EDUCATIONAL PLATFORM FOCUSED ON ADVANCED STRATEGIES OF REINSTATEMENT OF BUILDING MATERIALS IN THE INDUSTRIAL VALUE CHAIN TO PROMOTE THE TRANSITION TO THE CIRCULAR ECONOMY THROUGH THE USE OF BIM LEARNING TECHNOLOGIES

2019-1-ES01-KA203-065962

O2-A5. REPORT ON THE RESULTS ON FIRST WORKSHOP IN PORTUGAL

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INTELLECTUAL OUTPUT 2

TASK O2-A5
Report on the results of Second Workshop in Portugal

Presentation of common learning outcomes for advanced strategies applied to Circular Economy using BIM learning technologies

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O2-A5. REPORT ON THE RESULTS ON FIRST WORKSHOP IN PORTUGAL

1. INTRODUCTION

The practical seminar "Como fazer uma análise de sustentabilidade com BIM HOJE?", held on 14 July 2022 at the National Association of Young Entrepreneurs (ANJE), Porto, Portugal, was organized by the University of Minho, University of Porto, Order of Engineers of the northern region, QA SRN, and ANJE.

The Seminar takes place in the context of the ERASMUS+ CircularBIM project involving Portuguese, Spanish and Romanian partners since 2019, for the definition of suitable databases for sustainability and BIM interoperability processes.

This task is assumed by the deliverable identified as O2/A5 "*Report on the results of Second Workshop in Portugal. Presentation of common learning outcomes for advanced strategies applied to Circular Economy using BIM learning technologies*".

This task is included in Intellectual Output 2 " *New interactive BIM-learning methods for Circular Economy*" of the CircularBIM project.

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2. AGENDA

15h00 - 15h30   Reception and registration

Part I – Fundamentals and investigations

15h30-15h40 Opening session (moderated by Prof. Miguel Azenha)
Eng Bento Aires, President of OERN
Arq Conceição Melo, President of OA-SRN
Prof. João Poças Martins, FEUP
Prof. Ricardo Mateus, UMinho

15h40-16h00 Experiences from Spain. Andalusia Construction cost database, instrument for the environmental impact assessment and construction waste control. Prof. Madelyn Marrero Meléndez. Universidade de Sevilha.

16h00-16h20 Avaliação expedita do carbono incorporado em modelos BIM classificados com o sistema de classificação SECClasS. Prof. Ricardo Resende. ISCTE

16h20-16h40 O projeto Europeu RecycleBIM rumo a plataforma integrada de gestão de resíduos da construção. Prof. Miguel Azenha. ISISE / Universidade do Minho

16h40-17h00 As DAP - declarações ambientais de produto - como instrumento de avaliação da sustentabilidade ambiental. Eng. Marisa Almeida. Centro Tecnológico da Cerâmica e do Vidro.

17h00 – 17h30   Coffee break

Part II – Practical application

17h30-17h50 O enquadramento Português nas análises de sustentabilidade e circularidade com enfoque nas bases de dados disponíveis. Prof. Ricardo Mateus. ISISE / Universidade do Minho

17h50-18h10 Utilização de ferramenta BIM para análise de sustentabilidade com conexão a base de dados nacional. Engº Ricardo Figueira. TOP Informática / CYPE

18h10-18h30 Discussion

18h30   Closing

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O2-A5. REPORT ON THE RESULTS ON FIRST WORKSHOP IN PORTUGAL

3. EVENT DEVELOPMENT

1. Opening session

The opening session, which was moderated by Prof. Miguel Azenha, Assistant professor at the University of Minho, member of ISISE, and coordinator of the Portuguese National Course in BIM, included interventions from Prof. Ricardo Mateus Assistant professor at the University of Minho who is the Board of iiSBE Portugal, and member of the Technical Committee of the Portuguese EPD's registration system (DapHabitat), Arq Conceição Melo, Chairman of the Board of Directors North Regional Section of the Ordem dos Arquitectos, Prof. João Poças Martins, Professor Auxiliar and Member of the Civil Engineering Department Council, FEUP, and Eng Bento Aires, President of the Order of Engineers - North Region.

