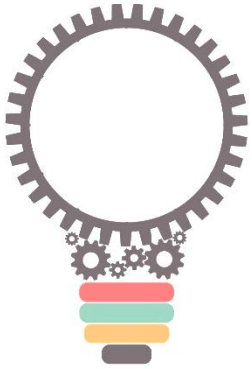

eDea

Ψηφιακές υπηρεσίες για ιδεασμό, συνεργασία & σύνθεση στη σχεδιαστική σκέψη

Output 5

Supporting content for integrating design thinking activities into learning processes

Ελλάδα 2.0
ΕΘΝΙΚΟ ΣΧΕΔΙΟ ΑΝΑΚΑΜΨΗΣ ΚΑΙ ΑΝΘΕΚΤΙΚΟΤΗΤΑΣ

Με τη χρηματοδότηση της Ευρωπαϊκής Ένωσης
NextGenerationEU

ΓΓΕΚ
ΓΕΝΙΚΗ ΓΡΑΜΜΑΤΕΙΑ ΕΡΕΥΝΑΣ ΚΑΙ ΚΑΙΝΟΤΟΜΙΑΣ

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Introduction

The eDea research project aims to design digital interventions that support design teams in the context of learning, entrepreneurship, and social entrepreneurship in collaboration and to design innovative solutions to the complex challenges of our time by applying the steps of design thinking, a profoundly human-centred process that contributes to the introduction of solutions even when they are not apparent at first glance. Design thinking is based on steps of problem investigation, empathy, and observation to understand the real needs of users, problem redefinition, ideation, idea evaluation, and prototype design that allow design teams to approach a problem from different perspectives, considering the actual rather than the initially perceived needs of users.

This technical report presents design thinking activities that can be used directly in learning or design processes or indirectly as inspiration for designing new ones. The activities are designed for application in learning and business environments to encourage alternative and innovative thinking. They can be implemented as presented in this document and used as inspiration for new designs.

The technical report is organised into 2 parts. The first part presents a collection of actions and exercises that can be incorporated into the stages of design thinking. Teachers or group coordinators can choose from these actions and combine them to promote innovative thinking. The second part of the technical reference presents specific cases of problems of the modern era structured in design thinking steps that encourage innovative thinking and facilitate their implementation and execution in learning contexts or, more generally, creative design.

Part A. Structural design thinking exercises

Structural design thinking exercises are self-contained activities, each of which can be considered an autonomous element that can be combined flexibly and adaptable to create a complete work unit. In this sense, structural exercises are "individual." They cannot be broken down into smaller steps, like a person in physics. They are building blocks of larger activities.

Structural exercises are general-purpose and usually relate to one or more steps of design thinking, such as problem investigation, ideation, or prototyping. They are designed for maximum adaptability and use in broad design or learning contexts.

This module presents structural exercises that teachers or coordinators of design teams can use or adapt in combination with other activities to create an engaging design thinking experience for students or participants in innovative design processes.

Creativity

30 shapes

Objectives

The encouragement of participants and the building of confidence in their creative capacity.

Use

The activity can be used at the beginning of the design thinking process.

Implementation

Each participant receives from the instructor or coordinator a sheet of paper containing 30 geometric shapes. They must turn each shape into an image through drawing.

Duration

15 minutes.

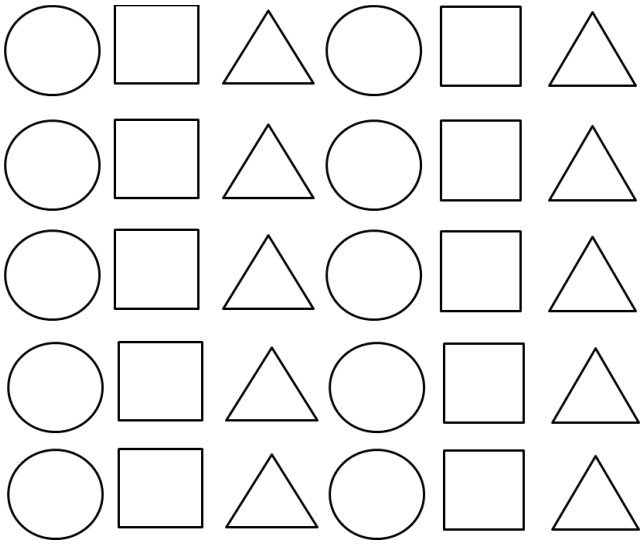

Figure 1. 30 figures (adapted from Lewrick et al., 2020).

Design an object that is useful to someone

Objectives

The encouragement of participants and the building of confidence in their creative capacity.

Use

The activity can be used at the beginning of the design thinking process.

Implementation

Each participant is encouraged to draw something valuable to someone using the shapes in the image below.

Duration

15 minutes.

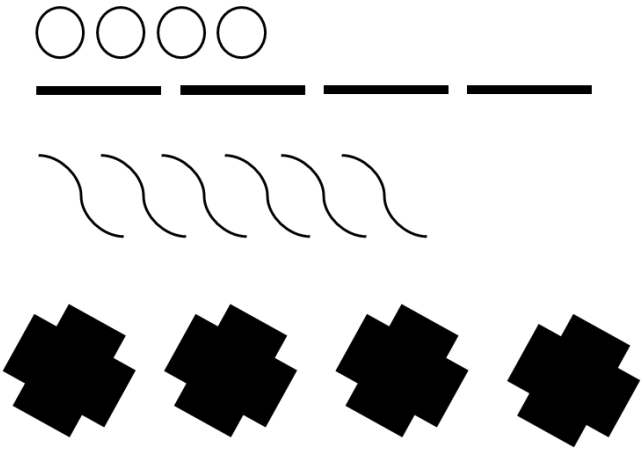

Figure 2. Design an object that is useful to someone.

Encouraging team spirit

Set a team name and design a logo

Objectives

The expression of the identity of the group.

Use

The activity can be used at the beginning of the design thinking process as a tool to encourage team spirit within a team.

Implementation

Team members are encouraged to define a name for their team and design a logo. They can create the logo on paper, digitally, or in another medium they choose.

Duration

The activity can be given as homework. Each team can choose the time to invest.

Describe team profiles and define collaboration rules

Objectives

The familiarisation of team members with each other.

The recognition and recording of knowledge and skills of members.

The definition of rules and procedures of good cooperation.

Use

The activity can be used at the beginning of the design thinking process as a tool that encourages team spirit within a team and the definition of a collaborative "contract" that ensures equality and respect among members while encouraging innovative thinking.

Implementation

Group members are encouraged to set their group profile using the 'group canvas' shown in the image below. Team members discuss and agree on team goals, roles and skills, values, and rules of cooperation.

Duration

2 hours.

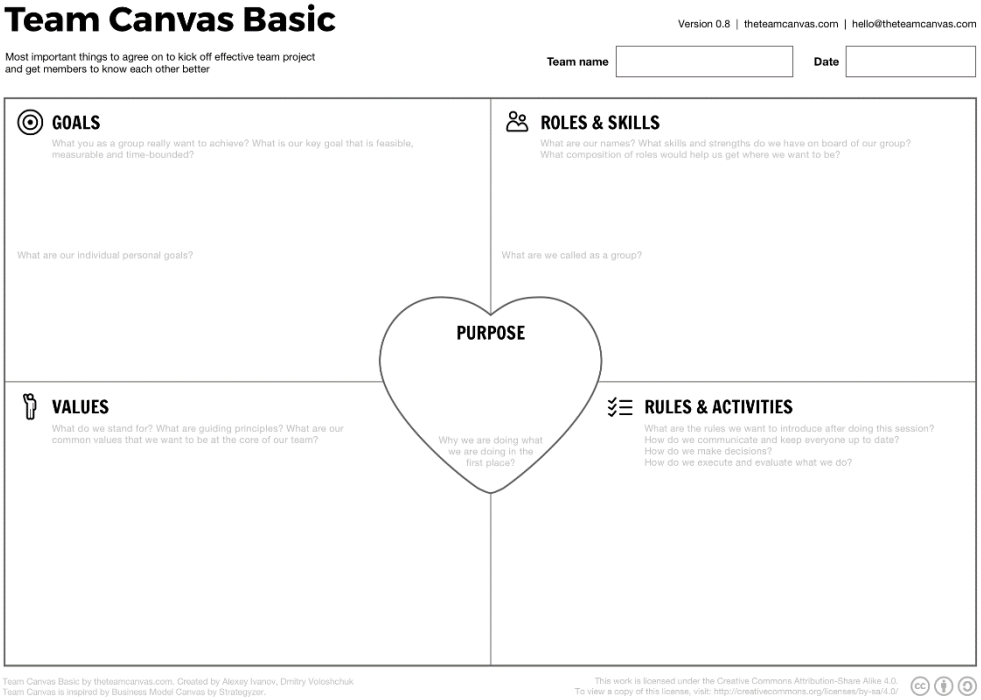

Figure 3. Group canvas (available through Creative Commons).

Table of interests

Objectives

The team members' acquaintance with each other, or, in other words, the "breaking of the ice" at the beginning of a collaboration.

Use

The activity can be used at the beginning of a collaboration so that people who do not necessarily know each other can get acquainted and join a group through a discussion of their interests. Ideally, the activity is implemented with all groups throughout the class.

The activity can also be used among other exercises for group relaxation.

Implementation

Each participant receives an A4 paper that includes a table of questions related to interests, preferences, or experiences, such as the one below. The process facilitator can adapt the questions given as examples. Each participant is asked to write down on each box the name of another participant for whom the question has a positive answer.

Has read 3 novels	Likes to cook	Has travelled to Europe	Has designed a game, learning or otherwise
Has attended ancient theater	Has attended 3 concerts	Has traveled to Paris	Their favorite color is blue
Speaks 3 languages	Has a parent from a different country	Enjoys holidays at the sea	Knows how to play a musical instrument
Prefers casual attire	Has siblings	Enjoys mountain hiking	Has worked in a professional environment
Has visited 3 Greek islands	Wants to start a company	Has programmed software	Has visited Epidaurus
Has visited 3 countries	Likes hiking	Has experience in design thinking	Wants to work in a startup company

Figure 4. Table of interests (adapted from Lewrick et al., 2020).

This way, participants are encouraged to communicate with many people in the class and get to know each other. The participant who completes the table first wins the process and receives a reward.

Duration

20 minutes.

Water transport

Objectives

The encouragement of teamwork and cooperation to achieve a common goal.

Use

The activity can be used at the beginning of a collaboration to promote team spirit.

The activity can also be used for group relaxation exercises.

Implementation

Teams are asked to transfer water from a starting point to a finish point between some distance, for example, 5 – 8 meters for groups of 6 people, using auxiliary materials such as:

- 1 bottle of water 1.5lt.
- A plastic bag.
- 3 paper water cups.
- A piece of watering hose 50cm long.
- A plastic biodegradable bag.
- 2 sheets of A4 paper.
- 1 disposable wooden spoon.
- 1 piece of aluminium foil 50x50cm2.
- 1 sponge.
- Clips.
- 4 skewer sticks.

Between the starting and finishing points for each group, there are predefined points where members can stand, as shown below. Only water can be transported from one point to the next, and materials used in one place cannot be reused in another.

Initially, the members of each group meet to draw up a plan for transporting the water using the available auxiliary materials. Then, they execute their plan. The team that carries water first to the finish line is the winner and receives a reward.

Duration

45 minutes.

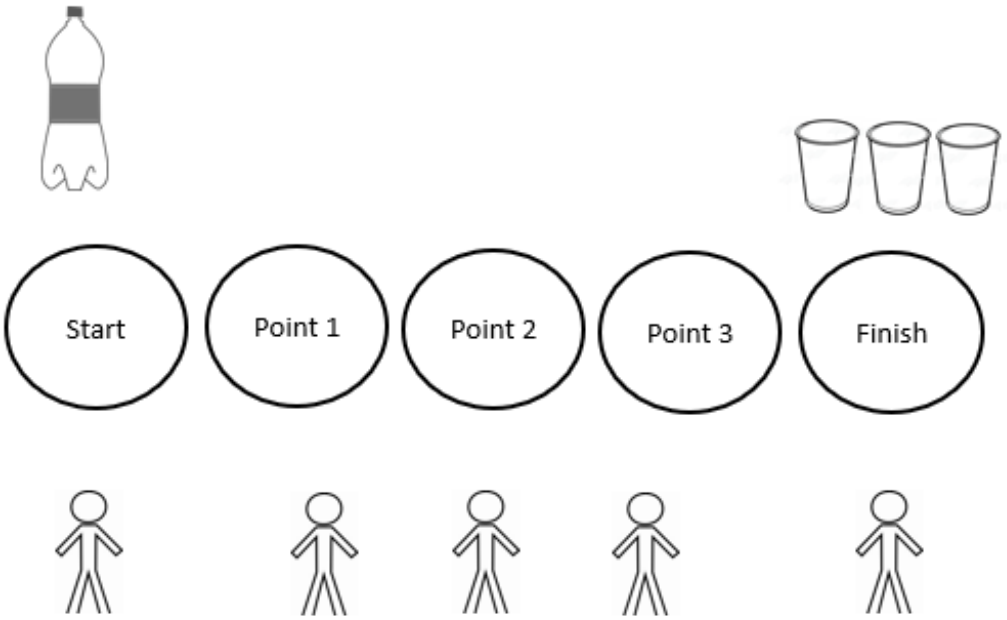

Figure 5. Water transfer.

Water purification

Objectives

The encouragement of teamwork and cooperation to achieve a common goal.

Use

The activity can be used at the beginning of a collaboration to promote team spirit.

The activity can also be used for group relaxation exercises.

Implementation

Teams are asked to purify water in various contexts, for example, during a mountain trip, in the schoolyard, using coloured water, and more. They have at their disposal auxiliary materials such as:

- 2 paper water cups.
- 1 cola A4 paper.
- 5 fasteners.
- 3 oversized fasteners.
- 2 paper coffee filters.
- 1 piece of aluminium foil 50x50cm2.
- 5 rubber bands.
- 5 skewer sticks.

Duration

20 minutes.

Warm-up, step 1: Story of my name

Objectives

The team members' acquaintance with each other, or, in other words, the "breaking of the ice" at the beginning of a collaboration.

Use

The activity can be used at the beginning of a collaboration so that people who do not necessarily know each other can get acquainted and join a group by discussing their interests.

Implementation

Members of each group are invited to talk about themselves, their interests, and their skills. The broader activity includes 3 steps, all or some of which are implemented depending on the group's needs.

This exercise is the 1st of the 3 steps. Each group member is invited to share the history of their name, its special meaning, such as cultural, historical, spiritual, or otherwise, the way it was chosen, for example, based on traditions or important family figures, and more. The exercise is designed to be simple, encouraging all team members to participate in the discussion and thus initiating collaboration (adapted from Stein Greenberg et al., 2021).

Duration

5 minutes for each team member.

Warm-up, Step 2: Survival skills in a post-apocalyptic era

Objectives

The team members' acquaintance with each other, or, in other words, the "breaking of the ice" at the beginning of a collaboration.

Use

The activity can be used at the beginning of a collaboration so that people who do not necessarily know each other can get acquainted and join a group by discussing their interests.

Implementation

Members of each group are invited to talk about themselves, their interests, and their skills. The broader activity includes 3 steps, all or some of which are implemented depending on the group's needs.

This exercise is the 2nd of the 3 steps. Each team member is asked to describe the skills they possess that would help their team survive in a post-apocalyptic era where civilisation has been destroyed. The exercise is unexpected and encourages team members to talk about their interests outside of the workplace, such as cultivation, cooking, coordination, herb harvesting, makeshift shelter construction, orientation, and more (adapted from Stein Greenberg et al., 2021).

Duration

5 minutes for each team member.

Warm-up, step 3: Professional skills

Objectives

The team members' acquaintance with each other, or, in other words, the "breaking of the ice" at the beginning of a collaboration.

Use

The activity can be used at the beginning of a collaboration so that people who do not necessarily know each other can get acquainted and join a group by discussing their interests.

Implementation

Members of each group are invited to talk about themselves, their interests, and their skills. The broader activity includes 3 steps, all or some of which are implemented depending on the group's needs.

This exercise is the 3rd of the 3 steps. Each team member is asked to describe their skills in their field of work, such as at school, university, or the company they work for. Alternatively, the group member is asked to explain how he would like to be seen by colleagues in a professional environment, i.e. what skills he would like to project positively (adapted from Stein Greenberg et al., 2021).

Duration

5 minutes for each team member.

Two truths and one lie

Objectives

The acquaintance of the members of a group with each other through the sharing of stories about themselves.

Use

The activity can be used at the beginning of a collaboration so that people who do not necessarily know each other can get acquainted and form a group by telling their stories.

Implementation

Each group member is asked to tell three stories about themselves. Two of them are true, while the third is a lie. Team members try to guess which stories are true and which aren't (adapted from World of Work Project, 2023).

Duration

10 minutes for each team member.

Telling our stories

Objectives

The group members are acquainted through structured stories about their lives.

Use

The activity can be used at the beginning of a collaboration so that people who do not necessarily know each other can get acquainted and join a group through narration.

Implementation

Group members answer questions about their childhood, when they were young adults, and now. They then weave them into a story they share with the other team members (adapted from Hi Toolbox, 2023). Each group member writes their answers on paper and groups them by category.

Examples of questions that team members could answer about their childhood are:

- Think of a situation that made you happy.
- A person who was important to you.
- A situation that changed you.

Examples of questions group members could answer about their years as young adults are:

- Present something that interests you a lot.
- A person who helped you grow.
- A situation that caused you to change.

Examples of questions team members could answer for now are:

- Present a situation that motivates you to act.
- A situation that made you realise a talent of yours.
- A failure from which you learned something.

Each team member then has 10 minutes to organise the answers to a story.

Finally, each team member has 4 minutes to present the story.

Duration

1 hour for a group of 6 people.

Problem research

Description of the problem through images, videos, scientific articles, and other sources

Objectives

Investigating the problem through digital and other sources.

Understanding the fundamental parameters of the problem.

Recording information about the problem.

Describing the problem.

Use

The activity can be used in investigative processes to understand the different aspects of a problem by searching for information and data.

Implementation

Team members are encouraged to explore and record information contributing to understanding and describing the problem through images, videos, scientific articles, media articles, social media posts, and other sources.

Duration

3 hours.

Associations

Objectives

The identification of correlations between the problem and the broader social environment.

Use

The activity can be used in investigative processes to understand the different aspects of a problem in the broader social environment and the wishes and needs of the users of a possible solution.

Implementation

Team members are encouraged to investigate and record correlations that contribute to understanding the actual parameters of the problem from the users' perspective. They are invited to record:

- 3 ideas related to the problem.
- 3 ideas related to the problem and people.
- 3 ideas related to the problem and places.
- 3 ideas related to the problem and feelings.
- 3 ideas related to the problem and actions.

Duration

2 hours.

Expert eyes

Objectives

The identification of the context within which the problem will be solved.

Use

The activity can help participants reflect on the importance of approaching the problem from different perspectives to generate ideas for solving it and addressing needs.

It can also be used when the design team cannot propose new ideas to help the collaboration progress.

Implementation

Participants are invited to walk in their neighbourhood and jot down their observations.

They are then invited to take the same walk each time with an expert with a different speciality and write down their observations. Through this walk, different observations related to the expert's point of view will emerge each time. For example, an engineer will notice imperfections on the road or invisible traffic signs. At the same time, a gardener will observe gardens, flower beds on sidewalks, and balconies with plants (adapted from Stein Greenberg et al., 2021).

Duration

1 hour for each walk.

Metaphors and analogues

Objectives

The search for inspiration for new ideas by recognising correlations between seemingly different situations or environments with common characteristics.

Use

The activity can be used to investigate the site of the problem.

It can also be used in ideation processes to generate many ideas to solve the problem.

Implementation

Participants are asked to use similes and metaphors to understand a need, a quality, and more based on analogies with something else. For example, the metaphor "the user drowns in paper" evokes emotions.

Alternatively or complementarily, participants, in their effort to solve a problem, are asked to observe a seemingly different situation that nevertheless has similar characteristics. For example, after a few laps, a car has to change tyres in a track car race. He enters the pits, where a team of specialists, each performing a particular task, work together to change the tyres quickly. A seemingly different situation is an emergency room in a hospital. When a new case comes, a team of specialists who each perform a precise task work together to deal with a health emergency in no time to save the patient's life. Both cases involve an immediate reaction of a very well-cooperating team of experts, and therefore, solutions for one case could inspire solutions for the other (adapted from Brown, 2019).

Duration

1 hour.

Immersion for insight

Objectives

Put the design team in the user's shoes to understand the experiences, problems, and emotions that users face when using a product or service for improvement.

Use

The activity can help participants understand users' actual needs through their experiences.

Implementation

Participants are invited to follow a step-by-step user-oriented process and list points of possible improvements. For example, suppose the goal is to improve the digital application process for admission to a graduate program. In that case, participants can follow the prescribed steps until the process is completed without submitting. They can also follow these steps in different environments, such as their home, the university library, or an internet café. Other conditions, such as various power computers or network speeds, could highlight different points of potential improvements (adapted from Stein Greenberg et al., 2021).

Duration

The duration depends on the process in which the participants will be immersed.

User observation (shadowing)

Objectives

The understanding of the real needs of users through observation of their everyday life in their environment.

Use

The activity can help participants understand the importance of approaching the problem differently.

Implementation

Participants select a non-feature user with a different experience and follow them for one day. During the day, they note their observations, such as what impressed them, what surprised them, and what new they learned about the user's needs (adapted from Stein Greenberg et al., 2021).

Duration

1 day.

Observation exercise

Objectives

The encouragement of observation.

Use

The activity can be used during problem investigation exercises to help participants understand the importance of observation in identifying user needs.

Implementation

Participants see a picture of everyday life that presents multiple levels of information. For example, the image may show a busy square where groups of people engage in different activities. The more layers of information displayed in the picture, the more interesting the activity will be. Participants are asked to discuss what they see, what they think is happening in the image, why they believe this, and what more they see (adapted from Stein Greenberg, 2021).

Figure 6. Exercise observation.

Duration

30 minutes.

What does this person need?

Objectives

The encouragement of observation.

Use

The activity can be used during problem investigation exercises to help participants understand the importance of observation in identifying user needs.

Implementation

Participants see an image of a person trying to find something. They are asked to think about what the user needs. They are encouraged to give at least 7 answers. Answers should begin with a verb. A verb describes a need as opposed to a noun describing a solution. (adapted from Stein Greenberg, 2021).

Figure 7. What does this person need?

Duration

30 minutes.

What; How; Because;

Objectives

This tool helps design teams reach more profound levels of observation. It guides designers from concrete observations of a situation to more abstract emotions, observations, and concepts to discover behind-the-scenes motivations and patterns. This tool can be used to analyse the photos the design team took in the field for composition purposes and to enlarge the needs search area.

Use

The activity can be used early in exploring the design thinking process.

Implementation

In preparation, participants are asked to divide a sheet into three sections titled What? How; and Why?

In the next stage, observation, they record specific observations and objective details. What does the user do in a particular case or photo? At this stage, participants are asked not to make assumptions.

In the next step, that of comprehension, participants are asked to answer questions such as: How does the user do what he does? Does it require effort? Does he seem in a hurry? Does the activity appear to be a negative or positive experience? Participants are asked to use adjectives and explanations.

In the next stage, participants are asked to make assumptions that interpret the situation. Why does the user do what he does the way he does it? Participants are asked to make informed guesses about their motives and feelings. This step reveals assumptions the design team can test with users, often leading to unexpected ideas (adapted from Hasso Plattner Institute of Design, 2018).

Duration

20 minutes.

Stakeholder map

Objectives

The tool visually represents the ecosystem of the groups involved in or affected by the specific challenge studied by the design team. It is helpful because it helps to understand better the broader ecosystem in which the solution proposed by the design team will be integrated, as well as the correlations between different teams that will interact with it.

Use

The activity is used in the problem investigation process.

Implementation

The activity helps to uncover existing formal and informal relationships between stakeholders, identify friction between them, and identify potential opportunities to establish new relationships, promote existing ones, or create alternatives.

A stakeholder can be an individual, a team, or an organisation with a specific interest or relationship to the topic or challenge the design team is studying.

Examples of stakeholders may include:

- Customers, users.
- Employees, internal departments.
- Partners.
- Suppliers.
- Clubs and communities.
- Government institutions.
- Non-governmental organisations.
- Mass media.

Steps to complete a stakeholder map:

- Designers quickly brainstorm and list all potential stakeholders with their study topic or challenge. It is recommended that they answer the following questions that facilitate the process:
    - Who is involved with the topic/challenge under study?
    - Who is affected by the outcome?
    - Who can support the outcome or the resulting solution?
    - Who are the key decision-makers?
    - Which user groups need to be investigated so that the design team can have an overall understanding of the problem?

- The designers rank the stakeholders in order of priority, determining their level of importance. Categorising stakeholders and determining their influence helps to understand their meaning better. Which of these stakeholders is essential to the topic or challenge under study?
- The designers create the stakeholder map by placing the stakeholders at the appropriate point on the map based on the categorisation that preceded it.
- They analyse and record on the map how stakeholders are interconnected and exchange value for the design team to understand and analyse the relationships formed between them by following the steps below:
    - They connect with arrows the interconnected stakeholders.
    - They record what value stakeholders exchange, such as products or information, and how they affect each other.

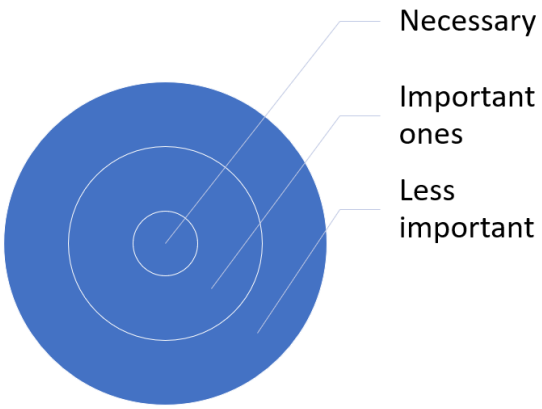

Figure 8. Categorisation of stakeholders.

Duration

1 hour.

Problem definition

How can we ...

Objectives

Redefining the problem in a way that incorporates the results of the problem investigation while facilitating the introduction of many ideas for possible implementation.

Use

The activity can be used after the problem investigation and before the ideation process to define the problem and devise a solution contributing to innovative thinking.

Implementation

Team members are encouraged to redefine the problem with a sentence. The new definition should achieve:

- Incorporate the information collected through the investigation process regarding the problem's parameters.
- To incorporate the design team members' understanding of the problem.
- To offer opportunities to introduce many ideas that can be combined to design an effective solution.

Redefining the problem can take the form of:

"How could we... design something that ... be useful to someone...".

Alternatively, the redefinition of the problem may take the form of:

"Who (the user) ... what (needs) ... why (observation)".

Who;	**What;**	**Because;**
The user ...	… The needs ...	… observation

As mentioned above, in the exercise "What the user needs" (*page*), defining the problem using a verb instead of a noun is important. A verb describes the situation and offers opportunities to introduce new ideas. A noun is already a solution, limiting the opportunities to introduce further possible solutions.

Duration

1 hour.

Table 2x2

Objectives

The activity helps structure and classify information about users and design space, highlighting relationships between them. The aim is to uncover ideas or areas that need further exploration. A 2x2 board is also a great way to communicate a relationship visually.

Use

The activity can be used to define the problem of the design process.

Implementation

Participants draw a 2x2 table on x and y axes, select a range of values for each axis, and draw or paste notes with elements on the board. They can explore any group of objects or attributes, such as products, incentives, or users.

For example, participants can place products on a board of perceived quality, low to high, versus using natural materials, natural or synthetic. They then look for groups and correlations by observing quadrants that contain information or are empty. Finally, they observe where the supposed correlation breaks down.

Participants may need to try various combinations of price spectrums to find one that makes sense. The debate generated by filling in the table is often more valuable than the map. The 2x2 table can also be used to map a competitor's landscape. An empty quadrant can signal a market opportunity (or a bad idea).

Duration

20 minutes.

Scalable "Why-How?"

Objectives

The activity helps refine users' different needs in a way that brings out a sensible and applicable middle ground, as a general rule, "Why?" leads to abstract statements, and "How?" leads to concrete statements. Often, abstract statements make more sense, but they are not as applicable. The opposite is true for more specific statements.

Use

The activity can be used to define the problem of the design process.

Implementation

Participants implement the following steps:

- They identify some essential user needs and write them down on the bottom of a paper.
- Starting from a specific need, they ask, "Why?". For example, why does a user "need to see a connection between a product and the process that creates it?"
- They ask again why and continue to build on the same need. Eventually, they will arrive at a general, abstract need like "the need to be healthy." This is the top of the ladder.
- They go down the stairs again, asking, "How?". This step gives participants ideas on how to address needs.

Duration

20 min

User interviews and persona

Colour, progression, and reflection

Objectives

Preparing and conducting interviews in a way that produces interesting information and feedback.

Use

The activity can define users' needs, desires, feelings, and opinions before the ideation process.

Implementation

Team members are encouraged to prepare for the interview process. General recommendations for the organisation of the procedure:

- Conduct at least 3 interviews.
- Each interview should last at least 30 minutes.
- At least two team members must conduct the interview. One asks the questions, and the other records the answers. In this way, the member asking the questions focuses all his attention on the interviewee without being distracted by an effort to take notes. This method creates greater closeness between the interviewer and the interviewee.
- To plan the place and time of the interview in a way that contributes to creating a relationship of trust between the interviewer and the interviewee.
- The group members offer a gift or exchange to the interviewee, depending on their relationship, for example, friendly or professional.
- The interviewees should be familiar people to facilitate building a relationship of trust, but not very familiar so that the information that will be produced is interesting and has unknown aspects. For example, they may be acquaintances or colleagues but not good friends.

Recommendations for planning interview questions:

- It is recommended that a collection of questions be written before the interview.
- It is recommended that team members visualise the progress of the interview.
- The first questions of the interview are recommended to create an atmosphere of trust.
- Then it is recommended to draw questions:

  "**Colour**" questions encourage the interviewee to delve deeper into the topic of discussion. For example, if the interviewee mentions that he had an exciting

visit to a museum, a colour question could be "What made the visit interesting?"

