VITALISING ICT RELEVANCE IN AGRICULTURAL LEARNING

PROJECT OVERVIEW

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V I R A L

Kick-off meeting

Banja Luka, 21-23.01.2020.

Figure 1: Role of ICT in agriculture

ICTs bridge the gap between agricultural researchers, extension agents and farmers thereby enchancing agricultural, production.

ICTs assist with implementing regulatory policies, frameworks and ways to monitor progress.

ICTs widen the reach of local communities, including women and youth, and provide newer business opportunities, thereby enhancing livelihoods.

ICTs improve access to climate-smart solutions as well as appropriate knowledge to use them.

ICTs increase access to financial services for rural communities, helping to secure savings, find affordable insurance and tools to better manage risk.

ICTs provide actionable information to communities and governments on disaster prevention, in real-time, while also providing advice on risk-mitigation techniques.

ICTs help deliver more efficient and reliable data to comply with international traceability standards.

ICTs facilitate market access for inputs as well as product marketing and trade in a variety of ways.

Role of ICTs in Agriculture

- Regulatory & policy
- Agricultural extension & advisory service
- Promote environmentally sustainable farming practices
- Disaster management & early warning system
- Enhanced market access
- Food safety & traceability
- Financial inclusion, Insurance & risk management
- Capacity-building & empowerment

Source: FAO-ITU E-agriculture Strategy Guide

First proposal - 2018
Leading partner - University Džemal Bijedić, Mostar

- *lack of expertise*
☞ *faculties of Electrical Enginering*
☞ *multidiciplinary teams at unviersity level (FEE + FA)*

- *lack of business sector*
☞ "Plantaže", "Agro-voće", Jaffa Komerc"

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PROJECT AIM

Overall project aim of VIRAL to support university and business collaboration (UBC) through accelerating the use of ICT across Western Balkans agro-communities. The concept is led by relevant regional AET facilities and based on enabling the use of different ICT solutions/techniques/tools in the classroom and outside of it in order to obtain desired integration of agriculture and it engineering which in effect reinforces UBC across regional agro communities.

SO1: to increase the capacity of HEIs to apply and generate ICT in AET and practice

☞ Highly educated and skilled agriculture labour force is mandatory to **create, share and use knowledge** and so is the case with a vibrant system of **teaching, research and innovation** to be able to tap into global knowledge, assimilate and adapt it to the local need.

☞ Universities responsibility could be better served when **HEIs are current in terms of modern ICT infrastructure and tools**.

☞ Thus, VIRAL offers a robust **training component for teaching staff, students, non-formal educator and extension services providers** whereby ICT solutions/techniques/tool are debated and use explained.

☞ Comprehensive set of training looks into importance/general use of ICT in agriculture, **robotic management, software applications, drones and GIS**.
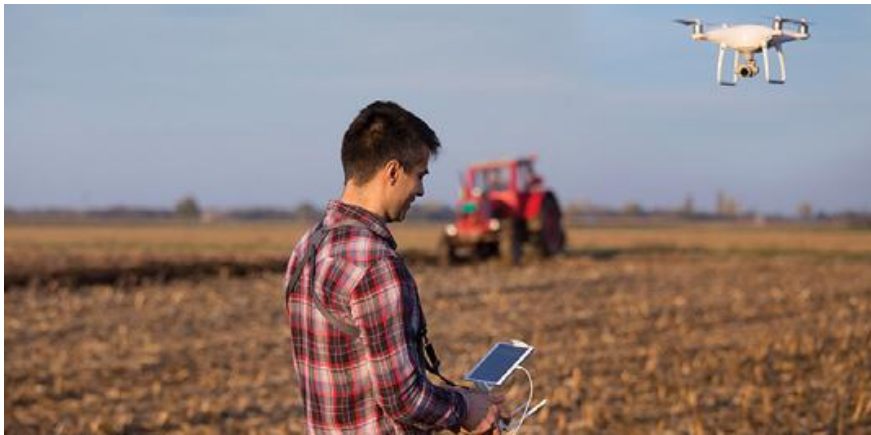

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SO2: to improve effectiveness and employability of AET graduates

Focusing on employability helps universities **to attract and retain high quality students** and maintain a competitive advantage, while for students employment outcomes form key motivation for pursuing certain education fields. With this in mind VIRAL puts emphasis on:

☞ **ridging the existing skills gap**: It is important to engage with businesses to facilitate closer correspondence between the skills universities teach and the skills businesses want in the agriculture field.

