



Report on use and results of Serious Gaming

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Document number: V1.0

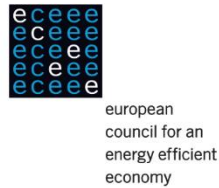
Publishing date: 30.06.2021

Project deliverable: D5.5



Multiple benefits of energy efficiency

Project partners



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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 785131. This document only reflects the authors' views and EASME is not responsible for any use that may be made of the information it contains.



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1. Introduction

This document represents a detailed evaluation report about the Serious Game, used in the trainings of M-Benefits.

The serious game has been developed with the open source platform Wegas in the framework of WP4 of M-Benefits and has been hosted for the whole project duration and will be hosted until 3 years after the project.

The Serious Game was used as an integrative component in the trainings, i.e. elements of the frontal lecture were alternated with game elements in the Serious Game.

This report summarises the main aspects and findings from the use of the Serious Game

2. Proceedings of the Serious Game

Before the training started, the participants were informed that the Serious Game would be part of the training and they were asked to create a general account. This was deemed sufficient for the training to start. At the beginning of each training, it was then checked with the participants whether the accounts worked and teams of 3-5 people were formed. The Wegas platform offers the possibility to create individual accounts as well as to group individual accounts into a team. This was also implemented during the training, i.e. each participant created a personal account and joined a team.

During the training, phases of frontal lecture and discussion with the participants were alternated with phases of the Serious Game. This enabled the participants to take on an active role at a very early stage and to directly apply what they had heard in the previous lecture and, above all, to see for themselves whether they had understood what had been conveyed. The phases of the Serious Game are also a good opportunity for the lecturers to get feedback on their own lecture and also on the level of knowledge of the participants. In this way, deficits/lacks can be specifically addressed in further phases.

As a result of the training and the Serious Game, presentations were held by the teams in which the M-Benefits project of the Pickles company, which forms the theme in the Serious Game, was presented. The presentations and the results from

the Serious Game and the financial calculations were subsequently discussed with the presenters and the other teams.

DATES & TIMES	WHO	PROGRAM
Day 1	13H15 - 18H00	
13h15 - 13h30	Teacher + participants	Round of introduction Presentation of the project Multiple Benefits
13h30 - 15h00	Teacher	M-Benefits Analysis Method and Underlying Concepts (Part I): business model & value proposition; corporate decision-making; energy processes and services; strategic analysis (value-cost-risks). Presentation of the serious game and practical modalities of the game
15h00 - 15h15	Break	
15h15 - 18h00	Participants	Playing the serious game - steps 1-3
Day 2	08H30 - 15H45	
08h30 - 10h30	Teacher	M-Benefits Analysis Method and Underlying Concepts (Part II): Financial Methods for Evaluating Investments - Familiarize yourself with the evaluation spreadsheet. Workshop "Excellencia"
10h30 - 10h45	Break	
10h45 - 11h30	Participants	Serious game - Step 4
11h30 - 12h00	Teacher	Tips and solutions for effective communication.
12h00 - 13h00	Lunch	
13h00 - 14h00	Participants	Preparing the presentation of the energy-efficiency project to Pickles Investment Selection Committee
14h00 - 14h15	Break	
14h15 - 15h00	Participants	Presenting the energy-efficiency project to Pickles Investment Selection Committee
15h00 - 15h30	Teacher + participants	Pickles energy-efficiency investment project: wrap-up and discussion

Figure 1 exemplary timetable for a training with Serious Game

3. Statistical data on the Serious Game

The Serious Game was an important part of the training and it was all the more important to ensure that the tool was easy to understand. Therefore, the Serious Game was translated into 8 languages:

- English
- French, German
- German, French
- Greek
- Portuguese language
- Italian language
- Spanish
- Polish

The Wegas training platform provides two versions of the Serious Game: a long version, which is suitable for the 2-day training sessions, and a short version, which can also be used in shorter workshops. Individual project partners also used the variant of not using the long version in the course of the training, but rather giving the presentation in a face-to-face training, but running the Serious Game online from different locations.

In total, 40 training sessions were started in the course of M-Benefits. Since the total number of training sessions was lower, it can be assumed that a not insignificant part of the sessions was created for separate events or short workshops.

In the course of the training sessions, about 300 individual accounts were created, which have subsequently merged into small teams.

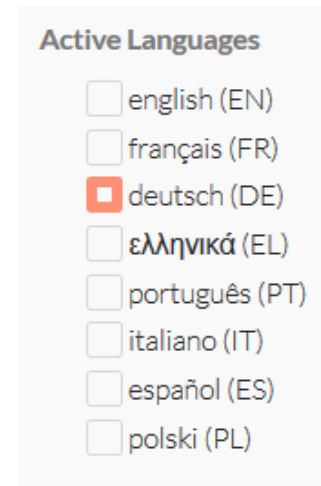


Figure 2 drop down menu for choice of language

4. Feedback on the Serious Game

Since the knowledge transfer and the Serious Game were generally conducted intertwined, feedback on the Serious Game was also conducted in the course of the training evaluation. The detailed feedback evaluations can be found in Deliverable D5.3. Here is an excerpt / summary of the feedback on the Serious Game:

The following questions were asked about the Serious Game:

- 1) The Serious Game helped me to understand the contents of Multiple Benefits.
- 2) I understood the objectives and content of the Serious Game.
- 3) The Serious Game was pleasant to play.

In total, the feedback questionnaires were returned by 70 participants.

To the question

"1) The Serious Game helped me to understand the contents of Multiple Benefits"

- 48% answered that the statement was completely true,
- 48% that the statement was true.
- 4% answered neutrally

To question

"2) I understood the objectives and contents of the Serious Game",

- 57% answered that the statement was completely true,
- 38% that the statement was true.
- 4% answered neutrally

To question

"3) The Serious Game was pleasant to play"

- 32% answered that the statement was completely true,
- 59% that the statement was true.
- 7% answered neutrally.
- One person gave a negative response to this question.

In general, the Serious Game was seen by many participants as a very interesting and useful way of directly applying the knowledge imparted. One point of criticism, especially in the first training sessions, was that it takes a fairly long time to get used to the mechanics of the game. The thesis that the Serious Game would be intuitive enough to be played with very little instruction could therefore not be confirmed. In the later training sessions, more time was therefore spent on the use of the Wega platform respectively more support was offered by the lecturers. Towards the end of the game, however, the operation of the game was consistently mastered by all participants and satisfaction increased significantly. The participants were also satisfied with the content of the Serious Game, i.e. it was perceived as neither too easy nor too difficult and the example of the Pickles Company was described as very realistic.