

# PR2 Report

*Comprehensive vision on ongoing EU Ag-Tech initiatives linked to education*



# LATEST

Local-focused AgTech Education  
for Successful Ag Transitions

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University



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# TASK 2.1 – COMPREHENSIVE RESEARCH ON SIMILAR EU PROJECTS RELATED TO THE LATEST PROJECT

## 1. EXECUTIVE SUMMARY

The report identifies 16 Erasmus+ projects, 1 Life project and 2 Horizon 2020 projects and elaborates synergies with LATEST and its objectives and actions. The goal is to provide a report on synergies between academia, industry, agricultural experts and farmers towards improved production and more resilient agriculture in the EU. Furthermore, the report describes synergies with selected European projects/initiatives for providing other resources with a high added value such as:

- Recognition of other programs, processes and initiatives Explored the “niche” of each – “value adding role”
- Overview of complementary and relationships
- Evaluation according to niche in overall impact area
- Acknowledgment that changes are a result of a range of programs, processes, and initiatives
- Creating links with similar initiatives that share the same goal and support implementation of SDGs
- Identification of relevant stakeholders and their engagement in events such as workshops and seminars
- Creating a strategy for knowledge transfer from local to a global level
- Identification of the needs, gaps, and challenges
- Interaction with synergy projects
- Sharing of best practices

The report investigates potential modules, their content, learning outcomes and teaching methods from each selected project and uses this information for the development of the project result 3 – competencies and know-how matrices. Together with the PR1 this will complete the development of the specific objective 1 – BENCHMARK TRAINING OFFERS ABOUT AGTECH.

## 2. PROJECT OVERVIEW

The adoption of smart farming technology (SFT) to support the green transition towards sustainable agriculture is, above all, a generational challenge.

The significant potential in implementing SFT, sustainable agricultural development and shaping the future of rural areas, in general, is widely acknowledged, yet is largely untapped in digitalisation and technology adoption processes in agriculture. There is a need to achieve synergies between many different actors and identify and build a continuous service development process. Key stakeholders, such as agri-food and IT companies, businesses and investors, also need to be better involved in the process. Synergies need to be built between stakeholders *and* generations.

The LATEST project partners aim to investigate and provide educational programs in the field of smart and sustainable farming technology and solutions and recognize the need to systematically integrate the requirements and interests of future knowledge and end-user pools, existing agricultural end-users (farmers) and different agricultural stakeholders.

The LATEST project is coordinated by the Polytechnic Institute UniLaSalle in Beauvais, France with the University of Udine (Italy), the University of Hohenheim (Germany), the BOKU University (Austria) and the Harper Adams University (UK) as partners.

Moreover, 15 associated partners - manufacturers as individuals or in an associated form, farmers associations, agricultural cooperatives networks or associations of agricultural engineers - joined the project.

The LATEST Project aims to provide an exhaustive overview of educational and training programs in AgTech in Europe, as a basis to design multidisciplinary innovative, locally fine-tuned academic programs to develop, implement and adapt AgTech for European agricultural stakeholders – including manufacturers, farmers, public and private technical services – in the transition towards sustainable and climate-smart agricultural systems (see Picture 1).



Picture1: The project specific goals and key questions

### 3. INTRODUCTION AND CONTEXT OF THE PROJECT RESULT#2 REPORT

Successful synergies require a dedicated strategy which defines common interests and objectives. Based on this strategy, joint opportunities and goals for value creation are identified, which provides incentives with real upside for breakthrough performances.

Building bridges between similar projects in terms of upskilling the agricultural sector and creating networks with all relevant stakeholders will help higher educational institutions to generate knowledge for innovative and adaptive educational pathways such as multidisciplinary micro-credentials. The LATEST Project aims to create synergies among similar projects to achieve greater impact and efficiency in the upskilling pathways in terms of new digital agricultural solutions for sustainable agriculture and climate change mitigation, adaptation and resilience and to create strategic partnership opportunities.

To achieve comprehensive synergies, the following elements will be analysed: Curricula (e.g. content wise / Modules – Learning Outcomes), teaching and learning methods, MOOCS, knowledge exchange platforms or tools / short courses for Lifelong Learners which can be used for Micro Credentials.

### 4. METHODOLOGY AND RESEARCH

The purpose of Task 2.1- Comprehensive research on similar EU projects related to the LATEST Project, is to collect information with the goals of: 1) generating a database on similar EU projects, results, best practices and organisations, 2) producing a comprehensive state of the art report on the sector that can serve both stakeholders and training providers and 3) collection of modules linked to the PR3. The research is related to the collection, review and analysis of upskilling pathways for filling the labour gaps regarding digital transformation and sustainable smart agricultural production. The aim of these synergies is

to address the high need in upskilling and innovative education approaches in the agricultural sector as a response to climate change and the digital transformation era.

The approach of the research and analysis is following a methodology of desktop research on the material published in reports and similar documents that are available in public libraries, websites, data obtained from surveys already carried out etc., and is focusing on 3 dimensions: climate mitigation, digital transformation and LLL approach. Our research focuses on previous or current Erasmus+ projects and similar EU initiatives related to higher education as well continuing education, networks and associations. The research the following:

- Browsing and collecting data
- Creating and elaborating the Synergies Matrix (roadmap of similar projects) of potential synergies
- Evaluating the projects in the Synergy Matrix against the synergies that could be created. The projects will be assessed for potential links, relationships, and relevance with LATEST. We define a ranking with 3 levels (within the focus on climate change, digital transformation and LLL on potential synergies that could be created)
- Based on the results of evaluation we will define a ranking for projects that are in strong synergy with LATEST (see the Matrix)
- Collecting data based on networks and relevant platforms (Eucen, LLL platform, UniLab, Pact for Skills, UNESCO...)

Expected benefits through the synergies are:

- Creating links with similar initiatives that share the same goal and support implementation of SDGs

- Identification of relevant stakeholders and their engagement in the events such as Workshops and seminars
- Creating a strategy for knowledge transfer from local to a global level
- Identification of the needs, gaps and challenges
- Interaction with synergy projects
- Share of best practices

## 5. SYNERGIES AND RELATIONS TO ERASMUS+ PROJECTS AND OTHER INITIATIVES

The report provides an overview of 16 Erasmus+ projects, 1 life project ADA and 2 projects of Horizon 2020 with a focus on sustainability, digitalization, transversal skills, and entrepreneurship.

### SYNERGIES COMPARISON



The report describes potential connections and partnerships that could be developed between the LATEST Project partners and current or previous similar projects or related

initiatives. The synergies will help in spreading the project results to a broader audience but also to learn from other project findings. Furthermore, potential modules found in these projects will be included into PR3. The results will be presented at specific workshops organized during the project lifetime. The goal is to identify and analyse synergies between academia, industry, agricultural experts and farmers towards improved production and more resilient agriculture. Education in smart farming should increase synergies in crop production, animal production and will eliminate trade-offs.

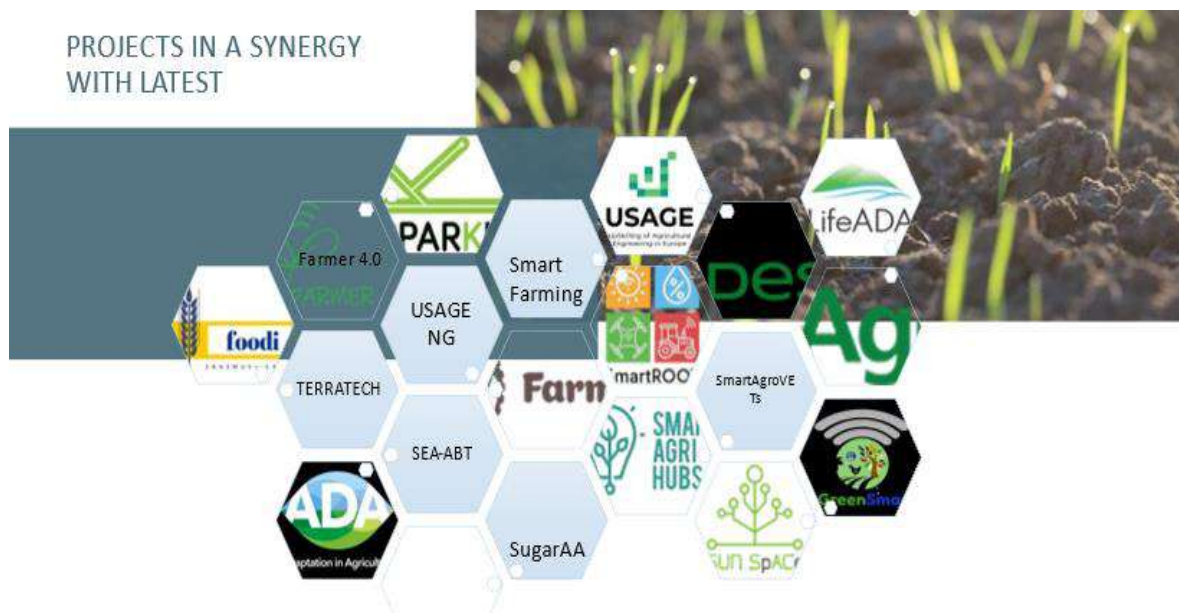
We will define two kinds of synergies relate to the purpose of PR2:

- Static synergies – the synergy effect results from the relationship between LATEST and existing outcomes generated by past projects. The synergies could be considered static since it is not possible to interact directly with the project activities. Instead, their results will be possibly used for the purpose of exploiting and testing. Thus, the information offered by past project outcomes will contribute to a sustainable use of resources under a synergic process.
- Dynamic synergies – the synergy effect results from the relationship between similar ongoing projects that are developing resources under a collaborative dimension. In this case the synergic processes must be planned. Ongoing projects can create synergies based on adequate and synchronized roadmaps created for two or more projects. Relation with ongoing relevant platforms, networks and associations were considered like dynamic synergies.

## 5.1 SYNERGY PROJECTS AND THE ROADMAP DESIGN

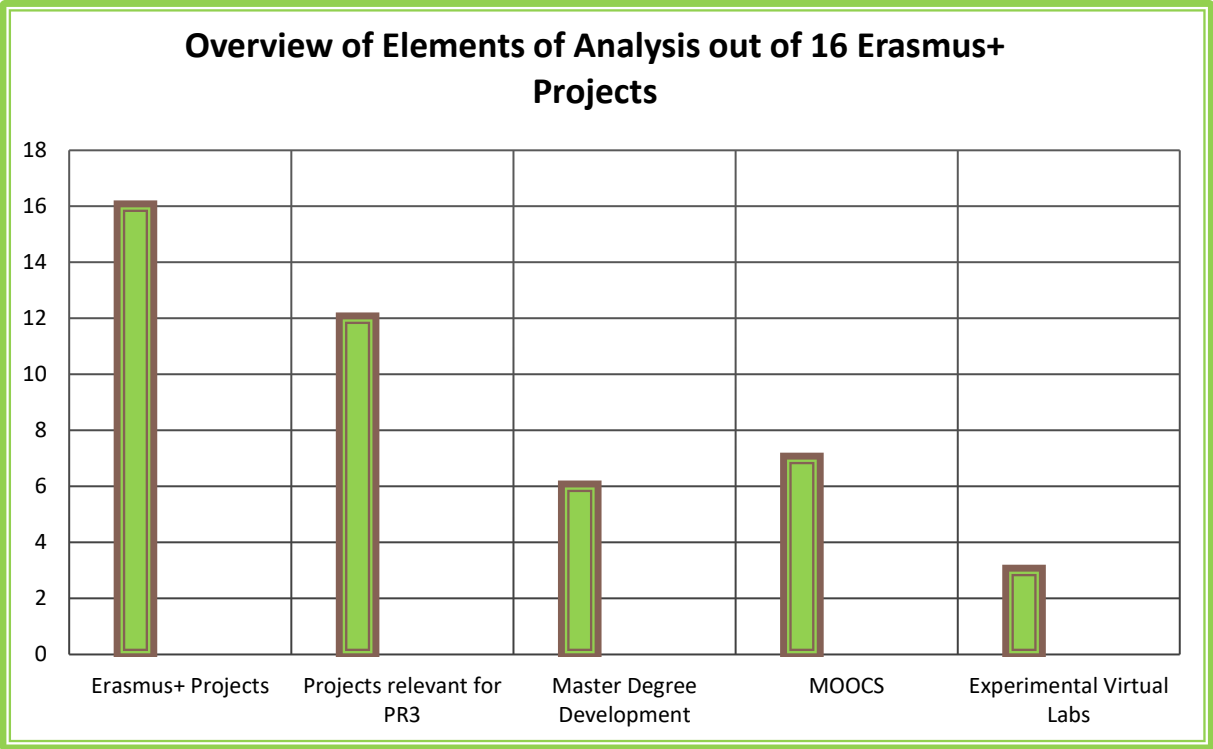
- Topics are clustered into sustainability, climate change and mitigation, digital transformation, entrepreneurship and LLL in Agriculture

- Creating and elaborating the Synergies Matrix (roadmap of similar projects) of potential synergies
- Evaluating the projects in Synergy Matrix against the synergies that could be created
- Investigation of:
  - Context (modules-content, learning outcomes, actions, deliverables)
  - Innovation
  - Goals
  - Teaching methods
  - Target groups
  - Description of potential synergy
  - Website
- Based on the results of the evaluation we will define a ranking for projects that are in strong synergy with LATEST



Picture 2: An Overview of the selected projects

Following these elements of analysis of 16 Erasmus + projects, we provided information for the LATEST project considering that 12 projects were relevant and are in a synergy with PR3, 6 projects shared the same goal of developing a Master programme, 7 projects focused on MOOCS development and as innovation in teaching 3 projects applied experimental labs. (See the Graphic 1)



Graphic 1: An overview of elements of analysis of the Erasmus+ projects

The projects in the graphic overlap in the analysis of different elements.

