



D5.3

Report on training courses

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Multiple benefits of energy efficiency

Project partners



Environmental Change Institute



B ● R G ● C ●



European Council for an Energy Efficient Economy



www.mbenefits.eu



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Introduction

Each implementing partner commenced a training program of at least 2 trainings, based on the training scheme developed in the framework of WP4 and consisting essentially of

- The Serious Game
- A user manual to facilitate comprehension and use of Evaluation and Communication Tools by practitioners.
- A master presentation on the introduction and explanation of the multiple benefits approach

In this document all trainings performed by the implementing partners are documented. *As this is not the final status of the deliverable, there is not the complete number of trainings documented yet.*

General Remarks

All trainings have been performed in national language and followed a basic concept developed in WP4 that envisaged a duration of 1½ days. It became clear very soon, that it would be challenging to find training participants in companies for such a lengthy training, so a few partners implemented an alternative model, introducing a combination of a webinar-course and a course with on-site-presence. In the end 2 types of trainings have been executed:

- Training course with full on-site-presence for 1½ days
- Training course with preparatory web-courses on the theoretical parts and with on-site-presence for the Serious Game and the team presentations

The scheme of the trainings follows the scheme of the train-the-trainer-event in Frankfurt in March 2019:

A theoretical part comprises the principle and the process of multiple benefits including all partial process steps. The “Multiple Benefits Toolkit” has been presented and explained and basic concepts of business analysis have been explained.

To complement the theoretic input a Serious Game has been played in teams of 2-5 players. in order to apply the basics conveyed in theory directly in practice.

The Serious Game culminated in a presentation of possible solutions by selected project teams to a virtual decision-making committee. The presented solutions have then been discussed in the entire group and tested for their relevance.

Overall Feedback and Summary from all Trainings

Each implementation partner organised two trainings (Portugal even organised three trainings). In total, 160 participants were trained through face-to-face trainings and an additional 57 participants through online participation (not to be confused with the webinars, which were also held) due to the introduction of hybrid events.

The general feedback to the trainings was, that the ratio between theory input and group work (serious game) was very well balanced. The serious game was not too easy to catch on at the beginning, but after a while, most participants improved their speed and their performance in the game. Overall, the serious game was considered an important and valuable part of the training. Some participants asked for more concrete examples of

multiple benefits in companies and for formulas for the calculations of monetary effects. Especially the quantification of non-energetic effects was expected. However, this was not the main goal of the training concept.

Especially worth mentioning are the training blocks on the strategic dimension of energy efficiency measures in combination with the multiple benefits and on the financial basics (internal rate of return, payback, cash flows, tax effects...). While the block on the strategic dimension was considered highly enlightening on one side but not easy to communicate on the other side, the block on the financial issues was mostly considered highly valuable.

An often-mentioned feedback especially from energy managers in large companies was that after the training a participation as a pilot project would be considered.

A summary of the feedback from all the trainings is not particularly meaningful, since the trainings always followed the same pattern, but were also conducted by different trainers. However, feedback on the training scheme itself is also interesting.

Regarding the question "the Serious Game helped me to understand the contents of Multiple Benefits", 94% of the participants answered that this was true (63%) or completely true (31%). The rest are neutral in this respect.

The question "I understood the objectives of the Serious Game" was answered by 90% as true (45%) or completely true (45%). 10% are neutral

The question "The Serious Game was pleasant to play" was answered by 96% with "yes" (20%) or "no" (76%).

Question 4 "The workshop was helpful for me and time well spent" was answered by 100% with true (18%) or completely true (82%).

Question 5 "Multiple benefits play a role in my company", however, was answered by only 57% with true (27%) or completely true (30%). 33% are neutral, and for 10% of the participants the statement is not applicable.

Austria – Graz Energyagency

1st training

Date: 8/9 July 2019

Location: Grazer Umweltamt, Schmiedgasse 26, 8010 Graz

Trainer(s): Reinhard Ungerböck, Julia Tartler

Participants list (registrations):

name	surname	Company
Skopal	Marc-Andre	Magna
Binder	Markus	Magna
Gerhold	Michael	Magna
Fruhmann	Stefan	Andritz
Mairoid	Andreas	Andritz
Maierhofer	Thomas	Andritz
Mayrold	Thomas	Stölzle
Schinnerl	Daniel	Siemens
Dulnigg	Erwin	Sandvik
Ernst	Erik	Universalmuseum
Schantl	Martin	Universalmuseum
Schneider	Ingo	HSLU
Hechtl	Eleonore Beate	Umweltamt Graz


Summary

The acquisition of trainees worked mainly through the so-called ÖKOPROFIT-network of the municipality of Graz and individual contacts and telephone calls with potential participants. After one postponement of the date the training took place and went very well. The participants formed 3 teams that worked together well and produced good results.

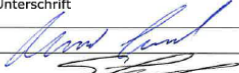

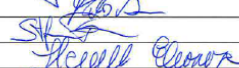

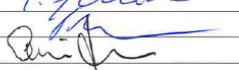

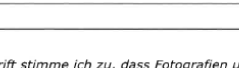
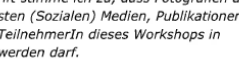
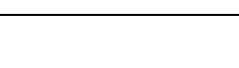



Photo documentation



Signature list

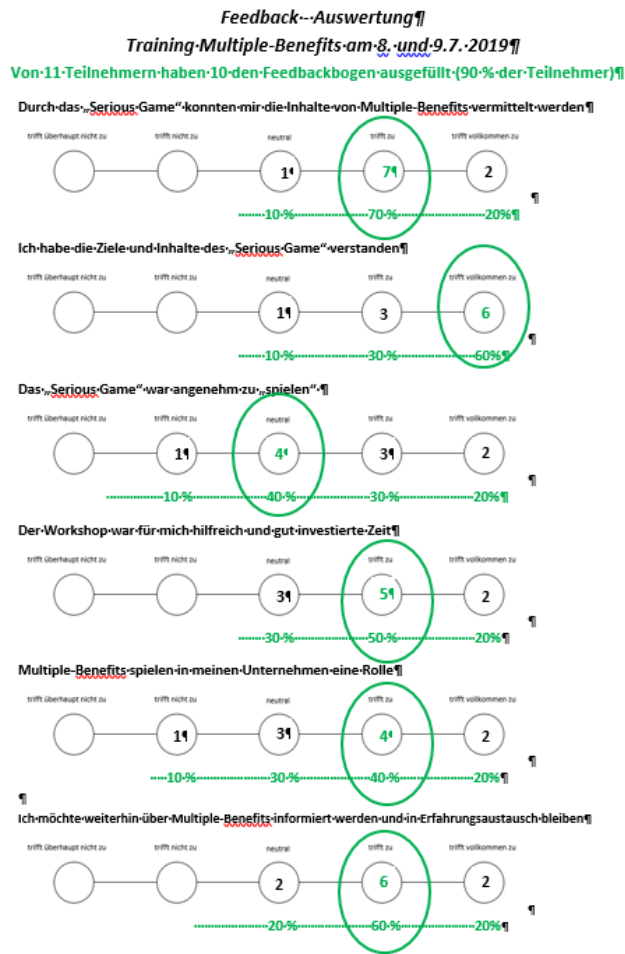


Training „M-Benefits - Erfolgreich am Markt durch Energieeffizienz“
 Graz, 8. und 9. Juli 2019

	TeilnehmerIn Vor- und Zuname in Blockschrift	Unternehmen	Einverständnis *)	Unterschrift
1	MICHAEL GERHOLD	MAGNA STEYR	<input checked="" type="checkbox"/>	
2	Marek Štepaň	— —	<input checked="" type="checkbox"/>	
3	Daniel Schinnerl	Siemens	<input checked="" type="checkbox"/>	
4	Julia Tarts	Gea	<input checked="" type="checkbox"/>	
5	Markus Bindov	MAGNA	<input checked="" type="checkbox"/>	
6	Stefan Fröhmann	Andritz	<input checked="" type="checkbox"/>	
7	Eleanor Beate Knecht	Stadt Graz-AG3	<input checked="" type="checkbox"/>	
8	Erik ERNST	Universalmuseum Jo	<input checked="" type="checkbox"/>	
9	MARTIN SCHWARZ	UTS	<input checked="" type="checkbox"/>	
10	INGO SCHNIBDER	HS LU	<input checked="" type="checkbox"/>	
11	Thomas Mayrho	Sibele	<input checked="" type="checkbox"/>	
12	Erwin DUCWIG	Sandvik	<input checked="" type="checkbox"/>	
13			<input type="checkbox"/>	
14			<input type="checkbox"/>	
15			<input type="checkbox"/>	
16			<input type="checkbox"/>	

* Im Rahmen dieser Veranstaltung können Fotografien und/oder Filme erstellt werden. Mit dieser Unterschrift stimme ich zu, dass Fotografien und Videomaterialien, auf denen ich abgebildet bin, zur Presse-Berichterstattung verwendet und in verschiedensten (Sozialen) Medien, Publikationen und auf Webseiten veröffentlicht werden können. Weiters stimme ich zu, dass der Unternehmensname als TeilnehmerIn dieses Workshops in Presse-Berichterstattung, in verschiedensten (Sozialen) Medien, Publikationen und auf Webseiten genannt werden darf.

Evaluation result



2nd training

Date: 13/14 November 2019

Location: ÖGUT, Hollandstraße 10, 1020 Wien

Trainer(s): Reinhard Ungerböck, Julia Tartler, Monika Auer

Participants list (registrations):

surname	name	Company
Jan W.	Bleyl	Energetic Solutions
Franz	Wallechner	IES Austria
Anja	Rautnig	Strebel GmbH
Werner	Korbe	Korbe Energiemanagement
Jacqueline	Stürzer	Siemens
Alexander	Male	UBIB DI Male
Markus	Muellner	Energieagentur Waldviertel
Oskar	Böck	Engie
Herwig	Kickinger	Energieagentur Waldviertel
Christian	Frömmel	Manner
Mohamad Khoder	Seif Aldin	Energieagentur Waldviertel
Philip	Peterson	Mastermind Consulting

Summary

The acquisition of trainees worked mainly through DECA/ÖGUT as a co-organizer of the training and the KLIEN (supporter of M-Benefits through a LOS). Participants of the training were mostly energy consultants. The participants formed 4 teams that worked together well and produced very interesting final presentations of their results.

Photo documentation



Signature list



Training „M-Benefits - Erfolgreich am Markt durch Energieeffizienz“

Wien, 13. und 14. November 2019

	TeilnehmerIn Vor- und Zuname in Blockschrift	Unternehmen	Einverständnis DSGVO *)	Unterschrift
1	Alexander MALE	URIB Di MALE	<input checked="" type="checkbox"/>	<i>[Signature]</i>
2	Christian FRÖHNER	Mannor	<input checked="" type="checkbox"/>	<i>[Signature]</i>
3	PHILIP PETERSON	MASTERMIND	<input checked="" type="checkbox"/>	<i>[Signature]</i>
4	Hans-Jörg KICKINGER	ETG Weibschneid	<input checked="" type="checkbox"/>	<i>[Signature]</i>
5	Mohamad Khoder Seif Aldin	EAR Waldnerhof	<input checked="" type="checkbox"/>	<i>[Signature]</i>
6	MARCO KÜCHNER	STADT ZÜRICH	<input checked="" type="checkbox"/>	<i>[Signature]</i>
7	Oskar Böck	ENGIE	<input checked="" type="checkbox"/>	<i>[Signature]</i>
8	JACQUELINE STÜRBER	SIEMENS	<input checked="" type="checkbox"/>	<i>[Signature]</i>
9	Wolfgang KORB	Ing. Wolfgang KORB	<input checked="" type="checkbox"/>	<i>[Signature]</i>
10	FILIP WÄGELINER	Repaustil - Seimauer	<input checked="" type="checkbox"/>	<i>[Signature]</i>
11	Jean-Claude RLEY	ENERGETIC SOLUTIONS	<input checked="" type="checkbox"/>	<i>[Signature]</i>
12	Moussa Ader	OCAT	<input checked="" type="checkbox"/>	<i>[Signature]</i>
13	CHRISTIAN KACHTENBERG	CTI	<input checked="" type="checkbox"/>	<i>[Signature]</i>
14	Anja Rautnig	Strobel GmbH	<input checked="" type="checkbox"/>	<i>[Signature]</i>
15			<input type="checkbox"/>	
16			<input type="checkbox"/>	

Bitte KOPIE der TN-Liste.

* Im Rahmen dieser Veranstaltung können Fotografien und/oder Filme erstellt werden. Mit dieser Unterschrift stimme ich zu, dass Fotografien und Videomaterialien, auf denen ich abgebildet bin, zur Presse-Berichterstattung verwendet und in verschiedensten (Sozialen) Medien, Publikationen und auf Webseiten veröffentlicht werden können. Weiters stimme ich zu, dass der Unternehmensname als TeilnehmerIn dieses Workshops in Presse-Berichterstattung, in verschiedensten (Sozialen) Medien, Publikationen und auf Webseiten genannt werden darf. Die Veranstalter speichern meine Kontaktdaten für Informationszwecke zu ähnlichen Themen wie die der Veranstaltung, die Zustimmung dazu kann ich jederzeit widerrufen.