☞ **integrating employability into curricula**: in seeking ways to integrate employability-focused moments into curricula VIRAL uses employer relationships as a means of providing meaningful problem-based learning experiences. These are evidenced by organization of hackathons pitching competitions as capacity building tool for HEIs and output for use in industry. New knowledge is also generated through active involvement of students with prospective business operators networking at the hackathons.

SO 3: **to boost academic-business cooperation regional platform for sustainability, networking and exchange within agricultural and technological communities**

Stemming from successful implementation of the SO 1 and 2 which provide a structured capacity building frame, SO 3 represents a **peak of efforts that build standing formal networking and alliance among ICT and agricultural SMEs with HEIs** in the form of a spin off *EXPO event* and by:

☞ **providing IT services** appropriate to the needs of regional agro-communities including both AET and producers, increasing their efficiency & sustainability,

☞ **ever-expanding knowledge base** constructed around a user-friendly knowledge co-creation and transfer in the field that goes both ways from university to business and vice versa,

☞ **competitive and available agricultural integrated IT solutions** for agricultural business operators, **increasing efficiency and profit-making ability of the sector**.

Work packages

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Work package 1 - **Preparation**

Work package type and ref.nr	PREPARATION	WP.1
TITLE	PREPARATION	

Tasks	1.1 To carry out comparative analysis of university-business cooperation in agriculture in the Western Balkans and EU and develop policy recommendations 1.2 To carry out needs analyses and map knowledge transfer potential 1.3 To create web portal 1.4 To organize Introduction conference		
Estimated Start Date (dd-mm-yyyy)	15-10-2019	Estimated End Date (dd-mm-yyyy)	28-02-2020
Lead Organisation	P8 UNIVERSITY MARIBOR (UM), P2 UNIVERSITY OF MOSTAR DZEMAL BIJEDIĆ (UNMO),		

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Deliverables/results/outcomes

Work Package and Outcome ref.nr	WP.1, outcome 1.1.
Title	Comparative analysis report with recommendations

Work Package and Outcome ref.nr	WP.1, outcome 1.2.
Title	Needs assessment/knowledge transfer update report

Work Package and Outcome ref.nr	WP.1, outcome 1.3.
Title	Web portal

Work Package and Outcome ref.nr	WP.1, outcome 1.4.
Title	Introduction conference

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Work package II - Building competences in AET

Work package type and ref.nr	DEVELOPMENT		WP.2
TITLE	BUILDING COMPETENCES IN AET		

Tasks	2.1 To organize educational seminar on ICT in agriculture 2.2 To organize 2 training sessions 2.3 To purchase and install equipment 2.4 To organize 2 workshops and create University ToT teams and develop ToT course toolkits 2.5 To develop project applications for (inter)national grant-schemes 2.6 To create Practical Guide for the use of ICT in AFT
	2.7 To organize 2 workshops and create crash course on ICT in agriculture

Estimated Start Date (dd-mm-yyyy)	15-02-2020	Estimated End Date (dd-mm-yyyy)	14-03-2022
Lead Organisation	P6 UNIVERSITY DONJA GORICA (UDG), P7 WAGENINGEN UNIVERSITY (WU)		

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Deliverables/results/outcomes

Work Package and Outcome ref.nr	WP.2, outcome 2.1.
Title	Improved competences of use of ICT in agriculture

Work Package and Outcome ref.nr	WP.2, outcome 2.2.
Title	Purchased and installed equipment

Work Package and Outcome ref.nr	WP.2, outcome 2.3.
Title	Created University ToT teams

Work Package and Outcome ref.nr	WP.2, outcome 2.4.
Title	ToT course toolkits

Work Package and Outcome ref.nr	WP.2, outcome 2.5.
Title	Project applications for selected funding schemes