The intervention focused on the importance if data in the context of sustainability and the role and importance of BIM in that context. The talks highlighted the importance of addressing the matter of climate change, and the challenges that face the industry in combatting this issue.
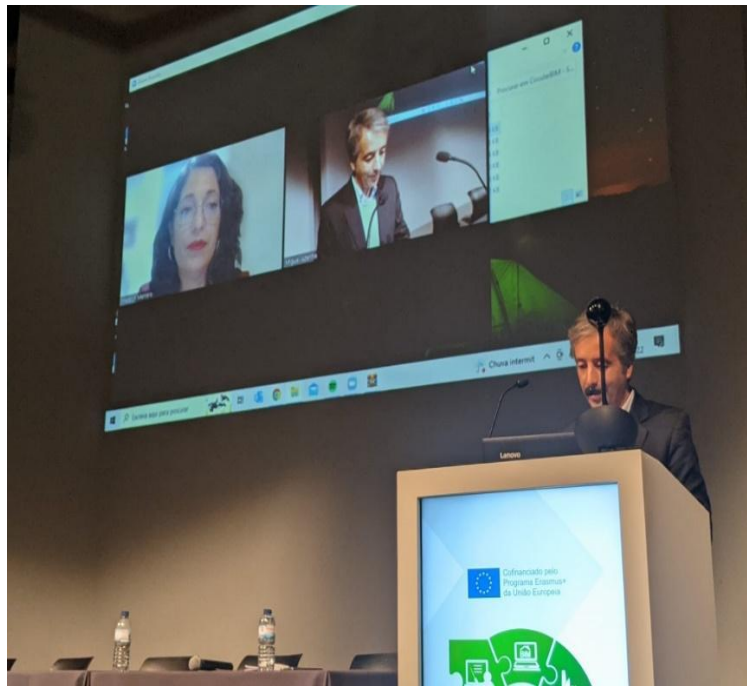

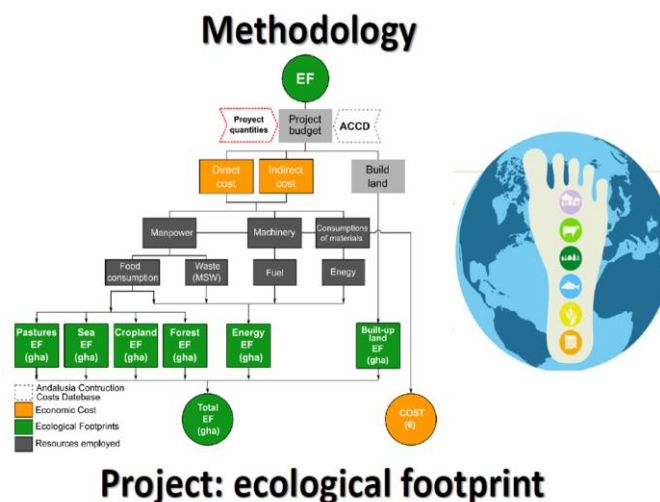*Pictures of the opening of the Workshop, within the framework of the CircularBIM project.*

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2. Presentation of Prof. Madelyn Marrero Meléndez "Experiences from Spain. Andalusia Construction cost database, instrument for the environmental impact assessment and construction waste control"

Prof. Madelyn presented her presentation online through video call. She presented a methodology for analyzing the environmental impact of the building life cycle (BLC), along with a case study. Then the results of the case study were discussed and conclusions were presented with future works.

Pictures of the presentation of Prof. Madelyn Marrero Meléndez.

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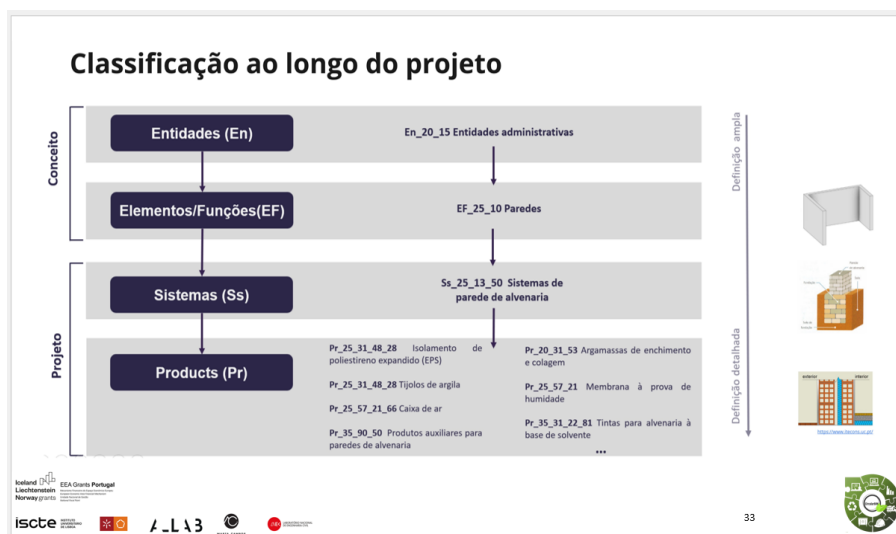
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3. Presentation of Prof. Ricardo Resende "Avaliação expedita do carbono incorporado em modelos BIM classificados com o sistema de classificação SECClasS"

Prof. Ricardo talked about the importance of the classification system SECClasS that has been developed for the Portuguese industry, in the context of using it to evaluate the sustainability of construction projects in the different phases of the project.

He also introduced the tools and tutorials developed within the SECClasS project, along with the works on developing Product Data Templates for the national context.

