

R4.2 - Start-up and entrepreneurial workshops

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Glossary of terms, abbreviations and acronyms

Abbreviation / Acronym / Term	Description
CE	Circular Economy
CHAINS	CHallenges INnovation teams. Collaborative teams of students of the PackAlliance postgraduate programme to work on a specific industry challenge
EACEA	Education, Audiovisual and Culture Executive Agency
HEI	Higher Education Institution
P	Partner
PackAlliance Hubs	Physical places where the academia-industry collaboration within the project will take place
PESTEL	Political, Economic, Social, Technological, Environmental, and Legal
PS	Polystyrene
WP	Work Package

Partner shortname	
P1-Campus Iberus	Partner 1 - Campus Iberus (Spain)
P2-Ecoembes	Partner 2 - Ecoembes (Spain)
P3-AGH	Partner 3 - AGH University of Science and Technology (Poland)
P4-Synthos	Partner 4 - Synthos Group (Poland)
P5-TAMK	Partner 5 - TAMK Tampere University of Applied Sciences (Finland)
P6-Pyroll	Partner 6 - Pyroll Group (Finland)
P7-Proplast	Partner 7 - Consorzio per la promozione della cultura plastica - Proplast (Italy)
P8-UNISA	Partner 8 - Università degli Studi di Salerno (Italy)

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1. Introduction

The different national PackAlliance Hubs have organized different entrepreneurial workshops in each participating country in order to foster entrepreneurship within the plastic packaging industry.

3 workshops have been hosted in different locations in each participating country (Spain, Italy, Poland, and Finland). Workshops were open to anyone interested in order to connect with companies, professionals and other start-ups from different regions, contributing to enlarge therefore the national networks of the project.

This document resumes the 12 workshops organized all around Europe thank to the 4 PackAlliance Hubs created within the PackAlliance project.

2. Workshops

2.1. Finland

2.1.1. Workshop 1

The first workshop done in Finland took place on 24 September 2021, following an active methodology that promotes collaborative work among participants, supported by the Jamboard tool for Design Thinking and mind mapping.

The workshop was promoted in the TAMK and Pyroll media, however, some participants from the packaging sector were specifically invited through phone calls and emails. In total 31 people attended, including packaging company employees, packaging producers, sorters and recyclers, industry partners and students.

During the event the following topics were presented:

- Current status and future of plastic recycling / Anniina Rasmus, Fortum
- Responsibility and ethics of communication / Maria Åkerman, VTT
- Specialist in the circular economy of plastic packaging - Citizen and consumer engagement / Eveliina Asikainen and Nina Kukkasniemi, TAMK

The methodology of the workshop consisted of working in groups to generate an analysis of the packaging and plastic sector, having a common understanding and deepening the issues through an active discussion of the participants. Figure 1 shows the part of the workshop where indications are given focused on sharing participants' results and answering the question *What challenges or areas for improvement? (Mitä haasteita tai kehitettävää?)*.

There were no problems in running the workshop, however, prior to the workshop one speaker cancelled his participation and was replaced by a member of the partners.



Figure 1. What challenges or areas for improvement?

For this first Finnish workshop, a complete publication was published:

<https://www.tuni.fi/unit-magazine/artikkelit/muovi-pitaisi-saada-reippaammin-kiertamaan-mutta-pakkausmerkinnat-jarruttavat>

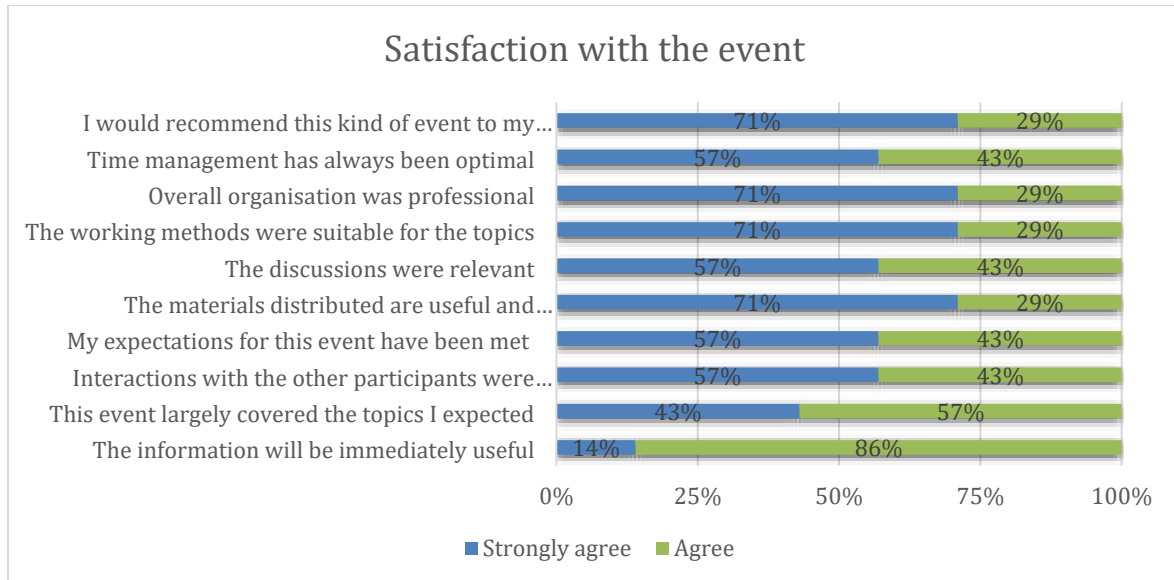
Results

As an outcome of the workshop for the project were the data on educational competence gaps collected from all thematic areas, as well as the increased dissemination of the Pack Alliance project among the plastics industry in Finland. The main impact of the workshop for the participants was the opportunity to discuss important issues along the whole value chain.

In general, a survey was carried out to find out the satisfaction of the participants as shown in Table 1, the results show that the information provided is of great interest to the participants as well as the group methodology used.

