



# Gamification Handbook to implement the SDGs in SMEs

INTELLECTUAL OUTPUT 02 | JULY 2023



Supporting the implementation of the Sustainable Development Goals  
in Small and Medium-sized Enterprises through VET



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## SME Green Skills HUB

Supporting the implementation of the Sustainable Development Goals in Small and Medium-sized Enterprises through VET

[www.smegreenskillshub.eu](http://www.smegreenskillshub.eu)

### Intellectual Output 02

Gamification Handbook to implement the SDGs in SMEs (Virtual Campus)

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# Introduction

The Gamification Handbook to implement the Sustainable Development Goals in SMEs has been designed as a practical guide on the advantages of applying gamification in Vocational Education and Training (VET) as a powerful approach to address global sustainability challenges while enhancing SMEs workforce skills.

The handbook provides insights, tips, examples and good practices on the following areas.

## 1. Gamification in Vocational Education and Training

Insights on the advantages of applying gamification in a vocational education environment, as well as main tools and approaches used to implement the gamification approach in VET.

## 2. Applying gamification to implement the SDGs in SMEs through VET

Tips to efficiently apply gamification in VET aimed to support the implementation of the Sustainable Development Goals in SMEs.

## 3. How to gamify in-company training for staff

Infographic with 15 tips about how to gamify in-company training for staff and main considerations for those SMEs interested in gamifying in-company training.

## 4. Gamification in the SME Green Skills HUB training materials

Examples on how gamification has been applied on the SME Green Skills HUB Virtual Campus and Assessment App.

## 5. Good practices

Good practices on the application of gamification in Vocational Education and Training from Spain, Italy, Ireland, Portugal and Türkiye.



# Gamification in VET

Gamification is the application of game design principles and elements to non-game contexts to engage and motivate people to achieve specific goals. In the field of Vocational Education and Training (VET), gamification can play a significant role in enhancing the learning experience, increasing learner engagement, and improving skill development.

The growing trend of gamification in VET is having a profound impact on how people learn and train. Recent researches have shown that when gamification is used in VET, it can help to increase motivation and engagement, as well as improve learning outcomes. Gamification techniques have taken their rightful place in vocational and corporate training. They've been applied more broadly to education for some time already. But with the rise of remote/hybrid work models and the need for more online training, they quickly became an integral part of learning and development strategies all over the world.

Below you will find a summary of the advantages of applying gamification in a vocational education environment, as well as the main tools and approaches used to apply gamification in VET.

Advantages of applying gamification in VET

## 1. Increased engagement

Gamification makes learning more interactive and enjoyable, which can help learners stay engaged and motivated throughout their vocational training.

## 2. Skill acquisition

Gamification can be used to simulate real-world scenarios, allowing learners to practice and develop practical skills in a safe and controlled environment.

## 3. Progress tracking

Gamified systems often include mechanisms for tracking progress and providing instant feedback, allowing learners to see their improvement over time.

## 4. Competition and collaboration

Gamification can introduce elements of competition and collaboration, encouraging learners to compete with themselves or others and work together to achieve goals.

## 5. Retention

Interactive and immersive gamified experiences are more likely to be remembered, leading to better retention of knowledge and skills.



Main tools and approaches to apply gamification in VET

### 1. Points, badges, and leaderboards

These are basic game elements that can be used to reward learners for completing tasks or achieving specific milestones. Leaderboards can foster healthy competition among learners.

### 2. Narrative and storytelling

Incorporating a compelling narrative or storyline into vocational training can make the learning experience more engaging and relatable.

### 3. Immediate feedback

Providing immediate feedback on performance allows learners to understand their strengths and weaknesses and make necessary improvements.

### 4. Progression and levels

Breaking down training into levels or stages can create a sense of achievement and progression, motivating learners to advance.

### 5. Simulation and scenarios

Creating realistic simulations and scenarios enables learners to practice skills and problem-solving in a controlled environment.

### 6. Customization and personalization

Tailoring the learning experience to individual preferences and skill levels can increase learner engagement.

### 7. Rewards and incentives

Offering tangible rewards or incentives, such as certificates or discounts, can motivate learners to complete their training.

Successful gamification mixed with on-the-job training can stir excitement and build retention as you enable your employees to develop the skills and competencies they need to succeed in their role. Training employees in a virtual classroom is still a trend in workplace learning and development, and you can add game mechanics to the training. By gamifying your training with incentives such as points, employees are also more likely to stay motivated to complete the training modules. The competitive nature of gamification can encourage your users to beat their scores and advance to the next level, which enables continuous learning in the workplace setting.



# Applying gamification to implement the SDGs in SMEs through VET

Applied gamification in Vocational Education and Training can effectively contribute to the implementation of the Sustainable Development Goals in SMEs. In this regard, gamification represents a powerful approach to address global sustainability challenges while enhancing workforce skills: engages learners, equips them with practical skills, and may foster a sense of responsibility towards sustainability, ultimately benefiting both individuals and the broader community by advancing sustainable development objectives.

The following tips will help you to guide the application of gamification in VET with the aim to implement the SDGs in small and medium-sized enterprises.

## Alignment with SDGs

Identify the specific SDGs that align with the needs and goals of the SMEs.

This could include goals related to poverty reduction, sustainable economic growth, decent work, industry innovation, climate action, etc.

## Contextualized content

Develop gamified content that relates directly to the SDGs and the specific challenges faced by SMEs.

For example, create scenarios that simulate sustainable business practices, responsible supply chain management, or resource efficiency.

