Dissemination meeting

Miljan Cvetković

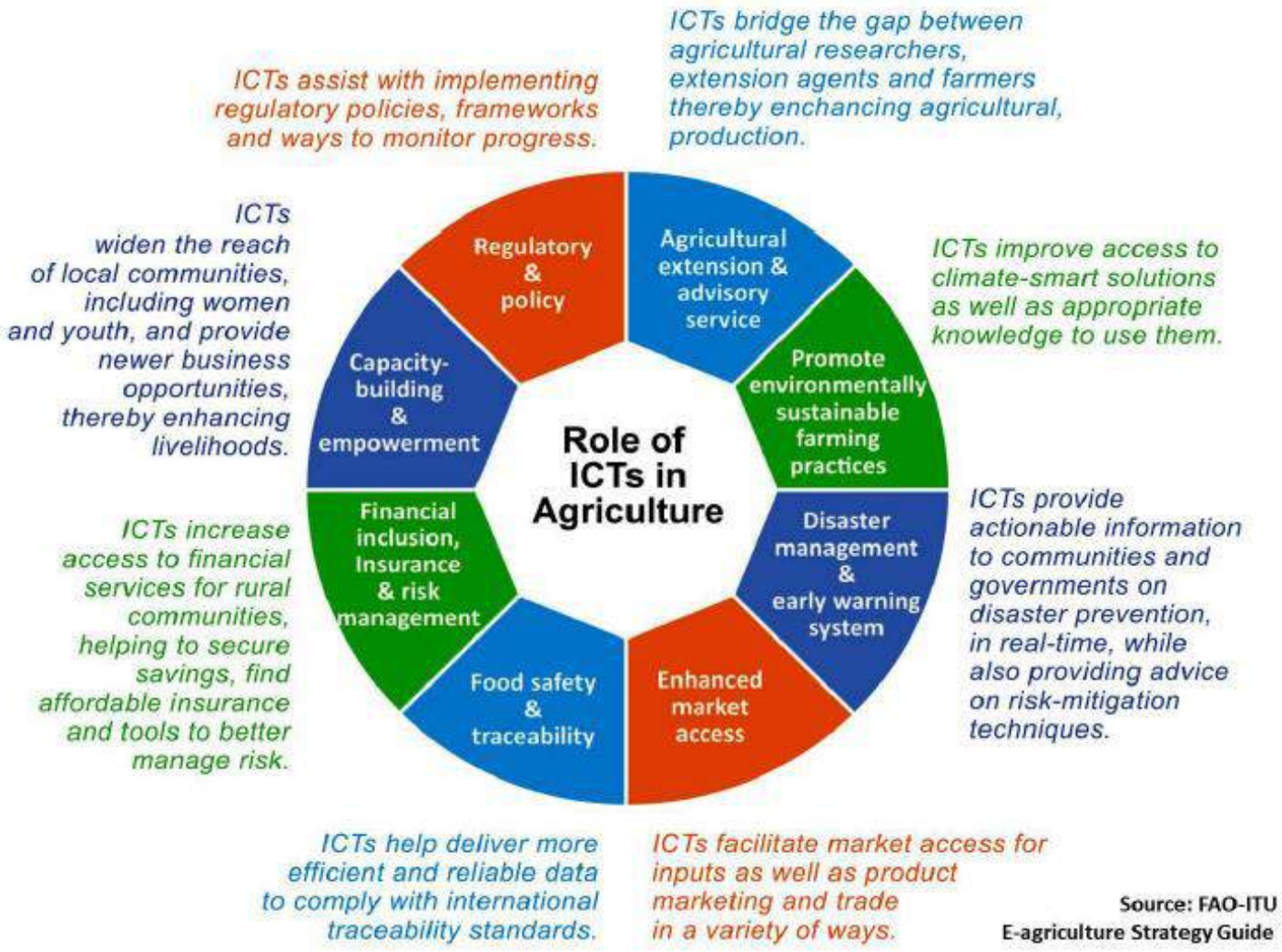
Vitalisnig ICT relevance in Agriculture Learning

VIRAL

Bijeljina, 25.09.2020.

Co-funded by the Erasmus+ Programme of the European Union

Figure 1: Role of ICT in agriculture



Source: FAO-ITU
E-agriculture Strategy Guide

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.

ICT for Agriculture

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**.

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**.

