FUTUREbio

Project Dissemination and Communication Plan

Project Acronym:	FutureBio
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0.1	11.02.2022	Arzum IŞITAN (PAU)	First draft that forms the plan
0.2	19.02.2024	Arzum IŞITAN (PAU)	Final form

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1. Executive Summary

This Project Dissemination and Communication Plan (PDCP) aimed to provide key information and guidelines for the dissemination, internal and external communication, and sustainability of the FutureBio Project. The plan describes the dissemination activities that will be carried out by strategic partnership over the project's lifetime, according to the target group, the objectives of the project and the project proposal. In the preparation of this plan, some parts of the Management and Communication Plan of the DIVA (Boosting innovative Digitech Value chains for Agrofood, forestry and environment) project were utilized[1]

The dissemination plan was based on the following characteristics and principles:

- it has been oriented towards the needs of the users, incorporating the types and levels of information needed into the forms and language preferred by the users, various dissemination methods, including written information, electronic media, and person-to-person contact were used;
- it has incorporated both proactive and reactive dissemination channels;
- it has included information that target groups have identified as important and also were likely to need;
- it has drawn upon existing resources, relationships, and networks to the maximum extent possible while building new resources as needed by target groups,
- it has included effective quality control mechanisms to assure that information to be included in the system is accurate, relevant, and representative;
- it has included sufficient information so that the target groups can determine the basic principles underlying specific practices and the settings in which these practices may be used most productively;
- it has established connections to resources that may be needed to implement the information.

The dissemination process was considered as an essential and critical project activity not only for spreading information among target groups but also for motivating external actors to be involved in the different project activities in order to include their contribution within the project outputs and activities. The dissemination actions were:

- Establish or connect with existing networks to promote awareness and engagement;
- Provide information and assistance to local and regional institutions;
- Distribute information to EU-wide networks, stakeholders, influential institutions and opinion-formers relevant to the topic;
- Disseminate new content for academics, university students, industrial workers, institutions, and general public;
- Stimulate dialogue between educational institutions, and public and private institutions related to manufacturing, environment, energy, agriculture sectors.

FutureBio was a two-year KA220-HED-Cooperation Partnerships in Higher Education project supported by Turkish National Agency, on biopolymers between nine partners from Turkey and EU. The FutureBio project has provided information about bioplastics and production methods and carried out awareness

[1] DIVA (Boosting innovative Digitech Value chains for Agrofood, forestry and environment) project https://www.projectdiva.eu/

studies with new innovative training materials is the first project in the field. FutureBio has five work packages/phases categorized into four management levels for the purpose of to benefit from innovative practices among university students, academic staff, industry workers and the society, and to increase the competencies of academics and students with on-site training:

- Management Level- Phase1: Management
- Operation Level- Phase2 and Phase3: Curriculum preparation including needs analysis, company visits and survey applications, report preparation; creation of interactive open-access education modules, lecture guidebook, and VR exercises.
- Dissemination Level- Phase 4: Dissemination and sustainable implementation of the products
- Monitoring and Control Level- Phase5: Quality Control and Monitoring

The document encompasses:

- External Communication Plan
  - Communication strategy
  - FutureBio key messages
  - Target groups
  - Dissemination tools and channels
- B. Internal Communication Plan
  - Internal Communication procedures
  - Rules and recommendations for a correct use of external communication tools
  - Working internal templates
- C. Evaluation and monitoring of FutureBio dissemination activities
- D. Obligations and requirements for communication actions

This document has been prepared based on information obtained from the following documents:

1. Erasmus+ KA220-HED Project Proposal for “Let's use biodegradable plastic for the future”,
2. Partnership Agreement,
3. Guideline for the Use of the Grant for Grants Awarded in 2021 under Call — EAC/A09/2021.

2. Introduction

2.1 Purpose of Project Dissemination and Communication Plan

WP4 "Dissemination and sustainable implementation of the products" was the framework of the project where all the materials to be used from project results to dissemination activities will be planned and checked during the entire project. The main purpose of this FutureBio Project Dissemination and Communication Plan (PDCP) was to create a common understanding of introducing, transferring, explaining, and using obtained project results during the project duration. The plan has also included determining how to make internal and external communication and interaction within the project consortium and stakeholders and target groups. The intended audience of this document was all project stakeholders including the project team members, university teachers and students, industrial institutions and their workers, high school students and teachers, public and private institutions, associations, individuals and general society.

FutureBio's dissemination activities aimed at communicating its objectives and results to a wide audience by promoting the adoption of project's results, as well as by facilitating the exchange of information and the interaction with industry, academia, and society as a whole.

2.2 Project Introduction

Modern world has met with plastic/polymeric materials for the first time in the 1400s after Columbus encountered a natural rubber ball in Haiti. Today, polymers have found a wide range of applications thanks to their lightness, easy formability, and wide range of uses, from kitchenware to artificial heart valves. Many polymers are used in packaging of food, textile, and machinery, and they are important parts of solid waste disposed of in solid waste landfills.

According to the EU reports, PM packaging parts represent about 8% of the overall refuse in the landfills. Besides all, microplastics, which are tiny fragments below 5 mm in size, are a big problem for leakage of rivers, lakes, seas and oceans. They can remain intact for many years. Reuse in manufacturing, incineration for energy generation, biodegradation in compost or in soil can be counted as disposal processes for plastic wastes. To reduce all negativities caused by polymers, "A EU Strategy for Plastics in a Circular Economy" and "Plastic Waste: a EU strategy to protect the planet, defend our citizens and empower our industries" has been developed. In the EU, around 25.8 million tons of plastic waste are produced every year. EU reports also states that only 6% of plastic products are demanded in the EU as recycled plastics. Polymeric waste is frightfully increased with 'single-use' plastics each year. Reusability and nature degradable polymer production are important parts of these strategies. According to the European Green Deal Communication, reducing wastes, compensating carbon footprint emissions, saving resources, and sustainability are key priorities for the EU now and in the future. For a more livable and GREENER world, biopolymers should be developed and used. The FutureBio project was carried out to contribute to these basic priorities. Project aims to make the use of innovative practices among university students, academic staff, industry employees, and the community and to increase the competencies of academics and students with in-place training. This project has been prepared in accordance with the European Union's strategy of developing cooperation, increasing quality and encouraging innovation in the learning activities of individuals and groups in the field of education and training. In the preparation of the project, especially the difficulties and crisis caused by Covid-19, the importance of digital education for digital transformation in accordance with the Digital Education Action Plan was taken into consideration. Considering these issues, it was our priority to develop a high-performance digital technology for university students and industrial workers within the scope of the project. In this way, we aimed to develop high quality digital technologies for education of universities and industrial institutions providing information of polymer and biopolymer and their manufacturing technologies all over Europe. We aimed to improve capacity and flexibility in education by making digital tools. The project has applied the most innovative training technologies based on E-LEARNING and online learning tools with INTERACTIVE VIDEOS and animation applications in game format and VIRTUAL REALITY tools that contributed to improve the trainees' motivation and engagement. The learning material has been structured according to a competency-based learning approach. The use of e-learning and other related technologies in the FutureBio project can provide new opportunities for learners increasing flexibility, motivation and engagement. Students can take control of their own learning and be an active part of the learning process. In addition, mobile learning offers a number of new opportunities for learners and teachers, including the relatively low cost of technologies.