"**Progression**" questions relate to a different thematic unit. For example, a promotional question might be, "It's a fascinating discussion; we could talk about ..."

"**Reflection**", i.e. questions that encourage the interviewee to reflect on what he has said. These questions offer opportunities for the interviewee to become aware of ideas that until then had been latent. They may provide fascinating clues. However, they should only be done if a relationship of trust has been built between the interviewer and the interviewee.

Duration

3 hours for designing questions. At least 30 minutes to conduct each interview.

Route map

Objectives

The roadmap helps analyse a process in its parts to highlight areas where a new perspective on the problem can be gained. It helps design teams avoid overlooking details and systematically analyse them to empathise with and understand users and their experiences.

Use

The route map can be used in the early stages of exploring the design thinking process after data from user research has been drawn. It can drive the design team's empathy process and communicate its findings to others.

Implementation

Participants:

- **They choose a procedure to consider**. For example, the user's morning routine. They then create a map of that process that captures each step. They organise the data in a way that makes sense using, for example, a timeline of events, a series of images, or a stack of cards. The design team can create a route map based on the user's observation or conduct an interview. Alternatively, the user can draw their route map.
- **They are encouraged to consider all available information**. Design teams often overlook seemingly insignificant details, such as opening window shades during the morning routine. What seems meaningless may be the trigger that evolves into a surprising insight. In this activity, participants are asked not to overlook elements even if they do not appear to understand the problem to be solved at first glance.
- **They look for patterns and anomalies**. Participants are encouraged to connect individual events to a larger context. Often, coupling an observation with previous knowledge leads to an important finding.

Duration

20 minutes.

Interviews with empathy

Objectives

The activity contributes to the acquisition of empathy. By interviewing users, participants better understand an individual's behaviours, choices, and needs. We recommend interviewing in person and with pairs of researchers so that one person can chat while the other is recording.

Use

The activity can define users' needs, desires, feelings, and opinions before the ideation process.

Implementation

It is recommended that interviews occur in person and in groups of two designers so that one member can converse while the other can record.

The designers conducting the interviews follow the following good practices:

- **They ask why**. Even when they think they know the answer.
- **They never say "usually" when they ask a question**. Instead, they ask about a specific incident. "Tell me about the last time you ….."
- **They encourage storytelling**. The stories reveal how users think about the world. Designers look for inconsistencies. What users say and ultimately do can be different. These inconsistencies often hide interesting findings.
- **They pay attention to non-verbal signs**. They are aware of body language and emotions.
- **They are not afraid of silence**. Allowing silence gives users time to think about their answers, which can lead to more profound answers.
- **They neutrally ask questions and do not indicate answers**. "What do you think about buying gifts for your spouse?" is better than "Don't you think shopping is great?"

Duration

Each interview must be at least 30 minutes long.

Five "Why?"

Objectives

The activity contributes to a deeper understanding of why a phenomenon occurs, or users act in a certain way, building a better understanding of the problem.

Use

The activity can be used in the early stages of empathy and definition in combination with other forms of interviewing.

Implementation

Designers ask fundamental questions about a user's behaviour, such as, "Why are you doing this?" In each answer, they ask successively again, "Why... ".

For instance:

- Why do you exercise?
  - For my health.
- Why does exercise improve your health?
  - Because I do vigorous exercise and burn calories.
- Why is this important?
  - To lose weight.
- Why do you want to lose weight?
  - To have a better presentation.

Questions can go on.

Duration

5 minutes.

Photo diary

Objectives

The activity helps to highlight points of friction, opinions, and behavioural patterns of users based on what they consider essential in their daily lives.

Use

The activity is used in the stages of empathy and ideation.

Implementation

Designers ask potential users to keep a diary, both written and photographed. If possible, they can provide them with a camera. They don't give precise instructions. Instead, they let users photograph what they consider essential.

The calendar can be about users' daily lives or, more specifically, about their interaction with a particular product or service.

Duration

Up to 1 day.

Card sorting

Objectives

The activity contributes to understanding users' mental models regarding a product, device, or system.

Use

The activity is used at the stage of empathy.

Implementation

The designers prepare cards/papers, each mentioning a possible feature, function, or design property of the product or system under design. They ask users to organise and sort the cards in the space, for example, on the table, in any way that makes sense to them. It helps when they encourage users to describe their actions so designers can better understand how users group concepts.

The way they organise cards can reveal their expectations, priorities, and desires regarding possible functions and other features.

Duration

30 minutes of preparation, 5 minutes per user.

Interviews with extreme users

Objectives

Identifying outliers of users who deviate from the expected average can reveal new insights and identify areas for improvement.

Use

This specific category of interviews can be used in the early stages of empathy and definition.

Implementation

Designers are asked to identify edge users, people who are familiar with the object they are designing or who do not know it. Using other tools on this list, they then conduct assessment and interview activities with these individuals.

Duration

On a case-by-case basis.

Fly on the wall

Objectives

The activity is a user research technique in which the researcher does not intervene or guide the user but only observes his actions. The aim is to reveal what users do in their daily lives in realistic conditions and times without crediting the users' narrative, which may hide subjectivities.

Use

The activity is an empathy tool used in the early stages of design.

Implementation

The activity should take place in the natural environment of the object under design, which can be the user's home, workplace, public space, etc. In this case, the designers aim to observe and record the routine user actions and interactions without any intervention. Researchers remain unnoticed and uninvolved, like a "fly on the wall."

Duration

15 minutes.

Sharing stories

Objectives

After conducting interviews, design team members meet to share stories they heard. Sharing stories serves for several reasons. It allows team members to learn about what others have gathered in the field. Even if everyone was present at the field research, comparing how each participant experienced the interview has value. In addition, by listening and seeking more information, team members tend to bring out specific aspects and more profound meanings they did not initially realise. This is how the synthesis process begins.

Use

The activity is used in the early stages of exploring design thinking after data have been drawn from user research.

Implementation

The designers collect their observations and share stories that stand out from their team's fieldwork. While each team member shares notes and user stories, the others should take notes on interesting things said, references to things users said, surprises and interesting facts, noting one title per note (Post-it). Notes can be grouped and rearranged on the board to reveal themes and patterns. The ultimate goal is for designers to understand what's going on with each user to find out who their users are and what they need concerning the design space.

Duration

30 minutes.

Point of view (POV)

Objectives

A viewpoint frame helps to make a concrete statement of a problem that will drive the design process so that the design team can start brainstorming solutions. Most importantly, each designer's perspective helps articulate the team's challenge in a way that makes sense and inspires.

Use

The activity is used to define the design process problem after interviews.

Implementation

After interpreting user empathy interviews, designers try different ways of articulating the problem.

To define perspectives, they describe the user in vivid and descriptive language, including relevant details. Then, they choose their favourite surprise/finding representing the most powerful change in their perspective. Finally, they formulate a key change for the user, assuming their finding is correct.

Designers follow the following good practices:

- They make sure that their point of view flows understandably to a third party.
- They identify a finding focusing on a specific user rather than a demographic group.
- They formulate a game-changing direction without dictating a specific solution.

Duration

20 minutes.

User persona

Objectives

Creating a user persona, i.e. a description of a characteristic user.

Use

The activity can describe a typical user before the ideation process.

Implementation

Team members are encouraged to create a user persona based on the information collected during problem investigation, immersion, and/or interviews. The persona is not a specific person. Instead, he is an imaginary person with the characteristics of a typical user.

There are many ways to create a persona. Some of them are:

Empathy map

The tool describes the user's feelings, sees, hears, and does.

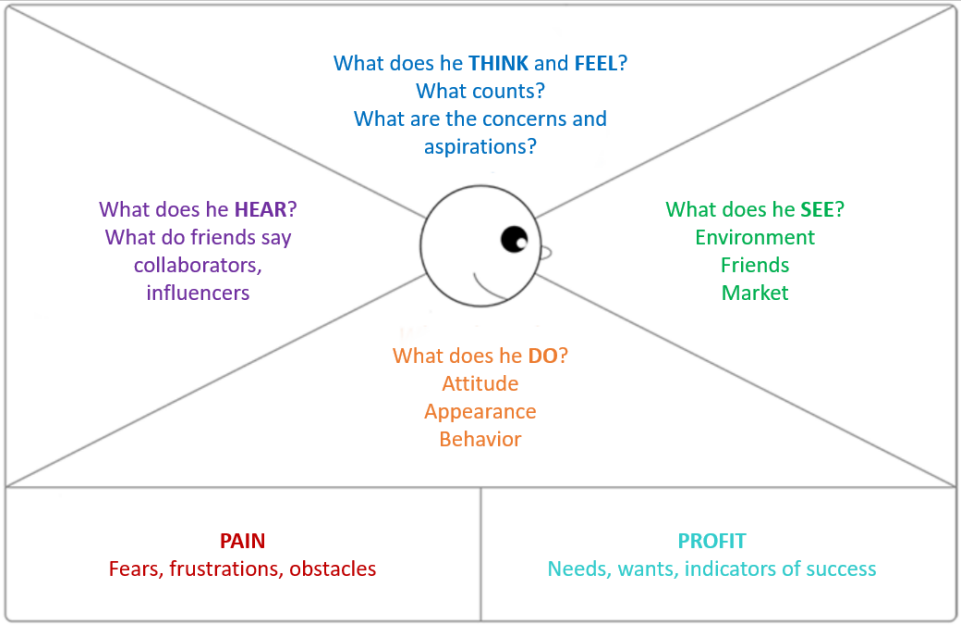

Figure 9. Empathy map.

In addition, he describes the problem he has to face and his needs and desires.

User's journey

The tool describes the user's journey from the beginning of his life until today, recording experiences and important events that have influenced his thinking, wanting, and needing.

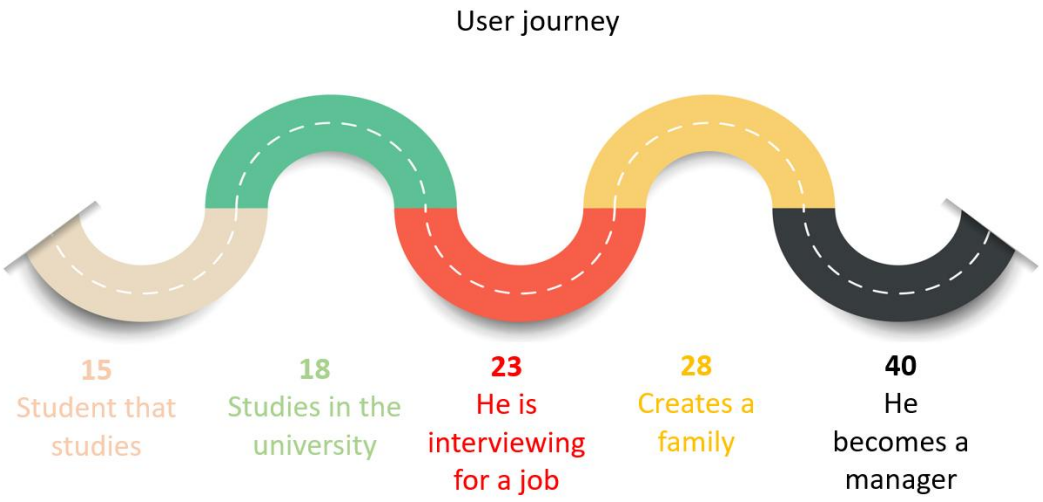

Figure 10. User journey.

Mind map

The tool describes the user's thoughts and what concerns him in his daily life.

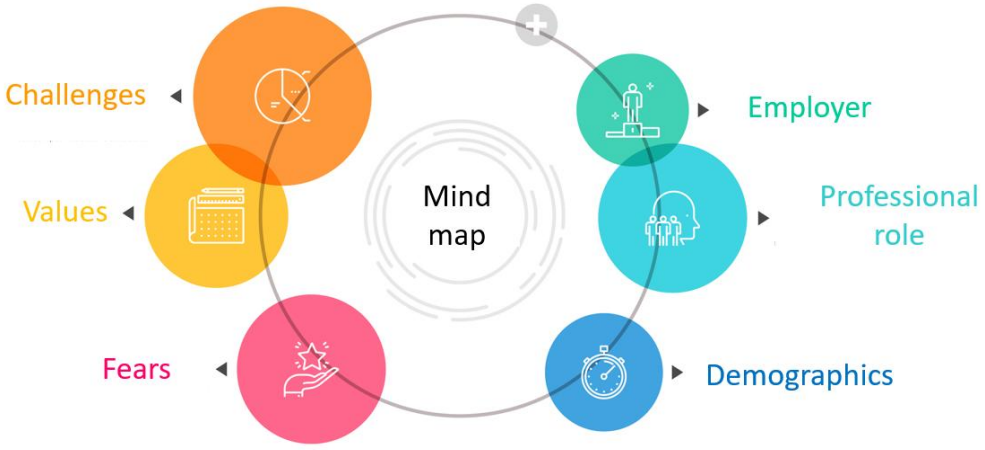

Figure 11. Mind map.

Duration

2 hours.

Feedback gallery table

Objectives

The activity makes it easy to record real time comments for presentations and prototyping. Designers can use a feedback gallery board to either give feedback on progress within the design team or record user feedback. The table itself sorts thoughts and ideas into four categories for easy evaluation.

Use

Activity is part of the process of testing ideas.

Implementation

Designers divide a blank page or whiteboard into quadrants. They draw a plus sign in the upper left quadrant, a delta symbol in the upper right quadrant, a question mark in the lower left quadrant, and a lamp in the lower right quadrant. They fill out the table as they give or receive feedback. They place the features someone likes or finds notable at the top left (plus sign). They place constructive criticism at the top right (delta symbol). They place the questions posed at the bottom left (question mark). And finally, they put the new ideas right (lamp). They seek clues to each quadrant during commentary and feedback, especially the top two. The plus quartile records ideas you like, while the delta quadrant lists potential desires.

Duration

Parallel with other activities, without a specific duration.

Ideation

Basic ideation exercises

Objectives

The introduction of ideas towards synthesising a possible solution to the problem.

Use

The activity can be used to introduce ideas in a collaborative way by team members.

Implementation

Team members are encouraged to follow the steps below, which could contribute to the collaborative generation of ideas. Team members are asked to record:

- 5 possible solutions without receiving further instructions or clarifications.
- 1 solution, which requires a budget of 1m Euro.
- 1 solution, which requires a budget of 1 Euro.
- Solutions that start with each letter of the alphabet. This activity is word-based and can activate different parts of the brain, possibly leading to the introduction of additional solutions.
- 1 solution whose implementation requires magic. The word magic refers to technology.

Duration

3 hours.

Affinity diagrams

Objectives

By placing key concepts and observations in a single diagram, relationships and connections between different aspects of the problem can be identified, revealing opportunities and potential intervention points to achieve innovation.

Use

The activity is used at the stage of ideation.

Implementation

Participants create a list of basic concepts related to the problem and the proposed solutions they design. The items on the list can be more general concepts, ideas, and topics revealed during the research, specific functional or other characteristics of their ideas, and characteristics of user categories.

They then arrange all the ideas in a typical diagram, grouping common and similar concepts in terms of similarity, interdependence, proximity, or whatever seems logical to them.

Duration

20 min

6-3-5

Objectives

The introduction of ideas towards synthesising a possible solution to the problem.

Use

The activity can be used to introduce ideas in a collaborative way by team members.

Implementation

The activity is implemented most effectively by groups of 6 people. Each member of the group receives a piece of paper and a pencil. Team members sit at a round table. Over 5 minutes, each member is asked to write down 3 ideas on paper. After 5 minutes, each member gives the paper to the person sitting on his right. Each team member writes in 5 minutes 3 new ideas or comments related to the ideas on the paper received. The activity can generate 180 ideas in 30 minutes (adapted from Lewrick et al., 2020).

Duration

30 minutes.

Powers of 10

Objectives

The activity introduces a framing technique used for composition or ideation. It allows the design team to examine each challenge through frameworks of various sizes and scales.

Use

The activity can be used in the early stages of synthesis and ideation of the design process.

Implementation

Participants are invited to consider increasing and decreasing the scale and sizes of the context they are examining to reveal connections and ideas. The activity can be used in different ways, as described below:

- **Powers of ten to investigate findings**. Participants are encouraged to imagine that they are planning a checkout experience at checkout. They've already noticed that users read customer reviews before purchasing and that users value their peers' opinions when shopping. Participants are asked to imagine the user shopping for items in a different cost range, from chewing gum to a bed or house. Does this change user behaviour? Participants are asked to analyse the details of their findings. They are also asked to note where these findings break down or make no sense.
- **Powers of ten for ideation**. Participants add constraints that change the size of the solution space. What if it had to cost more than a million euros to implement? Or less than 25 minutes? What if it was bigger than this room? Or is it smaller than a wallet?

Duration

30 minutes.

How could we...

Objectives

The activity focuses on short questions that initiate ideation. They are broad enough to include many solutions but narrow enough to set valuable boundaries. Between the very narrow "How could we create an ice cream cone that doesn't drip" and the very vague "How could we redesign dessert?", there is the more correctly defined "How could we redesign ice cream to be more portable".

Use

The activity is used to define the problem, leading towards ideation.

Implementation

Participants start by using the design challenge and the point of view statement. They then break down the broader challenge into smaller segments and ask questions that open up the solution space.

An example of the implementation of the activity follows.

Challenge. Redesign the airport lounge.

Point of view. A frenzied mother of three runs to the gate of her flight to learn that her flight is delayed. She has to entertain her playful children not to irritate her already irritated fellow passengers.

Apply questions about how we could ...

- Pressure alleviation: How could we separate children from passengers?
- Exploring the opposite: How could we make waiting for the most exciting part of travel?
- Questioning a hypothesis: How could we eliminate waiting time?
- Creating an analogy from a need to a specific context: How could we make the airport look like a spa? Or with a playground?
- Changing a status quo: How could we make playful, loud kids less annoying?

Duration

20 minutes.

Brainstorming

Objectives

Brainstorming generates a lot of ideas at once. It is a special time when the creative part of the designer's brain is strengthened while the evaluative part remains relatively inactive. The intention is to encourage the collective thinking of the design team.

Use

The activity is used throughout the design process to design empathy work, evaluate products and services, and find design solutions.

Implementation

The design team's goal in brainstorming is to generate as many ideas as possible without judging or evaluating them. Participants gather before a whiteboard and spend 15 to 30 minutes brainstorming with high concentration.

They write down every idea, regardless of the feelings or thoughts it generates. The design team can assign a person to record the heard ideas. Alternatively, each member can share their ideas and put them on the board. Either way, participants are asked to use notes and stick them quickly. They can use questions like "How could ..." to start brainstorming.

Duration

15 to 30 minutes.

Coordinate a brainstorming session

Objectives

Good coordination is the key to creative brainstorming. Brainstorming generates many broad and sometimes irrelevant ideas. A good facilitator creates the conditions for open, active, and constructive participation.

Use

The activity can be seen as preparation for a brainstorming session with many participants.

Implementation

Tips and good practices for effective brainstorming coordination follow.

- **Energy**. The moderator must keep ideas flowing. He makes sure to write a compelling question to start brainstorming. If the group slows down or has no other ideas, they attempt to introduce a variation of the question to restart the brainstorming process. It is recommended that the moderator prepare some question options in advance.
- **Restrictions**. The moderator adds solution constraints to spark new ideas. "What if it had to be round?" or "How would Superman do it?" Or it introduces procedural restrictions, such as participants having to enter 50 ideas in 20 minutes.
- **Space**. The space where brainstorming takes place is essential to the process. A room with a very vertical workspace (walls/surfaces) is recommended. It is suitable for all participants to stand up and have supplies such as Post-its and a marker in their hands.

Duration

20 minutes.

"Yes, and!" brainstorming

Objectives

Brainstorming can often seem absurd and knee-jerk. It can also leave less extroverted people feeling like they're not involved in the process. The "Yes, and!" brainstorming provides some structure for guiding brainstorming and creating a suitable space for each team member to contribute and leverage each other's ideas.

Use

This is a specific category of "brainstorming" activity, usually used at the ideation stage.

Implementation

The facilitator writes on a whiteboard a radical and innovative game-changing idea, such as "It would change the data to ..." Then, the facilitator gives team members two minutes to write a memo outlining a new approach to achieving data change. The facilitator asks participants to briefly share their innovative ideas and place them on the board.

He then guides the team through a series of "Yes, and!" brainstorms for each idea. It asks team members to expand on ideas by saying "yes, and [...]" when they start. It ensures that each team member can contribute to each idea before moving on to the next.

If any ideas developed spark other ideas, they can also be recorded. The moderator repeats the process until everyone's idea has been passed and built by everyone else at least once.

Duration

15 minutes.

I like it. I would like it. What if ...

Objectives

Designers must rely on personal communication, feedback, and constructive feedback during the design process. Other designers give input on the design frameworks and process, while users comment on possible solutions. The "I like it, I would like, what if..." It is a simple tool to encourage constructive commentary.

Use

The activity can be used at any stage of the design process.

Implementation

The activity is almost too simplistic, but it is beneficial and should be mentioned. Group members meet and coordinate by expressing "likes", "I would like", or "what if" in short phrases.

For example, "I like how we divided our group into pairs." "I would have liked to have discussed our plan before testing." "What if we tested another prototype?"

Team members share dozens of such thoughts and write them down in a meeting. They don't have to respond to every comment. The moderator lets the group decide what topics to discuss as they arise.

Duration

20 minutes.

Analogous inspiration

Objectives

The method is used as a springboard for inspiration solutions, such as products, services, and others, from industries different from the one the team is studying. Participants are then asked first to identify key ideas, values, and characteristics that embody the products and services selected as motivation for inspiration and then convey these values and attributes to inspire solutions related to the challenge the group is studying.

Use

The activity is used after an initial brainstorming process to produce new ones.

Implementation

Designers follow these steps:

- Based on the previous definition of the problem, they record the most basic feelings, values, and needs on which they want their solution to focus.
- They list 5 - 10 products and services that provide solutions to the feelings, values, and needs they recorded.
- For each of the products or services recorded in the previous step, they record the basic ideas and individual elements that characterise the solution. For example, if in the last step, they listed IKEA as an® example for inspiration, here they can record key features of the IKEA® customer experience such as customer assembly, instructions and tools for assembly, product combinations, extra services at extra charge, flat packaging to reduce space, and more.
- They use the characteristics they recorded to produce solutions related to the challenge under study.

Duration

1 hour.

Evaluation of ideas

Select one of the brainstorming ideas

Objectives

Brainstorming has to generate many broad ideas. That's the easy part. The challenging part is choosing the ideas to exploit. In some cases, selecting ideas from the brainstorming can be simple (participants pick a few ideas that stand out), but choosing design solutions may require more thought.

It is recommended that design teams explore more than one idea and do not settle for safe and obvious choices. Instead, they are advised to select a range of ideas to proceed with prototyping to maintain the range of solutions the team produces.

Use

The activity is carried out immediately after a brainstorming session. It is the last part of the ideation process, moving towards prototyping.

Implementation

Design teams shouldn't narrow down their ideas too quickly. An unlikely idea can trigger a valid or meaningful finding. It is helpful to hold ideas that excite, entertain, or intrigue. They can choose from the following selection techniques.

- **Vote by vote**. Ideas are on a board in notes. Each member of the group has three votes. Votes are marked with a marker mark or sticker on each note. The ideas with the most votes are selected.
- **Four categories**. The design team members choose one or two ideas from each category: the rational choice, the most likely to excite, the favourite, and the unlikely.
- **Bingo.** Team members consider one or two ideas that inspire the creation of a physical prototype, digital prototype, or experience prototype.

If an idea seems so distant that testing it seems pointless, participants are asked to ask themselves what attracted them to it and then test that aspect or incorporate it into a new solution.

Duration

15 minutes.

Evaluate ideas through categorisation

Objectives

The evaluation of ideas to select one for prototype implementation.

Use

The activity can be used after the ideation process to evaluate the group members' proposed ideas and to select one or a combination of ideas for prototype implementation.

Implementation

Group members are encouraged to categorise the ideas they produced through ideation into 3 groups. The categorisation can be represented graphically using the graph shown in the following image. Members are asked to categorise the ideas in the respective boxes.

Categories of ideas:

- "Simple" ideas that are easy to implement (blue square).
- Innovative but achievable ideas that promote innovation (green square).
- Ideas not yet feasible due to the non-maturity of the required technology. In other words, ideas for future implementation (yellow square.

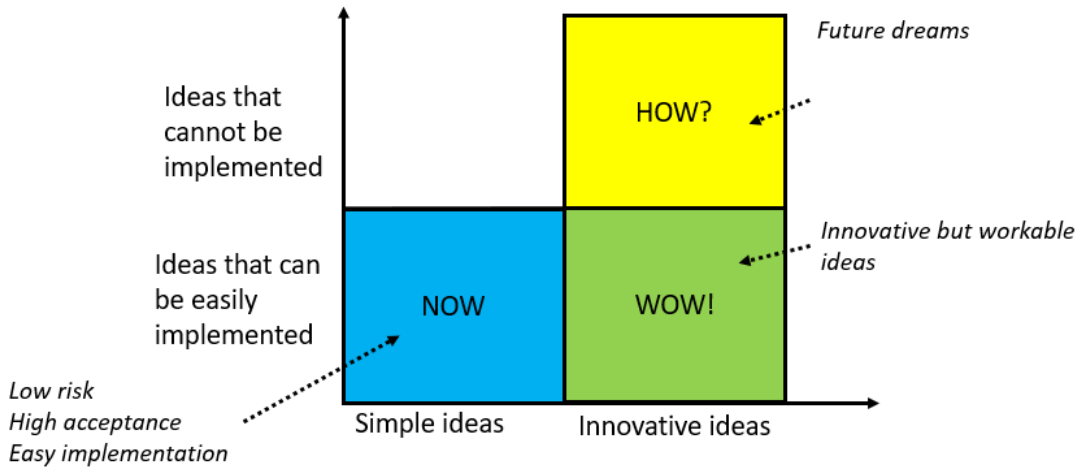

Figure 12. Categorise ideas into "simple", innovative but feasible, and immature (adapted from Gamestorming, 2023).

Group members are encouraged to select one or more combined innovative but achievable ideas, i.e. ideas categorised in the green square, to be standardised.

Alternative implementation

Groups can choose different criteria to place on the chart's axes. However, the criteria are recommended to be linked to user requirements. Examples of criteria are user enthusiasm, solution performance, added value, feasibility of implementation, and more. Whatever criteria the groups choose, price fluctuations in the form of more or less, high-low, or others should be placed on the axes.

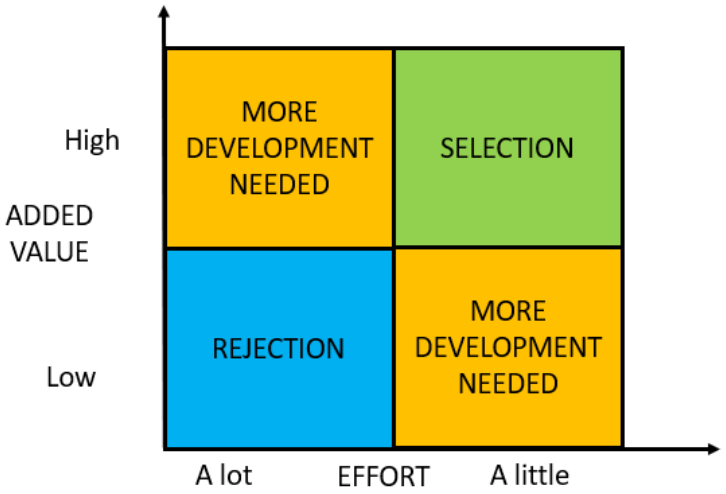

Figure 13. Example of alternative categorisation of ideas with criteria related to user requirements (adapted from Lewrick et al., 2020).

Duration

2 hours.

Design guidelines

Objectives

Design guidelines, or design guidelines, are written statements that formulate a strategy for how participants can solve their design challenge, regardless of any particular solution. The activity contributes to translating the design team's conclusions about users' needs and knowledge into workable design guidelines.

Use

The activity is used in the stages of defining the design process problem.

Implementation

Participants can translate their knowledge and observations into design guidelines by formulating their findings in terms of solutions rather than user observations. For example, "a user's need to feel that they are contributing to the creation of a gift" becomes "the user must be involved in creating a gift."

They can also work in reverse from a potential solution to create design guidelines. They are advised to ask themselves which aspects of the solution resonate with users and turn them into guidelines or guidelines.

Design guidelines must be solution-independent. That is, they must be helpful regardless of the design solution chosen. Participants may know they are designing a gift product but are unsure if it is physical, digital, or experiential. The above design guideline, i.e. "the user giving the gift must be involved in the creation of the final gift", is still helpful, even if the design team does not yet know the final design solution.

Duration

15 minutes.

Overview of the design team's portfolio

Objectives

The design team's portfolio comprises incremental (simple) and radical innovations. Analysing each idea's category helps the team understand where to focus its energy and attention.

Use

The activity is used at any stage of the design process.

Implementation

Participants create a simple 2x2 whiteboard. They plot the "depth of finding" on the x-axis, from superficial to profound. Shallow findings are things the team knew before starting the project. The profound findings reveal entirely new aspects of the problem.

They draw the "radicality of the idea" on the y-axis, from the gradual to the revolutionary or radical idea. Incremental concepts are simple improvements to existing products, services, or ideas the organisation has tested. Revolutionary ideas are those that have never been tried or existed.

Using a profound finding to achieve deep innovation is easier than a shallow one. When the team looks at its portfolio, it should ask itself, "What ideas address problems we had not thought of before?" These ideas can be used in the Yes and! activity.

Duration

20 minutes.

Prototyping

Solution poster

Objectives

The solution description is on a poster, through which the audience can visually represent the key features.

Use

The activity can be used to present the proposed solution that introduces a group in a way that allows users to interact with it and generate feedback.

Implementation

Group members are encouraged to describe their solution using a poster that shows:

- The name and logo of the design team.
- The problem to be solved.
- The objectives of solutions.
- The application of technology, if relevant.
- The target groups.
- The solution, description with images and text.
- How to access the market, if relevant.

Duration

1 day.

The user's journey

Objectives

The description of the user's experience from his exposure to the proposed solution through a description of his trip, i.e. the description of his experience during its use.

