

**CHARM-EU**



**CH**allenge-driven  
**A**ccessible  
**R**esearch-based  
**M**obile  
**E**uropean  
**U**niversity

# **CHARM-EU**

## ***Programme Design Exemplar***

# **Winter School 2021**

Social innovation for a sustainable future

Co-funded by the  
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**Utrecht University**



**EÖTVÖS LORÁND  
UNIVERSITY, BUDAPEST**



**UNIVERSITÉ  
DE MONTPELLIER**

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# Executive Summary

**The Winter School Pilot Programme was developed as a student-led programme** which introduced students to **transdisciplinary thinking** and **innovative research methods** that can be applied across and above academic disciplines. The Winter School was developed as an opportunity for student participants to develop new skills and competencies that will transfer across many different work and career settings, these include: Critical Thinking and Collaboration Skills, Communication Skills, Creativity and innovation skills, Self-direction skills Global and Local connection skills, Using technology as a tool for learning.

During the challenge, the 13 student participants of the programme took part in **20 hours of content and workshops over the four days** of the winter school, working together in diverse teams. During this experience students gained an interesting **insight into the world of sustainability** and worked on further developing some of the prementioned skills and competencies, whilst participating in **activities such as one-to-one icebreakers, video conferencing, vlogging and content creation**. They particularly expanded on their collaboration and communication skills and utilise their creativity and critical thinking. Participants even got the chance to work alongside twelve extra-academic actors from the business and society sectors. On the final day of the winter school, **all students presented their developed projects in a pitch session**, where multiple stakeholders judged the presentations and provided their expert feedback, which was a fun and educational experience for everyone.

# Introduction

## Rationale

The purpose of the winter school pilot was to test aspects of the CHARM-EU master's programme. These included pedagogical and administrative details. Overall, the pilot tested:

- The CHARM-EU educational principles, pedagogical approach, technologies, team formation and scaffolds.
- Professional development opportunity for staff across the Alliance to work together and develop learning activities.
- Educational Content design and delivery
- Involvement of extra-academic actors from business and society

## Winter School Themes

The Winter school themes were selected to align with problem spaces that were first identified during an initial series of workshops with CHARM-EU staff in February 2020 and then further developed through feedback from the CHARM-EU Days virtual conference in November 2020.

**A problem space is a set of goals for a creative process.**

Problem spaces do not need to include any details of the solution but focus instead on ideation and problem definition. The CHARM-EU Days event **explored the future of the European Higher Education landscape and its role in addressing complex and interlinked societal challenges.** The event created a unique opportunity for participants to reflect and discuss the potential of European Universities in shaping the present and the future of our society by reinforcing its commitment with the EU's Green Deal action plan.

The following problem spaces emerged from the event.

- Nexus: Climate Change
- Life & Health: Infectious diseases
- Water: Water footprints
- Food: How to feed the planet: alternative and sustainable food sources.

## Module Learning Outcomes

The Winter School module learning outcomes were drawn from the CHARM-EU module learning outcomes.

Upon completion of the Winter School programme, students should be able to:\*

- **Effectively communicate the inter- and transdisciplinary developed solution to a diverse** (academic and non-academic) **audience**, using the most appropriate media/technological tools/ resources.
- **Develop skills to work sensitively and professionally as peers and team members**, demonstrating both empathy and leadership in the management and integration of diverse intercultural, interpersonal, intersocietal and inter/trans-disciplinary communication.
- **Critically reflect on the individual and collaborative learning process**, personal and professional developments and results of implementation.
- **Describe and critically appraise a real-world sustainability challenge** from various disciplinary perspectives to determine and frame the challenge.
- **Outline different disciplinary approaches, intercultural perspectives, and their interrelationships** to identify (e.g. social, cultural, political, economic) actors involved in and affected by the challenge.
- **Identify and critically appraise the many ways in which** (understandings of) **sustainability issues and their consequences involve matters of socio-cultural identity construction and politics** (including gender, ethnicity, religion, education, geo-politics and generations) and consider these matters when designing for and assessing methods for social action.

\* These learning outcomes were selected from those already existing within the CHARM Master Pilot: Master's in Global Challenges for Sustainability

# What was being tested

## Educational principles

CHARM-EU is based on a set of ten educational principles.

- Challenge-Driven
- Research-led, Research-based
- Sustainability
- Technology Enhanced
- Student centred
- Situated, Authentic Learning
- Transversal Skills
- Transdisciplinarity
- Transnational and intercultural learning
- Inclusive.

Each of the educational principles influenced the design of the Winter School programme, but **Sustainability and Transdisciplinarity were given specific focus** (see Table 1).

**Students were called to act upon challenges relating to three of the SDGs (plus a fourth category, Nexus**, representing their intersection), within a transdisciplinary team. Throughout the four days of the winter school, WP7 also organised learning activities reflecting five out of the nine CHARM EU educational principles.