2.3 Project Objectives

The target group of the FutureBio project was all project stakeholders, including the project team members, university teachers and students, industrial institutions and their workers, high school students and teachers, public and private institutions, associations, individuals, and general society. The results of the project were to develop a curriculum, prepare a guidebook, and to produce education materials with innovative and interactive tools for university students. The project applied innovative technologies based on e-learning, online learning, VR tools, and interactive videos. The learning material was structured according to a competency-based learning approach.

FutureBio aimed to determine the basic knowledge level of target groups on biopolymers by preparing a short survey during the preparation phase of the project.

The objectives of FutureBio were classified based on target groups of the project as follows:

For ACADEMICIANS and university STUDENTS

- To create an innovative curriculum, open education resources (OERs), virtual reality (VR) tools, laboratory videos, a lecture guidebook,
- To encourage the development of biodegradable polymers (BDPs) and products via courses and outputs
- To guide them to prioritize in their academic career planning
- To increase the scientific competencies with in-place trainings

For INDUSTRY

- To create an industrial needs report, a value chain extending from lab to industry, from industry to environment and economy

For SOCIETY

- To raise social awareness that plastic pollution is an issue that needs urgent action
- To obtain awareness about BDP products

For PROJECT PARTNER

- To increase digital skills
- Developing new projects

2.4 Project Focus

With game-based animations, videos, and interactive presentations, distance learning tools are prepared for those who are interested in polymers from all age groups and want to learn about biopolymers. It was expected that interest in the subject would increase with the online webinars that have been held during the project process. Our project team consists of experts in the fields of polymers and biopolymers, development of training methodology, and innovative education materials. During the project, mutual information transfer, know-how, and brainstorming have been carried out, and the partnership was more efficient. It developed its scientific knowledge related to the BDP through the training activity (C1) for the project staff. Therefore, we aimed for the project partnership to develop itself in innovative education technologies. Thus, the potential of using these technologies in new projects will also be increased. Sustainable environment, green, and reduction of harmful waste are among the needs of the EU. For this reason, it is of great importance to raise awareness on BDP among

industrial institutions and employees, to research production methods, and to develop university-industry collaborations.

FutureBio acted as a bridge in this regard. The needs of the industry have been investigated in partner countries and a guiding road map was created. Thus, it aimed to contribute to the sustainable economy and to be beneficial for the creation of a qualified workforce along with the contribution to the sustainable environment. In the project's detailed awareness/needs analysis and dissemination activities (E1-E8), a collaboration with public and private sectors have been done. We planned to spread project results faster by taking the opinions of these institutions. In this way, new projects can be produced.

Dissemination materials, activities, the number of people to reach, and their expected impact are the following:

- Website was set up in all partner languages and constantly updated.
- 8 webinars as alive were organized through the project YouTube account. Other broadcasts, including congress presentations, have also been added to the YouTube channel.
- Establishment of social media platforms were made by PAU.
- Newsletters were prepared every six months.
- 7 National Informative Meetings and 1 Workshop/Panel (E1-E8) were organized.
- Announcement of the activities was performed on local and national platforms. The results of the FutureBio project were presented in relevant seminars/conferences, and news.
- Some review and research papers were published in highly ranked international journals.
- FutureBio consortium has formed competent institutions in the scientific and technological fields. Dozens of congresses are organized or attended by our partners every year. Within the participation in various conferences/seminars, we distributed approx. 1000 leaflet by PAU and all partners, and via website, social media, press/media we reached over the 20000 people (For example, the news on the PAU official twitter page for the C2 (student training) activity of the project, received 1,494 views (https://twitter.com/pauedutr/status/1724700933508989235), and a Linkedin post about the C2 activity received 2485 views (https://www.linkedin.com/feed/update/urn:li:activity:7129262393120948224/).
- Project partners have attended various congress/symposium related for the BDPs.
- A master thesis has been completed in the context of the FutureBio.
- A patent application was filed for one of the ideas developed by the PAU team within the scope of the FutureBio project. This patent idea was awarded a silver medal at ISIF2023.
- The PAU team participated in Teknofest 2022 and Teknofest 2023 with the ideas developed by the FutureBio project. In both years, the project made it to the finals in the Environment and Energy and Technologies for the Benefit of Humanity / Disaster categories. In Teknofest 2022, the best presentation award was won. a patent application was made for one of these ideas.
- Within the scope of TÜBİTAK 2209-A University Students Research Projects Support Program, student projects on the use of bioplastics were supported in 2022 and 2023 under the supervision of FutureBio PAU team.
- FutureBio's main target group was the university students and academicians. With the dissemination activities, additionally it was reached to industry, high school students, and society using visual and printed materials, website, social media, webinars, and informative meetings.

- At least 285 people were expected to attend national informative meetings. People who work on polymer and its production from the public and private sector and Municipality were invited. We reached 600 people with those activities directly.
- FutureBio had a workshop/panel held by KLU. This event has been organized to present all the outcomes of the project. 70 local participants attended this activity including the Vice Governor of Kırklareli.
- Within the scope of the project, the consortium carried out various promotional activities in high schools and secondary schools to increase impact: In high schools and secondary schools, activities have been organized such as art competitions and poster presentations. Earth day STEM challenge activities were organized to reach at least 350 young people with activities at the secondary and high school level, which was held locally especially in Italy, Romania, and Turkey.
- For university students, various activities were organized: a poster competition was organized by OTH. Social responsibility movements such as collecting plastics etc. were initiated.
- The number of people we directly reached among university students was planned to be 500. With the events organized, press reports, lectures given at university level, and project outputs, we have reached more than this number of university students. Thus, we expect awareness raising efforts to continue locally and across countries.
- One of the expected effects of the project was to combine the theoretical knowledge of universities with industry and to create an environment for joint work. In this context, information was exchanged with PAGEV on many issues.
- Above all, it was expected that educational materials produced using high technology would be met with great interest, especially by Generation Z, and this has happened.
- eTwinning, Erasmus+ Project Results Platform, and EPALE platforms are used for the dissemination, also.
- Within the dissemination activities for the public, the Layman's Report is provided a general and brief overview of the project and its outcomes, such as the challenges faced by the project, the proposed solutions, the innovative aspects of such solutions, the main achievements and outputs, the main results of the implemented pilots or recommendations for future. The Layman's Report was the final dissemination activity within the project's duration. The Layman's report summarizes the work of a LIFE FutureBio project for a general audience. They are a means of extending the impact of the project beyond the area of implementation.