Use

The activity can be used to present the proposed solution. It can be applied to describe any solution but is particularly useful in cases where physical prototyping is not feasible, such as telling the user's experience of digital services or intangible products.

Implementation

Team members are encouraged to describe their solution using the user journey described above in the User Persona exercise.

Similarly, team members can use a storyboard to describe the user experience of the proposed solution virtually.

Usage scenarios

Objectives

Through the design and representation of use scenarios of the planned products and services, fundamental features of an idea can be communicated and tested in the context of a realistic and expected use.

Use

The tool is used in the stages of ideation and initial prototyping.

Implementation

Participants are encouraged to design a scenario showing a use case for the planned object or service. The script must include all the necessary characters and describe both the use of the object or service and the broader context of use.

The scenario can be described through text or presentation. It can also be defined using rough time frames (like comics) that describe the steps of the script.

Duration

30 min

Prototyping for empathy

Objectives

Generate empathy through prototyping and observing users' interaction with them.

Use

The activity is used at the prototyping stage while offering information on the first step of empathy.

Implementation

Participants think about the people interacting with that object or experience when creating a prototype. They develop the prototype or design the experience specifically to gain empathy. They don't necessarily have to look for solutions when testing prototypes with users. In the same way that a prototype aimed at a solution reveals new information about the idea being tested, a prototype that seeks empathy helps gain an understanding of people and their space.

Prototyping for empathy helps designers delve deeper into user needs or explore an image they're developing. They can create empathy prototypes to test with users or the design team. Examples of empathy prototypes that designers can create are below.

- **Sketch**. They ask users to draw something and then talk about it. "Plan how you get to work."
- **Game**. They create a game to explore specific topics. They use a simple card game to force users to make choices related to their design challenge.
- **Simulation**. Users design an aspect of the user experience to better understand it themselves. For example, if users are gardening while carrying a baby, they might try carrying ten pounds while doing garden chores.

Duration

30 minutes.

Scenes, sets, roles

Objectives

The activity prepares the design team to test its prototype in the field with real users. It is based on improvisation and contributes to understanding where and how the prototype will be tested and the roles of each design team member involved in research in the field.

Use

The activity is part of the prototyping process.

Implementation

A team is formed that will test an idea in the field. This group calculates the following.

- Where should the user ideally get in touch with the idea of the group? This is the "scene" in which the design team can test the new idea or, at least, represent it in their own space.
- What sets, prototypes, and objects will the design team need to build? These are the minimum physical objects necessary for the user to imagine experiencing the idea through simulation.
- What roles should team members take? Who will be the host of users? Who will actively participate in testing the prototype by interacting directly with the user or performing some operation in the background? Who will observe and take notes?

Duration

1 hour.

Test with users

Objectives

User testing is a fundamental part of human-centric design. It helps improve a solution and provides a better understanding of its intended audience.

Use

The activity is part of the prototyping process and serves as the stage for testing ideas.

Implementation

Designers should consider what they can learn about the proposed solution and the user when testing prototypes. This activity helps create empathy.

Good practices for planners regarding the implementation of the activity are as follows:

- **They let the user test the prototype**. They show but do not guide. They put their prototype in the user's hands or set the user in the original, giving him only the essential context to understand what to do.
- They encourage the user to talk about their experience during use. They use prompts, such as "Tell me what you think as you do this."
- **They actively observe**. It is recommended that the user not be corrected immediately. Instead, they monitor how they use the original, whether they use it incorrectly or whether they misuse it.
- **They ask follow-up questions**. These questions are often the most valuable part of the activity. "Show me why this would work (wouldn't work) for you." "Can you tell me how that made you feel?" "Why?" They answer users' questions with questions. "So, what do you think this button does?"

Duration

20 minutes per user.

Specify a variable

Objectives

The activity encourages the creation of prototypes to evaluate a specific solution variable. Identifying a variable saves time and money since the design team does not need to create all aspects of a complex solution, but it also allows testing multiple prototypes, each of which differs in one property. This encourages the user to make more specific comparisons between the originals and choose one option over another.

Use

The activity is part of the prototyping process and at the testing stage of ideas.

Implementation

Based on users' needs and knowledge, designers identify a variable of their idea to refine and test it. Then, they build low-resolution prototypes for a few different versions. A prototype doesn't have to be or even look like the solution. For example, it can help the design team evaluate how heavy a device should be. The team creates prototypes of varying weights without making them functional to achieve this. Another example concerns assessing the method of receiving a product from users, for instance, from the shop or through distribution. To evaluate possible solutions, the team designs boxes and packaging for each service without filling them. The team can solve this aspect of their idea by choosing a variable to test and stepping towards a good design solution.

Duration

1 hour prototyping, 10 minutes per user.

Wizard of Oz

Objectives

A "Wizard of Oz" prototype imitates the functionality the design team wants to test with users. It saves time and money for its actual creation. These prototypes are often used to prototype digital systems, in which the user thinks that the response and interaction occur from the prototype itself or a computer when, in fact, it is operated by a human.

Use

The activity is part of the prototyping process and at the testing stage of ideas.

Implementation

Designers determine what they want to try. They then choose how to mimic that functionality and give users an authentic experience. They can combine tools such as tablets, email systems, or presentations with human intervention to create the illusion of functionality. For example, to test a person's interaction with a questionnaire, instead of programming the questionnaire functionality, an instant messaging system and team members in the background can be used to direct questions and answers. The "Wizard of Oz" prototypes can be extended beyond the digital sphere to physical prototypes. The design team can create a vending machine prototype without building the necessary mechanisms by using a person hidden inside to deliver purchases.

Duration

1 hour.

Download and edit videos

Objectives

Video is a powerful medium for communicating ideas or knowledge and telling stories. The plan is the means of communication. If something isn't in the plan, it doesn't exist.

Storytelling is achieved through video editing, which brings the story to life. Meticulousness in editing is crucial to achieving the best and clearest narrative.

Use

Video and its editing are tools that can be used at any stage of the design process.

Implementation

Basic guidelines for capturing videos for use in design:

- Designers make their intent clear. What do they want their audience to get?
- They always have a clear plan for the subject or the protagonist.
- They consider light sources and shadows.
- They take more shots than they think they need. Editing is where storytelling begins. Longer shots allow some room for editing transitions as well as corrections.
- They hold the microphone close to the subject and the protagonist.
- They turn the microphone away from unwanted noises.

Instructions for quickly editing a video:

- Designers make sure the audience understands their visual narrative. The video should be clear.
- They make an initial draft montage of the whole video. They define the beginning, middle, and end.
- They remain focused on telling their story faithfully, even if it means removing shots they like.
- Sound is just as important as image. Designers ensure that music complements the visual elements and does not distract.
- They know where the video will be hosted. If it is to be played by a computer, minimal compression to ensure quality is recommended. They should also follow the guidelines for social media or video hosting sites.

Duration

1 hour for preparation and downloads. Several hours for editing.

Create a physical prototype

Objectives

Creating a physical prototype aims to generate user feedback through a makeshift physical construction that can be built quickly and economically, simulating the essential characteristics of the proposed solution.

Use

Physical prototyping can be used in the early stages of problem investigation to better understand needs and generate user feedback when evaluating potential solutions.

Implementation

Participants are invited to create a rough and fast economic prototype of the final solution using simple materials such as paper, cardboard, elastics, fasteners, rope, chopsticks, and more. The original is not the final product. After being used for evaluation, it will be discarded. The final product will be manufactured in detail at a later stage. The prototype's expendable nature means that participants will not have to invest significant effort in its implementation.

Prototyping can have several goals, such as:

- The evaluation of specific characteristics of a possible solution.
- The evaluation of a combination of features of a possible solution.
- Evaluation and investigation of extreme solutions.
- Evaluation of the vision of the solution.
- Evaluation of the final product through the implementation of a prototype that quite faithfully simulates the characteristics of a final product implementation.

Duration

A couple of hours.

Creation of an intangible prototype

Objectives

Creating an intangible prototype aims to generate user feedback for an intangible solution, such as a digital service, or an intangible experience, such as a cultural experience in a place.

Use

Intangible prototyping can be used in the early stages of problem investigation to better understand needs and evaluate possible solutions to generate user feedback.

Implementation

When the proposed solution is intangible, it is not feasible to create a physical prototype. In this case, participants can create an intangible prototype. Intangible prototypes can take different forms. Some of them are:

- A storyboard describes, with images, the user's experience of exposure to the proposed solution, similar to that used in the film industry in the pre-production phase.
- The user's journey describes the experience of being exposed to the proposed solution.
- A usage scenario also describes the user's experience of exposure to the proposed solution.

Duration

A couple of hours.

Digital prototyping

Objectives

The description of the solution in a poster, through which the audience can visually represent its fundamental characteristics.

Use

The activity can be used to present the proposed solution that introduces a group in a way that allows users to interact with it and generate feedback.

Implementation

Participants are invited to implement a digital prototype of the proposed solution following software design procedures. The outcome of this process will not be the final digital implementation of the proposed solution. Instead, it will be a quick implementation product that includes the minimum desired functionality in a way that allows users to interact with it. If the solution's evaluation is positive, it will be re-implemented in stable software with a friendly user interface and graphics.

Alternatively, the digital solution can be presented through modelling tools of its user interface, such as Figma®.

Digital prototyping requires that the design team have the necessary programming skills.

Duration

2 weeks.

Create a digital story

Objectives

The solution is described with a digital story, through which the audience can have a visual representation of its basic characteristics.

Use

Digital stories allow ideas to be presented in an understandable and dramatic way. They can be used not only for entertainment but also in professional contexts to share messages.

This method is suitable for intangible solutions for which it is not possible to create a physical prototype.

The activity can be used to present the proposed solution that introduces a group in a way that allows users to interact with it and generate feedback.

Implementation

Participants are asked to develop a digital story that describes the desired user experience of implementing a proposed solution. Relevant digital environments and tools, such as Adobe Slate®, can be used to develop digital history.

Duration

1 day.

Part B: Design thinking challenges

This module presents design challenges related to entrepreneurship or social entrepreneurship. The challenges are inspired by real life and the needs of industry and society. They are designed as integrated design activities aimed at students or design groups and aim to develop design thinking skills.

The challenges have been structured using the structural, individual exercises presented in the previous section. They can be used exactly as they are presented or adapted to the needs of participants in innovation processes.

Sustainability and regenerative design

Why is the activity interesting?

The green transition through environmentally friendly activities concerns all sectors of today's economy and everyday life, from building design to fashion. Sustainability is about the future, meaning that the current generation carries out all activities for its well-being in a way that does not consume resources that ensure the well-being of future generations. Sustainability is a concept with great resonance today due to the challenges of climate change that affect safety and quality of life. The United Nations recognises 17 sustainability goals (UN Sustainability Goals, 2023), such as combating poverty and hunger, health, quality education, clean water, gender equality, clean and cheap energy, labour and economic growth, industry and infrastructure, eliminating inequalities, sustainable cities, responsible production and consumption, climate action, life under the sea, life on land, peace and justice, and working together to achieve these goals.

Any product or service must be designed from a sustainability perspective to ensure the well-being of future generations. Traditional design is degenerative, systematically reducing ecosystem vitality by consuming resources. Society should strive for regenerative design that restores, reconciles, and reproduces the environment.

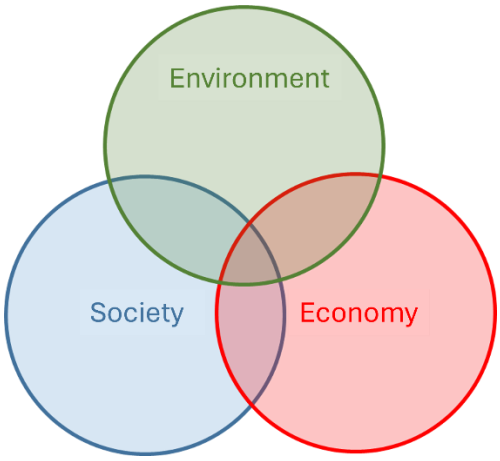

Figure 14. Sustainability considers environmental, social, and economic objectives.

Sustainability is a holistic process considering ecological, social, and economic factors to achieve long-term well-being. Sustainability solutions are at the intersection of environmental, social, and financial goals.

The global community cannot afford to ignore sustainability goals. For this reason, there is often talk of taking action to limit the rise in the Earth's temperature to no more than 1.5 degrees Celsius. Even this small rise in Earth's temperature is estimated

to lead to a 100% increase in extreme weather events, affect 6% of insects, 8% of plants, and 4% of vertebrates, lead to ice-free summers in the Arctic Circle at least once every 100 years, displace 46 million people due to rising sea levels. For every half degree of warming, there will be a significant reduction in food production in tropical regions and reduced economic growth (WWF, 2023). These consequences multiply rapidly, causing the Earth's temperature to rise by 2 degrees Celsius.

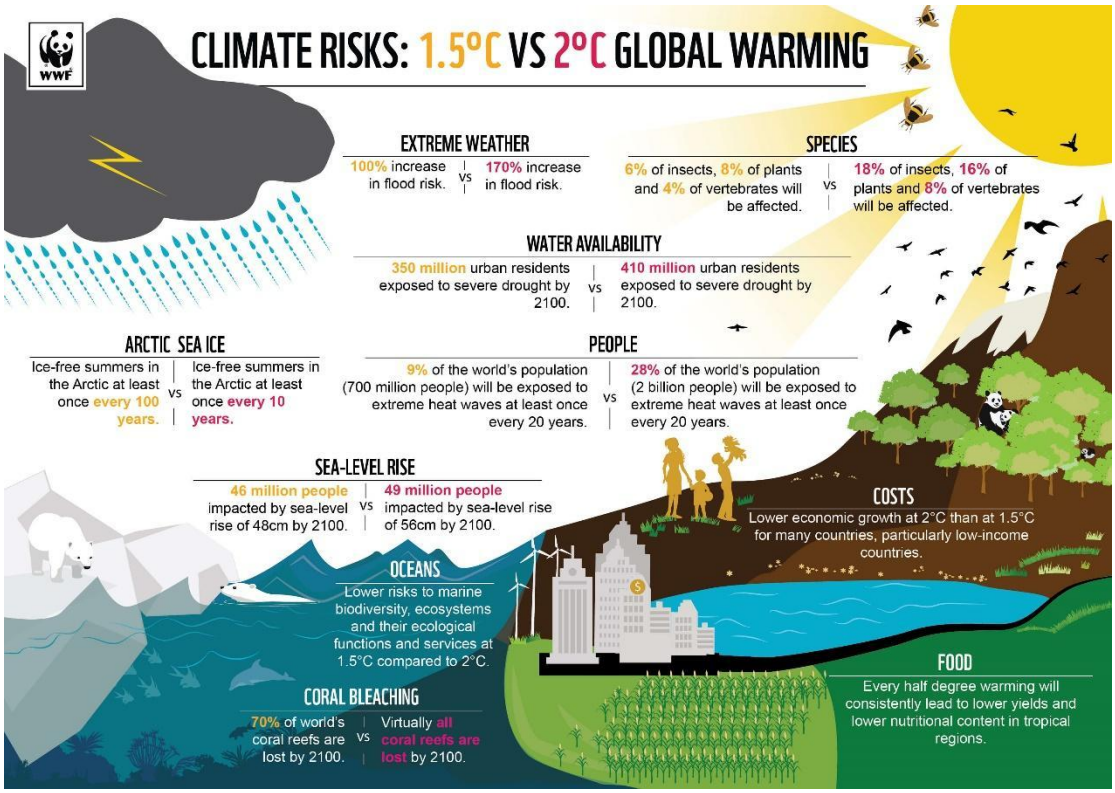

Figure 15. The consequences of the Earth's temperature rise of 1.5 and 2 degrees Celsius (source WWF, 2023).

Some of the biggest sustainability challenges in 2023 are poor management, food waste, biodiversity loss, plastic pollution, deforestation, air pollution, melting ice caps and rising sea levels, agriculture, and food and water availability insecurity.

This activity invites participants to design sustainability solutions for everyday life and economic activities. It is consciously open to allowing students and designers to analyse sustainability broadly. The goal is to redesign services, products, or experiences through sustainable practices.

Concepts covered by the activity and keywords

Sustainability, environment, development, natural resources management, climate crisis, regenerative design.

Who is the activity for?

The activity is addressed to everyone because sustainability is of broad interest. Students, designers, and the general public can use it.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding concepts of sustainability, environment, and natural resource management.
- Understanding the sustainability goals of the United Nations.
- Development of critical and analytical thinking.
- Exploring sustainability challenges in broad areas of everyday life and the economy.
- Collaborate in teams to brainstorm, evaluate, and synthesise ideas towards sustainable solutions that better serve the needs of citizens and companies.
- Presentation of solutions in writing and orally.

Structuring the activity by applying design thinking steps

Step 1: Encourage creativity

The step aims to encourage team members' confidence in their creative skills.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).

Step 2: Develop team spirit

This step aims to create team spirit and familiarize team members with each other.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Getting to know each other by applying the exercises My Name History (*page 27*), survival skills in the post-apocalyptic era (*page 28*), and professional skills (*page 29*).

Step 3: Problem research

The step aims to investigate, describe, and record sustainability challenges from different perspectives, leading to a better understanding of problems in other areas of everyday life and the economy.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Identification of correlations (*page 34*).
3. Expert eyes (*page 35*).

Step 4: Problem definition

This step aims to record a specific sustainability challenge and design relevant innovative solutions.

Suggested activities:

1. How can we ... (*page 45*).

Step 5: Analyse and record user needs

This step aims to identify the user groups that will benefit from the proposed sustainability solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 6: Ideation

The step aims to introduce as many ideas as possible towards designing a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Exercise 6-3-5 (*page 66*).

Step 7: Evaluate ideas

The step aims to evaluate ideas and choose the one that will be implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 8: Prototyping

The step aims to design a prototype that users can use to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Alternatively, a description of the proposed solution with a digital story (*page 93*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the teacher or facilitator after each step of the activity.
- Feedback from members of other groups after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.
- Evaluation by the instructor or coordinator of a design text, based on the results of each and all steps.
- Discussion on new knowledge with the aim of consolidation.
- Discussion on adapting the proposed solutions to different contexts to develop analytical thinking.

Innovative solutions for circular tourism

Why is the activity interesting?

Circular tourism is related to sustainability and resource management in the tourism industry. It aims to minimise waste, reduce resource consumption and promote the reuse, recycling and regeneration of materials and resources throughout the tourism value chain.

Circular tourism adopts principles similar to those of the circular economy model, a framework for sustainable economic development. The circular economy aims to create a closed-loop system where resources are used efficiently, waste is minimised, and materials are continuously recycled into production.

There are many examples of circular practices in tourism. One of them is waste reduction and material recycling. In addition, the promotion of energy efficiency through energy-saving practices, the use of renewable energy sources, and the application of energy-efficient technologies in tourist facilities. Saving water by encouraging responsible water use, implementing conservation measures, and water-efficient technologies in hotels, resorts, and other tourist facilities. Sustainable transport using low-carbon technologies and promoting public transport. Local products and services reduce the carbon footprint associated with transport and support local economies. The involvement of local communities in decision-making processes in a way that ensures that tourism benefits are distributed fairly.

Circular tourism is essential for many reasons. It protects the environment by promoting good practices that minimise negative impacts. It emphasises the conservation of natural resources, the protection of ecosystems, and the reduction of pollution and waste. By adopting sustainable practices, tourist destinations can preserve their natural beauty and biodiversity for future generations.

In addition, circular tourism benefits local economies by generating income and employment opportunities. It often emphasises community involvement, encouraging local businesses and residents to participate in and benefit from tourism activities. This can help diversify regional economies and reduce dependence on a single industry.

Circular tourism contributes to preserving a destination's cultural heritage by encouraging visitors to engage with local communities, traditions, and customs with respect, promoting cultural exchange and understanding. Circular tourism helps communities preserve their unique identity by valuing and supporting local cultural practices. At the same time, it contributes to social development, aiming to improve

the quality of life of local communities. It can lead to infrastructure development, improvements in healthcare, education opportunities, and improved social services. Circular tourism can empower and uplift communities by involving local communities in decision-making processes and ensuring their fair representation.

Finally, circular tourism contributes to long-term sustainability instead of short-term profits. Local communities can effectively plan and manage their resources by considering tourism activities' social, economic, and environmental impacts. This ensures that tourism can thrive without depleting resources or harming the environment or local communities.

Figure 16. Mytilinaios mansion in Pelion is an example of sustainable tourism.

Overall, circular tourism recognises the interconnectedness of environmental, economic and social factors and aims to strike a balance between them. By adopting sustainable practices, destinations can create a positive and lasting impact while providing enjoyable tourist experiences.

Concepts covered by the activity and keywords

Sustainability, environment, development, circular economy, circular tourism, resource reuse, resource-saving.

Who is the activity for?

The activity is aimed at tourism professionals, design teams interested in innovation, tourism policymakers, students, and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding sustainability concepts, circular economy, circular tourism, resource reuse, and resource-saving.
- Development of critical and analytical thinking.

- Exploring the area of circular economy and circular tourism and identifying opportunities to improve services and practices.
- Collaborate in teams to brainstorm, evaluate, and synthesise ideas towards sustainable solutions that better serve the needs of professionals, companies, and customers in circular tourism.
- Presentation of solutions in writing and orally.

Structuring the activity by applying design thinking steps

Step 1: Develop team spirit

The step aims to create team spirit among team members, define the rules of cooperation, familiarise team members with each other, and familiarise members of different teams.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).
2. Define group name and logo design (*page 20*).
3. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research

This step aims to investigate, describe, and record the problem broadly, allowing the identification of opportunities to improve services and practices.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Identification of correlations (*page 34*).

Step 3: Problem definition

The step aims to redefine the problem in a way that allows broad solutions to be introduced. The definition should consider the results of problem research, user needs analysis, and understanding of designers.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Analysis of user needs

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 5: Ideation

This step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Exercise 6-3-5 (*page 66*).

Step 6: Evaluate ideas

The step aims to evaluate ideas and choose the one that will be implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 7: Prototyping

The step aims to design a prototype that users can use to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user's journey *(page 82*).
2. Description of the problem with solution poster (*page 81*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of options.

- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Green IT

Why is the activity interesting?

Green computing technology refers to a range of practices, technologies, and products designed and used to reduce technology's impact on the environment and improve sustainability. Computers and related technologies often consume large amounts of energy and resources, so there is an increasing effort to reduce their negative impact on the environment. Green computing helps protect the environment and create sustainable technological solutions that can continue to be used at a lower cost to the environment and users.

Green computing technology is integrated into education to enhance student awareness of the importance of sustainability and responsible use of technology. Therefore, green computer technology promotes students' environmental protection and sustainability awareness. Participants learn about green technology use as they learn how to use energy-efficient computers, apply recycling techniques, and choose green technology products.

In addition, green computing technology links technology to sustainability, helping participants realise how technology can be used to achieve sustainability and encouraging the development of critical thinking as students analyse the advantages and disadvantages of green technology and think about its impact on society and the environment.

This activity can encourage international discussion of green technology and understanding of global challenges in this area. It can also help students understand how green technology affects communities worldwide.

The learning activity on green computing technology is interesting and educationally beneficial. It helps students understand the importance of environmental protection and how technology can contribute to this goal. Participants learn about the impact of technology on the environment and the practices they can follow to reduce this impact.

This activity also provides opportunities for learning new technological skills and applying them to environmental sustainability issues. It presents green technology as a sector with career potential and business development, preparing students for future employment opportunities. In addition, participants learn about the development of infrastructure for sustainable energy production and effective technology management.

Overall, learning about green computing technology is interesting and contributes to educating and raising awareness among young people about environmental sustainability issues and the importance of applying technology for the planet's good. Participants are trained to make responsible decisions about the use of technology and its impact on the environment and society.

Concepts covered by the activity and keywords

Sustainability, environment, green growth, technology, computer science, energy footprint.

Who is the activity for?

The activity is aimed at pupils, students, digital transformation policy makers, green growth policymakers, and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding concepts of sustainability, resource reuse, and resource-saving.
- Understanding the concept of green computing technology.
- Understanding the concept of green growth.
- Understanding the concept of digital transformation.
- Development of critical and analytical thinking.
- Collaborate in teams to brainstorm, evaluate, and synthesise ideas towards sustainable solutions for green computing technology and reduce the energy footprint of computer-based activities.
- Presentation of solutions in writing and orally.

Structuring the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create team spirit among team members, define the rules of cooperation, familiarise team members with each other, and familiarise members of different teams.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Description of team profiles and collaboration rules (*page 21*).
3. Warm-up, step 1: Story of my name (*page 27*)
4. Warm-up, step 2: Survival skills in a post-apocalyptic era (*page 28*).

5. Warm-up, step 3: Professional skills (*page 29*).

Step 2: Problem research

This step aims to investigate, describe, and record the problem broadly, allowing the identification of opportunities to improve services and practices.

Suggested activities:

1. Observation exercise (*page 39*).
2. User observation (shadowing) (*page 38*).
3. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
4. Identification of correlations (*page 34*).

Step 3: Problem definition

This step aims to redefine the problem in a way that allows broad solutions to be introduced. The definition should consider the results of problem research, user needs analysis, and understanding of designers.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Analyse and record user needs

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 5: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Exercise 6-3-5 (*page 66*).

Step 6: Evaluate ideas

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 7: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user's journey *(page 82*).
2. Alternatively, describe the problem with a solution poster (page 85).
3. Alternatively, describe the problem by creating a prototype (page 95).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. However, due to its digital theme, the eDea digital platform is recommended for communication, interactivity, sharing ideas, and collaborative design.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of options.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Discussion on digital computer technology, its positive effects, and possible solutions to reduce the energy footprint of related activities.
- Repetition of the activity's steps to improve the proposed solution and new presentation of results.

Green cities

Why is the activity interesting?

Green cities are urban areas that have adopted practices and policies aimed at reducing human footprint on the environment and promoting sustainability. They strive to combine urban development with the protection of the natural environment and the improvement of the quality of life of their inhabitants, save resources, and contribute to sustainable development.

Green cities promote the development of low-energy construction, use renewable energy sources, and apply technologies such as green roofs and insulation. They also promote public transport, sidewalks, and bike lanes while limiting car use to reduce road traffic and air pollution. Green cities maintain natural environments and green spaces in the city. At the same time, residents are informed and encouraged to participate in initiatives and programs aimed at sustainability.

Green cities promote the quality of life of their inhabitants, reduce pollution, create safe spaces for walking and recreation, and combine development with the protection of the natural environment. Such cities also provide examples and inspiration for other cities and communities wishing to follow similar sustainability models.

Green cities offer many advantages that help improve residents' quality of life and protect the environment. Firstly, limiting car use and promoting public transport help reduce air pollution and improve the quality of the air people breathe. Also, designing structures with low energy consumption and using renewable energy sources help reduce energy efficiency and energy bills.

Green cities provide fast, efficient, and sustainable transport options to reduce road traffic and air pollution. They maintain green spaces, parks, and natural areas that protect the environment and residents' health. They promote efficient water, energy, and waste management by saving resources.

Participants can benefit in many ways from designing green cities. Learn about environmental protection and sustainable development. This awareness informs them of preserving nature and reducing their ecological footprint. In addition, they learn how to make sustainable consumer choices and reduce waste and resource consumption.

Green cities offer action opportunities for participants who can participate in recycling programs, environmental initiatives, and green development campaigns. They also provide physical activity and recreation spaces, improving students' health and well-being.

Participants can learn more about green computing technology, sustainable resource management, and environmental protection through training programs and information materials. They also develop skills related to critical thinking, algorithmic thinking, and creativity as they explore solutions for environmental conservation. More generally, educating and involving students in green initiatives can open up opportunities for professional development in environmental science and green technology.

Overall, green cities offer participants rich learning and development opportunities, raise environmental awareness, and equip them with skills they can use in the future.

Concepts covered by the activity and keywords

Green cities, sustainable development, reduction of energy footprint, quality of life, computer technology.

Who is the activity for?

The activity is aimed at pupils, students, green policymakers, engineers, and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding of concepts related to sustainability and sustainable development.
- Understanding the characteristics of green cities.
- Understanding the positive impact of green cities on quality of life.
- Development of critical, analytical, and entrepreneurial thinking.
- Development of capacity for investigation, evaluation, and cooperation.
- Collaborate in teams to brainstorm, evaluate, and synthesise ideas for the design of green cities or individual services that contribute to green practices in a city.
- Presentation of solutions in writing and orally.

Structuring the activity by applying design thinking steps

Step 1: Encourage creativity

The step aims to encourage participants' creativity and confidence in their ability to design innovative solutions.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).

Step 2: Develop team spirit

The step aims to create team spirit among team members, define the rules of cooperation, familiarise team members with each other, and familiarise members of different teams.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Table of interests (*page 22*).
3. Water purification (*page 26*).

Step 3: Problem research

This step aims to investigate, describe, and record the problem broadly, allowing the identification of opportunities to improve services and practices.

Suggested activities:

1. Expert eyes (*page 35*).
2. Metaphors and similes (*page 36*).
3. User observation (shadowing) (*page 38*).
4. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
5. Identification of correlations (*page 34*).

Step 4: Problem definition

The step aims to redefine the problem in a way that allows broad solutions to be introduced. The definition should consider the results of problem research, user needs analysis, and designers' understanding.

Suggested activities:

1. How can we ... (*page 45*).

Step 5: Analyse and record user needs

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 6: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Exercise 6-3-5 (*page 66*).

Step 7: Evaluate ideas

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 8: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user's journey *(page 82*).
2. Description of the problem with solution poster (*page 81*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. The eDea digital platform can contribute to effective communication, interactivity, sharing of ideas, and collaborative design, especially when participants are not in the same room during their collaboration or continue collaborating after physical meetings. The steps of the activity can be created within the platform, offering participants a digital common collaboration space and encouraging active participation in innovation activities.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of options. The audience is open to stakeholders outside the implementation team, such as engineers, urban planners, environmentalists, and others.
- Feedback from the teacher or facilitator, members of other groups, and the audience on the proposed solution.

- Discussion on green cities, their positive impact on quality of life, and trends of possible solutions using technology.
- Discussion on sustainability and sustainable development, its positive impact on quality of life, and trends of possible solutions using technology.
- Repetition of the activity's steps to improve the proposed solution and new presentation of results.