More specifically, the following online workshops/webinars were organised (see Table 1):

- Which are the SDGs: Sustainability ED
- Identify three challenges within SDGs: Sustainability ED
- Competency workshop on Transdisciplinarity: Transdisciplinarity (TD) ED
- Competency workshop Discourse and Dialogue: Transversal Skills (TS) ED
- Competency workshop on Research skills: Research Led (R) ED
- Competency workshop on Project management: Transversal Skills (TS) ED
- Competency workshop on Prototyping: Challenge driven (CD) ED
- Competency workshop on Presenting: Transversal Skills (TS) ED

In more general terms, the Winter School also addressed the CHARM-EU approach to Technology Enhanced Learning and Situated Authentic Learning through the development of students challenge solutions.

## Engagement with stakeholders

**Stakeholders participated in the programme\*, in order to provide their perspective and input from their expertise** to the students and their solutions.

The recruitment of these actors was conducted through WP7 members and the local network of each CHARM EU partner universities. The goal was **to have at least two stakeholders for each one of the four themes** that students teams would work on, coming from a different organisation/institution/professional background.

The final outcome was:

Team/ Theme	#Stakeholders	Prof. Background
Nexus: Climate Change	4	Climatologist, Governmental officer, Environmental engineer, Academic
Life & Health: Infectious Diseases	2	Academics (Pharmacological studies, Clinician (infectious diseases)
Water: Water footprints	4	Academics , Consultant, Geometrics
Food: How to feed the planet: alternative and sustainable food sources.	2	Academic, Industry Sust. & Health Officer

\*These stakeholders engaged in three activities:

- i) brainstorm with student team on the problem their space,
- ii) provided feedback to teams on a demo pitch,
- iii) judging the final pitch/presentation, asking questions and providing feedback.

## Student selection and application process

Winter School students were selected in a multi-step process that began with the circulation of an online MS form via the CHARM-EU website, emails to CHARM-EU students via student reps, and internal communication channels of each university (published last week of Dec. - first week of January).

This asked students to write a brief text of 200 words on why they wished to attend the Winter School.

Some 79 responses were received and from these, 21 individuals were invited to apply as candidates based on the quality of their text.

**From this application, 13 individuals were selected** based on their Academic discipline, Home University (location), Motivation for participation and SDG Theme preference.

## Student team formation

The aim for the Winter school was to create transdisciplinary teams of students, that would reflect different scientific, educational and cultural backgrounds. Four teams, one for each SDG theme, were created based on the applications. The process of making balanced and inclusive selections was tested based on the inclusiveness educational principle.

Student teams were formed by Winter School staff using the follow process:

- **Begin with the most popular chosen theme** so as to ensure the maximum number of students could work on their preferred theme.
- Aim for a **balance of students from each institution** where possible.
- Aim for a **balance of genders** where possible.
- Create teams that have a **balanced mixture of disciplines** to promote transdisciplinarity.
- **Review of the short-listed students motivation text** if there were questions or concerns about any particular student.

Student teams did not have explicit roles but **team roles were covered within the learning content** and facilitators observed that some teams self-elected members for roles when working on their solutions.



## Technologies and Online Modality / Platform Pre-testing

The following set of technologies were tested during the Winter School.

### **MS Teams**

MS Teams is the main collaboration platform for CHARM-EU and the Winter School provided an opportunity to trial this environment with students.

Individual MS Teams channels were created for plenary and team sessions and students were assigned to their relevant private channel before the programme began. Stakeholders were able to join the main plenary channel as well as the student channel for their theme.

**Student feedback for Teams was generally positive** but some issues were observed. Students agreed that Teams enhanced their collaboration and facilitated their learning.

It was seen as a useful tool for discussion and document sharing.



*“I thought that Microsoft Teams was really brilliant for being able to flip between the main room and our own breakout rooms”*

*“it’s really good to be organized because you have every section. You have channels. You can switch [to a] different conference, and I really like that and also that you can upload documents inside. That’s the really good thing of Teams and I think no one has the same on any other platform right now.”*

### **MS Office suite**

Office 365 applications were used by students and staff during the programme. OneNote was particularly effective for scaffolding the delivery of content to students. **Learning resources were prepared in advance by the instructor** and then copied into the sub-channel of each team when needed. **Students reported that they found the approach reassuring** as they always knew where to find the latest task. Students also completed their team reflections in the OneNote application using the same scaffolded approach, where facilitators released a document to guide the reflection when it was required. This proved to be a great way for teams to work and it also gave facilitators excellent visibility of student team progress.