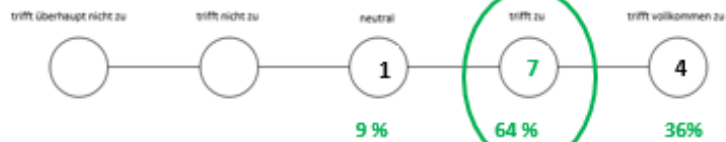
Evaluation result

Feedback - Auswertung

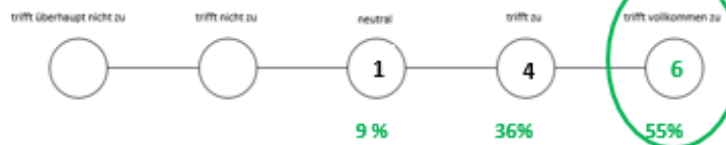
Training Multiple-Benefits am 13. und 14.11.2019 in Wien

Von xx Teilnehmern haben 11 den Feedbackbogen ausgefüllt (xx% der Teilnehmer)

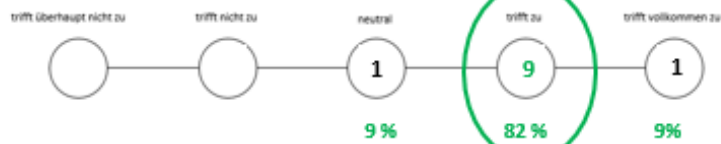
Durch das „Serious Game“ konnten mir die Inhalte von Multiple-Benefits vermittelt werden



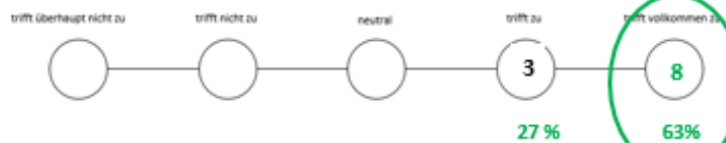
Ich habe die Ziele und Inhalte des „Serious Game“ verstanden



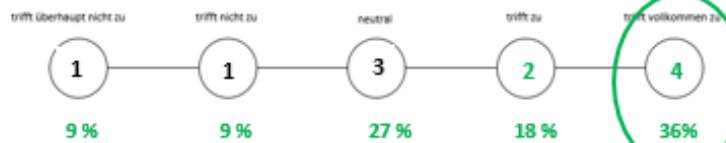
Das „Serious Game“ war angenehm zu „spielen“



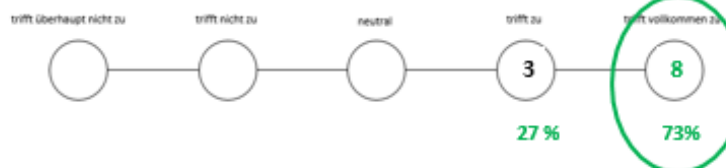
Der Workshop war für mich hilfreich und gut investierte Zeit



Multiple-Benefits spielen in meinen Unternehmen eine Rolle



Ich möchte weiterhin über Multiple-Benefits informiert werden und in Erfahrungsaustausch bleiben



Germany – IREES

1st training

Date: 22. & 23. October 2019

Location: Karlsruhe

Trainer: Felipe Toro & Kai Bergmann

Participants list:

Nr.	Anrede	Name	Firma
1	Herr	Karabacak	KACO
2	Herr	Schreijaeg	EnBW
3	Herr	König	Green Palatina
4	Frau	Heithausen	MiRO
5	Herr	Kauber	Keff
6	Frau	Bühler	Wirtschaftsförderung Karlsruhe
7	Herr	Kunz	dm
8	Herr	Baumann	Fiducia GAD
9	Frau	Lena Kappler	Fraunhofer ISI

Summary

The acquisition of trainees worked through two different approaches. The first target groups were the companies we already contacted regarding pilots. The second target group were energy consultants and energy efficiency network moderators we knew from former projects. The trainees formed three teams and worked through the serious game in good cooperation.

Photo documentation





Signature list

Evaluation result

Due to limited time on the last day and the trainees traveling back, we collected the feedback on the training orally. The main points they mentioned are listed below.

1. Good ratio between theory input and serious game.
2. Everybody said: the serious game helped to understand the theory behind, it is very close to reality, is a good hands-on example.
3. One group said that it requires a lot of concentration and focus to read all the material in the game
4. The serious game emphasizes the focus on communication in the identification and quantification process very well.
5. There was the desire about more examples of multiple benefits in companies in different types of measures integrated in the theory parts.
6. Some expected the focus was more on the quantification aspects of the multiple benefits in companies.
7. In general, it was a very good training and workshop, and everybody learned new aspects of assessing multiple benefits of energy efficiency.
8. At least three companies that attended the workshop are considering the participation as a pilot project.

As of the feedback questionnaire the following summary can be extracted from what the participants expressed after the training.

- Through the “serious game” more aspects of Multiple Benefits could be explained
7 of 9 participants mentioned this statement is what corresponds the most
- I have understood the objective and content of the “Serious Game”
8 of 9 participants said yes
- The serious game was comfortable to be played
6 out of 9 expressed that it was good game to play while others expressed the difficulty to concentrate and read all the materials. It is a good representation of reality in the companies and the search for data.
- The training and workshop were time good invested
8 out of 9 expressed that it was time good invested
- Multiple benefits are important for my company or companies that I advise
9 out of nine expressed that it was important

All participants are interested in the results of the project and expressed their interest to be informed about the upcoming events and results.

2nd training

Date: 30.01.2020

Location: Karlsruhe

Trainer: Felipe Toro, Kai Bergmann & Jasmin Henrich

Participants list webinars

Title and Date of Webinars organized in Germany as supporting background information on the training in person using the Serious Game.

The webinars were designed as follows and shown live and a repetition link was also given.

Type of Event	Content in German (names in English)	Date	Time
Webinar 1	Multiple Benefits (MB) Introduction, Method and Examples Einführung, Methode und Beispiele	16.01.2020	9:30 – 11:00 Repetition link sent
Webinar 2	Objectives and Concepts around Strategy and Competitiveness Definition der Ziele und der Begrifflichkeiten Strategie und Wettbewerbsvorteil	21.01.2020	9:30 – 11:00 Repetition link sent
Webinar 3	Financial Analysis of Non-Energy Benefits Finanzielle Analyse der MBs - Valuation Methods and Concepts	22.01.2020	9:30 – 11:00 Repetition link sent
Webinar 4	Communication of non-energy benefits Kommunikation der Mehrfachnutzen - Strategies for presentation, communication methods	23.01.2020	9:30 – 10:15 Repetition link sent

After the 4 webinars were completed a one-day training took place in Karlsruhe, Germany from 9.00 am until 18.00h where 4 teams of participants applied, learned and understood the methods for identification, quantification and communication of non-energy benefits in a company with several energy efficiency measures. The registrations and attendance list of the webinars and serious game training day are attached below.


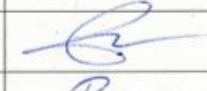
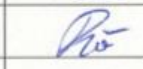

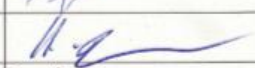
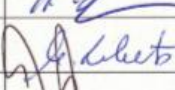

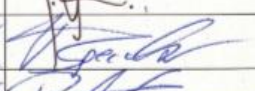
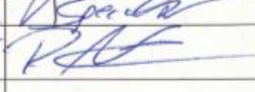
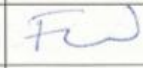

Participants Name and Company	Webinar 1	Webinar 2	Webinar 3	Webinar 4
Mr. Thorsten Rapp	x	x		
Mr. Christoph Mack	x	x		
Mr. Bastian Wrobel	x	x	x	x
Mr. Reinhold Mader				
Mr. Frank Stoss	x	x	x	x
Mr. Person, Georg		x		
Mr. Peter Uhl				
Mr. Klaus Edele				
Mr. Bernd Müller	x			
Ms. Birgit Batsch		x		
Mr. Christian Riese	x			
Ms. Beate Amend		x	x	x
Ms. Anke Schellenberger	x	x	x	x
Mr. Helmut Krames	x	x	x	x
Mr. Markus Wolff				
Mr. Andreas Langsdorf				
Mr. Joachim Sokoll			x	x
Mr. Hans-Jürgen Rönnecke		x	x	x
Mr. Yannik Möller	x	x	x	x
Mr. Probst, Armin	x	x		x
Mr. Hartmut Baden	x	x	x	x
Ms. Mira Lehnerts	x	x	x	x
Mr. Marc Lunemann				
Mr. Tobias Speicher	x	x	x	x
Mr. Waldemar Brauer	x			x
Mr. Yannik Franzen				
Mr. Michael Sautter		x	x	x
Mr. H.J. Koscher	x	x	x	x

Participants list training Serious Game:

Teilnehmerliste MBenefits Fortbildung „Innerbetriebliche Vorteile von Energieeffizienz bewerten und kommunizieren“

Spalte A* - Einverständnis zur Weitergabe der Emailadresse unter den Teilnehmer

Spalte B* - Einverständnis zur Veröffentlichung von Personenfotos „externer Personen“ zu werblichen Zwecken

Anzahl	Name	Firma	A*	B*	Unterschrift
1	Anke Schellenberger	Energieberatung			
2	Helmut Krames	e+e Consult			
3	Markus Wolff	Mars Automotive & MARS-Innovation			
4	Andreas Langsdorf	QFE Quality First Engineering GmbH			
5	Joachim Sokoll	EES Energieeffizienz Joachim Sokoll	X	X	
6	Hans-Jürgen Rönnecke	Schräder Abgastechnologie	X	X	
7	Yannik Möller	Freudenberg SE			
8	Probst, Armin	Agilent	X	X	
9	Hartmut Baden	HBM Management Services	X	X	
10	Mira Lehnerts	e+e Consult	X	X	
11	Marc Lunemann	Schräder Abgastechnologie	X	X	
12	Tobias Speicher	Famis	X	X	
13	Robert Novak	HAWE Hydraulik SE	X	X	
14	Waldemar Brauer	SEW-Eurodrive			
15	Felipe Toro	IREES GmbH	X	X	
16	Kai Bergmann	IREES GmbH			
17	Jasmin Henrich	IREES GmbH			
18	Eberhard Jochem	IREES GmbH			
19	Clemens Rohde	Fraunhofer ISI	X	X	

Summary

We combined the second training with the webinars so that the training could be shortened to one day due to the advice from the participants of the first training.

We provided solid background information and on the methodology with the webinars shown in January 2020 and these ones were applied during the one-day training by the target participants mainly energy managers at companies or energy efficiency consulting engineers on the 31st of January 2020 in Karlsruhe, Germany for a full working day.

The training session was designed in a way that each phase of the Multiple Benefits Methodology along the serious game simulation (steps 1 to 5) was worked out by each team of three participants in average. The participants went through the whole simulation and raised questions to the trainers when explanations were needed. In this way they applied and understood the tools in an almost real environment at a company. Each team had the role of the energy manager of the company. Each phase of the game was accompanied by an impulse presentation on the concepts presented at the webinars and also excel tools for the

financial calculations, using the same table of the game where the energy managers assess financially each energy efficiency measure taking into account the monetized non energy benefits for each measure.

Finally, each team presented the selected measures in front of an arranged investment committee conformed by Prof. Eberhard Jochem (Fraunhofer and IREES) as well as the Trainer Felipe Toro from IREES and the facilitator Jasmin Henrich from IREES as well. The presentations summarized the main outcomes of each of the trained phases and the energy managers from each team experienced several questions on the assumptions done for the quantification of non-energy benefits or even the existence of additional costs of the proposed measures. Each team presented the financial evaluation of the measures including only energy benefits and both energy and non-energy benefits in a integrated multiple benefits approached.

After the

Photo documentation

Teams working very concentrated on serious game



Short impulses on the multiple benefits methodology (Example Strategy)



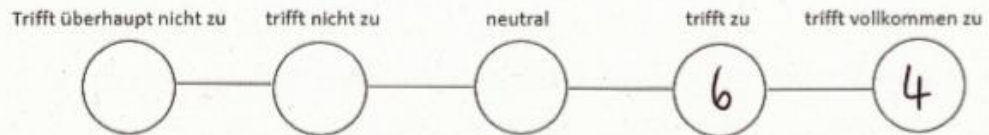
Teams presenting to investment committee with Prof. Eberhard Jochem



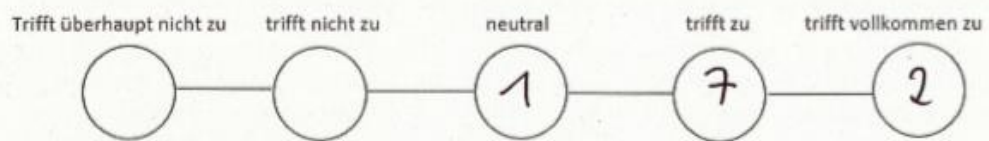
Evaluation result - Summary

Feedback Fortbildung „Innerbetriebliche Vorteile von Energieeffizienz bewerten und kommunizieren“ – 30.01.2020 in Karlsruhe

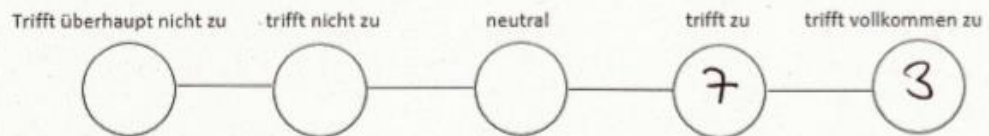
1. Durch das „Serious Game“ konnten mir die Inhalte von Multiple Benefits vermittelt werden.



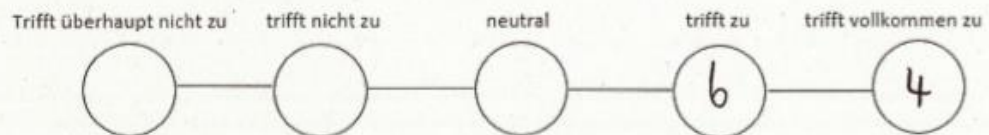
2. Ich habe die Ziele und Inhalte des „Serious Games“ verstanden.



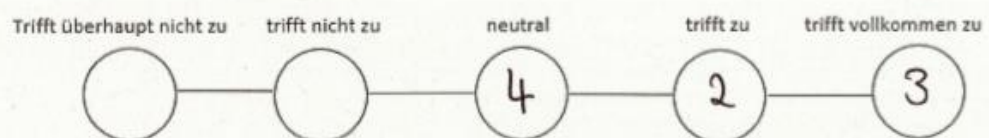
3. Das „Serious Game“ war angenehm zu 2 spielen.