## Problem-solving scenarios

Design gamified scenarios and simulations that require learners to address real-world sustainability challenges faced by SMEs.

Encourage them to find innovative solutions while learning about the SDGs.

## Role-playing and decision-making

Incorporate role-playing and decision-making elements into the gamification.

Let learners take on roles within SMEs, such as managers or employees, and make decisions that impact the company's sustainability efforts.

## Competitions and collaboration

Foster competition among learners and encourage collaboration by organizing

competitions that involve teams working together to achieve sustainability-related goals within the gamified environment.

### **Progress tracking and feedback**

Implement progress-tracking mechanisms that allow learners to see how their actions align with SDGs and their impact on the simulated SME.

Provide feedback on their sustainability performance.

### **Rewards and recognition**

Use points, badges, or other incentives to reward learners for achieving sustainability milestones.

Recognition can motivate them to actively engage with the SDG-focused content.

### **Real-world application**

Encourage learners to apply the knowledge and skills acquired through gamified vocational education in real SME settings.

This could involve internships, projects, or consultancy work with actual SMEs striving to meet SDG targets.

### **Monitoring and evaluation**

Continuously assess the effectiveness of gamification in achieving SDG-related learning outcomes.

Gather feedback from learners, SMEs, and other stakeholders to make improvements.

### **Collaboration with SMEs**

Collaborate with SMEs to create custom gamified modules that address their specific sustainability challenges and align with their business goals.

### **Accessibility and inclusivity**

Ensure that the gamified vocational education is accessible and inclusive to a diverse group of learners, including those from underrepresented communities and backgrounds.

### **Promote awareness**

Use the gamified training as an opportunity to raise awareness about the importance of the SDGs and sustainable business practices among SMEs and their employees.



## How to gamify in-company training for staff

1

Develop training games focused on habit and mastery building



2

Change the format of complex training sessions by breaking it into sequential sub-training sessions

3

Use progress through levels to help recognize staff achievements



4

Add a scoring system as a benchmark for further staff development



5

Have leaderboards to display the ranking of staff and keep track of their goals

6

Add role-playing games to prepare staff for real-life situations in a safe environment



7

Provide feedback (points, badges, progress bars) during the entire training to improve self-reflection and knowledge retention

8

Enhance corporate training with virtual reality simulations to boost self-confidence and memory retention



9

Award points for completing tasks or hitting milestones in a training course

10

Use scavenger hunts by completing tasks and getting clues to increase engagement and team building



11

Use gamified quizzes to encourage staff to retain knowledge and self-evaluate

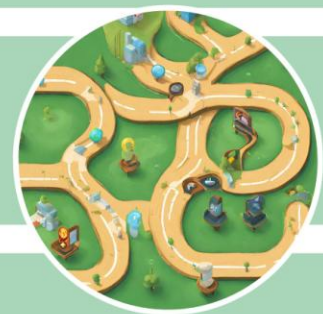


12

Use contests to incentivize staff to reach defined goals

13

Use gamified learning paths with challenges to keep staff engaged while learning



14

Have an in-office leaderboard to track progress and add a competitive aspect

15

Gamify Instructor-Led Training (ILT) through gamified assessments as Kahoot!



## Considerations to gamify in-company training for staff



### TECHNOLOGY AND INFRASTRUCTURE

Ensure that the technology and infrastructure needed for gamified training are in place and accessible to all staff members



### TRAINING FOR TRAINERS

Train trainers and instructors to effectively implement gamified elements and provide support to learners throughout the process



### DATA PRIVACY

Be mindful of data privacy and security concerns, especially if the gamification platform collects and stores user data



1

### CLEAR LEARNING OBJECTIVES

Before implementing gamification, define clear learning objectives and align game elements with these goals to ensure training remains effective



2

### ACCESSIBILITY AND INCLUSIVITY

Consider the accessibility needs of all employees, including those with disabilities, and ensure that gamified elements are inclusive

3



4

### FEEDBACK AND ITERATION

Collect feedback from staff members on the gamified training experience and be prepared to make adjustments based on their input

5



6

### ALIGNMENT WITH COMPANY GOALS

Ensure that the gamified training aligns with the overall goals and objectives of the company and contributes to the professional development of staff

7

# Gamification in the SME Green Skills HUB training materials

SME Green Skills HUB is an Erasmus+ project aimed at assisting and guiding Small and Medium-Sized Enterprises in the implementation of the Sustainable Development Goals by fostering green sectorial skills through innovative and new generation training methods using gamification and workplace learning pedagogies with the guidance of VET teachers, trainers, and mentors.

The gamification approach has been integrated in several aspects within the SME Green Skills HUB training materials. The examples provided below are related with the digital tools developed in the framework of this project:

- **Virtual Campus**

Online multilingual digital platform providing educational activities and resources to upskill VET teachers, trainers, consultants and mentors to support managers and staff of European SMEs, to transform their current way of doing business towards a more sustainable world.

- **Mobile Assessment App**

Practical and innovative online evaluation tool that can be used by VET teachers, trainers, consultants and mentors to identify their level of competence and related training requirements to support the implementation of the SDGs in SMEs.

## **Gamification approach in the Virtual Campus**

Gamification has been implemented in two elements within the Virtual Campus: the Training Modules and the Vocational Open Online Courses (VOOC).

### [Training Modules](#)

This structured set of innovative training contents and practical activities has been designed to serve as a blue-print for setting up an ideal training programme on supporting the implementation of the SDGs in SMEs through VET.