Figure 1  
MS Teams Channels

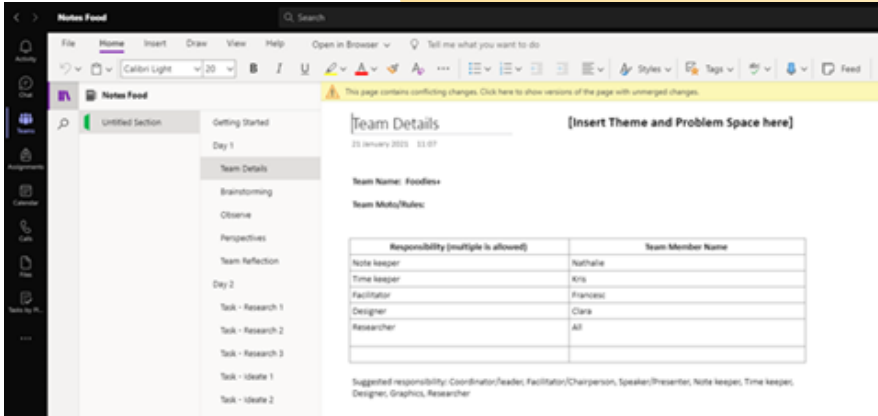


Figure 2  
Teambuilding exercise to co-create team identity in OneNote.



Figure 3  
Example of a scaffolded activity in OneNote

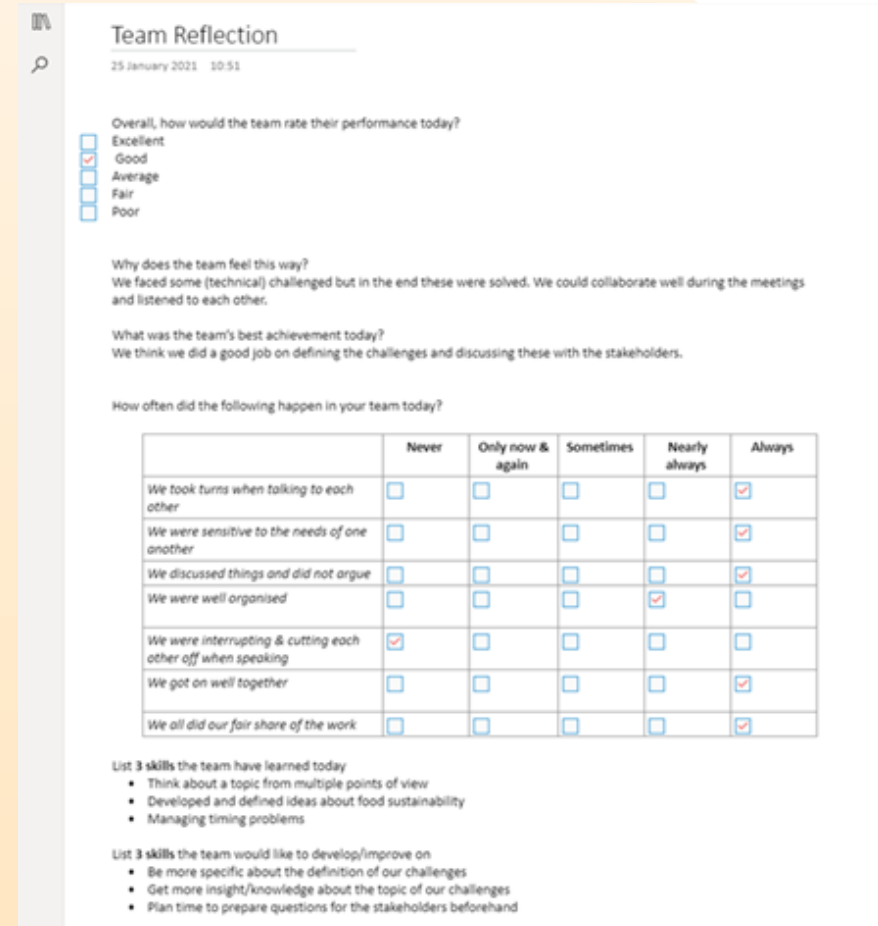


Figure 4  
Using OneNote for Team Reflections

## ***IceBreaker.video***

This tool was used on the first morning of the Winter School to help students get to know one another in a series of one-to-one video chats to answer 3 questions:

- What motivated you to attend the Winter School?
- What is your disciplinary area?
- What are your hobbies?