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- A poster competition was organized in Germany.

- Social responsibility movements such as collecting plastics etc. were initiated.

- Within the scope of June 5 Environment Day activities, a painting and assemblage contest was organized with the participation of 40 schools across the province in cooperation with Kırklareli

University and Kırklareli Provincial Directorate of National Education. At the school, our students were first shown a video containing information about the degradation processes of plastics in nature and biodegradable plastics. Then the painting contest was announced.

- Fondazione Bruno Kessler, Universita Degli Studi Di Trento, Fondazione Bruno Kessler, Universita Degli Studi Di Trento, and Indivenire srl participated in EDUCA: TOWARD A NEW SCHOOL (education festival) event held in Rovereto/Italy on 14/16 Aprile 2023 with 13 posters.
- Beyond all this, the web platform which contains all project outputs, will be kept up to date for at least 5 years by the project team.
- Two students from SU attended the 12th Eagean Analytical Chemistry Days congress held in Istanbul/Turkey with poster presentations. The content of the poster presentations is the use of PLA printed in the form of electrodes in 3D printing in various chemical processes.Their work was supported by Tübitak, and Futurebio was referenced in poster presentations and project reports.
- A seminar titled "Biodegradable Plastics and possible applications of VR as well as biopolymers in the construction sector" has been realized as a poster presentation by OTH on December 15, 2023, at Regensburg.
- An oral presentation titled "Ressource-efficuent structures" has been done at 21st international conference on constructions materials onSeptember 3. - 15.September 2023, at Weimar, Germany by OTH as oral presentation.
- A virtual workshop titled "Sustainable Structures - Potentials of Biopolymers" has been realized by OTH on 7th February 2024.
- A seminar titled "Biodegradable Plastics and possible applications of VR as well as biopolymers in the construction sector" has been realized as a poster presentation by OTH on December 15, 2023, at Regensburg.
- An oral presentation titled "Ressource-efficuent structures" has been done at 21st international conference on constructions materials onSeptember 3. - 15.September 2023, at Weimar, Germany by OTH as oral presentation.
- An Interactive Workshop with oral presentations titled "Advanced Building Materials" has been realized by OTH on 14th June 2023.
- A webinar titled "The methodology of life cycle assessment to quantify the ecological sustainability of materials" has been realized by OTH on 23th February 2024.
- A workshop titled "MINT workshops with students from 11th grade on Sustainable Building materials" has been realized by OTH on 26th February 2024 at Regensburg,
- A network meeting has been held by OTH on 27th February 2024, at Uelzen, Germany as oral presantation titled "Presentation on LCA and Circular Economy in the construction sector".

- Within the scope of the Community Service course given by Prof. Fatma Kırmızı from Pamukkale University project team, Osman Özgür primary school was visited in May 2022. The activity was attended by 10 undergraduate students, 32 primary school students, and 1 teacher. Students were given information about recycling and students drew pictures related to the subject.
- "International Congress on Adaptive Approaches - ADAP 2023" was held on September 7-10, 2023 in partnership with Kırklareli University, Turkey, Agricultural University of Plovdiv, Bulgaria and Sofia University of Architecture, Civil Engineering and Geodesy, Bulgaria. FututreBio team participated in the congress with two sessions.
- Many dissemination activities have been carried out by FBK and IND in addition to EDUCA 2023. On 31 March 2023, a secondary school information day was organised and an activity on microplastics visualization was organized. A webinar was organized by Dr. Laura Pasquardini as IND project coordinator.
- Nadia Catenazzi from SUPSI published an article titled "The FUTUREbio project - Open Educational Resources creation in H5P" on the EPALE platform: https://epale.ec.europa.eu/en/content/futurebio-project-open-educational-resources-creation-h5p
- The VR materials created in FutureBio have been published in the Meta Store for VR, and on a webpage for more traditional access. Below are the instructions for accessing the material on both technologies:
    - For VR, the FutureBio 360 materials can be accessed on Meta Quest 2, Meta Vision Pro and Meta Quest 3 goggles through the Meta Store. Someone can install the application on her/his goggles by one of two ways:
        - Either visit the application's Meta Store page on your mobile phone or desktop by visiting the store page and adding the application to her/his account.
        - Or she/he can put on VR headset, go to the Meta Store inside the VR operating system and then search for "FutureBio". The application is released in the Meta App Lab.
    - For desktop and mobile use, the FutureBio 360 materials can be found by visiting the link at: https://ctrl.studio/play/futurebio or by embedding the content using an iframe to any web page.

All partners have agreed on dissemination and all partners hold one informative meeting within the project, except IND and FBK. However, leading FBK, UNITN and IND have attended some dissemination activities, additionally. They worked to disseminate project results using their local and national links.

Creation of website and leaflet and opening of social media accounts (Facebook. Twitter. LinkedIn) have been done by PAU at the beginning of the project. All partners shared project news and announcements on their official website. In addition, since all partner institutions have very strong local press relations, the project activities are promoted in the local and national press.

For the project logo, PAU, COSVITEC, and CTRL prepared a draft before TPM1, and the project logo was selected during TPM1. After the logo selection, a leaflet as a draft has been prepared by PAU and after the approval of the partners, all project partners translated into languages and used in all promotion and dissemination activities.

E-Newsletters have been issued to promote the project and its outputs, and translated for disseminating to national training organizations, stakeholders, and media. For this purpose, the partnership used its National Informal Networks. Newsletters were foreseen, 1 every 6 months of the project. Additionally, partners took advantage of their own networks and of the existing platforms and tools for promotion on European level, to maximize the publicity effect. The dissemination plan at the beginning of the project has been prepared by all partners to widespread the products and have a vast outreach.