The Training Modules provide Training contents and Practical Activities for six units of learning outcomes. Below you will find the gamification approach included in both resources.

### Training Contents

Course plan proposal including a suggestion of contents, proposed methodology, references, instructions for the assessment and tips for trainers, consultants and educators

### Gamification approach

Proposed methodologies to implement the training sessions on the basis of gamification

- Experiential learning
- Inquiry-based learning approach
- Small group activities
- Peer interaction
- Game-based dynamics
- Game design techniques
- Design thinking
- Lego Serious Play

### Practical Activities

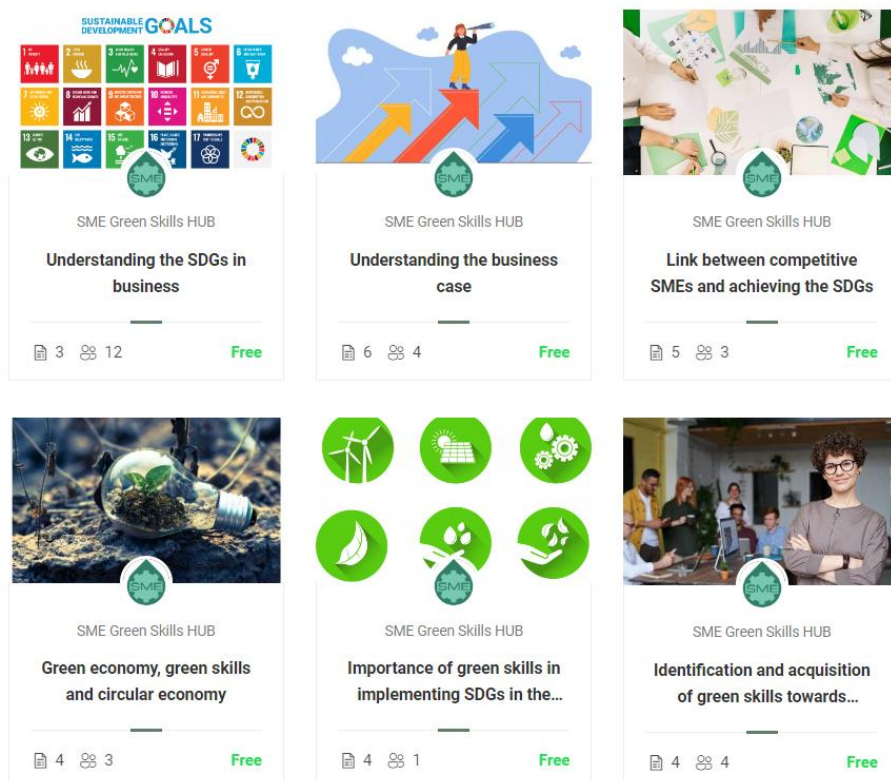
Collection of face-to-face practical activities on supporting the implementation of the SDGs in SMEs to be applied with managers and SME staff

### Gamification approach

Title of the activity	Gamification techniques provided
How to become a green SME (Unit 2)	Brainstorming technique
Analysis of the organisation's value chain and of the main SDGs impacted by their activity (Unit 3)	Collaborative process and peer interaction
Sustainability Business Model Canvas (Unit 4)	Small groups competition
Sustainability Pitch: how to enhance sustainable entrepreneurship in a company (Unit 4)	Innovation projects competition
Role playing the application of PDCA cycle (Unit 5)	Role playing
Dissemination via social media (Unit 6)	Experiential learning

### Vocational Open Online Courses (VOOC)

Comprehensive set of learning materials designed to assist VET teachers, trainers, consultants and mentors to support the implementation of the SDGs in SMEs. The courses have been developed on the basis of the European Framework of Competences to implement the SDGs in SMEs.



The image displays six Vocational Open Online Courses (VOOC) cards from the SME Green Skills HUB. Each card features a title, a brief description, and a 'Free' label. The courses are:

- Understanding the SDGs in business**: 3 documents, 12 icons.
- Understanding the business case**: 6 documents, 4 icons.
- Link between competitive SMEs and achieving the SDGs**: 5 documents, 3 icons.
- Green economy, green skills and circular economy**: 4 documents, 3 icons.
- Importance of green skills in implementing SDGs in the...**: 4 documents, 1 icon.
- Identification and acquisition of green skills towards...**: 4 documents, 4 icons.

## Gamification features included in the VOOC

### Points and scores

**What are the SDGs?**

Companies and SMEs are a vital partner in achieving the SDGs helping to advance sustainable development on people and the planet.

True  False

You got 1 of 1 points

1/1 Finish

^ UNDERSTANDING THE SDGS IN BUSINESS		3/6
1.1	What are the SDGs?	✓
1.2	What are the SDGs?	✓
1.3	The 17 SDGs	✓
1.4	Identifying the SDGs	✓
1.5	SMEs and their role in achieving the SDGs	✓

### Progress bars

4 of 7 items Finish Course

## Circular economy

The linear economy in which we live in is based in an extraction, consumption and resource waste model, resulting in the destruction of the ecosystems we depend on. In order to remain within the earth's limits, one needs to redesign economy based on ecological principles.



## Understanding the SDGs in business



Teacher  
SME Green Skills HUB

Course results 66.67%

In Progress



### Real time-feedback (H5P tests)

#### Why is Green Economy important?

Drag the words into the correct boxes

The importance of transitioning to a  is that it continues to improve a symbiotic and positive relationship between nature and humans.  is the foundation to human development and economic . As we make more and more progress, we face more , and thus the transition to a green economy ensures Improvement of  (such as better healthcare, education and job security, and social equity) and preserves in the advancement to reduce environmental risks and ecological  of natural resources.