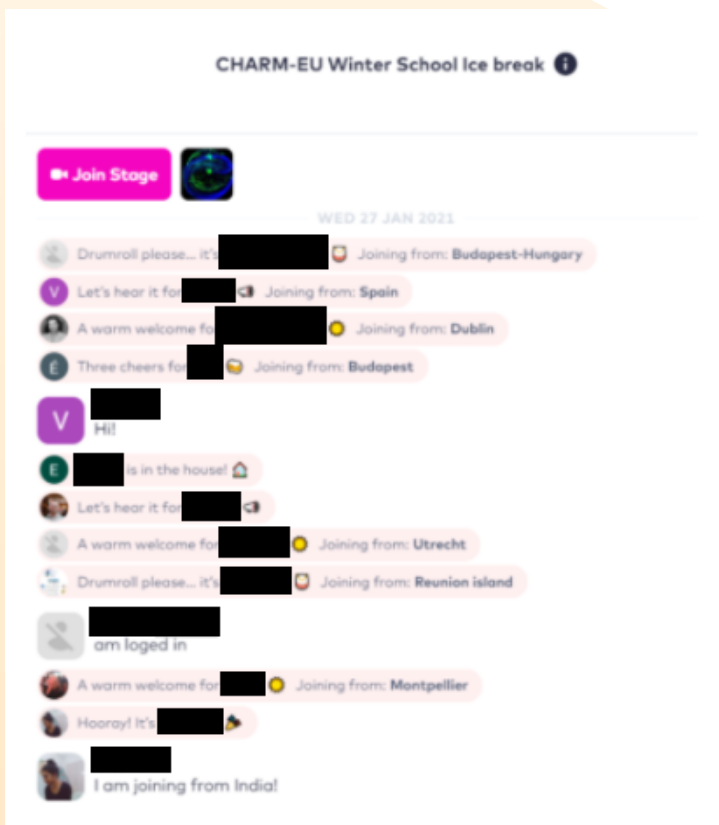


 Icebreaker

The aim of the icebreaker activity was to collect as much information as possible for a subsequent team challenge. This objective was known in advance and was intended to make it easier for the students to get involved.

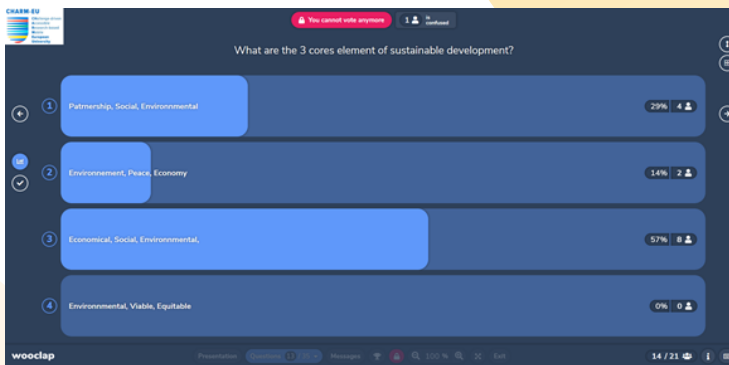
**The feedback is generally positive, and students like being able to meet each other informally to chat**, but we do have some concerns to report.

Firstly, the application requires a Gmail account to access, and this slowed things down somewhat while the students were logging in. Secondly, the timing of the activity meant that students moved from Teams to IceBreaker and some students became confused with the browser microphone permissions.



## **Wooclap**

Wooclap proved to be an excellent tool to enhance the interactivity of our sessions by allowing students to respond to quizzes and polls in real-time via their smartphones. Responses are immediately available for the presenter to review or share during their lecture. **This offers a powerful, student centred approach to working through learning materials.** We used the Wooclap quiz questions during a team challenge to check the acquisition and understanding of the SDGs and competencies.



## **Flipgrid.com**

The FlipGrid platform was used as an evening reflective activity where students were asked to produce a shorty vlog to share with their teammates.

## **Mozilla hubs**

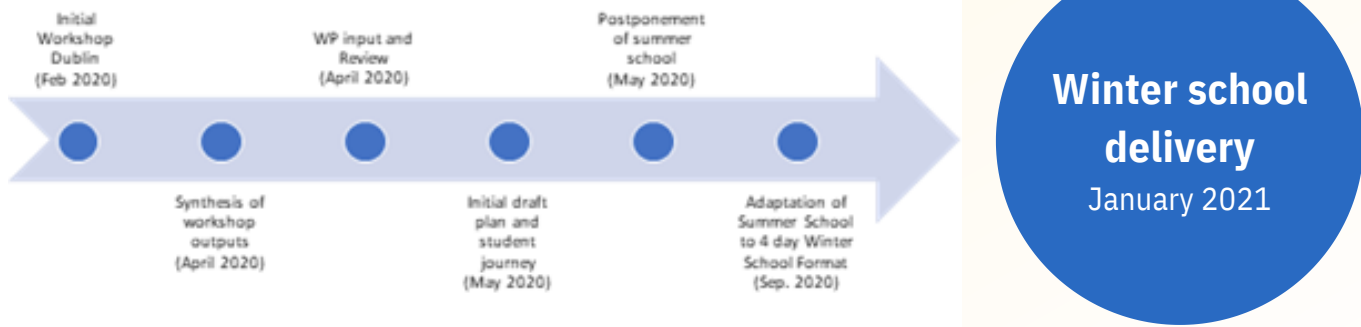
Although not used for a specific learning activity, the Hubs environment proved to be an **excellent virtual space to run the Winter School social event** during this time of COVID-19.

Many of the students were able to attend a short social session that included a quiz and an Internet scavenger hunt to introduce the Hubs functionality.