All documented activities collected in a final dissemination report which were made available to the national agency and the public. Arzum Işıtan from PAU, Yasemin Öztekin from SU, Evren Çağlarer from KLU, Gratiela Dana Boca from UTCLUJ, Massimo Bersani from FBK, Alessandro Pegoretti from UNITN, Aniello Gervasio from COSVITEC, Teijo Lehtonen from CTRL, Charlotte Thiel from OTH, and Laura Pasquardini from IND were responsible for the dissemination activities as team leaders. COSVITEC and FBK supported the dissemination plan and activities due to the solid experience in several former European projects. They have experts in managing project advertising, plan and advertising campaigns, especially dissemination purposes, and structuring main paths for main goals and objectives promotion, involving stakeholders, press, and effectively using 2.0 web tools. They have also extensive stakeholders' network, that include local, national, and International SMEs, Public Entities, NGOs, schools, and Universities, that benefited from the outputs of FutureBio and helped in the dissemination of the project results.

SU and KLU are in industrial areas, so they also contributed not only web-based dissemination activities but also to provide industrial cooperation to raise awareness.

Before TPM5, PAU prepared a sustainability plan and shared it with all partners. During TPM5, the plan was discussed, and its final form created, and the activities planned to be attended in the next 3 years and the activities planned to be organized were discussed.

PRODUCTS are:

1. Dissemination plan
2. Sustainability plan
3. Dissemination materials and activities
4. Website and social media platforms
5. Project logo
6. Newsletters
7. Brochure

QUALITY INDICATORS:

- Number of participants attend seminars/informative meetings/workshop/webinars
- Number of websites visiting
- Number of distributed newsletters/brochures
- Number of audience of seminar/congress/webinars

3. Dissemination Paths

The dissemination plan included activities that can be divided into internal and external dissemination according to the target audiences they were addressed to. Both paths reflected the individual interests and strategies of each of the organizations involved but also the needs and visions for the future encouraged through the project results.

The project management team was responsible for operating the communication plan.

3.1 Internal Communication

The internal communication included the tools and activities that intend to give awareness of the results to the consortium members and that were not available to the public in general. It referred also to activities aimed to inform members of the partner's organization about the idea underlying biopolymers, concepts applied or developed, and the results obtained already. The dissemination activities included the further use of the results within the partner's organization. This kind of communication included:

- Project meetings and their resulting reports;
- Information exchange through an internal mailing list which addresses and includes all project participants;
- A collaborative workspace document repository;
- Video and phone conferencing;
- Reports, publications, outputs, etc.;
- On-line collaboration;
- Internal meetings

In line with the project objectives, the form, frequency, by whom, purpose, and time of each communication module were determined as can be seen in Table 3.1.

Table 3.1 Internal communication tools

Internal Communication							
Priority Group/ Audience	**Name**	**When?**	**How to communicate?**	**Communication objectives**	**Key messages**	**Responsible**	**Performance indicators**
Project Team	Project team meeting	Weekly	Face-to-face, online platform	Evaluating the progress of the tasks involved in the project	Each project partner institution will hold weekly meetings within itself.	Team leader	The number of participants
Project Team	Project team meeting	Bimonthly	Online platform	Evaluating the progress of the tasks involved in the project	The progress of the project will be observed	PMT	The number of participants
Project consortium	Project meetings	Each 6 months	Face-to-face, online platform (If there are restrictions due to Covid19)	Reviewing and organizing all project activities, checking and quality controlling of milestones	Evaluating the progress of the tasks involved in the project	PMT	The number of participants, number of completed tasks, number of milestones achieved

3.2 External dissemination

The external dissemination refers to activities and means that create awareness of the project's partial and overall results and its progress and documentation. The targets of those dissemination activities were specific users and interest groups that were identified above as well as the public in general.

The target group of the FutureBio project was all project stakeholders including the

- Project team members, University teachers, University students (1st priority),
- Industrial institutions and their workers (2nd priority),
- High school students and teachers, Public and private institutions, Associations (3rd priority),
- Individuals, general society (4th priority).

The results of the project were to develop a curriculum, prepare a guidebook, and to produce education materials with innovative and interactive tools for university students. The project applied innovative technologies based on e-learning, online learning, and VR tools with interactive videos and animations in game format. The learning materials were structured according to a competency-based learning approach.

The proposed external dissemination activities included the following strategies and tools.

Table 3.2. External dissemination activities

External Communication							
Priority Group/ Audience	**Name**	**When?**	**How to communicate?**	**Communication objectives**	**Key messages**	**Responsible**	**Performance indicators**
Steakholders (1st, 2nd, 3rd, and 4th priorities)	Informative meetings	23-24th months of the project	Face-to-face, online platform (If there are restrictions due to covid19)	Sharing project results, evaluating suggestions from stakeholders and new collaborations	the project outputs will be shared with stakeholders	PAU SU CNU COSVITEC UNITN CTRL OTHR	The number of participants, Informative meeting reports
Steakholders (1st, 2nd, 3rd, and 4th priorities)	Workshop	24th month	Face-to-face, online platform (If there are restrictions due to covid19)	Sharing project progress, evaluating suggestions from stakeholders and new collaborations	the project progress will be shared with stakeholders	KLU and and PMT	The number of participants, Workshop evaluation report
Steakholders (1st, 2nd, 3rd, and 4th priorities)	Website	1-24th months	Internet	Sharing project progress, reports and results, sharing basic information related to digitalization of livestock	the project progress, results and basic info will be shared with stakeholders.	PAU and PMT	Number of clicks
Steakholders (1st, 2nd,	Project leaflets	6th month	Printed and visual	Sharing of basic	Leaflets will be used all dissemination	PAU and PMT	Number of leaflets distributed

3rd, and 4th priorities)				information related project	and information activities		
Steakholders (1st, 2nd, 3rd, and 4th priorities)	Newsletters	Each 6 months	Online, e-mail	Sharing project progress	the project progress will be shared with stakeholders	PAU and PMT	Number of newsletters sent
Steakholders (1st priority)	Attendance of congress	12nd-24th months	Face-to-face, online platform (If there are restrictions due to covid19)	Sharing project results	the project progress will be shared in scientific area	PAU and PMT	Number of oral presentation and scientific papers
Steakholders (2nd priority)	Industry visits	1-24th months	Face-to-face, online platform	Assesment and evaluation, Needs analysis, Sharing project results	Needs analysis will be done with workers	PAU and PMT	Number of visits, number of surveys
Steakholders (3rd priority)	Promotional activities	1-24th months	Face-to-face, online platform	Different kind of activities in special days	Increasing environmental awareness, water awareness, climate change awareness	PAU and PMT	Number of activities
Steakholders (1st, 2nd, 3rd, and 4th priorities)	Book	1-24th months	Printed and online platform	Increasing knowledge	Increasing environmental awareness, water awareness, climate change awareness	All partners	Number of download and number of distributed books
Steakholders (1st, 2nd, 3rd, and 4th priorities)	Distance education materials and VR tools	4-24th months	Online platform	Increasing knowledge	Increasing environmental awareness, water awareness, climate change awareness	All partners	Number of clicks
Steakholders (1st, 2nd, 3rd, and 4th priorities)	Webinars	6-24th months	Online platform	Increasing knowledge	Increasing environmental awareness, water awareness, climate change awareness	All partners	Number of clicks

3.3 Communication Tools

3.3.1 Project Logo

The project logo has been prepared by PAU, COSVITEC, and CTRL as a draft before TPM1, and the final form of project logo has been decided during TPM1.