	Strongly agree	Agree
The information will be immediately useful	14%	86%
This event largely covered the topics I expected	43%	57%
Interactions with the other participants were encouraged	57%	43%
My expectations for this event have been met	57%	43%
The materials distributed are useful and informative	71%	29%
The discussions were relevant	57%	43%
The working methods were suitable for the topics	71%	29%
Overall organization was professional	71%	29%
Time management has always been optimal	57%	43%
I would recommend this kind of event to my colleagues	71%	29%

Table 1. Finland workshop1: Satisfaction survey results



2.1.2. Workshop 2

The second workshop was of high impact because it was held at the PacTec fair in Helsinki, where the entire packaging value chain is brought together, from raw materials and design to bottling industries and recyclers. The workshop was held on 18 May 2022, a few days after the press release of the results and the exhibition report was published on the dissemination of the workshop and the PackAlliance project.

The invitation was made in TAMK and Pyroll networks and the event's website under the name table workshop on-site *The future of packaging: greenwashing or new technologies?*. There was a space for a workshop for 60 people, and up to 100 people were able to attend. Those who did not have a place were allowed to participate as observers.

The dynamics consisted in generating a debate with a specialised panel representing the main actors of the packaging industry and stakeholders related to plastic packaging, the duration of the activity was 75 minutes. Subsequently, round table discussions were held with participants who were provided with a series of trigger questions, generating a debate that was moderated with the panellists, Figure 2 shows the cover of the press release narrating the workshop held at the fair.



Figure 2. Cover of the workshop press release

Results

The main impacts of the round table for the project were the opinions and discussions on the role of communication with citizens and consumers in relation to packaging, packaging materials and the life cycle of packaging.

The fair that brought together industry representatives from various sectors was also well suited for the further dissemination of the Pack Alliance project in Finland.

The results of the round table discussions and the debate with the panelists were disseminated through TAMK's networks and are available at:

<https://blogs.tuni.fi/tamkblogi/hanketoiminta/viherpesua-vai-uutta-teknologiaa/>

A satisfaction survey was conducted, however, it had little response impact. Feedback from participants was mostly provided orally to the organisers.

2.1.3. Workshop 3

In the last workshop organised, it was decided to collaborate with RUOKO (<https://projects.tuni.fi/ruoko/>) in order to strengthen ties that will allow the continuity of the project, and to facilitate the creation of local centres, especially in the field of food packaging.

In collaboration with RUOKO, a panel discussion with industry professionals was followed by a workshop with a large group of professionals from all levels of the plastic packaging value chain. The keynote speeches sparked a lively debate among the attendees, which continued into the workshop. The main impact of the workshop for participants was the opportunity to discuss consumer engagement along the entire value chain. However, the discussion was somewhat lacking in the importance of the value that consumer engagement can bring to companies.

For this third Finnish workshop, a complete publications was also published: <https://blogs.tuni.fi/tamkblogi/hanketoiminta/pakkausten-kiertotalous-ei-toteudu-ilman-kuluttajaa/>

Results

Participants were offered new perspectives about sorting and recycling of packaging through expert keynotes and joint discussions, and the workshop demonstrated the methodology used in PackAlliance and disseminated the results of the project.

Cooperating with RUOKO in the workshop, data was obtained for a PESTEL analysis (in Annex 1) that contributes to the investigation of the potential added value and competitiveness that companies could achieve through increased consumer commitment to packaging recycling and reuse.

2.2. Italia

2.2.1. Workshop 1

The PackAll Hubs workshop “*INNOVATION IN SUSTAINABLE PACKAGING*” has been organized by the Aosta Valley Region in collaboration with the Chambre Valdôtaine des entreprises et des activités libérales, Enterprise Europe Network and Proplast on November 30th, 2021.

The promotion of the workshop was done on the different social media (website, LinkedIn and mailing) and through the social media channel of Proplast side. The workshop was widely publicised with a positive impact on LinkedIn, thus the 18 participants of the workshop from 12 companies from the plastic packaging sector.

The workshop used design thinking tools to understand the needs of the companies and also active methodologies that encouraged dialogue between the participants. This dialogue on current needs and training was maintained during the sharing of the results of the PackAlliance training programme. This workshop lasted 4,5 hours, with presentations by experts in the sector and the workshop dynamics itself, the details of the timetable can be found in the Figure 3 below.

L'innovazione nel packaging sostenibile

30 novembre 2021 ore 14.00
Sala Lys c/o Pepinieres d'entreprises di Pont-Saint-Martin
Viale Carlo Viola, 78

Programma

14.00	Registrazione dei partecipanti
14.15	Apertura dei lavori e saluti di benvenuto
14.30	PITEM CLIP – Progetto CIRCUITO: una nuova opportunità per il territorio valdostano e i servizi dello Sportello EEN Federico Molina - Camera valdostana delle imprese e delle professioni Sportello SPIN2
14.45	Presentazione Polo CGREEN e Linee intervento della nuova Agenda Strategica di Ricerca Susana Remotti, Giorgio Boaro – Polo CGREEN
15.00	I materiali per un packaging sostenibile e cenni sulle normative Marta Zaccane – Consorzio Proplast
15.30	Le esperienze di Proplast su materiali, applicazioni, riciclo: progetti sviluppati ed in corso Marta Zaccane, Giorgio Boaro – Consorzio Proplast
15.45	Iniziativa "PackAll Hub" nell'ambito del progetto PackAlliance. Susana Remotti – Consorzio Proplast
16.00	Testimonianza aziendale – Enval Srl Michel Borinatto - Responsabile Ufficio Tecnico
16.15	Domande e risposte

L'incontro costituirà l'occasione per illustrare le attività previste dal Progetto CIRCUITO e l'iniziativa PackAll Hub nell'ambito del progetto PackAlliance (ERASMUS+)

MODALITÀ DI ISCRIZIONE

Per iscriversi occorre compilare il modulo online <https://forms.gle/DTQyBiSozHbomzDxB> entro lunedì 29 novembre 2021 ore 12.00. La partecipazione all'evento è gratuita e subordinata alla regolarità del pagamento del diritto annuale alla Chambre, ove dovuto. Alla luce delle ultime disposizioni Ministeriali per il contenimento della diffusione del covid-19 è necessario presentarsi all'incontro muniti di GREEN PASS.