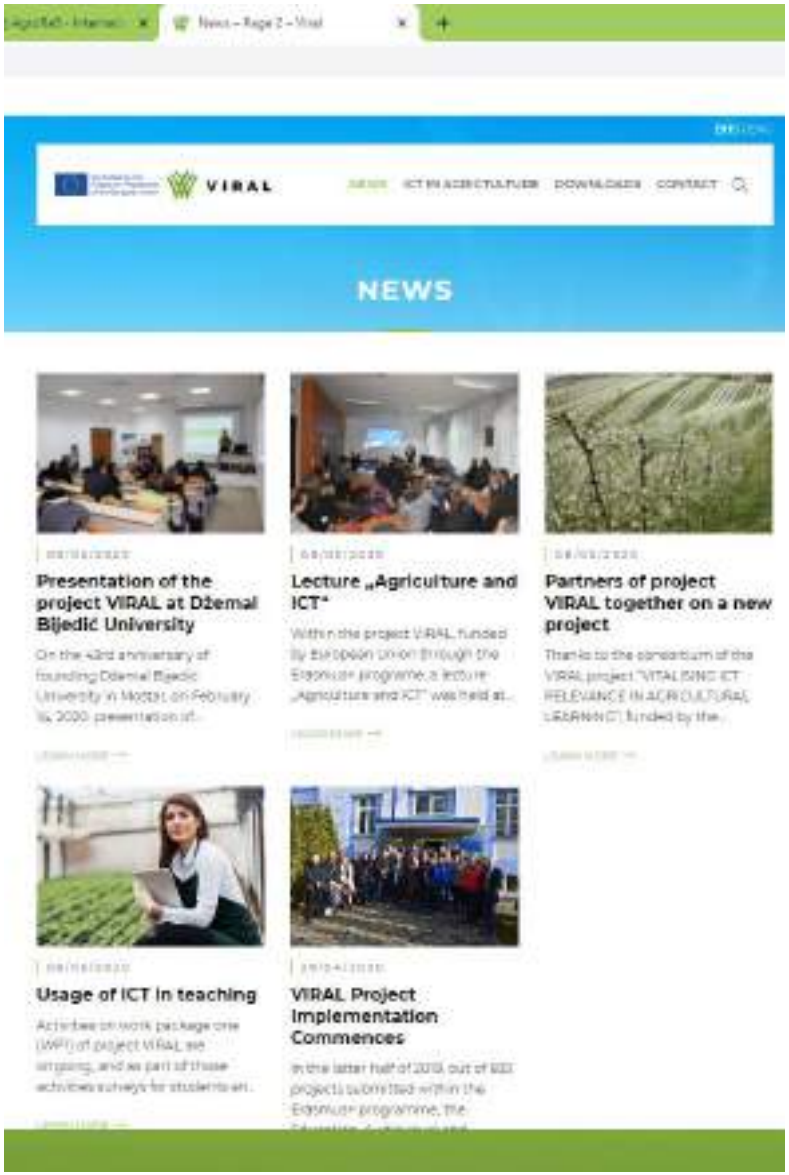
Work packages

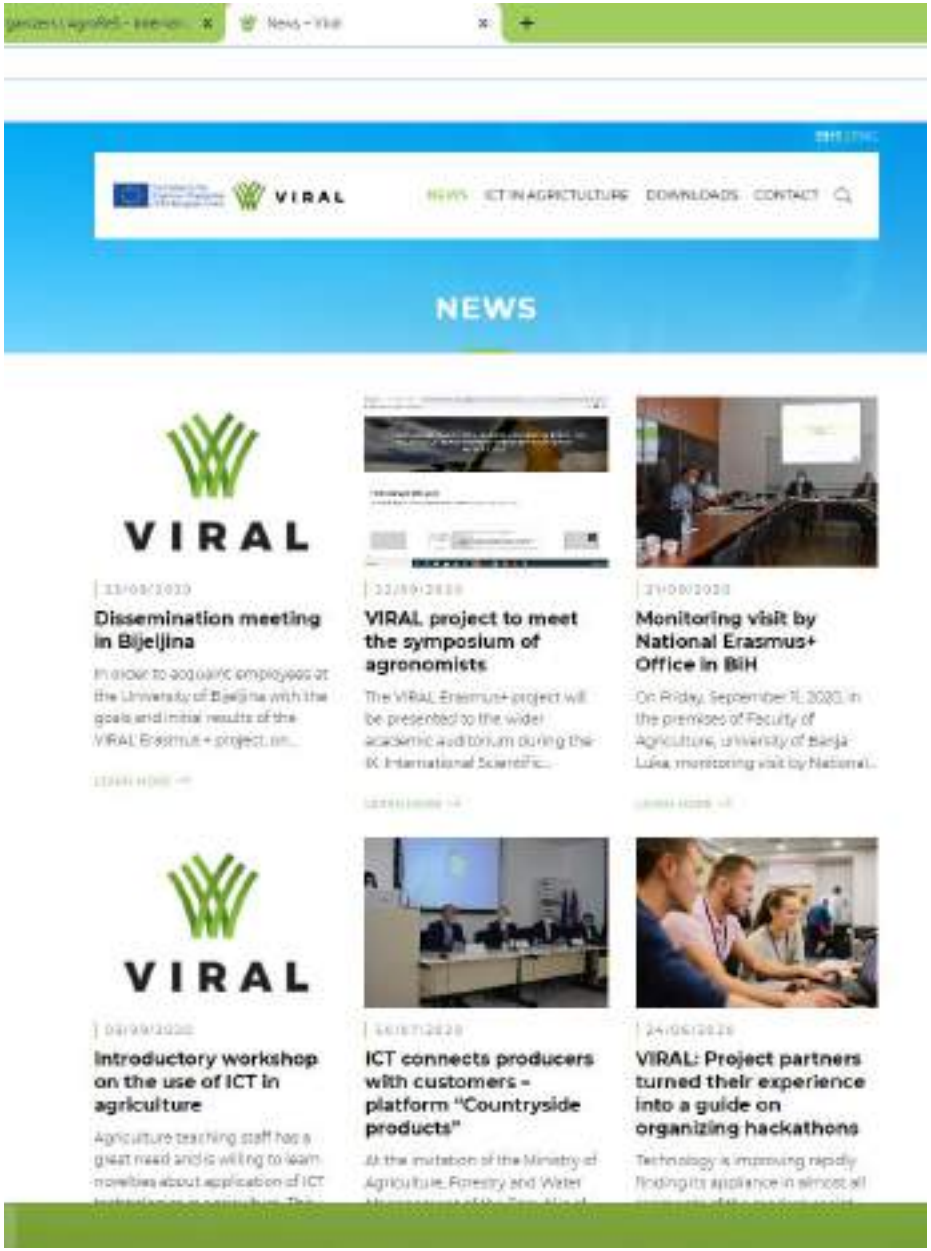
Work package 1 - Preparation

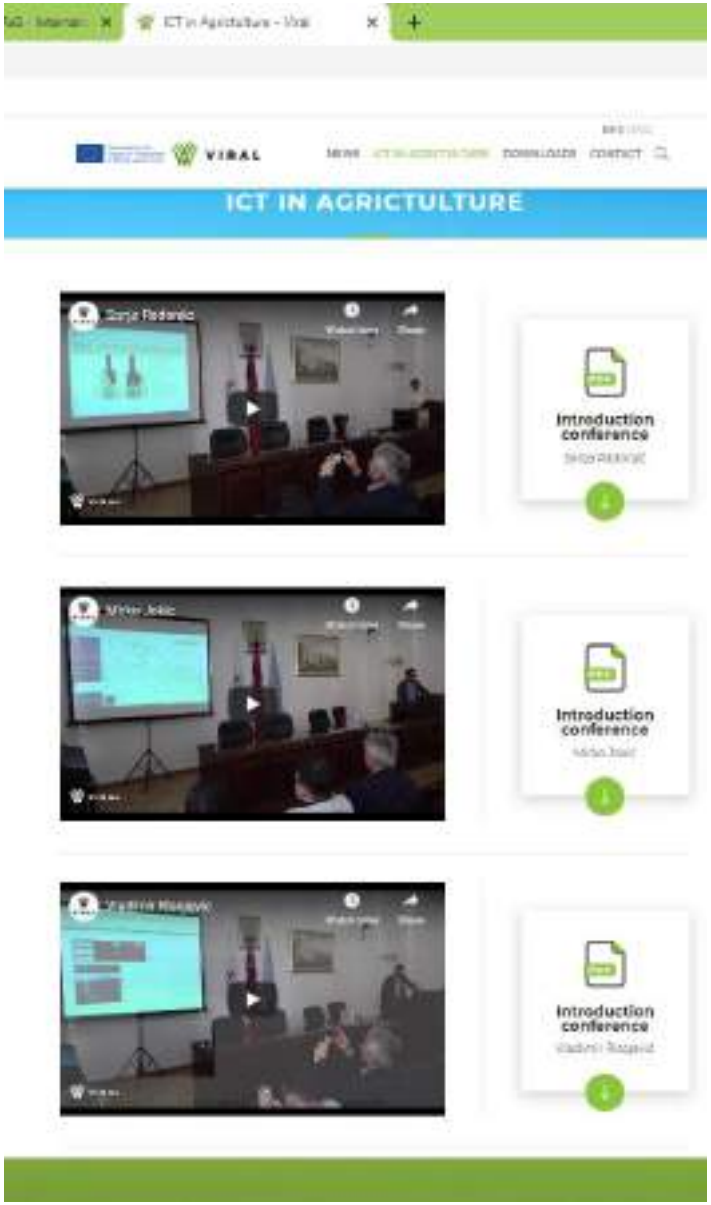
Work package type and ref.nr	PREPARATION	WP.1
TITLE	PREPARATION	