#### Why is Green Economy important?

Drag the words into the correct boxes

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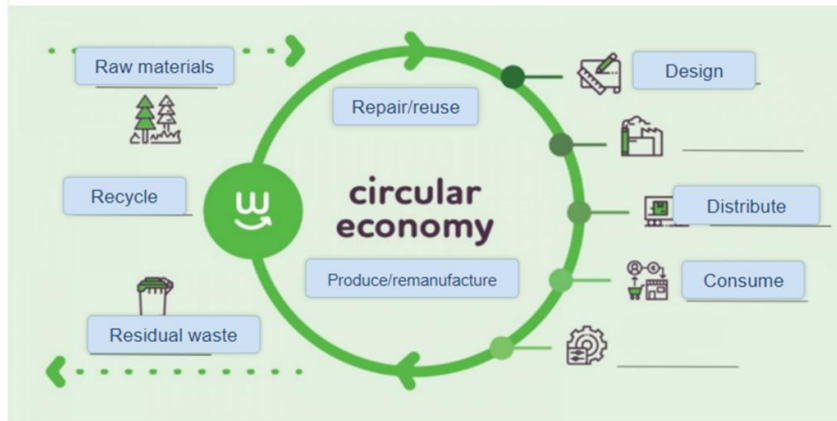
Average score





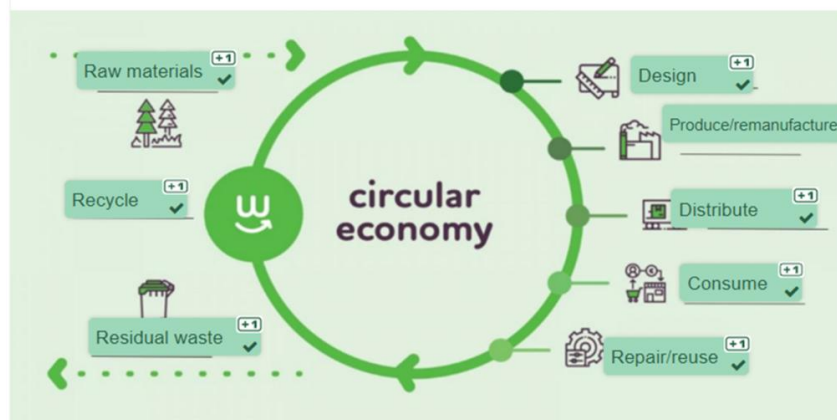


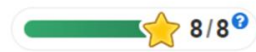

Circular Economy Cycle



✓ Check 

Circular Economy Cycle



Great score!  
 8/8 

**Congratulation, you already completed this!**

**8**  
8

Your result is **passed** 

## Gamification approach in the Assessment App

**Progress bars and Real time-feedback (Competences assessment)**

**1 - Introduction to the SDGs in business** Assessed

↓ VIEW COMPETENCE & SELF-ASSESS

**2 - Understanding the role of green skills in SMEs** Assessed

↓ VIEW COMPETENCE & SELF-ASSESS

**My results**

Competences assessed

6 / 6

📄 View My Results

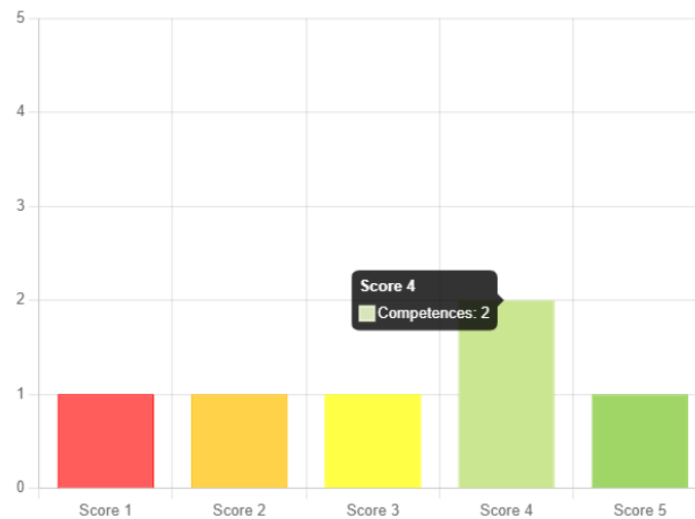
**Scores (My results)**

Definition of the competence	Score
Having a comprehensive understanding of the SDGs and be able to expand on their relevance for business, thus setting the necessary background knowledge for the attainment of all the other related competences.	1
Recognise green skills and new business models related to them, forecasting their relevance for the implementation of the SDGs in SMEs.	3
Identify business needs and opportunities within the framework of the SDGs. Help those enterprises interested in committing to sustainability to clearly define their priorities (selecting objectives that are fully aligned with their activity) and to become more competitive as a result.	4