Figure 3. Schedule italian workshop 1

At the end of the workshop, the participants have been invited to complete a survey regarding the organization and has been sent to them by email too. The result as shown in Table 2.

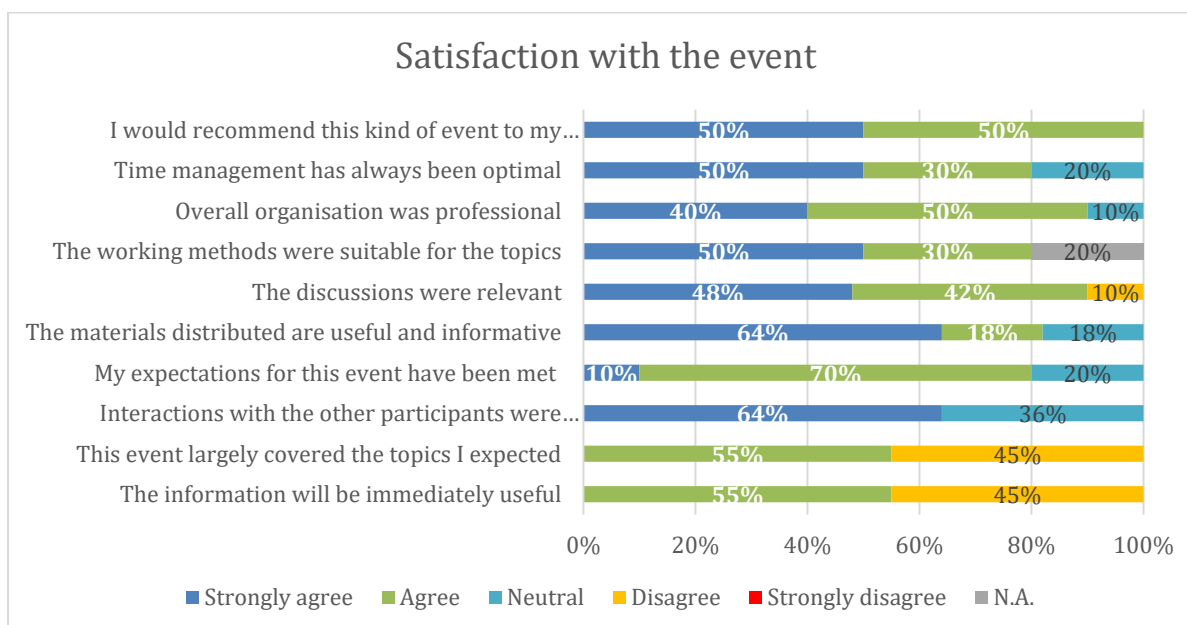
Results

The participants were very enthusiastic during the discussion about what kind of possible case of studies that will be analyzed by the students during the Hubs. Some ideas have been suggested by the companies finding out of real challenges. For instance, new materials used for packaging and their requirements as sealability and printability or issues concerning biopolymers shortened and mixed with recycles.

This was reflected in the satisfaction survey carried out, which found that while 100% considered the information to be relevant or very relevant, 45% did not see how to use it in the short term.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	N.A.
The information will be immediately useful		55%		45%		
This event largely covered the topics I expected		55%		45%		
Interactions with the other participants were encouraged	64%		36%			
My expectations for this event have been met	10%	70%	20%			
The materials distributed are useful and informative	64%	18%	18%			
The discussions were relevant	48%	42%		10%		
The working methods were suitable for the topics	50%	30%				20%
Overall organisation was professional	40%	50%	10%			
Time management has always been optimal	50%	30%	20%			
I would recommend this kind of event to my colleagues	50%	50%				

Table 2. Italy workshop 1: Satisfaction survey results



2.2.2. Workshop 2

The second workshop has been organized by UNISA and Proplast on April 27th, 2022. The workshop aimed to inform and present the PackAll training course, the CHAINS module and the PackAll Hub, using a discussion panel dynamic to hear the views of the participants. The format of this workshop was online via Teams, with 12 participants.

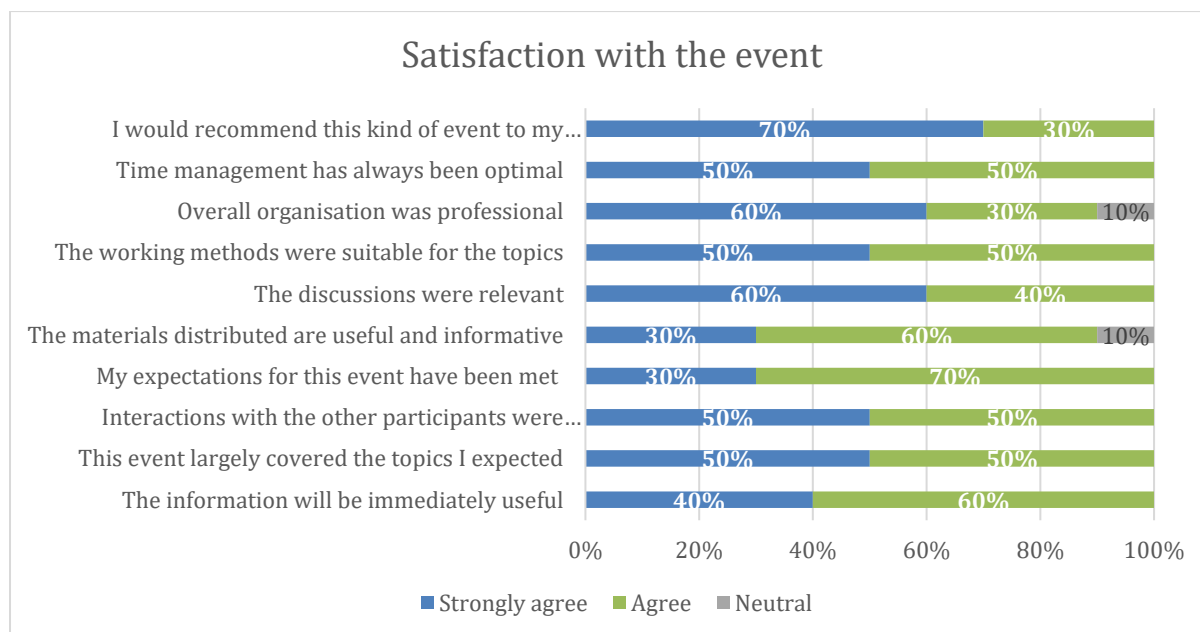
The invitation to the workshop was by mailing and personal contact with potential partners to establish the continuity of the project. At the end of the workshop, the participants have been invited to complete a survey regarding the result as shown in Table 3, 10 of the 12 participants filled the survey.