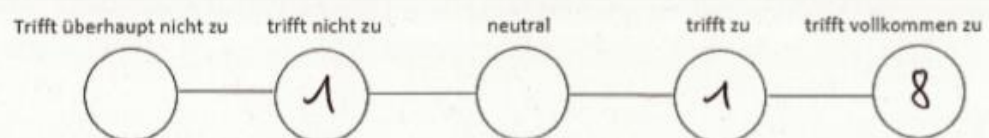
4. Der Workshop war wichtig hilfreich und gut investierte Zeit



5. Mehrfachnutzen spielen in meinen Unternehmen eine Rolle



6. Ich möchte weiterhin über Multiple-Benefits informiert werden und in Erfahrungsaustausch bleiben



All participants filled the feedback form. Additionally we have obtained feedback of the webinars as good in content but some technical difficulties appeared while streaming.

Italy – FIRE

1st training

Date: 25 September (theory), 3 October (serious game) 2019

Location: Bologna

Trainer(s): Dario Di Santo, Livio De Chicchis, Lorenzo Tuzzolo

Participants list:

Online training session:

Dati partecipanti				
Cognome	Nome	Indirizzo e-mail	Data/Ora iscrizione	Ora partecipazione - Ora abbandono (Tempo in sessione)
Accanito	Ciro Alberto	ciro.accanito@eni.com	20/9/19 9.35 CEST	25/9/19 10.10 CEST - 25/9/19 12.20 CEST (2 ore 11 minuti)
BITTANTE	FILIPPO	filippo.bittante@snergospa.com	9/9/19 8.37 CEST	25/9/19 10.08 CEST - 25/9/19 10.36 CEST (28 minuti)
Bongiovanni	Luca	luca.bongiovanni@gruppoiren.it	17/9/19 9.59 CEST	25/9/19 9.26 CEST - 25/9/19 12.21 CEST (2 ore 56 minuti)
CUMANI	MARGHERITA	margherita.cumani@gruppohera.it	25/9/19 9.31 CEST	25/9/19 9.31 CEST - 25/9/19 12.21 CEST (2 ore 50 minuti)
Cabiddu	Monica	monica.cabiddu@fnmggroup.it	24/9/19 12.21 CEST	25/9/19 9.37 CEST - 25/9/19 12.21 CEST (2 ore 44 minuti),25/9
Cassataro	Marcello	marcello@interazione2p.it	9/9/19 8.33 CEST	25/9/19 9.29 CEST - 25/9/19 10.47 CEST (1 ora 18 minuti),25/9
D'Albore Stellato	Dario	dario.dalbovestellato@eni.com	19/9/19 17.10 CEST	25/9/19 9.26 CEST - 25/9/19 12.21 CEST (2 ore 55 minuti)
Enrico	D'Aurelio	enrico.daurelio@gmail.com	25/9/19 9.34 CEST	25/9/19 9.35 CEST - 25/9/19 12.21 CEST (2 ore 46 minuti)
FERILLI	CRISTINA	cristina.ferilli@gewiss.com	6/9/19 17.23 CEST	25/9/19 9.27 CEST - 25/9/19 12.21 CEST (2 ore 54 minuti),25/9
Ferrari	Nicolò	nicolo.ferrari@mail.polimi.it	11/9/19 5.15 CEST	25/9/19 9.34 CEST - 25/9/19 12.20 CEST (2 ore 47 minuti)
GAMBARO	FEDERICO	federico.gambaro@mail.polimi.it	11/9/19 5.15 CEST	25/9/19 9.37 CEST - 25/9/19 12.21 CEST (2 ore 45 minuti)
Leone	Eloisa	eloisa.leone@eni.com	24/9/19 12.26 CEST	25/9/19 9.17 CEST - 25/9/19 12.20 CEST (3 ore 3 minuti)
Martorana	Claudio	claudio.martorana@valeri.it	5/9/19 18.35 CEST	25/9/19 9.17 CEST - 25/9/19 12.21 CEST (3 ore 4 minuti)
Patrino	Eleonora	eleonora.patruno@eni.com	19/9/19 17.27 CEST	25/9/19 9.34 CEST - 25/9/19 12.21 CEST (2 ore 47 minuti)
Piazzì	Michele	michele.piazzì@gruppohera.it	24/9/19 12.20 CEST	25/9/19 9.26 CEST - 25/9/19 12.20 CEST (2 ore 55 minuti)
Resca	Marco	lamstudio@alice.it	6/9/19 13.17 CEST	25/9/19 9.35 CEST - 25/9/19 9.49 CEST (15 minuti),25/9/19 9.4
Riefoli	Maria Cristina	cristina.riefoli@gruppoiren.it	17/9/19 13.38 CEST	25/9/19 9.23 CEST - 25/9/19 12.21 CEST (2 ore 59 minuti)
Roveda	Fabio	fabio.roveda@gruppohera.it	24/9/19 13.43 CEST	25/9/19 9.24 CEST - 25/9/19 12.20 CEST (2 ore 57 minuti)
Sposato	Angela	angela.sposato@dbagroup.it	5/9/19 12.16 CEST	25/9/19 9.29 CEST - 25/9/19 12.21 CEST (2 ore 52 minuti)
VANNUCCI	DAVIDE	vannucci@area-e.it	24/9/19 12.40 CEST	25/9/19 9.37 CEST - 25/9/19 12.21 CEST (2 ore 44 minuti)
Vandoni	Dylan	dylan.vandoni@eni.com	24/9/19 13.04 CEST	25/9/19 9.24 CEST - 25/9/19 12.21 CEST (2 ore 57 minuti)
Ziveri	Daniele	dziveri@bit-energia.it	5/9/19 14.28 CEST	25/9/19 9.44 CEST - 25/9/19 12.21 CEST (2 ore 37 minuti)
benevento	corrado	corrado.benevento@asbibi.piemonte.it	5/9/19 12.48 CEST	25/9/19 9.31 CEST - 25/9/19 9.31 CEST (1 minuto),25/9/19 9.3
ciotta	luigi	luigi.ciotta@eni.com	20/9/19 8.44 CEST	25/9/19 9.34 CEST - 25/9/19 12.21 CEST (2 ore 48 minuti)
ferrari	marco	marco.ferrari1@eni.com	19/9/19 17.03 CEST	25/9/19 9.24 CEST - 25/9/19 12.21 CEST (2 ore 57 minuti)
garzia	alessandro	alessandro.garzia@eni.com	19/9/19 17.19 CEST	25/9/19 9.16 CEST - 25/9/19 12.20 CEST (3 ore 4 minuti)
greco	daniela	dg@didelmesistemi.it	6/9/19 14.59 CEST	25/9/19 9.17 CEST - 25/9/19 12.21 CEST (3 ore 5 minuti)
maggiore	simone	simone.maggiore@rse-web.it	5/9/19 12.10 CEST	25/9/19 9.27 CEST - 25/9/19 11.35 CEST (2 ore 8 minuti)
tanzi	serena	serena.tanzi@eni.com	20/9/19 9.30 CEST	25/9/19 9.23 CEST - 25/9/19 12.20 CEST (2 ore 58 minuti)
D'ACIERNO	Domenico	Domenico.D'Acierno@eni.com	20/9/19 18.07 CEST	--

Serious game “live” session:

name	surname	Company
Marcello	Cassataro	Interazione 2P
Claudio	Martorana	I Medicei
Fabio	Roveda	Hera Spa
Michele	Piazzì	Hera Spa
Lorenzo	Calcagno	PoliTo

Summary

Trainings were split in a first half-day online meeting, during which the theoretical part (methodology and financial analysis) was disseminated, and a one-day live session playing serious game.









Photo documentation

Signature list

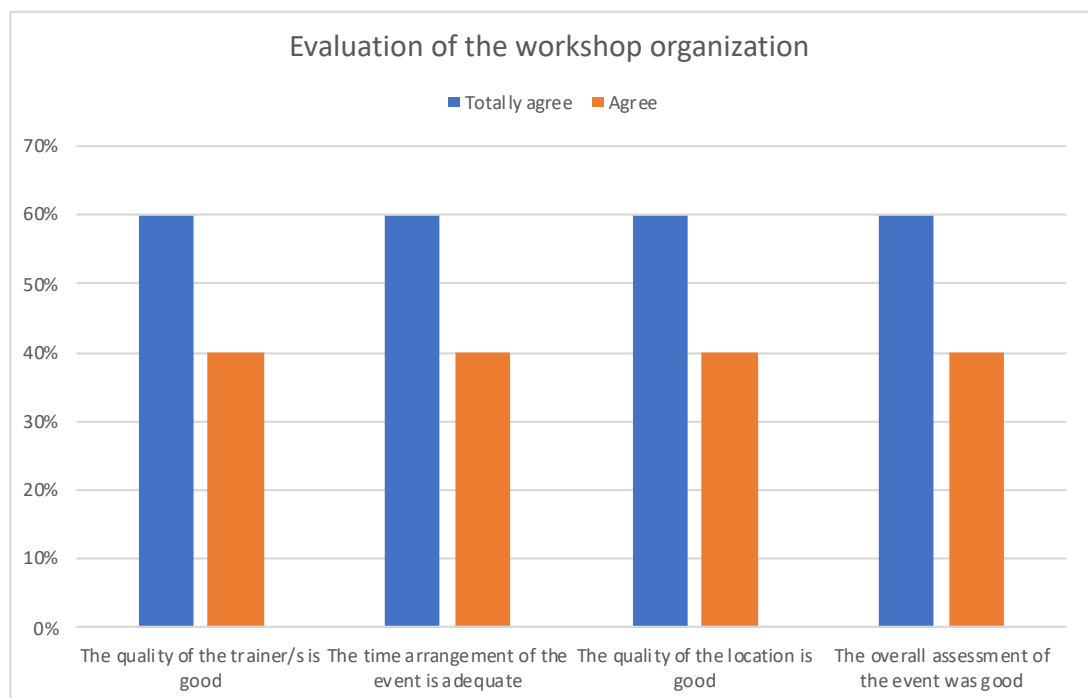
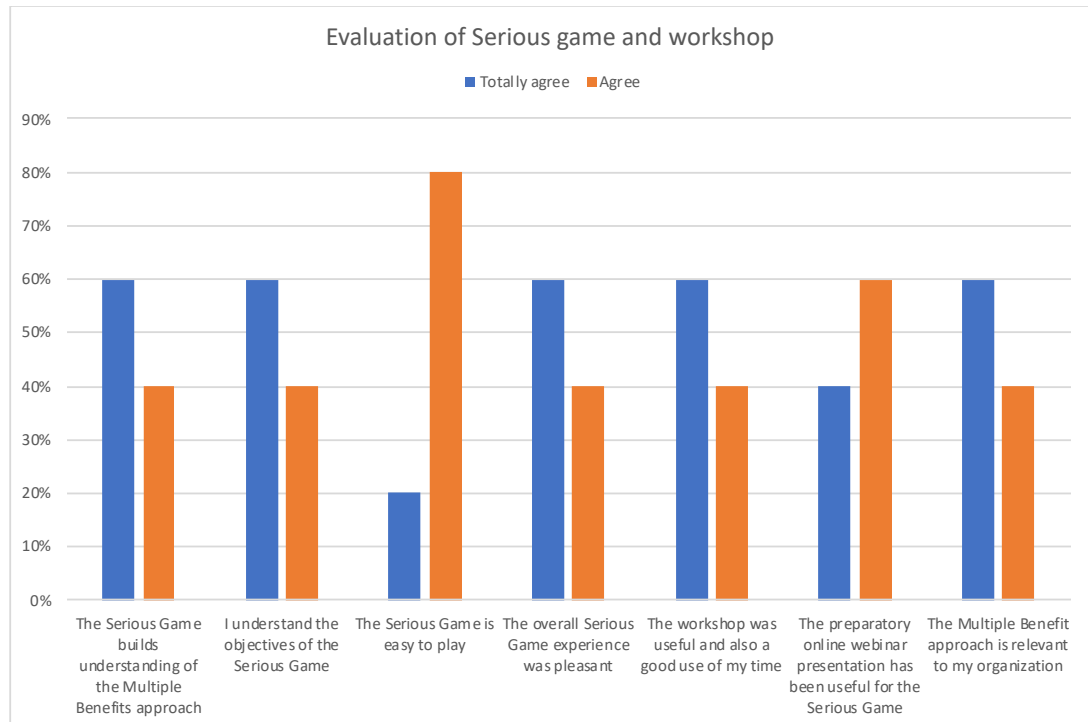
Training M-Benefits Bologna

October 3, 2019

Participants

Name	Surname	Organisation	Signature
Davide	Vannucci	Area Engineering	
Marcello	Cassaturo	Interazione 2P	
Corrado	Ilariuzzi	Servizi tecnici e amministrativi	
Marco	Resca	Libero professionista	
Claudio	Martorana	EGE	
Valter	Corbani	libero professionista	
Vittorio	Favaro	BIT Energia	
Daniele	Ziveri	BIT Energia Srl	
Michele	De Paola	Libero Professionista	
Claudio	David	Energia Ambiente 2050	
Fabio	Roveda	Hera spa	
Michele	piazzi	Hera spa	
Lorenzo	Calcagno	Kai Polio - studio	
Dario	Di SANTO	FIRE	
Livio	De CHICCHIS	FIRE	
Lorenzo	TUZZOLO	FIRE	

Evaluation result



2nd training

Date: 25 September (theory), 14 October (serious game) 2019

Location: Milano

Trainer: Livio De Chicchis, Stefano D'Ambrosio

Participants list:

name	surname	Company
-------------	----------------	----------------

Ciro	Accanito	Eni
Luca	Bongiovanni	Iren
Cristina	Ferilli	Gewiss
Marco	Ferrari	Eni
Giacomo	Lanteri	Energy expert
Eloisa	Leone	Eni
Simone	Maggiore	R.S.E.
Andrea	Ponta	Iren
Maria Cristina	Riefoli	Iren
Dylan	Vandoni	Eni
Eleonora	Patruno	Eni
Alessandro	Garzia	Eni

Summary

We had a mix of both heterogeneous groups and groups who worked in the same company (but different functions). Interesting final discussion about the measures chosen.