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

http://viralerasmus.org/en/news/






ICT in Agricultura - Viral
VIRAL
ICT IN AGRICTULTURE
Introduction conference
Introduction conference
Introduction conference


ICT in Agricultura - Viral
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Introduction conference
Introduction conference
Introduction conference
Field Robot - FARMBEA
Vitalising ICT Relevance in Agricultural Learning

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Najnovije | Republika Srpska | BiH | Srbija | Region | Svijet | Hronika | Privreda | Kultura | Društ

22/01/2020 | 11:58 → 12:33 | izvor: SRNA

Za napredak značajno uvođenje informacionih tehnologija

Uvođenje informaciono-komunikacionih tehnologija u poljoprivredu neophodno je radi smanjenja troškova, a u Republici Srpskoj bi u ovoj godini trebalo da bude nabavljen softver za satelitsku analizu u ovoj oblasti, rečeno je danas u Banjaluci na konferenciji o informacionim tehnologijama u agraru.

Viši stručni saradnik u Ministarstvu poljoprivrede, šumarstva i vodoprivrede Republike Srpske Mirko Jokić istakao je da su informacione tehnologije sve više zastupljene u poljoprivrednoj proizvodnji i da će nabavkom softvera biti identifikovane poljoprivredne kulture u Srpskoj što je značajno za utvrđivanje agrarnih politika i podsticajnih mjera, kao i zdravstvenog stanja usjeva.

PRIMJENA IKT U POLJOPRIVREDI Nove tehnologije vitalne za smanjenje troškova

WWW.SRPSKAINFO.COM / PETAK 24. JANUAR 2020. / Društvo / 9

KONFERENCIJA O PRIMENI IKT U POLJOPRIVREDI

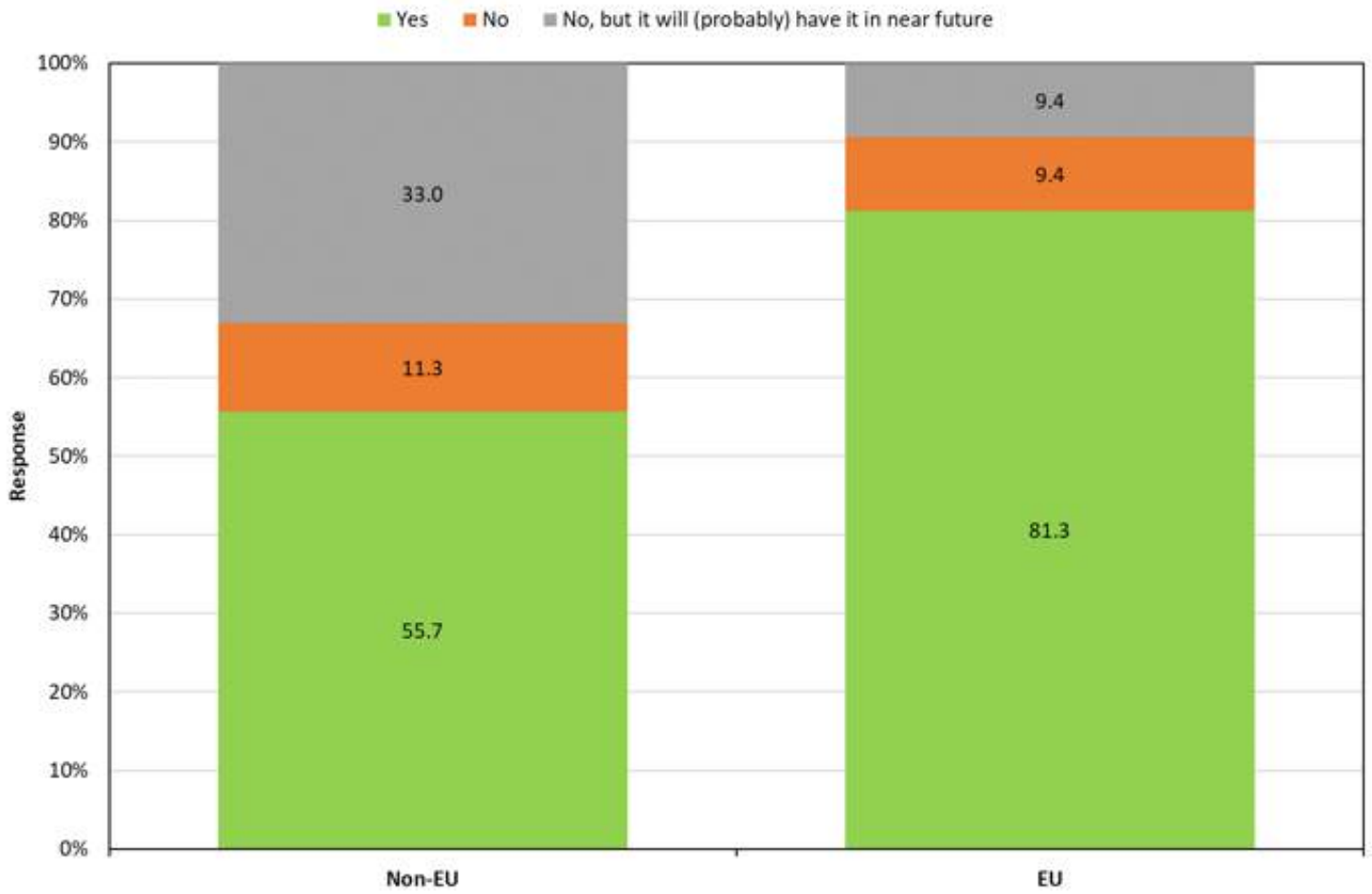
TEHNOLOGIJE SU VITALNE ZA SMANJENJE TROŠKOVA

Primena novih tehnologija u poljoprivredi važna je, pre svega, zbog smanjenja troškova, ali i povećanje konkurentnosti poljoprivredne proizvodnje, ističu stručnjaci u ovoj oblasti.