Active senior citizens

Why is the activity interesting?

Active senior citizens are people in the third phase of their lives, spanning about 60 years and beyond. Despite their age, these citizens remain active, inspired, and actively involved in society. There are many ways in which active senior citizens contribute to their community and society in general.

Many choose to continue their work, either full-time or part-time, offering their expertise in various fields. Also, many join volunteering programs to contribute to the community as volunteers in community programs and organisations. They assist in needs identification programs, educational programs, and initiatives to improve their community.

In addition, many seniors maintain their love of learning and are excited to share their knowledge with younger generations. They may participate in teaching programs, become mentors, or organise lectures and workshops. They also take advantage of the opportunity to learn new things, participate in educational programs, and take classes in music, art, or other interests.

Often, with retirement, older people have more free time. This allows them to engage in activities they love, such as travel, art, sports, hobbies, and social life. Active senior citizens can participate in social groups, clubs, choirs, and other activities that allow them to socialise, make new friendships, and enjoy their free time. Senior citizens can maintain a rich social life by participating in clubs, clubs, and social events. Active living and participating in physical activities help maintain health and fitness.

Senior citizens can contribute to the local economy through consumption, work, and entrepreneurship. They can also participate in public debates, write articles, contribute to policy formulation, and express their views on issues of interest to them.

Many older people offer help and support to their family members, especially in matters relating to the care of their grandchildren. They help and support children, grandchildren, and other family members.

Overall, active senior citizens remain essential pillars of society and contribute to maintaining their community and promoting social solidarity. Old age can be a time of opportunity, exploration, and participation in life and community.

Concepts covered by the activity and keywords

Senior citizens, active citizenship, civic engagement, quality of life, intergenerational learning.

Who is the activity for?

The activity is aimed at pupils, students, senior citizens, policymakers for social inclusion, adult teachers, and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding the challenges that discourage the active participation of older people in social life.
- Understanding the importance of active participation of elderly people in social life.
- Understanding the concept of intergenerational learning.
- Development of critical and analytical thinking.
- Development of empathy for the needs of the elderly.
- Collaboration in groups for brainstorming, evaluating, and synthesising ideas to develop solutions that promote the active participation of elderly people in social, business, and civic life.
- Presentation of solutions in writing and orally.

Structuring the activity by applying design thinking steps

Step 1: Encourage creativity

The step aims to encourage the participants' creativity and confidence in their ability to design innovative solutions.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).

Step 2: Develop team spirit

The step aims to create team spirit among team members, define the rules of cooperation, familiarise team members with each other, and familiarise members of different teams.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Table of interests (*page 22*).
3. Water transport (page 23).

Step 3: Problem research

This step aims to investigate, describe, and record the problem broadly, allowing the identification of opportunities to improve services and practices.

Suggested activities:

1. What does this person need? (*page 40).*
2. Immersion for insight (*page 37*).
3. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
4. Identification of correlations (*page 34*).

Step 4: Problem definition

The step aims to redefine the problem in a way that allows broad solutions to be introduced. The definition should consider the results of problem research, user needs analysis, and understanding of designers.

Suggested activities:

1. How can we ... (*page 45*).

Step 5: Analyse and record user needs

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. User observation (shadowing) (*page 38*).
2. Design and conduct colour interviews, promotion, and reflection *(page 49*).
3. Creation of persona (*page 60*).

Step 6: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Exercise 6-3-5 (*page 66*).

Step 7: Evaluate ideas

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 8: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user's journey *(page 82*).
2. Description of the problem with solution poster (*page 81*).
3. Alternatively, describe the problem by creating a prototype (page 95).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. The eDea digital platform can contribute to effective communication, interactivity, communication of ideas, and collaborative design. The steps of the activity can be created within the platform, encouraging participants to share their ideas in a standard digital workspace that is also a place to record the design process.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of options. The audience can also include people from the activity's target group, namely senior citizens.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Discussion on the needs of the elderly and the importance of their active participation in social and business life for their and community's benefit.
- Repetition of the activity's steps to improve the proposed solution and new presentation of results.

Redesigning the public library experience

Why is the activity interesting?

The activity concerns the production of innovative ideas to improve the experience and services offered by a library, primary school, school, university, or other service. It enables designers to redesign a service that appeals to different audiences, such as children, students, teachers, parents, and individuals who like reading.

The activity approaches the library as an organisation that provides services and value to its users. In this context, designers will become familiar with the concept of service as an experience that spans time and includes many points of contact and interaction with users or customers to provide them with value in specific needs or problems they face. This requires designers to demonstrate systemic and critical thinking to redesign the library experience. The result of the activity can vary significantly from designing digital products and user interaction points to creating a complete library experience that includes many different channels, designing interiors, educational programs and experiences, and more.

Libraries are evolving in response to changing information needs and technological developments. The activity challenges designers to think creatively about how a library can remain relevant and alive in the digital age. It requires innovative solutions from designers and provides the opportunity to practice and develop skills in ideation, creative thinking, and interaction with each other to design a truly innovative solution that meets users' needs and the imperatives of the 21st century.

In addition, the activity gives great flexibility to designers to be able to adapt the theme in the direction that seems most interesting to them. For example, some could address how to reach audiences that do not take advantage of the services of a library, while others could explore alternative uses and users that future libraries could support to expand their range of services and increase their target audience. Similarly, as part of flexibility, designers can choose whether to study the experience of a children's elementary library, a school library, a university library, or an adult municipal library.

Design thinking emphasises solving real problems and creating meaningful solutions. Libraries play a critical societal role by enhancing education, culture, and community involvement. Redesigning the library experience allows designers to impact a significant community organisation meaningfully. Library workers could also participate in the participating teams' final presentations to listen and evaluate their ideas. This increases the likelihood that some libraries will implement some ideas, giving designers the pleasure of seeing a piece of their work provide real value to their

local community, school, or university. This reinforces the sense that designers or students can actively contribute to positive change in their community. This real impact adds an extra incentive to the designers to complete the activity, often absent in the exercises and/or tasks done as part of the training.

Finally, the activity is appropriately designed so that designers have easy access to the public they will have to study. They can easily connect with library users and staff to understand the needs and challenges facing libraries as organisations in the 21st century. The activity encourages designers to adopt a user-centric approach to learn the importance of putting themselves in users' shoes by conducting primary research with and without library users.

Concepts covered by the activity and keywords

Community, organisation, service, culture, education, participation, service design.

Who is the activity for?

The activity is addressed to professionals and design teams interested in redesigning services and user experience (Customer Experience—CX), employees of public and local government bodies, employees of cultural institutions and businesses, such as museums, bookstores, publishing houses, and others, professionals involved in the field of social innovation, students, and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding the concept of service and distinguishing it from the product idea.
- Understanding of basic principles of service design.
- Understand the limitations that an organisation places in the context of resolving issues related to its services.
- Development of critical and analytical thinking.
- Development of collaboration skills within a working group to formulate a new value proposition for library services.
- Develop empathy by conducting primary research with users.
- Define design problems based on user research.
- Presentation of solutions in writing and orally and evaluation of solutions by external reviewers.

Structuring the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create a team spirit, define the rules of cooperation, and familiarise team members with each other.

Suggested activities:

1. Telling Our Stories (*page 31*).
2. Two truths and 1 lie (*page 30*).
3. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research

The forum aims to investigate various aspects of the issue, good practices from Greece and abroad, and the problems and needs of users and other stakeholders.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*). The teacher should start the investigation phase with this exercise so that the participants can practice and enhance their observation before conducting the field research, resulting in better results.
3. User observation (shadowing) (*page 38*).
4. Empathy interviews (*page 52*).

Step 3: Problem definition

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. How can we ... (*page 45*).
2. Point of view (POV) (*page 59*).
3. Creation of persona (*page 60*).

Step 4: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).

2. Exercise 6-3-5 (*page 66*).

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one that will be implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user's journey *(page 82*).
2. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
3. Test with users (*page 86*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the teacher or facilitator after each step of the activity.
- Feedback from members of other groups after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.

- Feedback from external reviewers relevant to the topic of the exercise, such as staff or the director of a library.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.
- Discussion in class about new knowledge with the aim of consolidation.

Reducing food waste in households

Why is the activity interesting?

In a world where the sustainable development of cities and countries is one of the most topical and vital issues globally, food waste is emerging as a critical problem with multiple impacts on the economy, social welfare, and the environment. How can we help final consumers reduce food waste in households?

According to data from the United Nations (United Nations Environmental Programme, Food Waste Index Report, 2021), almost one billion tons of food are wasted annually. A large volume of food is discarded at all supply chain stages, from production until raw materials reach the final consumer. This phenomenon creates two main problems. On the one hand, there is a significant waste of raw materials and food. At the same time, according to data from the Hellenic Statistical Service and the UN, one in nine people worldwide (795 million) is malnourished. In contrast, one in three people worldwide faces moderate or severe food insecurity. On the other hand, the overproduction of food creates a massive amount of garbage. The environment is irrationally polluted, and the garbage treatment exacerbates the greenhouse effect, increasing the energy footprint. Through this work, students and professionals can work on a contemporary challenge that has a tangible impact on the real world.

The issue of food waste is deeply systemic. As such, it involves a wide range of stakeholders, including consumers, food producers, retailers such as supermarkets, grocery stores, and others, social enterprises, and institutions such as municipalities, NGOs, and others. Design thinking thrives on complex problems, encouraging the breakdown of complex issues into more minor, more manageable challenges. Through this work, participants will analyse the multifaceted issue of food waste, identifying its root causes and consequences in citizens' daily lives. By deconstructing a complex social and environmental problem into more minor, manageable challenges, students and professionals will understand the power and value of design thinking in managing and solving complex, systemic issues.

Although it is a global and highly systemic issue, the problem of food waste directly affects every citizen and consumer in the context of his daily life. The issue concerns reducing food waste and managing raw materials and food that households reject for various reasons, such as not consumed or expired so that raw materials and food are not wasted unnecessarily. Another aspect of the issue is the issue of informing and educating consumers on the issue of raw material waste. It is, therefore, evident that students and professionals who will undertake this work in the context of learning the

methodology and principles of design thinking can direct the topic in the direction that seems most important to them or most interesting.

Students and professionals can respectfully choose and focus on a specific target audience. For example, some groups may design a solution for students and young people living independently. Other groups may focus on the daily life and needs of a family with children or the needs of elderly people. Therefore, the theme is appropriately structured to support many possible solutions, from designing a digital service and creating an educational platform or information campaign to developing solutions that could be integrated and provided by existing companies and organisations, such as supermarkets, catering businesses, social enterprises, and others. This strengthens and promotes creative thinking.

Design thinking emphasises the development of empathy with end users or consumers and a user-centric approach. As part of this exercise, participants should study and understand the needs, behaviours, and motivations of people who lead them to food waste and of people and social groups who experience the impact of food waste. The paper deals with an issue that concerns all of us and focuses on designing solutions for end consumers and households. Participants in the exercise will have no difficulty in conducting research with users to understand the causes and behaviours that contribute to the issue of food waste.

To sum up, this work is more than just an academic exercise. It is a call to action, a means to promote change in easy and simple ways everyone can adopt. It provides participants with the opportunity to delve into the heart of a real challenge that touches the lives of millions of people worldwide.

Concepts covered by the activity and keywords

Sustainable development, sustainability, environment, economy, nutrition, poverty, resource-saving, resource recycling, social economy, social entrepreneurship, social economy, education, information

Who is the activity for?

The activity is addressed to professionals and design teams interested in sustainable development issues, employees of food retail companies, such as supermarkets and grocery stores, professionals in the catering sector, employees of NGOs, employees of local authorities, professionals involved in social innovation, professionals engaged in marketing, students, and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding the concept of sustainable development.
- Development of critical and analytical thinking.
- Development of systems thinking.
- Development of skills to break down complex problems into individual smaller and more manageable challenges.
- Development of collaboration skills through working in teams.
- Develop empathy by conducting primary research with users.
- Familiarity with the principles of behavioural design based on understanding how people think and make decisions to design interventions that lead to behaviour change.
- Define design problems based on user research.
- Presentation of solutions in writing and orally.
- Interdisciplinary cooperation. The project provides an opportunity for students and professionals from various disciplines to work together to find solutions to the problem of food waste.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create a team spirit, define the rules of cooperation, and familiarise team members with each other.

Suggested activities:

1. Warm-up, step 2: Survival skills in a post-apocalyptic era (*page 28*).
2. Warm-up, step 3: Professional skills (*page 29*).

Step 2: Problem research and record user needs

The forum aims to investigate various aspects related to the issue, good practices from Greece and abroad, as well as problems and needs of users and other stakeholders, as already recorded in the bibliography

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Stakeholder map (*page 42*).
3. User observation (shadowing) (*page 38*).
4. Empathy interviews (*page 52*).
5. Sharing stories (page 59).

Step 3: Problem definition

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. How can we ... (*page 45*).
2. Creation of persona (*page 60*).
3. Metaphors and similes (*page 36*).

Step 4: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).
3. Analogous inspiration (page 76).

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the proposed solution with the user's journey *(page 82*).
3. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
4. Test with users (*page 86*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the teacher or facilitator after each step of the activity.
- Feedback from members of other groups after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Feedback from external reviewers relevant to the topic of the exercise, such as staff or the director of a library.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.
- Discussion in class about new knowledge with the aim of consolidation.

Strengthening and supporting the mental health and well-being of students and young people aged 18-25

Why is the activity interesting?

According to the World Health Organisation (2022), mental health is a state of well-being in which the individual becomes aware of their abilities, can cope with everyday life stress, can work productively and fruitfully, and can contribute to the community. Mental health includes our emotional, psychological and social well-being. It affects how we think, feel and act. It also helps us identify how we manage stress, build relationships with our social environment, and make healthy choices. Mental health is a fundamental human right and a prerequisite for personal, social and socio-economic development.

Moreover, according to a recent World Health Organisation study entitled "Mental health, social inclusion and young people aged 18-29 in the WHO European Region (2023)", in 2019, approximately 16.1% of adolescent boys and 18.6% of adolescent girls aged 10-19 in Europe experienced some mental health disorder. Since the start of the pandemic, the number of young people with mental health problems has at least doubled. 64% of all young people are at risk of depression and are 30% to 80% more likely to report symptoms of depression or anxiety. At the same time, suicide is the second leading cause of death for adolescents aged 15-19 in Western Europe.

Protecting and promoting mental health is essential to ensuring the authenticity and well-being of young people and building human and social capital. However, mental health is one of the most overlooked areas of health at both European and global levels. The WHO reports that European countries spend, on average, only 2% of their health budget to strengthen the mental health sector. The project allows students to become more informed about a critical issue that directly concerns them, reflect on its consequences, and design solutions that promote and enhance mental health and well-being for young people.

The target group of the project is directly accessible, so both students and professionals who will deal with this issue will be able to reach users and conduct research efficiently. To understand users' needs, participants in the work must analyse and answer various questions such as: what causes, behaviours, and motivations lead young people to seek help? What means or services do they use to seek help, such as a private mental health professional, friend, relative, family, helpline, community services or mental health centres, digital apps, online forums, and more? What prevents young people from seeking help, and why do they stop treatment? This topic is suitable for participants to experiment with or combine different types of research

to record users' needs and behaviours and to experiment with co-design methods with users, for example, by organising a creative co-design workshop with their fellow students.

Mental health services are evolving in response to information needs and technological developments. The project challenges students to think creatively about how technology can help and enhance the field of mental health. At the same time, it requires participants to think about the role that universities, institutions, professors, and fellow students can play. In addition, an essential aspect of the issue that is worth considering is the issue of prevention, i.e. how we can not only help young people who are already experiencing some mental problems but also prevent the occurrence. The project enables students to produce innovative solutions that universities can use. These solutions can move in many directions, either by integrating the technological element more firmly into the solution or by taking a more communal approach.

Concepts covered by the activity and keywords

Health, mental health, prevention, well-being, university, students, community or social services.

Who is the activity for?

The activity is aimed at professionals and design teams interested in health issues and in particular mental health, professionals in the broader health sector, for example, doctors, psychologists, nurses, social workers, and others, trainers and educators of sustainable development, companies and professionals developing software for the health sector, employees in food retail companies, for example, supermarkets, grocery stores, and others, professionals in the catering sector, employees of NGOs, employees of local authorities, professionals involved in the field of social innovation, professionals involved in product promotion (marketing), students, and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding the concept and importance of mental health for personal, social and socioeconomic development.
- Understanding the concept and mechanisms of prevention in the field of health.
- Development of critical and analytical thinking.
- Development of systems thinking.

- Development of skills to break down complex problems into individual smaller and more manageable challenges.
- Development of collaboration skills through working in teams.
- Develop empathy by conducting research with users.
- Familiarity with the principles of behavioural design based on understanding how people think and make decisions to design interventions that lead to behaviour change.
- Define design problems based on user research.
- Presentation of solutions in writing and orally.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create a team spirit, define the rules of cooperation, and familiarise team members with each other.

Suggested activities:

1. Description of team profiles and collaboration rules (*page 21*). Given the activity's focus on mental health, it would be interesting for team members to discuss what stresses them and what they need to feel emotionally secure and calm during work.
2. Warm-up, step 3: Professional skills (*page 29*).

Step 2: Problem research and record user needs

The forum aims to investigate various aspects related to the issue, good practices from Greece and abroad, as well as problems and needs of users and other stakeholders, as already recorded in the bibliography

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Stakeholder map (*page 42*).
3. Design and conduct colour interviews, promotion, and reflection *(page 49*).
4. Sharing stories (*page 59*).
5. Creation of persona (*page 60*).

Step 3: Problem definition

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).
3. How could we... (*page 70*).

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one that will be implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the proposed solution with the user's journey *(page 82*).
3. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
4. Test with users (*page 86*).
5. Wizard of Oz *(page 88*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps

anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the teacher or facilitator after each step of the activity.
- Feedback from members of other groups after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Feedback from external reviewers relevant to the topic of the exercise, such as staff or the director of a library.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.
- Discussion in class about new knowledge with the aim of consolidation.

Redesigning the retail experience

Why is the activity interesting?

The project concerns the production of innovative ideas to improve the shopping experience of consumer products. It concerns the retail sector (business-to-customer / B2C), which includes a wide range of businesses such as businesses that sell food, books, furniture, household items, technology items such as computers, mobiles, and others, clothing and footwear products but also businesses that trade cars, jewellery, and more.

The retail sector is a dynamically evolving industry that is called upon to respond to ever-changing consumer preferences, technological developments and global trends. According to a recent EY survey (2022), consumers' priorities in Greece, motivations and criteria that influence their behaviour and decisions have changed drastically in recent years. Specifically, 58% of consumers in Greece consider whether the product is healthy as the main criterion for choosing consumer products, 71% of consumers prefer businesses whose actions have a social impact, and 64% of consumers express interest in the environmental impact of businesses.

Around the world, Greek consumers, especially younger ones, are also looking for improved experiences and personalised services and products. The shift to e-commerce caused by the pandemic is strengthening, pushing businesses to omnichannel and distribution models, enabling consumers to enjoy the benefits of physical stores and online searches and purchases. With this in mind, companies should improve the level of service and upgrade the customer experience in physical stores and digital channels.

At the same time, to enhance the overall customer experience, many companies that market products develop and provide value-added services around these products. This trend is recorded worldwide under the term "servitisation of products". For example, companies selling furniture provide interior design and decoration services. Similarly, companies selling household appliances, such as washing machines, kitchens, refrigerators, technology items, and others, are developing a network of partners aiming to maintain these appliances and easy and quick repair in case of damage by providing after-sales services.

As part of the work, participants are first asked to choose a specific retail sector, such as clothing products or furniture, and then propose innovative solutions that will help companies operating in that sector become more competitive. Among others, participants can explore and propose solutions to the following individual issues:

- **Store experience**. Study and suggestions for improving the physical space of the store. These suggestions may concern the layout of the space, the organisation and presentation of products, and the information provided about the products. In this context, immersive technologies, such as virtual reality (VR) and augmented reality (AP), and digital media, such as smartphones, tablets, and others, can be studied in addition to interaction with space and products, can be examined.
- **Digital channels and the online store experience.** Study businesses' digital channels and make suggestions for improving their digital communication and the online shopping experience.
- **Sustainability and social responsibility**. Study how businesses can integrate sustainable practices or play a more active role in product-related social issues.
- **Value-added services that complement the purchase of the product**. They can be services provided in the store, during the purchase or services related to the after-sales phase and will be used by the consumer a second time, for example, product return, maintenance, repair, and more.

Concepts covered by the activity and keywords

Consumer products, store experience, interior design, online shopping, corporate social responsibility, sustainability, after-sales services, and omnichannel experience.

Who is the activity for?

The activity is aimed at professionals and design teams interested in issues related to retail products, entrepreneurs and retail store owners, marketing professionals, VR/AR technology professionals, students, and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding the concept of omnichannel experience.
- Familiarity with virtual and augmented reality (VR/AR) technologies.
- Understand how the configuration and organisation of the interior space affects the overall user experience.
- Familiarity with interior design principles.
- Understanding the concept of corporate social responsibility
- Development of critical and analytical thinking.
- Development of systems thinking.
- Development of skills for breaking down complex problems into individual ones. Smaller and more manageable challenges.
- Development of collaboration skills through working in teams.

- Develop empathy by conducting research with users.
- Define design problems based on user research.
- Presentation of solutions in writing and orally.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create a team spirit, define the rules of cooperation, and familiarise team members with each other.

Suggested activities:

1. Table of interests (*page 22*).
2. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research and record user needs

The forum aims to investigate various aspects related to the issue, good practices from Greece and abroad, as well as problems and needs of users and other stakeholders, as already recorded in the bibliography

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. User observation (shadowing) (*page 38*).
4. Design and conduct colour interviews, promotion, and reflection *(page 49*).
5. Interviews with extreme users (*page 56*).
6. Sharing stories (*page 58*).
7. Creation of persona (*page 60*).

Step 3: Problem definition

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Route map (*page 51*).
2. How can we ... (*page 45*).

Step 4: Ideation

The step aims to introduce as many ideas as possible towards designing a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).
3. I like, I would like, what if... (*page 72).*

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype that users can use to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*) or Wizard of Oz *(page 88*).
2. Description of the proposed solution with the user's journey *(page 82*).
3. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
4. Scenes/sets/roles *(page 85).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the teacher or facilitator after each step of the activity.
- Feedback from members of other groups after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Feedback from external reviewers relevant to the topic of the exercise, such as staff or the director of a library.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.
- Discussion in class about new knowledge with the aim of consolidation.

Redesign of public transport systems

Why is the activity interesting?

Redesigning public transport systems aims to improve the efficiency, accessibility and user experience of public transport in cities. As urban populations grow, transportation systems face increasing pressure to accommodate more commuters while minimising environmental impact. This challenge asks participants to rethink how buses, trains, and other forms of public transportation are designed and operated, focusing on creating a more seamless and enjoyable experience for users. By addressing these issues, cities can enhance mobility while reducing congestion and pollution.

One of the main concerns in public transport is accessibility. Many people, especially those with disabilities or mobility problems, struggle to navigate traditional transportation systems. Rethinking transport planning to be more inclusive may include better signage, improved wheelchair access or simpler ticketing systems. Ensuring that public transport is accessible to all, regardless of physical capacity, helps cities promote social equity and provide vital services to all residents.

Environmental sustainability is another critical aspect of this challenge. Public transport systems are often significant sources of greenhouse gas emissions, mainly when powered by fossil fuels. Designing more environmentally friendly transportation solutions, such as electric buses or trams powered by renewable energy, can significantly reduce a city's carbon footprint. Participants can explore integrating green technologies into public transport systems, aligning with global efforts to combat climate change and create more sustainable urban environments.

Technology integration also plays a central role in redesigning public transport systems. Modern commuters expect real time information on routes, delays, and available services. Developing apps or digital platforms that provide real time updates can improve the user experience, making public transport more reliable and predictable. In addition, using innovative ticketing systems or IoT-based solutions to manage traffic flow and maintain vehicles can improve operational efficiency and reduce costs.

Public transport systems also have a social component, acting as places where different populations come together. Improving the overall experience—through better design, comfort, or safety features—can make commuting more enjoyable and reduce stress for everyday users. This challenge encourages participants to think holistically about how public transport can be replicated as a service and as a key part of the urban fabric that promotes inclusion, sustainability and improved quality of life.

Concepts covered by the activity and keywords

Public transport, sustainability, accessibility, environmentally friendly solutions, user experience, digital services, transport efficiency, renewable energy.

Who is the activity for?

This activity targets professionals and design teams in urban planning, transport authorities, environmental advocates, digital product designers, students and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understand the importance of public transport systems for cities and economies.
- Development of solutions to improve accessibility.
- Familiarity with sustainable transport technologies.
- Develop empathy by observing and interviewing commuters.
- Encourage systemic thinking to address multifaceted urban challenges.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create a team spirit, define the rules of cooperation, and familiarise team members with each other.

Suggested activities:

1. Telling Our Stories (*page 31*).
2. Two truths and 1 lie (*page 30*).
3. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research

The activity aims to investigate various aspects of the issue, good practices from Greece and abroad, and the problems and needs of users and other stakeholders.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*). The teacher should start the investigation phase with this exercise so that the participants can practice and enhance their observation before conducting the field research, resulting in better results.

3. User observation (shadowing) (*page 38*).
4. Empathy interviews (*page 52*).

Step 3: Problem definition

from the proposed solution and the investigation of their real needs, as opposed to those perceived at first glance.

Suggested activities:

1. How can we ... (*page 45*).
2. Point of view (POV) (*page 59*).
3. Creation of persona (*page 60*).

Step 4: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one that will be implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user's journey *(page 82*).
2. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
3. Test with users (*page 86*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in traditional classroom contexts without using digital tools. The eDea digital platform can contribute to effective communication, interactivity, idea exchange, and collaborative design. Activity steps can be created within the platform, encouraging participants to share their ideas in a standard digital workspace that records the design process.

Assessment of newly acquired knowledge

Featured:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of choices. The public can also include people from the activity's target group, the elderly.
- Feedback from the teacher or moderator and members of other groups on the proposed solution.
- Discussion on the needs of older people and the importance of their active participation in social and business life both for their benefit and their community.
- Repeat the steps of the activity to improve the proposed solution and present new results.

Smart waste management solutions

Why is the activity interesting?

The challenge of designing smart waste management solutions addresses the growing need for more efficient and sustainable ways of managing municipal waste. Cities produce vast amounts of waste daily, and traditional waste collection systems often struggle to keep up with increasing volumes. This challenge asks participants to explore how technology can be integrated into waste management to optimise collection routes, improve recycling rates, and reduce the environmental impact of waste disposal. Participants can contribute to cleaner, greener urban environments by rethinking how cities manage waste.

At the core of innovative waste management is using technology to create more efficient systems. IoT sensors can be installed in trash cans to monitor fill levels and alert garbage collection teams when bins are ready to empty. This approach reduces unnecessary collections and ensures bins are emptied before overflowing, improving service efficiency and public spaces' cleanliness. Participants can explore applying these technologies on a larger scale, developing potentially smart grids that manage waste across entire cities.

Recycling is another critical element of this challenge. Many waste systems are inefficient in sorting recyclables from general waste, resulting in large quantities of reusable materials ending up in landfills. Smart waste solutions can include automated sorting technologies or systems encouraging users to separate their waste more efficiently. In addition, participants can explore ways to involve communities in recycling efforts, using digital platforms to provide feedback or incentives for good waste disposal practices.

Sustainability is a key focus of this activity. Waste management systems contribute significantly to pollution through methane emissions from landfills or the fuel used by collection vehicles. Participants can explore how to reduce the environmental impact of these systems, such as through the use of electric collection vehicles or composting programs that reduce the amount of organic waste sent to landfills. By integrating sustainable practices into waste management, cities can play a critical role in reducing their overall carbon footprint.

Public awareness and engagement are also essential elements of smart waste management. For any waste management system to succeed, citizens must be educated and motivated to participate. This challenge encourages participants to consider how digital tools, such as apps or online platforms, can inform residents about good waste disposal and recycling practices. These tools can also collect data

on waste generation, helping cities make more informed decisions about managing their resources sustainably.

Concepts covered by the activity and keywords

Smart waste management, IoT, sorting, recycling, sustainability, municipal waste.

Who is the activity for?

The activity is aimed at urban planners, environmental scientists, technology professionals, IoT specialists, students and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding waste management challenges in urban environments.
- Learn about smart technologies for efficient waste collection and recycling.
- Develop empathy through user observation and interviews.
- Encourage creative problem-solving and collaboration.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create a team spirit, define the rules of cooperation, and familiarise team members with each other.

Suggested activities:

1. Table of interests (*page 22*).
2. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research and record user needs

Problem research aims to investigate various aspects related to the issue, good practices from Greece and abroad, as well as problems and needs of users and other stakeholders, as already recorded in the bibliography

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. User observation (shadowing) (*page 38*).
4. Design and conduct colour interviews, promotion, and reflection *(page 49*).
5. Interviews with extreme users (*page 56*).

6. Sharing stories (*page 58*).
7. Creation of persona (*page 60*).

Step 3: Problem definition

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Route map (*page 51*).
2. How can we ... (*page 45*).

Step 4: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).
3. I like, I would like, what if... (*page 72).*

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one that will be implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*) or Wizard of Oz *(page 88*)
2. Description of the proposed solution with the user's journey *(page 82*).
3. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).

4. Scenes/sets/roles *(page 85).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in traditional classroom contexts without using digital tools. The eDea digital platform can contribute to effective communication, interactivity, idea exchange, and collaborative design. Activity steps can be created within the platform, encouraging participants to share their ideas in a standard digital workspace that records the design process.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of choices. The public can also include people from the activity's target group, the elderly.
- Feedback from the teacher or moderator and members of other groups on the proposed solution.
- Discussion on the needs of older people and the importance of their active participation in social and business life for their benefit and their community.
- Repeat the steps of the activity to improve the proposed solution and present new results.

Creating green urban spaces

Why is the activity interesting?

The challenge of creating green urban spaces focuses on representing cities as environments that integrate nature into the built landscape. Urbanisation has led to declining natural spaces, leaving many towns with limited greenery and outdoor spaces. This activity asks participants to design green spaces that beautify cities and provide environmental, social, and health benefits. Green urban spaces, such as parks, community gardens, and green roofs, help improve air quality, reduce heat, and create healthier, more sustainable cities.