## 5.2 CONTEXT ANALYSIS - MODULES CONTENT, LEARNING OUTCOMES, TEACHING AND LEARNING ACTIVITIES

For the investigation of each project context and education deliverables in terms of learning outcomes, modules content LATEST focused on the sustainability, climate change and

mitigation regarding agriculture, digitalization, entrepreneurship, and transversal skills acquirements (See the Picture 3).

All relevant information from this research category in a form of report LATEST will use for the development of the Project Result 3 – Competencies and know-how matrices in AgTech Education for Successful Ag transitions.

### Projects relevant for the PR3

As the results of the 12 Erasmus+ projects analysis we collected relevant data for the PR3 development. Our focus was collecting data on the learning outcomes, ensuring that the level of the EQF is 6/7, teaching methods and pedagogical approach and the target groups. The leaders of the PR3 combined all relevant modules into the competencies matrices. These projects are FOODY; FARMER4; SPARKLE; TERRATECH; SUNSPACE; AGREENSMART; SMARTFARMING; SMARTROOT; USAGE; USAGE NG; and SMART AGRIVET.

We also investigated projects that planned to develop MOOCs such as FOODY; SPACE; AGREENSMART; FARMBOX; USAGE NG; SAGRI; SMARTFARMING.

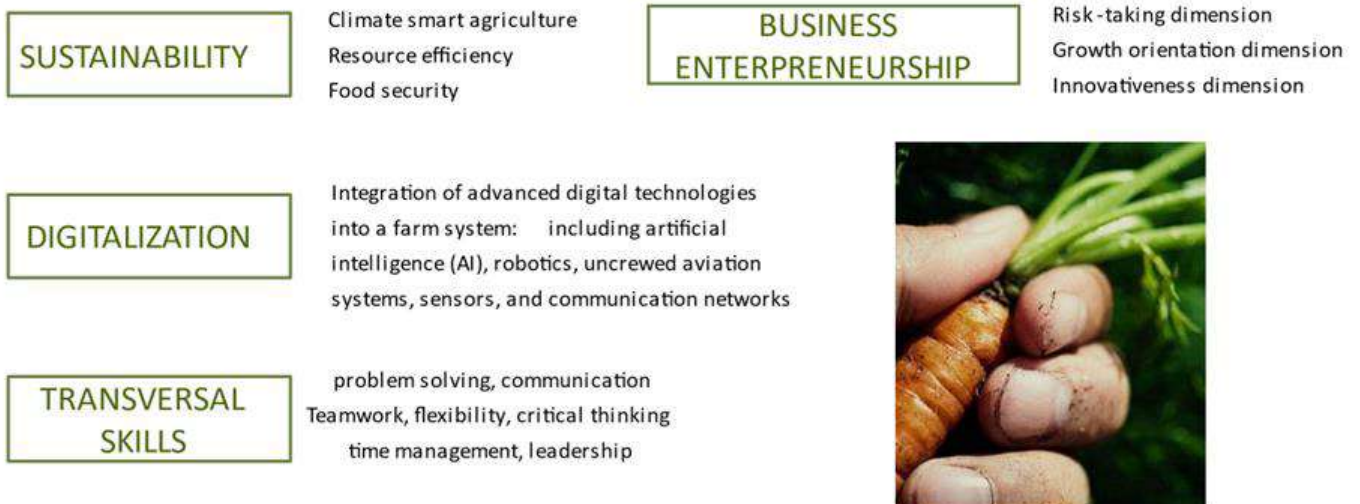
AGREENSMART Erasmus+ project is aiming to:

- Develop a **High-quality European teaching network**
- **Provide transdisciplinary skills** - use of digital technologies in crop farming and animal husbandry, mitigation and adaptation to climate change, sustainable agriculture and agroecology.
- **Cultivate research partnerships** between Higher Education Institutes and the professional sector

With LATEST, AGREENSMART is in synergy through:

- Learning outcomes
- Teaching methods
- Continuing education that leads to a master degree
- The target groups of the project include: the next generation of engineers, farm managers, agricultural advisors, and entrepreneurs to deal with climate change using technology to enhance sustainability and adapt agricultural practices.

#### SKILLS AND COMPETENCES CATEGORIES



Picture 3: Skills and competences categories

## SUSTAINABILITY

The strong synergy with LATEST in this category is in the projects ADA, FOODY, AGREENSMART, FARMBOX. All these projects focus on more sustainable agriculture including economic, environmental, and social challenges, search a synergetic cooperation and proper technologies implementation considering geographical diversity, local issues, and challenges at each partner country. The projects ADA and FARMBOX are aiming to enhance the trainers' capacity to create innovative farming knowledge, approaches, and practices, using critical climate scenarios (scenario-based approach) and increase in this way students and farmers' competences on climate change adaption practices (soil and water management, climate resilient crops etc).

# DIGITALIZATION

The digitalisation of the European agricultural sector has an impact on the industry, increases efficiency, sustainability, and competitiveness. The latest technologies such as **artificial intelligence (AI)** and **robotics** for the **Internet of Things (IoT)** offer support for farmers and agribusinesses by making better decisions, optimise their operations, and increase productivity, leading to higher profits and a more sustainable agricultural sector. On the other hand, many farmers face challenges such as the lack of necessary digital skills to fully benefit from digitalisation or limited benefit awareness. The LATEST project has the goal to develop educational programmes that will tackle all these issues and share the same ideas with EU projects such as TERRATECH, SMARTROOT, USAGE, USAGE NG, SMART FARMING and SUNSPACE. The goal of the SMARTROOT Erasmus+ project is to develop a master's degree programme so that the **resilience of agriculture subject to climate change** will be improved, while **farmers will gain knowledge** on methodologies to **foster synergies** between agricultural production, climate change mitigation, and adaptation. In synergy with LATEST, the Erasmus+ project SUNSPACE has investigated through surveys teaching and learning practices as well skills and competences among farmers to establish their requirements in learning. In other words, they evaluate farmer levels to adjust content and pedagogical approaches for acquiring the relevant digital skills.

USAGE and USAGE NG Erasmus + projects developed modules for the up skilling regarding IoT and advanced smart farming technologies in crop and livestock farming as a response to the labour market requirements. These modules are relevant for the PR3.

## BUSINESS - ENTREPRENEURSHIP

The project LATEST in its research of the Erasmus+ projects FARMER 4.0, SUNSPACE, SPARKLE,

and FOODY analyses the concept of entrepreneurship in the agricultural field, adoption of new productive processes and new business models to support with educational offers small and medium scale farmers with knowledge and to share the best practices.

The Erasmus+ project FARMER 4.0 is a teaching model for facilitating the cultural transition of agricultural entrepreneurs towards the agricultural enterprise of the future. The project promotes entrepreneurship, to adopt new productive processes and new business models based on concepts such as Open Source, FabLab, 3D Printing and 3D tools, Virtual Reality, Open Innovation, Job Shadowing, Coworking.

The SPARKLE Erasmus+ project created a cooperation between the universities, farmers, and companies to provide high quality education and to fill the gaps in the field of advanced precision farming technologies and entrepreneurship among researchers, agricultural enterprises (small and medium) and students.

## TRANSVERSAL SKILLS

One of the main priorities of the LATEST project is to stimulate innovative learning practices and pedagogical approaches. We investigate these approaches and search for the best practices and experiences among relevant EU initiatives. Increased level of critical thinking, initiative, and entrepreneurship, to adapt to working environments and people, adaptability, intrapersonal skills (self-discipline, ability to learn independently, flexibility and adaptability, self-awareness, motivation), time management skills, and organizational skills, media and information literacy, and global citizenship are the focus of the comprehensive analysis. Furthermore, LATEST highlights the critical thinking ability for applying precision agriculture technologies.

All projects according to pedagogical approaches and learning practices follow the labour market demand as well as the importance of cooperation between the university and industry, and show a positive impact on the personal development and transversal skilling. Lifelong Learning (LLL) is the key to economic success and employment for people, enabling them to participate fully in society.

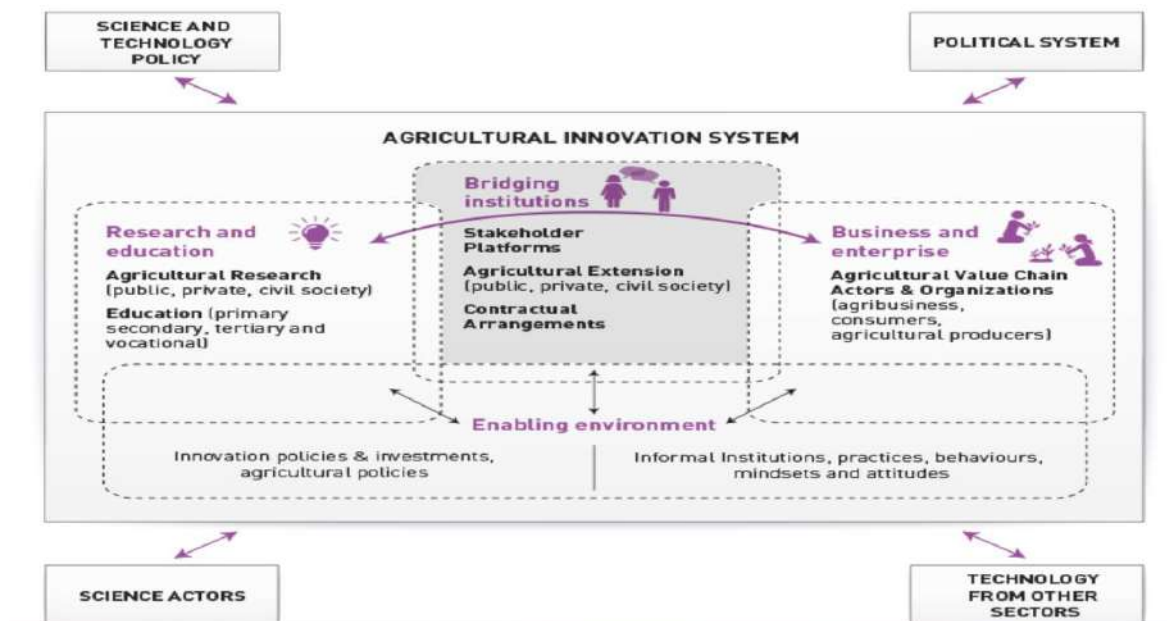
The general objectives of the LIFEADA project are to modernize and harmonize higher education by promoting lifelong learning in relation to sustainable agriculture in non-EU Alpine-Danube-Adriatic countries and to improve networking between EU and partner countries.

The Erasmus+ project USAGE has developed a concept on validation procedures based on CEDEFOP guidelines that is harmonized among all university project partners to enable inclusion and to foster learning mobility and enhance the employability in the EU. The project implemented more flexible teaching and learning paths such as a learner-centered

approach, which brought higher education with traditional pedagogical methods closer to LLL institutions. Another project with an innovative pedagogical approach when it comes transversal skilling is the Erasmus+ Farmer 4.0. One of the project priorities is to provide high quality, work-based vocational training by integrating experiential training elements in job shadowing and intergenerational co-working to stimulate the transfer of competences between traditional farmers, technologists, researchers, and agricultural entrepreneurs of the digital age.

# INNOVATION

With the adaptation of the 2030 Agenda for Sustainable Developments, innovation is the main driver for reaching the SDGs actions. It is important to bring all actors from different sectors to collaborate to meet all challenges that agriculture is facing. As an example of a good practice in fostering agricultural resilience, LATEST put a special focus on the analysis of the Life project ADA, Erasmus+ project USAGE NG and two Horizon2020 projects SmartAgriHubs and DESIRA.



Picture 4: Agricultural innovation system and trans sectoral collaboration

The Life project ADA aims to achieve concrete objectives in terms of resilience to climate change in three agrifood chains: dairy (Parmigiano-Reggiano), wine production, and fruit and vegetables. The project will be implemented on an experimental basis in Emilia-Romagna, then replicated in Veneto, Tuscany, and Lazio.

The project fosters an agricultural innovation system through an innovative public-private partnership model between insurance companies, public administration (regions), technical and scientific institutions, NGOs, and producers' organisations (joint bodies for innovation or cooperatives) and follows:

- Transfer knowledge on climate scenarios together with risk management and adaptive measures to improve farmers' skills in addressing current and future climate risks.
- Development and use of proper tools to support the decision-making process – ADA TOOL
- Coherent political strategy at a regional level

The USAGE NG Erasmus+ Project aims to offer customized upskilling in smart and precision agriculture with a focus on climate change to people who work or will work in small-scale agriculture. The objective of the USAGE NG project is to make learning paths more flexible at different stages of life by increasing modularity of studies and providing learners micro credentials following the European Qualification Framework (EQF). Based on the European approach to micro-credentials, USAGE NG learning offers merge different perspectives of the various backgrounds of learners and teachers and are linked with a distinct, targeted learning experience with clearly defined learning outcomes that are assessed against transparent standards. Furthermore, with a strong focus on the SDG 2.3 and 2.4 the project supports farmers in rural areas with the development of mobile learning opportunities - the newly developed content will not only be accessible via mobile devices but will also meet the changing needs of a new generation of students.

