



STEAM BO.SS

boosting soft skills

2023-1-IT01-KA220-VET-000163992

Sustainable Waste Challenge

Estonian Pilot Project



Sapere utile



UNIMORE
UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA



Saaremaa
Gümnaasium



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1. Title

“Sustainable Waste Challenge”

2. Topic

The Sustainable Waste Challenge is an educational project that connects learning with real-world environmental issues, focusing on waste management, community behavior, and sustainability. Inspired by challenges faced in local communities such as overflowing waste containers, improper disposal habits, and the environmental consequences of litter the project encourages students to become active problem-solvers and changemakers.

This is a project-based learning initiative that empowers students to tackle real-world environmental problems by rethinking how we deal with waste.

Students explore authentic driving questions like *“How do our daily habits affect waste generation?”* or *“What innovative solutions can make our city cleaner and more sustainable?”* Working in teams, they investigate the causes of waste problems, engage with community stakeholders, and prototype solutions that address both individual behavior and systemic waste management practices.

Through inquiry, collaboration, and hands-on experimentation, students learn to:

- Connect knowledge with practice by applying STEAM-subjects and social studies to real-life environmental challenges.
- Develop 21st-century skills such as critical thinking, problem-solving, proactivity, teamwork, effective communication and creativity.
- Create meaningful impact, for example by testing new waste-sorting systems, designing awareness campaigns or proposing innovative solutions.

The project has 3 main parts:

- **Game:** Creative Junk Mashup - which concentrates on understanding of waste generation and behavior.
- **Workshop:** Urban Environment Robotization project – trying to find innovative solutions (e.g. technologies, new systems) which could be used to tackle waste problems.
- **Panel discussion and debate:** “What options do communities or cities have to improve waste management?” – trying to raise public awareness and find how can each of us contribute to reducing waste and keeping our surroundings clean.

Partner organization:

- Kuressaare Regional Training Centre (Kuressaare Vocational School)

3. Age range

The group's students range in age between 15 and 16 years old.

4. Number of participants:

30 students in the 10th grade (K-12)

5. Description of the project:

ORGANISATION OF ACTIVITIES: August 26th – 27th

Nº of hours	Date	Activity
8	August 26 th	creativity, teamwork and innovation through upcycling and robotics
8	August 27 th	analysis and debate on waste management challenges and solutions

First day (August 26)

- Welcome and framing
- Waste Icebreaker: Each person says their name + one thing they sorted or reduced recently
- Presentation of the project and activities/challenges.
- Forming groups (5-6 students)

a) **Game: Creative Junk Mashup**

- **Purpose:** Using the SCAMPER Technique in Design Thinking.
 - To boost creativity, collaboration, and upcycling thinking through a fast-paced, hands-on game inspired by the SCAMPER method.
- **Preparation:** For each group is prepared collection of items - things that are no longer used but cannot be thrown away. Participants can also bring similar items from home. (Examples: a broken bracelet, a worn slipper, an old toy, a key with no lock...)

Game instructions:

- **The Pile:** Every group empties their bags into the middle of the room, creating one big, glorious junk pile.
- **Sort Round – “Color!”**
The game leader shouts: “Color!”
Everyone begins sorting the items based on color – pink in one pile, white in another, multicolored in a third, and so on.
- **Create Round – “Combine!”**

The leader calls: "**Combine!**"

Each player reaches into a color pile with both hands, pulls out **two random objects**, and puts them together to see:

- **Could this new hybrid object serve a new function?** (find connections with knowledge from the fields of STEAM (engineering, chemistry, technology)
Example: a pink toy bunny + a worn-out pink slipper = a comfy slipper again – the bunny covers the hole and makes it cute too!
- **More Rounds – Different Attributes:**
Repeat the sorting and combining based on other attributes:
 - "**Shape!**", "**Material!**", "**Function!**", etc.
- Encourage players to explore possibilities using the **SCAMPER** technique:
 - **S** – Substitute
 - **C** – Combine
 - **A** – Adapt
 - **M** – Modify (shape, color, function)
 - **P** – Put to other use
 - **E** – Eliminate or expand
 - **R** – Reverse or reimagine
- **(Optional) Poetry or Storytime:**
At the end, players can write a short **poem or story** about their hybrid creation.
Where did it come from? What's its new purpose? What's its name?

Outcome:

- Fun, fast, and full of laughter
- Sparks creativity and problem-solving
- Demonstrates the power of repurposing
- Applies the SCAMPER technique in a hands-on way
- Builds empathy through storytelling

Lunch break

b) Workshop: Urban Environment Robotization project

- **Supervised learning in Computer lab:** programming basics.
- **Challenge:** Waste Management and Urban Sustainability.
- Students programmed mBot robots to optimize logistics and clean up waste in a future city model, using Python and mBlock.
- Each group makes a presentation of their solution.

- Group-works presentations.

In the urban environment robotization project, group-works were evaluated not only on whether the robots completed the task, but also on how the students solved programming problems and adapted the robots to the urban environment:

- **teamwork** – the success of each group depends on their ability to share tasks, communicate and support each other. Each student can apply their strengths such as leadership, analysis or creative thinking.
- **creativity and problem solving** – during the project, students must find innovative solutions to real-world problems.