One key benefit of green urban spaces is their ability to improve environmental sustainability. Trees and plants absorb carbon dioxide, filter pollutants, and cool urban areas, mitigating the effects of climate change. Green spaces can relieve poor air quality and high temperatures in cities. Participants in this challenge can explore innovative ways to integrate greenery into urban environments, such as creating vertical gardens or turning unused land into public parks.

Social cohesion and community involvement are also important aspects of urban green spaces. Parks and green spaces serve as gathering places where people can connect, relax, and engage in recreational activities. Well-designed green spaces can help strengthen the social fabric of neighbourhoods by providing inclusive areas for all residents. Participants are encouraged to consider how their projects can promote community involvement through community gardening projects or public events in green spaces.

Public health is another important focus of this challenge. Research shows that access to green spaces improves physical and mental well-being by encouraging outdoor activity and providing relaxation and stress relief spaces. Green spaces can serve as essential health resources in densely populated cities, where residents may have limited access to nature. Participants can explore how to design spaces that promote active living, such as incorporating walking or cycling trails or creating quiet areas for meditation and reflection.

The challenge also encourages participants to consider how green spaces can be integrated into urban infrastructure. Rooftop gardens, green walls, and eco-friendly public buildings show how nature can be incorporated into cities without requiring large tracts of land. These designs not only provide environmental benefits but also contribute to the aesthetic appeal of cities by creating urban environments that are more enjoyable and attractive to residents and visitors.

Concepts covered by the activity and keywords

Urban planning, green spaces, sustainability, biodiversity, eco-friendly design, community engagement.

Who is the activity for?

This activity is aimed at urban planners, architects, environmental advocates, designers, students and the general public.

Learning or planning objectives of the activity

- The learning or design objectives of the activity are:
- Develop an understanding of green urban spaces and their advantages.
- Familiarity with environmentally friendly building materials.
- Learning to engage communities in the preservation of urban spaces.
- Development of systemic thinking for the integration of nature in cities.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create team spirit and familiarise team members with each other.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Getting to know each other by applying the exercises My Name History (*page 27*), survival skills in the post-apocalyptic era (*page 28*), and professional skills (*page 29*).

Step 2: Problem research

Problem research aims to investigate various aspects related to the issue, good practices from Greece and abroad, and the problems and needs of users and other stakeholders.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*). The teacher should start the investigation phase with this exercise so that the participants can practice and enhance their observation before conducting the field research, resulting in better results.
3. User observation (shadowing) (*page 38*).
4. Empathy interviews (*page 52*).

Step 3: Problem definition

The step aims to redefine the problem in a way that allows broad solutions to be introduced. The definition should consider the results of problem research, user needs analysis, and understanding of designers.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).
3. Analogous inspiration (*page 73*).

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the proposed solution with the user's journey *(page 82*).
3. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
4. Test with users (*page 86*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in traditional classroom contexts without using digital tools. The eDea digital platform can contribute to effective communication, interactivity, idea exchange, and collaborative design. Activity steps can be created within the platform, encouraging participants to share their ideas in a standard digital workspace that records the design process.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of choices. The public can also include people from the activity's target group, the elderly.
- Feedback from the teacher or moderator and members of other groups on the proposed solution.
- Discussion on the needs of older people and the importance of their active participation in social and business life for their benefit and their community.
- Repeat the steps of the activity to improve the proposed solution and present new results.

Empowering digital learning platforms

Why is the activity interesting?

The challenge of strengthening digital learning platforms focuses on improving how students and teachers interact with online learning environments. As education increasingly shifts to digital platforms, particularly after the COVID-19 pandemic, there is a growing need for attractive, accessible, and effective platforms. This challenge invites participants to rethink the design and functionality of digital learning platforms, making them more user-friendly and responsive to students' different needs.

One of the main issues with current digital learning platforms is engagement. Many platforms rely on static content, such as text or pre-recorded videos, which can lead to boredom and student disengagement. Participants can design platforms encouraging active participation and peer learning by incorporating interactive elements such as quizzes, discussion forums, and live collaborative tools. Gamification is another approach that can make learning more dynamic, using game-like features to motivate students to complete tasks and track their progress.

Accessibility is another critical aspect of this challenge. Many digital platforms are not designed for all students, especially those with disabilities. Traditional online learning platforms can be challenging for visually or hearing-impaired students or those struggling with motor skills. Improving these platforms to be more inclusive – through features such as screen readers, captions, or simplified navigation ensures that all students can easily access educational content. Participants in this challenge are encouraged to consider how their projects can accommodate a wide range of competencies, making education more equitable and accessible.

Personalisation is another exciting aspect of this challenge. Every student has unique learning needs, and digital platforms offer the potential to provide personalised learning experiences. Participants can explore how to incorporate adaptive learning technologies that track student progress and deliver personalised content based on individual performance. These platforms could suggest resources, adjust difficulty levels, or offer customised feedback, allowing students to learn at their own pace and focus on areas where they need the most improvement.

Teachers and educators are also essential in this challenge. Effective digital platforms need to support students and the teachers who use them. Teachers need tools to manage lessons, track student progress, and provide effective feedback. By integrating features such as grade integration, communication tools, and detailed analytics, participants can design platforms that enable teachers to monitor and support their students effectively.

Finally, the challenge encourages participants to think about the future of digital education and how platforms can evolve to meet the needs of both current and future learners. As technology continues to advance, there are opportunities to integrate emerging technologies such as virtual reality (VR), augmented reality (AR), and artificial intelligence (AI) to create more immersive and personalised learning environments. Participants are encouraged to explore how these technologies can enhance the digital learning experience, making education more engaging, inclusive and adaptive to the changing needs of students and teachers.

Concepts covered by the activity and keywords

Digital learning, personalised learning, accessibility, e-learning, gamification, and user experience.

Who is the activity for?

This activity is designed for educators, digital product designers, UX/UI professionals, students and education technologists.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding digital learning trends and best practices.
- Development of solutions for personalisation of educational content.
- Familiarity with accessibility standards on digital platforms.
- Develop creative problem-solving and user empathy.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

This step aims to create a team spirit, define the rules of cooperation, and familiarise team members with each other.

Suggested activities:

1. Table of interests (*page 22*).
2. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research

Problem research aims to investigate various aspects related to the issue, good practices from Greece and abroad, as well as problems and needs of users and other stakeholders, as already recorded in the bibliography

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. User observation (shadowing) (*page 38*).
4. Design and conduct colour interviews, promotion, and reflection *(page 49*).
5. Interviews with extreme users (*page 56*).
6. Sharing stories (*page 58*).
7. Creation of persona (*page 60*).

Step 3: Problem definition

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Route map (*page 51*).
2. How can we ... (*page 45*).

Step 4: Ideation

The step aims to introduce as many ideas as possible towards designing a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).
3. I like, I would like, what if... (*page 72).*

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*) or Wizard of Oz *(page 88*).
2. Description of the proposed solution with the user's journey *(page 82*).
3. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
4. Scenes/sets/roles *(page 85).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in traditional classroom contexts without using digital tools. The eDea digital platform can contribute to effective communication, interactivity, idea exchange, and collaborative design. Activity steps can be created within the platform, encouraging participants to share their ideas in a standard digital workspace that records the design process.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of choices. The public can also include people from the activity's target group, the elderly.
- Feedback from the teacher or moderator and members of other groups on the proposed solution.
- Discussion on the needs of older people and the importance of their active participation in social and business life for their benefit and their community.
- Repeat the steps of the activity to improve the proposed solution and present new results.

Including product packaging

Why is the activity interesting?

The challenge of designing inclusive product packaging centres is to make everyday products more straightforward and accessible to all consumers, regardless of their physical abilities. Packaging is often the first interaction a consumer has with a product, and poorly designed packaging can create unnecessary barriers for people with disabilities, the elderly, or people with limited dexterity. This challenge invites participants to rethink how packaging can be designed to be more intuitive, easier to open and accessible for everyone while addressing sustainability issues.

Inclusive packaging design is essential for people with physical limitations, such as arthritis, reduced hand strength, or vision problems. Traditional packaging designs, such as hermetically sealed containers or small print labels, can be difficult to handle or read. Participants in this challenge are encouraged to explore ways to make it easier to open the package, such as incorporating easy-to-pull tabs, ergonomic designs or resealable features. By reducing the effort required to access products, inclusive packaging can improve the overall consumer experience and allow people to use products independently.

Another key aspect of inclusive packaging is tactile design, particularly for the visually impaired. Packaging based solely on visual cues can be difficult for blind or visually impaired consumers. Adding touch features, such as raised symbols, braille, or textured surfaces, can help these consumers identify products and navigate the packaging more easily. This enhances usability, promotes independence, and ensures that products are accessible to a broader range of consumers.

Sustainability is an essential parameter alongside inclusion. As consumer demand for environmentally friendly products grows, packaging must also be designed with environmental impact in mind. Participants are encouraged to explore how sustainable materials can be used in combination with inclusive design, creating packaging that is both accessible and environmentally responsible. This may include using biodegradable materials, reducing plastic use, or designing packaging that is easily recycled by all consumers, including those with limited mobility or dexterity.

Brand loyalty and market reach are also essential factors in inclusive packaging design. By prioritising accessibility, companies demonstrate a commitment to serving all customers, which can boost brand loyalty and broaden their consumer base. Inclusive packaging can appeal to many customers, from people with disabilities to ageing populations, creating positive brand associations and long-term customer retention. This challenge encourages participants to think about how inclusive packaging can

create a competitive advantage for brands while improving the overall consumer experience.

Ultimately, the challenge of designing inclusive product packaging is creating solutions that enable all consumers to interact with products comfortably and independently. Participants are encouraged to think holistically about how packaging can be redesigned to meet different consumer needs, from ease of use and accessibility to environmental sustainability. Through inclusive design, packaging can become a tool to improve quality of life, enhance independence and promote social equality while aligning with broader sustainability goals.

Concepts covered by the activity and keywords

Inclusive design, product packaging, accessibility, eco-friendly packaging, haptic design.

Who is the activity for?

The activity is aimed at packaging designers, product developers, sustainability advocates, students and the general public.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding the importance of accessible packaging for people with disabilities.
- Development of environmentally friendly packaging solutions.
- Learn about inclusive design principles.
- Enhance empathy through user observation and interviews.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

The step aims to create team spirit among team members, define the rules of cooperation, familiarise team members with each other, and familiarise members of different teams.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).
2. Define group name and logo design (*page 20*).
3. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research and record user needs

Problem research aims to investigate various aspects related to the issue, good practices from Greece and abroad, as well as problems and needs of users and other stakeholders, as already recorded in the bibliography

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. User observation (shadowing) (*page 38*).
4. Design and conduct colour interviews, promotion, and reflection *(page 49*).
5. Interviews with extreme users (*page 56*).
6. Sharing stories (*page 58*).
7. Creation of persona (*page 60*).

Step 3: Problem definition

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Route map (*page 51*).
2. How can we ... (*page 45*).

Step 4: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).
3. I like, I would like, what if... (*page 72).*

Step 5: Idea evaluation

The step aims to evaluate ideas and choose the one that will be implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Select one of the brainstorming ideas (*page 75*).
3. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype that users can use to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*) or Wizard of Oz *(page 88*).
2. Description of the proposed solution with the user's journey *(page 82*).
3. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
4. Scenes/sets/roles *(page 85).*

The way the prototype is built, or the idea is presented depends on the type of solution proposed.

Use of the digital platform

The activity can be implemented both digitally and in traditional classroom contexts without using digital tools. The eDea digital platform can contribute to effective communication, interactivity, idea exchange, and collaborative design. Activity steps can be created within the platform, encouraging participants to share their ideas in a common digital workspace that also records the design process.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of choices. The public can also include people from the activity's target group, the elderly.
- Feedback from the teacher or moderator and members of other groups on the proposed solution.
- Discussion on the needs of older people and the importance of their active participation in social and business life for their benefit and their community.
- Repeat the steps of the activity to improve the proposed solution and present new results.

Design of smart energy management systems in homes

Why is the activity interesting?

Energy is one of the most critical resources consumed in the modern world, and sustainable energy management practices are imperative. As the primary energy consumers, homes are responsible for significant consumption, leading to increased carbon dioxide (CO2) emissions and environmental burdens. Today, many homes do not take full advantage of available technologies, resulting in energy waste through inadequate thermal insulation systems or manual devices that operate continuously without need.

Smart energy management systems provide solutions that can improve energy efficiency by incorporating automation and advanced technologies. These systems allow consumption to be monitored in real time, enabling users to adjust their habits and identify sources of waste. For example, adjusting the thermostat remotely or automatically adjusting the lighting according to the presence of people in a room can lead to significant energy and money savings.

Integrating these technologies contributes to the overall achievement of sustainability goals set globally. Participants in the activity will be able to develop innovative solutions that promote sustainability and awareness about energy consumption. By following design practices focused on energy management, participants will contribute to the drive for a more sustainable world and enhance their ability to implement solutions that positively impact society and the environment.

This activity highlights the importance of education on sustainability and the use of smart technology. Through analysis and design, participants will learn how technology can be integrated into their daily practices, broadening their energy efficiency and knowledge of responsible consumption. At a time when climate change is one of the world's biggest challenges, participating in such activities can help foster a new culture that respects natural resources and promotes innovation in the energy sector.

Overall, the activity offers a unique opportunity for participants to combine theory with practice. They will design solutions that improve their quality of life and contribute to the planet's sustainability. Through collaboration and creativity, participants will become part of the solution needed to address the challenges related to energy consumption and environmental protection.

Concepts covered by the activity and keywords

Energy, smart technologies, sustainability, efficiency, home management.

Who is the activity for?

The activity is aimed at students of design, architecture, engineering, and technology professionals interested in smart energy management and sustainable development. It is also suitable for the general public interested in reducing home energy consumption.

Learning or planning objectives of the activity

The learning or design objectives of the activity are:

- Understanding the importance of energy and the impact of consumption on the environment.
- Familiarity with the principles of smart systems and sustainable energy management.
- Develop critical thinking around reducing waste and increasing efficiency in homes.
- Collaborate in teams to design solutions that improve energy management.
- Presentation and defence of the proposed solutions in written and oral form.

Structure the activity by applying design thinking steps

Step 1: Creativity

The step aims to encourage the participants' creativity and self-confidence so that they can release their imagination, approach the challenge with an open mind, and produce innovative ideas.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).
2. Design an object that is useful to someone. Encourages creative thinking and the ability to design practical solutions (page 18).

Step 2: Encourage team spirit

This step aims to develop cohesion and collaboration in the team, which are fundamental factors for successfully implementing design thinking and producing innovative solutions.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Table of interests (*page 22*).

Step 3: Problem research

This step aims to understand the energy waste problem in homes through data analysis, research, and searching for information from various sources.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. Metaphors and similes (*page 36*).

Step 4: Problem definition

This step aims to formulate a clear and well-defined problem, guiding the subsequent phases of the design process and the search for innovative solutions.

Suggested activities:

1. How can we ... (*page 45*).

Step 5: Analyse and record user needs

This step aims to collect information and understand users' needs, desires, and expectations so that the solutions proposed can effectively respond to their real needs.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 6: Ideation

The step aims to create a wide range of possible solutions to the energy management challenge in homes, encouraging free thinking and exchanging ideas.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).

Step 7: Evaluate ideas

The step aims to critically evaluate and select the most promising ideas based on criteria such as sustainability, feasibility and innovation to proceed to the next phase of prototyping.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 8: Create a prototype

This step aims to create a tangible and functional prototype, which will allow the demonstration and evaluation of the proposed smart energy management system solution's basic functions and features.

Suggested activities:

1. Description of the problem with physical prototyping (*page 90)*. Construction of a simple, physical model to demonstrate the system's operation.
2. Usage scenarios. Creation of scenarios describing the use of the system by users in everyday situations (*page 83).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented on a digital platform, such as eDea, which allows collaboration on all proposed steps anytime and anywhere. The digital platform will enhance interactivity when analysing and recording problems, ideating, evaluating ideas, and presenting solutions.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of solutions by the teams and evaluation of the effectiveness of the solutions. The evaluation will be done by the teacher or the coordinator of the activity based on the following criteria:
    - Understanding the importance of energy and the impact of consumption on the environment.
    - Familiarity with the principles of smart systems and sustainable energy management.
    - Develop critical thinking around reducing waste and increasing efficiency in homes.
    - Collaborate in teams to design solutions that improve energy management.
    - Presentation and defence of the proposed solutions in written and oral form.

Reusing fashion waste

Why is the activity interesting?

Fashion is one of the industries that significantly affects the environment, as it produces large amounts of waste and consumes vast resources. From using raw materials to discarding clothes, fashion leaves a large ecological footprint. Today, many garments are discarded after only being worn a few times, increasing pollution levels and waste of natural resources. Indicatively, tons of clothes end up in landfills yearly, where they remain for decades, if not longer, without decomposing.

This activity allows participants to explore creative ways to reuse fashion materials that would otherwise go to waste. Participants will reduce resource waste and create a more sustainable fashion value chain by redesigning and transforming old clothes and fabrics into new, functional products. This approach combines innovation with sustainability and offers practical solutions to the climate crisis.

In addition, reusing fashion waste promotes creativity and uniqueness. Through the activity, participants can develop their ability to design unique pieces that follow the principles of a circular economy and offer aesthetic innovation. Recycling materials, whether fabrics, buttons, zippers, or other components, can be transformed into a creative process that leads to products of high aesthetics and reduced production costs.

The activity is not only environmentally essential but also has social dimensions. By reusing fashion waste, participants can help reduce the need to continuously produce new clothes, directly affecting working conditions in clothing industries. Speed fashion, which relies on the rapid and mass production of clothes in cheap markets, often exploits labour forces, resulting in poor working conditions and minimal pay. Reusing fashion waste can reduce the pressure to produce and help improve these conditions.

In addition, the reuse of fashion waste helps raise public awareness of the environmental and social problems associated with the fashion industry. Participants will have the opportunity to learn about the life cycle of clothes and their impact on the planet's health and discover the possibilities for reducing the fashion footprint. Through this process, they will become partakers of more conscious and responsible consumption and enhance their knowledge about the circular economy.

Finally, the activity can help promote new business models based on reuse. Participants can explore business opportunities sustainably and be inspired by the idea that old can be turned into new. By integrating recycling into clothing production,

new growth opportunities can be created for small businesses specialising in producing eco-friendly products. Thus, the activity contributes to protecting the environment and promoting a new culture of sustainable entrepreneurship.

Concepts covered by the activity and keywords

Recycling, reuse, sustainable fashion, circular economy, and environmental awareness.

Who is the activity for?

The activity is aimed at students of design, fashion, architecture, and fashion professionals interested in sustainable development and circular economy. It is also suitable for the general public interested in recycling and reusing materials.

Learning or planning objectives of the activity

- Understanding waste in the fashion industry.
- Design sustainable clothes from recyclable materials.
- Development of design practices that reduce contamination.
- Development of creativity and innovation in recycling and reuse of materials.

Structure the activity by applying design thinking steps

Step 1: Creativity

Problem research aims to encourage the participants' creativity and confidence so that they can unleash their imagination, approach the challenge with an open mind, and produce innovative ideas.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).
2. Design an object that is useful to someone. Encourages creative thinking and the ability to design practical solutions (page 18).

Step 2: Encourage team spirit

This step aims to create a team spirit among team members, define the rules of cooperation, and familiarise each other with practical cooperation in the project.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Water purification (*page 26*).

Step 3: Problem research

This step aims to investigate and understand the problem of waste and pollution caused by the fashion industry, analysing the environmental and social impacts.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. Identification of correlations (*page 34*).

Step 4: Problem definition

The step aims to redefine the problem to emphasise the need for innovative fashion waste reuse solutions, creativity, and sustainability.

Suggested activities:

1. How can we ... (*page 45*).

Step 5: Analyse and record user needs

This step aims to understand users' needs and preferences, focusing on consumers who want sustainable and unique fashion solutions.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 6: Ideation

Problem research aims to produce innovative ideas for reusing fashion waste, encouraging creative thinking and collaboration.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).

Step 7: Evaluate ideas

This step aims to critically evaluate and select the most promising ideas based on criteria such as sustainability, aesthetics, functionality, and innovation so that we can proceed to the next prototyping phase.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 8: Create a prototype

This step aims to create a tangible, low-cost, and fast-implementation prototype that will allow us to demonstrate and evaluate the functionality and aesthetics of a fashion waste reuse solution.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the problem with physical prototyping (*page 90)*. A simple prototype from recycled materials will be constructed to demonstrate the idea.

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The "Reuse fashion waste" activity can be implemented on a digital platform, such as eDea, allowing collaboration on all proposed activity steps. The digital platform will enhance interactivity in analysing and recording problems, ideating, evaluating ideas, and presenting solutions. Participants can exchange ideas, comment on others' suggestions, and work together to create sustainable clothes from recyclable materials.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of solutions by teams and evaluation of the effectiveness of solutions. The evaluation will be done by the teacher or the coordinator of the activity based on the following criteria:
    - Understanding waste in the fashion industry.
    - Design sustainable clothes from recyclable materials.
    - Development of design practices that reduce contamination.
    - Creativity and innovation in recycling and reuse of materials.

Creating sustainable public spaces

Why is the activity interesting?

Public spaces are crucial in citizens' daily lives as meeting points, recreation, and social interaction. However, with urban population growth and the continued expansion of cities, the need for sustainable public spaces is more urgent than ever. Traditional public spaces are often not designed with sustainability in mind, leading to excessive consumption of resources such as water and energy and high emissions. Creating public spaces that combine social utility with environmental protection is one of the key pillars for reducing cities' ecological footprint.

This activity focuses on designing public spaces that are environmentally sustainable but also functional for citizens. A sustainable public space includes green infrastructure, such as parks, vegetation areas, and ecological drainage systems, that reduce carbon emissions, improve air quality and provide natural shade and coolness. Also, using renewable energy sources for lighting and water supply, combined with recycling and composting of waste, contributes to achieving environmental sustainability.

The social dimension of creating sustainable public spaces is also crucial. Sustainable spaces offer natural beauty and recreational opportunities and improve citizens' quality of life and health. Creating safe, clean and welcoming spaces encourages social interaction, physical activity and mental well-being. Participants in the activity will be able to design spaces that benefit the environment and strengthen social cohesion, creating a healthier and happier urban landscape.

From an economic point of view, the sustainability of public spaces can contribute to long-term savings for local communities. Green infrastructure has lower maintenance costs than traditional infrastructure and can bring economic benefits by reducing energy and resource costs and creating new jobs in sustainable development. In addition, public spaces adapted to sustainability principles become more attractive to citizens and tourists, boosting the local economy.

Another interesting element of this activity is the technological innovation that can be integrated into the design of sustainable public spaces. Smart technologies, such as energy and water management sensors, air quality monitoring systems, and applications for citizen interaction with space, offer new possibilities for controlling and optimising resources. Participants will be able to explore and integrate such technologies into their proposals, further improving the efficiency of public spaces.

In addition to environmental and social benefits, creating sustainable public spaces can be an example and model for other cities and communities. Planners, urban planners, and policymakers can draw inspiration from the proposed solutions and adapt them to their urban environments. The successful implementation of such projects can lead to several imitative practices at national and international levels, contributing to a general transition towards more sustainable and humane cities.

Overall, the activity offers a unique opportunity for participants to combine innovation with sustainability while improving citizens' quality of life. Through collaboration and creativity, they can actively contribute to shaping an urban landscape that respects and protects the environment while enhancing social and economic sustainability.

Concepts covered by the activity and keywords

Sustainable development, public space, green infrastructure, renewable energy sources, social cohesion, economic sustainability.

Who is the activity for?

The activity is aimed at students of design, architecture, urban planning, environmental sciences, and industry professionals interested in sustainable development and design of public spaces. It is also suitable for the general public interested in urban planning and environmental protection.

Learning or planning objectives of the activity

- Understanding the needs of public spaces.
- Development of plans to improve quality of life through sustainable solutions.
- Collaboration to achieve innovative design solutions.

Structure the activity by applying design thinking steps

Step 1: Creativity

Problem research aims to encourage the participants' creativity and confidence so that they can unleash their imagination, approach the challenge with an open mind, and produce innovative ideas.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).
2. Design an object that is useful to someone. Encourages creative thinking and the ability to design practical solutions (page 18).

Step 2: Encourage team spirit

This step aims to create a team spirit among team members, define the rules of cooperation, and familiarise each other with effective cooperation in the project.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Table of interests (*page 22*).
3. Water transport (page 23).

Step 3: Problem research

Problem research aims to investigate and understand the problem of the lack of sustainable public spaces in modern cities, analysing residents' needs and the challenges cities face.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. Expert eyes (*page 35*).

Step 4: Problem definition

The step aims to redefine the problem by focusing on creating sustainable public spaces, emphasising innovation, sustainability and social cohesion.

Suggested activities:

1. How can we ... (*page 45*).

Step 5: Analysis of user needs

This step aims to understand users' needs and preferences, focusing on residents' needs for sustainable and functional public spaces.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 6: Ideation

Problem research aims to generate innovative ideas for sustainable public spaces, encouraging creative thinking and collaboration.

Suggested activities:

1. Brainstorming (*page 69*).
2. Exercise 6-3-5 (*page 66*).

Step 7: Idea evaluation

This step aims to critically evaluate and select the most promising ideas based on criteria such as sustainability, functionality, social cohesion, and innovation to proceed to the next prototyping phase.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 8: Prototyping

The step aims to create a low-cost prototype and quick implementation, which will allow the demonstration and evaluation of a solution for the functionality and aesthetics of sustainable public spaces.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the problem with physical prototyping (*page 90)*. Construction of a simple, physical model to demonstrate the idea.

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity "Creating sustainable public spaces" can be implemented on a digital platform, such as eDea, which allows collaboration in all proposed activity steps. The digital platform will enhance interactivity in analysing and recording problems, ideating, evaluating ideas, and presenting solutions. Participants can exchange ideas, comment on others' suggestions, and work together to create sustainable public spaces.

Specifically, the digital platform will offer the following possibilities:

- Create working groups to analyse and record the problem
- Digital collection and exchange of ideas to integrate green solutions in public spaces
- Evaluate and comment on other team members' suggestions

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of solutions by teams and evaluation of the effectiveness of solutions. The evaluation will be done by the teacher or the coordinator of the activity based on the following criteria:
    - Understanding the importance of sustainable development and the design of public spaces.
    - Development of plans to improve the quality of life by integrating green solutions in public spaces.
    - Collaborate in teams to achieve innovative design solutions.
    - Creativity and innovation in responding to design challenges.

Sustainable product packaging design

Why is the activity interesting?

Product packaging is one of the world's most significant sources of waste, as most packaging materials, such as plastic and cardboard, end up in landfills. According to studies, millions of tons of plastic packaging are discarded annually, burdening the environment and ecosystems. These materials take hundreds of years to decompose and often end up in water resources, burdening marine life and human health through the food chain. Therefore, the need for sustainable packaging design, which reduces resource consumption while promoting recycling and biodegradability, is more urgent than ever.

This activity focuses on creating innovative solutions for packaging products with environmentally friendly materials. Using biodegradable materials, such as paper, bioplastics, or natural by-products, can drastically reduce waste. In addition, designers can adapt packaging to be more durable and reusable, giving more value to the consumer while reducing the environmental burden. A sustainable product cannot be considered complete if its packaging does not follow the same principles.

Sustainable packaging design is not only about materials but also about design efficiency. Companies can reduce costs and enhance sustainability by designing smart, versatile packaging that can be easily stored, transported, or reused. This can lead to savings for both producers and consumers. Packaging that uses fewer materials and has a longer shelf life contributes to the circular economy, where products and materials remain used for as long as possible.

In addition, sustainable packaging design strengthens the company's image and satisfies consumers who are now looking for more responsible choices. Consumers are becoming more aware of the impact of their purchases on the environment and prefer to support companies that incorporate sustainable practices. Through innovation in packaging, companies can set their products apart from the competition and boost customer loyalty.

In addition to environmental benefits, sustainable packaging design can open up new business opportunities. Participants in this activity will examine solutions for using cutting-edge materials and technologies, enhancing their creativity and promoting sustainability in practice. Alternative materials, such as mushrooms converted into biodegradable packaging or seaweed packaging, pave the way for developing new innovative products with a positive environmental footprint.

Finally, sustainable packaging design reduces carbon emissions, as less energy is required to produce and store lighter and less energy-intensive packaging. Overall, the activity offers an opportunity for participants to promote responsible production and consumption, creating solutions that meet the challenges of modern times while benefiting the environment and society.

Concepts covered by the activity and keywords

Sustainable packaging design, recyclable materials, biodegradable materials, circular economy, environmental sustainability.

Who is the activity for?

The activity is aimed at design and architecture students and professionals in the design and production industry. It is also suitable for the general public interested in sustainable development and environmental protection.

Learning or planning objectives of the activity

- Understanding the impact of conventional packaging on the environment.
- Packaging design with recyclable and biodegradable materials.
- Development of innovative solutions to reduce waste.
- Development of critical thinking and innovation in packaging design.

Structure the activity by applying design thinking steps

Step 1: Encouraging team spirit

This step aims to create a team spirit among team members, define the rules of cooperation, and familiarise each other with practical cooperation in the project.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Table of interests (*page 22*).

Step 2: Problem research

This step aims to investigate and understand the problem of unsustainable product packaging and its environmental impact, analysing existing situations and consumer needs.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).

3. Metaphors and similes (*page 36*).

Step 3: Problem definition

The step aims to redefine the problem to emphasise the need for sustainable product packaging design, innovation, sustainability, and consumer appeal.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Analysis of user needs

Problem research aims to understand users' needs and preferences, focusing on consumers' need for sustainable, practical, and attractive product packaging.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 5: Ideation

Problem research aims to produce innovative ideas for sustainable product packaging design, encouraging creative thinking and collaboration.

