



viralerasmus.org

Project meeting and workshop

University of Donja Gorica, Plantaže 13. jul, MANT

June 17th and 18th, 2021.



Meeting minutes

Continuing with the project activities, a working meeting and workshop was held in Podgorica for two days (June 17th and 18th). The meeting and the workshop were primarily intended for the participants of the Erasmus + Viral project, and the host was the University of Donja Gorica. Participants were informed in about the most important details of the meeting through the program (agenda). Participants registered through an online questionnaire.

The event was attended by 39 participants, given the scope of project activities and the need for decision-making and implementation. Participants and discussants were coordinators and representatives of work packages WP 2.4, WP4.2 and WP4.3. With the consent of all participants, the materials from the meeting can be used for further distribution and popularization of this topic.



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



During the first working day, after the welcoming speech of the Dean of the Faculty of Food Technology, Food Safety and Ecology, Prof. Dr. Vesna Marash, and project associates, coordinators of the mentioned faculty Jovana Drobnyak, MA, participants are reminded the attendees of the activities envisage by the agenda for the next two days.



Photo 1. Photo from the introductory part of the meeting

The working part began with a lecture by prof. Dr. Petraq Papajorgij on "REVITALISING AGRICULTURE THROUGH ICT". Prof. Dr. Petraq Papajorgij based his lecture on the following topics:

- Cork 2 declaration and action plan
- Point 7: Boosting Knowledge and Innovation
- The Smart village concept
- Smart village and technology
- Is ICT related to economic growth?
- The Smart village philosophy
- The STERM Framework
- Business models for modern rural economies
- The role of the simulation
- The challenge
- New technologies: internet of things
- New technologies: Drones
- New technologies: Big data

- New technologies: Blockchain
- New technologies: Artificial Intelligence
- Inter-regional cooperation



Photo 2-3. Photo from the lecture

After a short break, work continued in parallel groups on the work packages WP 2.4, WP4.2 and WP4.3. Work package WP 2.4 referred to ToT teams and ToT course toolkits, and work packages WP4.2 and WP4.3 related to Set of EXPO founding documents, guidelines and materials and constituted EXPO managing structures and work plan. Attendees at the workshops discussed and worked on parts of the mentioned work packages, the solutions resulting from the mentioned activities were later presented to the entire Viral team.





Photo 4-8. Photos of meetings from work packages WP 2.4, WP4.2 and WP4.3

After the break, the representatives of the work packages presented their solutions to all participants. Participants in the WP 2.4 work package related to ToT teams and ToT course toolkits reached the following defined points:

The presentation should include the following:

- VIRAL project form
- The presentation should have between 20 and 30 slides
- The presentation should be sent in PPT or PDF format
- The last slide should contain information about the author
- The file name must be in A1L1 format
- The presentation should be sent with an audio and video presentation



viralerasmus.org

Deadlines:

- June 25, 2021 for presentations
- July 2021 agronomists review the presentation along with comments
- July 15, 2021 for audio and video presentations

Additional instructions:

- The title of the lecture is set by the author
- The presentation should be placed on Google Drive for the WP 2.7 Crash course
- All lectures in a certain field (Iot, mobile application, drones, gis and robots) should be divided into 4 sections
- Video presentation should be based on presentation

COURSE STRUCTURE FOR STUDENTS

A1 Introductory lecture

A1L1 Sensors - University of Maribor

A1L2 Communication Technologies - Part 1 UNTZ

A1L3 Communication Technologies - Part 2 UNTZ

A2. Iot systems in agriculture

A2L1. Introduction

A2L2. Hardware in Iot systems

A2L3 Software in Iot systems

A2L4 Examples of Iot systems in agriculture

A3. Mobile applications

A4. Drones

A5 Application of GIS in agriculture

A6 Application of robots in agriculture

TRAINING LECTURES FOR AGRONOMISTS AND ADVISORS

1. Training for agronomists and business sector: contains the introduction and application of these systems in agriculture
2. Lectures for advisors must contain an application and a detailed overview of the system
Trainings should be presented in two presentations with one break.



