



MIND

Erasmus+ strategic partnership for Higher Education
DEVELOPMENT OF MECHATRONICS SKILLS AND INNOVATIVE
LEARNING METHODS FOR INDUSTRY 4.0

E4 REPORT

Project Title	Development of mechatronics skills and innovative learning methods for Industry 4.0 2019-1-RO01-KA203-063153
Output	E4 – MIND Platform for learning new skills in mechatronics within the network for Industry 4.0
Date of Delivery	August 2020
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Version	V3, 18.08.2021

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1. Description of MIND Project

EU founded Erasmus+ project MIND (Development of mechatronics skills and innovative learning methods for Industry 4.0, Project Reference: 2019-1-RO01-KA203-063153) is getting closer to its end after close to three years and after facing the current pandemic times.

MIND project has following main objectives:

1. Determine the most frequent mechatronics skills necessary for Industry 4.0 in the partner nations' regions.
2. Raise students' employability, relevant knowledge, and competencies by taking into account the demands of firms implementing Industry 4.0 principles.
3. Construction of an online e-learning platform that will support courses and learning materials on cutting-edge industrial issues will improve the learning experience of teaching staff and students.
4. Enhance and build cross-sector synergies through collaboration between higher education institutions and private sector representatives with the goal of closing the gap between company needs and real capabilities acquired through higher education curriculum.

The MIND project's outcomes were determined by the relevant skills and current technologies used by Industry 4.0, as well as the path that students and teaching staff can take to achieve state-of-the-art knowledge and competences by using the educational MIND platform and taking online video courses.

2. Summary of the multiplier event

The Multiplier Event (E4) organised by the Romanian partner IntegraHR and facilitated by TUCN was held on 12th August 2021 at DoubleTree by Hilton Cluj - City Plaza, Ballroom Hall, to present the results of the intellectual outputs of MIND project to an invited audience composed of industry experts affiliated to regional companies and academic staff.

The purposes of the event were:

1. Explanation of the basic concepts of Industry 4.0 and why a new mechatronics curriculum is needed.
2. Dissemination of the results obtained in IO4.
3. Dissemination of the results obtained in IO5.
4. Building new connections with firm's representative in order to have their point of view about students' preparation in the context of Industry 4.0

The schedule of the event is presented in the following table:

14:00-14:30	Registration
14:30-15:00	Short presentation of project and the event agenda
15:00-16:00	Introduction in Industry 4.0 concept and Mechatronics 4.0
16:00-16:15	Coffee break
16:15-17:30	Platform presentation and participants registration
17:30-19:00	Dinner
19:00-20:00	Collection of didactic videos aiming to improve mechatronics skills presentation
20:00-20:15	Coffee break
20:15-21:00	Conclusion and evaluation of the event

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The Multiplier event was planned to have four main presentation which were held by the TUCN representatives. The presentations were focused on Mind Project objectives explanations, concepts of Industry 4.0 and the results obtained during this project.



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3. Attendance

For inviting participants, e-mails were directly to regional companies who could be interested in the project and for academic staff and students, a press release was published on the TUCN website:

UNIVERSITATEA ADMITERE SUNT STUDENT VIZITEAZĂ INTERNATIONAL UTCN2020

international@UTCluj
Blogul international@UTCluj.Revenim săptămânal cu noi informații

Școala de Vară Bright, un eveniment de succes care a reunit peste 300 de tineri din 20 de țări

Doctorat 2021
Admitere Doctorat 2021

- Development of mechatronics skills and innovative learning methods for Industry 4.0
- The Online International Winter School TUCN 2021
- Finala competiției dedicată conceptului de "casă inteligentă" pentru studenții din anul I de la Construcții
- Atelier online privind tehnologii de imprimare 3 D cu aplicații în industrie și medicină
- eDREAM - Innovative Demand Response Technologies for a Decentralized Energy Ecosystem

Vezi toate știrile și evenimentele

The press release can be accessed using following link:

https://www.utcluj.ro/media/notices/2021/Invitatie_MIND_E4_HHud0wa.pdf

Erasmus+ strategic partnership for Higher Education
Project 2019-1-RO01-KA203-063153

Development of mechatronics skills and innovative learning methods for Industry 4.0

PRESS RELEASE
EU research project MIND presents results through multiplier event

EU founded Erasmus+ project MIND (Development of mechatronics skills and innovative learning methods for Industry 4.0, Project Reference: 2019-1-RO01-KA203-063153) is getting closer to it's end after close to three years and after facing the current pandemic times.