Suggested activities:

1. Brainstorming (*page 69*).
2. "Yes, and!" brainstorming. Generate many ideas by building on previous ideas with a positive feedback loop (*page 71).*

Step 6: Idea evaluation

This step aims to critically evaluate and select the most promising ideas based on criteria such as sustainability, functionality, aesthetics, cost, and innovation so that we can proceed to the next phase of prototyping.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).
2. Feedback gallery table. Collect feedback and evaluate ideas in a systematic way *(page 62).*

Step 7: Prototyping

The step aims to create a low-cost prototype and quick implementation, which will allow the demonstration and evaluation of the functionality and aesthetics of sustainable product packaging.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the problem with physical prototyping (*page 90)*. Construction of a simple, physical model to demonstrate sustainable packaging.

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

This activity can be implemented on a digital platform like eDea, allowing collaboration on all proposed steps. The digital platform will enhance interactivity in analysing and recording problems, ideating, evaluating ideas, and presenting solutions.

Specifically, the digital platform will offer the following possibilities:

1. Creation of working groups to analyse and record the problem.
2. Digital collection and exchange of ideas for packaging design.
3. Evaluate and comment on the proposals of other team members.

The digital platform will make "Sustainable packaging design" more interactive, collaborative, and effective.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of solutions by teams and evaluation of the effectiveness of solutions. The evaluation will be done by the teacher or the coordinator of the activity based on the following criteria:
    - Understanding the impact of conventional packaging on the environment.
    - Packaging design with recyclable and biodegradable materials.
    - Development of innovative solutions to reduce consumption.
    - Creativity and innovation in responding to design challenges.

Designed for digital platform accessibility

Why is the activity interesting?

Digital technology has affected almost every aspect of our lives, but for many people with disabilities, access to digital platforms remains limited. Accessibility to digital platforms is essential to ensure that all individuals have equal opportunities to interact, work and enjoy the services provided by technology. Without proper adaptation, many digital applications and websites become impossible for people with vision, hearing or movement impairments to use. Lack of accessibility hampers their integration into society and labour markets, limiting their potential.

This activity focuses on designing digital platforms that are fully accessible to all users, regardless of their physical capabilities. Accessibility design includes using technologies such as screen readers, voice-to-text converters and assistive tools for people with mobility difficulties. These tools allow every person to navigate and interact with a website or app without barriers, enhancing their integration into the digital society.

Accessibility is not just a technical issue but also a question of justice and human rights. In many countries, legislation requires businesses to offer disability-friendly digital platforms. Therefore, incorporating accessible design practices is socially responsible and business-essential. Participants in this activity will understand the technical specifications necessary to implement such platforms and develop solutions that facilitate accessibility for all users.

The design of accessible digital platforms is crucial in sectors such as education, healthcare, and public services, where equal access is critical. For example, on education platforms, students with disabilities can fully participate in classroom activities through accessible tools such as subtitles and custom audio files. In healthcare, everyone-friendly digital platforms allow patients to communicate with their doctors and access vital health information, regardless of their physical abilities.

In addition, accessible design can lead to broader adoption of digital products by the public, as platforms that are friendly to all users tend to be preferred by companies and organisations. Accessibility helps strengthen a company's reputation and differentiate itself in a world where social responsibility is critical to success. At the same time, with a growing elderly population often facing difficulties using technology, accessible platforms are becoming essential for their integration into the digital economy.

Finally, integrating accessibility into design can create new professional and business opportunities. Designers and developers who specialise in accessibility can fill a growing gap in the market as more companies look for solutions that meet the needs of people with disabilities. Overall, the activity offers a unique opportunity for participants to create digital platforms that promote social inclusion and fairness while responding to future technological and business demands.

Concepts covered by the activity and keywords

Accessibility, digital platforms, disability, equality, social inclusion, assistive technology.

Who is the activity for?

The activity aims at digital design students, programmers, and technology professionals. It is also suitable for the general public interested in accessibility and social inclusion.

Learning or planning objectives of the activity

- Understanding accessibility needs in the digital world.
- Design solutions that allow access to all users.
- Development of digital products that promote equality.

Structure the activity by applying design thinking steps

Step 1: Encouraging team spirit

This step aims to create a team spirit among team members, define the rules of cooperation, and familiarise each other with practical cooperation in the project.

Suggested activities:

1. Two truths and 1 lie (*page 30*).

Step 2: Problem research

Problem research aims to investigate and understand the problem of lack of accessibility to digital platforms, analysing the needs of users with disabilities and the challenges they face.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. Expert eyes (*page 35*).

Step 3: Problem definition

The step aims to redefine the problem by emphasising the need for accessible digital platforms that promote equity, inclusion, and usability for all users.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Analysis of user needs

Problem research aims to understand the needs and preferences of users with disabilities regarding using digital platforms, focusing on the challenges they face and best practices.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 5: Ideation

Problem research aims to generate innovative ideas for accessible digital platforms, encouraging creative thinking and collaboration.

Suggested activities:

1. Brainstorming (*page 69*).
2. I like, I would like, what if... (*page 72).*

Step 6: Idea evaluation

This step aims to critically evaluate and select the most promising ideas based on criteria such as usability, feasibility, social justice, and innovation so that we can proceed to the next prototyping phase.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).

Step 7: Prototyping

This step aims to create a low-cost prototype and fast implementation, which will allow the demonstration and evaluation of a digital platform's functionality and accessibility.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).

2. Creation of digital prototype. Construction of an interactive digital prototype to demonstrate essential accessibility functions *(page 92).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

This activity can be implemented on a digital platform, such as eDea, which allows collaboration on all proposed steps. The digital platform will enhance interactivity in analysing and recording problems, ideating, evaluating ideas, and presenting solutions.

Specifically, the digital platform will offer the following possibilities:

- Creation of working groups to analyse and record the problem.
- Digital collection and responsiveness of ideas to improve accessibility.
- Evaluate and comment on the proposals of other team members.

Using a digital platform will make the activity "Design for accessibility on digital platforms" more interactive, collaborative, and effective.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of solutions by teams and evaluation of the effectiveness of solutions. The evaluation will be done by the teacher or the coordinator of the activity based on the following criteria:
    - Understanding accessibility needs in the digital world.
    - Design solutions that allow access to all users.
    - Development of digital products that promote equality.
    - Creativity and innovation in responding to design challenges.

Education and lifelong learning

Why is the activity interesting?

Education and lifelong learning are key elements of modern society. When combined with new technologies, entrepreneurship, and the development of new skills, they can create opportunities for growth and innovation.

New technologies have redefined the way we learn and teach. Digital education offers opportunities for personalised learning, taking advantage of the latest technological advances such as virtual reality, artificial intelligence, and online communities. This broadens the range of education, making it more accessible and flexible.

Entrepreneurship is the process by which ideas and innovations are transformed into actual products and services. It is the engine for economic growth and job creation. Entrepreneurship-focused education enhances individuals' abilities to create and manage their business opportunities.

In this context, education and lifelong learning with an emphasis on new technologies, entrepreneurship and developing new skills offer many opportunities. They allow individuals to acquire technological skills necessary in the modern world. They teach the use of new technologies by promoting digital literacy and understanding of the digital society.

In addition, continuing education and lifelong learning promote the development of new competencies. People can acquire new skills and knowledge by seeking to develop or change their career path. They can learn to manage the challenges of the modern business world and be prepared for changes in the labour market.

Finally, education and lifelong learning emphasise new technologies, entrepreneurship, and developing new skills to promote innovation. They cultivate creativity and think outside the box, promoting technology development and problem-solving.

Education is key to achieving the UN Sustainable Development Goals (SDGs). This framework aims to improve the quality of life globally while protecting the environment and promoting equitable social development. Education is closely linked to the SDGs:

- **Quality of education and utilisation of human resources**. The first goal of the SDGs is to eradicate poverty and hunger, ensure health and well-being for all, and achieve quality education. Education allows people to respond to the labour market's needs and improve their living standards. By investing in

quality education and access to education for all, we achieve more equal societies and opportunities for people.

- **Sustainable development**. Sustainable development is essential for the conservation of natural resources and the protection of the environment. SDG Goal 4 is about quality education and promoting sustainable development. The training teaches people to contribute to environmental protection, develop innovative solutions to environment-related problems and ensure the sustainable use of natural resources.
- **Justice and equality**. Goal 10 of the SDGs addresses reducing inequality. Education is key to tackling inequalities in access to opportunities and resources. It enables everyone to develop their abilities and contribute to the development of society.

Overall, education is the driving and unifying factor in achieving the SDGs, as it provides the necessary skills, critical thinking and awareness needed to promote sustainable development and address global challenges.

Overall, education and lifelong learning, with a focus on new technologies, entrepreneurship, and the development of new skills, are essential for developing a dynamic and innovative society that seizes the opportunities offered by new technologies to improve people's lives and grow the economy.

Concepts covered by the activity and keywords

Sustainability, circular economy, new technologies, skills development, education, lifelong learning.

Who is the activity for?

The activity is aimed at educators, design teams interested in innovation, education policymakers, students, and the general public.

Learning or planning objectives of the activity

The learning objectives for education and lifelong learning can be:

- Understanding the importance of lifelong learning, i.e. the role of continuous education in the development of individuals and society in general.
- Development of self-learning skills required for self-study and improvised learning.
- Development of critical and analytical thinking and regular upgrading of knowledge.
- Promote social justice and develop awareness about access to education and lifelong learning for all, regardless of social class.

- Strengthen collaboration and develop skills to collaborate with other students and teachers to support each other and achieve learning goals.
- Develop multicultural skills, encourage openness to diversity, and understand multiculturalism through lifelong learning.
- Formulate sustainable learning goals and understand the importance of long-term development of learning skills and continuous learning for personal and professional development.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

The step aims to create team spirit among team members, define the rules of cooperation, and familiarise team members with each other and members of different teams with each other.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).
2. Define group name and logo design (*page 20*).
3. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research

This step aims to investigate, describe, and record the problem broadly, allowing the identification of opportunities to improve services and practices.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Identification of correlations (*page 34*).

Step 3: Problem definition

This step aims to redefine the problem in a way that allows broad solutions to be introduced. The definition should consider the results of problem research, user needs analysis, and understanding of designers.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Analysis of user needs

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Interviews with extreme users (*page 56*).
2. Creation of persona (*page 60*).

Step 5: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Exercise 6-3-5 (*page 66*).

Step 6: Idea evaluation

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 7: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
2. Alternatively, digital prototyping programming.
3. Alternatively, a description of the proposed solution with the user's journey *(page 82*).
3. Alternatively, description of the problem with solution poster (*page 81*).
3. Alternatively, a description of the proposed solution with a digital story (*page 93*). This method is suitable for intangible solutions for which physical prototyping is impossible (*page 90*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when

analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Sharing economy

Why is the activity interesting?

The sharing economy represents an essential model of economic organisation that aims to distribute resources and opportunities more fairly and reasonably in society; unlike the traditional speculative economy, where competitiveness and individual profit dominate, the sharing economy emphasises cooperation, conciliation, and justice.

In the sharing economy, the production and allocation of resources are designed to serve the needs and good of society as a whole rather than primarily serving the interests of one or a few individuals. This often involves non-profit organisations, community initiatives, and public policies aimed at a fairer distribution of opportunities to citizens.

An essential feature of the sharing economy is the priority given to access to basic needs such as healthcare, education, housing, and food. Financial resources are allocated to ensure that no one is excluded from participation in society because of poverty or lack of access to essential services.

Social justice is critical in the sharing economy. The rich contribute significantly to financing everyday needs and services, while tax policy focuses on a fairer distribution of wealth. The aim is to reduce social inequalities and enhance opportunities for all.

Acquisition-based models refer to the traditional economic approach, where ownership and acquisition are central elements. By the end of the 20th century, the economy based on this model had reached its limits, with growing inequalities in the distribution of wealth and increasing pressure on the environment.

In contrast, usage-based models focus on resource efficiency and efficiency rather than owning them. This aligns with the principles of the sharing economy as it seeks a fairer distribution of resources and opportunities.

The shift from ownership-based to usage-based models means that resources and infrastructure must be used more efficiently and fairly and that access to them must be fair for all citizens. This transition usually requires the development of new policies, legislation and practices that support a more equitable distribution of resources and environmental protection.

Overall, the transition from acquisition-based to use-based models represents a way of rethinking the economic system to achieve greater fairness, sustainability, and balance between social, economic, and environmental factors.

Digital technologies are essential to the emergence of these models of economic organisation based on use and sharing. This relationship reflects how technological developments and digitalisation affect the economy, society, and model organisation. Specifically:

- **Digitalisation of the economy**. Digital technologies have shaped the economy of social media, e-commerce, digital shopping, and other sectors. These technologies make it possible to monitor the use and allocation of resources with much greater accuracy and efficiency, thus promoting the idea of use over possession.
- **Social and economic justice**. Digital technologies enable transparency and monitoring of resource allocation processes, enhancing fairness in the distribution of wealth. In this context, technologies such as blockchains can be used to control distribution.
- **Community collaboration platforms and models**. Digital platforms and online tools enable the development of new models of economic cooperation. Communities can work together to use and share resources, creating economies of community participation.

Overall, digital technologies play an essential role in achieving the goals of the emerging sharing economy and promoting usage-based models as they enable efficient management and a fairer distribution of resources and opportunities.

Concepts covered by the activity and keywords

Resource sharing, social economy, Entrepreneurship, Sustainable development, crowdsourcing.

Who is the activity for?

The activity is aimed at entrepreneurs, design teams interested in innovation, municipalities and communities, students, and the general public.

Learning or planning objectives of the activity

The learning objectives for the sharing economy, combined with education on sustainable development and circular economy, are:

- Understand the importance of the sharing economy and its positive impact on society, including reducing inequality and access to services.
- Development of entrepreneurial skills for creating and operating community businesses and initiatives to share resources and services.
- Critical and analytical thinking on social justice to analyse social problems and inequalities and the impact of the sharing economy on social justice.

- Collaborative skills in sharing, including teamwork and mutual support for implementing shared projects.
- Developing sustainable shared practices and understanding the importance of long-term conservation of shared resources and services for sustainability.

Structure the activity by applying design thinking steps

Step 1: Develop team spirit

The step aims to create team spirit among team members, define the rules of cooperation, familiarise team members with each other, and familiarise members of different teams.

Suggested activities:

1. Encourage creativity by applying the exercise 30 shapes (*page 17*).
2. Define group name and logo design (*page 20*).
3. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research

This step aims to investigate, describe, and record the problem broadly, allowing the identification of opportunities to improve services and practices.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Identification of interfaces (page 34).

Step 3: Problem definition

The step aims to redefine the problem in a way that allows broad solutions to be introduced. The definition should consider the results of problem research, user needs analysis, and designers' understanding.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Analysis of user needs

This step aims to identify the user groups that will benefit from the proposed solution and explore their real needs instead of those perceived at first glance.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).

2. Creation of persona (*page 60*).

Step 5: Ideation

The step aims to introduce as many ideas as possible towards designing a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Exercise 6-3-5 (*page 66*).

Step 6: Idea evaluation

The step aims to evaluate ideas and choose the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 7: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Physical prototyping from consumable materials such as paper, adhesive tape, stationery, and more (*page 90*).
2. Alternatively, digital prototyping (*page 92*).
4. Alternatively, a description of the proposed solution with the user's journey *(page 82*).
4. Alternatively, description of the problem with solution poster (*page 81*).
5. Alternatively, a description of the proposed solution with a digital story (*page 93*). This method is suitable for intangible solutions for which physical prototyping is impossible (*page 90*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without using digital tools. Structure the steps of the activity on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Promoting physical activity to improve health

Why is the activity interesting?

Sport and physical activity are crucial parts of education and continuous learning. Their importance extends beyond physical health. Sport and physical activity are associated with improving mental health, increasing mental well-being, and developing social skills.

Sport and physical activity help address the challenges of modern life, such as stress, depression, and the rise of lifestyle-related diseases. Regular exercise boosts the immune system, improves cardiovascular health and reduces the risk of obesity and chronic disease.

In addition, sports and physical activity promote the development of new competencies and skills. Athletes learn self-management, dedication, teamwork, and endurance in adverse conditions. These abilities are helpful in sports, everyday life, and professional careers.

In addition, sports promote social cohesion and multicultural exchange. Racing activities and sporting events unite people from various cultural and social groups. The dissemination of sport can help promote multiculturalism and exchange ideas and values.

Finally, sport offers a sustainable source of entertainment and wellness that improves quality of life. People who participate in sports enjoy physical activity, expressiveness, and a sense of achieving personal goals.

New technologies offer countless opportunities in the field of sport and physical activity, such as:

- **Physical condition monitoring**. Wearables such as smartwatches and fitness trackers allow athletes and amateurs to monitor their physical condition, such as pulse, calorie burning, and sleep quality. This can help in professional sports and improve personal performance.
- **Digital education**. Technology enables digital education platforms to offer digital physical activity, nutrition, and sports psychology courses. This allows people to develop new skills and knowledge about physical health.
- **Virtual reality (VR) and augmented reality (AR).** These technologies allow the creation of immersive environments for exercise and sports. Athletes can use VR glasses to enhance exercise, and AR can be used for training and technique analysis.

- **Social platforms and knowledge sharing**. Social platforms and social network apps allow athletes to connect, share experiences and share knowledge about exercise and healthy living.
- **Personalised nutritional advice**. Technologies such as nutrition and genetic analysis applications can provide personalised nutrition and performance advice to help athletes achieve their goals.

These technologies offer new opportunities to develop sports and physical activity capacities, helping people achieve their health and wellness goals.

Concepts covered by the activity and keywords

Sports, psychosomatic health, exercise psychology, wellness, wearable technologies.

Who is the activity for?

The activity is aimed at tourism professionals, design teams interested in innovation, tourism policymakers, students, and the general public.

Learning or planning objectives of the activity

The learning objectives for the Promotion of Health-Enhancing Physical Activity are:

- Understanding the importance of physical health and the role of physical activity and healthy eating in overall physical and mental health.
- Development of physical skills and abilities to improve performance in sports or physical activity.
- Better understanding of nutrition and sensitivity to the importance of healthy eating and proper eating behaviour to achieve sports and health goals.
- Development of psychological well-being and recognition of the relationship between exercise and psychological well-being, learning strategies for coping with stress and improving self-esteem through physical exercise.
- Strengthening collaborative skills in exercise and sports, including teamwork and mutual support.
- Critical and analytical thinking about healthy living and developing skills to critically comment on and analyse different aspects of healthy living, including diet, exercise and psychological well-being.
- Develop sustainable physical and nutritional practices and understand the importance of long-term fitness and health maintenance by implementing integrated sports and healthy eating practices.

Structure the activity by applying design thinking steps

Step 1: Encouraging team spirit

This step aims to create a team spirit among team members, define the rules of cooperation, and familiarise each other with effective cooperation in the project.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Telling Our Stories (*page 31*).

Step 2: Problem research

The step aims to investigate and understand the problem of physical inactivity and its effects on health, analysing users' existing situations and needs.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. User observation (shadowing) (*page 38*).
3. Expert eyes (*page 35*).

Step 3: Problem definition

The step aims to redefine the problem by focusing on the need for innovative solutions to promote physical activity to improve health, emphasising well-being and prevention.

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Analysis of user needs

The step aims to understand users' needs and motivations regarding physical activity, focusing on their deepest desires and concerns.

Suggested activities:

1. Empathy interviews (*page 52*).
2. Five "Why?". Tool for deeper understanding of the causes behind user behaviours (*page 53*).

Step 5: Ideation

The step aims to produce innovative ideas to promote physical activity and encourage creative thinking and collaboration.

Suggested activities:

1. Brainstorming (*page 69*).
2. Powers of 10. Framing technique to help examine the challenge from various scales (*page 67*).

Step 6: Idea evaluation

The step aims to critically evaluate and select the most promising ideas, based on criteria such as effectiveness, feasibility, attractiveness and innovation, to proceed to the next prototyping phase.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 7: Prototyping

This step aims to create a low-cost and fast-implementation prototype that will allow us to demonstrate and evaluate the functionality and effectiveness of a solution to promote physical activity.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Scenes/sets/roles *(page 85).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without using digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.

- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Digitalisation of public services

Why is the activity interesting?

Using digital technologies to deliver public services is essential to upgrading and improving public service. The continuous evolution of digital technologies has enabled the creation of new, advanced solutions that can serve the public more effectively and efficiently.

One of the main challenges facing public services is increasing the workload and needs of the public. Citizens expect to have easy access to public services and to receive quick responses to their requests. In this context, digital technologies offer several advantages.

One of digital technologies' main offerings is to ensure public services' transparency and reliability. Digitalising processes can reduce the risk of human errors and omissions while enabling service performance to be monitored and evaluated.

In addition, digital technologies allow the creation of tailored solutions to the public's needs. This means that citizens can receive personalised services that offer accuracy and efficiency.

Finally, digital technologies make it possible to increase the accessibility of public services. Citizens can access them from anywhere and anytime through digital platforms, thus enhancing their daily lives.

Digital technologies have the potential to disrupt the delivery of public services and create more effective, efficient, and accessible solutions for the public.

Harnessing digital technologies at the local level, focusing on greater citizen participation, is crucial to developing sustainable local communities and improving quality of life. This can be achieved in the following ways:

- **Transparency and participation**. Public authorities can use digital platforms for transparency in decision-making processes. Citizens can learn about local issues and participate in debates and public consultations online.
- **Provision of public services**. Local authorities can develop digital platforms that allow citizens to submit requests and petitions online. This can help serve the public's needs effectively.
- **Education and social participation**. Local authorities can offer educational programmes on digital literacy to improve citizens' participation. In addition, they can create online tools that allow the exchange of ideas and suggestions for improving the local community.

- **Sustainable development**. Local communities can use digital technologies to monitor resource use, promote recycling, and reduce their carbon footprint, contributing to further developing sustainable practices.
- **Data security and protection**. Local authorities must protect citizens' privacy and data security when using digital services.

Combining digitalisation with active citizen participation can lead to more open, transparent, and effective governance at the local level, serving community needs and promoting sustainable development.

Concepts covered by the activity and keywords

Digital services, Local government, Citizen participation, Transparency, Sustainable development

Who is the activity for?

The activity is aimed at civil servants, design teams interested in innovation, municipalities and communities, students, and the general public.

Learning or planning objectives of the activity

- Improving recognition of the importance of digital technology for delivering public services.
- Capacity building for active citizenship in public governance through digital tools.
- Promoting transparency and information management by local authorities using digital technology.
- Understanding the principles of sustainable development in the context of public service provision.
- Development of skills for the safe use of digital services and protecting privacy in the online space.

Structure the activity by applying design thinking steps

Step 1: Encouraging team spirit

This step aims to create a team spirit among team members, define the rules of cooperation, and familiarise each other with effective cooperation in the project.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Telling Our Stories (*page 31*).

Step 2: Problem research

Problem research aims to explore and understand the problem of digitalisation of public services, analysing citizens' needs and the challenges public authorities face.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. User observation (shadowing) (*page 38*).

Step 3: Problem definition

The step aims to redefine the problem by focusing on improving digital public services, emphasising usability, accessibility and efficiency.

Suggested activities:

1. How can we ... (*page 45*).
2. Route map (*page 51*).

Step 4: Analysis of user needs

The step aims to understand citizens' needs and expectations regarding digital public services, focusing on the needs of different user groups.

Suggested activities:

1. Empathy interviews (*page 52*).
2. Interviews with extreme users (*page 56*).

Step 5: Ideation

Problem research aims to generate innovative ideas to improve digital public services, encouraging creative thinking and collaboration.

Suggested activities:

1. Brainstorming (*page 69*).
2. I like, I would like, what if... (*page 72).*

Step 6: Idea evaluation

This step aims to critically evaluate and select the most promising ideas based on criteria such as usability, accessibility, efficiency, and innovation so that we can proceed to the next phase of prototyping.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).
2. Design guidelines (*page 78*).

Step 7: Prototyping

This step aims to create a low-cost and fast-implementation prototype that will allow the demonstration and evaluation of the functionality and usability of a digital public service.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Creation of digital prototype. Construction of an interactive digital prototype to demonstrate essential accessibility functions *(page 92).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Use of new technologies for agricultural production

Why is the activity interesting?

Agriculture is at a critical juncture as an integral part of human history and the social fabric. It faces significant challenges from increasing globalisation, climate change, and the need for sustainable food production. In this context, the role of digital technologies in agriculture has emerged as a crucial factor towards achieving sustainable rural development.

Access to new technologies and their practical application transforms the farming community, offering many opportunities and causing fundamental changes in how food is produced and agriculture is managed.

The farming community faces significant challenges in the 21st century, such as increasing globalisation, climate change, and the need for sustainable agriculture. Using new technologies in agricultural activities is crucial in addressing these challenges and achieving sustainable agriculture. Next, we present the importance and objectives of using new technologies in farming.

- **Increased productivity and sustainable agriculture**. Applying new technologies such as aesthetics, automatic data collectors, and geographic information allows farmers to monitor their crops accurately, improving productivity and reducing pesticide and fertiliser use. This approach contributes to sustainable agriculture as it helps maintain soil health and minimise environmental impact.
- **Emerging markets and innovative business opportunities**. The use of new technologies creates innovative opportunities for farmers and rural communities. Developing applications for crop monitoring, product marketing, and farmer training creates emerging markets and encourages entrepreneurship in the agricultural sector.
- **Increased food safety**. New technologies allow food supply chain monitoring from the field to the consumer's table. This ensures a high level of food safety and helps address the problem of food security.
- **Sustainable water management**. Aesthetics, automatic data collectors and digital applications can help manage water more efficiently in agriculture, protecting water resources and saving water.
- **Development of scientific knowledge and professional skills**. The use of new technologies requires the development of scientific knowledge and know-how

in the agricultural sector. Farmers and agricultural professionals can acquire new technology-related skills, thus improving their professional performance.

- **Protection of biodiversity**. New technologies can help preserve and protect biodiversity in rural environments. Smart farming and precise agriculture, using data and sensors, can help avoid the overuse of pesticides and fertilisers, which can negatively impact species diversity and natural habitats.
- **Sustainable agricultural production**. Permaculture is an approach to agriculture that aims to preserve the soil and the environment's health. New technologies, such as automatic data collectors and digital management platforms, can enhance the application of permaculture and offer sustainable alternatives to traditional agriculture.
- **Development opportunities in rural areas**. Developing new technologies in agriculture can create employment and entrepreneurship opportunities in rural areas. In addition, it can promote the creation of new businesses in ecological production and rural tourism, contributing to the development of rural communities.
- **Climate change and sustainability:** Digital technologies can help agriculture adapt to climate change. Farmers can make decisions that combine productivity with sustainability by combining data from sensors and forecasting models.
- **Education and awareness-raising:** Using new technologies in agriculture requires education and awareness-raising among farmers and stakeholders. This can help create a more digitally efficient rural population harnessing new technologies to benefit sustainable agriculture.

Concepts covered by the activity and keywords

Biodiversity conservation, sensors in agriculture, agricultural drones, sustainable agriculture, innovative agricultural practices.

Who is the activity for?

The activity is aimed at farmers, design teams interested in innovation, municipalities and communities, students, and the general public.

Learning or planning objectives of the activity

- Understanding of digital tools used in agriculture, such as sensors, drones and management software, operation, and advantages.
- Technology that can be applied to agricultural production to increase productivity, improve product quality, and reduce losses in agricultural production.

- Sustainable agriculture and how new technologies can contribute to environmental conservation and the sustainable use of natural resources.
- Climate adaptation and how new technologies can be used to manage climate-related changes and adapt agriculture.
- Creation and innovation in the design of agricultural systems based on new technologies and proposal of improvements for rural sustainable development.

Structure the activity by applying design thinking steps

Step 1: Encouraging team spirit

This step aims to create a team spirit among team members, define the rules of cooperation, and familiarise each other with practical cooperation in the project.

Suggested activities:

1. Define group name and logo design (*page 20*).
2. Two truths and 1 lie (*page 30*).

Step 2: Problem research

The step aims to investigate and understand the problem of agricultural production and the challenges farmers face, analysing their needs and the opportunities new technologies offer.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Observation exercise (*page 39*).
3. Stakeholder map (*page 42*).

Step 3: Problem definition

The step aims to redefine the problem by improving agricultural production through new technologies, emphasising rural communities' sustainability, efficiency and prosperity.

Suggested activities:

1. How can we ... (*page 45*).
2. Scalar "Why? How?". Deepen understanding of user needs and correlate with possible solutions. (page 47).

Step 4: Analysis of user needs

Problem research aims to understand farmers' needs and preferences regarding new technologies, focusing on their challenges and emerging opportunities.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Creation of persona (*page 60*).

Step 5: Ideation

The step aims to produce a wide range of innovative ideas for using new technologies in agricultural production, encouraging creative thinking and collaboration.

Suggested activities:

1. Brainstorming (*page 69*).
2. Analogous inspiration (*page 73*).

Step 6: Idea evaluation

The step aims to critically evaluate and select the most promising ideas based on criteria such as effectiveness, feasibility, sustainability, social acceptance, and innovation to proceed to the next prototyping phase.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).

Step 7: Prototyping

The step aims to create a low-cost and fast-implementation prototype, which will allow the demonstration and evaluation of the functionality and effectiveness of a solution to improve agricultural production through new technologies.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Scenes/sets/roles *(page 85).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. It is recommended that the steps of the activity be structured on the digital platform eDea, which offers the possibility of collaborating on all the proposed steps anytime and anywhere. The eDea digital platform will enhance interactivity when

analysing and recording the problem, ideating, evaluating ideas, and recording the final proposed solution.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the teacher or facilitator after each step of the activity.
- Presentation of the proposed solution and justification of the choices.
- Feedback from the teacher or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Energy management at the local level

Why is the activity interesting?

A community or village that autonomously produces and manages the energy it consumes, utilising design thinking for sustainable solutions.

Applying design thinking to a project that focuses on energy management locally is interesting for several reasons:

- **Autonomy and self-management**. Communities are gaining independence from centralised energy grids, focusing on renewables and sustainable practices.
- **Innovation**. Design thinking encourages the creation of new, practical, and tailored solutions to the community's needs.
- **Environmental awareness**. The activity raises awareness of reducing carbon footprints and protecting the environment.
- **Social participation**. Residents actively participate in the decision-making and planning of their energy systems through collective participation.
- **Practical application**. Applying sustainable technologies, such as photovoltaics, wind turbines or energy storage systems, offers tangible solutions for everyday life.

Concepts covered by the activity and keywords

Sustainability, energy resource management, renewable energy, design thinking, social responsibility, energy efficiency.