3.3.2 Project Leaflet

After the logo was decided, a brochure draft that introduces the project has been prepared by PAU and after the approval of the partners, all project partners translated into languages and used in all promotion and dissemination activities.

3.3.3 Lecture Guidebook

University students, academicians, and the industrial firms and employees were FutureBio's target groups, respectively. For a better world, biodegradable polymers should be developed and used. Although research on biodegradable polymers is increasing day by day, their usage is not at the desired level. However, teaching programs including applications can be performed to gain the knowledge and skills about the synthesis, properties, and applications of biopolymers. A common innovative course curriculum has been created (PR1) to develop the knowledge and skills, revealing the gaps in current education. Most of the current English books are focused on medical or food applications of biopolymers. Moreover, there are very few books on biodegradable plastics and their applications.

As the book will fill a gap in the literature, it is one of the basic works in the related field. On the other hand, there isn't any course book in TURKISH related to biopolymer technology. In this area, a scientific resource that can be taught in Turkish universities is obtained. Since the book is also prepared in English, it can be used all over Europe and the world.

The guidebook, which contains examples from the project partners' works and industry applications, is innovative in this respect. It is a book that people from different disciplines can use according to their interests. It was planned to open 2 courses on biopolymers in the Technology Faculty of PAU and within the scope of The Graduate School of Natural and Applied Science In accordance with the prepared curriculum (PR1). A total of 6 courses were offered in two graduate degrees at departments at PAU (Mechanical and Manufacturing Engineering and Metallurgy and Materials Engineering) and 3 of these courses were actively conducted.

Similar work was done at all other partner universities.

Pilot applications between 17-18th months of the Project performed by 250 students and 50 academics in total. Students who took the courses had an opportunity to utilize interactive learning materials, laboratory videos, and Lecture Guidebook. The feedback requested and thus, necessary revisions have applied to the modules, tools, and chapters.

In addition to these 250 students and 50 academic staff, VR tools were introduced to 40 students during the C2 activity and 140 high school students through multiplier events and feedback were received. It was also introduced at EGEKAF2024 hosted by PAU and 250 more people from all educational backgrounds tried and evaluated the VR applications.

To close an important interdisciplinary course material gap in Turkey and Europe and to contribute to the literature, development of environmental awareness, to encourage biodegradable polymers to be included in the study and research topics of students, academicians, and industrial companies, raising

awareness about sustainable environment and decarbonization were among the aims of this work package. This project result has highly impact on all target groups, and it has high potential of dissemination and transferability.

At the 2nd TPM in Finland on the 6th month of the project, the result of PR1 at national and international level has been discussed and analyzed. The partnership gave the curriculum's final form and created a competence map. These analyses, curriculum, and competence map were used to form the basis of PR2 and PR3. Critical thinking related to PR2 has been done and online modules shared between all partners. Providing preliminary information to the Project staff about the creation and use of online materials and videos has been done by PAU and SUPSI.

At the 3rd and 4th transnational meeting (TPM3 and TPM4), the progress of PR2 was discussed. First, an online course platform using free material creation tools, h5p, has been created on the website. The primary role of the platform was enabling the student to learn on their own and encouraging them to evaluate themselves. Content preparation of tools and videos have been done through PR2.

During TPM2, the sections and topics were negotiated and shared by all partners. Until the 14th month, the draft EN versions have been prepared. At the TPM3, the progress of this result has been evaluated. Encountered problems and suggestions with the project partners discussed and the modules prepared in EN reviewed. After the month of 14th, project partners translated those materials into their own languages. Pilot applications between 17-18th months of the Project have been performed by 250 students and 50 academics in total for interactive materials and the book chapters. In addition to these 250 students and 50 academic staff, VR tools were introduced to 40 students during the C2 activity and 140 high school students through multiplier events and feedback were received. It was also introduced at EGEKAF2024 hosted by PAU and 250 more people from all educational backgrounds tried and evaluated the VR applications. After testing all educational materials with an evaluation questionnaire, it has been determined by their missing parts or needs. After completion of all pilot implementations, the results have been compared and evaluated between partners during TPM4. After the necessary parts were corrected, the materials and the platform were finalized.

The partners created a draft content during the project's writing process. The partners stated which topics they could contribute to. The draft curriculum study and the final curricula are given below:

A- DRAFT

- Basic polymer knowledge- polymer chemistry and polymerization
- Basic biopolymer knowledge -Chemical structure, understanding and prediction of certain physical properties of a BDP, and how these are influenced by external factors (pH, I, T)
- Know the structure and properties of important polysaccharides, including the understanding of alginates, zein etc.
- Know the principles behind experimental determination of physical properties (solubility, mechanical properties etc.)
- Use simple methods for polymerization and depolymerization of biodegradable plastics: kinetics and reaction mechanisms
- Preparation of biopolymeric materials (alginate film or beads, polymerization of zein, soya etc.)

- Production of natural aliphatic polyesters as PLA, PHA, bio-polyethylene etc. Chemical modifications of biopolymers (chitosan, alginate, PLA) aimed at enhancing the biological properties of the polymer and increase of water solubility
- Preparation biopolymeric composites, reaction and investigated of bio composite films
- Determine the shape and extension in solution of a biopolymer, based on physical data
- Characterization of biopolymers by FTIR, SEM, X-ray techniques, DLS, etc.
- Environmental and biomedical applications (adsorption of toxic materials, controlled drug delivery systems,)
- Decarbonization and biopolymers
- Sustainable environment and biopolymers

B- **FINAL**

CHAPTER 1. POLYMERS
- 1.1 Definition of Polymers
- 1.2 Nomenclature of Polymers
- 1.3 Mechanisms of Polymerization
- 1.4 Modification of Polymers
- 1.5 Types of Polymers
- 1.6 Applications of Polymers
- 1.7 Biopolymeric Materials
- 1.8 Preparation of Biopolymers

