Interreg CENTRAL EUROPE

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AGRI-DIGITAL GROWTH

D.3.1.1
Transnational workshop involving the quadruple helix actors to validate the Precision Faming Skills demand across CE

Summary

A. Workshop CONTEXT

A transnational workshop was organized hybrid in concomitance with EIMA international 2024 on 7th of November 2024, with regional decision-makers to promote transnational collaboration and policy alignment. This workshop provided an opportunity to contribute to the realization and update of Regional Innovation Strategies for Smart Specialization (RIS3) in the regions of Central Europe.

The workshop brought together key stakeholders from different regions (and quadruple helix levels) to discuss common challenges and opportunities related to Precision Farming (PF) manufacturing and to identify areas for sector renovation. Discussions focused on leveraging the strengths of each region to create a competitive advantage in the PF industry.

The outcomes of the workshop were used to inform decision-makers about possible strategies for the development and update of RIS3 in the participating regions.

Overall, the workshop was an important step toward building and validating a sustainable and collaborative knowledge transfer ecosystem for PF in Central Europe. Its outcomes also facilitated transnational partnerships and promoted the harmonization of regional strategies, helping to drive innovation and growth in the industry.

B. Agenda

INTERREG CENTRAL EUROPE AGRI-DIGITAL GROWTH

Precision Farming Ecosystem

Innovation and knowledge across Europe

7th November 2024,
Time: 15:30 - 17:30 EIMA International
Venue: Notturno room (EIMA Viale Aldo Moro, 16, 40127 Bologna BO, Italia)

Agenda

Thursday 07.11.2024

Time	Topic	Presenter
15.30 - 15.35	Welcome and introduction	Stefano Zamparo, Fondazione Fenice
15.35 - 16.00	Precision farming Vision and market overview	• Maria Teresa Maschio, FederUnacoma • Federico Menna, Eit Digital • Riccardo Velasco, Crea
16.00 - 16.10	Agri-Digital-Growth	Luca Masiero, Crea
16.10 - 16.30	Precision Farming Ecosystem to promote collaboration across Central Europe	• Patrick Marcuzzo, Crea • Lucrezia Collu, Eit Digital • Riccardo Malavasi, Fondazione Fenice
16.30 - 16.40	Q&A Round table	
16.40 - 16.50	Precision Farming Specialist	Riccardo Malavasi, Fondazione Fenice
16.50 - 17.20	Open Discussion: Competence Framework across Veneto and Emilia Romagna Region	• Veneto Region (tbc) • Emilia Romagna Region (tbc)
17.20 - 17.30	Conclusion and networking	Stefano Zamparo, Fondazione Fenice

C. Workshop Results

The transnational workshop brought together a diverse array of stakeholders from across Central Europe, representing the topics of academia, industry, government and civil society in alignment with the quadruple helix framework. The event facilitated in-depth discussions and exchanges that have shed light on the current state, challenges and opportunities within the Precision Farming (PF) sector. The key outcomes of the workshop are summarized below.

Validation of Demand for Precision Farming Skills

A consistent theme throughout the workshop was the confirmation of a critical skills gap in PF. Presentations by experts such as Maria Teresa Maschio president of FederUnacoma and Riccardo Velasco director of CREA Viticulture Enology underscored the urgency of addressing these deficiencies. Participants agreed on the need for collaborative efforts to bridge this gap through targeted education and training initiatives. The workshop highlighted the significant role that digital agriculture can play in attracting younger generations to the field. This represents not only a solution to the aging farmer demographic but also an avenue for sustaining innovation and competitiveness in agriculture.

Research, Innovation, and Education: An Interdependent Triad

Andrea Conti (in behalf of Federico Menna) from EIT Digital stressed the interdependence of research, innovation and education, pointing out that innovation cannot thrive without robust educational frameworks and research initiatives. The workshop discussions echoed this sentiment with stakeholders acknowledging the necessity of creating tailored educational pathways that integrate cutting-edge research into practical applications. The alignment of research and industry needs is as a cornerstone for fostering innovation and addressing the evolving requirements of farmers and the broader PF ecosystem.

Ecosystem Building and Knowledge Transfer

The presentations emphasized the importance of ecosystem development for effective knowledge transfer. Stefano Zamparo (in behalf of Riccardo Malavasi) from Fondazione Fenice outlined a hub-and-spoke model for a PF knowledge transfer ecosystem, where project partners as founders of the ecosystem act as hubs and SMEs, among others, function as spokes and benefit of the ecosystem

services. This model showed its potential to enhance collaboration and facilitate the adoption of advanced technologies. The role of SMEs as innovation drivers and feedback providers was particularly emphasized, showcasing their ability to ensure that research outputs align with practical farming needs.

Fig.1: from left side: Stefano Zamparo, Maria Teresa Maschio, Riccardo Velasco, Andrea Conti

Italian associated partners representatives joined the presentation and enriched it with their insights were given into two regions, one into the Veneto region by Dr. Nicola Panarello for Veneto regionr and Patrizia Alberti for Emilia-Romagna. The significance of collaboration within the ecosystem was reinforced by Dr. Nicola Panarello, who introduced the Agricultural Knowledge and Innovation System (AKIS). Mr Panarello is officer at Veneto Region and was involved in development of the AKIS for knowledge transformation in the rural areas. AKIS prioritises cooperative multi actor approaches over individualistic endeavors in the agricultural value chain. Furthermore Patrizia Alberti, officer Emilia-Romagna Region gave a presentation on the substantial investment in AKIS by the Emilia-Romagna region which demonstrated a clear commitment to training, consultancy, and dissemination activities, which are strategic for operationalizing these collaborative efforts toward a more digital and smart agriculture.