## **How was it tested?**

Pre and post-test surveys were used to examine student sentiment regarding the Winter School learning outcomes, access issues, inclusivity requirements and the other themes discussed above. A follow-up focus group session looked at student attitudes to these topics in a qualitative treatment. Some of these points were also examined in a focus group session with stakeholders.

## Design Process



### ***Outline of Initial Workshop – Dublin February 2020***

CHARM-EU stakeholders met in Trinity College Dublin in February 2020 for a series of design workshops and discussions.

Some excellent ideas were generated for each of the CHARM-EU themes, i.e.

- Challenge Driven
- Research-led / Researcher-based
- Sustainability
- Technology Enhanced
- Student Centred, Situated, Authentic Learning
- Disciplinary Depth
- Transversal skills
- Transdisciplinarity

Stakeholders were asked to comment on each theme with consideration towards the following topics:

- Pedagogical guidelines
- Programme structure and content
- Teaching and Learning Strategies Handbook
- Assessment techniques and Criteria Resources
- Virtual Learning Environment
- Emerging Technology Prototype

These fruitful sessions highlighted some important questions to address in the design of the Winter School.

### ***Aim***

Prototype a 5 Day Challenge-Based Workshops. This required the creation of a blank 5 day structure template to add content ideas.

### ***Practical considerations***

Who is it for? i.e. To produce a profile of targeted students.

What will they learn? i.e. The themes.

Why would they want to do it? i.e. Taking a student-centred perspective.

Assessment. i.e. What is feasible to test.

### ***Resources Needed***

An estimate of the requirements, which were further developed through discussions with staff.

### ***Materials/equipment***

Facilitators created learning materials and shared these in a scaffolded approach at relevant times during the Winter School programme delivery. Students only required a web capable device and a reliable broadband connection to attend.

### ***Facilities/Space/Location***

The Winter School was an online programme based within an MS Teams environment. Students were recommended to have a quiet place to work.

### ***Who needs to be involved? (staff, industry etc.)***

We recommend a minimum of one to two staff for any online interactive sessions with a cohort of this size. Stakeholders from industry and society offered their expertise which added greatly to the overall value of the programme for students. Their involvement also promoted the CHARM-EU principles by enhancing the transnational and intercultural learning and by steering students to more authentic and meaningful solutions.

### ***Participants***

Members from all alliance universities worked together in multiple groups to design prototype 4 day programmes. N=13

### ***Outputs***

The creation of a Synthesis document to collate feedback and help identify main themes.

Day 0	Day 1	Day 2	Day 3	Day 4
<p>Registration, preferences and selection Online"/Flipped Classroom Videos from KCTs with the societal challenges</p> <p>Introduction fundamentals of [SDG]s Intro to SDGs SDG quiz</p> <p>Post a pitch of yourself (video introduction)</p> <p>Define personal goals</p> <p>Matching survey – define the teams at the end of the day &amp; Pre-survey – for evaluation</p>	<p><b>Topic</b> Transdisciplinary Research and Stakeholder Engagement Process step: Empathise/Observe/Explore</p> <p><b>Morning</b> Sustainable Development goals + Teambuilding Competency workshop Methods to approach challenges Identify three challenges within SDGs [SDGs] (KCT expanded?)</p> <p><b>Afternoon</b> Competency workshop 3 (Transdisciplinarity [TD]) Discourse and Dialogue [TS] Stakeholder Discussion + Consult with client (KCT involvement )</p> <p><b>Evening</b> Social</p>	<p><b>Topic</b> Ideation and Project Management Process Step: Research/Ideate/Plan</p> <p><b>Morning</b> Competency workshop 4 (Research skills [R]) Competency workshop 5 (Project management) [TS] [SAL] Investigation strengths and solutions for the challenges</p> <p><b>Afternoon</b> Students investigate and propose solutions to challenges Identifying Prototype/Solution Space Prototyping [CD]</p> <p><b>Evening</b> Vlog Reflection?</p>	<p><b>Topic</b> Prototype Development and Communication Process Step: Prototype/Design</p> <p><b>Morning</b> Contin. Prototyping [CD]</p> <p><b>Afternoon</b> Competency workshop 6 (presenting and communication skills) [TS] Try-out pitch to client/KCTs and/or coach. Intragroup feedback on pitches</p>	<p><b>Topic and Process Step</b> Testing /Presentation</p> <p><b>Morning</b> Final Preparations/Future planning and limitations exploration</p> <p><b>Afternoon</b> Present futuring scenarios to city stakeholder, assessed by KCT and stakeholders. Presenting the solution (digitally and in an innovative way).</p> <p>Review/Reflect/Future actions Self assessment/Peer assessment/ Evaluation – post-survey</p> <p><b>Evening</b> Social</p>

# Evaluation Methodology

## Students

Students were not formally assessed to a detailed rubric but **several data points were collected** to produce an indicative grade of their work on the programme.