The project is in alignment with the goals of Common Agricultural Policy – CAP 2023 -2027, a key tool in reaching the ambitions of the Farm to Fork and biodiversity strategies.

SmartAgriHubs is a €20 M EU project under the Horizon 2020 instrument and brings together a consortium of well over 164 partners in the European agri-food sector. The project aims to realise the digitisation of European agriculture by fostering an agricultural innovation ecosystem dedicated to excellence, sustainability, and success in 7 sectors (Arable, Aquaculture, Fruits, Vegetables, Dairy, Animal Production and Novel Foods) and 9 geographical clusters (UK & Ireland; Scandinavia; France; Northwest Europe; Central Europe; Northeast Europe; Iberia; Italy & Malta; South-East Europe). It aims to deliver 80 new digital solutions to the market, raise €30M additional funding from public, regional, national, and private sources, and plans to help digitise over 2 million farms spread across Europe.

SmartAgriHubs uses a Regional Cluster (RC) approach, where each regional cluster represents a group of agricultural Digital Innovation Hubs, Competence Centres, and Innovation Experiments.

9 Regional Clusters in Europe establish bridges between the agri-food sector and technology providers in their respective regions and thereby contribute to knowledge exchange and the establishment of a pan-European market of digital solutions for the agri-food sector.

DESIRA is a Horizon 2020 project (2019-2023) coordinated by the University of Pisa which involves 25 partner organisations (research institutes, NGOs and SMEs) in a multi-actor and inter-disciplinary consortium.

The project aims to improve the capacity of society and political bodies to respond to the challenges that digitalisation generates in agriculture, forestry and rural areas. Additionally, DESIRA aims to fill the socio-economic knowledge gaps on digitalisation in agriculture, forestry and rural areas, assess the past and current socio-economic impact of digitalisation in relation to SDGs, improve the capacity of communities to reflect on future risks and opportunities of digitalisation, improve the capacity of rural communities to reap the opportunities offered by digitisation and to improve resilience to related associated risks,

promote online and offline interaction and learning among a wide range of stakeholders, increase the uptake of societal concerns in ICT-related policy and innovation, and to align digitalisation scenarios with societal needs and expectations.

### 5.3 SYNERGIES WITH LATEST SPECIFIC OBJECTIVES

The relevant projects will be assessed for potential links, relationships, and relevance with LATEST and we define a ranking with 3 categories:

- 1-2 points = Weak
- 2-3 points = Moderate
- 3-4 points = Strong

The table describes synergy points and relationships of the projects in synergies with LATEST

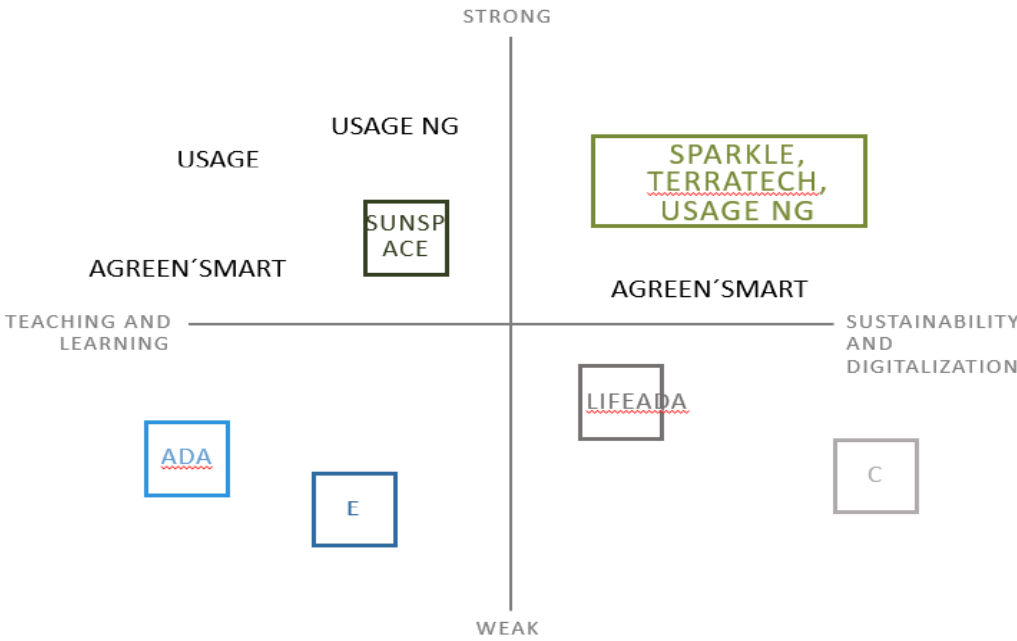
Project title	Specific objective 1	Specific objective 2	Specific objective 3	Specific objective 4
FARMER 4.0			•	•
SPARKLE		•	•	
TERRATECH	•	•	•	
USAGE NG	•	•	•	•
SUNSPACE		•	•	•
SmartAgro Vets		•	•	•
lifeada		•		

TERRATECH, USAGE NG, SMARTAGRO VETS are Erasmus+ projects that belong to the category that describes strong synergy with LATEST.

The key goal of the Erasmus+ project SAMRTAGRO VETS is to enhance climate change adaptation and resilience through VET learning on agriculture by addressing sustainable agricultural water management and agrometeorological literacy. Furthermore, to improve the level of competencies and skills and to equip VET teachers with educational materials

and innovative training tools on agrometeorological literacy, new irrigation methods, smart farming, and policies for climate change adaptation in agriculture.

Regarding teaching and learning, sustainability and digitalization, and relationship with LATESTs specific objectives and their actions, the strong synergy with LATEST show the Erasmus+ projects AGREEN'SMART, SUNSPACE, TERRATECH and USAGE NG. (See Graphic 2).



Graphic 2 describes projects in synergies with LATEST specific objectives according to assessment criteria teaching and learning, sustainability, and digitalization.

The Erasmus+ project SUNSPACE has investigated teaching and learning practices among farmers in Asia as well skills and competences among farmers to establish their requirements in learning, in other words evaluate farmer levels to adjust content and pedagogical approach. The synergy with LATEST is in the specific objective 2 - project result 5: Selection of best tools for teaching on agrotechnology, specific objective 4 - project result 8: Guide for best practices in learner centred teaching and didactic methods and specific

objective 3 – project result 6: Integrating relevant agrotechnology and innovative pedagogical tools in curricula.

TERRATECH aims to develop a master program degree on smart agricultural technologies with innovative teaching methods and material and shows strong synergy with LATEST in the specific objective 1, specific objective 2, and specific objective 3.

## 6. CONCLUSION

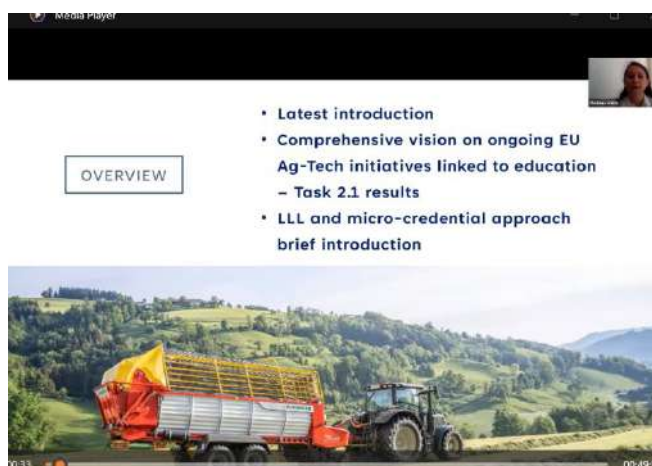
The report investigated possible synergies and links that could be developed with other European projects and initiatives. The existence of ample documentation sources makes it possible to create synergies between projects already closed or still ongoing, leading to the creation of added value and the use of existing resources regarding agriculture education.

The partners will be able to select and use, and furthermore to establish synergies with selected European projects and initiatives for producing modules, competence-based education programs for lifelong learners such as micro credentials, using the best practices in pedagogical approaches and to create networking opportunities and collaboration among diverse stakeholder groups.

A detailed overview of the 18 initiatives and projects with potential synergy actions and with a high added value was prepared. All projects and initiatives show the importance of collaboration among sectors, sustainability, and transversal skilling towards a more resilient agriculture.

## TASK 2.2 – REPORTS ON PR2 WEBINARS

### 1. Report on PR2 - Webinar 1 “The role of latest in the sustainable digital agriculture education within the focus on innovative lll strategies such as micro- credentials”



On 19th of June 2023, BOKU hosted a first webinar on evidence-based research and benchmarking EU initiatives which are in synergy with LATEST. The research aims to explore added value gathered from the learning and teaching perspectives on digital technologies and solutions towards more sustainable and resilient agriculture. BOKU presenters Vladana Vidric and Christina Paulus have invited all LATEST partners to contribute with the diverse stakeholders from the agriculture-oriented institutions, businesses, organizations, students, farmers, lifelong learners, associated partners, industry representatives, farm advisors, entrepreneurs, eco-activists, green enthusiasts, and environmentalists interested in smart agriculture to attend this webinar. The webinar took place online in a duration of 1 hour. For this purpose, BOKU has provided a Brochure and Zoom link invitation.

#### AGENDA of the webinar:

- ❖ Welcome and Introduction
- ❖ Introduction of the LATEST project;
- ❖ presentation of the project results: PR1 - A total of 25 fully completed surveys were submitted in March 2023, which generated a total of 56 programs at the EQF levels 5-8 plus 13 LLL programs and PR2 - Report on 16 Erasmus+ projects 1 life project ADA, 2 projects of Horizon 2020, Topics in sustainability, digitalization, transversal skills and entrepreneurship;
- ❖ LLL and micro-credential approach brief introduction.

In-between the sections BOKU has prepared a Mentimeter where the participants had a chance to discuss on the relevant topics.

## What are the challenges regarding up/reskilling in agriculture , lifelong learning and climate change mitigation?



How do you see added value for micro credentials? 11 Responses



THE ROLE OF LATEST IN THE SUSTAINABLE DIGITAL AGRICULTURE EDUCATION WITHIN THE FOCUS ON INNOVATIVE LLL STRATEGIES SUCH AS MICRO- CREDENTIALS AGENDA

LOCATION: ONLINE

ZOOM MEETING  
CONFERENCE

DATE: 19.06.2023

TIME: 09:00 – 10:00 AM

FACILITATOR: VLADANA VIDRIC  
CHRISIRINA PAULUS

9:00 – 9:05

5 min

❖ Welcome and introduction

Christina  
Paulus

moderates

9:05 – 09:20

15 min

- ❖ Introduction of the LATEST project
- ❖ Presentation of the project results: PR1 - A total of 25 fully completed surveys were submitted in March 2023, which generated a total of 56 programs at the EQF levels 5-8 plus 13 LLL programs and PR2 - Report on 16 Erasmus+ projects 1 life project ADA, 2 projects of Horizon 2020, Topics in sustainability, digitalization, transversal skills and entrepreneurship

Vladana Vidric

presents

9:20 – 9:30

10 min

Mentimeter: What are the challenges regarding up/re skilling in agriculture, lifelong learning, and climate change mitigation?

Christina  
Paulus

moderates

<b>9:30 – 9:45</b> <b>15 min</b>	❖ LLL and micro-credential approach brief introduction.	Vladana Vidric Christina Paulus present
<b>9:45 – 10:00</b> <b>15 min</b>	Mentimeter: How do you see added value for the micro credentials? Open Discussion	Christina Paulus moderates

## KEY LEARNINGS OF THIS WEBINAR

The webinar aimed to share information of the LATEST project deliverables to relevant stakeholders to stay up to date when it comes knowledge and up-skilling following the latest trends in LLL and innovative learning strategies such as micro credentials.

The purpose of the Webinar/Training was to:

- ❖ Share knowledge and best practices
- ❖ Identify innovation gaps in agriculture, needs in up/re-skilling and additional competences
- ❖ Present synergies and added values in the field of sustainable agriculture education
- ❖ Increase collaboration between diverse stakeholders, education, and target groups
- ❖ Understand and benefit from flexible learning paths
- ❖ Foster a culture of Lifelong learning through key messages
- ❖ Introduce the micro-credential approach

12 ATTENDERS

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## FEEDBACK

General feedback took oral and informal form. It was easily provided after the webinar while discussion section. It was mostly summative positive feedback. UNIHOHENHEIM requested more time for the webinar and clearer introduction and purpose since they introduced a new project member.