Feedback of 1st day

Second day (August 27)

c) Panel discussion and debate “What options do communities or cities have to improve waste management?”

Presentation of the head of the Environmental Department of Saaremaa Municipality about waste situation in local community.

The main problems that were highlighted:

- people are not satisfied with the frequency of emptying waste containers.
- people do not sort garbage according to its type.
- the cleanliness around waste containers is influenced by two important factors: the frequency of waste collection and the behavior of city residents.
- main problem arises from residents’ habit of leaving plastic bags with waste next to the containers or throwing unsuitable rubbish into them. (*“The problem is aggravated by users of packaging containers, who often throw packaging waste next to the containers or place trash that does not belong there into or beside them and after that birds scatter this litter around”).*

Questions & Answers session

Debate “What options do communities or cities have to improve waste management?” (*working in groups*)

Objectives:

- Students develop their teamwork, analysis and information-finding skills.
- Students must find information on the topic and analyze it, forming a new meaningful whole based on the information.

- Students understand societal bottlenecks, their causes, and possible solutions.

Tasks:

- Each student defines the most important social problem related to the waste management.
- Each student introduces the problem of their choice and writes keywords on the board.
- Based on similar keywords, students form groups of approximately 4–6 people. If necessary, several groups can deal with the same or similar problem.
- The groups will make a mind-map about their problem using some mind-map software (Miro, Lucid, Canva etc)
- The groups come up with reasons why:
 - the problem has arisen, i.e. what is the cause(s) of the problem.
 - it is a problem, i.e. what is the negative impact of the phenomenon.
- The groups come up with solutions to the problem, including evidence (expert opinions, statistical data, examples from other countries).
- Students present the results of their work. The teacher can oppose the student's solution, thus putting the group in a position where they are in a situation where they must defend their solution with explanations and proofs based on their preparation.

Summaries

- Post self-assessment questionnaire
- Satisfaction questionnaire

6. Didactic hours

(estimated duration of the training)

16 hours (spread over 2 days)

7. STEAM approach

Our project had 3 parts, each addressing different aspects of the STEAM approach.

Educational game “Creative Junk Mashup” is using SCAMPER method, students were expected to increase their capability to apply creative thinking skills in various situations and build their confidence to produce creative outcomes. This method is efficient in innovation and ideations sessions, to foster students’ creativity, critical thinking, and transfer of learning skills. During game students tried to find connections with knowledge from the fields of STEAM (engineering, chemistry, technology, art).

During robotization project students solve real-world problems, integrating knowledge from robotics and design to develop innovative solutions and enhancing soft skills.

Knowledge from engineering, science and technology can be supported by teamwork, public presentation and problem-solving skills.

The STEAM approach equips students with diverse skills, preparing them for future challenges in both technology and creativity. This micro-project integrates PBL with creative thinking tools and specific technological elements.

Discussion-debate develops following skills:

- **Teamwork:** groups are formed by similar views, group members must demonstrate autonomy and proactivity
- **Information-finding and critical thinking skills:** finding expert opinions, adequate info about problems, arguing with evidence
- **Public presentation skills:** teamwork presentations using effective visual aid software
- **Problem solving skills:** students will find causes of the problem, nature and consequences of the problem, negative impact of the phenomenon and solutions
- **Science, technology and math skills:** data analysis, using mind-map software
- **Respectful dialogue:** learning to disagree constructively and respectfully
- **Leadership:** taking initiative in guiding discussions or presenting ideas.

S – Science

- The scientific method in constructing challenges to produce creative outcomes, finding connections with knowledge from chemistry, technology etc, formulating critical thinking questions.

T – Technology

- integrating knowledge from robotics to develop innovative solutions; project-based-learning was integrated with creative thinking tools and specific technological elements

E – Engineering

- integrating knowledge from engineering and design to develop innovative solutions

A – Arts

- During educational game elements of art have been used
- Graphic design of project-works

M – Math

- programming mBot robots to optimize logistics and clean up waste in a future city model, using Python and mBlock.
- Programming basics skills

8. Soft skills developed through the project:

Problem-solving: participants looking solutions for waste management and urban sustainability problems

Creativity and critical thinking: participants tried to find connections with knowledge from the fields of STEAM and new functions for “junk”.

Teamwork and collaboration: participation and working in different groups during Junk mashup game and debating discussion.

Public presentation skills: presenting groupworks during debating-discussion and robotization project.

Communication and empathy in communication with audience: respectful discussion during debate

9. Assessment:

Self-assessment questionnaire

- Pre-questionnaire for students: <https://forms.gle/gGMDyPHEwp33Zrfe6>
- Post-questionnaire for students: <https://forms.gle/pB9uFCx38gDFVpuU9>

Satisfaction questionnaire

- Students: <https://forms.gle/BWxt3k53UPtWldFe7>
- Teachers: <https://forms.gle/8chkqkf2sQMWFpV5>

10. List of materials

- Laptops with internet access
- Computer lab with mBot robots
- Design, editing and presentation software: Miro, Lucid, Canva, PowerPoint, Sway
- Equipment for educational game
- Markers, paper, pen
- Collaborative workspace
- Assessment and feedback questionnaires

11. Venue

Classrooms, computer lab and aula.