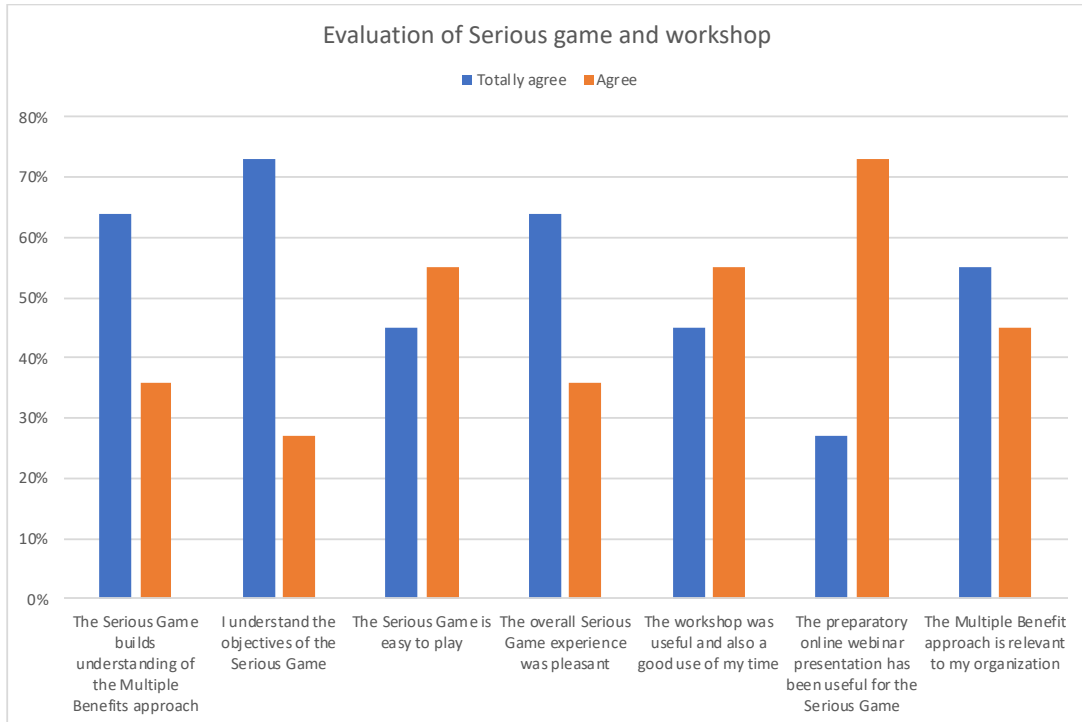
Photo documentation

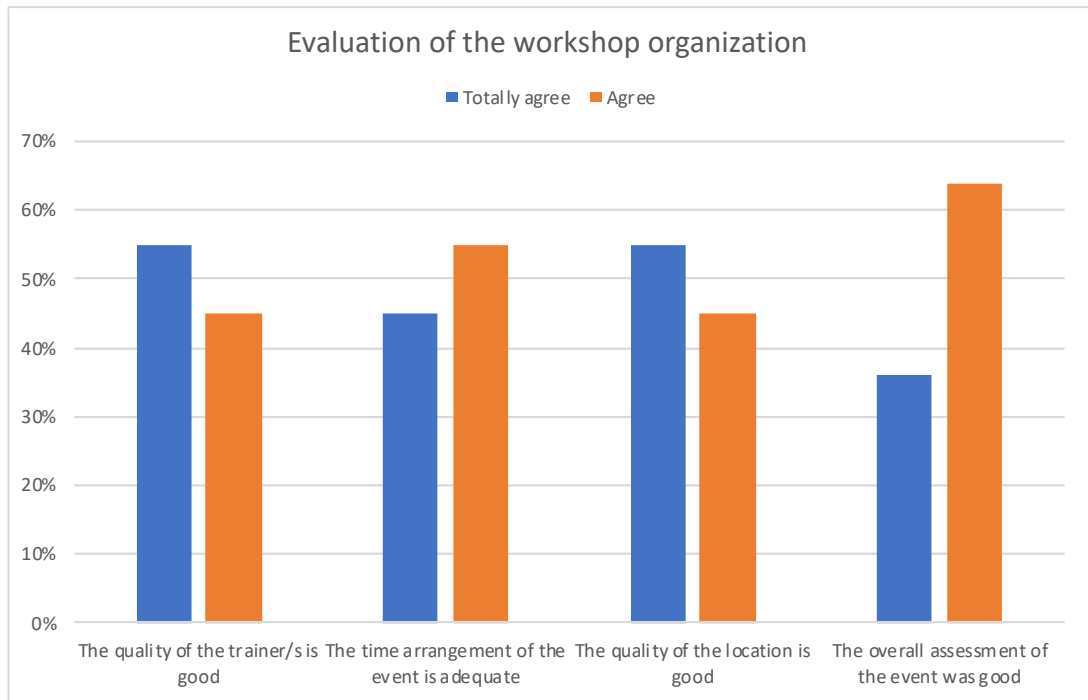


Signature list

M-BENEFITS - MILANO, 14-10-2019				
N°	COGNOME	NOME	AZIENDA	FIRMA
1	Accanito	Ciro	Eni spa	<i>[Signature]</i>
2	Accordini	Davide	Politecnico di Milano	
3	Altieri	Walter	Iveco spa	
4	Benevento	Corrado	ASL di Biella	
5	Bitetti	Michele	Eni spa	
6	Bongiovanni	Luca	IREN SpA	<i>[Signature]</i>
7	Cabiddu	Monica	FSM	
8	D'Acerno	Domenico	Eni spa	
9	D'Albore stellato	Dario	Eni spa	
10	D'Aurelio	Enrico	Libero professionista	
11	Ferilli	Cristina	Geniss Spa	<i>[Signature]</i>
12	Ferrari	Marco	Eni spa	<i>[Signature]</i>
13	Ferrari	Nicolò	Politecnico di Milano	
14	Fracchia	Giuseppe	territorio ed Energia srl	
15	Gambaro	Federico	Politecnico di Milano	
16	Greco	Daniela	didelme sistemi	
17	Lanteri	Giacomo	Libero professionista	<i>[Signature]</i>
18	Leone	Eloisa	Eni spa	<i>[Signature]</i>
19	Maggiore	Simone	R.S.E.	<i>[Signature]</i>
20	Melloni	Sara	Iveco s.p.a.	
21	Murri	Pasquale	Enel X	
22	Negro	Giorgina	CEK Industrial	
23	Odeffa	Simone	Territorio ed Energia	
24	Ponta	Andrea	IREN SpA	<i>[Signature]</i>
25	Realini	Anna	R.S.E.	
26	Risfoli	Maria Cristina	IREN SpA	<i>[Signature]</i>
27	Vandoni	Dylan	Eni spa	<i>[Signature]</i>
	PATELINO	ELEONORA	ENI SPA	<i>[Signature]</i>
	GARBIA	ALESSANDRO	ENI SPA	<i>[Signature]</i>

Evaluation result





Poland – KAPE

1st training

Date: 13.11.2019

Location: Faculty of Production Engineering, Warsaw University of Life Sciences, Nowoursynowska 166, 02-787 Warsaw

Trainer: Piotr Nowakowski, Ryszard Wnuk

Participants list:

Summary

The first training was dedicated for students of Management and Production Engineering at Faculty of Production Engineering – Warsaw University of Life Sciences. The idea behind it was to enlarge the scope of potential target group and to inform future energy managers about the importance of non-energy benefits and their real implications. Therefore the essential aim of the first training was to present M-Benefits methodology in general explaining in details every step of the process. Moreover the first training consisted part devoted to “Economic indicators for evaluation of profitability of the energy efficiency measure”, during which the most popular indicators were explained. The same training was conducted for two groups of students separately.

Photo documentation



Signature list



- MBenefits Training + Serious Game -

13.11.2019, University of Life Sciences, Faculty of Production
Engineering, Warsaw

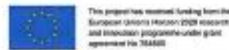
Lp.	Nazwisko	Imię	Podpis
✓ 1	Wesołowski	Karol	Wesołowski Karol
2	Wotanczewska	Alina	Wotanczewska Alina
3	Skłodonek	Żaklina	Skłodonek Żaklina
✓ 4	Szczygielski	Daniel	Szczygielski Daniel
5	Zagórski	Patryk	Zagórski Patryk
6	Szukalska	Julia	Szukalska Julia
7	Majewski	Janusz	Janusz Majewski
8	Stalman	Marcin	Marcin Stalman
9	Siniak	Cezary	Siniak Cezary
✓ 10	Łal	Wiktoria	Łal Wiktoria
11	Pawłowski	Patryk	Pawłowski Patryk
12	Strusiak	Robert	Robert Strusiak
13	Yuscha	Aleksandra	A. Yuscha
14	Killer	Emilia	E. Killer



- MBenefits Training + Serious Game -

**13.11.2019, University of Life Sciences, Faculty of Production
Engineering, Warsaw**

Lp.	Nazwisko	Imię	Podpis
1	Mabonowski	Bartłomiej	Bartłomiej Mabonowski
2	Jastrzębski	Daniel	Daniel Jastrzębski
3	Stankiewicz	Mariusz	Mariusz Stankiewicz
✓ 4	Rodopiński	David	David Rodopiński
5	Włodarczyk	Agata	Agata Włodarczyk
✓ 6	Sobolew	Mariusz	Mariusz Sobolew
7	Guz	Lukasz	Lukasz Guz
✓ 8	Koźniszki	Daniel	Daniel Koźniszki
9	Wichniacz	Joanna	Joanna Wichniacz
10	Michalski	Sebastian	Sebastian Michalski
11	Aleksander	Aleksander	Aleksander
12			
13			
14			



1

Evaluation result

All the participants found the M-Benefits methodology interesting and well-structured giving a broader perspective for energy efficiency topics within the company. Most of participants stated that they will use the presented approach working in the future company. The participants agreed that it is worth to be aware of so many non-energy benefits that may correspond to energy efficiency projects. The business-model canvas and the discussion on strategic aspects of energy efficiency were also well received. The students highlighted the high usefulness of the knowledge of economic indicators (SPBT, IRR, NPV, LCOE etc.).

2nd training

Date: 20.11.2019

Location: Faculty of Production Engineering, Warsaw University of Life Sciences, Nowoursynowska 166, 02-787 Warsaw

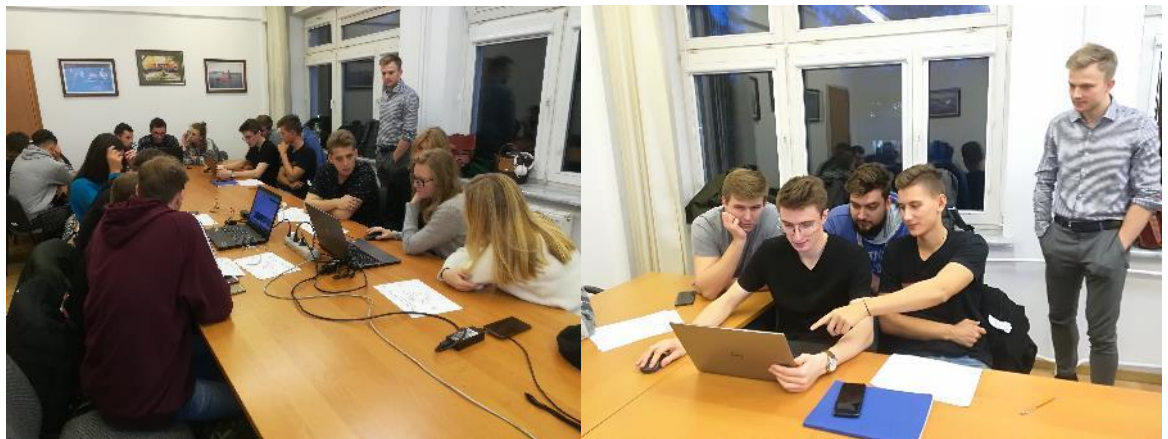
Trainer: Piotr Nowakowski, Ryszard Wnuk

Participants list:

Summary

The second training was a follow up session of the training which held on 13.11.2019. The training was devoted to the same groups of students, which participated in the first training. The core goal of the session was to conduct Serious Game play and test the real-case project tool. In order to do that, the introductory presentation describing the key elements of the game was showed to the participants by the representatives of KAPE. Furthermore, the necessary instructions were given to the participants in order to maintain a proper course of the gameplay. Each group of the students composed 5 teams participating the Serious Game independently.

Photo documentation



Signature list



- MBenefits Training + Serious Game -

20.11.2019, University of Life Sciences, Faculty of Production
Engineering, Warsaw

Lp.	Nazwisko	Imię	Podpis
1	Jablonski	Bartłomiej	Bartłomiej Jablonski
2	Jastrębski	David	David Jastrębski
3	Wichniacz	Joanna	Joanna Wichniacz
4	Gruś	Katarzyna	Katarzyna Gruś
5	Król	Mateusz	Mateusz Król
6	Walczyk	Agata	Agata Walczyk
7	Prokopiuk	David	David Prokopiuk
8	Penkiewicz	Mariusz	Mariusz Penkiewicz
9	Sobolew	Marek	Marek Sobolew
10	Mazur	Marek	Marek Mazur
11	Liśniewski	Melchior	Melchior Liśniewski
12	Michalak	Cezary	Cezary Michalak
13	Joniński	Marek	Marek Joniński
14	Kobuski	Daniel	Daniel Kobuski

1



- MBenefits Training + Serious Game -

**20.11.2019, University of Life Sciences, Faculty of Production
Engineering, Warsaw**

Lp.	Nazwisko	Imię	Podpis
1	Wasziriński	Karel	Wasziriński Karel
2	Werbanowska	Alina	Werbanowska Alina
3	Szczygielski	Daniel	Szczygielski Daniel
4	Skłodanek	Stoklino	Stoklino Skłodanek
5	Mawonide	Adam	Mawonide
6	Tyburczy	Aleksandra	A. Tyburczy
7	Matysiak Koboska	Matysiak	Koboska Matysiak
8	Majewski	Janusz	Janusz Majewski
9	Niktor ←	Lal	Lal Niktor
10	Powłowski	Patryk	Powłowski Patryk
11	Staniak	Robert	Staniak
12	Siwiec	Cezary	Cezary Siwiec
13	Zagórski	Patryk	Zagórski Patryk
14	J. Skuthele	Julia	Skuthele Julia

 This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 784805

1



Lp.	Nazwisko	Imię	Podpis
15	Juscho	Aleksandra	A. Juscho
16	Keller	Emilia	E. Keller
17	Gawilska	Elzbieta	Gawilska
18	Stalmach	Marcin	Marcin Stalmach
19			
20			
21			
22			
23			
24			
25			

Evaluation result

Due to time constraints we were collecting the feedback on the session during the Serious Game play. The key impressions of the participants are reflected in the following statements:

- Theoretical introduction is needed and very useful for final playing.
- The tool has many features of a typical game – progress indicators, dialogues to be chosen etc.
- The games reflects company reality in a proper way.
- The game consists a lot of information and materials to be read, which also implicates a high amount of time needed.
- The participants agreed that the game gave many useful experiences and extended their knowledge in the field of energy efficiency and multiple benefits.
- The participants in the end found the game interesting and fun that provided them a new and broader view on energy efficiency topics in the industry sector and beyond.