MIND project has following main objectives:

- Determine the most common mechatronics skills that are required for Industry 4.0 within the region of the partner countries.
- Raise the employability of students, the relevant knowledge, and competences, considering the needs of companies that implement Industry 4.0 concepts.
- Enhance the learning experience of teaching staff and students by the construction of an online e-learning platform that will support courses and learning materials regarding state-of-the-art industrial topics.
- Enhance and construct cross-sector synergies through the cooperation of higher education institutions and the representatives of private sector with the scope of narrowing the gap between the requirements of companies and actual skills developed through actual higher education curricula.

The results of MIND project were based on determining the relevant skills and actual technologies used by Industry 4.0 and the path that can be followed by students and teaching staff to achieve state-of-the-art knowledge and competences by using the educational MIND platform through taking the online video courses.

The multiplier event (E4) presents the results of MIND Project and is dedicated to companies (outside the consortium of the project) that have their main activity in industrial sectors while applying Industry 4.0 concepts. The event will be held on Thursday (12.08.2021) at Cluj-Napoca, DoubleTree by Hilton Cluj Plaza (Sindicatelor street 9-13), Ballroom Hall, starting at 5PM.

For the registration to the event fill the following form:
<https://forms.gle/QdWuSQBPEjCV9F7>

More about the project and its results at:
<https://www.project-mind.eu/index.php>

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To facilitate and control the registration of the participants, a Google Form was created to be able to track the number of attendees, to assure the compliance with the Covid-19 social regulations. The following companies were present at the event:

- PSC Automatizări și Instalații
- Lerntech
- Hardwired
- Electrogrup
- BLA SHINE SRL
- OMV Petrom
- Ulma Packaging
- Supreme Automobile SRL
- Alstom
- Sage Intacct
- Fortech
- CoachCompanion Romania
- SmartConfex
- ADR Nord-Vest
- Baumann Automation

The list of the registered attendees at the beginning of the multiplier event (E4) is presented below.

No.	Name	Organization	Organization's address	City of the organization	Country of the organization	Signature
1		Ulma Packaging	Apulida, str. Coasta 34	Apulida	Romania	[Signature]
2		PSC AUTOMATIZARI	Apulida, Str. Libertatii 218	Apulida	Romania	[Signature]
3		Electrogrup	Bucur. Petru I. Neza 123	Cluj	Romania	[Signature]
4		Electrogrup	Bucur. Petru I. Neza 123	Zalau	Romania	[Signature]
5		CoachCompanion	SRL Haid. nr 10	CLUJ-NAPOCA	Romania	[Signature]
6		Supreme Automobile	Train 111, 139	CLUJ-NAPOCA	Romania	[Signature]
7		Supreme Automobile	Train 111, 139	CLUJ-NAPOCA	Romania	[Signature]
8		HARDWIRED	PAVIN 9-13	Cluj-Napoca	Romania	[Signature]
9		BLA SHINE	CRISTIAN 173, Cl.	CLUJ-NAPOCA	ROMANIA	[Signature]
10		DAN CONFEX	SRL. VILORE 92C	ROMANIA	ROMANIA	[Signature]
11		SMARTCONFEX	Telciu 920 BM	Telciu	ROMANIA	[Signature]
12		SMARTCONFEX	Telciu 720 DN	Telciu	ROMANIA	[Signature]
13		BLA SHINE SRL	Str. Orosului Nr. 116	1107	ROMANIA	[Signature]
14		UTCM	Bucur. Muncii	CLUJ	ROMANIA	[Signature]

Host organization	INTEGRA HIR
Name of the legal representative	VALADIA PETRAR
Signature of the legal representative	[Signature]

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Erasmus+ Project MIND

Erasmus+ Programme – Strategic Partnership
 Project No: 2019-1-R001-KA203-063153
 Name and number of the multiplier event: MULTIPLIER EVENT E4, ROMANIA
 Event host organization: INTEGRA HR
 Date and Place: 12.08.2021, CLUJ-NAPOCA, HOTEL HILTON CITY PLAZA