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Fresh Taste, Fresh Take

Italian Pilot Project_1



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1. Title

“Fresh Taste, Fresh Take

Rebranding Bontù for a new generation of consumers.”

2. Topic

The communication agency Copiaincolla (<https://www.copiaincolla.com/>) is asking for your collaboration to develop proposals for one of their clients, Bontù. These are their requests:

- Follow the launch of a B2C brand (Bontù; products to present tomato paste, tomato preserves and vegan ragù).
- Find an alternative positioning to the usual themes of territory, Italy, tradition, table, family. Alternative target for these new products: out-of-town university students.

3. Age range

The group's students range in age from 19 to 35 years old.

4. Number of participants:

17 students of our post diploma course (communication and design)

5. Description of the project:

This activity requires students to create a promotional campaign for the launch of a new brand, Bontù.

The students will be divided into small groups, each of which will have to propose:

- a new name for the product
- a logo in horizontal format
- packaging for the product
- a 10” teaser video in vertical format (Instagram and TikTok)
- a proposal for a communication format that can “contain” the ideas and conversations generated around the products (let your imagination run wild).

ORGANISATION OF ACTIVITIES:

Nº of hours	Date	Activity
3	May 27 th	project start
3	June 9 th	checkpoint meeting with teacher/trainer
3	July 2 nd	checkpoint meeting with teacher/trainer
3,5	July 14 th	final presentation

Day 1 - May 27th (3 hours): Project start

Project presentation to the students with company.

Division into groups.

Each group must complete the tasks listed below by the end of the lesson:

- Structure the work group by distributing tasks to the various team members and assigning organizational roles. Identify, at least, the group manager, who will relate directly to the PM and the client.
- Come up with the name of your agency.
- Write a list of information that you would like to receive from the client company via email or call.
- Structure your work until the next meeting with a Gantt

Work for the next meeting

Prepare a slide presentation that covers the following points:

- Create an identity for your agency: name, logo, graphic format for slides.
- Information about the client, how they are positioned on the market compared to competitors and reference players, how and where they communicate, the sector, etc.
- Analysis of competitors with similar products and their communication
- Analysis of the company's products/services
- Communication strategy to promote the products. The proposed strategy must be both graphic/communicative and contain a part of a digital marketing campaign. Each campaign must have its own claim and name, a strategic narrative, a time frame, one or more objectives (number of people reached, number of people who will potentially expect to visit the store, etc.), KPIs, a reference budget.

Day 2 - June 9th (3 hours): checkpoint meeting with the teacher/trainer

Checkpoint with the reference teacher: presentation of what has been prepared so far by the various groups and feedback.

- Presentation of tasks to be prepared for the next checkpoint:
- Propose two variants for the following points:
 - new product name
 - logo in horizontal format
 - packaging for the product
 - 10'' teaser video in vertical format (Instagram and TikTok)

- proposal of a format that can “contain” the ideas and conversations generated around the products (let your imagination run wild).
- Start thinking about the final presentation document. Set up the graphic aspect, the order of the information to be shared and the general narrative that you want to make
- To determine the communication and digital marketing strategies you will be free to propose the most useful solutions in your opinion. Evaluate whether and which tools to use, for example:
 - Landing page
 - Social actions
 - Online and offline marketing
 - Guerrilla Marketing
 - Testimonials
 - Influencers
 - Events...

Day 3 - July 2nd (3 hours): checkpoint meeting with the teacher/trainer

Checkpoint with the reference teacher: presentation of what has been prepared so far by the various groups and feedback.

Start of work on the final presentation to the company of what has been realized.

Day 4 - July 14th: (3 hours and a half): Final presentation

Group presentations to the company and other participants/public.

PBL is the technique used for this project. Students will have the opportunity to engage with the subject teachers who supported them during the classroom courses and will receive continuous feedback from the Project Manager and tutors, both through structured moments (2 checkpoint meetings) and more informal ones (based on the students' needs).

6. Didactic hours

(estimated duration of the training)

From 27th of May to 14th July – more or less 33 hours (12 hours and a half in presence + 20 hours and a half for teamwork)

7. STEAM approach

S – Science

- Students analyze data and target behaviors (out-of-town university students), conduct market and competitor research.

- The scientific method is applied: observation → analysis → strategic hypothesis → testing (prototyping of logos, naming, teaser) → validation (presentation and feedback).

T – Technology

- Production of digital content (teaser videos, social media formats, landing page).
- Use of digital tools for marketing (KPI analysis, online campaigns, presentation software).
- Exploration of innovative channels such as TikTok and Instagram for promotion.

E – Engineering

- Project planning using tools like the Gantt chart.
- Structuring of working groups with defined organizational roles.
- Optimization of human and creative resources to meet deadlines and objectives.