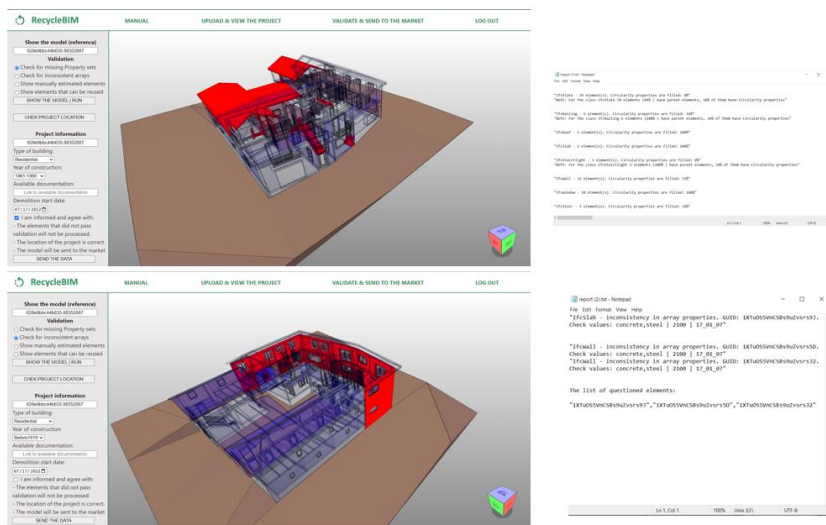*Pictures of the presentation of Prof. Ricardo Resende.*

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4. Presentation of Prof. Miguel Azenha "projeto Europeu RecycleBIM rumo a plataforma integrada de gestão de resíduos da construção"

Prof. Miguel talked about the RecycleBIM project that intends to make a multi-national and multi-stakeholder effort towards the creation of an integrated framework for circularity of raw materials of construction, leveraged on the wealth of information that is brought about by 'Building Information Modelling'.

He talked about the current developments and case studies, as well as the IFC-based tools being developed in the context of the project.

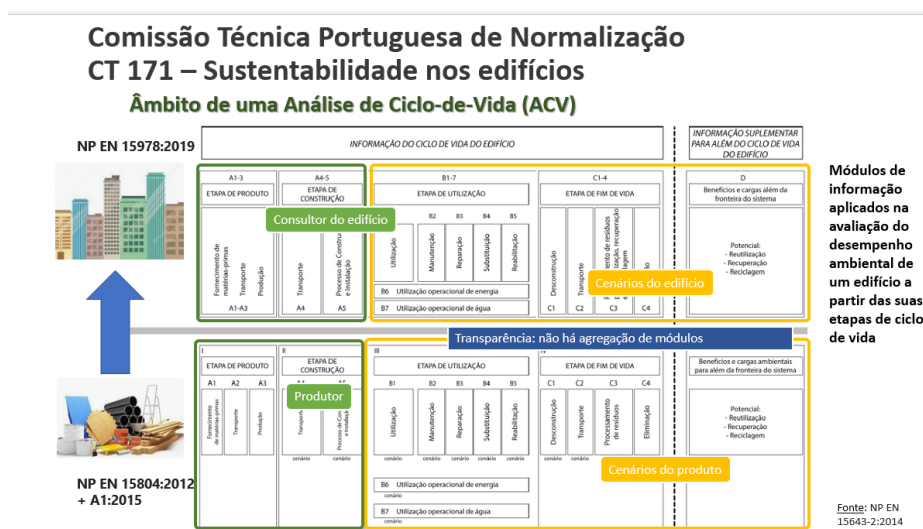*Pictures of the presentation of Prof. Miguel Azenha.*

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5. Presentation of Eng. Marisa Almeida "As DAP - declarações ambientais de produto - como instrumento de avaliação da sustentabilidade Ambiental"

Eng. Marisa did a presentation that elaborated on the definition of Environmental Product Declaration, their importance for the industry in the context of sustainability analysis, and how EPD are useful in the industry.

She explained about the international standards supporting EPDs, and shared useful resources with the audience that revolve around EPDs.
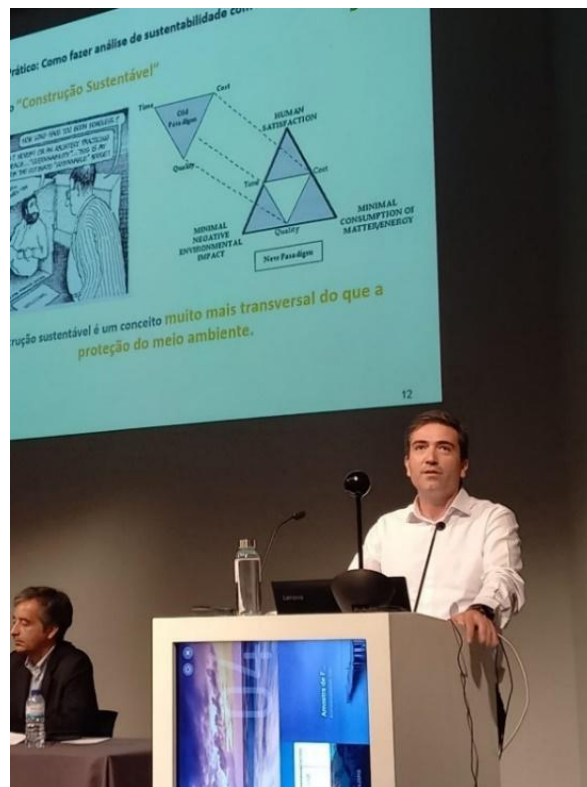