Finally, the event can be accounted successful and it is worth underlining that it contributed to the extension of future energy managers' expertise and will bring positive results in the near future.

Greece – NTUA

1st training

Date:

Location:

Trainer:

Participants list:

Summary

Photo documentation

Signature list

Evaluation result

2nd training

Date:

Location:

Trainer:

Participants list:

Summary

Photo documentation

Signature list

Evaluation result

Portugal - ISR

1st training

Date: 11th November 2019

Location: University of Coimbra, Dep. Of Electrical Engineering

Trainer: João Fong, Carlos Patrão

Participants list:

First Name	Last Name
Andrea	Leone
John	Ogundiran
Davide	Anolli
Bruno	Cardoso
Nazanin	Azimi

Summary

The training was held for post-graduate students of the Energy for Sustainability program at the University of Coimbra. Some of the students had already worked actively in the field of energy management. Very positive feedback was received.

Photo documentation





Signature list



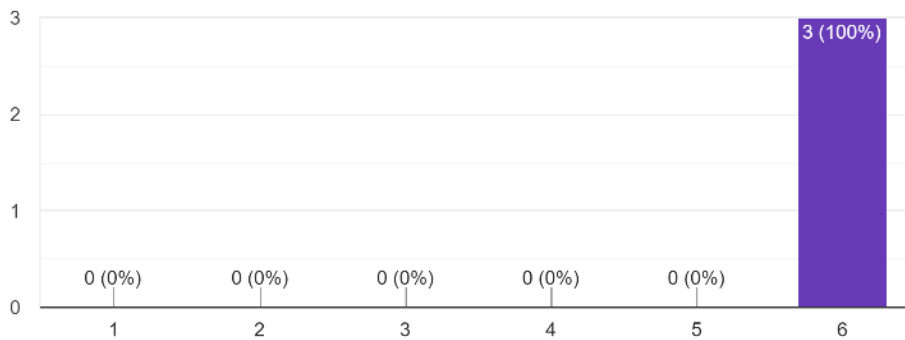
MBenefits – Training – Serious Game - 11/09/2019

Signature	Name	Surname	Email
	Paula	Fonseca	pfonseca@isr.uc.pt
	Miguel	Clemente	miguel.clemente@outlook.pt
	Carlos	Patrão	carlospatrao@gmail.com
	Mahla	Shariatzadeh	mahla.shariatzadeh@gmail.com
	Lucas	Teixeira	lucasengminas@gmail.com
	Andrea	Leone	andrea.leone96@gmail.com
	John	Ogundiran	Jogundiran@yahoo.com
	Nyembwe	Kapuya jean paul Bulaba	uc2019142248@student.uc.pt
	Hermano	Bernardo	hermano.ber@gmail.com
	Roham	Torabi	roham.torabi@gmail.com
	Davide	Anolli	davide.anolli@studenti.polito.it
	Bruno	Cardoso	bruno.cardoso@adai.pt
	Ana	Amaral	ana.amaral@student.uc.pt
	Nazanin	Azimi	n_azimy@yahoo.com
	Zelfonseca	Hegam	

Evaluation result

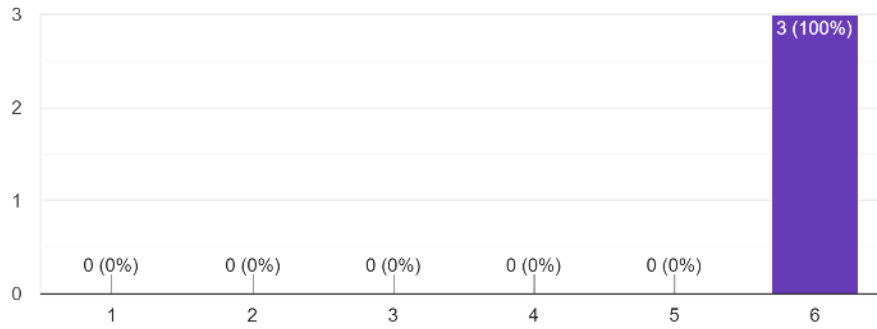
Did the training session meet your expectations?

3 responses



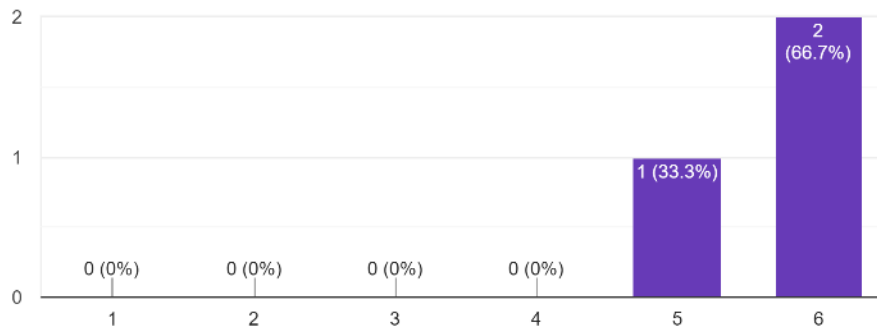
How would you rate the course's sequence and flow?

3 responses



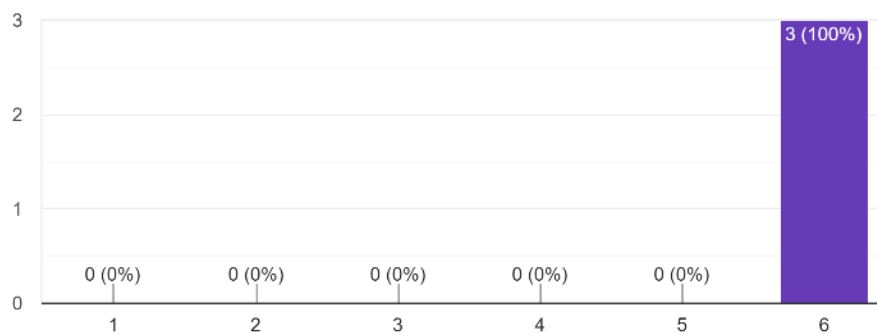
How would you rate your trainer's delivery skills?

3 responses



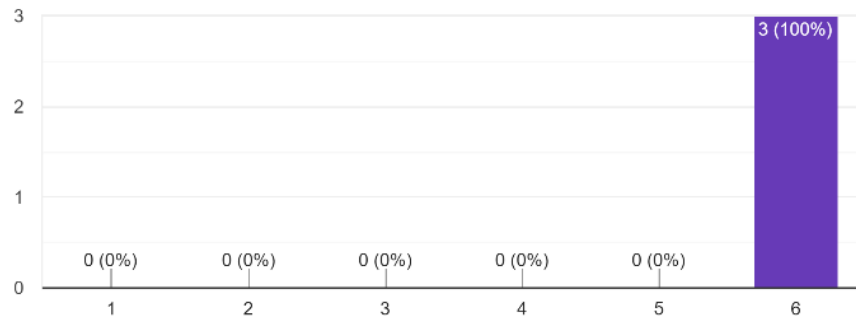
How would you rate the overall course content?

3 responses



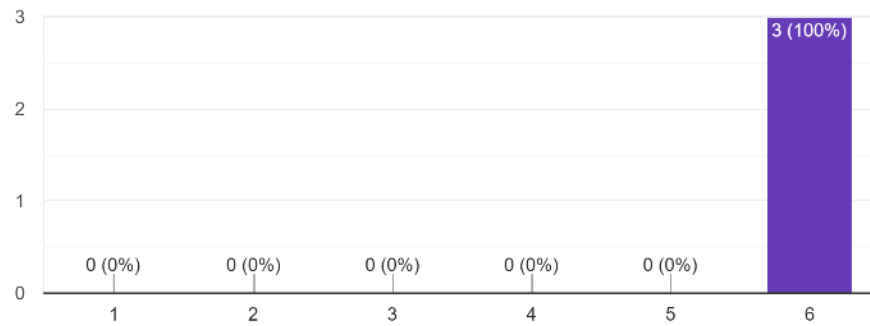
Enough theoretical background information was given to understand the methodology and play the serious game.

3 responses



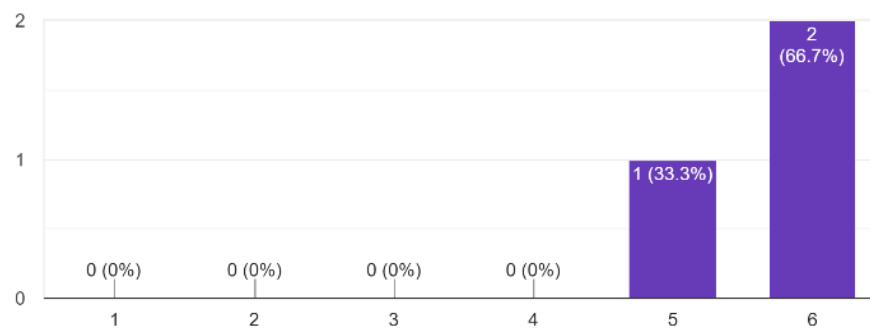
Was the game fun and engaging?

3 responses



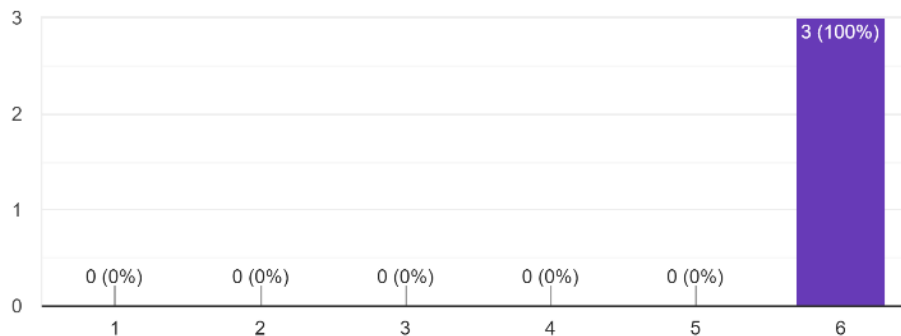
Do you feel enough time was given to complete each of the tasks?

3 responses



Will you be using what you have learned during the session in your professional life?

3 responses



2nd training

Date: 9 December 2019

Location: Lisbon, Direção Geral de Energia e Geologia

Trainer: João Fong, Carlos Patrão

Participants list:

First Name	Last Name	Organisation
Teresa	Henriques	Instituto de Gestão Financeira da Educação, I.P.
Amádis	Santos	Portuguese Energy Agency ADENE)
Maria	Bandeira Ferreira	Hovione
Ana	Oliveira	DGEG
Marisa	Seixas	DGEG
David	Prata	DGEG
Carla	Martins	DGEG

Summary

The training was held at the Portuguese Directorate-General for Energy and Geology. Participants were mainly from the public sector with only one private company represented.

Photo documentation



Signature list



Benefícios Múltiplos da Eficiência Energética - Serious Game
 Direção Geral de Energia e Geologia, Sala Santa Maria, 12º andar
 Rua 5 de Outubro, nº 208, Lisboa

09/12/2019, 10:00-18:00

Assinatura	Nome	Instituição
	Teresa Henriques	Instituto de Gestão Financeira da Educação, I.P.
	Paulo de Carvalho	INIAV
	Amádis Santos	ADENE
	David Salema	LNEG
	Luís Braga	RAR – Refinarias de Açúcar Reunidas SA
	Maria Bandeira Ferreira	Hovione
	Joaquim Santos	Instituto Politécnico de Leiria
	Iolanda Sousa	CM Loures
	Luisa Manuela Nunes Ferreira	Universidade de Évora
	Manuel Martinho	IASFA
	Purificação Pais	Secretaria Geral da Educação e Ciência
	João Fong	ISR-Universidade de Coimbra
	Carlos Patrão	ISR-Universidade de Coimbra
	Ana Oliveira	DGEG
	Mariana Santos	DGEG
	David Patrão	DGEG
	Carla Martinho	DGEG

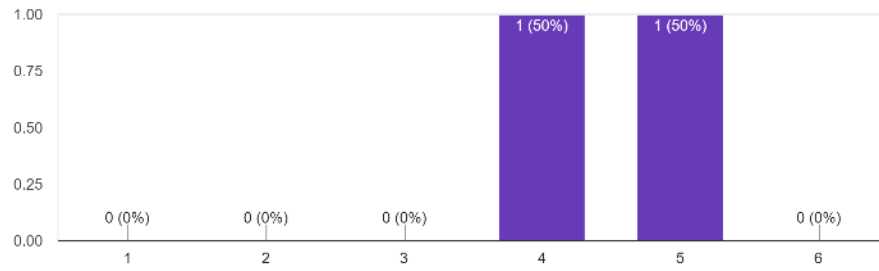


Funded by the European Union

Evaluation result

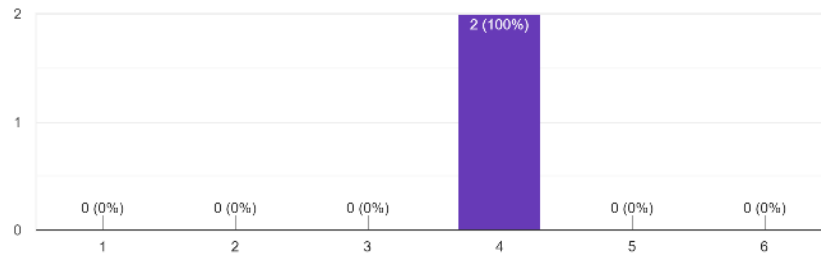
A sessão de formação correspondeu às suas expectativas?

