis and return on investment calculations • Participants will develop an evaluation and measurement plan, including key performance indicators and success criteria 2.4Presentation and feedback: • Participants will present their resource management strategies to the rest of the group • Facilitators will provide feedback and guidance on the strategies, and participants will have the opportunity to make revisions as necessary. • Facilitators will provide feedback on the effectiveness of the tactics and strategies proposed by the participants and discuss how they align with the scenario they were provided with. **Simulation Exercise** 1. Purpose: The purpose of this simulation exercise is to provide participants with a hands-on opportunity to apply the concepts and strategies learned during the workshop in a realistic scenario, as well as to evaluate their decision-making process, communication and crisis-management skills.

Session Description	2. Preparation: • Develop a detailed scenario for the simulation exercise, including information on the energy crisis, the agricultural organization, and the available resources and constraints • Create guidelines for the simulation exercise, including instructions on the decision-making process, communication, and resource management • Identify and train facilitators who will oversee the simulation and provide guidance as needed 3. Execution • Participants will be divided into small groups and will be assigned a role as leaders of an EU agricultural organization facing an energy crisis • Participants will be provided with the scenario and guidelines for the simulation exercise • Participants will engage in the simulation exercise, making decisions and managing resources in real-time • Facilitators will monitor the simulation and provide guidance as needed 4. Debriefing: • After the simulation exercise, a debrief session will be organized to discuss the key takeaways and evaluate the learning outcomes of the simulation. Participants will be evaluated on their decision-making process, communication, and crisis management skills, using a predefined evaluation criteria.

Debriefing	After the workshop, a debrief session will be organized to discuss the outcomes, review the feedback and evaluate the learning outcomes of the workshop. Moreover, the participants will be provided with an action plan on how to apply the learned concepts in their daily work. And also to establish a follow-up mechanism to track the progress and improvement of the participants in their own workplace. Additionally, the participants will be encouraged to share their practical task outcomes and receive feedback from their peers and facilitators.

3.5 Communication & Marketing

Introduction:

Welcome to our workshop on communication and marketing during non-formal training about smart technologies in agriculture. In this workshop, we will explore how farmers can use smart communication and marketing strategies to promote EU agricultural products to their target audience. We will discuss the challenges faced by farmers in communicating with their audience and how smart technologies can help them to reach their goals.

Topics of the Workshop:

1. Understanding the EU Agriculture Market: In this session, we will discuss the EU agriculture market, including key trends, challenges, and opportunities.
2. Smart Communication Strategies: Participants will learn about smart communication strategies, including how to identify their target audience, tailor their message, and choose the most effective communication channels.
3. Digital Marketing: We will explore the different digital marketing channels available to farmers, including social media, email marketing, and search engine optimization.
4. Content Creation: Participants will learn how to create compelling content, including how to write effective headlines, use images and video, and optimize their content for search engines.
5. Branding and Positioning: We will discuss the importance of branding and positioning in marketing, including how to develop a unique brand identity and position their products in the market.
6. Guest Speaker Sessions: We will invite experts to share their experience and knowledge about smart communication and marketing strategies in agriculture.

Main Tasks and Goals:

1. Develop an understanding of the EU agriculture market, including key trends, challenges, and opportunities.
2. Learn key concepts, strategies, and techniques for effective communication and marketing.

3. Develop skills in digital marketing, content creation, branding, and positioning.
4. Apply learning through interactive exercises, case studies, and practical tasks.
5. Develop a smart communication and marketing plan for their own farm.

Value of Developing Specific Skills: The skills and knowledge developed in this workshop will be valuable for farmers who want to effectively promote their EU agricultural products to their target audience. By using smart communication and marketing strategies, farmers can build their brand, increase their visibility, and attract new customers. Participants will also learn how to analyse their performance, identify areas for improvement, and adapt their strategies to changing market conditions.

In conclusion, this workshop will provide participants with the skills and knowledge they need to effectively communicate and market their EU agricultural products to their target audience. By using smart communication and marketing strategies, farmers can increase their profits, grow their business, and contribute to the sustainable development of the EU agriculture sector.

COMMUNICATION AND MARKETING	
Main Aim	The main aim of this workshop is to provide participants with a comprehensive understanding of smart communication and marketing strategies in EU agriculture. Participants will learn key concepts, strategies, and techniques for effectively communicating and promoting EU agricultural products to target audiences.
Used Tools, number of participants	The workshop will be delivered using a combination of theoretical presentations, group discussions, practical activities, and guest speaker sessions. Participants will engage in interactive exercises, case studies, and practical tasks to apply their learning in a hands- on context.
Materials and Preparation (what is necessaryfor the trainer/facilitator and participants to carry out the Exercise)	Develop a detailed agenda and schedule for the workshop Create presentation materials, including slides and handouts Prepare discussion questions and exercises for group work Identify and invite relevant experts and guest speakers to participate [optional] Research and prepare case studies and examples of successful EU agricultural communication and marketing strategies Reserve and set up any necessary equipment or technology
Session Description	• Introduction and welcome: Begin the workshop by introducing the topic and objectives, and provide an overview of the agenda. • Presentation: Deliver a comprehensive overview of the key concepts and strategies related to smart communication and marketing in EU agriculture. This can include information on target audience identification, messaging, and channels. • Group work: Divide the participants into small groups and assign them case studies to analyse. Facilitate discussion and provide guidance as needed. • Guest speakers: Invite experts and guest speakers to share their experiences and insights on the topic. Encourage participants to ask questions and engage in discussion.