Pictures of the presentation of Eng. Marisa Almeida.

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6. Presentation of Prof. Ricardo Mateus "Enquadramento Português nas análises de sustentabilidade e circularidade com enfoque nas bases de dados disponíveis"

Prof. Ricardo talked about the current state of the climate crisis, then discussed the latest developments on the political and legislative level that promotes for sustainable construction.

After that he presented about the frameworks of sustainability analysis in the Portuguese context, shedding light on the available resources and databases related to performing these analysis.

Pictures of the presentation of Prof. Ricardo Mateus.

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7. Presentation of Eng. Ricardo Figueira "Utilização de ferramenta BIM para análise de sustentabilidade com conexão a base de dados nacional"

Eng. Ricardo from CYPE, first explained about their company's software and their developments that support practices and regulation in the Portuguese context.

He also presented a live example on how a sustainability analysis can be performed using models in open format IFC using the tools developed by CYPE, and how it can be used to compare construction solutions during the design phase.

Pictures of the presentation of Eng. Ricardo Figueira.

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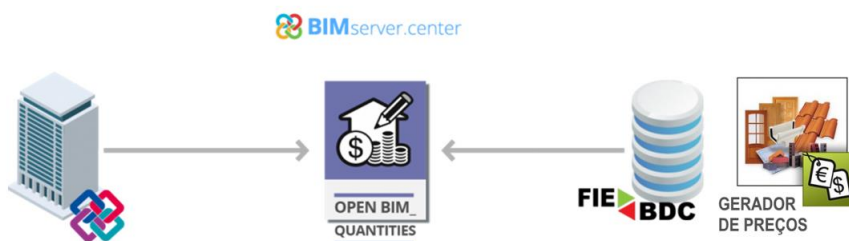
4. NUMBER OF PARTICIPANTS

The total attendance at the Seminar was 46 people, including the following project participants:

-Prof. Miguel Azenha, Uminho

-Eng. Bento Aires, Presidente da OERN

-Arq. Conceição Melo, Presidente da OA-SRN

-Prof. João Poças Martins, FEUP

-Prof. Ricardo Mateus, Uminho

-Eng. Marisa Almeida, CTCV

-Prof. Ricardo Resende, ISCTE

-Prof. Madelyn Marrero Meléndez, Universidade de Sevilha (online)

-Eng. Ricardo Figueira, CYPE

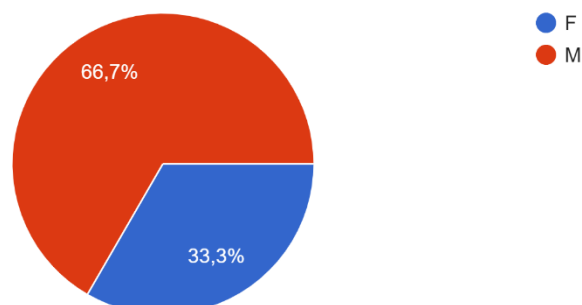Due to the Data Protection Law, the Attendees list is not available for public use.

6. RESULTS

After the workshop, attendees were asked to complete a survey in order to evaluate its impacts and collect feedback from industry professionals on key aspects of the project.

The reception was very satisfactory by the attendees and the main results are reflected below:
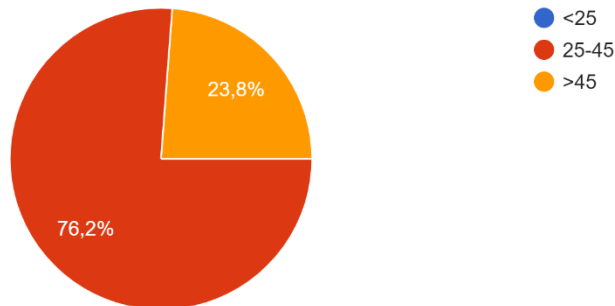
Gender
21 respuestas