Work Package and Outcome ref.nr	WP.2, outcome 2.6.
Title	Practical Guide for the use of ICT in AET

Work package III - Development of student pitching competitions - Hackatons

Work package type and ref.nr	DEVELOPMENT	WP.3
TITLE	DEVELOPMENT OF STUDENT PITCHING COMPETITIONS – HACKATONS	

Tasks	3.1 To organize an introduction web-streaming seminar on student pitching competitions 3.2 To organize study visit to international student pitching competition 3.3 To develop student pitching competitions 3.4 To implement student pitching competitions 3.5 To create video compendium on ICT solutions in agriculture developed by students

Estimated Start Date (dd-mm-yyyy)	15-04-2020	Estimated End Date (dd-mm-yyyy)	31-08-2022
Lead Organisation	P14 INNOVATION AND ENTREPRENEURSHIP CENTER TEHNOPOLIS (IECT), P15 INNOVATION CENTER BANJA LUKA (ICBL), P16 FOUNDATION FOR INNOVATION AND TECHNOLOGY DEVELOPMENT (INTERA), P17 MONTENEGRIN ASSOCIATION FOR NEW TECHNOLOGIES (MANT)		

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Deliverables/results/outcomes

Work Package and Outcome ref.nr	WP.3, outcome 3.1.
Title	Improved teachers and students knowledge on student pitching competitions – hackatons

Work Package and Outcome ref.nr	WP.3, outcome 3.2.
Title	Implemented student pitching competitions - hackatons

Work Package and Outcome ref.nr	WP.3, outcome 3.3.
Title	Video compendium

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Work package IV - Creation of university-business cooperation platform

Work package type and ref.nr	DEVELOPMENT	WP.4
TITLE	CREATION OF UNIVERSITY-BUSINESS COOPERATION PLATFORM	

Tasks	4.1 To organize introduction seminar on university-business cooperation 4.2 To organize development workshops on university-business cooperation 4.3 To create EXPO identity, founding documents, guidelines and materials 4.4 To constitute EXPO managing structures and plan of work 4.5 To implement EXPO 4.6 To extend EXPO membership and revise university-business cooperation work plan		
Estimated Start Date (dd-mm-yyyy)	15-07-2020	Estimated End Date (dd-mm-yyyy)	30-09-2022
Lead Organisation	P8 UNIVERSITY MARIBOR (UM), P1 UNIVERSITY OF BANJA LUKA (UNIBL)		

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Deliverables/results/outcomes

Work Package and Outcome ref.nr	WP.4, outcome 4.1.
Title	Improved knowledge on university-business cooperation

Work Package and Outcome ref.nr	WP.4, outcome 4.2.
Title	Set of EXPO founding documents, guidelines and materials

Work Package and Outcome ref.nr	WP.4, outcome 4.3.
Title	Constituted EXPO managing structures and plan of work

Work Package and Outcome ref.nr	WP.4, outcome 4.4.
Title	Organized EXPO

Work Package and Outcome ref.nr	WP.4, outcome 4.5.
Title	EXPO membership extended

Work package V - Knowledge transfer across agri-community

Work package type and ref.nr	DEVELOPMENT		WP.5
TITLE	KNOWLDEGE TRANSFER ACROSS AGRI-COMMUNITY		

Tasks	5.1 To implement student crash courses 5.2 To organize knowledge transfer seminar for extension service providers 5.3 To organize knowledge transfer seminar for agronomists and agriculture cooperatives 5.4 To organize knowledge transfer seminar for policy makers in AET 5.5 To organize knowledge transfer seminar for agriculture businesses		
Estimated Start Date (dd-mm-yyyy)	15-10-2021	Estimated End Date (dd-mm-yyyy)	30-04-2022
Lead Organisation	P9 UNIVERSITY OF AGRONOMIC SCIENCES AND VETERINARY MEDICINE OF BUCUREŞTI (USAMV), P3 SVEUČILČIŠTE U MOSTARU (SUM)		

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Deliverables/results/outcomes

Work Package and Outcome ref.nr	WP.5, outcome 5.1.
Title	Improved student employability

Work Package and Outcome ref.nr	WP.5, outcome 5.2.
Title	Improved knowledge of extension service providers about ICT in agriculture