Results

After the workshop, many doubts and needs have been emerged from companies' side. Therefore, they have realized that a space where interacting with researchers, universities and other stakeholders could be a good opportunity for them to collaborate and to solve problems.

	Strongly agree	Agree	Neutral
The information will be immediately useful	40%	60%	
This event largely covered the topics I expected	50%	50%	
Interactions with the other participants were encouraged	50%	50%	
My expectations for this event have been met	30%	70%	
The materials distributed are useful and informative	30%	60%	10%
The discussions were relevant	60%	40%	
The working methods were suitable for the topics	50%	50%	
Overall organisation was professional	60%	30%	10%
Time management has always been optimal	50%	50%	
I would recommend this kind of event to my colleagues	70%	30%	

Table 3. Italy workshop 2: Satisfaction survey results



2.2.3. Workshop 3

The PackAll Hubs workshop has been organized by Proplast with the support of UNISA on October 4th, 2022. The workshop aimed to inform and present the PackAll, the CHAINS

module, the PackAll Hub, and the future implementation of the IV Edition of the 1st Level University master MATESPACK beyond the project lifetime.

The workshop has been organized trying to involve companies of the circular economy plastics sector, inviting them to show their case studies and their skills, in order to understand their needs about upskilling and reskilling. The synergies generated within the companies will give the opportunity to collaborate in the future creating new ideas and opportunities.

To open the network at different levels, the workshop was open to the public in general, searching to create an opportunity of discussion about the PackAll Hubs and CHAINS. The workshop has been organized online and open to companies, associations, and universities from all over Italy, over 70 participants attended the workshop.

The dynamics of the workshop consisted of working on case studies, the main one being the one developed in the PackAlliance CHAINS module, which allowed participants to learn about the methodology and how it impacts the creation of innovative ideas in the plastic packaging sector.

Results

The participants were interested during the discussion about case-studies, and the possibility of future collaborations. This workshop supported the dissemination of the project and generated curiosity about the methodology used, opening the possibility for collaborations with companies in the sector and with professionals.

2.3. Poland

2.3.1. Workshop 1

The first PackAll Hubs workshop in Poland titled “*Workshop on the Circular Week business matchmaking: BIOECONOMY for innovative packages and circular food chains*” has been organized by Plastics Europe, Stowarzyszenie Klaster Biogospodarki (Association Bioeconomy Cluster); Pack Alliance | European alliance for innovation training & collaboration towards future packaging; Italian Circular Economy Stakeholder Platform – ICESP on October 12th, 2021 online, through the Zoom Platform.

The workshop was conducted by prof. Danuta Ciechańska who gave the presentations entitled: “Circular economy as a challenge for eco-innovative investments”. The event began with the prof. Joanna Kulczycka’s presentation on the importance of the circular economy and the PackAlliance Program. Ms Marta Kutyna gave a presentation concerning start-ups corresponding with the aim of the workshops- the development of entrepreneurship.

The workshop was divided into two parts. The first part focused on Polish and foreign speakers’ presentations devoted to essential issues of circular bioeconomy, packaging in accordance with the principles of circular economy, circularity of food system, bioeconomy for food and packaging, possibilities of financial support for enterprises.

The second part of the workshop was devoted to business matchmaking, which is defined as the process of finding the best match between the requirements of the different sides of the workshop participants' needs. The purpose was to identify potential areas of collaboration between the scientific and business communities, as well as to discuss the future development of the bioeconomy solution on a local, regional, national, and international scale.

Results

The workshop was joined by 28 people. No feedback of the participants were obtained during the workshop.

2.3.1. Workshop 2

The PackAll Hubs workshop “*Circular economy - building circular value chains and new business models*” has been organized by AGH in collaboration with the Klaster Gospodarki Odpadowej I Recyklingu on October 3rd, 2022 at the Mazowieckim Samorządowym Centrum Doskonalenia Nauczycieli w Płocku. In Płock (Poland).

Environmentally significant aspects of cooperation between entities in the value chain and the development of new business models were examined by workshop participants. During the workshop session, they discussed their own experiences and best practices, referring (as part of the work of each working group) to one of the following issues:

- the direction in which cooperation should be developed
- the type of cooperation that is most likely to prevent waste generation
- obstacles for the industry
- resource conservation, including water and energy
- eco-design
- influencing factors
- carbon footprint
- industry 4.0 (robotization, digitization, digitization)
- supply chain cooperation – network



Figure 4. Circular Economy workshop in Plock (Poland)

After a brief introduction and presentation to know each other, an introductory presentation was made about the circular value chain and new business models talking mainly about:

- Ecodesign and labeling of products.
- Standardization and environmental certification of sustainable companies
- Industry challenges in the context of the circular economy

Those presentations were made by Katarzyna Błachowicz (Vice-President of the Management Board, Waste Management and Recycling Cluster, National Key Cluster, Recycling Academy) and Agnieszka Zdanowicz (Vice-President of the Management Board, Waste Management and Recycling Cluster, National Key Cluster).