A – Arts

- Graphic design of logos and packaging.
- Creative storytelling: brand narrative, unconventional naming, original communication formats.
- Production of aesthetic and emotional content (images, videos, presentations).

M – Mathematics

- Definition of budgets and measurable objectives for campaigns (e.g., number of views, conversion rate).
- KPI analysis and forecasting of results.
- Calculation of available resources in relation to timing and selected communication channels.

8. Soft skills developed through the project:

The project is intentionally structured to actively foster the following soft skills, which are also explicitly requested by Copiaincolla:

Time Management: Through the division of the project into phases with specific deadlines (project start, checkpoints, final presentation), students learn to:

- Plan and structure medium-term work using professional tools such as a Gantt chart.
- Meet deadlines and objectives, simulating real-world project management dynamics.
- Distribute tasks within the team to optimize time and resources.

Group Management: From the very first day, students are required to form teams, assign roles (e.g., group manager), and organize internal and external communication flows (with the project manager and the client). This encourages:

- Distributed leadership
- Collaboration and active listening
- Shared problem solving

Creativity: The project requires creative and unconventional solutions for product branding and positioning:

- Naming, logo, and packaging that go beyond traditional approaches
- Creation of teaser videos and digital storytelling formats
- Proposals for experiential communication (guerrilla marketing, events, social challenges, etc).

Curiosity:

Students are required to carry out active research on:

- Business and competitive context
- Successful communication strategies
- Behavior of the target audience (out-of-town university students)

This stimulates:

- The ability to ask meaningful questions
- Autonomy in learning
- An exploratory attitude toward new tools and communication channels

9. Assessment:

- **Pre-post self-assessment questionnaire for students (pre-assessment date: May 27; post-assessment date: July 14):**
 - **pre-questionnaire** : https://docs.google.com/forms/d/1RKVWMQ3z7X_I0pJ-cfQP__Fj1Ks-Z7XwXCz72QX3EIM/edit
 - **post-questionnaire** : <https://docs.google.com/forms/d/1zWewDkV0BntPmi2mh9yVO16en9xxEFO095JbowuW7ml/edit>
- **Observation Form – Soft Skills Development for Project Manager/Tutor**
(to be completed at the checkpoints and on the final day of the project):
https://docs.google.com/forms/d/1vn_MuHBXGtNTx0yEaJ81iP-IdburA6tB2RZ8Xy-K5ek/edit

10. List of materials

- Computers with internet access
- Design software (e.g., Canva, Adobe) or physical materials to create to packaging (if they want to physically create the prototype)
- Spreadsheet software (e.g., Excel or Google Sheets) for financial calculations
- Markers, pens, paper
- Research materials (internet access for market research, business books, etc.)

- Projector or presentation software (e.g., PowerPoint)

11.Venue

A big classroom with computers, Internet connection, projector and round tables so students can work in groups will be needed.



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2023-1-IT01-KA220-VET-000163992

Marketing strategy for a new spin-off

Italian Pilot Project_2



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9. ASSESSMENT:	7
10. LIST OF MATERIALS	7
11. VENUE	7

1. Title

“Marketing strategy for a new spin-off”

2. Topic

Atobit (www.atobit.it) is a software house specializing in custom-made software. Students must prepare a marketing strategy to launch this new company spin-off, Atobit Formazione, maintaining a communication consistent with the parent brand Atobit.

Specifically, they would like to create:

- dedicated page on the Atobit website
- editorial plan for social media
- Google campaign
- creation of an event on site to make themselves known

For Atobit, it is important that students train and develop these soft skills during the project:

- **Curiosity:** constant desire to learn and update on digital tools, trends and behaviors that by their nature evolve quickly;
- **Data analysis:** knowing how to interpret metrics and KPIs to optimize campaigns;
- **Creativity:** thinking outside the box, trying to always find new ways while keeping the mind active and not sitting on a "we've always done it this way";
- **Listening and proactivity:** understanding requests and proposing solutions without fear;
- **Planning:** knowing how to organize one's activities to complete tasks in the agreed time.

3. Age range

The group's students range in age from 19 to 35 years old.

4. Number of participants:

21 students of our post diploma course (digital + event coordinator)

5. Description of the project:

ORGANISATION OF ACTIVITIES:

Nº of hours	Date	Activity
3	May 27 th	project start
3	June 9 th	checkpoint meeting with teacher/trainer
3	July 2 nd	checkpoint meeting with teacher/trainer
3,5	July 14 th	final presentation

Day 1 – May 27th: Project start

Division into groups.

- Each group must complete the tasks listed below by the end of the lesson:
- Structure the work group by distributing tasks to the various team members and assigning organizational roles. Identify, at least, the group manager, who will relate directly to the PM and the client.
- Give the work group a name.
- Write a list of information that you would like to receive from the client company
- Structure your work until the next meeting and describe it. Create a timing or Gantt. Remember that, during the project, you have to keep track of every changes that will be necessary, in order to monitor you progresses and better structure your work.
- Write an email to the PM by 04/30 where you will list:
 - the members of your team
 - the manager
 - the organization of your work until the next date (tasks, dates, objectives)
- Organize a call with the company contact person. This call must be organized in concert with the other groups and taking into account the contact person's agenda.