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Age

21 respuestas

- <25
- 25-45
- >45

23,8%

76,2%

---

3. Before my participation in this activity:

I had been familiar with construction sector

21 respuestas

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I had heard about the circular economy model applied to the construction sector.
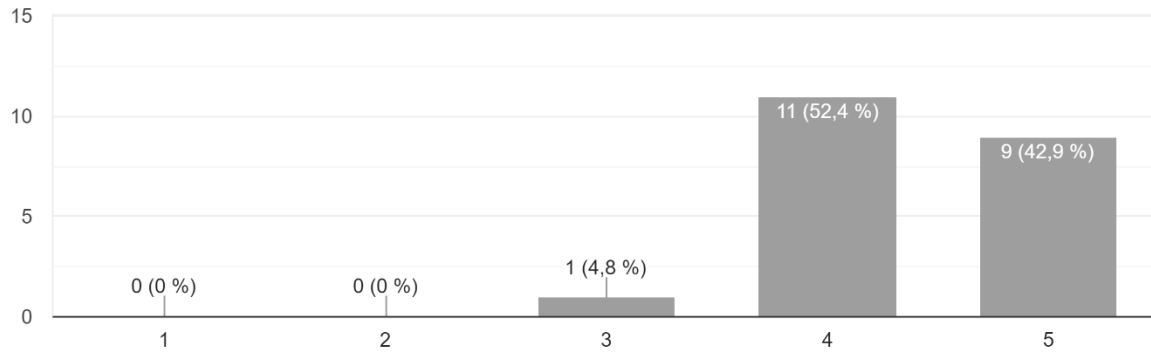
21 respuestas

I had been involved in similar activities concerning circular economy (not for the construction sector)
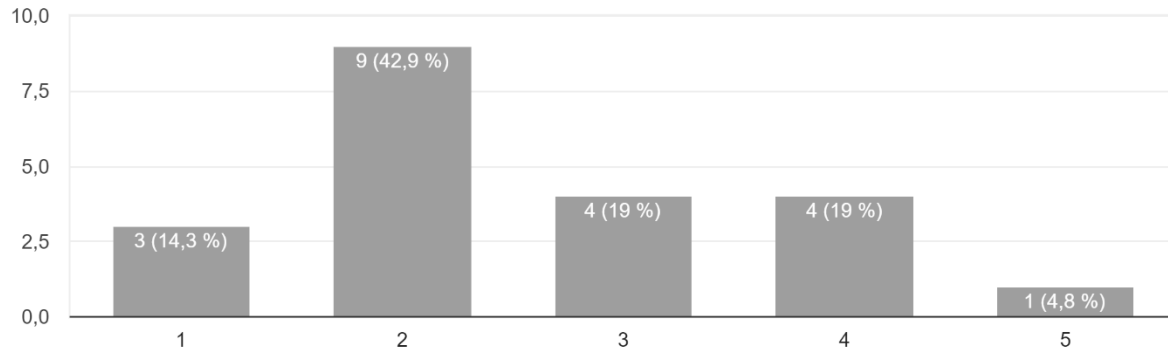
21 respuestas

EDUCATIONAL PLATFORM FOCUSED ON ADVANCED STRATEGIES OF REINSTATEMENT OF BUILDING MATERIALS IN THE INDUSTRIAL VALUE CHAIN TO PROMOTE THE TRANSITION TO THE CIRCULAR ECONOMY THROUGH THE USE OF BIM LEARNING TECHNOLOGIES

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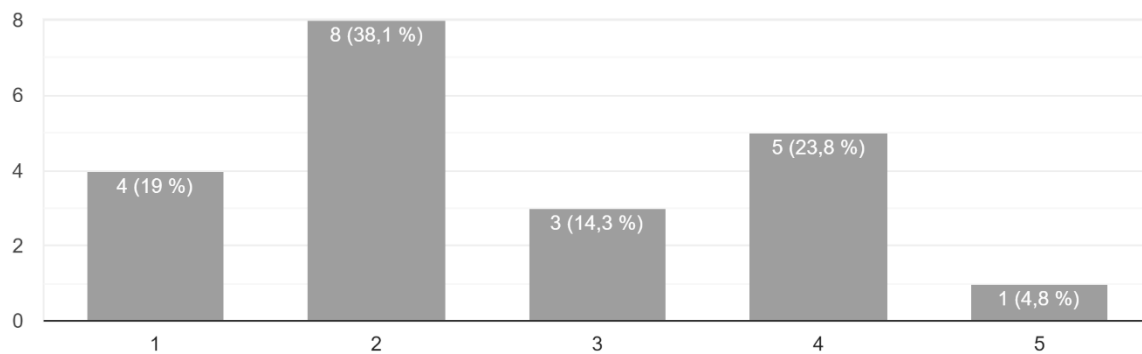
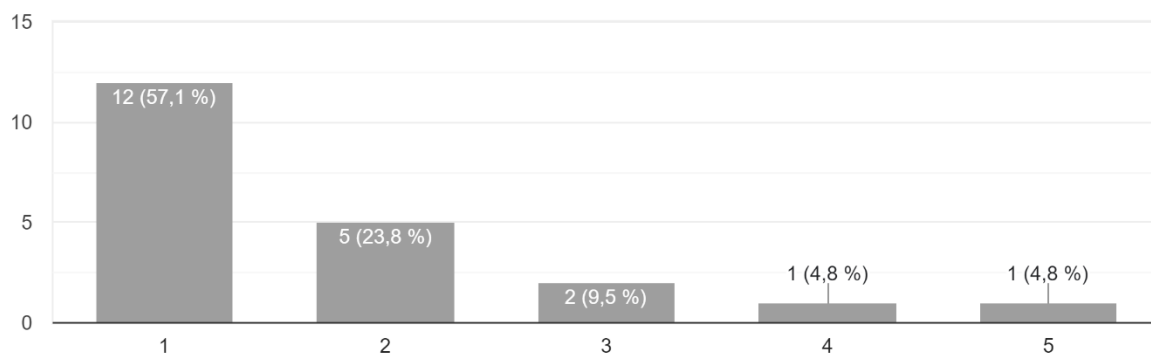**O2-A5. REPORT ON THE RESULTS ON FIRST WORKSHOP IN PORTUGAL**