Fig.2: Dr. Nicola Panarello

Regional Strengths and Harmonization

Another focal point of the workshop was leveraging regional strengths to foster harmonization and transnational cooperation. Therefore, regions can create synergies that drive innovation and growth in the PF sector. Participants highlighted examples such as the Agri-Digital-Growth project, which aims to establish a cooperative ecosystem for intellectual and operational growth in agriculture. These initiatives underscore the importance of regional contributions to a collective, pan-European effort.

Practical Innovations and Farmer Engagement

Practical innovations, such as those in viticulture presented by Patrick Marcuzzo, demonstrated how technology can directly benefit farmers. Drones, sensors, and precision irrigation methods were highlighted as transformative solutions that address immediate agricultural needs. The challenge of translating research into actionable practices was discussed extensively, with a consensus that ongoing dialogue with farmers is critical to ensuring that innovations meet their real-world requirements.

D. CONCLUSION

The workshop marked a significant milestone in addressing the challenges and opportunities in PF across Central Europe. By convening a diverse group of stakeholders, the event fostered a collaborative atmosphere essential for tackling the complex and multifaceted nature of this sector.

A primary takeaway from the workshop is the importance of an integrated approach that combines education, research, and innovation. The presentations and discussions consistently highlighted that no single entity or region can address the skills gap or technological demands of PF in isolation. Instead, success requires a concerted effort to align policies, foster transnational partnerships, and build a sustainable ecosystem for knowledge transfer.

At the heart of this transformation lies the Precision Farming Specialist (PFS), whose role is crucial for driving innovation and sustainability in the agri-food sector. Analyses presented during the workshop and related discussions revealed that while digitalization and advanced technologies offer immense opportunities to enhance efficiency and reduce environmental impact, a significant skills gap persists. This gap is not merely technical, involving knowledge of tools like drones or data management software, but also extends to integrating these technologies into existing agricultural practices to achieve practical and sustainable outcomes.

The role of the PFS is also crucial for ag machinery and precision farming systems producers who will need to integrate more and more of these experts within their organizations providing the industry with more advanced, flexible, adaptive, intuitive and user-friendly products and systems.

While many specialists are proficient in using drones for crop monitoring, they often lack the ability to analyze the collected data to make informed agronomic decisions, such as optimizing irrigation or applying targeted plant protection treatments. Addressing this deficiency calls for targeted training programs tailored to the specific needs of agricultural SMEs. Rather than adopting "one-size-fits-all" solutions, these programs must combine technical training with actionable strategies for practical implementation, ensuring that technological adoption is both economically viable and logistically feasible.

The PFS must not only master the technical aspects of new tools but also adapt them to diverse agricultural contexts. This includes evaluating the costs and benefits of different technologies in a pragmatic way. As a result, these

specialists will not just serve as technical operators but evolve into strategic consultants who can translate technological innovations into tangible improvements in business performance and environmental outcomes.

Finally, the rapid pace of technological advancements and evolving regulations necessitates ongoing education to keep the PFS competitive. Continuous learning will be vital to ensure these professionals remain at the forefront of innovation. Emerging technologies such as autonomous robotics, blockchain, and artificial intelligence will not only become essential tools for these specialists but will also play a pivotal role in broader strategies to transform agriculture into a more digital, sustainable and resilient sector.

In conclusion, the workshop validated the critical role of PFS in addressing the challenges facing the industry. Their ability to bridge the gap between technological advancements and practical application will be central to achieving sustainable growth in the agri-food sector.

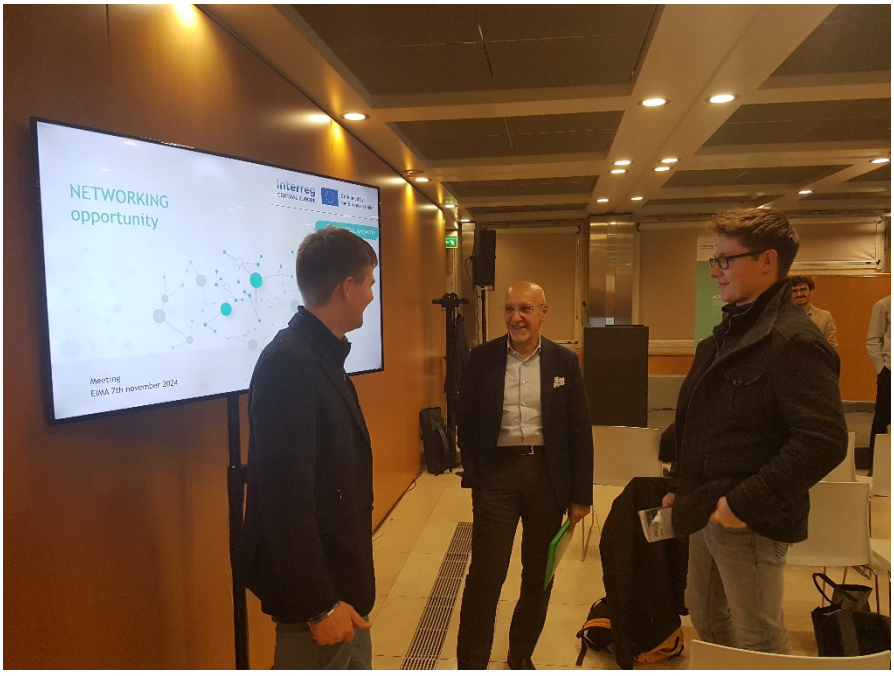

Fig.3: Networking activity after the presentation