After this introductory presentation, a creative workshop took place where participants had to identify the challenge, discuss of the challenge, work in groups creating innovative solutions and discuss ideas to choose one. At the end, the participants jointed the development of solutions, presented, and discussed the effects of the work done.

Results

The invitation was sent to 60 people and 18 joined the workshop. The workshop gathered participants from the following target groups:

- representatives of entrepreneurs (micro, small, medium, large)
- representatives of local government units
- representatives of municipal companies
- representatives of business environment institutions, including environmental ones.

In the summary, most of the participants indicated that although they knew some of the concepts - the ability to properly assign them to the process and, consequently, to model the activity - was not obvious.

The main conclusions of the creative work were:

- Circular economy, including topics related to plastics, requires a holistic view and cross-sectoral activities.
- The assumptions of the circular economy include relationality, cooperation, and availability of knowledge.
- Circular economy in Poland is built bottom-up, therefore mechanisms and tools created by the administration should be a response to bottom-up activities, often local.
- Circular economy is more than waste and recycling - it is primarily an innovative industry and services.

After the workshop, a satisfactory survey was launched among the participants to evaluate 16 aspects of the workshop. All of participants considered all the aspects of the workshop between “strongly agree” and “agree”. Just one aspect of one participant was marked as “neutral”.

2.3.2. Workshop 3

The last PackAll Hubs workshop in Poland titled “*Recycling of polystyrene – trends development for sustainable PS circularity*” has been organized by Synthos on October 15th, 2022 at the Powiatowy Zespół Nr 2 Szkół Ogólnokształcących w Oświęcimiu in Oświęcim (Poland).

The purpose of the event was to introduce the topic of recycling in the context of sustainable polystyrene waste management and possible circularity of PS-based products, especially related to Synthos actions within PackAlliance Project. At the beginning, the participants were introduced to the PackAlliance project. Then, another part of the workshop was devoted to properties, production methods, and applications of polystyrene. During the second phase of the event, the participants could broaden the knowledge regarding the recycling of polystyrene. The last phase was devoted to the PackAlliance project and proposal for solutions for polystyrene.



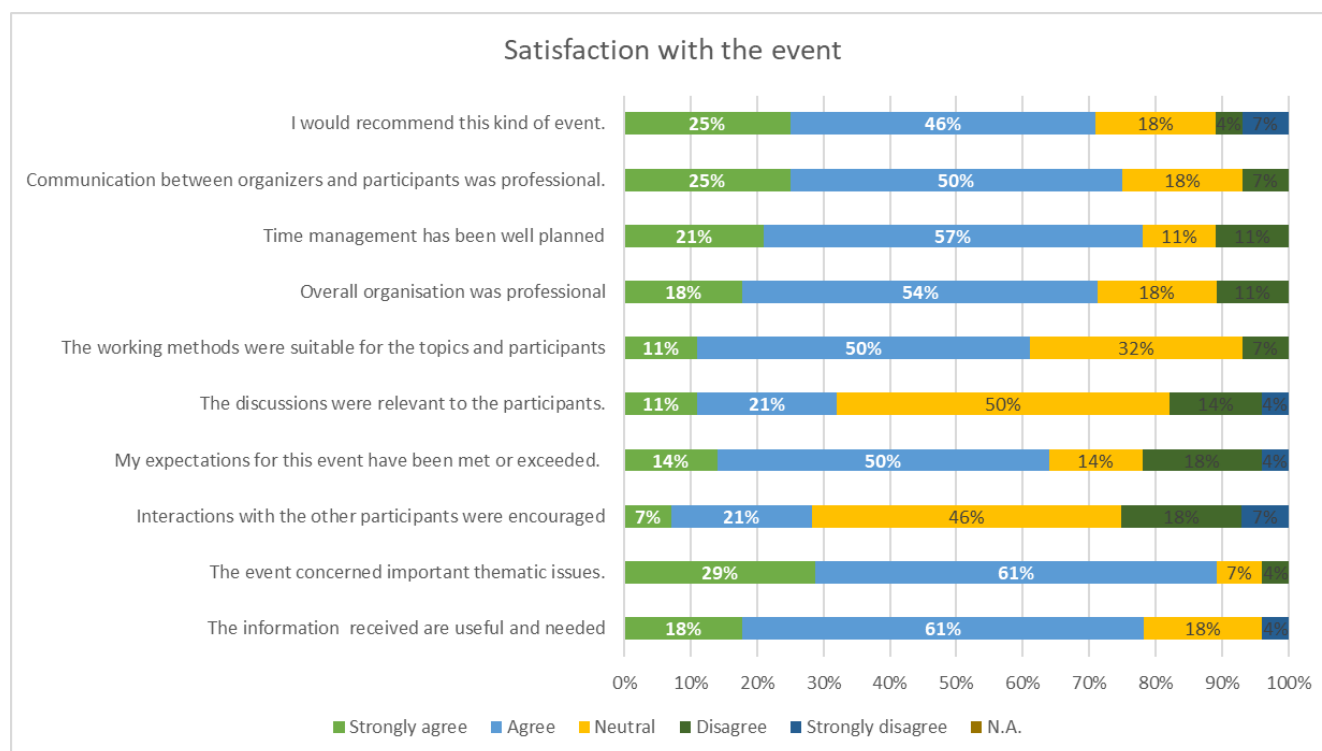
Figure 5. Recycling of polystyrene workshop in Oświęcim (Poland)

Results

The invitation was sent to 40 people and 33 joined the workshop.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
The information received are useful and needed	18%	61%	18%		4%
The event concerned important thematic issues.	29%	61%	7%	4%	
Interactions with the other participants were encouraged	7%	21%	46%	18%	7%
My expectations for this event have been met or exceeded.	14%	50%	14%	18%	4%
The discussions were relevant to the participants.	11%	21%	50%	14%	4%
The working methods were suitable for the topics and participants	11%	50%	32%	7%	
Overall organisation was professional	18%	54%	18%	11%	
Time management has been well planned	21%	57%	11%	11%	
Communication between organizers and participants was professional.	25%	50%	18%	7%	
I would recommend this kind of event.	25%	46%	18%	4%	7%

Table 4. Poland workshop 3: Satisfaction survey results



2.4. Spain

2.4.1. Workshop 1

The first Spanish workshop was held in a hybrid format, it was a hybrid event, the first day (November 25th, 2021) was a presential event at TheCircularLab in Logroño (Spain) and the second day (November 26th, 2021), was done on-line.