I had participated in another similar activity concerning the construction sector in the past

21 respuestas

I did not see the need to make use of the circular economy in the construction sector.
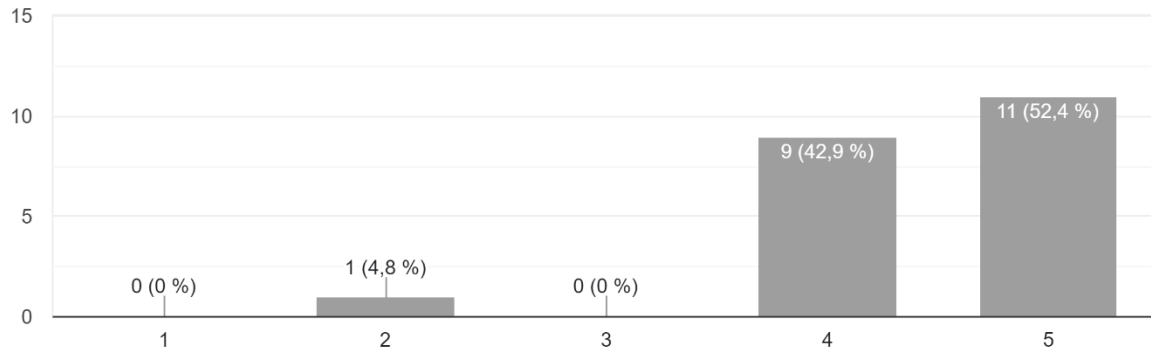
21 respuestas

4. After my participation in this activity:

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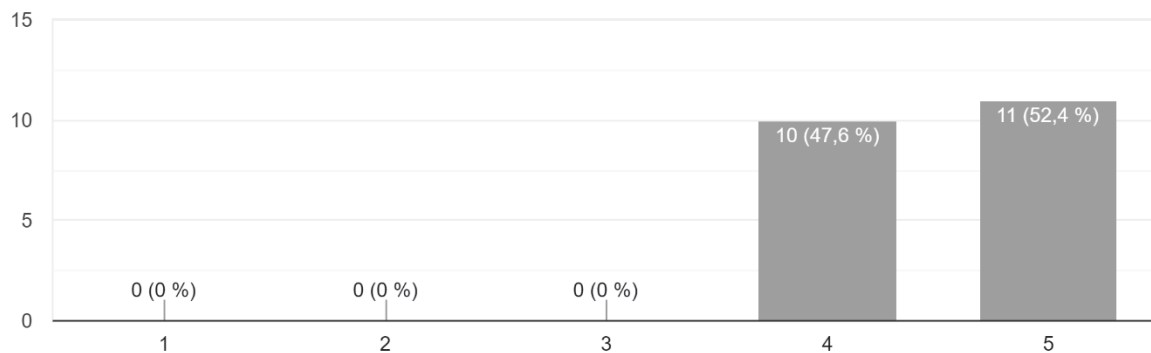**O2-A5. REPORT ON THE RESULTS ON FIRST WORKSHOP IN PORTUGAL**

I am more familiar with the construction sector

21 respuestas

I would like to learn more about circular economy in the construction sector.