## Competences evaluation chart

Infographic summary of your results



## Real time-feedback (Training recommendations)

Score	Training recommendations	Competences with this score	Recommended Training Resources
1	<p>The competences in which you have scored 1 indicate a high level of importance in your working environment and at the same time show that your mastery of the subject can be improved. We strongly recommend taking the courses on these competences in the Virtual Campus. They will help you improve your portfolio in this area.</p> <p>Find a shortcut to the different VOOC in the right-hand column.</p>	<p>1 - Introduction to the SDGs in business</p>	<p>1. Introduction to the SDGs in business</p> <p><a href="#">Go to training content</a></p>
2	<p>The competences in which you have scored 2 are most likely quite relevant to your work environment and indicates that there is some room for improvement in terms of your understanding of the related topics. We recommend you to take the courses on these competences in the Virtual Campus.</p> <p>Find a shortcut to the different VOOC in the right-hand column.</p>	<p>4 - Designing sustainability strategies and action plans</p>	<p>4: Designing sustainability strategies and action plans</p> <p><a href="#">Go to training content</a></p>
3	<p>A score of 3 indicates that you possess certain knowledge and understanding of these competences. Their application in your work environment is relevant. Based on these circumstances you should consider improving your competence in this area. We recommend refreshing your knowledge by taking the courses on these competences in the Virtual Campus.</p> <p>Find a shortcut to the different VOOC in the right-hand column.</p>	<p>2 - Understanding the role of green skills in SMEs</p>	<p>2. Understanding the role of green skills in SMEs</p> <p><a href="#">Go to training content</a></p>

# Good practices

## Spain

### Serious games for knowledge transfer from innovation projects



#### Basic data

Organization	AEICE
Target group/s	SMEs form the entire value chain of the habitat industry

#### Description

##### Aim

To transfer the knowledge gained in different innovation projects within a cluster, getting the attendees to:

- learn about the results achieved
- become familiar with the innovation process
- understand how innovation can help them in their day-to-day

##### Participants

50 participants from SMEs involved in the innovation projects to be showcased; companies interested in innovation outside the projects and/or that have never participated in innovation actions.

Duration: 4 hours

##### Process

As a preliminary step to the development of the sessions, a methodology was proposed based on the development of four game activities, one for each of the projects to be presented.

Given that the four activities had to be developed in a short period of time, no complex or task-specific games were designed with special didactic materials. Instead, very simple and more generic dynamics were chosen, applicable to different scenarios and effective for the intended purpose.

## Design and development

### ▪ **Serious Game 1: SIMUAL**

#### **Approach**

SIMUAL is based on the simulation of a Liquefied Natural Gas plant to virtually emulate the most complex and risky processes in the plant through a digital twin and VR.

The game consists of participants being able to participate directly in the virtual simulator experience, entering an LNG plant through 3D glasses, following in first person the steps to be followed to carry out maintenance and safety tasks correctly. For that purpose, VR glasses and controllers will be used.

Material resources

- Virtual reality room at 1A ingenieros.
- Virtual reality glasses
- Computer
- Videogame console
- Television

Human resources: 5 people.

- 2 people to prepare and set up the simulation of the LNG plant in the virtual reality room.
- Person presenting and providing technical support.
- Person (preferably a young person) playing the video console.

### ▪ **Serious Game 2: CERTIBLO**

#### **Approach**

CERTIBLO is a pilot system based on blockchain technology to issue and verify certificates efficiently and securely on the sustainability aspects of buildings: energy certification, green building certification, and other related parameters, such as compliance with the Technical Building Inspection (ITE).

The serious game to present it focuses on the development of a quiz competition per teams and in real time, supported by the Kahoot platform. Questions related to blockchain and to the three certificates that will be applied: green certificate, energy certificate and ITE will be incorporated. Thus, in an enjoyable way we will all be able to participate and discover how much we know about these topics, some of them better known and others, to say the least, pioneers.

Material resources:

- A room in which we can all play Kahoot with a projector and internet connection.
- Tables and chairs for all participants.
- Trivia cards and a dice.
- Gift of a certificate of choice for the company of the person who wins the game.

Human resources: 3 people.

- Person who prepares the Kahoot questions.
- 2 people to run the game.

### ▪ **Serious Game 3: White Paper on People-Centred Buildings**

#### **Approach**

The paper on which the game is based deals with the techniques of integrative design in Nearly Zero Energy Buildings and design with people in mind.

The game is based in a gymkhana with all attendees, split in different teams, to test how much they know about these buildings focused on people. The teams will have to correctly answer questions to be able to move on (going to a different room with new challenges) and covering the subsequent phases.

Material resources

- Rooms for developing the game (1A. ingenieros' headquarters).
- List of questions.
- Computer and projector for presentation of the White Paper.
- x" paper copies for the winners of the test.

Human resources: 3 people.

- 1 Person presenting the game and 1 providing logistical assistance.
- 1 Person who elaborates the different questions of the gymkhana.

### ▪ **Serious Game 4: Habitat Industry Carbon Footprint Platform**

#### **Approach**

This project proposes to design and develop a digital platform for measuring the corporate



carbon footprint for the value chain of the habitat industry, with a particular focus on the timber and furniture industry.

The game consists of testing the participants' knowledge of carbon footprint through virtual augmented reality platforms such as Plickers. The participants, divided into groups, have cards with a code, designed for this purpose. They provide answers through gestures without the rest of the groups knowing the results until the end, when the answers are shared.

Material resources

- Room set up for the game.
- 1 computer with projector.
- Cards with the different data on the carbon footprint of manufacturing companies.
- 5/6 small trees for the members of the winning team, bonsai type or related.

Human resources: 3 people.

- 1 Person presenting the game and 1 providing logistical assistance.
- 1 Person to draw up the game cards.

### Gamification features

As defined above, different simple gamification techniques were combined for the development of the action, considering also that for many of the attendees it was the first experience with this type of games.