The workshop was framed in the event of circular economy of plastic in cities, with the City Council of Logroño as the main stakeholder. At the event, different entrepreneurs were presented with their startups offering innovative solutions in the plastics sector. The entrepreneurs' pitches sessions was followed by a networking session.

On the second day in on-line mode, workshops took place with entrepreneurs and Ecoembes innovation specialists talking about the importance of the PackAlliance Hubs and the PackAlliance project itself.

The agenda of the event was the following:

1st day: Demo day (public)

- 11:00-11:15 Tour of the Hub facilities and relevant projects
- 11:15-11:30 Speaker Boyd Cohen
- 11:30-12:30 Start-ups pitches
- 12:30-12:45 Speaker Jaime Rodriguez de Santiago
- 12:45-13:15 Start-ups pitches
- 13:30 Closing and networking lunch

2nd day: Workshops (private)

- 10:00-10:30 Iridia Corporation
- 10:30-11:00 Smart Monkey
- 11:00-11:30 Vonzu
- 11:30-12:00 Recycleye
- 12:00-12:30 Spectral Geo



Figure 6. Entrepreneurs workshop in Logroño (Spain)

Results

28 participants were physically participating at the event the first day (the event was broadcasted online also with 156 participants), and 5 entrepreneurs were participating the second day. Among the participants of the first day were packaging waste management authorities (collection and sorting), government administrators, and entrepreneurs in the circular plastic economy

The invitation for entrepreneurs and Government was carried out in an institutional level by phone and email. Attendees only at the streaming for entrepreneurs' pitch could register online in Ecoembes web.

The agenda (in PDF) was previously delivered to the participants. The workshop shared the content of the modules of the PackAlliance training programme.

As it was a hybrid event, the preparation was complex, with a team in charge of streaming and another one for the face-to-face activities. Covid health protocols had to be covered, including PCR test for on-site participants.

The event was held during the COVID pandemic, several measures had to be implemented to avoid possible contagion, which limited interactions among the participants.

The entrepreneurs' pitches were timed and gave way to expert speakers from the sector. The workshop took place the day after the presentation of the Hub and the entrepreneurs' pitches, for this purpose, programming was carried out with Ecoembes' innovation specialists.

Due to the timing of the event, some entrepreneurs were unable to participate on both days.

The program PackAlliance are well received and of interest to the entrepreneurs, who commented on their training needs and gave feedback on the program's modules.

With the entrepreneurs' workshop, their training needs in the plastics value chain were determined. The training program developed at PackAlliance was shared with them and the modules in it were validated and they were invited to participate in the program.

2.4.2. Workshop 2

The second Spanish PackAll workshop was celebrated at Logroño, at TheCircularLab on July the 7th 2022. It consists on the presentation of PackAlliance to people from the packaging sector at the event "Spanish G7 Work Group for Circular Economy", in order to disseminate the Hub and other outputs. The workshop was organized by Ecoembes and Campus Iberus.

The workshop included a presentation of the nowadays' recycling challenges, a tour of the Hub facilities and relevant projects and a final presentation of PackAlliance, learning program and results.

The agenda (in PDF) was previously delivered to the participants. After the event, a PPT with the PackAlliance presentation was also sent to them.

The event was attended by plastic waste treatment managers from different parts of Spain.

The workshop began with the straight lines of packaging recycling, where participants contributed their own vision and interest in training people in the circular economy of packaging.

The presentation of the results of PackAlliance, including the training program, provided solutions to the challenges raised by the participants.

A tour of the Hub's facilities was conducted, introducing the work teams and their research areas.



Figure 7. G7 Circular Economy workshop in Logroño (Spain)

Results

22 external people participating (not including TheCircularLab and Campus Iberus Team). Public administration (all levels, including members of the national parliament, regional ministers and high levels directors in charge of the packaging waste management).

With people coming from different parts of Spain, the logistics of bringing them to the Hub (and back to their homes) were complex (also included participants from islands). Personnel were dismissed due to covid issues, and other experts within the company were called in.

The workshop was carried out according to the agenda, the participants confirmed their attendance days before and with them the bus and cabs were scheduled to go to their hotels, airports or train station.

The presentation of challenges was dynamic and allowed to know the concerns of the participants, the skills required for the training of personnel in the packaging sector and the needs of public administrations.

The results of PackAlliance are well received and of interest to the participants, who commented on the value of having Hubs in different parts of Europe.

The attendees contributed points to be considered in the circular economy of packaging, validated the training program as a key point to understand the problems of the sector and to be able to create solutions within companies and public administrations.

	Strongly agree	Agree
The contents developed were interesting	100%	
The information received will be immediately useful to me	75%	25%
Interactions with the other participants were encouraged	100%	
The working methods were suitable for the topics and participants	90%	10%

2.4.3. Workshop 3

The last workshop was celebrated during the CONAMA Congress (16th Congreso Nacional de Medio Ambiente) that was held in Madrid. More than 1200 experts, participants and attenders were registered. Ecoembes, partner of the PackAlliance project, had a booth in the Conference and Exhibition Area, where a poster with the main topics of the project were shown. During the conference, the information concerning the project and, its main characteristics and other activities related to the PackAlliance Hub were displayed and explained to the assistants.