### *Pre and post course surveys*

The student cohort were surveyed prior to their attendance and again on the final day of the programme. Survey questions examined student attitudes to the CHARM-EU themes and were drawn from a set of validated instruments that the Winter School staff had pre-selected. The Inclusiveness work-package also provided additional questions for these surveys to help understand student needs in advance of a longer Masters programme.

### *Daily Reflections*

Student daily reflections were scaffolded with a set of questions that focused on:

- Thematic Focus (Interest in the subject matter)
- Participation (working with others)
- Social structure (connection to the group)
- Mental model building (Creativity and Insights)
- General: What did you learn today? (2-3 ideas)
- General: What skills will you work on developing tomorrow? (2-3 ideas)

Students reported that they found the reflections to be very helpful.

Their typical responses focused on:

- Teamwork and collaboration with other group members
- Learning new methods to define and specify a goal
- Content specific details.

Reflections were conducted through OneNote and MS Forms.

### *Staff Observation Protocol*

Winter School staff met to reflect at the end of each day of the programme. This helped to identify team issues and also provided an ongoing quality check for the programme delivery. The reflection considered the appropriateness of content and technology as well as any student difficulties. Student teams also received a daily grade during these sessions that was based on their teamwork, record keeping and reflections.



## External Stakeholders

**Stakeholders were invited to attend the final pitch presentations where they had the chance to vote for each team** on a scale of [0-5], based on the following criteria:

- Multimedia Presentation (engagement and structure)
- Innovation/Creativity of their solution
- Sustainability
- Presentation (context and sources)
- Handling Q&A responses

### ***External stakeholder focus group***

A subset of the stakeholders also contributed to the overall evaluation of the Winter School through a follow-up focus group with Winter School staff.

### ***Qualitative analysis***

**A qualitative analysis of the focus group sessions was conducted by two researchers** from the Winter School staff. Both researchers coded the interview transcripts independently and then compared codes, which resulted in a set of twenty code groups. Further analysis is ongoing, but the following eight high-level themes have been identified thus far.

- software/technical issues
- offline-online
- challenges/problems
- group-related issues
- emotions
- goals/expectation
- stakeholders
- benefits/achievements of program

# Results

## Student demographics

79 expressions of interest were received, which lead to 21 students being invited to apply.

**A final set of 13 students were selected** from either the final year of an undergraduate degree or the first year of a master's programme.

University of Barcelona	3
Trinity College Dublin	2
Utrecht University	2
Eötvös Loránd University	3
University of Montpellier	3

Business and administration	2
Computing	1
Health	1
Humanities	1
International Development	1
Law	1
Life sciences	2
Mathematics and statistics	1
Physical sciences	2
Social and behavioural science	1

## Description and analysis of student artefacts created

During the four days of the Winter School there were two different categories of artefacts that were produced by the student teams:

### 1. Presentations

Each student team has worked on **delivering a final presentation of in total 5 minutes**. In these presentations, student teams presented the problem defined as their team perceived it, explaining the importance of it and the research they have done on, moving towards presenting their concept for tackling this specific challenge.

**All 4 teams delivered a final presentation on the last day of the winter school**, containing the abovementioned elements (definition of challenge, research, solution).

An indicative example of one of the teams is presented below.



## **2. One Note documentations**

Student teams used the One Note structure created by the facilitation team as a guide through the team and challenge process. **Every day students were asked to fill different sections and templates** within the One Note of their individual team channel. The sections were the following:

### **Day 1**

- **Team Details:** defining team roles in each member (note/time keeper, facilitator, designer, researcher)
- **Brainstorming:** on challenges related to their teams' broad theme
- **Observe:** for each one of the challenges they thought above, they would need to answer the following questions: what is the challenge who are the stakeholders, pros and cons associated with it and "how might we.."
- **Perspectives:** perspectives of stakeholders related to the challenge
- **Team Reflection:** on the performance of the team, what they learned and what they want to develop further as a team

### **Day 2**

- **Research:** researching their challenges to identify relevant and available data sources.
- **Ideate:** the next step for each of the challenges was for teams to consider how to use the data
- **Choose Challenge:** this process would be concluded by letting the team members vote among the three challenges they had researched and ideated. Their votes were based on most rational, most delightful, long shot or daring challenge.
- **Defining & Prototype:** this activity included four parts that helped students produce ideas for solutions on the chosen challenge. These four parts were the perspective that the team had, the current state of the challenge (mapping the present), imagining the future, and planning how to achieve their goal.

### **Day 3**

- **Innovation Sustainability:** the Business Model Canvas was used for the students to assess the sustainability of their idea.

### **Day 4**

- **Next steps and Limitations:** this focused on the student team drawing conclusions and identifying limitations on their idea.

## Surveys

Pre and post-test surveys showed that **students identified strongly with the Winter School themes** and felt confident regarding the course learning outcomes.