## 2. Report on PR2 - Webinar 1 “Student- centred learning approach towards micro credential development”

**When: 20.9.2024 from 11:30 to 12:30 CET**

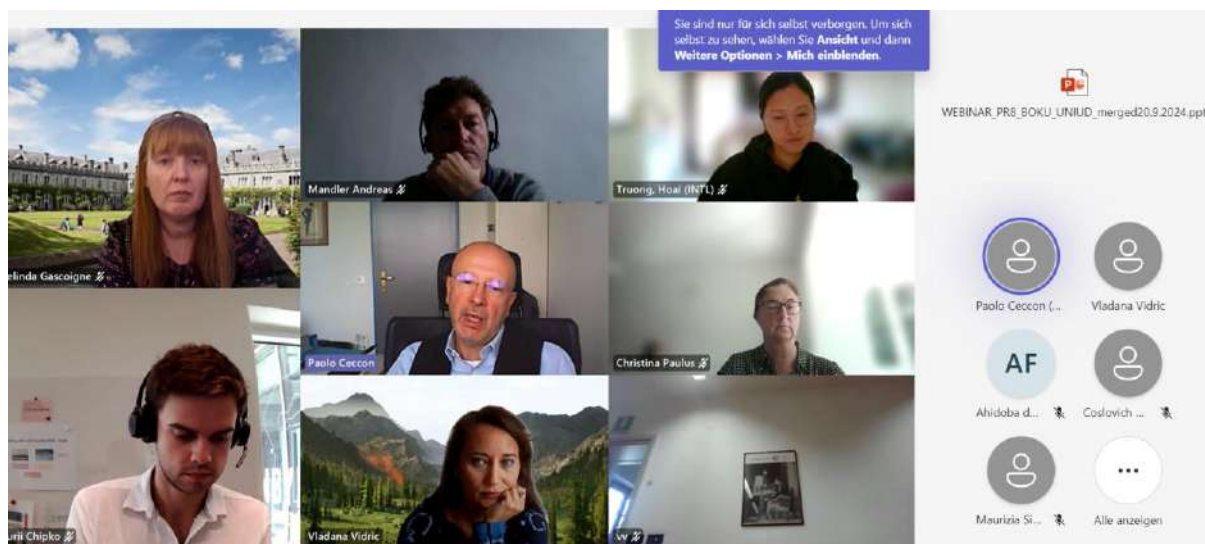
**Organized by BOKU and UNIUD**

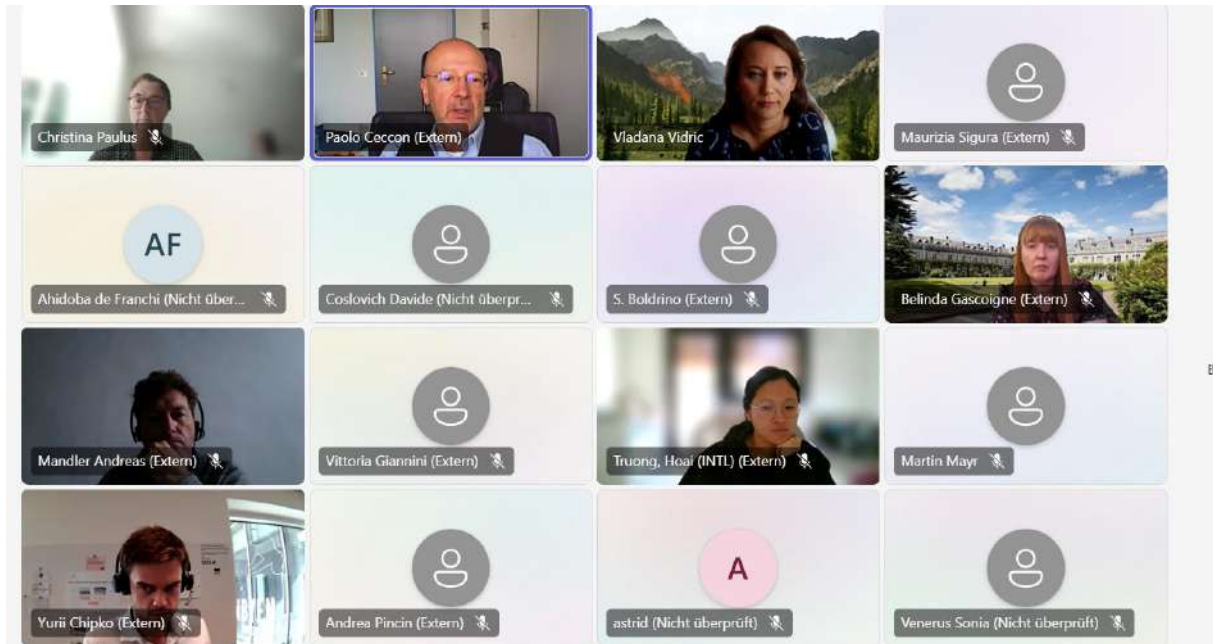
**Report prepared by Vladana Vidric**

The webinar “Student- centred learning approach towards micro credential development from the higher education perspective” took place online on 20 September 2024, from 11:30 to 12:30 CET.

The total number of participants was 22, including 17 external and 5 internal (speakers and assistants). The webinar was very proactive. Moderator was Chrstina Paulus and the speakers Paolo Cecon and Vladana Vidric had a chance to introduce them self’s, the project LATEST and the main results of PR5 and PR8.

The background of participants is diverse coming from agricultural sector, education, lifelong learning policies development.





After each part the speakers provided relevant questions for the active discussion with the participants searching for their perspective and challenges.

The questions:



## Questions to discuss

**How can we effectively take advantage of infrastructures' potential for effective remote teaching, given that they are not a constraint?**

**Do you believe that an AgTech education program can be run fully online?**

**What are the best strategies for you to increase the motivational active learning and why?**

**What are the benefits of SCL and active learning in the domain of Engineering, Agriculture or general in Natural sciences?**

**What are the benefits of learning outcomes in the form of micro credentials for the target groups you are dealing with? What about LO for farmers and other relevant stakeholders in the agricultural sector?**

**What is innovative for you in such approach?**

### Some highlights of the discussions:

The participants particularly have responded to the questions on how to increase the motivation among students. For them the precise knowledge about what students is learning and practical engagement in training regarding job benefits it's crucial for increasing the motivation. Learning how to transfer the knowledge into professional practice is a very good way to support motivation and output of the training. For some participants when it comes active learning the student engagement, autonomy, content relevance was the most important regarding their success.

They highlighted the importance of preparing learning outcomes based on students and farmers needs combining online and face to face teaching practices.

### Feedback and conclusion

The general feedback was positive, and the participants found the webinar interesting giving some parallels with healthcare sector. The participants have expressed positive oral feedback asking for providing them more details and PPP. Out of some technical minor problems, the webinar was successfully provided. No negative critics were provided. The goal of the webinar was to introduce project LATEST outputs and to provide active discussions and exchange of ideas and challenges. The conclusion is that active approach gives opportunities to reflect and to make connections among the participants creating effective environment that fosters creativity, critical thinking and collaboration.

### Additionally screenshots from the webinar provided by Paolo Ceccon

- Paolo Casati ha preparato un nuovo file riunione LATEST Erasmus+ Project - Invito a Webinar
- Oggi
- 11:13: Inizio riunione
  - Belinda Gascoigne (esterni) 11:18
  - Belinda Gascoigne
  - Alouïka de Franck (non verificata) 11:19 Traduci
  - Alouïka de Franck (Head of Quality, Center for continuing and distance Education University of Geneva) alouika.defranck@unige.ch
  - 11:42 Traduci
  - Please feel free to share your name, institution and contact information
  - Belinda Gascoigne (esterni) 11:41 Traduci
  - Belinda Gascoigne Adult Continuing Education, University College Cork, belinda.gascoigne@ucc.ie
  - 11:43 Traduci
  - Valentino Volpe
  - S. Beldrone (esterni) 11:43 Traduci
  - Suzanna Beldrone, freesooper, Austrian RPL expert, lecturer project & quality & knowledge management (FH Campus Wien), suzanna@fch.at
  - 11:44 Traduci
  - Vittoria Giannini (esterni) 11:44 Traduci
  - Vittoria Giannini, University of Padua (IT), Dept. of Agronomy, Food, Natural resources and Environment, vittoriagiannini@unipd.it
  - 11:46 Traduci
  - Valentino Volpe regional Agency for Rural Development Friuli Venezia Giulia Italy, Knowledge and Innovation transfer through ICT tools (medias) e-mail:valentino.volpe@asra.fvg.it
  - Federica Colonna (esterni) 11:47 Traduci
  - Federica Colonna, senior researcher at CRAA (Council for Agricultural Research and Economics), Research Centre for Agricultural Policies and Bioeconomy. Experienced agricultural economist, with a background in statistical-economic analysis and a special interest on the relationships between farming and the environment, organic farming, innovation and training. federica.colonna@craa.gov.it
  - 11:48 Traduci
  - Andrea Pinon
  - Andrea Pinon, head of the service centre for forestry and mountain farming and activities of the Italian autonomous Region Friuli Venezia Giulia and adjunct professor in the field of grassland system and management at the University of Udine, Email: andrea.pinon@regione.fvg.it
  - 12:00 Traduci
  - Violenza Viani (esterni) 12:00 Traduci
  - please feel free to write your ideas and answers in the chat

- 12:01 Traduci
- Andrew Mandler, researcher at uniba, agricultural faculty, coordinator at USA&S-AG project on up-skilling agricultural engineers. Email: andrewmandler@uniba.it
- Alouïka de Franck (non verificata) 12:07 Traduci
- I can see final
- Alouïka de Franck (non verificata) 12:16 Traduci
- Giving meaning to the training through a transfer project during the training
- 12:17 Traduci
- For those who have not yet shared their personal details and contact information, please feel free to do so
- Alouïka de Franck (non verificata) 12:18 Traduci
- We know giving meaning is important for motivation. Having a project during the training on how to transfer the knowledge into professional practice is a very good way to support motivation and output of the training.
- 12:26 Traduci
- Give my personal field of activity. I could report on the experience in advising and use of ICT in knowledge transfer to farmers. Focus on the final user (i.e. farmers) specific needs or to build up a training agenda/program that could fit as much as possible the participants needs. A combination of on-line and face-to-face approach could be useful, but the second one could be more effective in my opinion
- 12:27 Traduci
- Emiljehh Dervish-Venerus Sowa could you please also share your information?
- 12:30 Traduci
- Abelli Silvia (deich) (bergrprof) could you please share your information?
- 12:33 Traduci
- paolo can you please change the slides?
- or I do not see
- 12:33 Traduci
- I can see the slide Definition of Micro Creditobals...
- 12:33 Traduci
- I am sorry, I have to arrive, thanks for the valuable inputs
- 12:32 Traduci
- Violenza Viani - do you see option at top of Teams to Take Control?
- 12:33 Traduci
- Silvia Abelli Regione Autonoma Friuli Venezia Giulia, silvia.abeli@regione.fvg.it

## TASK 2.3 – Knowledge Database

### Knowledge Database for AgEng

#### Associations and professional organizations

	<b>ASABE</b> The American Society of Agricultural and Biological Engineers <a href="https://asabe.org">https://asabe.org</a>
	<b>CIGR</b> International Commission of Agricultural and Biosystems Engineering <a href="https://cigr.org/">https://cigr.org/</a>
	<b>AAC</b> Austrian Agricultural Cluster <a href="https://www.aac.or.at/about-us/">https://www.aac.or.at/about-us/</a>
	<b>RASE</b> The Royal Agricultural Society of England <a href="https://www.rase.org.uk/">https://www.rase.org.uk/</a>
	<b>CEMA</b> European Agricultural Machinery Association <a href="https://www.cema-agri.org/">https://www.cema-agri.org/</a>
	<b>FEDERUNACOMA</b> Italian Agricultural Machinery Manufacturers Federation <a href="https://www.federunacoma.it/en/">https://www.federunacoma.it/en/</a>
	<b>FAO</b> Food and Agriculture Organization of the United Nations <a href="https://www.fao.org/home/en">https://www.fao.org/home/en</a>

	<b>DLG</b> German Agricultural Association	<a href="https://www.dlg.org/en/">https://www.dlg.org/en/</a>
 ASSOCIAZIONE ITALIANA DI INGEGNERIA AGRARIA	<b>AIIA</b> Italian Society of Agricultural Engineering	<a href="http://aiia.it/">http://aiia.it/</a>
	<b>EurAgEng</b> European Society of Agricultural and Biosystems Engineering	<a href="https://www.eurageng.eu/">https://www.eurageng.eu/</a>
	<b>Axema</b> French union of industrial actors in agricultural equipment and green spaces	<a href="https://www.axema.fr/">https://www.axema.fr/</a>
	<b>IAgrE</b> Institution of Agricultural Engineering	<a href="https://iagre.org/">https://iagre.org/</a>
	<b>The National Centre for Precision Farming</b>	<a href="https://www.harper-adams.ac.uk/precision-farming/">The National Centre for Precision Farming - Understanding Precision Farming   Harper Adams University (harper-adams.ac.uk)</a>

## Online DATABASE

IPCC	<a href="https://www.ipcc.ch/data/">https://www.ipcc.ch/data/</a>
EU	<a href="https://ec.europa.eu/eurostat/web/agriculture/overview">https://ec.europa.eu/eurostat/web/agriculture/overview</a>
NASS	<a href="https://www.nass.usda.gov/">https://www.nass.usda.gov/</a>
AEF	<a href="https://www-genesis.destatis.de/genesis/online">https://www-genesis.destatis.de/genesis/online</a>
STAT	<a href="https://www-genesis.destatis.de/genesis/online">https://www-genesis.destatis.de/genesis/online</a>
FAO	<a href="https://www.fao.org/faostat/en/#home">https://www.fao.org/faostat/en/#home</a>