2 responses



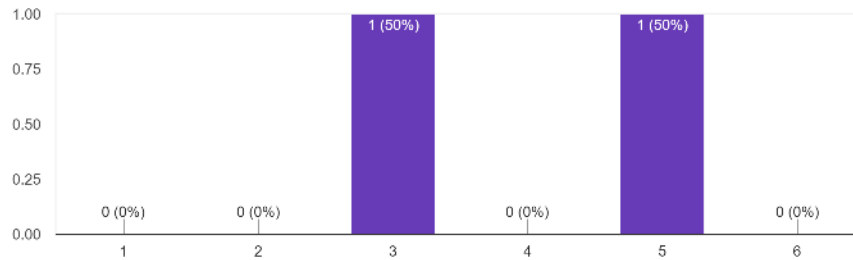
Como classificaria a sequência e o ritmo do curso?

2 responses



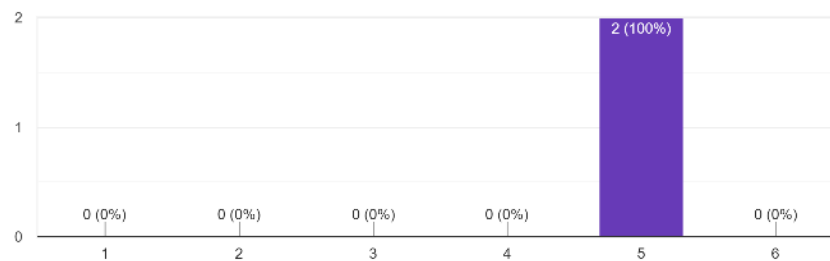
Como classificaria a capacidade do formador de comunicar informação?

2 responses



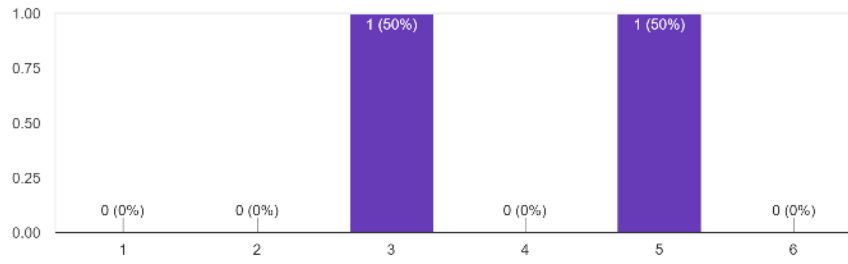
Como classificaria o conteúdo do curso?

2 responses



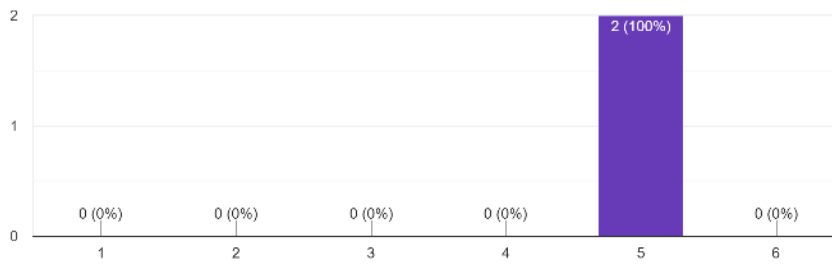
Foi dada fundamentação teórica suficiente para perceber a metodologia e jogar o serious game.

2 responses



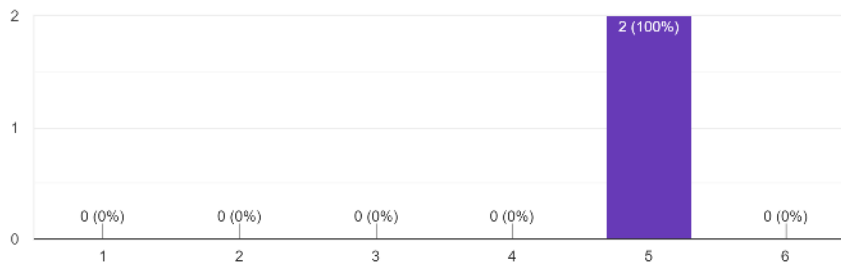
O jogo é divertido e cativante.

2 responses



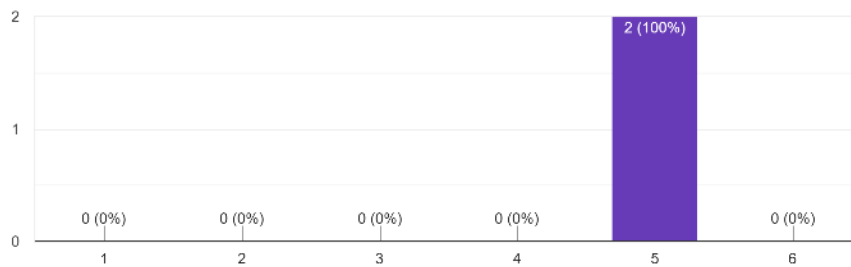
Sente que foi dado tempo suficiente para completar cada uma das tarefas?

2 responses



Pensa vir a utilizar o que aprendeu na sua vida profissional?

2 responses



3rd training

Date: 9 December 2019

Location: Coimbra, Ordem dos Engenheiros

Trainer: João Fong, Carlos Patrão

Participants list:

NOME	Organization
António Manuel de Brito Paulino	Instituto Politécnico de Coimbra
Bruno Gomes	Rigor, Consultoria e Gestão
Carlos Alberto Alvarinhas Costa	Mesaco-Gabinete de Apoio A Qualidade e Inovação Na Construção
Filipe José de Jesus Carvalheiro	GESA -UC
João Miguel Barreto Ferreira	Universidade de Coimbra
João Paulo Correia Matos Cardoso	Ordem dos Engenheiros
Jorge Manuel Tavares Marques	
José Artur Ruivo Simões	Teknos-Consultadoria e Gestão Industrial
Luciano Jorge Mendes Justo Ramos	SP4 – Engenharia, Lda.
Marcos José Carvalho Pereira Pinguinha	ALTICE
Maria Isabel Vila-Chã	AIDA – Associação Industrial de Aveiro
Paulo Alexandre Marques Durão Breda	
Pedro Jorge Fernandes Fonseca	Proficis, Lda.
Tiago Oliveira	Universidade de Coimbra

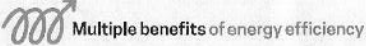

Summary

In order to increase the number of people reached within the target groups of the trainings a third training was held in Portugal. The objective was accomplished by partnering with the Engineering Association. The attendees were mainly active energy experts (energy managers, consultants) working in both industry and buildings.

Photo documentation

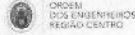


Signature list

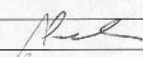


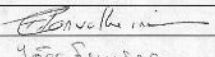
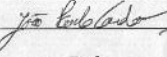
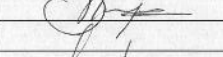
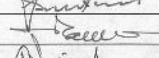

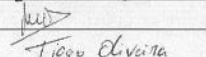
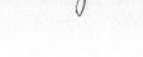







20 de fevereiro de 2020, 10h00-18h00

Ordem dos Engenheiros, Região Centro
Rua Antero de Quental, 107
3000-032 COIMBRA



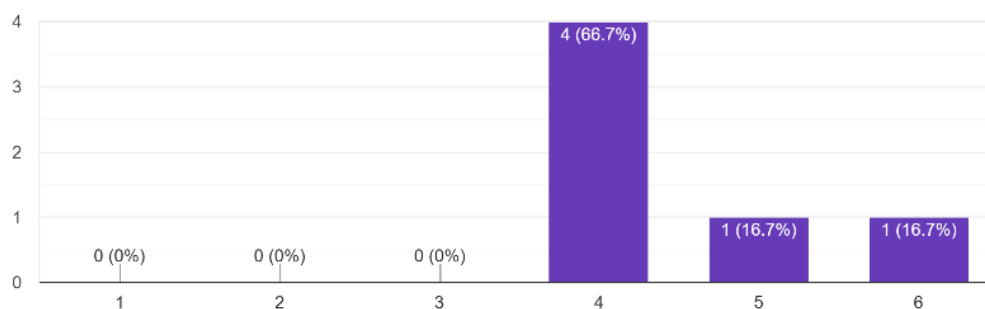
Formação | Seminário: Avaliar os Múltiplos Benefícios da Eficiência Energética Formadores: João Fong e Carlos Patrão

Nº	TIPO	NOME	Email	Afiliação	Presença
1	OERC	António Augusto Rodrigues Pascoal Alves			
2	V CREE	António Manuel de Brito Paulino	ANTONIO.PAULINO@ESTRADA.IG.PT	INSTITUTO POLITÉCNICO DE COIMBRA	
3	NM	Bruno Gomes	bruno.gomes@rigorcg.pt	Rigor, Consultoria e Gestão, S.A. - Grupo Salvador Caetano	
4	OERC	Carlos Alberto Alvarinhas Costa	CALVARINHAS@GMAIL.COM	NEALOCAS APOLIQUAÇÃO E INOVAÇÃO CONSTRUTIVA	
5	OERC	Carlos Alberto Lourenço Estevinho			
6	OERC	Enrique Manuel Leitão Ferreira			
7	OERC	Fernando José Rodrigues Marques da Silva			
8	OERC	Fernando Pinto de Carvalho			
9	OERC	Filipe José de Jesus Carvalheiro	Filipe.carvalheiro@gmail.com	GE3A - UC	
10	OERC	João Miguel Barreto Ferreira	JM.B.FERRA@LIVRO.COM.PT		
11	V CREE	João Paulo Correia Matos Cardoso	joao.p.cardoso@1@gmail.com		
12	OERC	Jorge Manuel Simões Galvão			
13	OERC	Jorge Manuel Tavares Marques	marques.jorge@sapo.pt	Bonitas	
14	OERC	José António Dias Rodrigues			
15	OERC	José Artur Ruivo Simões	jruivosimoes@betons.pt	consultas	
16	OERS	Luciano Jorge Mendes Justo Ramos	luciano.n Ramos@shk.pt	SHK Engenharia	
17	OERC	Marcos José Carvalho Pereira Pinguinha	marcos.j.f.pinguinha@telusim.pt	TELUSIM	
18	NM	Maria Isabel Vila-Chã	isavilachã@cmcm.com	ARDA - Assor. Ind. D. Aireiro	
19	OERC	Paulo Alexandre Marques Durão Breda	PAULO.DURAO.BREDA@GMAIL.COM		
20	OERC	Pedro Jorge Fernandes Fonseca	pedrojfon@igmail.com	Proficis Lda	
21	OERC	Tiago Oliveira	teoliveira@gmail.com	Universidade de Coimbra	

Evaluation result

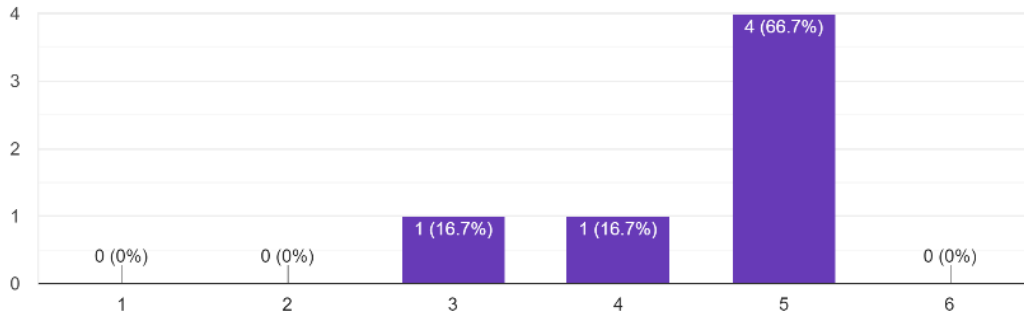
A sessão de formação correspondeu às suas expectativas?

6 responses



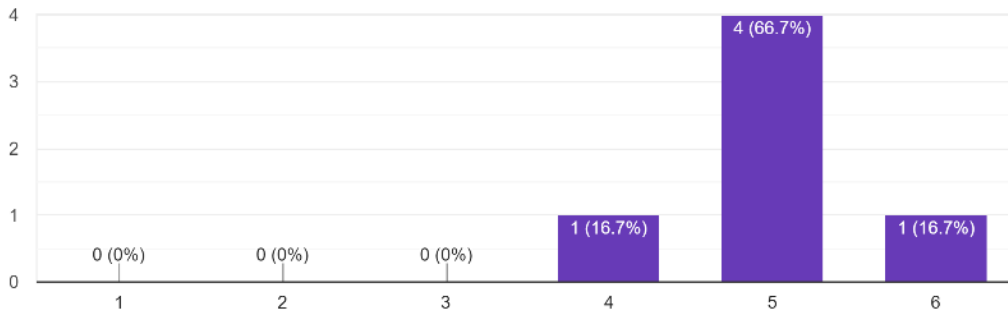
Como classificaria a sequência e o ritmo do curso?

6 responses



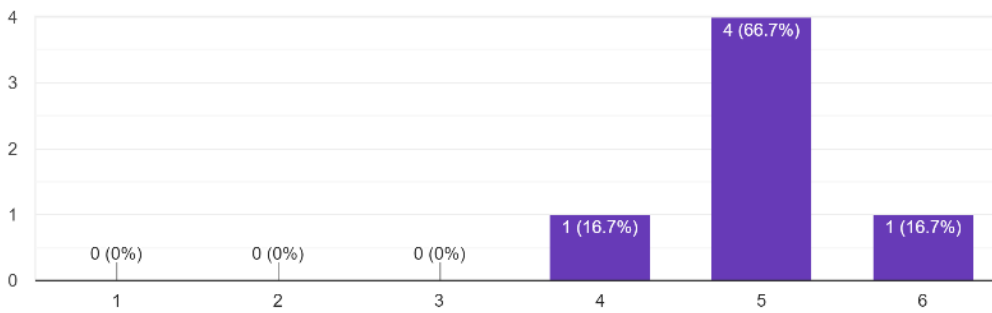
Como classificaria a capacidade do formador de comunicar informação?