Work Package and Outcome ref.nr	WP.5, outcome 5.3.
Title	Improved knowledge of agronomists and agriculture cooperatives about ICT in agriculture

Work Package and Outcome ref.nr	WP.5, outcome 5.4.
Title	Improved knowledge of policy makers about ICT in agriculture

Work Package and Outcome ref.nr	WP.5, outcome 5.5.
Title	Improved knowledge of agriculture businesses about ICT in agriculture

Work package VI - Quality assurance

Work package type and ref.nr	QUALITY ASSURANCE	WP.6
TITLE	QUALITY ASSURANCE	

Tasks	6.1 To organize Quality team meetings 6.2 To carry out 2 progress evaluations 6.3 To carry out external evaluation 6.4 To carry out verification of costs

Estimated Start Date (dd-mm-yyyy)	15-10-2019	Estimated End Date (dd-mm-yyyy)	14-10-2022
Lead Organisation	P4 UNIVERSITY IN TUZLA (UNTZ), P13 WESTERN BALKANS INSTITUTE (WEBIN)		

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Deliverables/results/outcomes

Work Package and Outcome ref.nr	WP.6, outcome 6.1.
Title	Ensured high quality implementation & results

Work Package and Outcome ref.nr	WP.6, outcome 6.2.
Title	Progress evaluation reports

Work Package and Outcome ref.nr	WP.6, outcome 6.3.
Title	External evaluation report

Work Package and Outcome ref.nr	WP.6, outcome 6.4.
Title	Auditing report

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Work package VII - Dissemination & Exploitation

Work package type and ref.nr	DISSEMINATION & EXPLOITATION	WP.7
TITLE	RESULTS DISSEMINATION & EXPLOITATION	

Tasks	7.1 To provide for project web portal regular maintenance 7.2 To organize internal institutional dissemination events 7.3 To carry out small-scale improvements of agriculture teaching practice 7.4 To carry out media promotion 7.5 To organize dissemination conference		
Estimated Start Date (dd-mm-yyyy)	15-10-2019	Estimated End Date (dd-mm-yyyy)	14-10-2022
Lead Organisation	P13 WESTERN BALKANS INSTITUTE (WEBIN), P5 UNIVERZITET BIJELJINA (UBN)		

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Deliverables/results/outcomes

Work Package and Outcome ref.nr	WP.7, outcome 7.1.
Title	Updating of web portal

Work Package and Outcome ref.nr	WP.7, outcome 7.2.
Title	Wider audience at home institution aware of the project

Work Package and Outcome ref.nr	WP.7, outcome 7.3.
Title	Small-scale improvements in agriculture teaching practice

Work Package and Outcome ref.nr	WP.7, outcome 7.4.
Title	Disseminated project results

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Work package VIII - Management

Work package type and ref.nr	MANAGEMENT		WP.8
TITLE	MANAGEMENT		

Tasks	8.1 To organize Kick off meeting and and deliver PM training 8.2 To organize Steering Committee meetings 8.3 To provide for smooth daily project management and administration		
Estimated Start Date (dd-mm-yyyy)	15-10-2019	Estimated End Date (dd-mm-yyyy)	14-10-2022
Lead Organisation	P1. UNIVERSITY OF BANJA LUKA (UNIBL)		

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Deliverables/results/outcomes