## Scientific Journals, Publications and Platforms

	ASABE Technical Library	<a href="https://elibrary.asabe.org/">https://elibrary.asabe.org/</a>
	Die Bodenkultur: Journal of Land Management, Food and Environment	<a href="https://sciendo.com/de/journal/boku">https://sciendo.com/de/journal/boku</a>
	AgriEngineering	<a href="https://www.mdpi.com/journal/agriengineering">https://www.mdpi.com/journal/agriengineering</a>
	Agronomy	<a href="https://www.mdpi.com/journal/agronomy">https://www.mdpi.com/journal/agronomy</a>

	Harvesting a sustainable future: An overview of smart agriculture's role in social, economic, and environmental sustainability	<a href="https://www.sciencedirect.com/getaccess/pii/S0959652623044967/purchase">https://www.sciencedirect.com/getaccess/pii/S0959652623044967/purchase</a>
	Biosystems Engineering	<a href="#">Biosystems Engineering   Journal   ScienceDirect.com by Elsevier</a>
	CIGR Handbook of Agricultural Engineering	<a href="https://cigr.org/node/640">https://cigr.org/node/640</a>
	Precision Agriculture	<a href="#">Home   Precision Agriculture (springer.com)</a>
	Computers and Electronics in Agriculture	<a href="#">Computers and Electronics in Agriculture   Journal   ScienceDirect.com by Elsevier</a>

Chen G., **Advances in Agricultural Machinery and Technologies**. CRC Press, 2018  
ISBN 978-1498754125

Megh R. Goyal, **Emerging Technologies in Agricultural Engineering**, 1st Edition, Apple Academic Press, 2017, ISBN 978-1771883405

Holden, N. M., Wolfe, M. L., Ogejo, J. A., and E. J. Cummins, **Introduction to Biosystems Engineering**, ASABE in association with Virginia Tech Publishing, 2021, ISBN 9781949373974

pdf – 9781949373936 prints (free downloadable as pdf at <https://www.asabe.org/BEdetails>)

### AgEng Events

	SIMA	<a href="https://en.simaonline.com/">https://en.simaonline.com/</a>
	ICAACS - International Conference on Agriculture, Agronomy and Crop Sciences	<a href="https://conferenceindex.org/event/international-conference-on-agriculture-agronomy-and-crop-sciences-icaacs-2024-april-london-gb">https://conferenceindex.org/event/international-conference-on-agriculture-agronomy-and-crop-sciences-icaacs-2024-april-london-gb</a>
	ASABE Yearly Meeting	<a href="https://asabemeetings.org/">ASABE 2024 (asabemeetings.org)</a>
	International Society of Precision Agriculture Conference	<a href="https://ispag.org/">Conference   International Society of Precision Agriculture (ispag.org)</a>
	Agritechnica World's biggest Fair for AgEquipment	<a href="https://www.agritechnica.com/en/">https://www.agritechnica.com/en/</a>

### AgEng Networks and Conferences

<https://ahdb.org.uk/>  
<https://www.ag-press.eu/all-events>  
[https://eu-cap-network.ec.europa.eu/events/eu-agri-food-days\\_en](https://eu-cap-network.ec.europa.eu/events/eu-agri-food-days_en)  
<https://sefi2024.eu/>  
<https://www.iccaworld.org/>

AgTech Trainings Offer in Europe – link to the PR1 mapping

EQF	NAME OF THE PROGRAMME	DESCRIPTION	COUNTRY AND INSTITUTION
5	<a href="#">Environmental Management and Resource Management</a>	Description: In addition to learning basic agricultural knowledge, the areas of resource cycles (material/energy), bio- and animal resources as well as recycling of organic waste materials are the defining topics of the field of environmental and resource management	<b>Austria - HBLFA Raumberg Gumpenstein</b>
6	<a href="#">Bachelor Sustainable Engineering of Products and Processes</a>	Description: You need technical knowledge and engineering skills, as well as practical experience with methods for comprehensive assessment and assessment. The future challenges in the areas of mobility, product design and manufacturing, process engineering and energy supply require global thinking and sustainable action. For this reason, TU Braunschweig offers an international bachelor's degree program in Sustainable Engineering	<b>Germany - Technische Universität Braunschweig</b>
6	<a href="#">Bachelor Agricultural Engineering</a>	Description: Agricultural Engineers are the specialists who help solve	<b>UK - Harper Adams University</b>

		global challenges which affect all of us, such as feeding a growing population with increasingly scarce resources while protecting the environment. Our Agricultural Engineering students develop machines, technology, systems and environmental solutions to reduce input consumption, increase precision and create sustainable production systems	
7	<a href="#">Master Organic Agricultural Systems and Agroecology (Agro-Eci-Organic) and Organic Agricultural Systems and Agroecology</a>	Description: This master provides a broad, interdisciplinary, theoretical knowledge and skills in the fields of organic agriculture and agroecology. This knowledge links ethical, ecological, economic, political, cultural, geographical and productive characteristics of sustainable forms and land use.	<b>Austria – Boku University of natural resources and life sciences</b>
7	<a href="#">Master Material and Energy Use of Renewable Resources</a>	Description: Graduates of this program are able to work with complex problems in the field of material and energetic use of renewable raw materials. Their competencies range from the production and extraction of raw materials to their final use.	<b>Austria – Boku University of natural resources and life sciences</b>
7	<a href="#">Master Environmental and Bioresource</a>	Description: This master provides further	<b>Austria – Boku University of natural</b>

	<a href="#">Management</a>	specialization in economics and social sciences. This master is interdisciplinary and application-oriented	<b>resources and life sciences</b>
7	<a href="#">Track: Farming for the future</a>	Description: The farming for the future track develops alternative, adaptive, creative agriculture to meet the challenges of climate change, biodiversity loss and global food insecurity	<b>France – Institut Polytechnique UniLaSalle</b>
7	<a href="#">Track: Management of natural resources</a>	Description: This track deals with the sustainability of natural resources- soil, water and biodiversity – associated with agricultural production.	<b>France – Institut Polytechnique UniLaSalle</b>
7	<a href="#">Master Sustainable Energy Engineering</a>	Description: This master is offers three specializations which represent sub-areas of Sustainable Energy Engineering. These specializations are Chemical Energy Engineering, Physical Energy Engineering, Energy and Resource-efficient Processes	<b>Germany – Technische Universität Braunschweig</b>
7	<a href="#">Master Environmental Management of Mountain Areas</a>	Description: This double degree programme focuses on sustainable landscape development as well as ecosystem and agro-ecosystem management in mountain areas. This master is highly interdisciplinary	<b>Italy – Free University of Bozen-Bolzano</b>
7	<a href="#">Master Horticultural Science (IMaHS)</a>	Description: This master allows students to experience multidisciplinary training and research-led teaching	<b>Italy – Free University of Bozen-Bolzano</b>

		in subjects covering the main aspects of horticultural production and the supply chain.	
7	<a href="#">Master Food Sciences for Innovation and Authenticity</a>	Description: This master provides sound knowledge of current and future challenges in food sciences, combining innovation and authenticity.	Italy – Free University of Bozen-Bolzano
7	<a href="#">Master Precision Agriculture</a>	Description: This master is realized in collaboration with the Universities of Florence, Tuscia and Salerno, with the National Research Council (CNR), the Council for Research in Agriculture and the Analysis of Agricultural Economics (CREA), IBF SpA - Services for Precision Agriculture. This makes it possible to make use of expert teachers of national and international renown, among the most active in research and profound connoisseurs of the methods of application of precision and digital agriculture in Italy.	Italy – University of Teramo
7	<a href="#">Digital management of agriculture and mountain territory</a>	Description: This master aims to train highly qualified professionals specialized in the introduction and management of technological and digital innovations in agriculture	Italy – University of Tuscia

		and mountain areas	
7	<a href="#">Master Innovation Development in Agrifood systems</a>	Description: This master provides students with an attractive and innovative program focusing on three main fields: Innovative techniques for low input production in agrifood systems, Innovative techniques for waste reduction and biomass recycling, Business promotion and cross competencies.	<b>Italy – University of Bari</b>
7	<a href="#">Master degree Integrated Pest Management</a>	Description: This master provides a solid training in Plant Health and Integrated Pest Management with a practical component of at least 40% and which emphasizes respects for the environment and human health.	<b>Spain - University of Lleida</b>
7	<a href="#">Master's degree Wildland Fire. Science and Integrative Management</a>	Description: This master covers the management of advanced specific technologies, knowledge of pyro ecology, acquisition of skills to perform complex analysis of fire behavior	<b>Spain - University of Lleida</b>
8	<a href="#">Bioeconomy</a>	Description: This institute creates the scientific foundation to transform agricultural food, industrial and energy systems into a comprehensive bio-based circular economy.	<b>Germany - Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB)</b>
8	<a href="#">PHD Engineering for Energy and</a>	Description: This PHD aims to provide an	<b>Italy - University of Tuscia</b>

	<a href="#">Environment</a>	interdisciplinary vision of engineering issues in the energy and environment sectors, characterized by high technological development	
<b>LLL Programs</b>	<a href="#">Smart Crop farming</a>	Description: Many people are open to new technology, but there is a lack of information on what kind of investment in digital technology is worthwhile, which processes are involved & what training is available to understand opportunities and challenges. To meet these challenges, the “Advanced Technologies in Smart Crop Farming” course will provide both up-to-date information and basic understanding of so-called “smart” technology	<b>Austria - Boku University of natural resources and life sciences</b>
<b>LLL Programs</b>	<a href="#">Meteorology and climatology</a>	Description: The aim of this course is for students to be able to describe the factors influencing climate.	<b>Italy – Free University of Bozen-Bolzano</b>
<b>LLL Programs</b>	<a href="#">Sustainable Development</a>	Description: This course provides the students with a holistic view on the various facets of sustainability	<b>Italy – Free University of Bozen-Bolzano</b>

## PROJECTS IN A SYNERGY WITH LATEST

See the following synergy matrix.



**Synergy identification:**  
digitalization, innovation, sustainability and climate change mitigation, pedagogic approach, Lifelong Learning approach, modules developemnt, link to the LATEST SOS

PROJECT	PROJECT PARTNERS	CONTEXT	GOALS	INNOVATION	TEACHING METHODS	TARGET GROUPS	SYNERGY DESCRIPTION AND RANKING	LINK TO SO	WEBSITE
FARMER 4.0 - Erasmus+	The project involves 7 partners coming from the following contexts: research/university and innovative entrepreneurship FabLab (Politecnico di Torino-IT, UTC-FR, Unilasalle-FR), vocational training and community (CSC-IT, OCAR IZ DERNEGI-TK), farming (Azienda Agricola Agrianto), public administration working on occupability/training, sustainability and governance of the agricultural sector (Consorti de la Ribera).	The key action is the cooperation for innovation and the exchange of good practices. In this sense, the aim of the project is to train agricultural entrepreneurs and businessmen to become farmers 4.0.	The project wishes to promote entrepreneurship in the agricultural field and facilitate the transmission and adoption of new productive processes and new business models based on concepts such as Open Source, FabLab, 3D Printing and 3D tools, Virtual Reality, Open Innovation, Job Shadowing, Coworking.	Experiential leaning throughout virtual environments (3D models in Virtual Reality laboratories), Job shadowing, Intergenerational coworking (into FabLabs)	Traditional structured training (face-to-face) and E-learning, Experimentation and exercise in a controlled environment (Virtual Reality into simulations), Deconstructed learning where the participants themselves discover how to use the available resources, supported by mentors who act as facilitators, in the logic of Creative Learning and 4P (projects, peers, play, passion).	Farmers who want to introduce “4.0 and E-learning, Experimentation and exercise product and process innovations” into their farming practices and business.	STATIC, Enterpreneurship, resilient agriculture, ranking-moderate	SO3 and SO4	<a href="https://www.farmer4.eu/">https://www.farmer4.eu/</a>
SPARKLE	SPARKLE is the Erasmus+ project (2018 – 2020) knowledge alliance within 11 Partners, with the focus on Mediterranean countries Greece, Spain, Italy, and Portugal.	The project created cooperation between the universities, farmers, and companies to provide high quality education and to fill the gaps in the field of advanced precision farming technologies and entrepreneurship among researchers, agricultural enterprises (small and medium) and students.	SPARKLE goals are future needs and market demand regarding innovative PA technologies, business cases for students based on business models of successful farms within adopted precision agriculture, teaching methodology and practices, blended training courses	INTERDISCIPLINARITY; Learning outcomes in the project are grouped into 12 lessons within 56 topics divided into 4 areas: 1.SPA OVERVIEW 2.TECHNOLOGY 3.SOCIAL AND ECONOMIC ASPECTS 4.ENTREPRENEURSHIP IN FARMING	BLENDED LEARNING	Agricultural professionals and students	STATIC, smart farming education, digitalisation and sustainability, teaching methods, ranking-moderate	SO2 and SO3	<a href="http://sparkle-project.eu/partnership/">http://sparkle-project.eu/partnership/</a>
TERRATECH	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 in 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 Ltda – 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-Schoinoploukakis -Greece)	The academic partners provide expertise in agricultural science, engineering, and management as well as in high tech applications. Student are expected to be trained in the use of new technologies in the field of agriculture, including – Bulgaria, ECQA GmbH – Aus- tria, Evolutionary Archetypes sensors, positioning technologies, new data analysis tools, advanced networking through Internet-of- Things (IoT) and Machine-to- Machine (M2M) communication.	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	INTERACTIVE TEACHING METHODS	Anyone with a basic Agriculture, electronic, electrical, computer or mechanical technical background, such as university students that have completed a suitable bachelor’s degree or professionals with equivalent or higher (5 years minimum) working experience	STATIC, advanced interactive certified MSc course, teaching methods, ranking-strong	SO1, SO2, SO3	<a href="https://www.terratechmsc">https://www.terratechmsc</a>
FOODI - KA2, Capacity-Building in the field of Higher Education	It consists of 16 organizations from 3 EU countries and 4 Asian countries. The 10 HEI from partner countries (PCs) comes from 3 different countries in Asia (Malaysia, Cambodia, and Thailand) in which food-industry plays a key role in economic and social development thus covering a large part of the region of Asia. All EU and PC HEI are specialized in Food science and technology	Erasmus+ / Capacity building in higher education, FOODI project aims to create a totally new MSc programme incorporating for the first-time innovation management and food processing curricula with a view to turning the local food processing sector into a driver of social and economic growth.	With special attention to the development of innovation and entrepreneurial skills in the attending students, the developed master course is to be deployed in Malaysia, Cambodia, and Thailand	Advanced knowledge and skills in the interdisciplinary field of food science and technology and possess a strong technical capability enabling them to contribute to the transformation of the food industry through a creative, innovative and professional approach. Transversal skills	ACTIVE LEARNING, BLENDED LEARNING, LEARNER-CENTRED APPROACH	Academic professionals and administrative staff, students at national level, Master curricula, local, regional, and national level as well researchers, experts, associations or networks of HEIs, research institutes and industry actors.	STATIC, impact on local, regional, national level, Master curricula, teaching methods, ranking - strong	SO1, SO2, SO3, SO4	<a href="https://www.foodi-project.eu">https://www.foodi-project.eu</a>
SUNSPACE - KA2, Capacity-Building in the field of Higher Education	Coordinated by Université Lumière Lyon 2 and developed by a consortium made up of 8 institutions from Europe and Asia.	This international cooperation alliance aims to provide an Education and Training System to help Farmers understand the use and usefulness of the new technologies	Skills and competences development in: Digital Agriculture, Agro-Business, Standardisation and Smart Farming	The project set-up a Smart Farm-Lab as “Center of Excellence in Smart Farming” to strength and sustain a link between HEIs and farmer in Asian countries and, implementing “Cascade Training Program” to train “Farmer leader” and “Farmer Leader” trains farmers.	BLENDED LEARNING, PEER LEARNING, LEARNING BY DOING	Traditional farmers, practitioner farmers, trained farmers	STATIC, digital transformation , teaching methods, ranking moderate to strong	SO2, SO3 and SO4	<a href="http://sunspace.fan">http://sunspace.fan</a>