6 responses



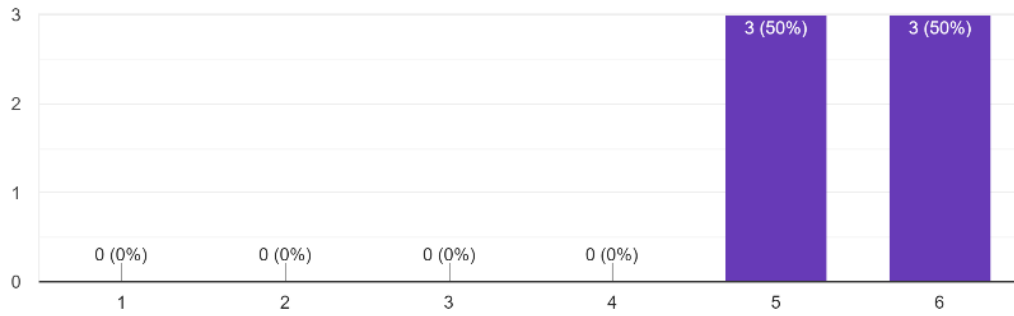
Como classificaria o conteúdo do curso?

6 responses



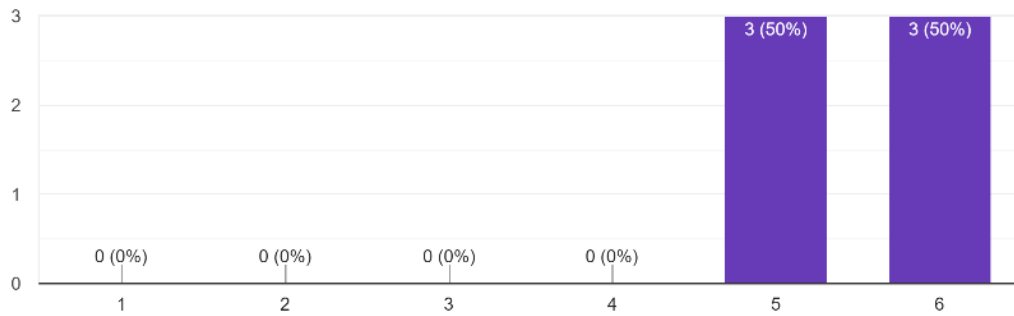
Foi dada fundamentação teórica suficiente para perceber a metodologia e jogar o serious game.

6 responses



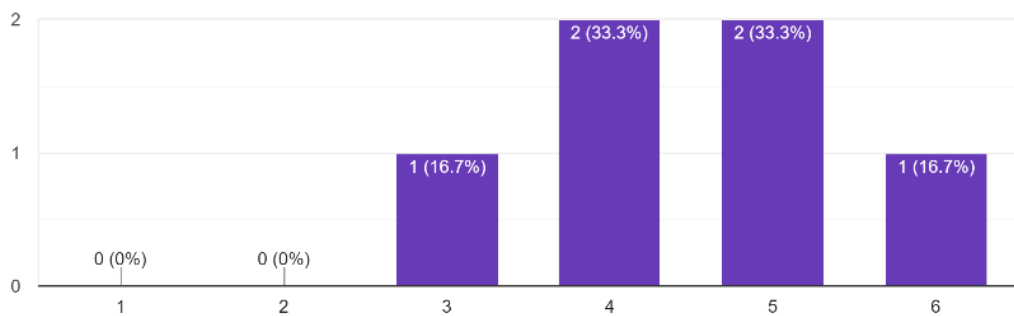
O jogo é divertido e cativante.

6 responses



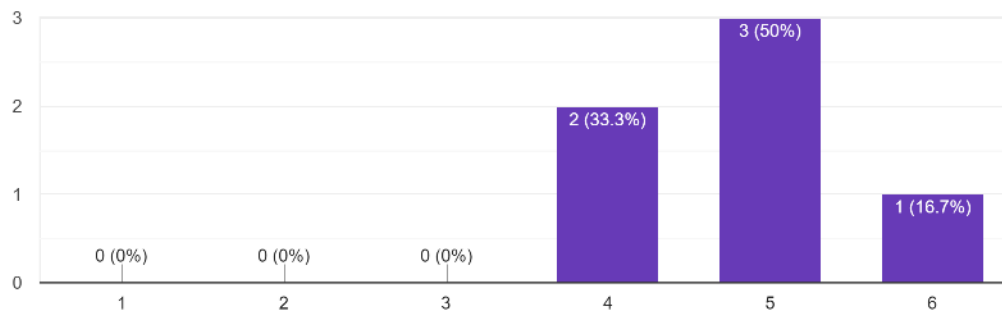
Sente que foi dado tempo suficiente para completar cada uma das tarefas?

6 responses



Pensa vir a utilizar o que aprendeu na sua vida profissional?

6 responses



Switzerland – HSLU

1st training

Date: All participants were trained during January 2020 using a special eLearning tool. After successful completion of the eLearning, a 1-day workshop including Q&A session and Serious Game took place in Zürich on January 23, 2020.

Location: Migros Headquarter Zürich

Trainer: Ingo Schneider (eLearning: Support by Ramon Späti)

Participants list:

First Name	Last Name	Organisation
Philippe	Seibert	JOWA TI
Raphael	Looser	MGB TI
Stephane	Vesin	ELSA SA
Florian	Brunner	LeShop
Hanspeter	Gysin	Midor
Marcus	Dredge	JOWA RE

Summary:

Companies did not accept 2-day TrainingWorkshops, they asked for a shorter and more flexible version of the training. As a result, an eLearning tool was prepared at HSLU. The tool is based on the content of the three Multiple Benefits Webinars, which were held by HSLU during September/October 2019. All participants took the eLearning during January 2020. After successful completion of this training, a 1-day Workshop including Q&A session and Serious Game was held on January 23, 2020 in Zürich. The participants worked on the case study in two teams, i.e. Team 1: 'Kälte' and Team 2: 'Wärme'. Both teams were successful. After the presentation, they had a lively discussion on the results.

The eLearning Tool by HSLU:

The screenshot shows the eLearning tool interface. The top part is a menu page with the title 'Multiple benefits of energy efficiency' and a 'Click: Select Menu Page' label. The menu lists various topics under sections 2.1 to 2.6. A 'Click: Back to Menu' arrow points from the selected content page back to the menu. The selected content page is titled 'Internal Rate of Return (IRR)' and contains the following text:

Five parameters

1. Initial outlay (I)
2. Cash flows (CF)
3. Period (n)
4. Discount rate (i)
5. Residual value (RV)

$$NPV = 0 = -I + \sum \frac{CF_t}{(1+i)^t}$$

IRR is an alternative technique for use in making capital investment decisions

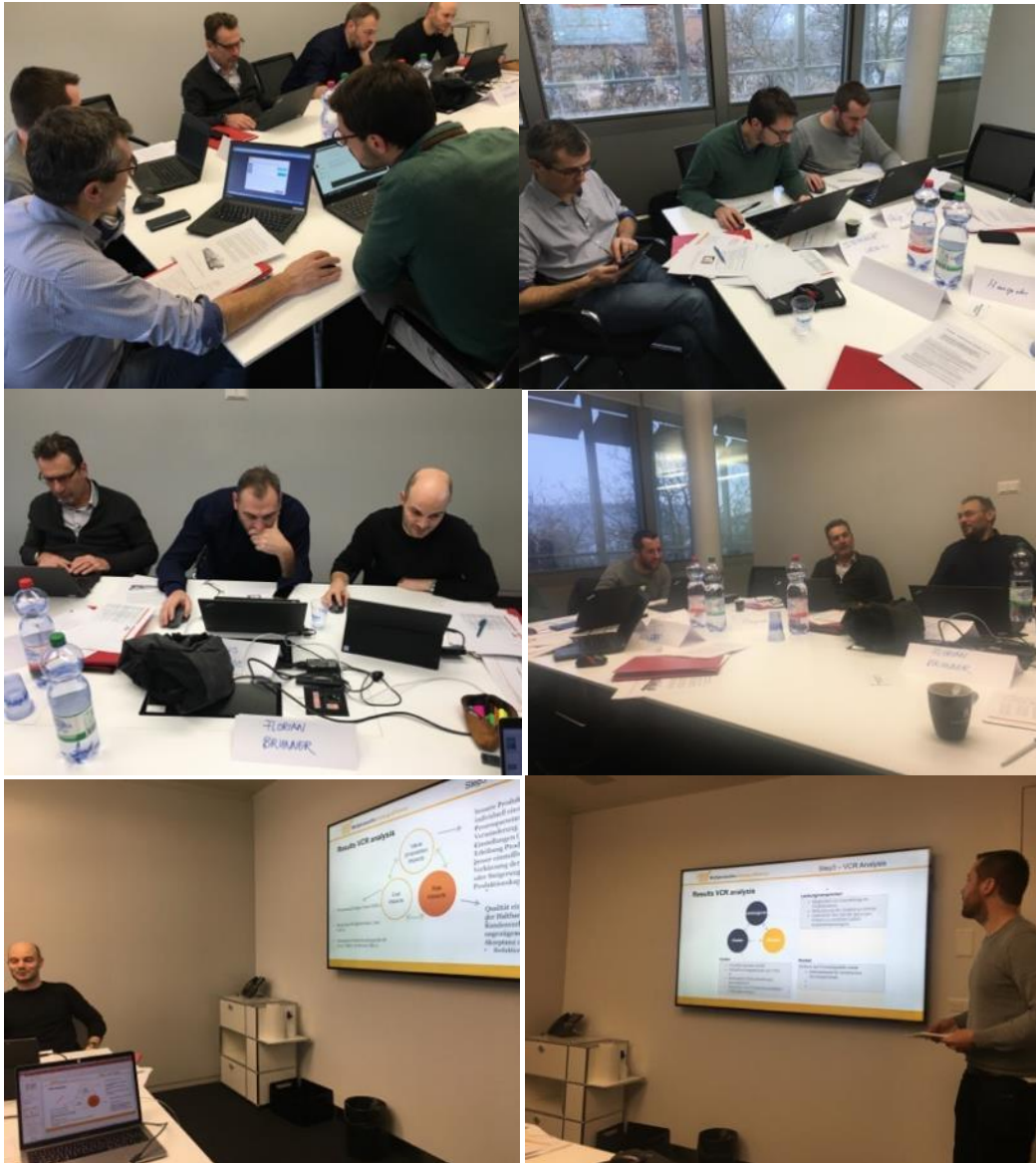
- takes into account the time value of money
- represents the true interest rate earned on an investment over the course of its economic life
- IRR = discount rate, that equates the PV of a project's expected cash inflows to the PV of the project's expected cash outflows

Drawback
Reinvestment assumptions

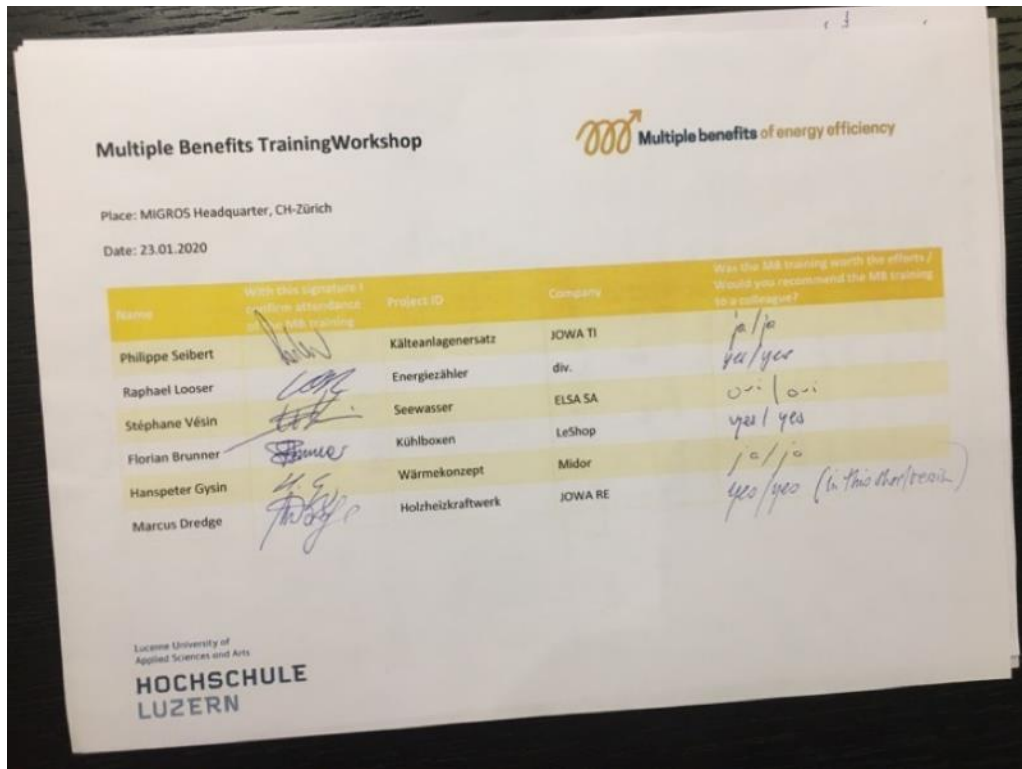
- IRR assumes that CF from the project can be reinvested at the same interest rate.
- IRR is a relative value
- It expresses the result as a percentage rather than in monetary terms
- This may be misleading

A 'Click: Select Content' arrow points to the selected content page. A 'Speaker explains the content of each selected page' label points to the content page.

