EU Danube Region Strategy
PA 8 LIGHTHOUSE

DIGITALIZATION, ARTIFICIAL INTELLIGENCE, METAVERSE & VIRTUAL WORLDS

DAP

Creation, introduction and testing of digital tools in agriculture, Bosnia and Herzegovina

Steinbeis Europa Zentrum Enabling Innovators to Grow
PBN advanced management
Gospodarska zbornica Slovenije Chamber of Commerce and Industry of Slovenia
DANUBE REGION strategy Prosperity through Diversity
Interreg Programme Danube Region
Co-funded by the European Union
REPUBLIC of CROATIA Ministry of Economy
Baden-Württemberg Ministry of Economic Affairs, Labour and Tourism

Basics

Acronym: DAP

Name: Creation, introduction and testing of digital tools in agriculture

Country: Bosnia & Herzegovina

Scoring: 40/50

Key Project Data:

2023-2024

103.180 BAM

Funded by EU4AGRI public call in Bosnia and Herzegovina, with co-financing provided by partner organisations and the contribution of the Faculty of Agriculture, University of East Sarajevo

Contact Persons:

Danijel Mijić

Grujica Vico

daniel.mijic@etf.ues.rs.ba

grujica.vico@pof.ues.rs.ba

https://www.youtube.com/watch?v=WtHj0HfnsFM

Participating Institutions:

- **University of East Sarajevo, Faculty of Agriculture (Coordinator)**
- Association of Women “Hercegovka” Nevesinje
- Centre for Integrative Inclusion of Roma and Romani Women “Otaharin” Bijeljina
- University of East Sarajevo, Faculty of Electrical Engineering
- Digitalni ozon d.o.o. (technology development and support)

Steinbeis Europa Zentrum Enabling Innovators to Grow

PBN advanced management

Gospodarska zbornica Slovenije Chamber of Commerce and Industry of Slovenia

DANUBE REGION strategy Prosperity through Diversity

Interreg Programme Danube Region

Co-funded by the European Union

REPUBLIC of CROATIA Ministry of Economy

Baden-Württemberg Ministry of Economic Affairs, Labour and Tourism

About the project

The **DAP Project** represents an upgrade of previously started research that is continuously implemented by the Faculty of Agriculture of the University of East Sarajevo in cooperation with various partners, and the subject of which is the **creation, testing and implementation of Information and Communication Solutions (ICT solutions) in greenhouse agricultural production.**

Aim:

- Digitize and automate greenhouse management
- Improve productivity and sustainability
- Facilitate knowledge sharing and innovation in agri-tech

- → Farmers gained first-hand insights into the benefits of using digital tools in greenhouse production
- → Created educational materials and tutorials remain available beyond the project's lifetime
- → New research capacities and defined a long-term focus on digital agriculture
- → Linking academia, local communities, and the private sector, ensuring further improvement and continuous upgrading of the platform beyond the initial funding period

Steinbeis Europa Zentrum Enabling Innovators to Grow
PBN advanced management
Gospodarska zbornica Slovenije Chamber of Commerce and Industry of Slovenia
DANUBE REGION strategy Prosperity through Diversity
Interreg Programme Danube Region
Co-funded by the European Union
REPUBLIC of CROATIA Ministry of Economy
Baden-Württemberg Ministry of Economic Affairs, Labour and Tourism

Main Activities

- Implementation of online **monitoring and management systems in greenhouses** of project partners
- Creation and testing of the **PlastenikNET platform**, including multiple modules (administration, online monitoring and management, farmer–advisor interaction, education, and a producer forum)
- Performance upgrade through new research and **continuous testing** in the Faculty's greenhouses.
- **Knowledge transfer** through practical and educational workshops, technical manuals and video tutorials
- **Promotional activities** (website, social media posts, media appearances)
- Project management **and coordination of the working team**

Objectives

- Increase **competitiveness** of greenhouse production
- Bring ICT solutions **closer to small-scale farmers**
- Strengthen cooperation between **academia and practice**
- Ensure the **inclusion of marginalised groups**

Steinbeis Europa Zentrum Enabling Innovators to Grow
PBN advanced management
Gospodarska zbornica Slovenije Chamber of Commerce and Industry of Slovenia
DANUBE REGION strategy Prosperity through Diversity
Interreg Programme Danube Region
Co-funded by the European Union
REPUBLIC of CROATIA Ministry of Economy
Baden-Württemberg Ministry of Economic Affairs, Labour and Tourism

Project Video available on YouTube: Link

Methodology

- Research–demonstration approach
- Iterative development and testing
- Long-term research in Faculty greenhouses
- Participatory training and workshops with producers
- Digital knowledge transfer via the PlastenikNET platform
- Ongoing partnership between academia and private partner

INNOVATION

Integration of IoT sensors, a digital platform, and educational content into a single system for greenhouse production

SUSTAINABILITY

Platform is continuously being improved through the cooperation of the DAP consortium, ensuring its long-term usability and development

REPLICABILTY & SCALABILITY

System is modular, adaptable to greenhouses of different sizes, and can be expanded to other local communities and countries in the Danube Region

DAP
DANUBE REGION strategy Competitiveness
Steinbeis Europa Zentrum Enabling Innovators to Grow
PBN advanced management
Gospodarska zbornica Slovenije Chamber of Commerce and Industry of Slovenia
DANUBE REGION strategy Prosperity through Diversity
Interreg Programme Danube Region
Co-funded by the European Union
REPUBLIC of CROATIA Ministry of Economy
Baden-Württemberg Ministry of Economic Affairs, Labour and Tourism

DAP

Results and Outcome

- Implementation of online monitoring and management systems in ten greenhouses at partner sites
- Development and launch of the PlastenikNET platform
- Three practical workshops (30 participants) and eight educational workshops (200 participants)
- Produced educational materials, technical manuals, and video tutorials

Conclusion: Small-scale producers can successfully adopt digital solutions when these are accessible, user-friendly, and accompanied by proper expert support.

Barriers

Development of innovative digital products in agriculture requires significant

- **Resources + Time**

for research, testing, and adjustment to small-scale farmers' needs. In addition, the market is still in an early phase of technology adoption, which requires sustained efforts in education and awareness-raising.

Tips

The key is connecting

- **academia**
- **the private sector**
- **and farmers**

to co-develop solutions that are practical, affordable, and long-term sustainable.

Steinbeis Europa Zentrum Enabling Innovators to Grow
PBN advanced management
Gospodarska zbornica Slovenije Chamber of Commerce and Industry of Slovenia
DANUBE REGION strategy Prosperity through Diversity
Interreg Programme Danube Region
Co-funded by the European Union
REPUBLIC of CROATIA Ministry of Economy
Baden-Württemberg Ministry of Economic Affairs, Labour and Tourism