Work for the next meeting

Prepare a slide presentation that covers the following points:

- Communication for your group: name, logo, graphic format for the slides.
- Who is the company that has been entrusted to you, how is it positioned on the market and compared to competitors, how and where does it communicate, the sector etc... competitor or reference player.
- Analysis of competitors and reference players: who are they, what do they do, how do they communicate.
- Study the company's products/services and describe the main ones.
- Research types of events made by other companies in the same sector or others that may be interesting to propose to the customer. Find at least 3 types of events to propose to the customer.
- Analysis of the company's digital and social presence: how many and which profiles does it have, how does it use them, coherence of communication, how is the website structured and organized.

Day 2 - June 10th: checkpoint meeting with the teacher/trainer

Group presentations of what has been achieved; feedback from the PM.

Work for the next meeting

- Structure a strategy that takes into account both the digital aspect and the event that will be organized.
- Propose a digital presence setup for the Atobit spin-off.
- Propose a marketing campaign to promote the courses. This digital campaign must have narrative, graphics, target and a time frame.
- Structure a precise action plan to implement the proposed campaign:
 - Create an editorial plan for the proposed marketing campaign
 - Define control KPIs for the campaign during and at the end
 - Propose posts and ADV with images and texts
 - Describe the event in its particularities

Day 3 - July 2nd: checkpoint meeting with the teacher/trainer

Group presentations of what was accomplished; feedback from the PM.

Work for the next meeting

Prepare a slide presentation describing the choices made to the client.

Day 4 - July 14th: Final presentation

Final presentation of the groups to the PM, the client and all those present of the work

PBL is the technique used for this project. Students will have the opportunity to engage with the subject teachers who supported them during the classroom courses and will receive continuous feedback from the Project Manager and tutors, both through structured moments (2 checkpoint meetings) and more informal ones (based on the students' needs).

6. Didactic hours

(estimated duration of the training)

From 27th of May to 14th July – 33 hours

7. STEAM approach

S – Science

- Students use empirical methods to gather and interpret data (e.g., metrics from a Google campaign).

T – Technology

- Use of digital tools (social media, Google Ads, content creation tools, data analysis platforms).
- Analysis and proposal of a digital strategy: website, social channels, online campaigns.

E – Engineering / Project Management

- Organization and planning of the work using Gantt charts and role assignments.
- Structured analysis and real-world problem-solving (PBL – Problem Based Learning).
- Ideation and execution of an on-site event, including all related logistics.

A – Arts

- Creativity in visual content creation (logo, social graphics, event materials).
- Storytelling and narrative development for digital campaigns.
- Website and visual identity design, ensuring coherence between the parent brand and spin-off.

M – Mathematics

- Analysis and interpretation of KPIs and metrics (CTR, CPM, conversions, etc.).
- Campaign budgeting and financial planning.

8. Soft skills developed through the project:

The project is intentionally structured to actively foster the following soft skills, which are also explicitly requested by Atobit:

1. Curiosity

- Essential for researching competitors, trends, digital tools, and innovative event formats.
- Encouraged through independent group work and real-world exploration.

2. Data analysis

- Required for evaluating campaign performance.
- Using data to optimize strategies and actions (digital marketing and communication).

3. Creativity

- Expressed in graphic design (logos, slides, social posts), content creation, and event planning.
- Encouraged by the need to differentiate from competitors and ensure effective communication.

4. Listening and proactivity

- Crucial during the call with the company and in interactions with the project manager.
- Groups must understand real needs and independently propose solutions.

5. Planning (Project management)

- Long-term planning with defined tasks and goals.
- Use of tools like Gantt charts and reports to monitor progress.

6. Teamwork and leadership

- Management of internal group roles (e.g., team manager).
- Collaboration in task distribution and conflict resolution.

7. Public speaking and communication

- Strengthened during the intermediate and final presentations.
- Essential to clearly and convincingly present ideas to the client.

9. Assessment:

- **Pre-post self-assessment questionnaire for students (pre-assessment date: May 27; post-assessment date: July 14):**
 - **pre-questionnaire:** https://docs.google.com/forms/d/1RKVWMQ3z7X_I0pJ-cfQP__Fj1Ks-Z7XwXCz72QX3EIM/edit
 - **post-questionnaire:**
<https://docs.google.com/forms/d/1zWewDkV0BntPmi2mh9yVO16en9xxEFO095JbowuW7ml/edit>
- **Observation Form – Soft Skills Development for Project Manager/Tutor**
(to be completed at the checkpoints and on the final day of the project):
https://docs.google.com/forms/d/1vn_MuHBXGtNTx0yeaJ81iP-ldburA6tB2RZ8Xy-K5ek/edit

10. List of materials

- Computers with internet access
- Design software (e.g., Canva, Adobe) or physical materials to create to packaging (if they want to physically create the prototype)
- Spreadsheet software (e.g., Excel or Google Sheets) for financial calculations
- Markers, pens, paper
- Research materials (internet access for market research, business books, etc.)
- Projector or presentation software (e.g., PowerPoint)

11. Venue

A big classroom with computers, Internet connection, projector and round tables so students can work in groups will be needed.