21 respuestas

EDUCATIONAL PLATFORM FOCUSED ON ADVANCED STRATEGIES OF REINSTATEMENT OF BUILDING MATERIALS IN THE INDUSTRIAL VALUE CHAIN TO PROMOTE THE TRANSITION TO THE CIRCULAR ECONOMY THROUGH THE USE OF BIM LEARNING TECHNOLOGIES
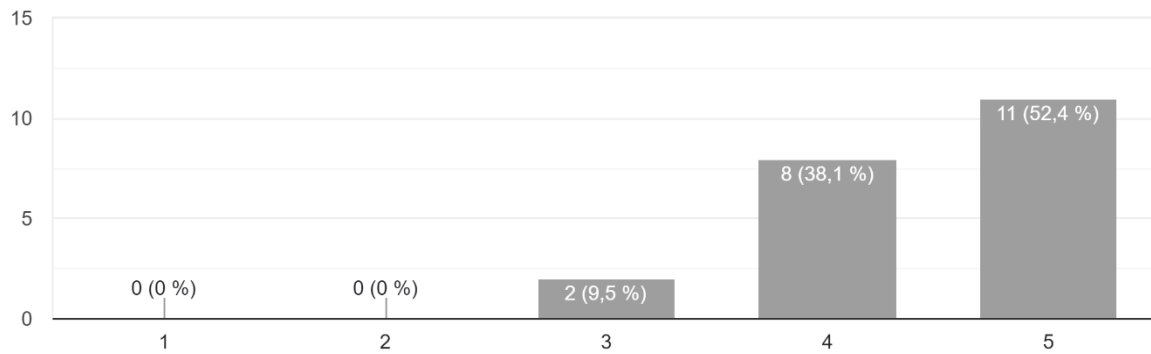
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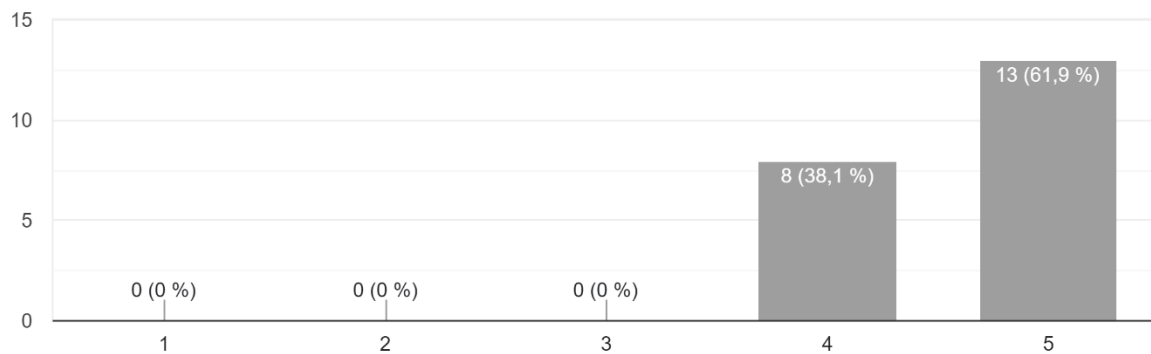**O2-A5. REPORT ON THE RESULTS ON FIRST WORKSHOP IN PORTUGAL**

I would like to be involved in similar activities concerning circular economy in general (not for the construction sector)

21 respuestas

I am interested in participating in other construction sector-oriented activities in the future
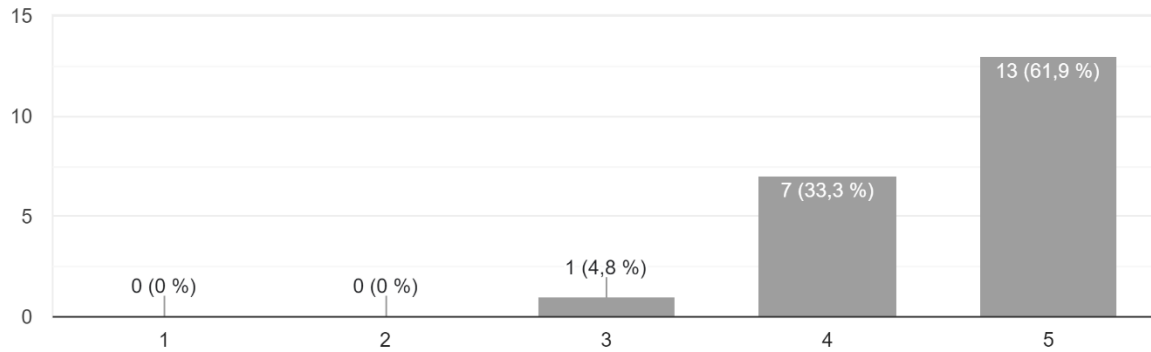
21 respuestas

EDUCATIONAL PLATFORM FOCUSED ON ADVANCED STRATEGIES OF REINSTATEMENT OF BUILDING MATERIALS IN THE INDUSTRIAL VALUE CHAIN TO PROMOTE THE TRANSITION TO THE CIRCULAR ECONOMY THROUGH THE USE OF BIM LEARNING TECHNOLOGIES