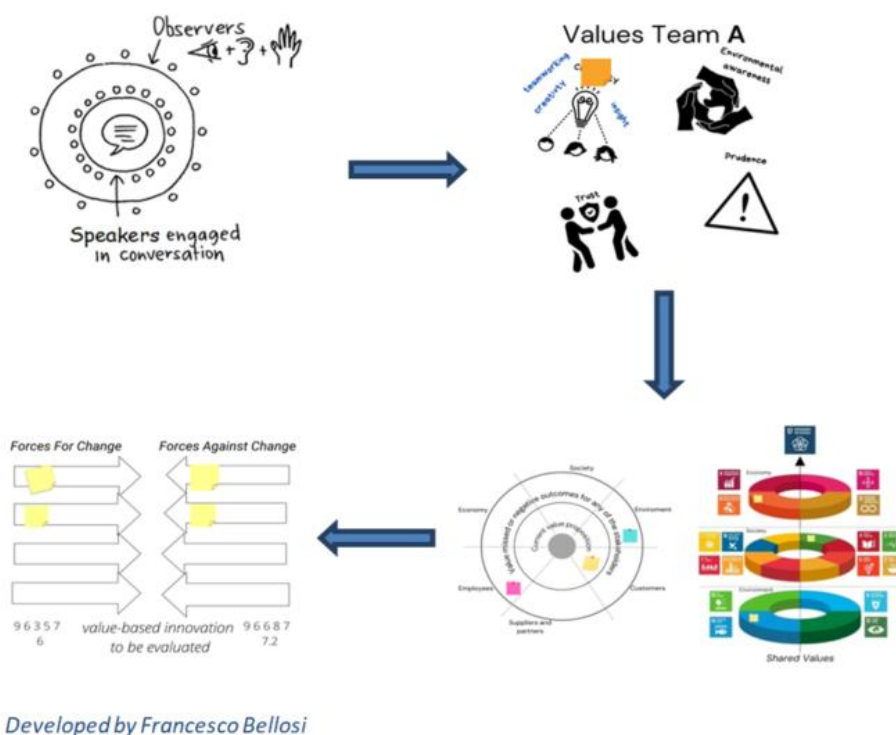
This includes experiential learning (Certiblo), VR-based games (Simual), game-based learning (white paper...), AR-based games (in the case of Habitat Carbon Footprint Platform)

### Link

<https://webcache.googleusercontent.com/search?q=cache:nFdepyi8L88J:https://www.aeice.org/7042/%3Flang%3Des&cd=10&hl=es&ct=clnk&gl=es>

## Italy

### Fishbowl for sustainable innovation



#### Basic data

Organization	Foundation for Research and Innovation
Target group/s	All type of companies, from great enterprises to SMEs

#### Description

##### Aim

The fishbowl is a set of linked gamified steps that aims at developing a deeper knowledge on sustainable innovation and SDGs in a company by engaging its staff with different challenges. The structure was developed within Erasmus+ Impact project.

##### Participants

The case study consists of 4 steps; participants (6-8 people minimum) are divided in at least two groups. The groups remain the same and separated for the first two steps, then in the third they start working together and in the last step are reshuffled. At least one external supervisor is needed. Participants can belong to any company department, not necessarily to the innovation or sustainability ones.





## Process

Validation fishbowl: one group explains sustainable innovation actions developed for a specific area/department/overall enterprise, the other group listens to and understands values and practices on sustainable innovation put in place from the other team, then the teams switch roles.

Shared values: aimed at building a sustainability culture, working together to identify specific shared values. Teams discuss and align on the values perceived by having listened to the other team during the fishbowl, then the two teams examine the values of their own organization/area identified by the other team, looking for overlaps and gaps.

Value mapping: the goal is to collect values-based ideas on sustainable innovations, to be placed in respect to the SDGs map. Teams work together on the shared values emerged in the second step to define missed values/negative outcomes from not innovating, but also on new ideas to be adopted, and place them in a sustainable value map. Later on, such ideas are grouped according to the SDG/s map they belong to.

Forces for or against change: the aim is to elaborate on a specific position (against/in favor), understanding the vision behind it and defending such idea/value, regardless of personal opinions. Supervisors divide the attendees in two teams, according to personal attitudes surfaced during the workshop, to discuss the innovation ideas emerged in step 3 (max 3-4 ideas), highlighting forces for/against change, reflecting on the risks coming from innovating or not, the best "defense" awards the team that proposed (or not) the change. The process is reiterated for the other ideas emerged in step 3.

## Results

Company's staff learn to deepen the topic of sustainable innovation and the attitude (or not) to take risks, by reflecting on them while being engaged in the whole process, but also to associate new possible ideas to the SDGs.

## Gamification features

Tools identified: Challenges, points/scores, real-time feedbacks, targeted goals

Methodologies identified: small group activities, peer interaction, game-based dynamics, game-based learning, serious games, inquiry-based learning, design thinking.