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STEAM BO.SS

boosting soft skills

2023-1-IT01-KA220-VET-000163992

Community+ Mission

Portuguese Pilot Project



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1. Title

“Community+ Mission | Digital Escape Room with Social Impact”

2. Topic

Development of soft skills through the creation of a Digital Escape Room, designed to promote social and digital impact among vulnerable audiences, based on real community issues.

Brief description of the activity

Community+ Mission is a challenge in which students from Computer Science and Health courses develop a Digital Escape Room with social impact, aimed at promoting health and digital literacy among vulnerable audiences.

The activity promotes teamwork, creativity, and the practical application of technical knowledge, while developing STEAM skills and soft skills essential for the job market.

Partner company: AI9.PT – Association for Innovation and Social Entrepreneurship is a non-profit organization that promotes projects with social, educational, and technological impact, focusing on developing skills for the 21st century. It works in partnership with schools, municipalities, and companies, promoting initiatives that combine creativity, technology, and active citizenship.

3. Age range

The group's students range in age from 15 to 25 years old.

4. Number of participants:

20 students attending VET Courses in the areas of IT and Health.

5. Description of the project:

ORGANISATION OF ACTIVITIES: June 5th – 6th and July 3rd – 4th

Nº of hours	Date	Activity
4	June 5 th	project kickoff, team setup and planning
4	June 6 th	concept development and initial feedback
8	July 3 rd	content creation, prototyping and testing
4	July 4 th	final presentation and evaluation

Day 1 | June 5 – Project kickoff (4 hours)

Division of groups and first tasks:

- Formation of groups (4-5 students)
- Definition of roles (group coordinator, content manager, technician, etc.)
- Presentation of the challenge
- Choice of target audience
- Creation of a work plan up to the first checkpoint

Day 2 | June 6 – Checkpoint I (4 hours)

Intermediate presentation:

- Proposed theme and narrative for the Escape Room
- Target audience chosen
- General structure of the game (platform, format of challenges)
- First examples of challenges or content
- Feedback from the trainer

Day 3 | July 3 – Checkpoint II (8 hours)

Game development:

- Creation of challenges and content (texts, images, videos, quizzes)
- Technical implementation on the chosen platform (Genially, Google Forms, PowerPoint, etc.)
- Internal testing between groups

Presentation of prototypes:

- Testable version of the Escape Room
- Complete example of a sequence of challenges
- Feedback for improvements

Task until final presentation:

- Finalization and final testing
- Preparation of the presentation

Day 4 | July 4 – Final Presentation (4 hours)

Formal presentation of the Escape Room to:

- Another class or simulated target group
- Trainers
- Possible external guest (partner company, social institution, professional in the field, etc.)

6. Didactic hours

(estimated duration of the training)

In total, the activity will consist of 20 hours during class hours.

7. STEAM approach

S – Science

- Application of the scientific method in constructing challenges: formulating questions, hypotheses, and verifying answers.
- Integration of knowledge about health, well-being, hygiene, and prevention.

T – Technology

- Use of digital platforms (Genially, Google Forms, interactive PowerPoint, Canva, etc.).
- Creation of interactive experiences with multimedia elements.
- Exploration of online presentation and collaboration tools.

E – Engineering (management)

- Planning and organization of teamwork (division of tasks, schedule, Gantt chart).
- Resolution of technical and logistical problems during game creation.
- Ability to adapt to unforeseen circumstances, testing, and continuous improvement.

A – Arts

- Graphic design (visual identity, illustrations, icons).
- Storytelling and development of an immersive and empathetic narrative.
- Creation of appealing visual materials adapted to the target audience.

M – Mathematics

- Logical reasoning for constructing puzzle-type challenges, numerical sequences, codes, etc.
- Data management and interpretation (e.g., test results, feedback, scores).
- Planning scores or time limits for challenges.

8. Soft skills developed through the project:

Empathy and communication tailored to the audience

- Ability to understand the target audience and adapt the language, tone, and format of content, making the experience accessible to people with different levels of health and digital literacy.

Teamwork and collaboration

- Working together with colleagues with different profiles, respecting opinions, sharing tasks, resolving conflicts, and contributing to a common goal.

Planning and organization

- Effective time and task management using schedules, Gantt charts, and clear distribution of responsibilities.

Creativity and critical thinking

- Ability to generate innovative ideas and solve problems through original, coherent, and effective solutions.

Autonomy and proactivity

- Taking initiative, seeking solutions on one's own, acting without relying exclusively on the teacher/trainer.

Public presentation skills

- Organization and clarity in communicating ideas to colleagues, trainers, or guests, using effective visual aids.

Problem solving

- Identifying technical or conceptual obstacles during the project and finding viable and quick alternatives.