A practical approach of **'learning by doing'** was seen as **an effective way to work and study online** and this aligns well with the CHARM-EU principles of Situated, Authentic Learning.

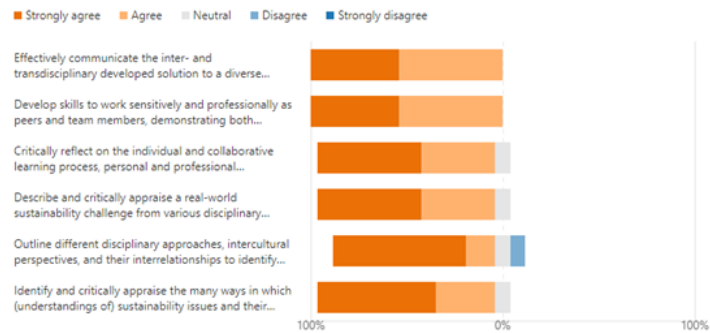
Inclusiveness is a core value of CHARM-EU and the Winter School, and surveys revealed that **time constraints were viewed by students as a barrier to inclusivity**.

This is consistent with student comments made during the follow-up focus group session.

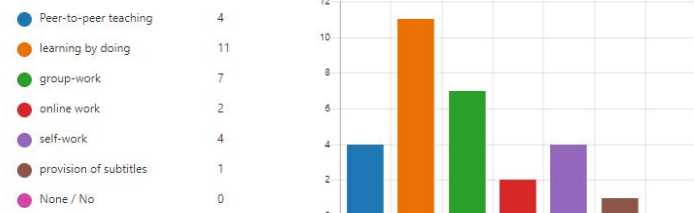
## Social engagement and Inclusivity

External stakeholders from business and society provided feedback during a follow-up focus group. Stakeholders noted that student teams could have developed their solutions to address social engagement and inclusivity in a more substantial way. This represents a **challenge** for the upcoming CHARM-EU masters design and it is excellent feedback at this early stage of content creation.

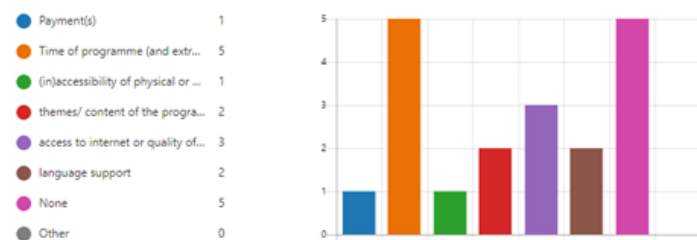
Transdisciplinarity: Please indicate how confident you feel regarding the Winter School Learning Outcomes, as they might relate to you



Is there a teaching, studying or working methods or tools that you find more suitable than others?



Inclusiveness - What barriers do you face (now, when enrolling or when participating) to participate equally and fully in this programme? i.e. Barriers to participating equally or fully in one or more of the following



## Qualitative

### ***Stakeholder and teaching staff feedback***

Stakeholder feedback was extremely positive with respect to the Winter School organization, student engagement and the technology platform. They noted that the timing of the first student meetings would be better if the students had worked together for longer, but recognized that this was not possible on a short programme. **They highlighted a considerable improvement in teamwork between their first and second meetings.**

*“...the second meeting was more easy. And the students are quite, adaptable. They have really good ideas and they have some perspectives that are very interesting.”*

Stakeholders felt that **student solutions could involve deeper transdisciplinarity** and we recognize this as a challenge to address for future events. Overall they felt that students applied their advice very well.

*“I was quite happy given the short time in the five days I was quite happy how the incorporated my feedback, so no complaint.”*

Stakeholders expressed **extremely pro-social sentiment** regarding their motivations to be part of the event.

*“we are really motivated to share our knowledge and to share our business network to help the students and of course to help the teachers to reach the goal of the sustainable development masters”*

**Staff met each evening to review the day** and the student progress using an observation protocol housed in MS Forms. Some practical suggestions regarding the timing of activities were recorded as well suggestions for tracking progress and promoting engagement though badges and gamification.

### ***Student and Staff Perspectives***

When asked about their experiences about the Winter School in a focus group, a number of themes emerged from the students' answers.

One major theme concerned **students' reasons for joining and their expectations about the Winter School.**

*"Maybe my goals were more about to know more challenges that we have nowadays, and I think that I achieve in my case that goal."*

*"I didn't have any expectation at all, I was waiting something more like a teacher and people listening, you know the more classical way."*

Technological issues, the online environment and the various software used were also commented on both in a positive and in a negative sense by the students.