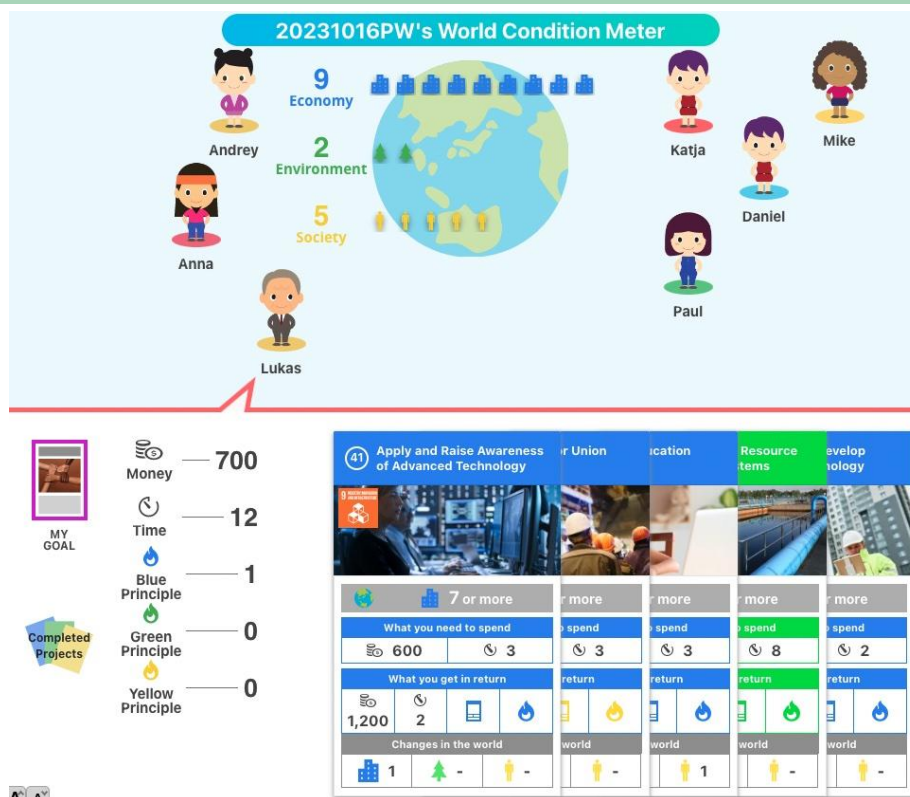
Overall the methodology merges different gaming aspects to support participants in analysing sustainable innovation needs in a very critical way to then trigger the pathway toward reasonable solutions.

## Link

<https://www.impact-project.site/>

## Ireland

### 2030 SDG game



#### Basic data

Organization	Innoquality Systems
Target group/s	Organizations and individuals (professionals)

#### Description

The 2030 SDG Game was developed by Japanese entrepreneurial consultants who work with various organizations, utilizing interactive elements, especially gamification. To promote awareness of the Sustainable Development Goals (SDGs), they created this game as part of a sustainability workshop.

The game can be played online or in person and includes playing cards and scoreboards for tracking both individual and global development. It is time-restricted, but its duration can be adjusted based on the group size and setting. The primary objective for players is to foster economic, environmental, and societal development in a simulated 'world.' However, the implicit goal is to enhance awareness of the interplay between these cornerstones and the connection between individual and global development.

At the start of the game, players receive 'resources' in the form of time and money. They are also assigned individual game goals, such as achieving a specific number of environmental or social points or attaining a certain amount of time or money.

These goals can be reached by completing specific 'tasks.' To undertake these tasks, players require resources. When a task is completed, it not only benefits the players but also has an impact on the three dimensions previously mentioned: economy, society, and environment.

The game progresses in cycles, with moderated group reflections interspersed throughout the gameplay

### Gamification features

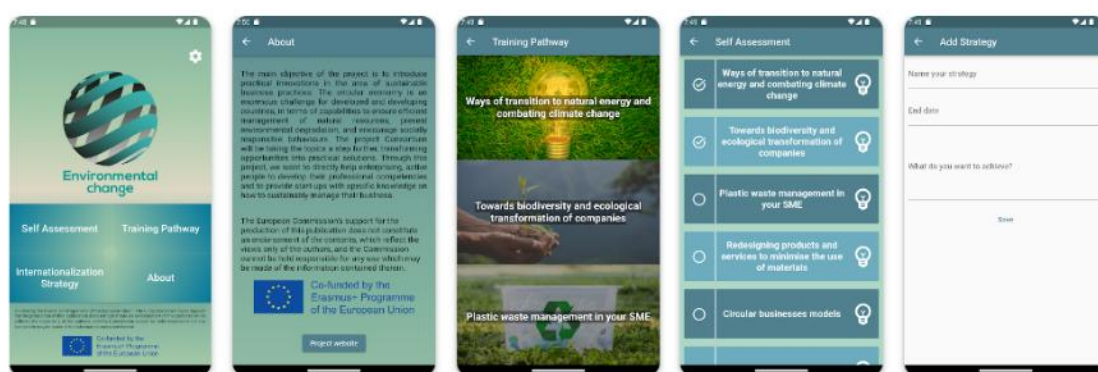
There is an online version with a programmed platform as well as an analogue game with playing cards and scoreboards.

### Link

<https://2030sdgsgame.com/>

## Portugal

### Environmental app for startups



### Basic data

Organization	Mindshift
Target group/s	Start-ups and SMEs, young entrepreneurs, VET teachers and trainers

### Description

#### Aim

The Environmental change project was funded by the European Union and is aligned with the European Green Deal goal to make EU's economy more efficient and sustainable by turning climate change and environmental challenges into opportunities. It aims to improve and validate the environmental competences of start-uppers, young entrepreneurs and VET providers focusing on six key-areas: transition to natural energy; biodiversity and ecological transformation; plastic waste management; eco design; circular economy and life cycle thinking.

### **Participants**

250 representatives of target groups and stakeholders across Europe participated in the testing of the Environmental app for startups.