Photo documentation:



Signature list:



Evaluation result:

For the evaluation of the workshop only two key questions were employed*:

Was the Multiple Benefits Training worth the efforts? 6/6 YES

Would you recommend the Multiple Benefits Training to a colleague? 6/6 YES

*The Ultimate Question: Driving Good Profits and True Growth. Fred Reichheld. Harvard Business School Press, Boston, MA; 2006; ISBN: 1-59139-783-9

2nd training

Date: All participants were trained during April 2020 using the special Multiple Benefits eLearning tool of HSLU. After successful completion of this eLearning, a workshop including the Serious Game took place online on April 28, 2020.

Location: Online WebEx Workshop

Trainer: Ingo Schneider (eLearning: Support by Ramon Späti)

Participants list:

First Name	Last Name	Employer	Online-Participant
Michael	Bayer	Battery Consult AG	X
Roman	Cervera	Mettler-Toledo AG	X
Mike	Kienbaum	Roche	X
Stefan	Kuzmiak	MSD (Merck)	X
Carolin	Lau	Roche	X
Silvan	Schmid	Swiss Steel	-
Philipp	Theile	Univ. Köln	-
Steffen	von Dahlen	Roche	X
Simon	Wenninger	Research Center FIM	-
Paul	Westermann	Univ. Victoria/ETHZ	-
Christian	Wiethe	Research Center FIM	-

Summary

Originally, the second TrainingWorkshop was planned to take place on April 28th, 2020 at the Innovation Park of Central Switzerland. This event was cancelled mid of April due to the Corona crisis and then re-organized as an online event at the same date. However, five registered persons were not interested to participate in the online event (see Table above).

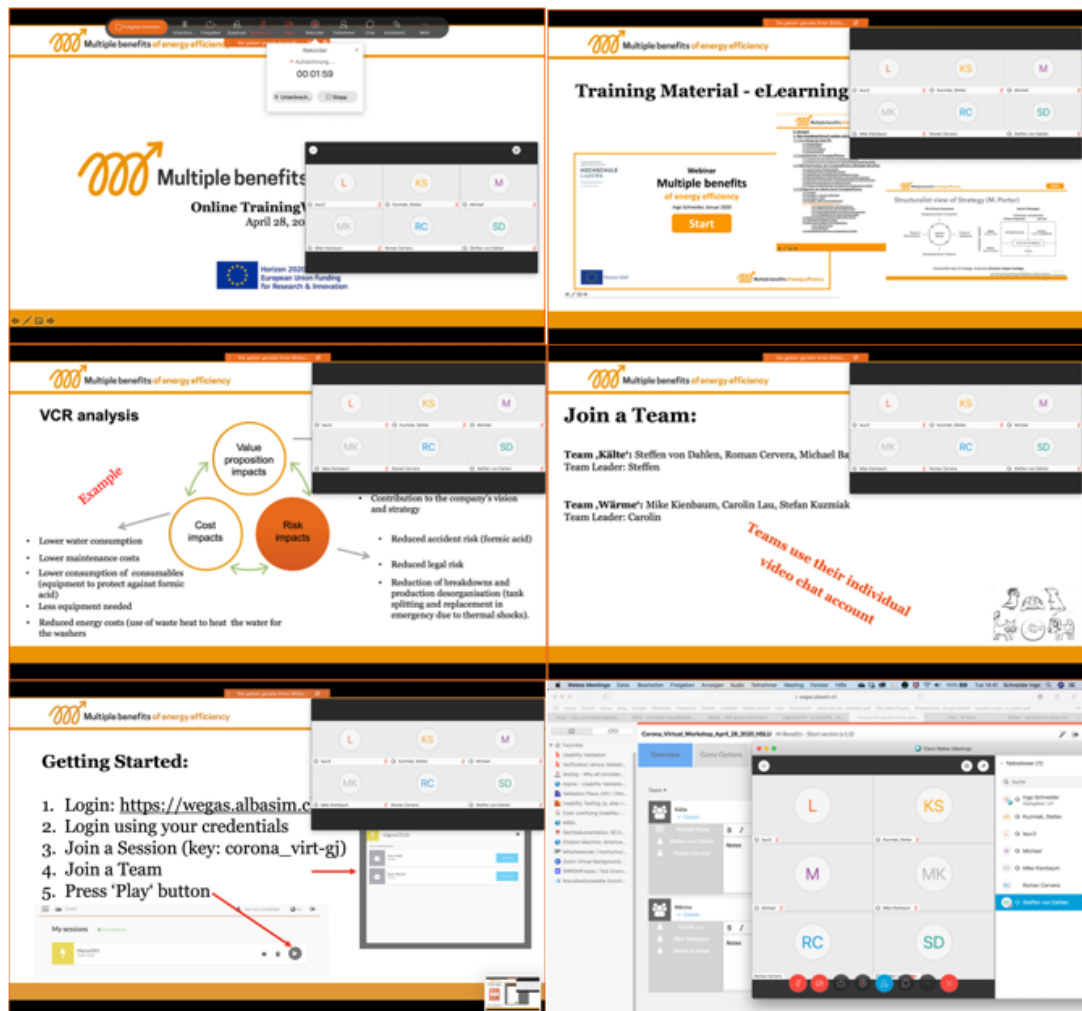
The screenshot displays a website interface with a navigation bar at the top containing 'Innovationspark', 'Netzwerk', 'Labs', and 'Events'. The main content area features a large graphic titled 'The multiple benefits of energy efficiency improvements' with a circular diagram showing various energy-related icons. Below this, there is a list of items with titles like 'Zusatznutzen der Energieeffizienz - Ein Treiber für die Gebäudesanierung?' and 'Open House: Soziale Nachhaltigkeit und Zusammenleben - mehr als...'. Each item has a 'Referenz' label and a 'DETAILS' button.

Announcement for the TrainingWorkshop at the Innovation Park Central Switzerland (IPZ) scheduled for April 28, 2020 on the IPZ website.

Most of the companies did not accept 2-day TrainingWorkshops, they asked for a shorter and more flexible version of the training. As a result, a special Multiple Benefits eLearning tool was prepared by HSLU (see documentation of 1st HSLU training). The tool is based on the content of the three Multiple Benefits Webinars, which were held by HSLU during September/October 2019. This eLearning tool has also been employed in the second TrainingWorkshop. The participants took the eLearning during April 2020. After completion of this training, an online Workshop including the Serious Game practical group exercise was held on April 28, 2020 via WebEx.

Photo documentation

Since the second Workshop was held online, we display screenshots of the WebEx online workshop.



Signature list and Evaluation result

For documentation purposes, we display the emails, we received from the participants for the rating of the second TrainingWorkshop.

Re: M-Benefits Workshop

MB
 Michael Bayer <michael.bayer@batteryconsult.ch>
 Thursday, 30 April 2020 at 14:25
 @ MultipleBenefits
[Show Details](#)

Hello,

thanks for offering this online workshop, which I was happy to attend.

As an answer to your questions my response is:

Was the TrainingWorkshop worth the effort? **yes**
 Would you recommend the TrainingWorkshop to a colleague? **yes**

Best regards,
 Michael Bayer

An Di, 28. Apr. 2020 um 18:20 schrieb MultipleBenefits <multiplebenefits@hslu.ch>

Dear Participant,

Thank you for attending the H2020 Multiple Benefits Online TrainingWorkshop on April 28, 2020.

We would be happy if you could reply to the two questions below and return this email to multiplebenefits@hslu.ch.

Was the TrainingWorkshop worth the effort? **yes/no**
 Would you recommend the TrainingWorkshop to a colleague? **yes/no**

Thank you!

Best regards
Hochschule Luzern
 Institute of Innovation and Technology Management, CC Power Economy
 Technikumstrasse 21, CH-6048 Horw
 T +41 41 349 33 11

Re: M-Benefits Workshop

VD
 von Dahlen, Steffen <stefan.von_dahlen@roche.com>
 Wednesday, 29 April 2020 at 07:42
 @ MultipleBenefits
[Show Details](#)

Dear Sir or Madam,

Please find below my responses to the survey questions for the H2020 Multiple Benefits Online TrainingWorkshop on April 28, 2020:

Was the TrainingWorkshop worth the effort? **yes**
 Would you recommend the TrainingWorkshop to a colleague? **yes**

Best regards,
 Steffen von Dahlen

Dr. Steffen von Dahlen
 Roche Diagnostics International AG
 Industriestrasse 1
 Grenzach-Wyhlen
 Switzerland
 Office +41 58 108
stefan_vd@roche.com
[http://www.roche.com](http://www.roche.ch)

Confidentiality Note: This message is intended only for the use of the named recipient(s) and may contain confidential and/or proprietary information. If you are not the named recipient, please contact the sender.

Re: M-Benefits Workshop

KM
 Kienbaum, Mike <mike.kienbaum@roche.com>
 Tuesday, 28 April 2020 at 19:24
 @ MultipleBenefits
[Show Details](#)

Dear Participant,

Thank you for attending the H2020 Multiple Benefits Online TrainingWorkshop on April 28, 2020.

We would be happy if you could reply to the two questions below and return this email to multiplebenefits@hslu.ch.

Was the TrainingWorkshop worth the effort? **yes/no**
 Would you recommend the TrainingWorkshop to a colleague? **yes/no**

Best regards
Hochschule Luzern
 Institute of Innovation and Technology Management, CC Power Economy
 Technikumstrasse 21, CH-6048 Horw
 T +41 41 349 33 11

Re: M-Benefits Workshop

KM
 Kienbaum, Mike <mike.kienbaum@roche.com>
 Tuesday, 28 April 2020 at 19:24
 @ MultipleBenefits
[Show Details](#)

Mike Kienbaum
 Product Leader Blood Gas & Electrolytes
 Squad Lead ROCV Reagents

Roche Diagnostics International AG
 Global Operations - Blood Gas & Electrolytes
 8, 10/ R, CH-120 108
 Forrenstrasse 2
 CH-6300 Rottweil, Switzerland

Phone: +41 -41 -79 -87834
 Mobile: +43 -79 -944 85 36
 Mail: mike.kienbaum@roche.com
www.roche.ch/rocheau

upcoming absence: 07 May 2020 - 24 May 2020

Global Operations - Exceptional people, excellent products... together we make a difference

Confidentiality Note: This message is intended only for the use of the named recipient(s) and may contain confidential and/or proprietary information. If you are not the named recipient, please contact the sender.

Re: M-Benefits Workshop

KS
 Kuzniak, Stefan <stefan.kuzniak@menck.com>
 Wednesday, 29 April 2020 at 09:33
 @ MultipleBenefits
[Show Details](#)

Dear sir/Madam,

Was the TrainingWorkshop worth the effort? **yes**
 Would you recommend the TrainingWorkshop to a colleague? **yes**

Kind regards,
 Stefan Kuzniak

From: Schneider Ingo HUGO T&A <ingo.schneider@hslu.ch> On Behalf Of MultipleBenefits
 Sent: Tuesday, April 28, 2020 18:20
 To: MultipleBenefits <multiplebenefits@hslu.ch>
 Subject: M-Benefits Workshop

EXTERNAL EMAIL - Use caution with any links or file attachments.

Dear Participant,

Thank you for attending the H2020 Multiple Benefits Online TrainingWorkshop on April 28, 2020.

We would be happy if you could reply to the two questions below and return this email to multiplebenefits@hslu.ch.

Was the TrainingWorkshop worth the effort? **yes/no**
 Would you recommend the TrainingWorkshop to a colleague? **yes/no**

Thank you!

Best regards
Hochschule Luzern
 Institute of Innovation and Technology Management, CC Power Economy
 Technikumstrasse 21, CH-6048 Horw
 T +41 41 349 33 11

Re: M-Benefits Workshop

SC
 Schneider-Lau, Carstin <carstin.schneider-lau@roche.com>
 Friday, 1 May 2020 at 09:26
 @ MultipleBenefits
[Show Details](#)

Dear Sir/Madam,

Thank you for organizing the 2020 Multiple Benefits Online TrainingWorkshop on April 28, 2020.

To answer your questions:

Was the TrainingWorkshop worth the effort? **yes**
 Would you recommend the TrainingWorkshop to a colleague? **yes**

Best regards
 Carstin

An Di, 28. Apr. 2020 um 19:18 Uhr schrieb MultipleBenefits <multiplebenefits@hslu.ch>

Dear Participant,

Thank you for attending the H2020 Multiple Benefits Online TrainingWorkshop on April 28, 2020.

We would be happy if you could reply to the two questions below and return this email to multiplebenefits@hslu.ch.

Was the TrainingWorkshop worth the effort? **yes/no**
 Would you recommend the TrainingWorkshop to a colleague? **yes/no**

Thank you!

RE: M-Benefits Workshop

KS
 Kuzniak, Stefan <stefan.kuzniak@menck.com>
 Wednesday, 29 April 2020 at 09:33
 @ MultipleBenefits
[Show Details](#)

Dear sir/Madam,

Was the TrainingWorkshop worth the effort? **yes**
 Would you recommend the TrainingWorkshop to a colleague? **yes**

Kind regards,
 Stefan Kuzniak

From: Schneider Ingo HUGO T&A <ingo.schneider@hslu.ch> On Behalf Of MultipleBenefits
 Sent: Tuesday, April 28, 2020 18:20
 To: MultipleBenefits <multiplebenefits@hslu.ch>
 Subject: M-Benefits Workshop

EXTERNAL EMAIL - Use caution with any links or file attachments.

Dear Participant,

Thank you for attending the H2020 Multiple Benefits Online TrainingWorkshop on April 28, 2020.

We would be happy if you could reply to the two questions below and return this email to multiplebenefits@hslu.ch.

Was the TrainingWorkshop worth the effort? **yes/no**
 Would you recommend the TrainingWorkshop to a colleague? **yes/no**

Thank you!

Best regards
Hochschule Luzern
 Institute of Innovation and Technology Management, CC Power Economy
 Technikumstrasse 21, CH-6048 Horw
 T +41 41 349 33 11

For the evaluation of the workshop only two key questions were employed*:

Was the Multiple Benefits Training worth the efforts? 5/6Yes, 0No

Would you recommend the Multiple Benefits Training to a colleague? 5/6Yes, 0No

*The Ultimate Question: Driving Good Profits and True Growth. Fred Reichheld. Harvard Business School Press, Boston, MA; 2006; ISBN: 1-59139-783-9