AGREENSMART - KA2 International cooperation for innovation and the exchange of good practices at the European level	7 European Universities of Life Sciences: Junia ISA France, UTAD Portugal, NMBU Norway, SLU Sweden, University of Helsinki Finland, University of Liège Gembloux Agro-BioTech Belgium, and Perrotis College Greece	Agreen' Smart focuses on cooperation for innovation and the exchange of good practices at the European level.	The project is aiming to link the added values gathered from the use of digital technologies in crop farming and animal husbandry (respectively precision agriculture and precision livestock farming), and related tools to valorize data (big data, artificial intelligence or robotics) and the mitigation and adaptation to climate change for a more sustainable agriculture including economic, environmental and social challenges. It provides transdisciplinary skills in agriculture, use of digital technologies in crop farming and animal husbandry, mitigation and adaptation to climate change, sustainable agriculture and agroecology	Synergetic cooperation considering geographical diversity, local issues and challenges at each partner country. Establishment and continuing a high-quality European teaching network on different and transdisciplinary subjects. Transsectoral collaboration.	GROUP PROGRAMS, HYBRID LEARNING	The next generation of engineers, DYNAMIC, local level and climate farm managers, agricultural advisors, change mitigation, digital and entrepreneurs to deal with transformation, networking, climate change using technology to teaching methods, ranking - strong enhance sustainability and adapt agricultural practices.	SO3 and SO4	<a href="https://erasmusplus-agreensart.eu/presentation/">https://erasmusplus-agreensart.eu/presentation/</a>
SMARTFARMING- KA2 International cooperation for innovation and the exchange of good practices at the European level	7 European Universities of Life Sciences: ISA Lille - Yncréa Hauts-de-France, UTAD Portugal, NMBU Norway, SLU Sweden, University of Helsinki Finland, University of Liège Gembloux Agro-BioTech Belgium, and Perrotis College Greece.	Smart Farming program is focused on using new technology in Crop Production. The purpose of this project is to raising students' awareness of new technologies and teach them how to use them in order to meet industry need for these skills.	This joint project aims to develop comprehensive educational programs and tools to address the current demand and anticipate the future needs of the agricultural industry in Europe.	The project identifies complementary expertise at each partner institution, to cover the different key points of PA. Each partner will therefore bring its very specific knowledge and experience in a specialization useful for this project: teledetection, GIS, robotics, mechatronics, plant science, etc. Each partner has been identified for its particular expertise and the added-value that he/she would bring to the project and its content:	E-LEARNING, GROUP PROJECTS, INTENSIVE PROGRAMS IN SWEDEN INCLUDING PRACTICALS AND FIELDS VISITS, INTERSHIP AT A PARTNER COMPANY	Students and agricultural professionals	SO3 and SO4	<a href="https://erasmusplus-smart-farming.eu/">https://erasmusplus-smart-farming.eu/</a>
FARMBOX - (2020-1-IT01-KA226-VET-008891)	The project is coordinated by the Department of Land, Environment, Agriculture and Forestry of the University of Padova (IT) and is composed by five partners from four countries: Istituto Oikos (IT), Uptoeath GmbH (DE), Chamber of Agriculture of the Republic of Lithuania (LT), Politeknika Ikaستيا Txorierri (ES)	Climate Smart Agriculture (CSA) skills for students and farmers, generating awareness about challenges of climate change, enabling free access to practical knowledge in order to invest in and update agricultural practices	The project aims to develop a MOOC about climate smart agriculture to provide key information about CSA and to present learners some useful practices in order to improve land management in terms of biodiversity principles and climate change adaptation needs	An online Simulator that will allow learners, small farmers and farmholders to simulate in a virtual environment the benefits on a given area of the implementation of CSA measures presented in the MOOC.	ONLINE TEACHING AND LEARNING, E-LEARNING	Future farmers, students, expert farmers, farmers' associations and organisations	SO3 and SO4	<a href="https://www.farminabox.eu/">https://www.farminabox.eu/</a>
SMARTROOT - KA2 International cooperation for innovation and the exchange of good practices at the European level	University of Western Macedonia (UOWM), International Hellenic University (IHU), Sidroco Holdings Limited (SIDROCO), Spanish Food and Drink Federation (FIAB), INFALIA P.C. (Infalia), Swedish University of Agricultural Sciences (SLU), AGRIVI D.O.O. (agrivi)	Through SmartROOT the resilience of agriculture subject to climate change will be improved, while farmers will gain knowledge on methodologies to foster the synergies between agricultural production, climate change mitigation, and adaptation.	A new Joint Master Degree program in the field of Mixed Farming Systems (MFS). The active involvement of students in the preparation process	Intensive Study Program on MFS for teachers, an online platform VIRTUAL FARM LAB to: Promote the capabilities of IT application in MFS, Define the required technical skills of ICT post-graduate students, Train agronomists and veterinaries post-graduate students. Intersectoral collaboration	VIRTUAL LAB, LEARNER - CENTRED APPROACH, CRITICAL THINKING	Students and agricultural professionals, Agronomist, It experts	SO2, SO3, SO4	<a href="https://smartroot.eu/project/">https://smartroot.eu/project/</a>
USAGE - K220	Sweden (SLU), Germany (TUM) and Italy (UNIBZ) and University of Natural Resources and Life Sciences - BOKU	The project enables smart, sustainable and inclusive growth through up-skilling, innovative pedagogic approaches and access to experience.	The aim of the USAGE project is to promote transparency and accountability in higher education regarding LLL. To foster cooperation between education and training organisations, industry and their employers, farmers. To promote the concept of Education for Sustainable Development (ESD) through modularisation and LLL Master program degree. Modules learning outcomes about Sensors, IoT, GIS, cloud-based processes, machine learning, artificial intelligence, networking to the farming system such as crop cultivation, livestock farming and fruit production	Competence oriented education programs with integrated LLL strategy following the modularization concept towards Master degree program. Validation of prior learning and inclusion.	ACTIVE LEARNING, BLENDED LEARNING, LEARNER-CENTRED APPROACH	The courses are structured to provide subject-specific knowledge for selected professionals of the agricultural sector (e.g., farmers, animal agronomist, farm managers, sales managers), public agricultural institutions and ministries of agriculture	SO1, SO2, SO3, SO4	<a href="https://usage.projects.unibz.it/">https://usage.projects.unibz.it/</a>
SMARTAGROVET - 2021-1-TR01-KA220-VET-000029507	MUNICIPALITY OF SILIVRI - (Turkey) (Coordinator), ISTANBUL TECHNICAL UNIVERSITY (Turkey), UNIVERSITÄT FUER BODENKULTUR WIEN (Austria), The Polish Farm Advisory and Training Center not-for-profit Sp. z o. he is. (Poland), TEKIRDAG NAMIK KEMAL UNIVERSITY (Turkey), Eu&Pro centrum vzdělávání a praxe, s.r.o. (Czech Republic)	Different regions have experienced different short- and long-term effects of climate change on agriculture. However, in the near future, its negative effects pose a threat to the existence of all living things. The project aims to improve rural areas' ability to adapt to climate change and fight its negative consequences through VET learning in agricultural water use efficiency.	To enhance climate change adaptation and resilience through VET learning on agriculture by addressing sustainable agricultural water management and agrometeorological literacy. To improve the level of competencies and skills of VET students on agrometeorological literacy and sustainable irrigation management system. To equip VET teachers with educational materials and innovative training tools on agrometeorological literacy, new irrigation methods, smart farming, and policies for climate change adaptation in agriculture. To raise awareness of the significance of climate change adaptation on agriculture implementation: To provide women farmers with improved training in agricultural cooperatives at the EU level. Development of Training course on agricultural water management and Training course on agro - meteorological literacy.	A virtual learning platform  An interactive VET-based Game Application	ACTIVE LEARNING, BLENDED LEARNING, LEARNER-CENTRED APPROACH, TRAIN THE TRAINER TRAINING, VET students, Umbrella organizations related to agriculture	VET teachers and providers, Farmers, Ministry of National Education, Umbrella organizations related to agriculture	SO2, SO3, SO4	