### **Process**

The Environmental app, available for Android and iOS smartphones, was conceived to ensure personalized training pathways by initially testing the knowledge and awareness concerning environmental change processes in SMEs. Besides the training pathways, the app also contains a strategy maker panel.

Thematically the app covers six areas: ways of transition to natural energy and combating climate change; towards biodiversity and ecological transformation of companies; plastic waste management in SMEs; redesigning products and services to minimise the use of materials; circular businesses models; life cycle thinking.

In addition to the target groups the Environmental mobile app can also be used by school teachers (entrepreneurship, economic subjects) and by youth trainers (in the Labour Exchange offices or in the Youth centres). This ensures its cross-sectorial transferability.

### **Results**

Among other things, the Environmental app provides new/enhanced competences in using digital possibilities in VET education, increased knowledge regarding circular economy and enhanced competencies in planning educational support using the latest technologies. The app is open to a large audience that can benefit from it.

### **Gamification features**

Learning Management Systems, challenges and real time-feedback

Inquiry-based learning, game-based dynamics, game-based learning and game design techniques

### **Link**

[www.environmentalchange.erasmus.site](http://www.environmentalchange.erasmus.site)

## Türkiye

### Digital Measurement Tool Prepared with Gamification

Output 10 / Digital Measurement Tool Prepared by Gamification

Behaviour	Score	Total Behaviour	Total Scores
<b>Training scoring (418 puan )</b>			
Training Completion	5	21 Trainings	190
Training Achievement	5	21 Trainings	190
<b>Time Spent in Training</b>			
Mobile Training Completion	5	21 Trainings	190
Mobile Training Achievement	5	21 Trainings	190
<b>Time Spent in Mobile Training</b>			
Filling Training Evaluation Form	1	21 Trainings	38
Training Liking			
Training Recommend			
<b>Exam Scores (180 points)</b>			
Exam Completion	30	6 Exams	90
Exam Achievement	30	6 Exams	90
<b>Activity Scores (400 points)</b>			
Activity Completion	50	4 Activity	200
Activity Achievement	50	4 Activity	200
<b>Social Scores (additional points that can be increased)</b>			
Comment on Training	1		
Social Comment	1		
Graffiti	1		
Fill in the Survey	1		
Login to the System	1		
			2 points that can be increased

**Total Predicted Score 1.000**

Name	Surname	Activity Name	Module Name	Module Type	Status	Points	Time Spent sec	Start	Finish
Arzu	Erdi	Eurokey Training Programme	Future Oriented Global Thinking	E-Training	Completed	100	469	30.11.2020	05.12.2020
Arzu	Erdi	Eurokey Training Programme	Strategy Design For Global Markets	E-Training	Completed	100	1746	02.12.2020	28.12.2020
Arzu	Erdi	Eurokey Training Programme	: Manage Your Globalization	E-Training	Completed	100	1425	02.012.202	29.12.2020
Arzu	Erdi	Eurokey Training Programme	The Cultural Dimension of Global Business	E-Training	Completed	100	2211	02.12.2020	15.01.2021
Arzu	Erdi	Eurokey Training Programme	Global Mindset/ Intercultural Skills	E-Training	Completed	100	4673	03.01.2021	25.01.2021
Arzu	Erdi	Eurokey Training Programme	Talk To The World - Global Communication	E-Training	Completed	100	1942	03.01.2021	07.02.2021

#### Basic data

Organization: Governorship of Bursa

Target group/s: SME employess

#### Description

##### Aim

The Digital Measurement Tool aims to enhance user learning by adding gamification elements, making it both educational and enjoyable with score-based results. Completing training courses earns participants points, motivating active participation. Gamification fosters competition and achievement, improving the overall learning process and outcomes. This approach creates engaging, interactive training for better knowledge and skill acquisition.

By introducing gamification elements such as point-based rewards, the Digital Measurement Tool seeks to foster a sense of competition and achievement among participants.

### **Participants**

The Digital Measurement Tool operates with an inclusive approach, where there are no restrictions on the number of participants. In fact, the system thrives on having a larger number of participants, as it enhances the overall learning experience, making it more enjoyable and competitive. Who will receive which e-training is determined through the platform, and then the training follow-up / reporting is realized.

### **Process**

SME personnel engage in a course equipped with a comprehensive evaluation system. This system offers personalized reinforcement through repeated, rich-format questions until correct answers are achieved. The repetition of questions tracks progress from the course start, allowing users to observe their development. Detailed reporting screens display the level of improvement.

Furthermore, gamification elements, with a day-oriented narrative, are integrated to enhance enjoyment and sustainability in corporate learning and reinforcement. The system can automatically group users based on their performance, delivering tailored content to these groups. After completing each module, users are required to take an online exam. A certificate is granted when the average score across all exams is 70 or higher. Users also have the capability to view and download system usage information for registered users.

### **Results**

SME employees can enhance their learning experience through ongoing feedback and the incorporation of gamification elements, making the learning process enjoyable. Additionally, SMEs have the ability to assess employee performance using detailed reports. In essence, gamification elements significantly enhance the learning journey for SMEs.

### **Gamification features**

This learning experience is built upon a learning management system that incorporates interactive media and competitive elements based on point systems. The addition of certificates and real-time feedback further amplifies its effectiveness.

In terms of the methodologies employed, it incorporates game-based dynamics, game-based learning, and serious games, all of which contribute to the unique properties of this learning experience.

### **Link**

<https://bitly.ws/UeKR>