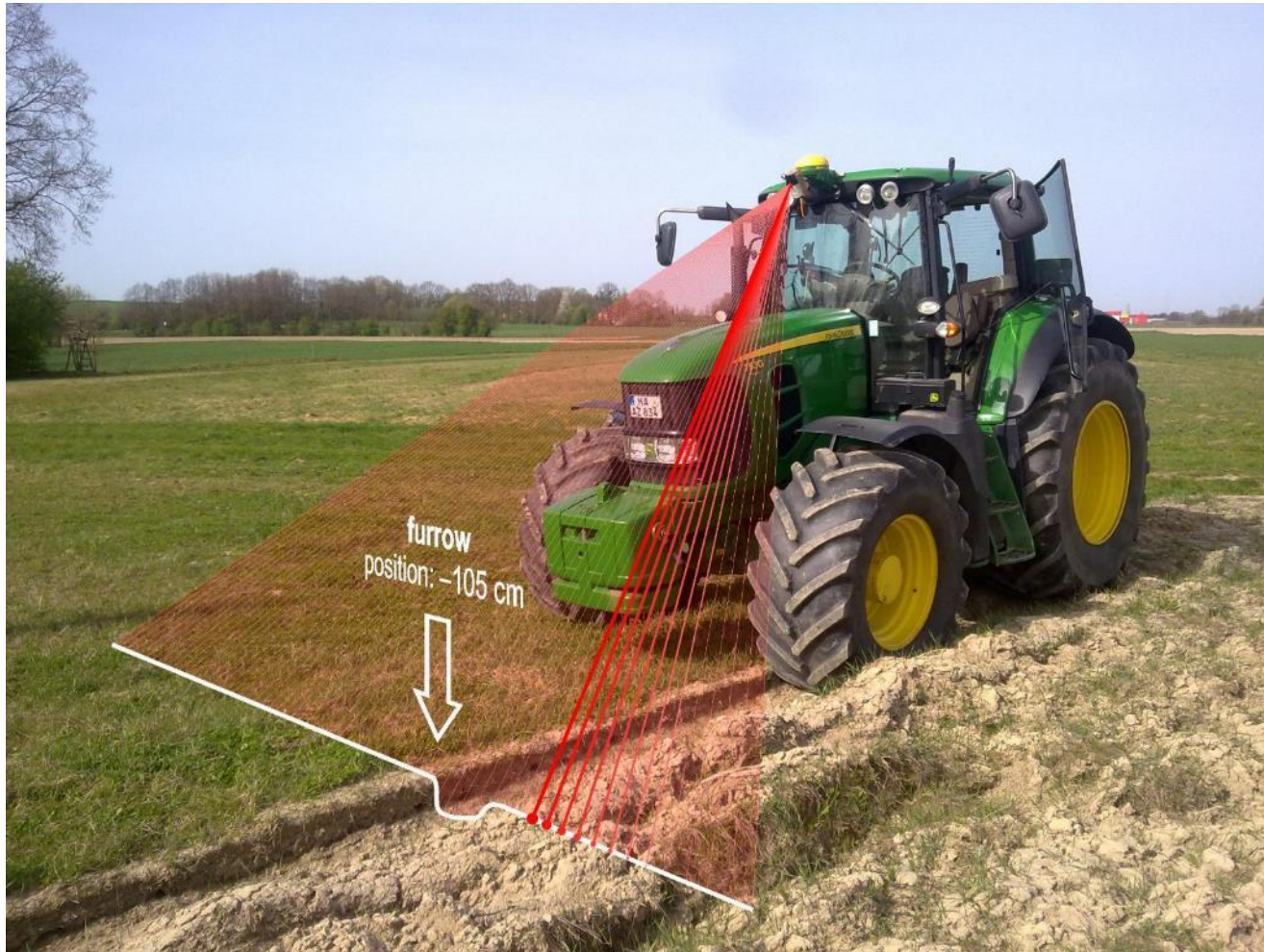| Work Package and Outcome ref.nr	WP.8, outcome 8.1.
Title	Project kick off meeting held, enhanced competences of project teams to manage EU grants