CONAMA Foundation organized the CONAMA Conference. The presentation of PackAlliance in the Conference was organized by Campus Iberus and Ecoembes as partners of the PackAlliance Project. The activities at the Ecoembes booth were organized by Ecoembes.



Figure 8. Ecoembes booth at CONAMA workshop in Madrid (Spain)

Results

The CONAMA Foundation approved and included a paper related to PackAlliance at the Congress Publication Book. The ISBN number of the publication is 978-84-09-46920-8. The paper was written by Cristina Nerín de la Puerta (Universidad de Zaragoza), Robert Soliva Fortuny (Universitat de Lleida); María Teresa Tena Vázquez De La Torre (Universidad de La Rioja); Alberto Navajas León (Universidad Pública de Navarra); Eva Gallego Pérez (Campus Iberus), Daniel Menchaca Martínez (ECOEMBES); Linda del Carmen Pichardo Arce (ECOEMBES).

The paper is also available to download at the CONAMA's website <http://www.conama2022.org/web/generico.php?idpaginas=&lang=es&menu=257&id=7637&op=view>

The Ecoembes booth had a lot of visits (hundreds) during the four days of the congress where the PackAlliance Hubs and the project itself was presented including some of the projects started with entrepreneurs at the Hub.

3. Conclusions

The different national PackAlliance Hubs properly organized the entrepreneurial workshops in each participating country (Spain, Italy, Poland, and Finland). to foster entrepreneurship within the plastic packaging industry.

The 12 workshops were successfully hosted in different locations with different formats in each participating country. Workshops were open to anyone interested in order to connect with companies, professionals and other start-ups from different regions, contributing to enlarge therefore the national networks of the project.

The COVID pandemic made that some of the events were online instead of face-to-face but most of the workshops were organized during the last year of the project where the restrictions were laxer.

All the workshops were successfully executed in terms of number of participants and positive feedback of the assistants.

Annex 1: Finland Workshop 3 PESTEL analysis



PESTEL analysis vision: 'Households would sort or otherwise recycle 80% of packaging, especially food packaging (is there a difference between take-away/other packaging)'

VISION	What does the situation need to be like for the vision to become a reality?	What do we need to do to get there?	Who do we need to involve?
Political	<ul style="list-style-type: none"> The Ministry of the Environment or another body is responsible for promoting the measures Help with organising sorting "social skills" Strong legislative guidance, national EU Political will, majority decision Dirt in the EU, Finland is sparsely populated, fuel energy to be approved Incentive regulation, is it possible? Supporting the introduction of reusable packaging (restaurants, etc.) Mandatory sorting instructions for packaging Proactivity for reactivity - positivity for negativity Empowering consumers, raising their hopes 	<ul style="list-style-type: none"> Recycling labels on packaging in big letters and clearly -> no need for consumers to think about it Labelling is understandable and easy to follow Motivation + good labelling on packaging (how to recycle) Sorting instructions in plain language Multilingualism is taken into account in sorting instructions Transparency, calculation methods Positive guidance before blame Is policy more of a threat to consumer action than fact-based control? <p><i>"When you come from countries where nothing is recycled, when you come to Finland, you should at least understand that recycling takes place here"</i></p>	<ul style="list-style-type: none"> E.g. PLA larger market areas -> EU cooperation More knowledge through basic education (children, young people) The whole value chain <p><i>"Through basic education for children and young people, just being at home is discussed"</i></p>
Economic	<ul style="list-style-type: none"> Including sorting + recycling costs in the price of packaging material -> facilitates value creation from waste The price of the packaging is the same for the consumer develop an incentive scheme financially encouraging profitability for companies that contribute to the costs easy assembly and dismantling, logistical advantage (technological) Possible incentive for the consumer to return the packaging e.g. voucher benefit when returning the packaging Strong economic incentives (price) Free collection process for consumers (no transport etc.) The choice of recyclable alternatives must be the most profitable option for companies Mixed waste is still considerably more expensive 	<ul style="list-style-type: none"> Creating a deposit scheme Motivating recycling, e.g. pledges Over time, the situation will normalise, sorting practices will become the new normal (e.g. paper collection, bottle collection) <p>"</p>	<ul style="list-style-type: none"> The whole value chain home delivery companies the home delivery company would take the waste, in the past you would collect the newspapers from home, now you would collect the waste from home -> this would be a selling point for companies, if sold correctly this service would be a competitive advantage for companies <p><i>"For example, Aces and online stores could accept the packages and get a coupon for a leap voucher."</i></p> <p><i>"Bring on your way in and take on your way out, for example, if you no longer go to the shop, you no longer go to the ecopoint. The selling point for the shop, the service."</i></p>