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



Materials:

1. PPT
2. 20 pages

DEADLINES:

- September 10, 2021 for presentations
- September 15, 2021, for an agronomist review
- September 20, 2021. for material
- September 30 for the entire project.

Within the work packages WP4.2 and WP4.3 which referred to the Set of EXPO founding documents, guidelines and materials and Constituted EXPO managing structures and work plan, the participants were divided into 4 groups, each of which received a separate topic.

The topics are as follows:

1. Managing authorities,
2. Virtual fair,
3. Conference,
4. Employment Exchange.

1. UP Governing bodies – GB

The governing bodies consists of three committees (steering committee, program committee and dissemination committee). The steering committee has the task of making decisions, presenting the project ... It was decided that this committee has elected representatives of 6 institutions.

2. Program committee – PG

The program committee is in charge of designing the content of events and coordinating them, as well as promoting and sending invitations to participate in events. It has also been decided who will be a member of this board.

3. Dissemination committee -DC

This committee has the task of communicating with the general public. It was decided that each institution has its own representative.

On the second working day, a visit to the company "13. July Plantations" is organized. During the visit, the participants were able to see the cellars - Šipčanik and Stari Podrum as well as to see the operation of the sensors that are installed and used in this company.



viralerasmus.org

Director of the Development sector in the company "July 13. Plantaže" and Dean of the Faculty of Food Technology, Food Safety and Ecology, prof. Dr. Vesna Maraš introduced the audience to the history and significance of the company. She explained the uniqueness of the Montenegrin climate, located between the Adriatic Sea, Skadar Lake and high mountains, which as such creates ideal conditions for growing and developing authentic grape varieties from which Plantations produce luxurious wines of unique and recognizable character.

Prof. dr. Vesna Maraš reminded that in the sixties of the last century, the story of modern viticulture and winemaking in Montenegro began, when agricultural goods in the area of Podgorica, Danilovgrad and Virpazar were merged into Agrokombinat "13. July ", which later developed into a modern company "July 13. Plantaže". She pointed out that raising a vineyard with an area of 1,500 hectares at the very beginning was an probable endeavor on the Ćemovsko field, which at that time was more a field of stone than land. Today, it is the largest vineyard in Europe in one complex and covers 2,310 hectares.

During the tour of the Šipčanik and Stari podrum cellars, she introduced the attendees to the history and capacities that the mentioned cellars have at their disposal. Šipčanik - a magnificent wine cellar, is a former military airport, turned into an impressive area for aging and aging wine, located in the heart of the vineyard. The basement is located at an average depth of over 30 meters below the ground. It is in the shape of a winding tunnel, 356 meters long. For Plantaže, but also for all visitors, Šipčanik is a real wine treasury, where over two million liters of wine are aged in wooden barrels at any time. So it was possible to find out that the Old Cellar is the oldest cellar within the company, but that today it is a modern cellar, preserved old look, which produces the best wines Plantaža premium and ultra premium segment, with a capacity of 5 million liters. It also houses an archive, located 8 meters below the surface of the earth, where 8,000 bottles from the best years are currently stored and matured.

Since 2017, the company "13. jul Plantaže" has been implementing three projects in the field of digital technologies within the prestigious HORIZON 2020 call. Current as well as realized projects implement practical pilot solutions in the field of precision agriculture, ie precision viticulture, fruit growing and winemaking. Optimization of irrigation in order to avoid water stress of vines, use of climatic, spatial and physiological data to mitigate climate change, digital monitoring of diseases and pests in order to reduce pesticide use and achieve better health status of crops - are just some of the tools of new technologies for more rational production.



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



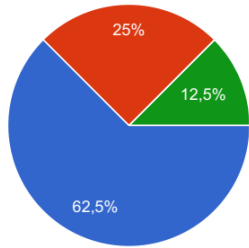
At Čemovsko polje, in peach orchards at the facility Kuće Rakića, we visited one part of the installed equipment: a meteorological station, sensors for monitoring soil moisture and devices with digital traps for monitoring the presence and number of pests. The mentioned equipment was installed in order to collect climate data, monitor soil moisture and recordings obtained from digital pheromone traps set in peach orchards on Čemovsko polje. With the help of the obtained data, we are working on the application of more rational and timely irrigation and prediction, monitoring and control of diseases and pests in these plantations, which contributes to obtaining a better final product.