*"I thought that Microsoft Teams was really brilliant for being able to flip between like the main room and our own breakout rooms and stuff like that it was really effective for that."*

*"I mean, we were trying to edit at the same time when we were using the Notes and we had some slow connection. I mean someone write something and the others couldn't see it because we were doing at the same time. But I think it's quite normal, because it's life."*

*"For the first activity, I don't remember the name of that website but we had like one minute to introduce each other. That website was kind of chaotic."*

Working in **multicultural, multidisciplinary** groups raised issues in connection with collaboration, intercultural skills and conflict management among other things, but this experience seemed to offer many benefits for our students.

*“Benefits are first of all that you learn from other cultures, because I saw the difference between the Spanish ones and maybe other people and that was really cool managing the problem and the tempos and ok maybe one thing maybe other wanted to finish first one thing, maybe other to finish two things at the same time.”*

*“I think one of the most important things that we did effectively as a group was kind of respect each other's area of expertise to say it in that way, so V I know that you had a background in, basically where there was something that I couldn't wrap my head around and the other two could, I let them at it. You know like, I just trust them, trusted their background and their knowledge enough to ensure that they knew what they were talking about in that regard.”*

*“So it was a very good experience to be able to understand a guy from the other part of the world who uses a completely [different] language, who's from a completely different culture. But we were able to understand each other.”*

One of the unique features of the program, the **involvement of stakeholders**, was generally appreciated by students.

*“They provided us feedback and we included that feedback we worked on, we shaped that feedback and at the final moment they said that we did a good job in just two days, and that's all.”*

*“When we got to a stage in the work that we had been doing on our own, you know you get to a stage where you can only so many time ask each other what you think of it and whether you think you're on the right track. And that was when it was really useful then for the stakeholders to come in with their expertise and kind of say ok, ya this is good and continue on this path, or you're not really focusing on what needed to be focused on here.”*



Despite all the positive feedback, there is definitely **room for improvement**, as students were concerned about a number of problems and challenges both in connection with the organisation and the execution of certain activities in the Winter School.

*“We didn’t know what was the purpose of the activity. It was kind of chaotic also because of that. Like the first part especially we didn’t really know.”*

*“There is so much to be done and not enough time in the day to get it done. But I felt at time when we were finishing our sessions we could have spent a bit more time or maybe it could have been more concisely targeted.”*

*“At some moment we wanted to know, ok, what’s next because maybe we try to prepare something in a different way or we try to make it to work easier in the future.”*

Despite the short time-span of the program, students were still able to get a **taste of some of the novel pedagogical approaches** piloted in the Winter School.

*“I think that we really learned a lot, teaching each other as simply college students, I didn’t mean simple, just students.”*

*“I think that the most beautiful thing of the winter school was, ok we are working in an actual problem, something that’s happening right now like it’s sustainable issues.”*

*“But was really presently surprised by like how much I didn’t know, and how much there was to learn in terms of, I guess how to progress forward in this world we’re living in. And it was really effective to see that in the setting that we did that, especially given that it was all online as well.”*

# Conclusions Recommendations and Practical Advice

The Winter School aimed to test certain aspects of the CHARM-EU master programme, such as the didactical and educational principles and approaches, technology used for their facilitation, interaction with students, staff and stakeholders as well as opportunities for the professional development of the staff involved. Throughout the development and execution of the Winter School, there were a number of interesting and valuable findings reflecting on the main masters programme.

Based on the analysis of the evaluations (which included student and stakeholder feedback, plus and staff observations), we conclude that **expectation management, clear communication and structure of the learning blocks are important factors to consider when developing a set of learning activities.** Student teamwork and collaboration emerged as key themes that students reported, and the pedagogical approach of **'learning by doing', combined with regular reflection** points, which was greatly appreciated.

**Time limitations and some initial difficulties using of the virtual environment were reported as challenges by students.** Students, staff and stakeholders pinpointed the need for additional time and space for some of the activities as well as for more dedicated time to prepare for them.

Our suggestions to **improve the quality of future events include a technical dry-run with students and stakeholders prior the start of the programme**, to get familiar with the educational environment and tools. Additionally, **a means to track progress by identifying completion of phases/tasks from the students during the programme**, would be informative for the educators and if presented in a gamified approach, could also enhance the experience and motivation of the students.

## **Case study report for conference**

A future output of the Winter School research will be to produce a conference paper focused on the design and identification of educational principles for evaluation.

### ***Ethical Approval Disclaimer***

Level 1 ethical approval was secured through the School of Education at Trinity College Dublin (TCD) to conduct research during the Winter School.

Level 1 approval pertains to non-vulnerable populations.

The application covered work with students, staff and external stakeholders via the following instruments: Surveys / Questionnaires, Interviews, Focus Groups, Student created artefacts, Reflective Journals, Notes and other files.

Due to the extensive research requirements for CHARM-EU, a novel approach was used to apply for ethics.

The application represents an umbrella application that frames the Winter School as the first of several events, with subsequent events therefore only requiring an addendum to the application.

WP7 staff worked with the data protection office in TCD to evaluate the need for a Data Impact Assessment, which was ultimately not required in the final application.