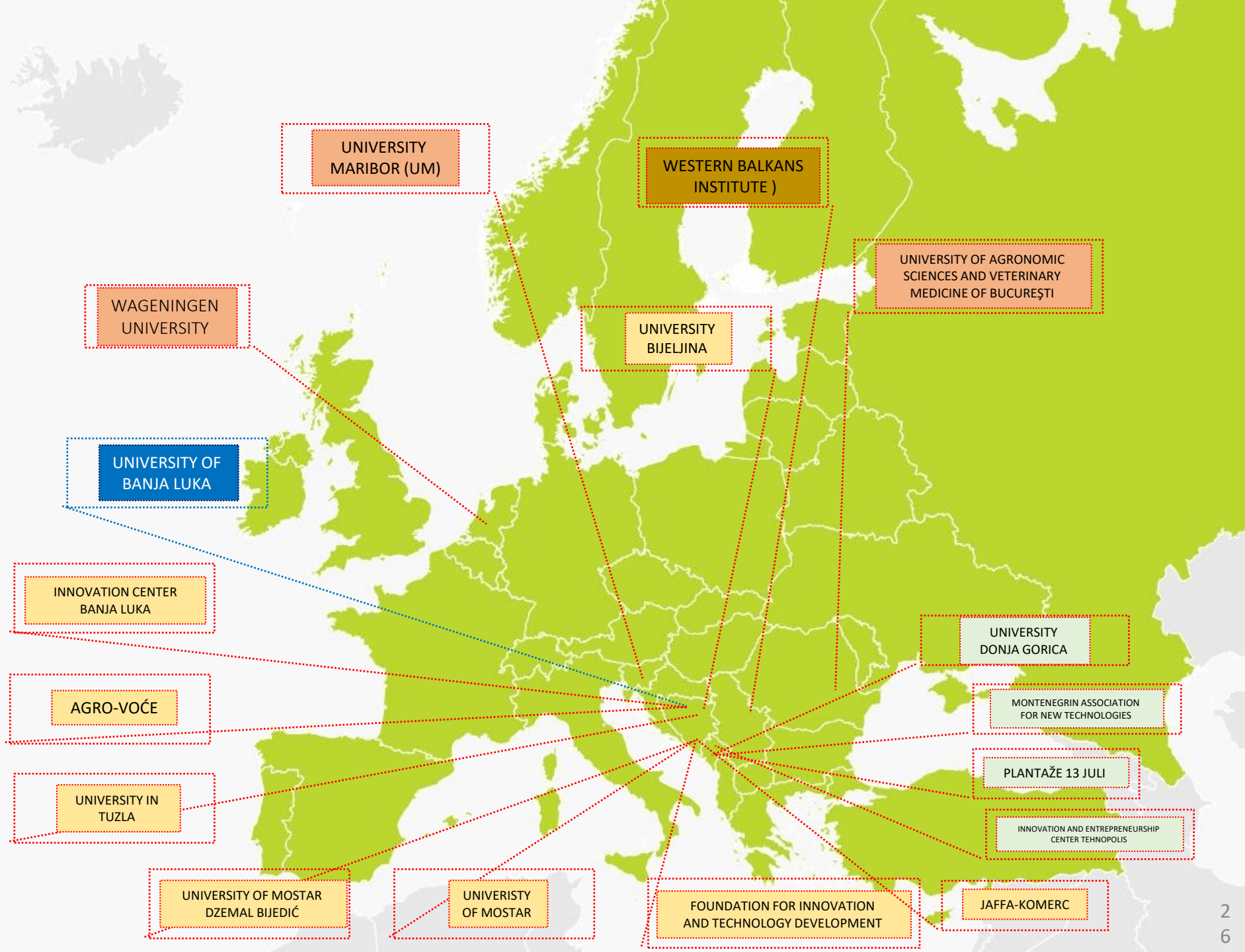| Work Package and Outcome ref.nr	WP.8, outcome 8.2.
Title	Project implementation Manual

Work Package and Outcome ref.nr	WP.8, outcome 8.3.
Title	Smooth project management, administration and reporting ensured

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Partners
(university, company, NGO)

UNIVERSITY MARIBOR (UM)

WESTERN BALKANS INSTITUTE)

UNIVERSITY OF AGRONOMIC SCIENCES AND VETERINARY MEDICINE OF BUCUREŞTI

WAGENINGEN UNIVERSITY

UNIVERSITY BIJELJINA

UNIVERSITY OF BANJA LUKA

INNOVATION CENTER BANJA LUKA

UNIVERSITY DONJA GORICA

AGRO-VOĆE

MONTENEGRIN ASSOCIATION FOR NEW TECHNOLOGIES

PLANTAŽE 13 JULI

UNIVERSITY IN TUZLA

INNOVATION AND ENTREPRENEURSHIP CENTER TEHNOPOLIS

UNIVERSITY OF MOSTAR DZEMAL BIJEDIĆ

UNIVERISTY OF MOSTAR

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Thank you !

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