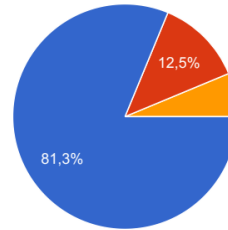
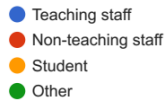


Photo 10-15. Photos of the second working day, visit to the company "13. July Plantaže"

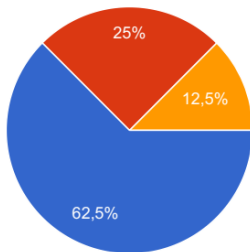
As part of the evaluation of the meeting held in Podgorica, participants had the opportunity to evaluate individual segments of the work through a questionnaire. The category of participants was divided into 62.5% teaching staff, 25% non-teaching staff and 12.5% others (Graph 1). When asked whether the content of the workshop was useful and relevant, a large percentage (81.3%) of respondents answered that they completely agreed that it was (Graph 2). A number of respondents (62.5%) fully agreed that the workshop was properly prepared for new learning on the development of training tools and the organization of EXPO events (Chart 3). Also, a large number of respondents (81.3%) fully agreed that the responsible persons were well prepared and informed about the topics of the meeting (Graph 4), and a larger number of respondents (68.8%) fully agreed that the visit to the company "13. Jul Plantaže" was useful and that new knowledge regarding the use of ICT in agriculture emerged from it (Graph 5). The same number of respondents fully agree that the plan, type, responsibilities and dynamics of the realization of upcoming events - work packages WP2 and WP4 are clear (Graph 6). Also, the majority of respondents completely agree (75%) that the duration of the workshop and meeting was appropriate (Graph 7). The expectations of about 70% of respondents were fully met (Graph 8).



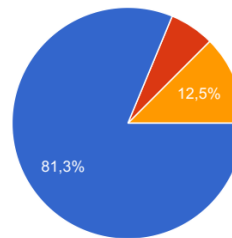
Graph 1.



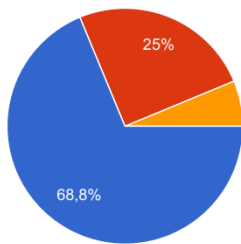
Graph 2.



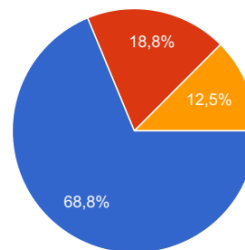
Graph 3.



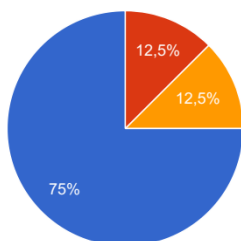
Graph 4.



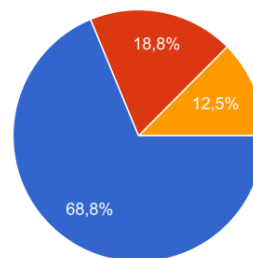
Graph 5.



Graph 6.



Graph 7.



Graph 8.





viralerasmus.org

The most significant results of the meeting were the following:

- ↳ the meeting provided an opportunity to learn about the importance of participating in projects for further research and development in the field of robotics, drone technology, GIS systems and mobile applications;
- ↳ participants agreed about following steps and deadlines for student courses in the field of IT in agriculture;
- ↳ participants agreed about following steps and deadlines of EXPO;
- ↳ participants had the opportunity to get acquainted with the work of a successful production and processing in company „13 Jul Plantaze“ who is applying modern IT technology.

More about the activities within the meeting at the following links:

<https://fptbhe.udg.edu.me/obavjestenja/5276-viral-radionica,-sastanak-i-prakti%C4%8Dni-primjeri>

<http://viralerasmus.org/radionica-sastanak-i-practicni-primeri/>

For all interested parties, who were not able to attend the meeting, the appropriate material will be available on the project website.

Podgorica,
23.06.2021.

Pripremili:
Andrijana Ćuković, UDG
Blažimir Ćetković, UDG
Katarina Pavićević, 13. Jul Plantaže



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