Session Description	• Practical activity [depends on the audience]: Assign a practical task for the participants to work on in breakout rooms. This could include creating a communication and marketing plan for a specific EU agricultural product or developing a social media campaign. Use the digital platform to track progress and provide feedback. • Conclusion and feedback: Summarize the key takeaways from the workshop and gather feedback from the participants. Provide resources for further learning and support. • Close the workshop with a final Q&A and thank the participants for their participation. *Other ideas for creating practical tasks:* **1. Developing a Communication and Marketing Plan:** In small groups, participants will be given a specific EU agricultural product or sector and will have to develop a comprehensive communication and marketing plan that includes: • Target audience identification and segmentation • Key message development • Tactics for reaching the audience through various channels (e.g. social media, print, events, etc.) • Budget and timeline • Evaluation and measurement plan • Participants will then present their plans to the rest of the group and receive feedback. **2. Social Media Campaign:** Participants will work in small groups to develop a social media campaign for a specific EU agricultural product. The campaign should include: • A clear message and objective • Target audience identification and segmentation • Tactics for engaging the audience through social media channels (e.g. Instagram, Facebook, TikTok, etc.) • Content calendar and posting schedule

Session Description	• Budget and timeline • Evaluation and measurement plan • Participants will then present their campaigns to the rest of the group and receive feedback. **3. Branding Exercise:** Participants will work in small groups to develop a brand for a specific EU agricultural product. They will need to: • Identify the key attributes and values associated with the product • Develop a brand name, logo, and tagline to reflect those attributes • Create a brand style guide that includes colours, typography, and imagery • Develop a brand story and key messaging • Participants will then present their brands to the rest of the group and receive feedback. **4. Video production:** Participants will work in small groups to produce a short video about a specific EU agricultural product or sector. The video should be designed to: • Engage the target audience and promote the key message • Be visually appealing and easy to understand • Be shareable on social media and other platforms • Participants will be provided with basic video editing software and equipment and will have to complete the video within a specific time frame. • Participants will then present their videos to the rest of the group and receive feedback.

Session Description	**5. Influencer Marketing:** Participants will work in small groups to identify relevant influencers in the EU agricultural sector and develop a strategy for working with them to promote a specific product or sector. The strategy should include: • Identifying key influencers in the sector and analysing their audience and reach • Developing a message and content that aligns with the influencer's brand and audience • Negotiating and finalizing deals with influencers • Measuring and evaluating the campaign's success • Participants will then present their strategies to the rest of the group and receive feedback. **6. Trade Show Planning:** Participants will work in small groups to plan and organise a virtual trade show for a specific EU agricultural product or sector. The trade show should include: • A mix of exhibitors and sponsors • A schedule of speakers and panel discussions • Interactive elements such as Q&A sessions, polls, and networking opportunities • Marketing and promotion strategy • Budget and timeline • Evaluation and measurement plan • Participants will then present their trade show plan to the rest of the group and receive feedback.

Debriefing	After the workshop, a debrief session will be organized to discuss the outcomes, review the feedback and evaluate the learning outcomes of the workshop. Moreover, the participants will be provided with an action plan on how to apply the learned concepts in their daily work. And also to establish a follow-up mechanism to track the progress and improvement of the participants in their own workplace.

COMMUNICATION AND MARKETING Fundación Sieneva	
Main Aim	The main aim of this workshop is to provide participants with a comprehensive understanding of smart communication and marketing strategies in EU agriculture focusing on entrepreneurship. Participants will learn about the process and barriers for effective communication, message creation, and communication and marketing tools among others.
Used Tools, number of participants	The workshop will be delivered using a combination of theoretical presentations (PPT), group discussions, practical activities and media resources. Participants will engage in interactive exercises, case studies, and practical tasks to apply their learning in a hands- on context.
Materials and Preparation (what is necessaryfor the trainer/facilitator and participants to carry out the Exercise)	- room - projector - papers and pens - Post-its
Session Description	• Introduction and welcome: Begin the workshop by introducing the topic and objectives, and provide an overview of the agenda. • First of all, we will begin the session with an energiser activity in order to wake participants up and creating a good mood for collaboration and participation. • Presentation: Deliver a comprehensive overview of the key concepts and strategies related to smart communication and marketing in EU agriculture. This can include information on target audience identification, messaging, and channels. • Group work: Divide the participants into small groups and assign them case studies to analyse. Facilitate discussion and provide guidance as needed.