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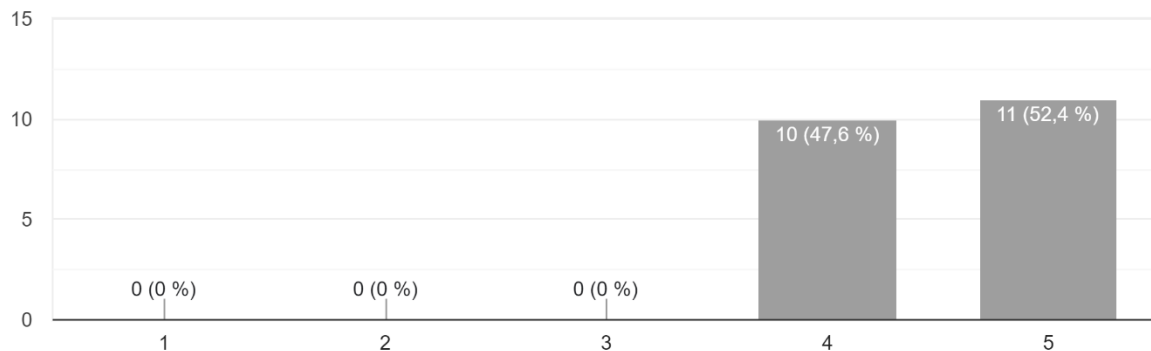## I have a more positive view on the use of the circular economy in the construction sector.

21 respuestas

Evaluate your experience at this event:

## The information and advice provided was useful

21 respuestas

EDUCATIONAL PLATFORM FOCUSED ON ADVANCED STRATEGIES OF REINSTATEMENT OF BUILDING MATERIALS IN THE INDUSTRIAL VALUE CHAIN TO PROMOTE THE TRANSITION TO THE CIRCULAR ECONOMY THROUGH THE USE OF BIM LEARNING TECHNOLOGIES

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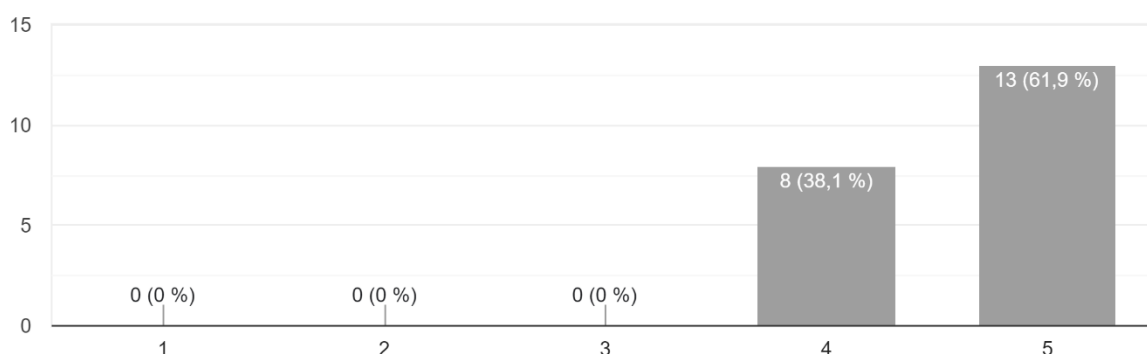of the European Union

The information was communicated in an understandable manner

21 respuestas
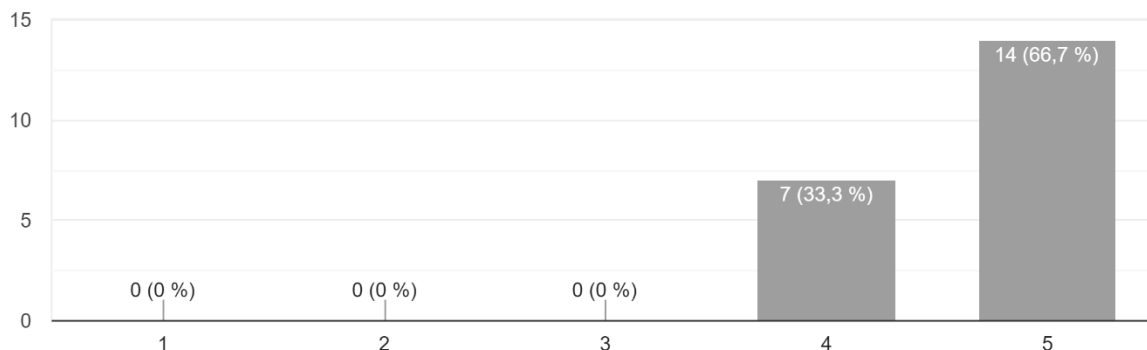
I was provided the opportunity to ask questions and these were satisfactorily answered

21 respuestas

All presentations can be found at the following link:

Seminário Prático - Como fazer uma análise de sustentabilidade com BIM HOJE? | Zenodo