<p>Social/ Social</p>	<ul style="list-style-type: none"> • "plus points" / prize. what? how? • More discussion + social pressure, so that those who are interested but not quite up for it yet can get excited. • future generations, looking to the future • trendiness, generational, awareness • Require the use of plain language labels / change recycling labels into the vernacular • Skills change needs/systemic change • Increasing social pressure to sort • An example of some influencers • Social pressure for recycling in the Community • Related party model /social pressure for packaging collection • Children and young people have a future in environmental awareness • Schools and organisations <p>"Bonus points, through some kind of reward for how much you recycle and schools may give you a badge for doing it right"</p> <p>-</p> <p>-</p>	<ul style="list-style-type: none"> • the importance of the role of the consumer and understanding this role will encourage sorting • the importance of sorting for individuals and society must be understood • Does the packaging really circulate or does it go to the incinerator anyway? -> making use of recycled materials (people think this way) • added value for the consumer • the importance of recycling • LCA from a consumer perspective • training and information retrieval • Communication so as not to appear greenwashing • The power of example • "plain language guidance is needed for specific groups" (e.g. symbols) <p>"Understanding the consumer: I am now the one who is significant in this chain" "There are so many lazy people, don't do it if it's not easy" "Yet you can lift 150 kg from a bench at the gym, it's not easy either" "If you are a misanthrope, at least think about animals and nature"</p> <p>"Your yoghurt pot was used for this dish brush too"</p> <p>"I pointed out to the guy that if he sorted, he would have to take the rubbish out less often" "he started sorting"</p> <p>"When a young person moves into their first home, there should be an incentive to recycle (financial, savings)"</p>	<ul style="list-style-type: none"> • packers / brands and trade • by education and education sector • Trade • property management business <p>"When you go to mono-materials, the trade sees red, when the selling time is reduced, it beats the price. Even if they eat it the same day, it still has to have a couple of weeks of selling time" -> the consumer should understand</p> <p>"Brand communication, sort, sort, sort"</p> <p>"With the YLE I love plastic 2019 campaign, sorting enthusiasm rose a lot. Expensive campaign, but raised recycling rates. MEGA class, a real bang for the buck!!!"</p> <p>"Some famous celebrity says, 'You should participate in this now, and you'll probably get a few percent more'"</p> <p>"We have four households that have their rubbish collected every 2 months, saving a hell of a lot of money than taking it to the recycling point and I'm the only one with a car. The neighbours have a visit every 2 months"</p> <p>"It doesn't always have to be that easy"</p> <p>"There are always groups that don't care e.g. driving without a seatbelt in 50% of raids, preferring to sit on the seatbelt rather than fasten it"</p>
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VISION	What does the situation need to be like for the vision to become a reality?	What do we need to do to get there?	Who do we need to involve?
Technological	<ul style="list-style-type: none"> raw materials can be separated, if mono-material this is not possible development of technologies ease of structural separation (multi-materials) easily recyclable packaging and materials, design, guidance problem in the kitchen (space) sorting NIR development material development "Jospaki's film will never be fully recycled. If the material contains less than 5 % evoh (binding agent material) then it won't work in our technology." "What are you leaving for your posterity?" Business cooperation/different materials /knowledge of combinations Improved recycling technology (motivating for the consumer) when you know that packaging can be recycled Economy/technology: interoperability of different parts of the value chain The recycling network/technology must be comprehensive enough to allow the use of different types of plastics (especially plastics). The technology may already exist to some extent - the will to use it Clear indication on the packaging how to sort it Deciding on a common methodology Labelling in plain language Inclusion of reusable packaging in the recycling scheme? Logistics, hygiene Developing/expertise in the use of different materials Digital watermarking/NIR robot Ecomodulation <p>"10 years ago I renovated the kitchen and the renovator was surprised when I wanted space for 7 dishes in the trash cupboard" < "now this seems too little"</p>	<ul style="list-style-type: none"> not enough space in the home/kitchen to sort everything (Plastic) packaging takes up a lot of space in bins materials are recognisable communicating the benefits of sorting close to the consumer and in an easy-to-understand way = motivation pipe collection system, where you weigh how much of each material you use, etc. based on weight -> block collection -> behind your own key -> this way you activate the consumer to sort, possibility of benchmarking water consumption, billing according to water consumption mono-material for recycling improving the efficiency of collection The technology exists but is it being used? The value chain as part of collaborative action <p>"why does everything have to be made in china? Could everyone have your own 3D printer at home?"</p> <p>"Multilayer plastics cannot be recycled, either they are abandoned, or technologies are developed"</p>	<ul style="list-style-type: none"> the whole value chain

Environmental	<ul style="list-style-type: none"> Raising the profile of recycled products Communication to the consumer on the possibilities/benefits of re-use/recycling easier recyclability Jospac-case well-separable materials understanding the role of plastics in food waste (the importance of packaging) Need to be aware of the current state of the environment and the concrete effects of change Consumers' understanding of their own carbon footprint and the impact of packaging recycling on it <p>For information</p> <ul style="list-style-type: none"> Raising awareness of environmental impacts (life cycle transparency) Informing own customers/end-users Concrete positive environmental impacts of sorting made clear (figures!) for the consumer to know 	<ul style="list-style-type: none"> It must not be a long distance to the sorting point the development of product distribution no longer requires packaging at all "Kamupak and Kotipitsa have already piloted reusable packaging" (the packaging is returned and the deposit/fee is recovered) Waste pipes (e.g. Ecosir: vacuum transfer solution) that suck up debris from the kitchen <p><i>"Inside the household focused, "Recycling on the go" What happens outside the home, jobs, hobbies etc. In a massive flow, a part disappears"</i></p> <p><i>"There is a recycling guide for immigrants, starting with the Finnish relationship with nature. "</i></p>	<ul style="list-style-type: none"> The whole value chain
Legislative	<ul style="list-style-type: none"> regulation must be clear use of uniform terms material standardisation, easier recycling A rewarding consumer experience from responsibility and sorting Regulations must strongly enforce clear sorting labels Harmonisation of concepts (e.g. what biodegradable means) Financial incentive to collect packaging (reward/fine) Taxation: household/household tax share or relief according to the degree of sorting 	<ul style="list-style-type: none"> legislation to guide packaging design ban on multi-materials and standardisation less individual packaging, e.g. in animal food standardise, but not with too much information Translating EU strategies (jargon removed) Children and young people are the future Will the next generations take it more seriously? Environmental anxiety - it's already too late to do something 	<ul style="list-style-type: none"> Involving building societies to motivate and guide Legislation also obliges consumers to sort Establishment of the post of "sorting inspector" = to guide and encourage Taking control of the chain of command e.g. legislation, housing associations, landlords, residents "Waste legislation is national if at all possible, every country should deal with its waste, not push it to the neighbour" -> "Waste exports are subject to authorisation, a terrible mess, should be made easier" <p><i>"Ecomodulations and all, the Commission is preparing ban lists, if nothing helps, if an unrecyclable material is hanging on the market, the Commission can say ban: nylon-ethylene films not on the market. This is the last resort."</i></p> <p><i>"2030 there are targets, there will be a check point, if the target is reached (50%) you can start thinking about whether there will be bans"</i></p>

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