Session Description	Energizer: airplane Each participant takes a piece of paper and a pencil, then they write her/his name and two funny questions (their choice). Once everyone is ready, they make a paper plane (will show how) and throw them all at the same time. Each person will take one paper plane, find the person whose name is in it and make the two questions. • Presentation: Deliver a comprehensive overview of the key concepts and strategies related to smart communication and marketing in EU agriculture. This can include information on target audience identification, messaging, and channels. One of our trainers will make a presentation on communication and marketing skills. This presentation will be mixed with groups activities and group work. • Video visualization TED TALK: 10 ways to have a better conversation • BREAK Activities: **1.Fake phone call (10-15 mins)** 6 groups of 5 people • Step one: coming up with a new service or product related to agriculture or PA technologies (might be invented) you want to sell to the others groups. • Step two: Another group will make questions about the service/product such as price or functionalities. • Step 3: Group number 3 will at the same time introduce random words to group number 1 which they must include within their selling speech.

Session Description	**2.How to improve your business communication?** Group work: Same groups as before: • Imagine you as a new farmer entrepreneur who wants to increase your target market by searching for new customers who are willing to buy your new "5G drone for variable rate fertilisers". Now imagine a conversation with a group of potential customers. Write: • Three questions would you ask to them before talking about your product • Which tool would you use for communicating with them (media, online meeting/ face-to- face, email…) and why? (each group present their questions and tools) **3.Video presentation:** Groups will have to make a short video (using smartphones) promoting the service or product used in Activity 1. They will have 15 mins to prepare them and videos must not last more than: 3:30 mins. All members of the group shall participate in the video. The most creative and original group will have a prize. **4.Conclusion and feedback:** Summarise the key takeaways from the workshop and gather feedback from the participants. Provide resources for further learning and support. We will deliver a questionnaire for each participant to fill in about the sessions and learnings acquired.

3.6 Evaluation of the Activity

Introduction:

The main goal of this evaluation workshop is to improve the training format before local dissemination. This ambition will be supported by individual and team feedbacks and workshops. The pedagogical approach is based on the personal experience of the participants during the training and on the group emulation to provide innovative ideas to improve the training modules. It is also an opportunity to increase their soft skills: How to give a constructive feedback, work within a team, present to others…

It is divided in 5 tasks

- Is the training content reaching its goal? Evaluate the learnings.
- What improvements are expected? Level of satisfaction of the participants and detect what should be improved.
- Summarize global feedback: 1 person per group presents the result for the teamwork
- Find new ideas to improve: Brainstorming
- Execution of the best ideas: Split tasks

Workshops

Main Aim	Improve the training format thanks to participants feedbacks and ideas
Used Tools, number of participants	30 persons
Timeline	3 h 30 min
Materials and Preparation	Post it different colours Laptop Tv screen or projector Kahoot quiz Paper and pens
Session Description	Introduction to explain the goal of the workshop, the agenda and the rules: explain the feedback technic (What is good, what should be improved, when and how plan the changes) + respect the others' opinions. • Knowledge check: Quiz (Kahoot) to evaluate is key points are memorized based on previous quiz to learn by repetition method: 15 min. Memorization with fun • Split in 6 groups: Each group discuss about their opinion to explain 3 improvements we can add to the training and 3 positive facts 30 min • Debrief of each group to explain others their feedback, 1 by group present to others 30 min • Brain storming to find best ideas in 3 categories (3 colours) => Theorical content / pedagogical approach/ tools 1h • Work on the improvements to refresh the training template by group 1 h
Debriefing	Everyone explains what he/she thinks about this session and mention 1 learning of this workshop 15 min.

ANNEXES

Proposed Agenda for complete training

Workshops on each topic (cca 1 hour and 30 minutes for each workshop)

Including theoretical presentation and practical activity.

	Day 1	*Day 2*	*Day 3*	*Day 4*	*Day 5*	*Day 6*	*Day 7*
9:30 – 11:00	*Arrival*	*Introduction*	*Management skills*	*Decision process (including decision based on data science)*	*Visit to the farm on precision agriculture.*	*Evaluation of the activity*	*D E P A R T U R E*
Break							
11:30-13:00		*Ice breaking and Team Building Activities*	*Management skills*	*Communication& Marketing*	*Visit to the farm on precision agriculture.*	*Evaluation of the activity*	
Lunch							
14:30-16:00		*Digital Skills-theory*	*Decision process (including decision based on data science*	*Communication& Marketing*	*Visit to the farm on precision agriculture.*	*Discussion + final evaluation/ Certificates*	
Break							
16:30-18:00		*Digital skills-practices*	*Discussion and Networking*	*Discussion and Networking*	*Visit to the farm on precision agriculture.*		

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