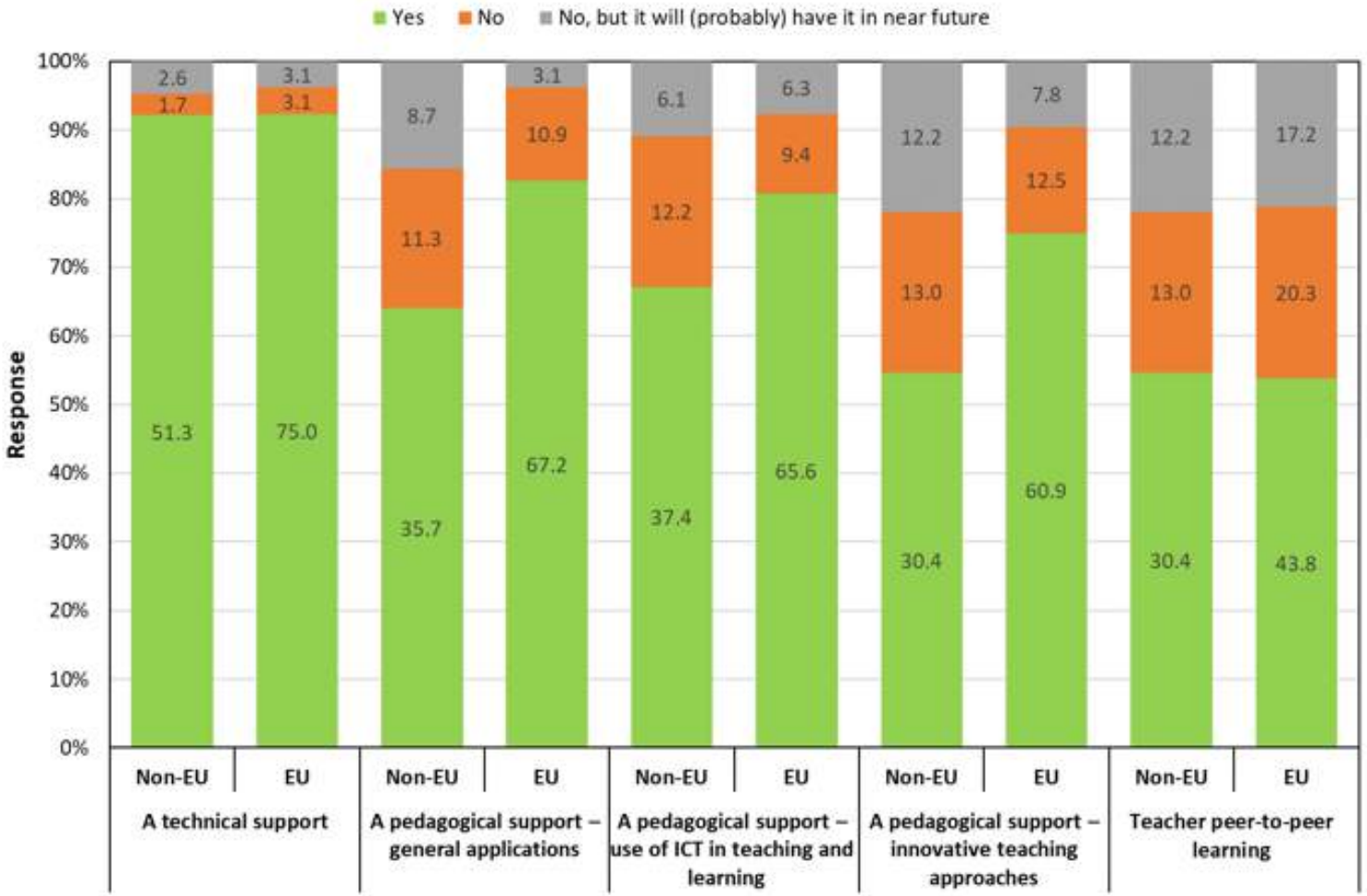
Projekat „Viral" je deo Erasmus plus programa, a namenjen je jačanju kapaciteta u visokom obrazovanju za

Part 1 (institution's ICT strategy, availability and use of ICT in teaching)

Q1: Please indicate whether your institution (University/Faculty) include ICT use in its vision and supported it by specific policies and strategies.

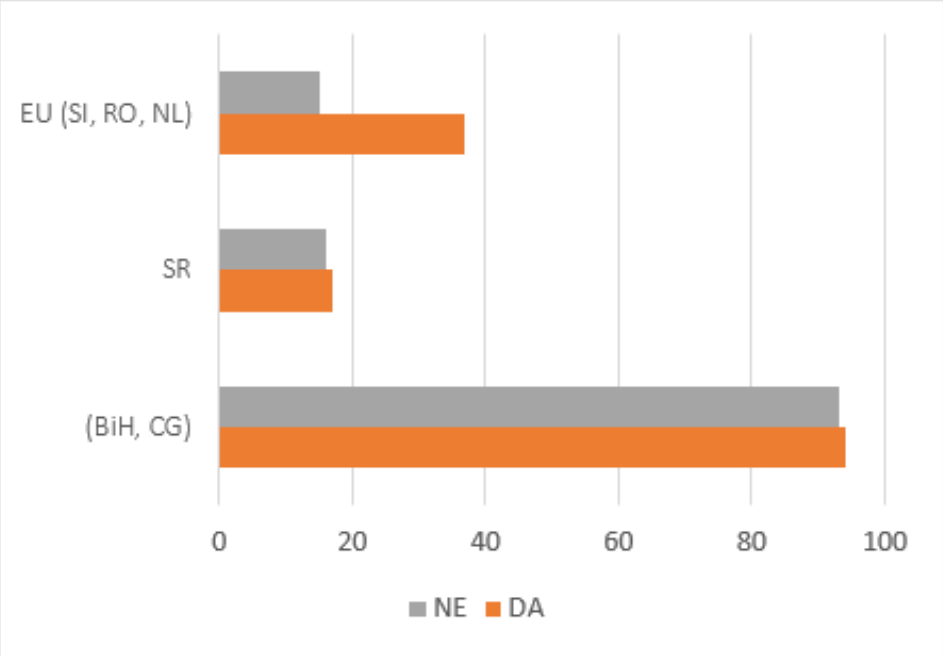


Q2 (Q1a): What types of support are available at your institution (University/Faculty)?



We obtained interesting data by analyzing the responses of agricultural producers. By comparing data on the use of information technology in agricultural production itself, we obtained data that show that there is a big difference between EU countries on the one hand and BiH, Montenegro and Serbia on the other. In BiH, Montenegro and Serbia, this ratio is almost equal, while, as expected, ICT is used much more in all three EU countries.

Grafikon 2.: Da li koristite IT na vašoj farmi?
Graph 2.: Do you use ICT on your farm?