USAGE NG - KA220	University of Natural Resources and Life Sciences - BOKU, Technical University of Munich (TUM), Free University of Bozen-Bolzano (unibz), ENAMA Servizi	USAGE-NG aims to empower all kinds of farming students to use digital agricultural technologies to monitor, quantify and mitigate the impacts of climate change on their individual farms.	The aim of this project is to produce a comparative analysis on diverse international learning opportunities for all university students, to design effective outreach strategies for small and medium farming systems in rural areas and to build on the above outlined network components. USAGE-NG will create modules on a modular system consisting of micro-credentials based on the European Credit Transfer System (ECTS) and follow the requirements of the European Qualifications Framework (EQF). Micro-credentials will be designed to support flexible learning pathways, including the possibility to combine, validate and recognize micro-credentials from different systems.	Micro credentials and mobile learning	ACTIVE LEARNING, BLENDED LEARNING, LEARNER-CENTRED APPROACH	The courses are structured to provide DYNAMIC, Climate smart subject-specific knowledge for selected professionals of the agricultural sector (e.g., farmers, animal agronomist, farm managers, sales managers), public agricultural institutions and ministries of agriculture	SO1, SO2, SO3, SO4	
SAGRI	The consortium consists of 10 partners from 3 countries. Three of them are higher education institutions: the P1-AGRICULTURAL UNIVERSITY OF ATHENS, the P5-UNIVERSIDADE DE EVORA and the P8-UNIVERSITA DEGLI STUDI DELLA BASILICATA. The consortium includes also the VET providers P2-EUROTRAINING EDUCATIONAL ORGANIZATION, P6-REGIBIO – Formação e Consultoria and P9 – ENTE DI RICERCA E FORMAZIONE that have vast experience in offering teacher training. Additionally, the consortium includes P4-SWISS APPROVAL TECHNISCHE BEWERTUNG S.A. which is an accredited body in Expert Training and Personnel Certification. Finally, the consortium is completed by the end user associations: P3-INSTITUTO AGROTIKIS KAI SINETARISTIKIS OIKONOMIAS (INASO-PASEGES), P7-Confederação dos Agricultores de Portugal and P10-CONFEDERAZIONE GENERALE DELL'AGRICOLTURA ITALIANA.	The SAGRI project, will allow agricultural workers to acquire the skills, knowledge and ability to understand and analyse agro environmental systems as natural ecosystems modified by human activity, though with an emphasis on environmental technologies that can be applied to achieve crop sustainable production by means of improved systems' management.	Six training modules and relevant learning and assessment material according to a skills-need analysis for the agricultural workers: Module 1: Precision agriculture; module 2: Integrated pest management in plant protection; Module 3: Agricultural reuse of organic residuals; Module 4: Drip irrigation and water-conserving technologies; Module 5: Renewable energy and its application as green agricultural energy source; Module 6: Bioenergy and energy crops. The SAGRI curriculum will have a specific character and be designed in terms of tangible learning outcomes for EQF level 5.	MOOC	ACTIVE LEARNING, ONLINE LEARNING, LEARNER-CENTRED APPROACH	Farmers and agricultural stakeholders STATIC, ranking - moderate	SO2, SO3	<a href="http://www.sagriproject.eu/">http://www.sagriproject.eu/</a>
LIFEADA - TEMPUS	LifeADA is coordinated by the University of Zagreb, Faculty of Agriculture (Grantholder). Cooperation with universities in Croatia, Germany, Austria and Slove	Through LifeADA, the participating partners aim to modernize and align their higher education while developing a lifelong learning approach to sustainable agriculture in Albania, Bosnia and Herzegovina Kosovo and Montenegro.	Rural Land management is a continuing education programme developed at University of Natural Resources and Life Sciences Vienna. The two year programme is part time, language of instruction is German. Rural Land management Programme teaches basic skills and deep knowledge about management and documentation, the use and operation, the assessment and the development of properties in rural space.	Integration of the Lifelong learning strategy, Continuing education and certification	Programme modules are provided in blocks on weekends and/or holidays Venue: Programme modules were mainly held at the university, 2 blocks are delivered abroad; 5 days of excursion (visiting various private enterprises and public authorities)	Landowners, employees of public institutions, lawyers, people who are interested in expanding their professional field	SO2	<a href="https://documents.pub/document/ifelong-learning-for-sustainable-agriculture-in-alps-danube-adriatic-region.html?">https://documents.pub/document/ifelong-learning-for-sustainable-agriculture-in-alps-danube-adriatic-region.html?</a>
SEA-ABT - Erasmus+ Capacity Building project	The consortium consists of 9 partners and is coordinated by the University of Natural Resources and Life Sciences, Vienna, Austria (BOKU). The remaining partners are Hochschule Geisenheim, Germany (HGU); University of Teramo, Italy (UNITE); ISEKI-Food Association, Austria (IFA); Chulalongkorn University, Thailand (CU); Kasetsart University, Thailand (KU); King Mongkut's Institute of Technology Ladkrabang, Thailand (KMUTL); Patkol Public Company Limited, Thailand (PATKOL); and Habla-Chemie GmbH, Thailand (HABLA). Besides these, the consortium also includes two associated partners namely the European Hygienic Engineering & Design Group (EHEDG) and the European University Continuing Education Network (EUCEN). For full descriptions of the partners and associated contact persons, please see <a href="https://www.sea-abt.eu/project/consortium">https://www.sea-abt.eu/project/consortium</a> .	project SEA-ABT will increase the capacities of the Thai universities for delivering modern high quality curricula and Life Long Learning (LLL) in the area of beverage technology. The development of demand-driven courses, modules and related educational products will be using innovative pedagogical approaches and teaching tools for use in higher education (HE) and continuous professional education (CPD). For the sustainable collaboration in HE and CPD, within the 3-year project the partners will establish an independent joint Academy for Beverage Technology - with hubs in Thailand and in the EU - to manage training and continuous exchange of best practice between the Thai and European partners.	Training Modules for Continuing Professional Development, Graduate Diploma Program in Beverage Technology & Management, Food Science and Technology - Double Degree with the Chulalongkorn University (Bangkok, Thailand)	An independent organisational frame for a structured and sustainable collaboration between universities and the beverage industry with hubs in Thailand and in the EU. The academy is managing training and continuous exchange of best practice between the Thai and European partners. Accreditation and certification	The ISEKI-Food Digital Library, digital library, Training for teachers, integration of innovative taching tools and approaches	Students and professionals	SO1, SO2, SO3	<a href="https://www.sea-abt.eu/home">https://www.sea-abt.eu/home</a>

SMARTAGRI-HUBS - HORIZON 2020	164 partners in the European agri-food sector.  The project aims to realise the digitisation of European agriculture by fostering an agricultural innovation ecosystem dedicated to excellence, sustainability and success in 7 sectors (Arable, Aquaculture, Fruits, Vegetables, Dairy, Animal Production and Novel Foods) and 9 geographical clusters (UK & Ireland; Scandinavia; France; North West Europe; Central Europe; North East Europe; Iberia; Italy & Malta; South-East Europe).	The SmartAgriHubs project serves as a catalyst for game-changing innovations in smart farming techniques. It aims to deliver 80 new digital solutions to the market, raise €30M additional funding from public, regional, national, and private sources, and plans to help digitise over 2 million farms spread across Europe	SmartAgriHubs uses a Regional Cluster (RC) approach, where each regional cluster represents a group of agricultural Digital Innovation Hubs, Competence Centres and Innovation Experiments. 9 Regional Clusters in Europe establish bridges between the agri-food sector and technology providers in their respective regions and thereby contribute to knowledge exchange and the establishment of a pan-European market of digital solutions for the agri-food sector. In the project 28 Flagship Innovation Experiments ideas, concepts and prototypes are tested for the advancement of the digitisation of the agri-food sector and for stimulating the exchange of knowledge and technology among 7 sectors in these 9 Regional Clusters.	SmartAgriHubs to provide R&D, technical expertise, laboratory, and demonstration facilities, testing and validation, and Information and Communication through Face-to-face and virtual demonstration activities (blended learning). The project has developed guidelines for online and offline teaching and learning activities and a toolkit to help them to demonstrate digital innovations.	Farmers, businesses, and other agri-food entities in digital transformation.  DYNAMIC, ranking moderate to strong	SO2, SO3	<a href="https://www.smartagrihubs.eu/">https://www.smartagrihubs.eu/</a>
DESIRA - HORIZON 2020	A Horizon 2020 project (2019-2023) coordinated by the University of Pisa which involves 25 partner organisations (research institutes, NGOs and SMEs) in a multi-actor and inter-disciplinary Consortium  The project aims to improve the capacity of society and political bodies to respond to the challenges that digitalisation generates in agriculture, forestry and rural areas	Fill the socio-economic knowledge gaps on digitalisation in agriculture, forestry and rural areas, assess the past and current socio-economic impact of digitalisation in relation to SDGs, improve the capacity of communities to reflect on future risks and opportunities of digitalisation, improve the capacity of rural communities to reap the opportunities offered by digitisation and to improve resilience to related associated risks, promote online and offline interaction and learning among a wide range of stakeholders, increase the uptake of societal concerns in ICT-related policy and innovation, and to align digitalisation scenarios with societal needs and expectations.	The digital transformation of rural areas	Gnomee Knowledge Base Tool, digital tools and projects	Rural communities  DYNAMIC, digital transformation, innovation and sustainability, ranking moderate	SO2, SO3	<a href="https://desira2020.agr.unipi.it/the-project/">https://desira2020.agr.unipi.it/the-project/</a>
ADA - LIFE PROJECT	The Life ADA project aims to achieve concrete objectives in terms of resilience to climate change in 3 agrifood chains: dairy (Parmigiano-Reggiano), wine production, and fruit and vegetables.	Transfer knowledge on climate scenarios together with risk management and adaptive measures to improve farmers' skills in addressing current and future climate risks. Build proper tools to support the decision-making process in outlining efficient adaptation plans at farm and supply-chain level, Define a coherent political strategy at a regional level to support adaptive planning by farmers. Promote an innovative approach for insurers to strengthen the ability to reduce risk and guarantee the insurability of farmers in the long term, despite the increase in catastrophic and systemic risks.	The implementation of an innovative public-private partnership model between insurance companies, public administration (regions), technical and scientific institutions, NGOs, and producers' organisations (Joint Bodies for Innovation or cooperatives).	ONLINE TEACHING AND LEARNING, E-LEARNING; ADA TOOL, PODCAST	Farmers, agricultural professionals  DYNAMIC, sustainable agriculture and climate change, innovation, ranking moderate	SO2, SO3	<a href="https://www.lifeada.eu/en/training/">https://www.lifeada.eu/en/training/</a>

## Knowledge Database for Lifelong Learning - LLL

### Associations and professional organizations

 <p>LIFELONG LEARNING PLATFORM EUROPEAN TOOL, SERVICE &amp; FOR EDUCATION</p>	<p>THE LIFELONG LEARNING PLATFORM</p>	<p><a href="https://www.lllplatform.eu/aboutus">https://www.lllplatform.eu/aboutus</a></p>
 <p>ETF Working together Learning for life</p>	<p>EUROPEAN TRAINING FOUNDATION</p>	<p><a href="https://www.etf.europa.eu/en">https://www.etf.europa.eu/en</a></p>
 <p>eucen european university continuing education network</p>	<p>THE EUROPEAN UNIVERSITY CONTINUING EDUCATION NETWORK - EUCEN</p>	<p><a href="https://eucen.eu/">https://eucen.eu/</a></p>
 <p>unesco Institute for Lifelong Learning</p>	<p>THE UNESCO INSTITUTE FOR LIFELONG LEARNING - UIL</p>	<p><a href="https://www.uil.unesco.org/en">https://www.uil.unesco.org/en</a></p>
 <p>EUA European University Association</p>	<p>THE EUROPEAN UNIVERSITY ASSOCIATION - EUA</p>	<p><a href="https://eua.eu/">https://eua.eu/</a></p>

## LLL Journals, Publications and Platforms

	<p><b>A EUROPEAN APPROACH TO MICRO-CREDENTIALS OUTPUT OF THE MICRO-CREDENTIALS HIGHER EDUCATION CONSULTATION GROUP</b></p>	<p><a href="https://op.europa.eu/en/publication-detail/-/publication/7a939850-6c18-11eb-aeb5-01aa75ed71a1">https://op.europa.eu/en/publication-detail/-/publication/7a939850-6c18-11eb-aeb5-01aa75ed71a1</a></p>
	<p><b>Defining, writing, and applying learning outcomes</b></p>	<p><a href="https://op.europa.eu/en/publication-detail/-/publication/ee9b069f-fba7-11ec-b94a-01aa75ed71a1/language-en%20">https://op.europa.eu/en/publication-detail/-/publication/ee9b069f-fba7-11ec-b94a-01aa75ed71a1/language-en%20</a></p>
	<p><b>European guidelines for validating non-formal and informal learning</b></p>	<p><a href="https://www.cedefop.europa.eu/en/publications/3093">https://www.cedefop.europa.eu/en/publications/3093</a></p>
	<p><b>Description of the eight EQF levels</b></p>	<p><a href="https://europass.europa.eu/en/description-eight-eqf-levels">https://europass.europa.eu/en/description-eight-eqf-levels</a></p>
	<p><b>E-learning methodologies and good practices: A guide for designing and delivering e-learning solutions from the FAO eLearning Academy (Second Edition)</b></p>	<p><a href="https://www.fao.org/3/i2516e/online/i2516e.html#/">https://www.fao.org/3/i2516e/online/i2516e.html#/</a></p>

## TASK 2.4 – 4. Exchange with Commission's Directorate-General for Agriculture and important EU Networks

The LATEST Project will be linked in the EU Networks like European Association for International Education; EUCEN (European university continuing education network; LLLP (Lifelong Learning Platform; EURASHE (European association of institutions in higher education). To link these networks with the results of the LATEST Project should strengthen the impact of innovative and high-quality exchange concerning cooperation and dialogue. In involving the Commission's Directorate-General for Agriculture and Rural Development (DG AGRI) which is responsible for EU policy on agriculture and rural development and deals with all aspects of the common agricultural policy, directly to the project could lead to the possibility to link the Agrifood Data Portal by offering the EU a comprehensive Information on several educational programs in these areas, even to the Climate SES edition, which is a Scenario Exploration System that supports any collective intelligence exercise on climate change and sustainability topics. BOKU plans the exchange. Representatives of all partners will participate to all the events.

Comments: In this task BOKU as a leader and expert in the lifelong learning had a chance to introduce the LATEST project to the COMMISSION'S DIRECTORATE-GENERAL FOR EDUCATION AND CULTURE the [Yann-Maël BIDEAU](#). The exchange with Commission's Directorate-General for Agriculture is planned beyond the project duration.

BOKU as the active member of eucen has been attended on 18.4.2024 the eucen Seminar Across the Atlantic 2024 where the special focus was given to the [Yann-Maël BIDEAU](#), DG EAC, European Commission who also presented the EU approach towards micro credentials. . The Seminar has brought together a group of 68 participants interested to hear what was happening in US, Canada and Europe in the area of micro-credentials. Initiatives such as DIGI COMP, GREEN COMP, micro credentials development and promoting sustainability are in the focus of the EU. We therefore wanted to introduce LATEST to international audiences and show our pathways in supporting SDG's development, green economy, up/re skilling strategies and innovative teaching methods towards micro credential development. Furthermore, LATEST provided a lot of research and analysis to identify needs and gaps in the education of sustainable agriculture and we wanted to share these pathways with international audiences in order to share and benefit from various experiences and practices. BOKU as the leader of task 2.4 has a more relevant networks and engagements in the promotion of SDG4, which was the main reason why we changed the exchange to the Commission's Directorate - General for Agriculture for Education. The project partners are planning to work on the new proposal and to use all relevant information provided in LATEST research such as competence mapping, identified skills needs, learning outcomes, innovative teaching methods and micro credentials. This would be a great potential to share with the Commission's Directorate - General for Agriculture for Education. The project coordinator will contact the Commission's Directorate - General for Agriculture for Education and try to set up an online meeting.