Who is the activity for?

The activity addresses local communities and settlements, municipalities and regions, non-governmental organisations (NGOs), energy researchers and scientists, and private enterprises in energy, technology or construction.

Learning or planning objectives of the activity

- Understanding sustainable energy systems and developing knowledge of renewable and storage systems.
- Energy independence by exploring ways to self-manage energy and reduce dependence on grids.
- Cost-effectiveness with cost-benefit analysis and sustainability of energy solutions.
- Identify problems by identifying the community's energy needs and challenges.

- Innovative design and creation of solutions that incorporate local particularities and needs.
- Awareness raising and engagement with active community participation in the decision-making process.

Structure the activity by applying design thinking steps

Step 1: Encouraging team spirit

The step aims to create team spirit and define rules of cooperation.

Suggested activities:

1. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research

The step aims to investigate, describe, and record the problem broadly, which allows for the identification of opportunities to improve services and practices.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Identification of correlations (*page 34*).

Step 3: Problem definition

The goal is to identify the user groups that will benefit from the proposed solution and broaden their needs.

Suggested activities:

1. Route map (*page 51*).
2. Fly on the wall (page 58).

Step 4: Ideation

The step aims to introduce as many ideas as possible to design a potential solution.

Suggested activities:

1. Exercise 6-3-5 (*page 66*).
2. How could we... (*page 70*).
3. I like, I would like, what if... (*page 72).*

Step 5: Idea evaluation

The step aims to evaluate ideas and select the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Usage scenarios. Creation of scenarios describing the use of the system by users in everyday situations (*page 83).*
2. Test with users (*page 86*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The eDea digital platform for this activity can enhance collaboration, communication, and efficiency. The platform will contribute to the collection and analysis of data on energy needs and community dynamics, the organisation of online polls or questionnaires to collect opinions, real time collaboration to create working groups and manage ideas, organisation of online meetings to discuss proposals and evaluate progress, integration of interactive tools, such as virtual workshops, to encourage active participation and generation of innovative ideas; use of dedicated design software through the platform to create and share prototypes and designs; creation of digital prototypes and virtual simulations of energy systems; recording and analysis of proposals aimed at improving design; Use interactive platform tools to gather feedback from the community, integrate observations and suggestions for continuous improvement of solutions, create and share digital presentations to disseminate results, use graphics, diagrams and other visual representations to make data easier to understand.

The eDea platform offers a flexible environment that supports every activity step, enhancing collaboration and facilitating the effective implementation of objectives.

Assessment of newly acquired knowledge

Suggested activities:

- Analyzing the achievement of objectives by measuring the solution's effectiveness, such as reducing energy costs.
- Analysis of the impact on the community, acceptance, and contribution of the solution to the local community.

- Feedback and continuous evaluation and improvement of the proposed solutions.

The activity can act as a model of sustainability and social action by enhancing autonomy and cooperation at the local level.

Management of natural resources - water

Why is the activity interesting?

A community or settlement that designs and implements practices for the self-management of water resources utilising design thinking for sustainable and efficient solutions.

The application of design thinking to water management is interesting for the following reasons:

- **Autonomy and efficiency**. Strengthening the community's independence through the optimal utilisation of local water resources.
- **Environmental sustainability**. Contributing to the reduction of water waste and the maintenance of its quality.
- **Innovation**. Creation and implementation of innovative solutions that meet the specific needs of each region.
- **Social participation**. Active involvement of residents in decision-making and management of water resources.
- **Practical application**. Application of technologies, such as rainwater collection tanks, filtration and recycling systems that improve everyday life.

Concepts covered by the activity and keywords

Sustainability, water management, design thinking, social responsibility, technological integration.

Who is the activity for?

The activity is addressed to local communities and settlements, municipalities and regions, non-governmental organisations (NGOs), researchers and scientists in water management, and private companies.

Learning or planning objectives of the activity

- Understanding water systems and learning the basic principles of water management.
- Environmental awareness and raising awareness for saving and protecting water resources.
- Cost-benefit analysis with assessment of sustainable solutions' economic and environmental advantages.
- Identification of needs and local problems in water management.
- Innovation and creation of solutions that meet the specific needs of each community.

- Evaluation and improvement with continuous feedback and adaptation of solutions.

Structure the activity by applying design thinking steps

Step 1: Encouraging team spirit

This step aims to create a team spirit among the team members, define the rules of cooperation, and get to know each other so that they can collaborate effectively on the project.

Suggested activities:

1. Table of interests (*page 22*).
2. Two truths and 1 lie (*page 30*).

Step 2: Problem research

The step aims to investigate and understand the problem of responsible management of natural resources, particularly water, analysing the needs and the opportunities offered by new technologies and innovative interventions.

Suggested activities:

1. Metaphors and similes (*page 36*).
2. Observation exercise (*page 39*).

Step 3: Problem definition

The step aims to redefine the problem by focusing on the need for water management processes through emerging technologies and community engagement.

Suggested activities:

1. Expert eyes (*page 35*).
2. Feedback gallery table. Collect feedback and evaluate ideas in a systematic way *(page 62).*

Step 4: Ideation

The step aims to generate innovative ideas for using new technologies in responsible water management, encouraging creative thinking and collaboration.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Brainstorming (*page 69*).

Step 5: Idea evaluation

This step aims to critically evaluate and select the most promising ideas based on criteria such as effectiveness, feasibility, sustainability, social acceptance, and innovation in order to proceed to the next phase of prototyping.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).

Step 6: Prototyping

The step aims to create a low-cost and rapid-implementation prototype, which will allow the demonstration and evaluation of the functionality and effectiveness of a solution for improving agricultural production through new technologies.

Suggested activities:

1. Description of the proposed solution with the user's journey *(page 82*).
2. Specify a variable (*page 87*).

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The eDea digital platform for this activity can enhance collaboration, communication, and efficiency by covering the different design and implementation phases. The platform will contribute to data collection, conducting research, strengthening the cooperation with team management tools, coordination, organising digital workshops for idea development, prototyping through the platform, virtual application simulations, collecting feedback, digitally communicating results with graphs and charts, sharing good practices, and disseminating management models to other communities.

Assessment of newly acquired knowledge

Suggested activities:

- Measuring effectiveness by analysing data to reduce water consumption.
- Analysis of social impact by assessing community participation and satisfaction.
- Continuous improvement by incorporating observations for future applications.

The activity promotes sustainability, collaboration, and innovation, contributing to the efficient management of water resources.

Socialisation of older people and inclusion in society

Why is the activity interesting?

A community or settlement that designs and implements practices for the self-management of water resources, utilising design thinking for sustainable and efficient solutions.

Applying design thinking to socialise with older people is interesting for several reasons:

- **Coping with loneliness**. The activity helps combat the social isolation and loneliness that older people experience.
- **Intergenerational cooperation**. It enhances communication and interaction between different generations.
- **Mental health promotion**. Active participation improves the mood and self-esteem of older people.
- **Social cohesion**. It empowers local communities and promotes solidarity.
- **Innovation**. Creative approaches to enhance older people's participation produce original and sustainable solutions.

This activity can act as a model for social inclusion and empowerment, promoting solidarity and equal participation.

Concepts covered by the activity and keywords

Social inclusion, intergenerational interaction, design thinking, digital health, active participation.

Who is the activity for?

The activity is aimed at older people, local communities, social institutions, schools and educational institutions, voluntary groups or individuals, and groups interested in offering support.

Learning or planning objectives of the activity

- Understanding needs by developing empathy for the needs and challenges of older people.
- Intergenerational collaboration and enhancement of communication and cooperation skills.
- Developing relationships and creating strong social bonds and trust.
- Develop actions and create initiatives that encourage participation and inclusion.

- Innovation by incorporating modern tools and approaches to support older people.
- Evaluation and continuous improvement of actions based on feedback.

Structure the activity by applying design thinking steps

Step 1: Encouraging team spirit

The step aims to create a team spirit and define rules of cooperation.

Suggested activities:

1. Warm-up, step 1: Story of my name (*page 27*)
2. Warm-up, step 2: Survival skills in a post-apocalyptic era (*page 28*).
3. Warm-up, step 3: Professional skills (*page 29*).

Step 2: Problem research

The step aims to investigate, describe, and record the problem broadly, which allows for the identification of opportunities for improving services and practices.

Suggested activities:

1. User observation (shadowing) (*page 38*).
2. What? How? Why? (page 41).

Step 3: Problem definition

The goal is to identify the user groups that will benefit from the proposed solution and investigate their needs.

Suggested activities:

1. How can we ... (*page 45*).
2. Table 2x2 (*page 46*).
3. Route map (*page 51*).

Step 4: Ideation

The step aims to introduce as many ideas as possible towards the design of a potential solution.

Suggested activities:

1. Affinity diagrams (*page 65).*
2. Brainstorming (*page 69*).

Step 5: Idea evaluation

The step aims to evaluate ideas and select the one implemented as a prototype.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).
2. Overview of the design team's portfolio (*page 79).*

Step 6: Prototyping

The step aims to design a prototype that users can use to generate feedback.

Suggested activities:

1. Test with users (*page 86*).
2. Download and edit videos (*page 89*).
3. Creation of an intangible prototype (*page 91)*.

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

Using the eDea digital platform for this activity can enhance collaboration, communication, and efficiency at all stages of implementation, such as understanding needs, real time collaboration, ideation, and sharing ideas through digital presentations and dissemination of results.

Assessment of newly acquired knowledge

Suggested activities:

- Analysis of goal achievement by measuring participation and satisfaction of older people.
- Analysis of the impact on society and the contribution to improving their quality of life.
- Feedback, continuous evaluation, and adaptation of actions.

Management of shared spaces in local communities

Why is the activity interesting?

A community or settlement that manages and develops its communal spaces, such as parks, squares, and gathering spaces, in a sustainable and participatory way, utilising design thinking to enhance social interaction and quality of life.

The application of design thinking to manage communal spaces locally is interesting for several reasons:

- **Social participation**. It encourages residents' active involvement in designing and managing their shared spaces, empowering the community.
- **Innovation**. Design thinking encourages the creation of innovative solutions that meet the community's needs for recreation, education, and socialisation.
- **Sustainability**. Sustainable green and resource management practices and technologies, such as rainwater harvesting systems or natural shading systems.
- **Upgrading quality of life**. Creating spaces that enhance the social interaction and well-being of residents, improve everyday life, and enhance the aesthetics of the space.
- **Environmental awareness**. Raising awareness of the importance of sustainability in the community.

Concepts covered by the activity and keywords

Sustainability, social participation, regeneration, design thinking, community well-being.

Who is the activity for?

The activity addresses local communities and settlements, municipalities and regions, non-governmental organisations, architects and urban planners, entrepreneurs, and design companies engaged in upgrading common spaces, such as builders or designers.

Learning or planning objectives of the activity

- Develop an understanding of community needs for shared space.
- Learning to apply sustainable and efficient practices in the design and management of public spaces.
- Strengthening community collaboration and involvement.
- Understanding the importance of upgrading public space for social interaction and well-being.

- Identification and recording of residents' needs and the community's priorities.
- Design of spaces that promote social participation and collaboration.
- Creating sustainable and functional solutions for the use of shared spaces.

Structure the activity by applying design thinking steps

Step 1: Encourage team spirit

The step aims to create a team spirit and define rules of cooperation.

Suggested activities:

1. Water transport (page 23).
2. Water purification (*page 26*).

Step 2: Problem research

The step aims to investigate, describe, and record the problem broadly, which allows for the identification of opportunities for improving services and practices.

Suggested activities:

1. Identification of correlations (*page 34*).
2. Metaphors and similes (*page 36*).
3. Immersion for insight (*page 37*).

Step 3: Define a problem

The goal is to identify the user groups that will benefit from the proposed solution as well as to broaden their needs.

Suggested activities:

1. Scalable "Why-How?" Deepening the understanding of user needs and correlating with potential solutions. (*page 47).*
2. Photo diary (*page 54*).

Step 4: Ideation

The step aims to introduce as many ideas as possible towards the design of a possible solution.

Suggested activities:

1. Coordinating a brainstorming session (*page 70*).
2. Analogous inspiration (*page 73*).

Step 5: Evaluation of ideas

The step aims to evaluate ideas and select the one implemented as a prototype.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).
2. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user journey (*page 82)*.
2. Description of the problem with physical prototyping (*page 90*). Construction of a simple, physical model to demonstrate the operation of the system.

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

Using the eDea digital platform can enhance the process of managing public spaces in local communities and strengthen the collaboration and participation of residents. The digital platform can be used to collect and distribute information about the state of public spaces and the needs of the community, with residents participating in the recording of problems and proposals for real time collaboration with working groups sharing ideas on the improvement of common areas, integration of interactive tools to encourage active participation of citizens, participation of residents in digital workshops, creation and evaluation of proposals for the configuration of common areas, Organizing online meetings to discuss and evaluate ideas in real time enhancing transparency and cooperation between residents and relevant bodies, managing time and timelines for the maintenance and upgrading of common areas, evaluation and commentary to improve proposals and plans. Residents can provide feedback through the platform for the ongoing improvement of common areas and use graphics, diagrams, and other visual tools to present and analyse the data.

The eDea digital platform offers an integrated environment that strengthens the design and improvement process of common areas, allowing the active participation and collaboration of all community stakeholders.

Assessment of newly acquired knowledge

Suggested activities:

- Analysis of the achievement of objectives by measuring the effectiveness of the plans, such as increased participation of residents.
- Analysis of the impact on the community, acceptance, and success of the proposed solutions.
- Continuous evaluation and integration of feedback to improve the spaces and their functionality over time.

Discussion and activity management platform for parents' associations

Why the activity is interesting

The discussion and activity management platform for Parents' Associations allows parents to collaborate to improve their children's educational experience and manage their club's activities in an organised and effective way, leveraging design thinking for innovative solutions.

The development and use of the platform for parents' associations offer unique opportunities for collaboration and action management. The platform enhances parents' ability to organize and actively participate in the educational process and improves communication within the school community.

- **Social participation**. The platform enhances parental participation, allowing for the gathering of ideas and the discussion of important school topics.
- **Organisation and coordination**. It offers tools for the effective management of the association's meetings, events, and activities.
- Strengthening. Parents are empowered to participate in important decisions and create solutions to support students.
- **Strengthening the community**. It strengthens collaboration between parents and teachers, encouraging collective action and creating a supportive school community.

The activity shows how technology can enhance parental collaboration and participation and improve school community organisation, management, and communication.

Concepts covered by the activity and keywords

Collective participation, event organisation, design thinking, educational support, active communication.

Who is the activity for?

The activity is addressed to parents' associations, schools, municipalities, local authorities, non-governmental organisations, voluntary organisations, educators, and coordinators working with parents and school communities to enhance participation and cooperation.

Learning or design objectives of the activity

- Understand communication and management tools.
- Development of collaboration and team management skills.

- Strengthening participation and active action in the educational sector.
- Learning how to organise and monitor educational and extracurricular activities.
- Creation of communication and organisation strategies.
- Setting priorities and objectives for the activities of the association.
- Development of tools and procedures to improve parental involvement.

Structure the activity by applying design thinking steps

Step 1: Encourage team spirit

The step aims to create a team spirit and define rules of cooperation.

Suggested activities:

1. Set a team name and design a logo (*page 20*).
2. Table of interests (*page 22*).

Step 2: Problem research

The step aims to investigate, describe, and record the problem broadly, which allows for the identification of opportunities for improving services and practices.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. User observation (shadowing) (*page 38*).

Step 3: Define a problem

The goal is to identify the user groups that will benefit from the proposed solution and broaden their needs.

Suggested activities:

1. Design and conduct colour interviews, promotion, and reflection *(page 49*).
2. Route map (*page 51*).
3. Five "Why?". Tool for deeper understanding of the causes behind user behaviours (*page 53*).

Step 4: Ideation

The step aims to introduce as many ideas as possible towards the design of a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. How could we ... (*page 70*).

Step 5: Evaluation of ideas

The step aims to evaluate ideas and select the one implemented as a prototype.

Suggested activities:

1. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the proposed solution with the user journey (*page 82)*.

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

The use of the eDea digital platform supports the management of the activities of the parents' association with the following tools data collection through questionnaires to understand needs, cooperation and coordination of actions through collaboration tools, online meetings and meetings for proposal analysis and progress evaluation, ideation and planning of actions, analysis, and evaluation for continuous improvement of activities.

Assessment of newly acquired knowledge

Suggested activities:

- Analysis of the achievement of objectives by measuring the effectiveness of the activities and objectives of the association.
- Analysis of the impact on the community, acceptance, and participation of parents in the activities.
- Collect feedback for the continuous improvement and strengthening of cooperation.

High school students plan a sustainable future for their city

Why the activity is interesting

Applying design thinking to an activity that aims to create a sustainable future for a city can be interesting for many reasons:

- **Innovation**. Design thinking promotes creative innovation. Students will have to rethink the existence and organisation of their city, proposing new ideas and solutions to challenges such as sustainability, energy, transportation, and the use of natural resources.
- **Distinctive skills**. The design thinking process encourages the development of skills such as critical thinking, collaboration, problem-solving, and communication, which are important for preparing students for the future.
- **Environmental** awareness. Through design thinking, students can recognise the impact of their decisions on the environment. They can design more environmentally friendly cities, considering sustainability and reducing the negative effects on the ecosystem.
- **Social participation**. Design thinking encourages community involvement. Students can interact with the local community to gather opinions, understand needs, and create solutions that serve the local population.
- **Education for the future**. Through this activity, students learn how to tackle real problems, applying their knowledge to practical challenges and enhancing their abilities to create sustainable solutions. At the same time, it introduces students to a field for which high school courses do not include information.

Overall, applying design thinking to such a project can inspire students, give them tools to solve problems, and invite them to actively participate in creating more sustainable and innovative solutions for their community.

Concepts covered by the activity and keywords

Sustainability, design thinking, innovation, social responsibility, collaboration, critical thinking, practical application, awareness-raising.

Who is the activity for?

The activity is aimed at high school students who are interested in participating in a design thinking process to create sustainable solutions for their city.

Learning or design objectives of the activity

- Understanding the process of design thinking and the stages it entails.

- Development of critical thinking skills when evaluating and improving proposed solutions.
- Development of collaboration skills through group activities.
- Application of mathematical, scientific and technological knowledge to practical problems.
- Development of communication skills for the effective presentation of ideas and solutions.
- Understanding the problems facing the city and identifying the community's needs.
- Development of capacities to create innovative solutions for improving the city.
- Identify the strengths and weaknesses of the proposed solutions and develop improvement capacities.
- Informing and raising awareness about environmental and sustainability issues.
- Acquiring skills that will help them address real social, economic and environmental challenges.

Structure the activity by applying design thinking steps

Step 1: Encourage team spirit

Students are divided into groups representing different parts of society, such as the school, the municipality, a supermarket, a clothing store, etc. The step aims to create team spirit and define rules of cooperation.

Suggested activities:

1. Description of team profiles and collaboration rules (*page 21*).

Step 2: Problem research

The step aims for students to imagine what their organisations would be like for a day. They think about what decisions they would have to make and what ideas they could have to improve sustainability.

Suggested activities:

1. Expert eyes (*page 35*).
2. Metaphors and similes (*page 36*).

Step 3: Define a problem

The aim is to identify the user groups that would benefit from the proposed solution and broaden their needs.

Suggested activities:

1. How can we ... (*page 45*).
2. Creation of persona (*page 60*).
3. Feedback gallery table. Collect feedback and evaluate ideas in a systematic way *(page 62).*

Step 4: Ideation

The groups generate ideas for sustainable proposals and improvements, considering their experiences as "people" from their representative organisation. The aim is to create as many ideas as possible.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. How could we ... (*page 70*).
3. Brainstorming (*page 69*).

Step 5: Evaluation of ideas

This step evaluates ideas and selects the one to be implemented as a prototype.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).
2. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology not maturing (*page 76*).

Step 6: Prototyping

Teams develop prototypes of their proposed solutions with physical models or digital representations to complete the design thinking process and present their ideas. The step aims to design a prototype that users can use to generate feedback.

Suggested activities:

1. Usage scenarios. Creation of scenarios describing the use of the system by users in everyday situations (*page 83).*
2. Description of the problem with physical prototyping (*page 90*). Construction of a simple, physical model to demonstrate the operation of the system.

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

Using the eDea digital platform for this activity can enhance collaboration, communication, and efficiency at all stages of implementation, such as understanding needs, real time collaboration, ideation, and sharing ideas through digital presentations and dissemination of results.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the instructor or coordinator after each step of the activity.
- Presentation of the proposed solution and justification of the options.
- Feedback from the lecturer or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Telemedicine in remote areas and islands

Why the activity is interesting

The activity that applies design thinking to create telemedicine in remote areas and islands is enjoyable for many reasons:

- **Problem solving**. Addressing the problem of inadequate healthcare in remote areas and islands by offering innovative solutions for healthcare delivery through telemedicine.
- **Improving access to healthcare**. Promote access to high-quality healthcare in areas that have difficulty accessing medical services.
- **health innovation**. Telemedicine encourages innovation in health, enabling the use of technology to improve the delivery of health services.
- **Education and awareness-raising**. Offer training opportunities to participants about telemedicine and its importance for health and well-being.
- **Humanitarian impact**. Creating a positive humanitarian impact by offering help and care to needy communities.
- **Contributing to sustainable development**. Telemedicine can promote sustainable development by reducing the need for long commutes, saving resources, and reducing the ecological footprint.

Overall, this activity offers a comprehensive approach to addressing health problems in remote areas, combining technology, design thinking and sustainable development.

Concepts covered by the activity and keywords

Telemedicine, Remote Areas, Sustainable Development, Health Innovation, Access to Health, Community Education, Social Justice, Technology Infrastructure, Collaboration and Teamwork, Health in Human-Centered Planning.

Who is the activity for?

The activity design for establishing telemedicine in remote areas and islands can be addressed to various stakeholders and professional sectors. The activity is addressed to teachers and professors, health science students, health professionals, communities in remote areas, and professionals in general in professional health environments.

Learning or design objectives of the activity

- Understanding the basic principles and functions of telemedicine, including using technology to deliver healthcare.

- Capacity building in implementing innovations in the health sector through telemedicine.
- Learning about the challenges and needs faced by communities in remote areas related to health.
- Development of skills in design thinking to identify problems and design innovative solutions.
- Strengthen communication and collaboration skills with team members to plan and implement the activity.
- Developing sensitivity to social and health inequalities and problems in remote areas.
- Understanding the importance of sustainable development and implementing sustainable healthcare solutions.
- Develop critical thinking skills to assess the challenges and impacts of healthcare in remote areas.

Structure the activity by applying design thinking steps

Step 1: Encourage team spirit

The step aims to create a team spirit and define rules of cooperation.

Suggested activities:

1. Table of interests (*page 22*).
2. Two truths and 1 lie (*page 30*).

Step 2: Problem research

The step aims to investigate, describe, and record the problem broadly, allowing for identifying opportunities for improving services and practices. Gather information on health needs in remote areas. Identify challenges and opportunities in the provision of health care.

Suggested activities:

1. Expert eyes (*page 35*).
2. Metaphors and similes (*page 36*).

Step 3: Problem definition

The goal is to identify the user groups that will benefit from the proposed solution and broaden their needs.

Suggested activities:

1. Route map (page 51).

2. Sharing stories (*page 58*).

Step 4: Ideation

The step aims to introduce as many ideas as possible towards the design of a potential solution.

Suggested activities:

1. Affinity diagrams (*page 65).*
2. Powers of 10. Framing technique to help examine the challenge from various scales (*page 67*).
3. I like it, I would like, what if... (*page 72*).

Step 5: Evaluation of ideas

The step aims to evaluate ideas and select the one to be implemented as a prototype.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the proposed solution with the user journey (*page 82)*.
3. Creation of digital prototype. Construction of an interactive digital prototype to demonstrate essential accessibility functions *(page 92).*

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

Using the eDea digital platform for this activity can enhance collaboration, communication, and efficiency at all stages of implementation, such as understanding needs, real time collaboration, ideation, and sharing ideas through digital presentations and dissemination of results.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the instructor or coordinator after each step of the activity.
- Presentation of the proposed solution and justification of the options.

- Feedback from the lecturer or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Design of an artistic space for psychosocial health

Why the activity is interesting

The activity is enjoyable for many reasons:

- Combining art and psychosocial health. The activity combines art with psychosocial health, offering an innovative way of approaching wellbeing and mental health.
- Community involvement. The process involves community members in the design of the space, thus offering an opportunity for community coordination and involvement.
- Design thinking to create an encouraging environment. Design thinking focuses on creating encouraging spaces that support the positive psychosocial experience.
- Social cohesion and prosperity. Designing an artistic space for psychosocial health contributes to social cohesion and improves individuals' well-being.
- Innovative approach to health. Applying design thinking to psychosocial health services opens new horizons for innovative mental health approaches.
- Development of artistic expression. The activity encourages creative expression and creativity to express and address challenges.

The overall idea is to create a space that is not only a positive intervention in psychosocial health but also reflects the community's needs and desires, using a process that incorporates design thinking principles.

Concepts covered by the activity and keywords

Design thinking, psychosocial health, community involvement, artistic expression, community and well-being, health innovation, collaboration, creative community.

Who is the activity for?

Pupils and students, teachers, families and parents, health professionals, and the community.

Learning or design objectives of the activity

- Participants will understand the design thinking process and how it can be applied to create and enhance artistic spaces.
- Participants will be trained to collaborate effectively as a team to design and implement an artistic space jointly.
- Participants will explore the psychosocial needs of the community and how space can contribute to well-being.

- Participants will acquire skills in the design of physical spaces, emphasising functionality and aesthetics.
- Participants will be encouraged to develop and express their creativity through space design.
- The design goal is to create an artistic space that meets the community's needs.
- The design goal is to incorporate artistic elements that promote a positive atmosphere and psychosocial well-being.
- Design goals include creating a flexible space that can adapt to the community's changing needs.
- The design goal is to use innovative approaches and materials in the design of the space.
- The design goal is to use symbolic elements and express the community identity through the space.

Structure the activity by applying design thinking steps

Step 1: Encourage team spirit

The step aims to create a team spirit and define rules of cooperation.

Suggested activities:

1. Telling Our Stories (*page 31*).

Step 2: Problem research

The step aims to investigate, describe, and record the problem broadly, allowing for the identification of opportunities for improving services and practices. Research the community's psychosocial needs and collect data.

Suggested activities:

1. Immersion for insight (*page 37*).
2. What? How? Because (*page 41*).

Step 3: Problem definition

The goal is to identify the user groups that will benefit from the proposed solution and expand their needs. Define basic goals and requirements for the artistic space.

Suggested activities:

1. How can we ... (*page 45*).
2. Five "Why?". Tool for deeper understanding of the causes behind user behaviours (*page 53*).

Step 4: Ideation

The step aims to introduce as many ideas as possible towards the design of a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Powers of 10. Framing technique to help examine the challenge from various scales (*page 67*).
3. Analogous inspiration (*page 73*).

Step 5: Evaluation of ideas

The step aims to evaluate ideas and select the one to be implemented as a prototype. The community evaluates the space, incorporating feedback and adjusting for improvement. Open opinion events are organised to evaluate the prototype space. Discussions with the community are conducted for any improvements.

Suggested activities:

1. Design guidelines (*page 78*).

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*) or Wizard of Oz *(page 88*).
2. Creation of an intangible prototype (*page 91)*.

How the prototype is built or the idea is presented depends on the proposed solution.

Use of the digital platform

Using the eDea digital platform for this activity can enhance collaboration, communication, and efficiency at all stages of implementation, such as understanding needs, collaborating in real time, ideating, sharing ideas through digital presentations, and disseminating results. In addition, it can be used to facilitate and enhance the artistic space design process for psychosocial health.

Assessment of newly acquired knowledge

Suggested activities:

- Feedback from the instructor or coordinator after each step of the activity.

- Presentation of the proposed solution and justification of the options.
- Feedback from the lecturer or coordinator and members of other groups on the proposed solution.
- Repetition of the steps of the activity to improve the proposed solution and new presentation of results.

Pension plan and financial planning service planning

Why the activity is interesting

The activity concerns creating innovative solutions to inform citizens about their pension plans and the importance of financial planning for the future. It allows students to design a real service that can be addressed to different audiences, such as young workers, people close to retirement, freelancers, or even students who wish to prepare themselves in time for their future. The activity approaches the information and timely formulation of a sustainable pension plan as a service that aims to help citizens understand their choices, make informed decisions, and formulate a sustainable financial plan for their retirement.

It is characteristic that various solutions have begun to be developed in this sector, both digital services provided by state bodies and help citizens to understand a complex system such as the pension system and to formulate a personalised plan for their future, as well as start-ups that have begun to emerge in the sector. A typical example is the company Jarvis, which enables employees to plan their retirement according to their ideal preferences actively. The platform offers an app for managing personal and professional pension plans, providing information and support for specific retirement goals.

Through this activity, students will become familiar with service as an experience that evolves and supports users throughout their lives as their needs change. Also, students are allowed to choose their solution's target audience, considering the needs of different social and age groups and each audience's digital familiarity levels. In general, younger people are more comfortable with technology, while groups such as the over-60s, approaching retirement, may not all have developed digital skills. Therefore, the solution should be simple and friendly to all users. Therefore, the final solution to be designed can vary significantly, from the design of a digital application or a personalised online platform to the creation of a multi-channel information ecosystem that includes simple and accessible services for users with low familiarity with technology or the development of an information campaign on the importance of saving and financial preparation.

The design of a personalised pension information service could have a substantial social impact, helping citizens of all ages to make more conscious and well-informed decisions. The activity enables students to develop design thinking, user analysis, and creative social problem-solving skills. In addition, there is the possibility of collaborating with institutions such as insurance companies, public organisations, and technology companies so that students' ideas have a realistic application and a

prospect of implementation. This reinforces that students can actively contribute to positive social welfare and retirement change. This real impact adds an extra incentive for students to complete the activity successfully.

Finally, the activity is appropriately designed so that students have easy access to the commons they will have to study. Students can contact young professionals, older workers, and pension experts to understand the needs and challenges citizens face at different stages and phases of their lives. Thus, the activity encourages students to adopt a user-centred approach and learn the importance of putting themselves in users' shoes by conducting primary research with citizens and/or organisations in the field.