Work package II - Building competences in AET

Bedir Tekinerdogan	Architecting IoT Based Farm Management Information Systems
Cagatay Catal	Machine Learning/Deep Learning in Agriculture
Qingzhi Liu	IoT in Agriculture
Ayalew Kassahun	Business-IT Alignment in Agri-Food Supply Chains
João Valente	Drones in Agriculture

Work package II - Building competences in AET

VIRAL

viraleurasia.org

The first workshop on ICT in Agriculture

IoT and GIS in Agriculture

Agriculture teaching staff has a great need and is willing to learn novelties about application of ICT technologies in agriculture. This is also one of the most important goals of the Erasmus + VIRAL project. The First workshop on ICT in agriculture in a series of trainings within the VIRAL project will be organized on September 29-30, 2020. in Tuzla. The lectures are professors and researchers from the University of Tuzla, University of Maribor, University of Sarajevo and University of Banja Luka. The activity is implemented within the work package 2 (WP 2.1) whose coordinators are the Wageningen University & Research and the University of Donja Gorica. We invite you to take part in this event.

AGENDA

University of Tuzla, Faculty of Electrical Engineering

September 29th, 2020

TIME	TOPIC	SPEAKER
10:30-11:00	Registration	
11:00-11:15	Welcome speech	Rector of the University in Tuzla Dean of the Faculty of Electrical Engineering
11:15-11:30	Project implementation status	MILJAN ĆVETKOVIĆ
11:30-12:00	***Location Intelligence and Trends in Geographic Information Systems: Use Cases from Bosnia and Herzegovina***	ALMIR KARABEGOVIĆ, PROFESSOR University in Sarajevo, Faculty of Electrical Engineering GALAS Center for Geospatial Research Sarajevo

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12:00-12:30	*Application of GIS in Agriculture*	MILAN ŠEVIĆ, MS University in Banja Luka Faculty of Agriculture
12:30-13:00	*Applications of Digital Signal Processing in Agriculture*	ZDENKA BABIĆ, PROFESSOR University in Banja Luka, Faculty of Electrical Engineering
13:00-13:15	**Discussion**	
13:15-14:30	Lunch break	
14:30-15:00	***Smart Farming: A Case of Automatic Cow Milking System***	ANJELA GUCIĆ, ASSOCIATE PROFESSOR University in Tuzla, Faculty of Electrical Engineering

WAGENINGEN UNIVERSITY & RESEARCH

UDG

VIRAL

viraleurasia.org

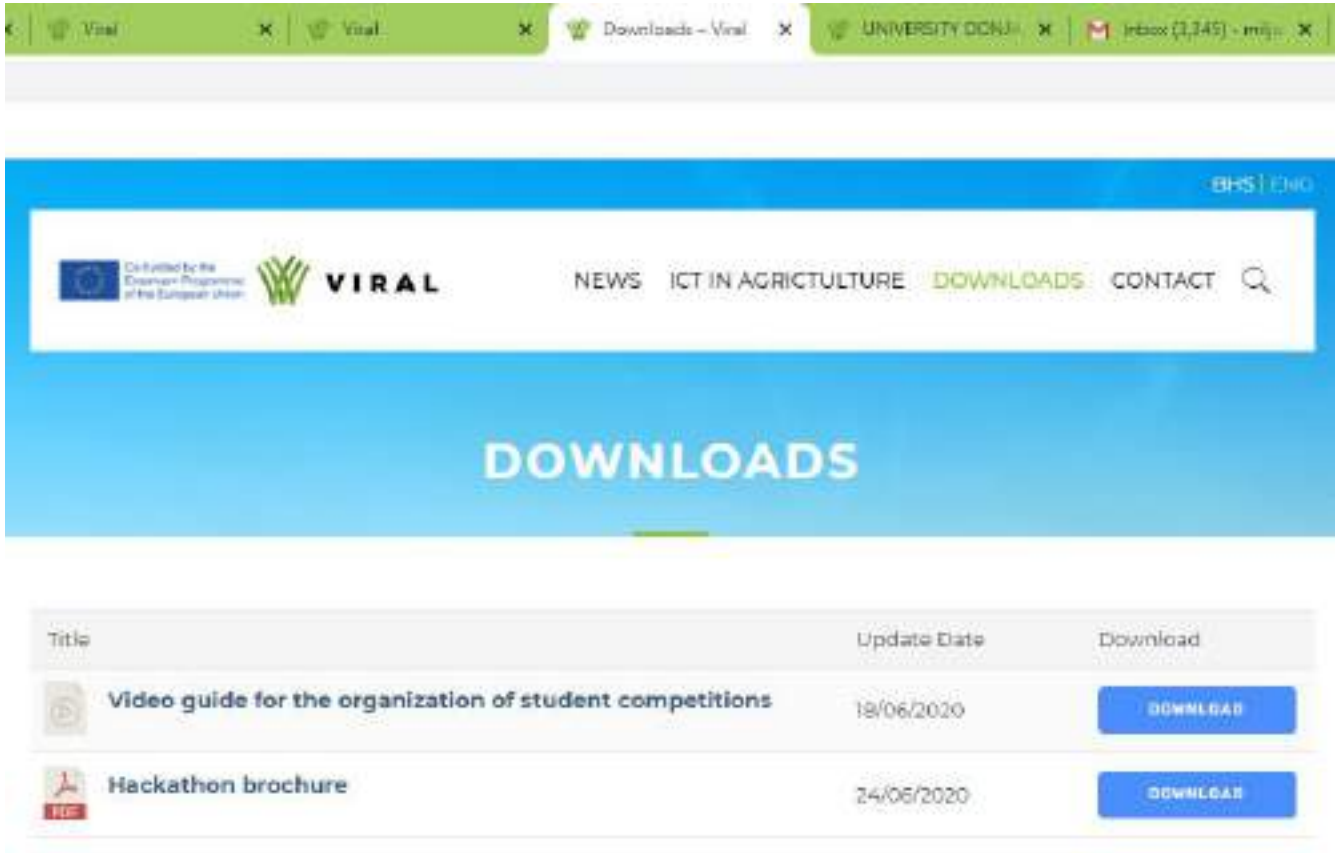
15:00-15:30	Incorporating smart IoT agriculture systems into engineering curriculum	ALMA ŠEHOVAC, ASSISTANT PROFESSOR University in Tuzla Faculty of Electrical Engineering
15:30-16:00	***Remote Monitoring and Control System for Greenhouse Based on IoT***	ANA ĐURIŠIĆ, ASSISTANT PROFESSOR University of Novi Department of Electronic
16:00-16:30	Summary/Questions	
16:30-18:00	Consortium meeting	
19:00-22:00	Social dinner	