CHAPTER 2. INDISPENSABLE POLYMERS OF LIFE: PLASTICS
- 2.1 Polymeric Structures of Plastics
- 2.2 Types of Plastics
- 2.3 Production Methods of Plastics
- 2.4 Usage Areas of Plastics
- 2.5 End of Life of Plastics

CHAPTER 3. BIOPLASTICS
- 3.1 Definition and Classification of Bioplastics
- 3.2 The Usage and Importance of Bioplastics
- 3.3 Sources and Production Methods of Bioplastics
- 3.4 Formation Mechanisms of Bioplastics
- 3.5 Recycling Mechanism of Bioplastics
- 3.6 Daily Examples for Bioplastics

CHAPTER 4. PROPERTIES OF BIODEGRADABLE PLASTICS
- 4.1 Chemical Structures
- 4.2 Chemical Properties
- 4.3 Physical Properties
- 4.4 Preparation Methods
- 4.5 Recycling Mechanism of Biodegradable Plastics

CHAPTER 5. CHARACTERIZATION OF BIODEGRADABLE PLASTICS
- 5.1 Introduction
- 5.2 Morphological Characterization
- 5.3 Chemical Characterization
- 5.4 Mechanical characterization of biodegradable plastics

For each topic of the curriculum, a competence map has been created which included the learning outcomes, knowledge, and skills of the students by COSVITEC supported by SUPSI and all partners.

The output's tasks are summarized below:

- PR3-1: Draft versions in EN (6th -16th months)
- PR3-2: Pilot testing (17th -18th months)
- PR3-3: Final version (18th -20th months)
- PR3-4: Translation in TR (21st -23rd months)

The products are Lecture Guidebook in TR and EN. The books are in pdf formats and were uploaded to the website. Only a limited number of paper prints were made. These printing costs were added to management costs.

The quality indicators for this project result were

- number of students attend the pilot application
- number of academics attend the pilot application
- number of book chapters providing 90% and above satisfaction from the results of the inter-partnership surveys regarding the quality of the project result (thus determining the problems and collecting the solution suggestions)

3.4 Online dissemination tools

3.4.1 Website and social media accounts

In the 1st TPM, after discussing with all partners on the draft design to be prepared by PAU, the constantly updated website design has been decided. Creation of website and leaflet, and opening of social media accounts (Facebook, Twitter, LinkedIn) have been done by PAU at the beginning of the project. All partners shared project news and announcements on their official website. In addition, since all partner institutions have very strong local press relations, the project activities are promoted in the local and national press.

3.4.2 Newsletters

E-Newsletters have been issued to promote the project and its outputs. The newsletters translated in partners' languages to disseminate national training organizations, stakeholders, and media. For this purpose, the partnership used its National Informal Networks. Newsletters were foreseen, 1 every 6 months of the project. Additionally, partners took advantage of their own networks and of the existing platforms and tools for promotion on European level, to maximize the publicity effect. The dissemination plan at the beginning of the project has been agreed by all partners to widespread the products and have a vast outreach.

3.4.3 Interactive open access education modules

Since the main target group for this result is students, it was planned to open 2 courses on biopolymers in Technology Faculty of PAU and within the scope of The Graduate School of Natural and Applied Science In accordance with the prepared curriculum (PR1), in the 2nd year of the project, educational activities would be carried out in these courses. A total of 6 courses were offered in two graduate degrees at departments at PAU (Mechanical and Manufacturing Engineering and Metallurgy and Materials Engineering) and 3 of these courses were actively conducted. In the 2nd year of the project, educational activities have been carried out in these courses:

MMLM 509 BIOPOLYMERS AND BIONANO COMPOSITE MATERIALS

MMLM 512 MECHANICAL TESTS OF POLYMER MATERIALS

MAIM 502 MANUFACTURING TECHNOLOGIES

MAIM 529 NANOSCIENCE AND NANOTECHNOLOGY

MAIM 531 POLYMER PRODUCTION AND TECHNOLOGY

MAIM 533 BIOPOLYMER AND BIOCOMPOSITE ENGINEERING

In addition, at the undergraduate level following courses were opened:

MBM 201 MATERIAL SCIENCE 1

MBM 202 MATERIAL SCIENCE 2

Similar work was done at all other partner universities.

Pilot applications between 17-18th months of the Project.

The studies of BPs are interdisciplinary research including different kinds of experts from material science, biotechnology, physics, chemistry, and engineering from environment to manufacturing and medical technologies. The required competencies for these areas can be put together along the concept

of biopolymer engineering providing novel concepts, materials, enzyme technology, experimental protocols, reference substances, as well as inventions. There have been no online modules prepared on experiments for the LABORATORY APPLICATIONS at university level. However, laboratory works are especially helpful to gain the knowledge and skills to make scientific evaluations about the synthesis, properties, and applications of biodegradable polymers. Within the scope of laboratory videos (including production, analysis, test), *16 videos* were prepared.

FutureBio aimed to create innovative technologies based on E-LEARNING and mobile learning tools with interactive videos and animations in-game format. The materials have been structured according to a competency-based learning approach (PR1). The use of e-learning technologies in the FutureBio project can provide new opportunities for learners increasing flexibility, motivation, and engagement. Students can take control of their own learning and become an active part of the learning process.

All the students, academicians, scientists, and sector workers need new teaching methods and tools to match modern implementation. Mobile learning offers new opportunities for learners and teachers including the relatively low cost of technologies, also. With game-based animations, videos, and interactive presentations, distance learning tools were prepared for those who are interested in PMs from all age groups and want to learn about BDPs. Increasing digital competencies, enhancing the quality of education, and making it interesting, development of environmental awareness, to encourage biodegradable polymers to be included in the study and research topics of students, academicians and industrial companies, raising awareness about sustainable environment and decarbonization is among the aims of this result. With the creation of the laboratory videos and the interactive platform targeting game-based learning, this project result is highly impactful on all target groups, and it has high potential of dissemination and transferability.

During and after the preparation of these modules with the support of SUPSI, we have received feedback from our project partners that they will use these learnt practices especially in the preparation of course materials. Therefore, we have achieved another objective of this project outcome, which is to increase the digital capacities of the project partners

METHODOLOGY: : At the 2nd TPM in Finland on the 6th month of the project, the result of PR1 as national and the international level has been discussed and analyzed. The partnership gave the curriculum's final form and created a competence map. These analyses, curriculum, and competence map were used to form the basis of PR2 and PR3. Critical thinking related to PR2 has been done and online modules shared between all partners. Providing preliminary information to the Project staff about the creation and use of online materials and videos has been done by PAU and SUPSI.