Concepts covered by the activity and keywords

Pension, organisation, service, information, prevention, education, social welfare, services, usability, public services, digital accessibility

Who is the activity for?

The activity is addressed to students of design schools, students in economics, financial analysis, and strategy students, and business administration, marketing, and public relations students interested in developing communication and information strategies for the pension system. Professionals creating digital products and services, professionals or executives of public organisations working in pension systems, social welfare and welfare, design teams, and the general public.

Learning or design objectives of the activity

The learning or design objectives of the activity are:

- Understanding the concept of service and distinguishing it from the product concept.
- Understanding basic principles of service planning.
- Understanding design principles focusing on accessibility of digital and physical services.
- Understanding design for all principles.
- Development of critical and analytical thinking.
- Developing collaborative skills within a working group to formulate a new value proposition jointly.
- Developing empathy through conducting primary research with users.
- Define design problems based on research conducted with users.
- Presentation of solutions in writing and orally and evaluation of solutions by external judges.

Structure the activity by applying design thinking steps

Step 1: Develop a team spirit of collaboration

The step aims to create team spirit among the team members, define the rules of cooperation, and familiarise them with each other.

Suggested activities:

1. Description of team profiles and collaboration rules (*page 21*).
2. Warm-up, step 2: Survival skills in a post-apocalyptic era (*page 28*).

Step 2: Investigate a problem

The step aims to investigate various aspects of the topic, good practices from Greece and abroad, and users' problems and needs, as already recorded in the literature.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Empathy interviews (*page 52*).

Step 3: Problem definition

The step aims to analyse the findings collected in the previous step and use them to identify the problem the team will focus on to design a solution.

Suggested activities:

1. Telling Our Stories (*page 31*).
2. Creation of persona (*page 60*).
3. How can we ... (*page 45*).

Step 4: Ideation

The step aims to generate as many ideas as possible to design a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Analogous inspiration (*page 73*).

Step 6: Evaluation of ideas

The step aims to evaluate ideas and select the one implemented as an original.

Suggested activities:

1. Select one of the brainstorming ideas (*page 75*).

2. Design guidelines (*page 78*).

Step 7: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).

How the prototype is built, or the idea presented depends on the type of proposed solution.

Use of the digital platform

The activity can be implemented digitally and in a traditional classroom without digital tools. Structure the steps of the activity on the eDea digital platform is recommended, which allows collaboration on all the proposed steps anywhere and anytime. The eDea digital platform will enhance interactivity during the investigation phase of the problem by sharing images, videos, and scientific articles. Accordingly, it will improve the effective sharing of stories, as the team will have all the feedback they received from users on a board. It will also facilitate collaborative ideation to find solutions, using examples of similar inspiration that team members or the teacher can upload, and then the choice to focus on specific ideas. In summary, leveraging the eDea solution will enhance effective collaboration at every stage of the activity.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the instructor or coordinator after each step of the activity
- Feedback from the members of the other groups after each step of the activity.
- Presentation of the proposed final solution and justification of the options
- Feedback from the lecturer or coordinator and members of other groups on the proposed solution
- Discussion in the classroom about new knowledge with the aim of consolidation.

Designing the post-purchase product return experience

Why the activity is interesting

The activity concerns the design of the process of returning products after purchase to improve the consumer experience, enhancing their satisfaction and supporting, from start to finish, the entire process of purchasing a product, which can result in the return of the product for various reasons. The activity is aimed at the retail sector. It concerns businesses that trade in consumer products such as clothing, electronics, furniture, technology, household products, foodstuffs, sporting goods and many more.

The retail industry has undergone significant changes in recent years. With the enhancement of digital commerce and online shopping, the probability of returning a product increases significantly as the product may not be in the right size, it may not meet the quality the buyer expected, it may be used and worn by another buyer, and so on. Consumers now have high expectations and demand an easy and fast product return process while expecting businesses to provide transparent and straightforward instructions combined with flexible return terms. This creates the need to redesign this process to meet the needs of modern consumers.

As part of the activity, participants are invited to design and propose innovative solutions to improve the product return process, considering the needs of consumers and the sustainability and efficiency of the process for businesses. Among other things, participants can explore and propose solutions that use digital communication channels exclusively or that leverage a combination of digital services and product return services provided in physical stores. In addition, students are particularly interested in studying ways to make the return process more environmentally friendly, for example, by offering options for recycling products or creating new uses for returned items that are worn out and not suitable for sale.

Also, participants can study and focus on different product return scenarios. For example, they can only focus on returning products due to the wrong size or returning worn or broken products. In particular, broken or worn products often lead to intense disputes between companies and consumers, as the consumer may not be able to prove that the product arrived with a problem, which can lead to the business refusing to accept it back and refund the money. In these cases, the consumer loses his product and his money, while the business loses the trust and satisfaction of the customer. In addition, such situations hurt the business's reputation, but many companies do not recognize this and prefer to focus on short-term profit. This can, however, lead to long-term damage to their reputation and a loss of clientele. For example, according

to research, poor customer service in the case of the purchase of broken, worn or non-functional products can directly and significantly damage a brand's reputation, which demonstrates the need for effective communication and investment of resources in the formulation of resolution strategies by companies (Eccles, Newquist and Schatz, 2007). The activity provides students with the opportunity, if they choose, to research and focus on this critical dimension of the product return process.

Through this activity, participants can improve one of the most critical aspects of the retail shopping experience and design solutions that enhance customer satisfaction and business competitiveness. Therefore, the activity provides many opportunities for collaboration with local businesses. At the same time, students have easy and direct access to research to the purchasing public and with professionals in the retail sector. They can also visit physical stores for on-site observation and research with the consumer public.

Concepts covered by the activity and keywords

Returns, customer service, litigation, return policy, retail, physical store, refund, product replacement, reputation management, after-sales services, shopping experience, complaint management, digital commerce, online shopping, consumer experience.

Who is the activity for?

The activity is aimed at students studying in marketing, business administration, product and service design. It is also addressed to professionals involved in customer support and complaint management, professionals working in the after-sales sector, entrepreneurs in the retail sector, marketing executives, and executives of public organisations such as consumer institutes and other similar organisations that defend consumer rights. It is also addressed to design teams and the general public

Learning or design objectives of the activity

The learning or design objectives of the activity are:

- Understand the importance of the product return experience and its role in consumer satisfaction and business reputation.
- Develop critical and analytical thinking about return procedures and the factors that affect businesses' acceptance or rejection of return requests.
- Develop problem-solving skills by analysing the challenges faced by consumers and businesses in the context of product returns.

- Developing systems thinking to understand the relationship between returns, customer service policies, logistics, economic costs and environmental impacts.
- Strengthening cooperation skills through teamwork and collective decision-making.
- Developing empathy through primary consumer research to understand the needs and challenges they face when returning products.
- Familiarity with the principles of customer experience management and the importance of formulating transparent and fair returns policies.
- Define design problems based on research conducted with users and businesses.
- Develop innovative solutions to improve return procedures, considering consumer needs and business interests.
- Presentation of solutions in writing and orally, enhancing communication and argumentation skills.

Structure the activity by applying design thinking steps

Step 1: Develop a team spirit of collaboration

The step aims to create team spirit among the team members, define the rules of cooperation and familiarize the team members with each other.

Suggested activities:

1. Table of interests (*page 22*).
2. Two truths and 1 lie (*page 30*).

Step 2: Problem research

The step aims to investigate and record users' needs. The proposed steps focus on extreme users. In this case, these are users who have suffered a lot in the past during the product return process and may also include users who have never had to return a product.

Suggested activities:

1. User observation (shadowing) (*page 38*).
2. Interviews with extreme users (*page 56*).
3. Route map (*page 51*).

Step 3: Problem definition

The step aims to define the problem on which the team will work from now on to design a solution:

Suggested activities:

1. How can we ... (*page 45*).

Step 4: Ideation

The step aims to introduce as many ideas as possible towards designing a potential solution.

Suggested activities:

1. Exercise 6-3-5 (*page 66*).

Step 5: Evaluation of ideas

The step aims to evaluate ideas and select the one implemented as an original.

Suggested activities:

1. Overview of the design team's portfolio (*page 79).*

Step 6: Prototyping

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user journey (*page 82)*.
2. Test with users (*page 86*).
3. Telling Our Stories (*page 31*).

The way the prototype is made, or the idea presented depends on the proposed solution, in this case, whether it will be a digital or physical service.

Use of the digital platform

The activity can be implemented digitally or in a traditional classroom without digital tools. It is proposed that the stages of the activity be organised on the eDea digital platform, which allows collaboration at every step, anytime and anywhere. In particular, the media platform enhances the interactivity and efficient collaboration of the team in the analysis of the problem, as through the matrix, results from interviews can be directly exchanged, giving all members an overall picture of the findings and enhancing a common understanding of users' needs.

During the ideation stage and the selection of the best ideas, the platform offers the possibility of collaboration and quick recording of ideas so that no one is lost. Often, a team may need to return to a previous step to review or build on additional findings and ideas. Finally, when creating the prototype, the eDea platform facilitates its remote testing by users, regardless of geographic location, thus facilitating access to the public for this critical evaluation stage.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the instructor or coordinator after each step of the activity.
- Collaboration and feedback from a professional in the retail sector after each step of the activity.
- Feedback from the members of the other groups after each step of the activity.
- Presentation of the proposed final solution and justification of the options
- Feedback from the lecturer or coordinator and members of other groups on the proposed solution
- Discussion in the classroom about new knowledge with the aim of consolidation.

Redesign of the onboarding process for new employees in companies

Why the activity is interesting

Onboarding, i.e., onboarding new employees in a company, is critical for their success in the organisation. According to studies (Carucci, 2018), 20% of new hires leave their jobs within the first 45 days, which is attributed to inadequate onboarding processes. An organized and well-designed onboarding program helps employees better understand their roles and company expectations and integrate quickly and smoothly into the work environment. At the same time, it enhances job satisfaction and reduces the likelihood of early retirement.

Despite this, many companies still implement piecemeal or standardized onboarding processes, which do not consider employees' individualised needs. According to a Gallup survey (2022), 88% of employees say their companies have not had a good onboarding experience. The most successful onboarding practices include formulating personalised onboarding plans, creating mentoring systems, using technology tools, and enhancing company culture through activities that promote social interaction. In addition, a lack of proper guidance and communication at the early stage can lead to employees feeling isolated, having difficulty understanding their role, and, ultimately, leaving their jobs prematurely. According to studies, companies that offer a structured and interactive onboarding process have 50% higher employee retention during the first year of employment (Bauer, 2010).

In addition, technology has begun to play an increasingly important role in the onboarding process. Companies are using digital platforms to simplify the process and provide an enjoyable experience for new employees. Through tools such as gamification or virtual reality (VR), employees can gain a more interactive and engaging experience when joining the company. Leveraging artificial intelligence (AI) to personalise onboarding is another step toward improving the process.

As part of the activity, participants are invited to design and propose innovative solutions to improve the onboarding process of new employees, considering both the needs of employees and the requirements of businesses. Participants can explore and propose solutions that leverage exclusively digital tools, such as interactive platforms, mentoring apps for young workers and microlearning platforms, or solutions that combine technology with more traditional forms of integration, such as mentoring or the organisation of training workshops. In addition, it is of particular interest to study strategies that make the onboarding process more participatory and personalised, offering customized experiences depending on the role and needs of each employee.

Through this activity, participants can examine how one of the most important functions of a company or organisation, human resource management, can be improved, to enhance the satisfaction and engagement of new employees. The activity provides many opportunities for cooperation with businesses to adapt the solutions to the specific context and the needs of the specific business. At the same time, through the activity, students become familiar with basic business functions that they will encounter in their professional careers, gaining an essential understanding of how businesses operate. This experience effectively prepares them for the next phase, the job search, facilitating their transition from academia to the job market.

Finally, students will come into contact and have the opportunity to study important concepts and aspects related to the issue in greater depth, one of which is corporate culture. Corporate culture is crucial to the experience of new employees, as it helps to enhance the sense of belonging and inclusion. Businesses that promote transparency, inclusion, and communication are more likely to offer new employees a more enjoyable and effective onboarding. Therefore, company culture must be integrated into onboarding to ensure the process's success and employees' professional well-being. Also, the psychological dimension of inclusion is crucial to the new employee's experience. The first few days in a new job can be stressful and uncertain, so businesses must support new employees. Psychological support can be provided through systems where a more experienced employee guides and supports the new employee. These initiatives help smooth integration and reduce the stress that usually accompanies adapting to a new work environment. In this way, the connection between professional and personal life is highlighted, as well as how work can positively and negatively affect employees' psychological state.

Concepts covered by the activity and keywords

Recruitment, Human Resources, Human Resource Management, Mental Health at Work, Employee Experience, Corporate Culture, Communication, Mentoring, Support, Coaching.

Who is the activity for?

The activity is aimed at students studying business administration, human resource management, psychology, social sciences, and marketing to understand the importance of onboarding new staff in business and its relationship with employees' professional and mental well-being. It is also addressed to professionals, executives, and executives who are active in human resource management and corporate culture, as well as all professionals involved in recruiting and integrating new employees. It is also aimed at design teams and the general public.

Learning or design objectives of the activity

The learning or design objectives of the activity are:

- Understanding the onboarding concept and its importance for the smooth integration of new employees into the company.
- Analysis of the modern challenges young employees face during integration and their adaptation to the new workplace.
- Developing skills in planning strategies, and business processes, considering the needs of employees and the business requirements.
- Familiarization with the principles of organisational behaviour and the psychology of the employee in order to better understand the parameters that affect the adaptation of the new employee.
- Developing critical thinking skills for analysing data and meeting new employees' needs.
- Developing systems thinking and the ability to organise and implement solutions that combine the advantages of digital and traditional channels in onboarding.
- Broadening knowledge about digital education, communication tools, and techniques and how these can be integrated into onboarding for better results.
- Development of collaboration skills through teamwork and co-design of solutions.
- Developing empathy through conducting research with users and understanding their challenges and needs.
- Presentation of the proposed solutions, both written and oral, enhancing communication skills and presentation of ideas and proposals.

Structure the activity by applying design thinking steps

Step 1: Develop a team spirit of collaboration

The step aims to create team spirit among the team members and to connect with the topic.

Suggested activities:

1. Telling Our Stories (*page 31*). It is suggested that the exercise focus on the activity topic so that participants can share personal stories or stories of acquaintances and friends concerning the hiring and onboarding process in a new company - work. In this way, participants will get into the atmosphere of the topic from the beginning and have the opportunity to share personal stories to connect with the rest of the team members.

Step 2: Investigate a problem and record user needs

The step aims to explore various aspects of the topic and understand the users' needs.

Suggested activities:

1. Identification of correlations *(page 35*).
2. What does this person need? (*page 41*).
3. Card sorting *(page 57).*
4. Feedback collection table. Collecting feedback and evaluating ideas in a systematic way (*page 64).*

Step 3: Ideation

The step aims to formulate as many ideas as possible so the team can synthesise them to produce the final solution.

Suggested activities:

1. Analogous inspiration (*page 77*).

Step 4: Evaluation of ideas

The step aims to evaluate ideas and select the one implemented as an original.

Suggested activities:

1. Evaluation of ideas by categorising them into feasible, feasible but innovative, and not yet feasible due to technology's immaturity (*page 81*).

Step 7: Create a prototype

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*) or Wizard of Oz *(page 88*).
2. Description of the proposed solution with the user journey (*page 82)*.
3. Testing with users (*page 91*).

How the prototype is built, or the idea presented depends on the type of proposed solution.

Use of the digital platform

The activity can be implemented digitally or in a traditional classroom without using digital tools. It is proposed that the stages of the activity be organised on the eDea

digital platform, which allows collaboration at every step, anytime and anywhere. In particular, the team can use the interactive whiteboard to record and form a correlation diagram, capturing the multiple aspects of the activity. At the same time, it will facilitate the sharing of cards and research with users online, using the cards for data collection. Thus, access to a broader audience is gained without geographical restrictions.

During the inspiration phase, the team will initially use the whiteboard to share specific examples they want to use as a source of inspiration. He will then proceed to the ideation process, recording all the ideas on the board. Visualising and recording all ideas is particularly important, as often in groups, some participants, incredibly the most introverted, may not express their opinions. The eDea platform fosters collaboration and promotes pluralism of ideas and opinions, ensuring that all proposals become visible.

Similarly, in the prototyping phase, the team can initially leverage the whiteboard to create the user's journey, recording the steps in digital Post-its. This journey can then be used to test the prototype with users online, without geographical restrictions, thus facilitating the collection of valuable feedback material.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the instructor or coordinator after each step of the activity.
- Collaboration and feedback from a professional in business and human resource management after each step of the activity.
- Feedback from the members of the other groups after each step of the activity.
- Presentation of the proposed final solution to the teacher, the other groups, and the external collaborator, as well as justification of the options.
- Feedback from the lecturer or coordinator and members of other groups on the proposed solution.
- Discussion in the classroom about new knowledge with the aim of consolidation.

Experience design for visitors to museums and cultural venues

Why the activity is interesting

The activity concerns designing and developing innovative solutions to improve the visitor experience in museums and cultural venues. It allows students to redesign a genuine service that concerns many different audiences, such as families with children, pupils, students, tourists, or ordinary visitors interested in art and culture.

The activity approaches museums and cultural venues as organisations that provide value and experience to their users, aiming to enhance visitors' connection with each place's art, history, and culture. Students will be asked to familiarise themselves with the service as a complete experience with multiple contact points and visitor interaction. In particular, students can, if they wish, focus, study, and apply contemporary trends adopted by museums and cultural venues in order to attract new audiences and remain relevant and attractive in the modern, digital era, such as:

- **The creation of interactive exhibitions** by using multimedia to immerse visitors in an experience that transports them to space and time, using new technologies such as augmented reality (AR) and virtual reality (VR).
- **The design of personalised experiences** tailored to each visitor's needs and interests, such as using personal profiles or applications that guide the visitor on different paths to enhance the experiential side of the visit.
- **Promotional campaigns and experience through social networks** extending the museum experience beyond the museum premises through social networks, where visitors can share their experiences and interact with museums before and after their visit. Museums use social media marketing strategies to attract new audiences, stay connected to their existing audiences, and create a community of people interested in cultural and historical issues.
- **Interactive educational tools** and integration of educational tools and games, such as digital mobile apps, allow visitors to learn through interactive discovery and play. Games and activities enhance learning and the museum experience, especially for children.

Shaping a sustainable business model for museums and cultural venues is extremely important and remains a key priority for them. In a constantly changing world, traditional funding and donations are not always sufficient to meet their needs. Thus, many museums are turning to creating innovative services and experiences that offer not only cultural value but also economic benefits. Examples of this approach include developing digital subscription services, such as digital museum programs or virtual

tours, creating shops with museum products and souvenirs, and organising special events and workshops for the public, which require participation for a fee. Also, some museums have started offering exclusive paid experiences, such as private tours or customised training programs, thus boosting their revenues and creating new, dynamic relationships with the public. These kinds of innovative services help museums adapt to modern needs and remain sustainable in the future.

It becomes apparent that the final solution can vary significantly, from the design of interactive digital applications or devices that improve the visitor's interaction with the exhibits to the design of a comprehensive museum experience that includes many different channels and touchpoints, such as digital platforms, educational programs, and activities for families, and children. In this way, this activity requires students to apply systemic thinking, as they are invited to combine the needs of the public, new technological trends, and the sustainability of the museum business model to design new and innovative experiences for their visitors.

Finally, the activity allows collaboration with institutions and professionals in the cultural sector, such as museums, cultural centres, exhibitions, etc., to implement the proposals and evaluate their application in the real world.

Concepts covered by the activity and keywords

Museum, cultural venues, experience design, business plan, business strategy, marketing, social networks, advertising campaign, sustainability, education, augmented reality (AR), virtual reality (VR), interactive exhibits

Who is the activity for?

The activity is addressed to students and professionals in design, cultural management, tourism, marketing, strategic development, IT, and digital technology, as well as to those interested in innovation and entrepreneurship in the cultural sector in general, to professionals active in the field of culture, such as museologists, museum educators, managers of cultural organisations, and specialists in visitor services, as well as to executives of museums and cultural organisations, who are looking for new strategies to improve the visitation and sustainability of their organisations.

Learning or design objectives of the activity

The learning or design objectives of the activity are:

- Understanding the meaning and significance of the visitor experience in museums and cultural venues to create a more engaging and dynamic experience.

- Familiarity with modern technologies and their applications in museum spaces, such as virtual reality (VR) and augmented reality (AR).
- Understand how the configuration of physical and digital space affects visitors' experience and interaction with exhibits.
- Familiarity with the principles of interior design and their application in developing museum exhibitions that enhance the public experience.
- Develop systems thinking to design integrated experiences, combining the physical and digital environment, considering users' needs and expectations, and contributing to the formation of a sustainable business model for organisations.
- Developing skills to understand the needs of the public through research.
- Understanding the importance of sustainability and business strategy for museums and how museum organisations can remain sustainable by creating new innovative services.
- Strengthening the capacity to collaborate in teams to develop, test and present innovative solutions for museums.
- Define and configure design problems based on user survey results and suggestions for experience improvements.
- Present the proposed solutions in writing and orally, enhancing presentation and communication skills.
- Presentation of solutions in writing and orally

Structure the activity by applying design thinking steps

Step 1: Develop a team spirit of collaboration

The step aims to create team spirit among the team members.

Suggested activities:

1. Table of interests (*page 22*).

Step 2: Investigate a problem and record user needs

The step aims to investigate various aspects related to the topic, good practices from Greece and abroad, as well as problems and needs of users and other stakeholders, as already recorded in the literature.

Suggested activities:

1. Description of the problem through images, videos, scientific articles, and other sources (*page 33*).
2. Empathy interviews (*page 52*).

3. Creation of persona (*page 60*).

Step 3: Ideation

The step aims to introduce as many ideas as possible towards designing a potential solution.

Suggested activities:

1. Brainstorming (*page 69*).
2. Analogous inspiration (*page 73*).

Step 5: Evaluation of ideas

The step aims to evaluate ideas and select the one implemented as an original.

Suggested activities:

1. Affinity diagrams (*page 65).*

Step 7: Create a prototype

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the problem with solution poster (*page 81*).
2. Description of the proposed solution with the user journey (*page 82)*.

The way the prototype is built, or the idea presented depends on the type of proposed solution.

Use of the digital platform

The activity can be implemented digitally or in a traditional classroom without using digital tools. It is proposed that the stages of the activity be organised on the eDea digital platform, which allows collaboration at every step, anytime, and anywhere. In particular, the team can use the interactive whiteboard to share inspirational content during the investigation phase of the problem. At the same time, it is proposed that the dashboard be used to record and exchange findings from the survey with users so that all members can gain a shared understanding of their needs and collaboratively shape the persona.

During the inspiration phase, team members can share through the whiteboard examples that they will use as sources of inspiration, thus facilitating the production of varied, creative ideas. The affinity diagram will help the team collaboratively prioritise their ideas, speeding up the decision-making process.

Finally, in the prototyping phase, the team can plan the user's journey on the board and use it to collect user feedback, proceeding with any improvements and modifications. The eDea platform enhances collaboration while offering flexibility, as participants who are unavailable at specific times can contribute asynchronously, recording their thoughts on the board. Thus, modern work becomes more interactive, while asynchronous communication becomes more effective and enriched with more points of view.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the instructor or coordinator after each step of the activity.
- Collaboration and feedback from a professional in the field of museums and culture after every step of the activity.
- Feedback from the members of the other groups after each step of the activity.
- Presentation of the proposed final solution to the teacher, the other groups, and the external collaborator, as well as justification of the options.
- Feedback from the lecturer or coordinator and members of other groups on the proposed solution.
- Discussion in the classroom about new knowledge with the aim of consolidation.

Design of interactive educational tools to promote gender equality

Why the activity is interesting

Gender equality is a fundamental human right and an important factor for social and economic progress. Promoting equality between men and women is not only a matter of justice and equality but also contributes to building healthier and more prosperous societies. However, despite the progress that has been made in recent years, gender inequalities still exist, for example, in the fields of education, work, politics, etc.

According to the European Parliament (2020), women in the European Union still earn an average of 14.1% less than men, and their presence in politics and leadership positions in companies and organisations remains limited. At the same time, gender stereotypes continue to influence perceptions and behaviours, and abuse and gender-based violence remain important social problems.

Technology, technology, and the design of interactive educational tools offer new possibilities for promoting gender equality. The design of educational tools that focus on information, awareness, education on gender equality issues, and the prevention of gender-based violence can be an important step in combating discrimination and changing attitudes. This activity allows students to study a complex and topical topic for Greek and European society and to create innovative interactive tools that will promote empathy and gender equality, with the aim of deconstructing stereotypes and enhancing education around gender discrimination.

This activity provides much flexibility. Students can choose to focus on and design a solution for a specific target audience, such as young people, families, students, and adults who may be victims of gender inequalities, violence, or bullies. Accordingly, professionals from education, mental health, social welfare, and justice can be involved in the design process to understand the various aspects of the issue and design holistic solutions. The design of the tools requires students to have an in-depth understanding of user needs, to analyse the social biases that exist around gender, and to examine the means and strategies that can help change behaviours.

Gender inequality exists in many areas of society, including education, politics, labour, healthcare, media, family, justice, and the economy. These areas reflect the structural and systemic nature of gender inequality, which affects individuals' daily lives and creates barriers to equal opportunities and social progress. Students in the context of this activity can choose a specific area in which they can focus and develop solutions. Alternatively, they can take a more holistic approach and develop solutions covering many aspects of society without being limited to a single area.

Through developing creative solutions to promote gender equality, participants can be informed about this critical social issue. Raising awareness of this issue helps them understand gender inequality and realise how they can contribute to their elimination. This allows them to develop a more responsible attitude towards gender discrimination so that they will never be able to become victims or cause similar inequalities in the future. It is equally important for both women and men, as both groups are involved in empowering and changing social norms to create a more equal and just society for all.

The activity encourages the creation of solutions that can be exploited, including within educational organisations, such as schools and universities, to raise awareness among young people and address issues of inequality from an early age.

Concepts covered by the activity and keywords

Gender equality, education, educational games, digital education, empathy, inclusion, social responsibility.

Who is the activity for?

The activity is aimed at students and professionals of social sciences such as sociology, political science, and philosophy. Students and professionals in the fields of design technology, Students and professional teachers, and students and professionals in the fields of communication and media. To active citizens interested in social justice and promoting gender equality at a social and professional level.

Learning or design objectives of the activity

The learning or design objectives of the activity are:

- Understanding gender inequality and educating about the causes and consequences of gender inequality in various fields, such as education, politics, work, healthcare, and social relations.
- Developing critical thinking by developing students' ability to identify inequalities and discriminations in the social fabric and analyse their causes and consequences.
- Creating innovative solutions by designing and developing innovative, interactive tools or programs that promote gender equality
- Familiarity with technological tools and platforms: Use and develop technological tools to create educational and awareness tools for gender equality.
- Developing collaborative thinking and teamwork by encouraging collaboration among students to identify problems and develop solutions, cultivating the ability to work in a team and manage complex issues.

- Enhancing social sensitivity by developing empathy and understanding of the different perspectives and needs of people facing gender inequalities.
- Familiarity with social responsibility through understanding the role of young people and organisations in promoting equality and contributing to the creation of a more just and equal society.
- Developing presentation and communication skills by presenting solutions both in writing and orally, enhancing communication skills.
- Collection and analysis of user data through designing, conducting research to understand their needs, and analysing findings.

Structure the activity by applying design thinking steps

Step 1: Develop a team spirit of collaboration

The aim of the step is to create team spirit among the group members and to reflect on the issue of gender equality.

Suggested activities:

1. Telling Our Stories (*page 31*). Participants are encouraged to share stories related to gender equality as part of the activity.
2. Two truths and 1 lie (*page 30*).

Step 2: Problem research

The step aims to investigate various aspects and stakeholders related to the issue and to understand the problems and needs of the final solution's users.

Suggested activities:

1. Stakeholder map (*page 43*).
2. Identification of correlations *(page 35*).
3. Design and conduct interviews with colour, promotion, and reflection (*page 50*).
4. Sharing stories (*page 59*).

Step 3: Ideation

The step aims to introduce as many ideas as possible towards designing a potential solution.

Suggested activities:

1. Basic ideation exercises (*page 64*).
2. Exercise 6-3-5 (*page 66*).

3. Affinity diagrams (*page 65).*

Step 5: Evaluation of ideas

The step aims to evaluate ideas and select the one implemented as an original.

Suggested activities:

1. Design guidelines (*page 78*).

Step 7: Create a prototype

The step aims to design a prototype for users to generate feedback.

Suggested activities:

1. Description of the proposed solution with the user journey (*page 82)*.
2. Creation of digital prototype. Construction of an interactive digital prototype to demonstrate essential accessibility functions *(page 92).*

The way the prototype is built or the idea presented depends on the type of proposed solution.

Use of the digital platform

The activity can be implemented either digitally or in a traditional classroom without the use of digital tools. It is proposed that the stages of the activity be organised on the eDea digital platform, which allows collaboration at every step, anytime, and anywhere. In particular, the eDea platform will help the team to create a correlation diagram when investigating the problem in order to analyse the different aspects and decide what the focus of the group will be. In addition, it will facilitate the sharing of stories and the recording of important comments received from user interviews, which will be recorded in notes and used in the next ideation phase.

In the ideation phase, the eDea platform will allow the recording of ideas and their immediate prioritization through the relevance diagram. Finally, the team can use the whiteboard to create the user's journey or upload screens of the digital prototype to receive feedback from users or present it interactively.

Assessment of newly acquired knowledge

Suggested activities:

- Presentation of each group's work after each step of the activity.
- Feedback from the instructor or coordinator after each step of the activity.
- Feedback from the members of the other groups after each step of the activity.
- Presentation of the proposed final solution to the teacher and the other groups and justification of the choices.

- Discussion in the classroom about new knowledge with the aim of consolidation.

Conclusions

This technical report includes a rich collection of design thinking actions that can be used directly in the training processes of young designers to collaborate in innovation production teams. They can also inspire the design of additional actions aimed at broad user groups. The report contains both exercises for the steps of design thinking and integrated design cases for introducing solutions to the challenges of 21st-century organised steps of design thinking.

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