Work package II - Building competences in AET

WAGENINGEN
UNIVERSITY & RESEARCH

UDG

Work package III - Development of student pitching competition - hackatons



INTERA technology park

Tehnopolis

ICBL Innovation Centre Banja Luka

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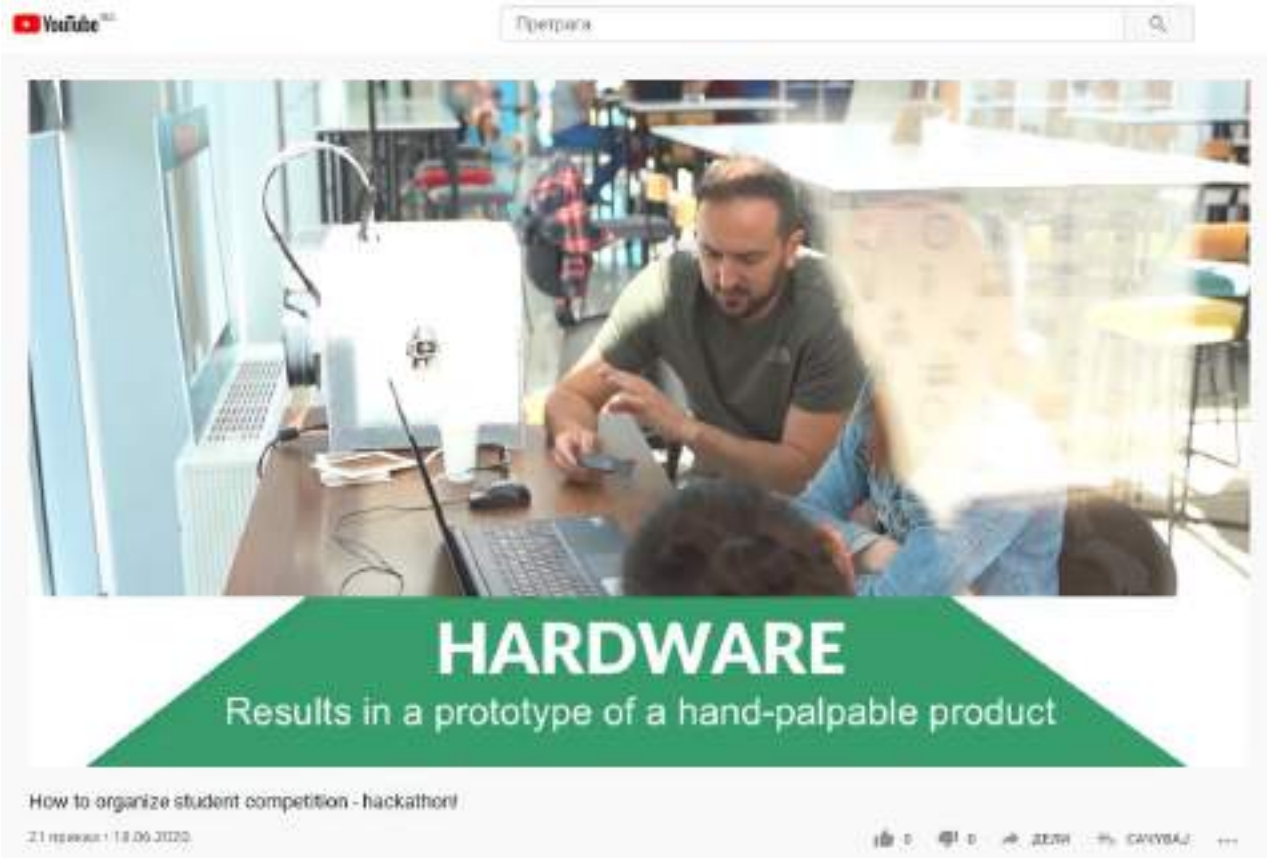
Work package III - Development of student pitching competition - hackatons

https://www.youtube.com/watch?v=FD10E2csWtQ



Work package III - Development of student pitching competition - hackatons

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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)		

Work package IV - Creation of university-business cooperation platform

Plantaže

УНИВЕРЗИТЕТ У БАЊОЈ ЛУЦИ
UNIVERSITY OF BANJA LUKA

University of Maribor

Jaffa-komerc

Jaffa-komerc

AGROVOĆE

Work package IV - Creation of university-business cooperation platform

http://viralerasmus.org/en/ict-in-agricultulture/

УНИВЕРЗИТЕТ У БАЊОЈ ЛУЦИ
UNIVERSITY OF BANJA LUKA

University of Maribor

Plantaze

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

SVEUČILIŠTE U MOSTARU

USAMV BUCUREȘTI EX TERRA VERITAS

Work package VI - Qality 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

Work package VII - Dissemination & Exploatation

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

Work package VIII - Management

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

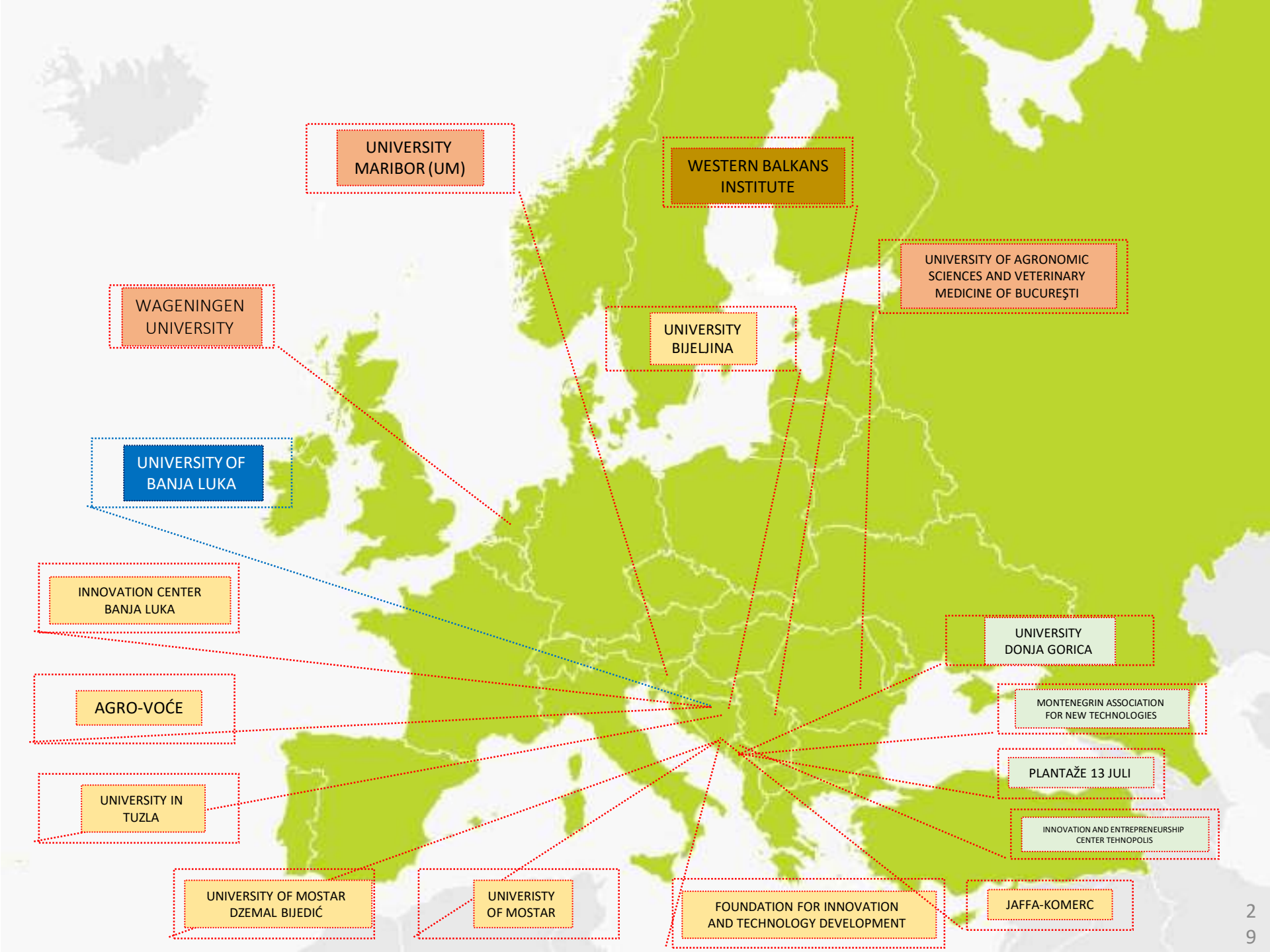
Tasks	8.1 To organize Kick off meeting and and deliver PM training 8.2 To organize Steering Committee meetings 8.3 To provide for smooth daily project management and administration		
Estimated Start Date (dd-mm-yyyy)	15-10-2019	Estimated End Date (dd-mm-yyyy)	14-10-2022