### Steps Taken:

On April the 9<sup>th</sup> Christina Paulus as the active member of the Steering Committee EUCEN has been presenting for the OECD "**Higher education institutions as catalysts for lifelong learning. A focus on flexible learning formats and green competences**" where the LATEST project and its main goals has been presented (Picture 1 and 2)



Picture 1

### Examples – projects LATEST and USAGE NG (Erasmus +)

- A focus to provide skills in agricultural engineering for the workplace by further promoting the green and digital transition and to increase the employability of citizens in the agricultural sector - **European Skills Agenda**
- **LATEST (Local-focused AgTech Education for Successful Ag Transitions)** investigates the societal challenges of climate change by identifying and reducing skill mismatches in the field of AgTech <https://latest-project.eu/>
- **USAGE NG (Up Skilling Agricultural Engineering Next Generation)** investigates EU initiatives in a synergetic relationship in digital transformation and climate mitigation for the green skill development in AgTech <https://usage-ng.boku.ac.at/>

www.eucen.eu



Picture 2

The event focused on the Challenges of universities in upskilling and reskilling for green transition emphasizing the following points:

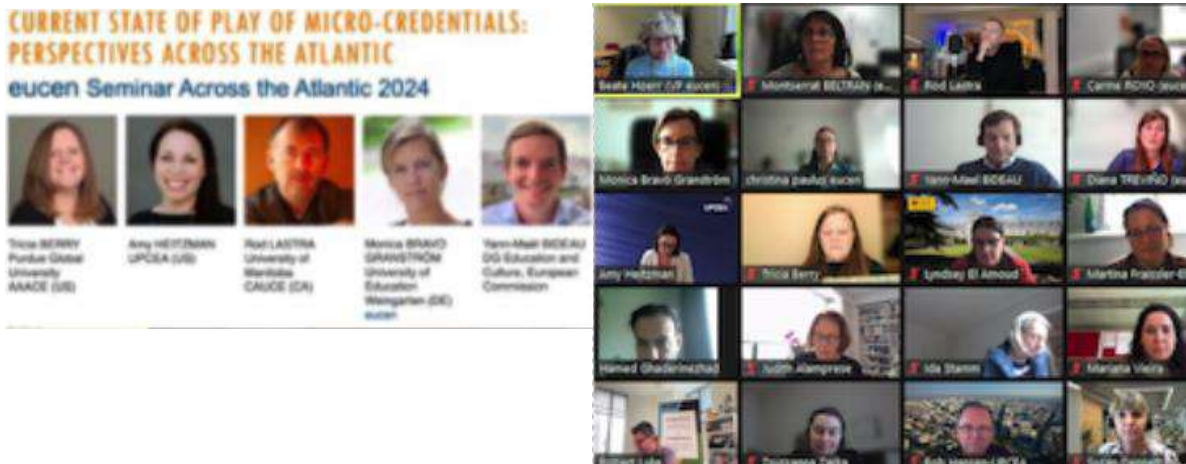
- Active communication with representatives from labour market
- Professionals need flexible learning formats to work and study in parallel or to study at workplace
- To consider a balance between work and family life
- A balanced curricula between theory and practice, university programmes are research- and evidence-based
- To ensure inclusiveness and reasonability of new learning programmes
- Scarcity of ready-made teachers on green competences, to motivate and train teachers
- Flexible and combined learning – f2f, online, video, paper, self-learning
- University as an organisational showcase for sustainability throughout teaching, research, and societal activities
- A growing variety of flexible learning formats – micro-credential programmes, tailor-made training programmes for organisations
- A learner-centred curricula development and study approach - individual and group learning, physical and e-learning, guided and self-learning
- Stakeholders' interest on ULLL is growing, favouring longer professional study programmes à To think and take time to discuss with each other!
- Specific calls for developing green competences by governments
- Equal treatment of learners and teachers need continuous actions
- A heterogenous picture of educational systems in Europe
- Bureaucratical limitations between educational systems, e.g. to develop joint cross-border micro-credential programmes

Considering all this information LATEST project was presented as an example of a good practice fostering all these challenges within the focus on climate change and transition towards resilient agriculture (Picture 2).

### **The eucen Seminar Across the Atlantic on micro-credentials**

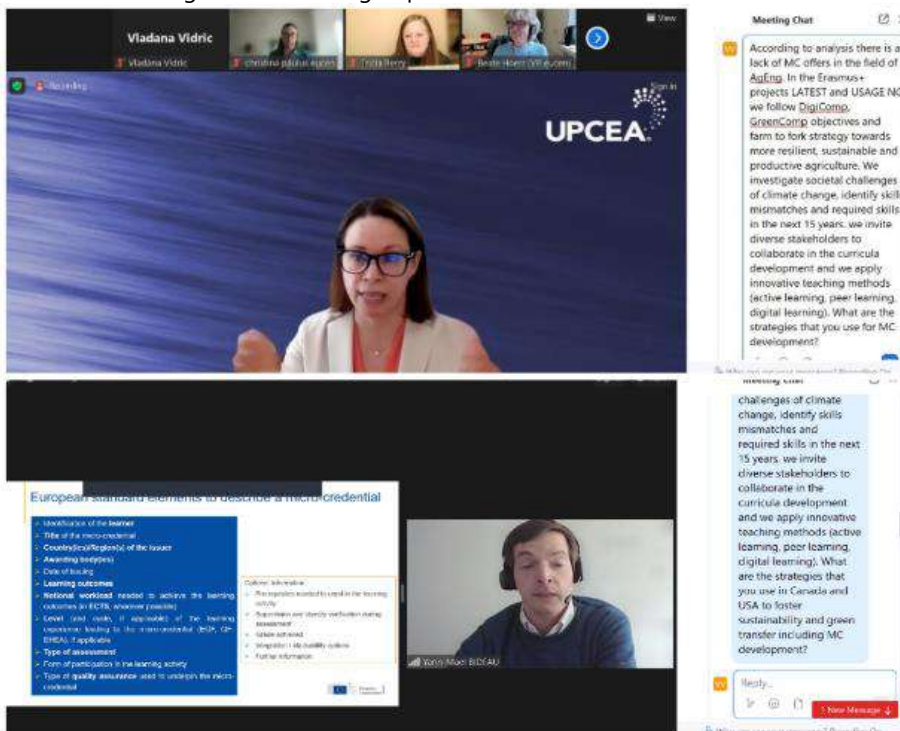
Christina Paulus and Vladana Vidric has been attended on 18.4.2024 the eucen Seminar Across the Atlantic 2024. The Seminar has brought together a group of 68 participants interested to hear what was happening in US, Canada and Europe in the area of micro-credentials. The seminar included very interesting and enlightening set of presentations and discussions. The panel formed by representatives of AAACE, UPCEA, CAUCE, DG EAC and eucen, managed to present the key elements of this topic in both continents.

Picture 3: The eucen Seminar Across the Atlantic 2024 via ZOOM



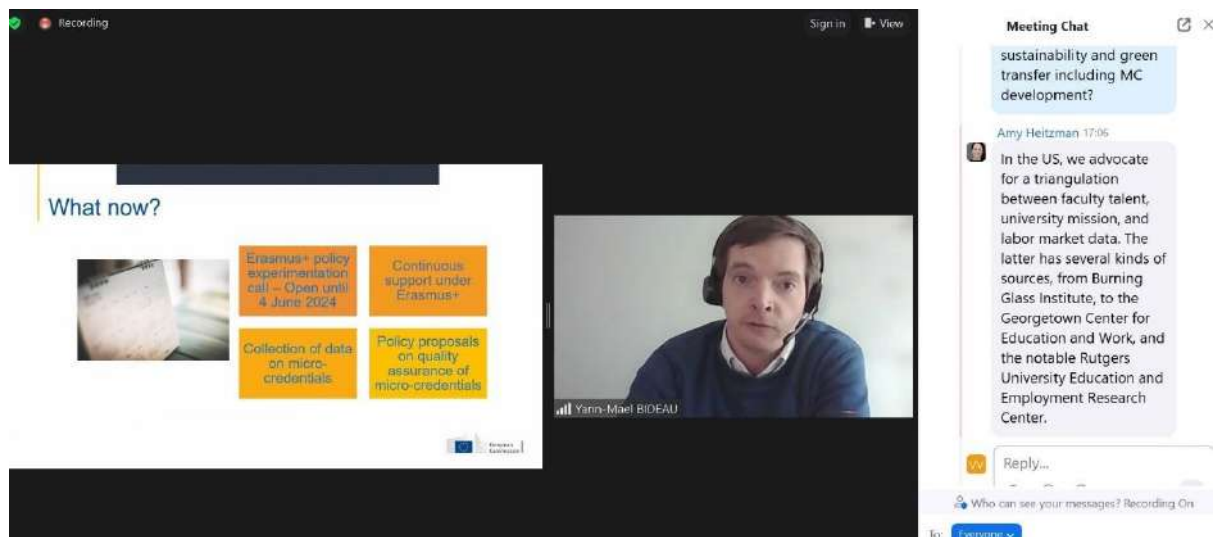
Special focus was given to the [Yann-Maël BIDEAU](#), DG EAC, European Commission who also presented the EU approach towards micro credentials. BOKU as the LATEST partner has introduced LATEST approach and methodology towards more sustainable Agriculture fostering EU initiatives such as Digi Comp and Green Comp, with the project main objectives. BOKU has introduced a question **“What are the strategies that you use in Canada and USA to foster sustainability and green transfer including micro credential development?”** for the other attendees beyond the EU borders (Picture 4).

Picture 4: Providing and introducing a question.



The answers were discussed online and, in the chat, highlighting the collaboration between universities, technology innovations and labour force needs and showing the synergies among each other. The US approach highlights importance of the triangulation between the faculty talent, university mission and its the goals regarding lifelong learning, and labour market data introducing the main sources such as the Georgetown Center for Education and Work, Rutgers University Education and Employment Research Center (Picture 5).

Picture 5: The answer on the LATEST question with the [Yann-Maël BIDEAU](#), DG EAC, European Commission in background



### **EUCEN Conference at University College Cork in Ireland**

From the 29th to the 31st of May Christina Paulus and Vladana Vidric attended the 54th eucen Conference in Cork. The biggest conference on lifelong learning has gathered over 200 participants from Europe, America and Asia working together on the "University Lifelong Learning leading positive change in challenging times" and exploring three different areas:

- ULLL as a vehicle for empowering learners to succeed in a complex and uncertain world
- Institutions of lifelong learning? The challenge in adapting the university to the new reality
- Exploring the reach of ULLL beyond the university. A focus on partnership-building and case studies of good practice

Picture 6: The 54th EUCEN conference in Cork



More than 40 abstracts have been presented in Cork either as a poster or as a presentation. Altogether, lots of discussion and sharing, and many ideas to take home. On Thursday 30<sup>th</sup> May Christina Paulus and Vladana Vidric has introduced LATEST project in the session “Putting the Flexibility in ULLL” with the paper presentation title **“Re/Up skilling the agricultural labour force: Micro-credentials as an important part of the LLL strategy”**.

Picture 7: LATEST part in the presentation



**Re/Upskilling the agricultural labour force - Micro-credentials as an important part of the LLL strategy**

Systematic overview of the Erasmus+ projects LATEST, USAGE NG, LI4LAM to share examples of good practices.

Vladana Vidric, Christina Paulus, Astrid Steinwöcker  
Department for Lifelong Learning  
BOKU University



**LATEST – Local focused AgTech Education for Successful Agricultural Transitions**

- Erasmus+ projects LATEST aims in addressing the main issues of the different actors of the labour market (industry, governmental and non-governmental associations, consultants and farmers).
- Modules from partner countries EQF level 7 towards Joint Master Program
- LATEST investigates the societal challenges of climate change by identifying and reducing skill mismatches in the field of AgTech.
  - It analyses and investigates existing EU training offers,
  - ensure coherence between academic training offer and demand in up skilling by identifying skills required on the labour market in the next 15 years,
  - integrates relevant AgTech innovative pedagogical tools into curricula,
  - ensure learner centred approach in the micro-credential developments
  - and supports the inclusion of AgTech in Master's level curricula
- How? Desktop research analysis, 89 survey requests sent to 84 HEIs in 11 countries, Focus group analysis

 BOKU 25 surveys completed have generated data on 70 programs at the EQF levels 5-8 (+ 13 LLL programs).

The presentation was well received and BOKU had chance to exchange an example of a good practice and expertise regarding lifelong learning strategy implementation and micro credentials development (Picture 8).

Picture 8: BOKU presenting LATEST at the eucen conference.



**Status:**

BOKU as the leader of the 2.4 task has been actively using all the relevant Networks to whom is a member in order to promote LATEST project as the initiative towards green and resilient agriculture and lifelong learning as an example of a good practice. In these activities BOKU has introduced the main LATEST objectives following the EU initiatives such as GreenComp, DigiComp, and FarmtoFork strategy ensuring the quality and transparency. BOKU introduced through the Erasmus+ project LATEST to the relevant EU stakeholders the importance of green skilling, climate change mitigation and sustainability. Furthermore, BOKU will bring potential collaboration among the partners and other universities in such events by sharing the synergies and common goals for the further steps.

The next steps to take might go beyond the project duration and are engagements of the project partners in the exchange with Commission's Directorate-General for Agriculture.