9. Assessment:

Initial and final self-assessment by students

- **Pre-challenge:** <https://forms.gle/CpgGQ6NSaRzctwu27>
- **Post-challenge:** <https://forms.gle/jzbBCaAR55YmUTNy6>

Observation form: <https://forms.gle/y65EeKTebZ6BKD1V6>

Satisfaction questionnaire

- **Students:** <https://forms.gle/LZrBVMxjnbLKHrDFA>
- **Trainers:** <https://forms.gle/G6QDM1BTJHUrHKEb7>

10. List of materials

- Computers with internet access
- Design and editing tools (Canva, PowerPoint, Genially)
- Collaborative workspace
- Planning and assessment sheets
- Support from the trainer for reviews and pedagogical guidance

11. Venue

EDUGEP Academia de Formação and EDUGEP Bonfim: Classrooms with computers, projector, tables and chairs.



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STEAM BO.SS

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2023-1-IT01-KA220-VET-000163992

Break barriers, build bridges

Spanish Pilot Project



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1. Title

“Break barriers, build bridges”

2. Topic

Raise awareness about the big number of barriers people with some kind of impairment have to face daily.

Novodecor (<https://www.novodecorsl.com/>) is a refurbishment company with over 30 years of experience, dedicated especially to the world of integral decoration of commercial premises. Novodecor assumes responsibility for the entire process, from planning to final delivery, ready for immediate use, without the client having to take any additional steps.

It has a wide range of clients, some of whom are well known in Spain and internationally.

Its slogan is ‘If it's in your imagination, we can make it happen’.

The company is trying to make its activity as inclusive as possible. In this sense, and especially in relation to people with functional diversity (both physical and intellectual) its aim is that the premises the company designs and refurbishes guarantee a complete and satisfactory experience to all their customers, trying to go beyond the current regulations.

To achieve this, the company will have to carry out different actions. Among them, it has contacted our College, CIPFP Misericordia, with the aim of getting advice from the second-year students doing a course in Social Integration who will share with the company their expertise and knowledge on the subject and will act as consultants.

The **main objectives** of the project between our school and Novodecor are:

- Detection of physical barriers in commercial premises many of which go completely unnoticed or are considered unimportant.
- Raise awareness of the importance of creating accessible and functional spaces for all types of users.
- Propose simple and realistic solutions to achieve maximum accessibility.
- Dissemination of the results to achieve greater awareness of this problem.

The **final products** to be presented at the end of the training sessions are (each group chooses one):

- Development of plans, models (physically or digitally).
- Creation of a marketing campaign (awareness-raising, denunciation, inclusive proposals) through social networks.

- Creation of a podcast in which the different groups will make visible issues related to inclusion in commercial spaces.

To achieve the objectives, the following **soft skills** must be considered and promoted among the students taking part in the project:

- Creativity
- Proactivity
- Teamwork
- Problem solving
- Adaptability/flexibility
- Commitment
- Effective communication
- Empathy

3. Age range

The group's students range in age from 19 to 30 years old, although the majority are in their 20s.

4. Number of participants:

27 students in the second year of Social Integration at CIPFP Misericordia.

5. Description of the project:

Methodology: **Challenge-Based Learning**

ORGANISATION OF ACTIVITIES: 15th to 26th September.

Nº of hours	Date	Activity
2	September 15 th	presentation of the project and activities/challenges.
2	September 16 th	visit of the company manager.
3	September 17 th	analysis of real spaces and introduction to STEAM approach.
2/day	September 18 th , 19 th , 22 nd , 23 rd , 24 th	group work on final projects.
4	September 25 th	review and collaboration with the company.
4	September 26 th	exhibition of final products.

Day 1 - 15 September: 2 hours

Presentation of the project to the students, the characteristics of STEAM projects, and the company with which we are going to collaborate. The aim is for them to understand the concept of inclusion and its importance in the design of spaces.

- **Activity 1:** Presentation of the project and a mini challenge in groups of 5: How can we design inclusive spaces for everyone?
- **Activity 2:** Empathy games or dynamics where will be used.
 - glasses simulating visual disorders
 - wheelchairs/clutches
 - sign language.
- **Final task:** research examples of inclusive spaces in your environment and bring a picture or drawing the next day.

Day 2- 16 September: 2 hours

- **Activity 1:** Visit of the company manager (online if physically impossible) to explain how they work in the spaces and what they would like to achieve.
- **Activity 2:** Participatory talk/workshop with experts from a disability association or videos on inclusion, accessibility and universal design.

Day 3- 17 September: 3 hours

- **Activity 1:** Work in teams to analyse real spaces in shops. What barriers do they find?
- **Activity 2:** Introduction to STEAM concepts applied to the project: STEAM APPROACH.
- **Activity 3:** Brainstorming: What elements should an inclusive space have?
- **Final task:** Initial sketch of a real inclusive shop space.