УНИВЕРЗИТЕТ У БАЊОЈ ЛУЦИ

UNIVERSITY OF BANJA LUKA

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
FOUNDATION FOR INNOVATION AND TECHNOLOGY DEVELOPMENT
JAFFA-KOMERC

Duration:

november 2019 – october 2022

Budget:

888.000 €

Credit:
João Valente
presentation: Drones in Agriculture, 16.09.2020.
(available online in coming days)

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João Valente
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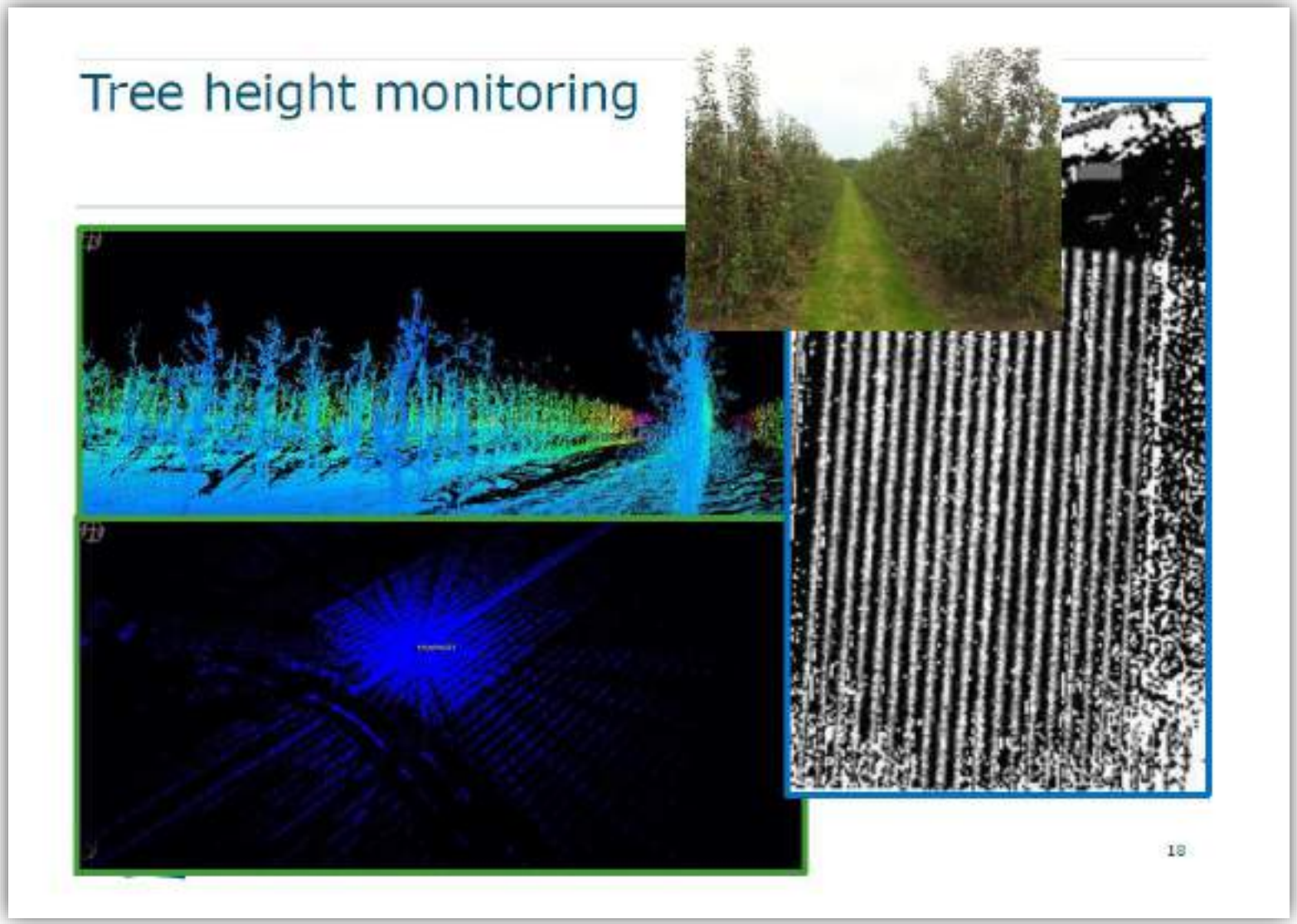