At the 3rd and 4th transnational meeting (TPM3 and TPM4), the progress of PR2 was discussed. First, an online course platform using free material creation tools, h5p, has been created on the website. The primary role of the platform was enabling the student to learn on their own and encouraging them to evaluate themselves. Content preparation of tools and videos have been done through PR2.

During TPM2, the sections and topics were negotiated and shared by all partners. Until the 14th month, the draft EN versions have been prepared. At the TPM3, the progress of this result has been evaluated. Encountered problems and suggestions with the project partners discussed and the modules prepared in EN reviewed. After the month of 14th, project partners translated those materials into their own languages. Pilot applications between 17-18th months of the Project have been performed by 250 students and 50 academics in total for interactive materials and the book chapters. In addition to these 250 students and 50 academic staff, VR tools were introduced to 40 students during the C2 activity

and 140 high school students through multiplier events and feedback were received. It was also introduced at EGEKAF2024 hosted by PAU and 250 more people from all educational backgrounds tried and evaluated the VR applications. After testing all educational materials with an evaluation questionnaire, it has been determined by their missing parts or needs. After completion of all pilot implementations, the results have been compared and evaluated between partners during TPM4. After the necessary parts were corrected, the materials and the platform were finalized.

The tasks were summarized below:

- Content preparation (PR2-1st /6th months),
- Laboratory videos preparation (PR2-2/6th -14th months), Interactive modules preparation in EN (PR2-3/6th-14th months) and in TR (PR2-4/15th -16th months),
- Pilot testing (PR2-5/17th -18th months),
- Revision and finalization (PR2-6/18th -23rd months).

The products are in EN, FI, GE, TR, RO, and IT:

1. Online platform
2. Laboratory videos
3. Online OERs

The quality indicators for this project result are:

- Number of students attend the pilot application
- Number of academics attend the pilot application
- Number of online tools
- Number of created videos
- Number of tools to be changed providing 90% and above satisfaction from the results of the inter-partnership surveys regarding the quality of the project result (thus determining the problems and collecting the solution suggestions)

3.4.4 VR tools

The VR training solutions complement the innovative curriculum, guidebook, and online material. There have been no VR tools prepared on manufacturing and using of BDPs. Production from different materials, characterization methods, polymer pollution, and environmental sustainability are the main topics.

VR as a technology has the power to take the user into another place. This has been utilized in making more immersive, interactive, and illustrative training materials which complement the more traditional books and online materials. Furthermore, the virtual reality solution makes the training more motivating for all the target groups. The created VR application consisted of a set of 360-degree images and videos with added informative (such as text, photos, audio, video) and gamified content (such as quiz, finding hidden information). The best user experience gained by using mobile VR glasses (such as Oculus Go / Quest / Quest 2) where the user gets a stereo view to the training content. The universities and companies often already have these devices, and they are available for a reasonable price. VR glasses have been used when presenting the material in the events of the project. The VR content has been also provided through a web browser which makes it available also to those users, not in possession of compatible VR glasses.

The content of the VR application is targeted to three use cases:

1. For the university teachers: An immersive view to a lab exercise for setting up a similar exercise. The purpose is to ease the starting of necessary exercises by having an immersive view to a model exercise.

2. For the university students:

a) An immersive view to a lab demonstration which is not possible to be implemented due to safety or equipment/cost reasons.
b) A tour to a chemistry plant for viewing in industry scale the process done in the exercise as a lab size.

3. For the public: For viewing the impact of unprocessed plastic waste to the environment and the choices one can make in everyday life.

METHODOLOGY: During TPM2, basic training was provided to the project team on the use of VR equipment. After the basic information, each institution that carried out the pilot applications bought one VR glasses from the project management budget that can be used alone without the need for a computer. During TPM2, the content of scenarios has been discussed, determined, and a division of work has been made for the preparation of the scenarios. The scenarios prepared in English were shared with CTRL. Since FBK and UNITN have unique laboratories, CTRL has got the 360 degrees images from FBK and UNITN for characterization and laboratory applications. In this regard, CTRL has closely cooperated with FBK, UNITN, and IND.

Developed VR tools in accordance with the scenarios reviewed at every TPMs. With the feedback received after the pilots, the parts that needed to be developed in the tools were advanced. The tools were first prepared in EN and then translated into all partner country languages and new, modern, and interesting training modules that can be used all over the EU were prepared. Increasing digital competencies (students, academics, and project staff), enhancing the quality of distance education, and making it interesting, development of environmental awareness, to encourage BDP to be included in the study and research topics of students, academicians, and industrial companies, raising awareness about sustainable environment and decarbonization is among the aims of this project result.

With the creation of the laboratory videos prepared and the interactive platform targeting game-based learning, this project result has a high impact on all target groups, and it has high potential of dissemination and transferability.

The virtual reality content is also provided through a web browser which makes it available also to those users, not in possession of compatible VR glasses.

In essence, the materials created in FutureBio are 360 images taken in several different bioplastic research laboratories in the partner organizations: University of Trento and FBK. The photographs are presented in a VR application for an immersive viewing experience, but they can also be viewed through a website.

The images allow users to get a virtual tour in the laboratories while learning about the technology and methodologies utilized there. Several types of materials have been created using the same 360 imagery: some of the materials are aimed for bioplastic professionals, some for teachers and some for students. Even though the 360 images don't change, all the attached information changes depending on the context.

The materials created in FutureBio have been published in the Meta Store for VR, and on a webpage for more traditional access. Below are the instructions for accessing the material on both technologies:

- For VR, the FutureBio 360 materials can be accessed on Meta Quest 2, Meta Vision Pro and Meta Quest 3 goggles through the Meta Store.

For desktop and mobile use, the FutureBio 360 materials can be found by visiting the link at: https://ctrl.studio/play/futurebio or by embedding the content using an iframe to any web page.

The PR4's tasks were summarized below:

1. PR4-1: Study of existing VR applications (4th -5th months)
2. PR4-2: Determining content for VR exercises (6th -8th months)
3. PR4-3: Implementation of the first versions of the VR exercises in English (9th -16th months)
4. PR4-4: Testing and gathering feedback on the VR exercises (17th -18th months)
5. PR4-5: Final version of the VR exercises in all partner languages (18th -20th months)
6. PR4-6: Preparing the transferability guide (21st -22nd months)
7. PR4-7: Evaluation (23rd months)

Its products will be the VR tools in all partner languages and Transferability guide.