Day 4 to 8 (18, 19, 22, 23 and 24 September): 2 hours/day

Divide the class in working groups (with different roles: architects, designers...etc)

- **Activity 1:** Development of plans, mock-ups, prototypes (physical or digital).
- **Activity 2:** Creation of a podcast on issues related to the work and research carried out.
- **Activity 3:** Campaign on social networks.
- **Final task:** Rehearsal of a short presentation of the proposal.

Day 9: Review and collaboration with the company (25 September) 4 hours

In order to present preliminary proposals and receive feedback from the refurbishment company:

- **Activity 1:** Oral presentation by each group to the company.
- **Activity 2:** Round of questions and constructive feedback.
- **Activity 3:** Improvement and adjustment of designs based on comments received.
- **Final task:** Prepare final materials for the last day's presentation (podcast, network campaign, etc.).

Day 10: Final presentation and reflection (26 September): 4 hours

Aiming to share learning and celebrate the process

- **Activity 1:** Set-up of a small exhibition with the work done.
- **Activity 2:** Final presentation of each group with visual materials or prototype and explanation of the process.
- **Activity 3:** Final collective reflection: What have we learned about inclusion and design?
- **Activity 4:** Evaluation of the project: self-evaluation, evaluation rubric.
- **Closing:** Diplomas of Achievement for participants.

6. Didactic hours

(estimated duration of the training)

35 hours: 25 classroom hours + 10 hours of work outside the classroom.

7. STEAM approach

Science and Technology:

- Conduct data analysis on physical barriers in commercial premises, using digital tools to collect, organise and visualise information.
- Research on innovative technologies and solutions that can improve accessibility, such as sensors, applications or adapted devices. How can lighting be improved in an efficient way?

Engineering:

- Design proposals for physical alterations or adaptations to remove barriers, considering technical and structural aspects (ramps, lifts)
- Create models or mock-ups showing what accessible spaces would look like, using diverse materials to enhance creativity.

Art:

- Develop impactful visual campaigns on social networks, using graphic design, photography and visual elements that raise awareness and call for action.

- In podcasting, incorporate creative elements such as music, emotive storytelling and sound effects to capture attention and convey the message effectively.

Mathematics:

- Analyse statistical data on the presence and type of barriers in different venues to identify patterns and prioritise actions.
- Measure and evaluate the accessibility of spaces through quantitative indicators, promoting a data-driven vision. Measurements, proportions, distribution of space.

8. Soft skills developed through the project:

Developing soft skills through a challenge-based learning project—like identifying and raising awareness about barriers faced by people with physical diversity—offers a real-world, collaborative, and human-centred context. Here’s how each soft skill can be cultivated in this setting:

Creativity

- **How it’s developed:** Students will need to think innovatively to design engaging awareness campaigns, develop inclusive solutions (like accessibility tools, videos, or events), or represent physical diversity issues in compelling ways.
- **Example:** Designing a simulation experience that allows others to feel the challenges faced by someone in a wheelchair.

Proactivity

- **How it’s developed:** The project demands initiative—students must go out, research, talk to affected individuals, and actively seek to understand and respond to real-world issues.
- **Example:** Proactively contacting local organizations or interviewing people with physical disabilities rather than waiting for information to come to them.

Teamwork

- **How it’s developed:** Group collaboration is central students will have to divide tasks, make decisions collectively, and resolve internal conflicts to progress as a unit.
- **Example:** Organizing roles based on individual strengths (e.g., one student research, another handles community outreach).

Problem Solving

- **How it’s developed:** Students will encounter various challenges—logistical, technical, social—and must brainstorm and test possible solutions.
- **Example:** Identifying a local building with poor accessibility and proposing actionable improvements.

Adaptability/Flexibility

- **How it's developed:** Real-world projects rarely go as planned. Students will need to adjust strategies, pivot ideas, and remain open to feedback.
- **Example:** Changing the format of an awareness event due to unforeseen weather or accessibility constraints.

Commitment

- **How it's developed:** Sustaining effort over time, especially for a cause with a social impact, helps students internalize responsibility and purpose.
- **Example:** Continuing outreach or campaign activities even when participation or results are initially low.

Effective Communication

- **How it's developed:** Students must express ideas clearly—to their team, to stakeholders, and to the broader community—whether verbally, visually, or in writing.
- **Example:** Preparing presentations, creating accessible digital content, or speaking at community meetings.

Empathy

- **How it's developed:** Direct engagement with people who experience physical barriers encourages perspective-taking and emotional connection.
- **Example:** Conducting interviews or shadowing individuals with physical disabilities to understand their daily experiences firsthand.

9. Assessment:

Pre and post self-assessment questionnaire for students

- [Pre-questionnaire](#)
- [Post-questionnaire](#)

10. List of materials

- Computers with internet access
- Design software (e.g. Canva, Adobe) or physical materials to create the packaging (if you want to physically create the prototype)
- Spreadsheet software (e.g. Excel or Google Sheets) for financial calculations
- Markers, pens, paper
- Research material (internet access for market research, business books, etc.)
- Overhead projector or presentation software (e.g. PowerPoint)

11.Venue

Aula Emprén: Classroom with computers, projector, tables and chairs specially designed to foster creativity, collaborative work and entrepreneurial skills.



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