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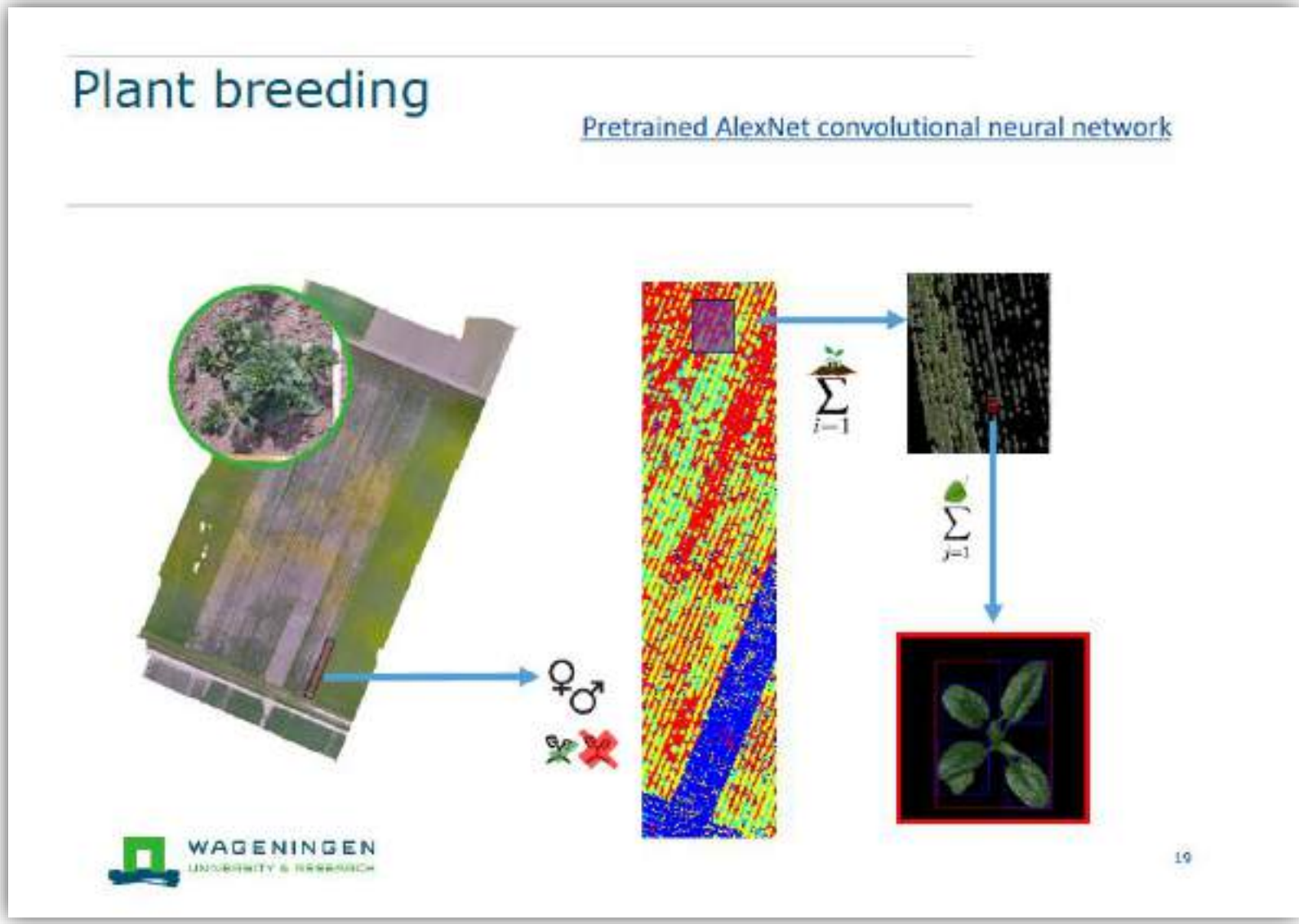

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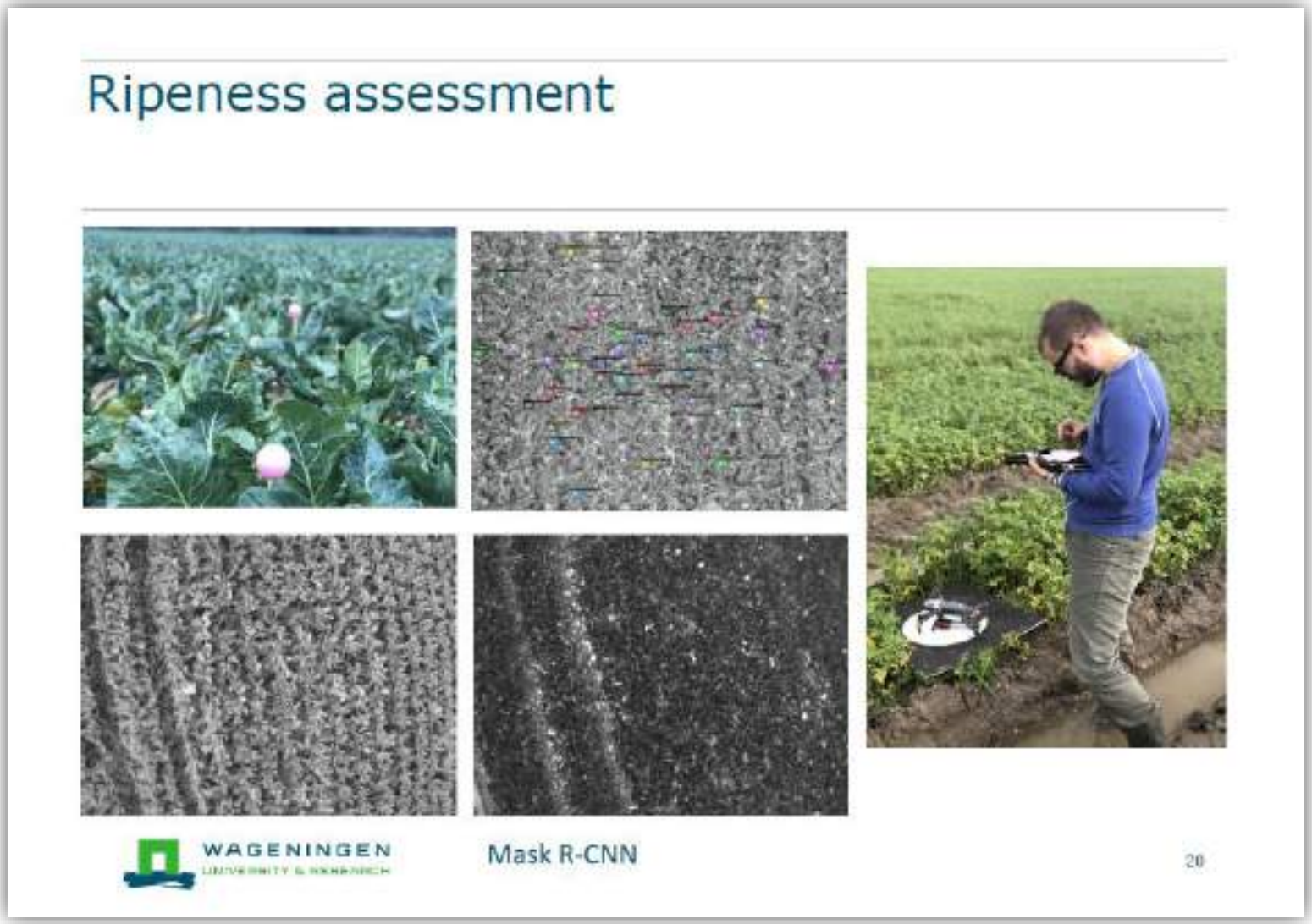

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Contact

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project coordinator
Associate professor, Miljan Cvetković

Thank you !

VITALISING ICT RELEVANCE IN AGRICULTURAL LEARNING