The quality indicators for this project result will be

- Number of students attend the pilot application
- Number of academics attend the pilot application

3.5 Internal rules and procedures for a proper use of communication tools

3.5.1 Website

FutureBio website is the main channel to communicate with our audiences and disseminate news. Every partner of the project has the ownership of one or two website's users (depending on their needs). Every user may create and upload content on the website. However, an approval from PAU, who acted as website administrator, makes sure the content is aligned with the general rules and approves it (before it goes public).

3.5.2 Publications, Press Releases, Interviews, and Webinars

The content of each publication has been agreed by all members of the PMT. Every partner oversees the translation of the content and leads the dissemination at national level.

3.5.3 Newsletters

It has been prepared in English by the host institution and shared with the partners within two weeks after each transnational project meeting. After the approval of all partners, it has been translated into the language of each partner country and uploaded to the website.

3.5.4 Social media accounts

All project activities have been shared by PAU as TR and EN on social media accounts.

4. Evaluation and Monitoring of Dissemination Activities

4.1 Indicators

FutureBio has "Quality assurance of the products" phase which includes:

- Quality plan

- Quality report
- Meeting evaluations
- Interim Evaluation
- Testing evaluation
- Final evaluation

A Quality Plan has been prepared and shared before starting the project by the coordinator. At the first TPM, it has been discussed, and necessary corrections have been made. Quality Plan included detailing procedures, criteria, and resources were agreed by all partners. The Partners used indicators to measure on a regular basis the rate of success of foreseen results using quality plan to ensure that the project outputs follow the specified standards to enrich all training and testing activities with quality standards to provide a final project validation report. Qualitative and quantitative indicators have been used in overall project management:

- Quality of Project management arrangements – no more than 20% rate of delays in delivering results throughout the Project
- Effectiveness of coordination by the project coordinator – no more than 20% rate of issues and problems detected in coordination
- Effectiveness of the monitoring and evaluation processes – 100% of partners and coordinator compliance with quality monitoring process tasks
- Effectiveness of quality arrangements – 100% rate of compliance with recommendations and amendment according to the problems detected

A set of indicators has been specifically defined to monitor successful distribution in terms of efficiency and effectiveness of dissemination activities. These indicators include:

Table 4.1 Set of indicators for Dissemination activities

Outputs / Deliverables/ Project Results	Measurement Unit	Target Value	Final
Project Logo	--	1	1
Animated logo for Website	--	1	1
Project brochure (in English and local editions in national languages)	Nr of project brochure produced	1000	1000
Project poster (in English)	Nr of project posters produced	10	10
Project Roll-ups (in English)	Nr of project rollups produced	3	3
International FutureBio e-newsletter	Nr of newsletter produced	5	5
Movie-documentary about FutureBio results, main outcomes and events	---	1	3
Number of regional local events organized for external audiences	Nr of events organized	7	7

Number of European events organized for external audiences (including a final event)	Nr of events organized	1	1
Number of events attended representing the project	Nr of events attended	7	7
Communication with SMEs for	Nr of events	24	40
Scientific publications in peer-review journals, international conferences and workshops participation in events or calls	Nr of publications	10	15
External audience of FutureBio website	Nr of unique visitors (based on Google Analytics)	1000	1000
Activity and dissemination in social media	Nr of posts	150	274
Social Media followers	Nr of followers	1000	1100
Informative meetings	Nr of attendance	380	600
Visiting high schools	Nr of events	20	20
Master of science thesis	Nr of thesis	-	2
Awards	Nr	-	2
Continuous works/projects	Nr	-	2
Project application	Nr	-	4

4.2 Dissemination log

The Dissemination Log was a specific tool for monitoring partners' dissemination activity during the whole project. The log is designed in an excel sheet and shared with all partners in a separate Google Drive folder. When a FutureBio partner releases or carries out a specific dissemination action (for example, organization of an event, publication on their website, attendance to a third-party workshop to promote FutureBio, etc.) a new entry on this excel log must be added including some basic information about the action made.

Every three months, the dissemination coordinator checked the log and refreshed the progress of the specific indicators in order to make a close monitoring on dissemination efforts. Specific email reminders have been sent to all partners to remind them to complete the log before each three-month period.

Table 4.2 FutureBio Dissemination Log

Date	Partner	Place of dissemination	Dissemination activity type:	Means (email, social media, distribution of leaflets, online article, scientific paper, press release etc...)	Brief description of the activity	Number of participants	Target group	Link to the folder with pictures

In each activity, the signature and information form seen in Table 4.3 will be completed by the participants and a scanned copy will be shared with the coordinator after the activity.

Event name:

Name of organization performing the event:

Date of Venue:

Place of Venue:

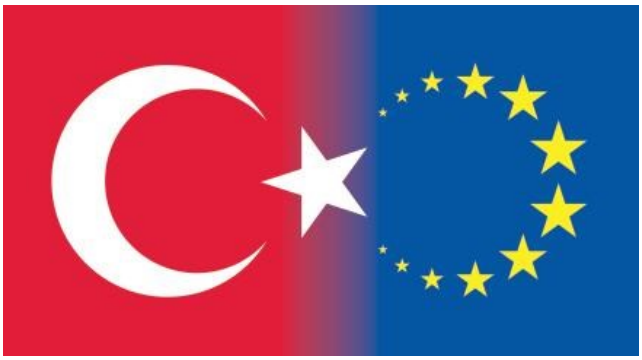
Table 4.3 Attendance list

	Name and Surname	National ID	Institution	Sign
1				
2				

5. Obligations and Requirements for Communication Actions

5.1 Information on EU funding — Obligation and right to use the logos

This project was financed by the European Commission through the Turkish National Agency. For this reason, within the framework of the contract signed with the Turkish National Agency, it is obligatory to use the following logos in the Erasmus+ and European Solidarity Program (ESC) project outputs. The 3 obligatory logos are the Presidency for the EU logo, the Turkish National Agency logo, and the EU logo:



Co-funded by the European Union

movetia Austausch und Mobilität Echanges et mobilité Scambi e mobilità Exchange and mobility

For communication activities:

"This project has received funding from the Turkish National Agency and European Commission Erasmus+ program under grant agreement No: 2021-1-TR01-KA220-HED-000032160".

5.2 Disclaimer excluding Agency and Commission responsibility

Any communication activity related to the action must indicate that it reflects only the author's view and that the Agency and the Commission are not responsible for any use that may be made of the information it contains:

"Funded by the Erasmus+ Programme of the European Union. However, European Commission and Turkish National Agency cannot be held responsible for any use which may be made of the information contained therein"

"This project has received grant support from Movetia funded by the Swiss Confederation. The content reflects the authors' view and Movetia is not responsible for any use that may be made of the information it contains."