PARTICIPANTS LIST

Multiplier event

No.	Name	Organization	Organization's address	City of the organization	Country of the organization	Signature
15		OMAPETROM	Str. Gravelui nr 2	SURACULENARCAU	ROMANIA	
16		Serviciu de Informatica	Mt. Constantin Brancoveanu	Cluj-Napoca	ROMANIA	
17		BACHMANN AUTOCATION	TRAIAN VOIA 14A	CLUJ-NAPOCA	ROMANIA	
18		Lumina lui COP	Ilfov	CLUJ-NAPOCA	ROMANIA	
19		DAN CONSTRUCT	STR VIOAR 92C	REGHIN	ROMANIA	
20		DOM. HTLS PONT	UNIRII 26/13B	REGHIN	ROMANIA	
21		WATERS KLUWER	THE OFFICE, 07	CLJ	ROMANIA	
22		ETP Cluj-Napoca	21 Decembrie 1918	CLJ	ROMANIA	
23		ADRIAN-VAS	Dorobanta nr 3	CLJ	RO	
24		CAB. AV. TAMAS	BAIA MARE	BAIA MARE	RO	
25		FORTECH	FRANZISUSI 106	CLUJ-NAPOCA	ROMANIA	
26		SAGE INTACT	21 DECEMBRIE 1918	CLUJ-NAPOCA	ROMANIA	
27		TRANSILVANIA IT	N. TRILTESCU nr 4	CLUJ-NAPOCA	ROMANIA	
28		SALES FUSION	Calaua Florentin nr 137	CLUJ-NAPOCA	Romania	

Host organization	INTEGRA HR
Name of the legal representative	PALADIA PETRAR
Signature of the legal representative	

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PARTICIPANTS LIST

Multiplier event

No.	Name	Organization	Organization's address	City of the organization	Country of the organization	Signature
29		BLU IMOBILIARE	DOMATH 9	CLUJ-N	ROMANIA	
30		BLU IMOBILIARE	DOMATH 4	CLUJ-N	ROMANIA	
31		ONE CONNECTOR	MIGRUL 8	CLUJ-N	ROMANIA	
32		CIT BILIMBEI	Bucuresti 34	CLUJ-N	RO	
33		VALUE PARTNERS	TUDOR VARGHESIU 40	CLUJ-N	ROMANIA	
34		PEL-TRH	Ep. Marton 6	CLUJ-N	Romania	
35		WATSTONE	WATER 28	CLUJ	ROMANIA	
36		RUSTERN	Compuila 159	Cluj-Napoca	Romania	
37						
38						
39						
40						
41						
42						

Host organization	INTEGRA HR
Name of the legal representative	PALADIA PETRAR
Signature of the legal representative	

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UP T
Universitatea
Politehnica
Timișoara

COMING
COMPUTER ENGINEERING

STU
SLOVAK UNIVERSITY OF
TECHNOLOGY IN BRATISLAVA

TECHNICAL
UNIVERSITY
OF CLUJ-NAPOCA
ROMANIA

integra[®]



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Every participant received a folder with dissemination materials that included a short description of the MIND Platform and the key elements of the curricula prepared by the project partners, a notebook, and a pen.



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3. Questionnaire/Inquiry data and results

The attendees were kindly asked to complete anonymously the following questionnaire. In this questionnaire were included questions about the organizational part of the event, about the materials that were presented and the overall impressions about attending the Multiplier Event E4. Also, the attendees could give suggestions about the aspects that can be improved.

Instructions: Please indicate your level of agreement with the statements listed below, on a scale from 1 to 5, where:

1 - Strongly disagree

3 – Neutral

5 – Strongly agree

2 – Disagree

4 – Agree

A. Objectives of the meeting

Statement	Score				
	1	2	3	4	5
1. The objectives of the meeting were clearly defined.					
2. The objectives were met during the meeting.					
3. All the relevant topics were covered during the meeting.					
4. The content was well organized and easy to follow.					
5. I obtained useful information and knowledge that will help me in my activity at work.					

B. Organization of the meeting

Statement	Score				
	1	2	3	4	5
6. The meeting was well organized.					
7. The facilitators were knowledgeable about the discussed topics.					
8. The facilitators were dedicated and supportive.					
9. Participation and interaction were encouraged.					
10. The schedule and the agenda were observed throughout the meeting.					
11. The materials distributed were useful.					
12. The time allocated for the meeting and for the activities, was sufficient.					
13. The meeting room and facilities were adequate and comfortable.					

14. What did you like the most about how the meeting was organized?

15. What aspects of the organization could be improved?

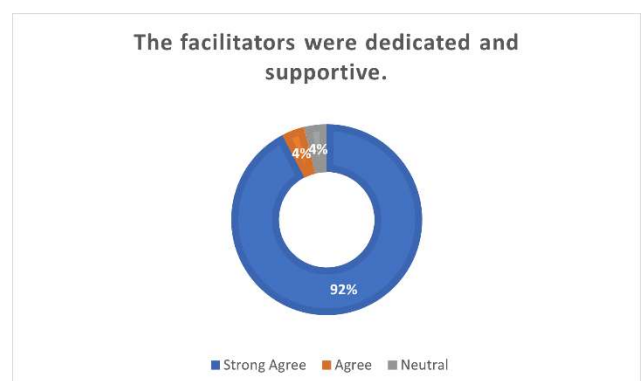
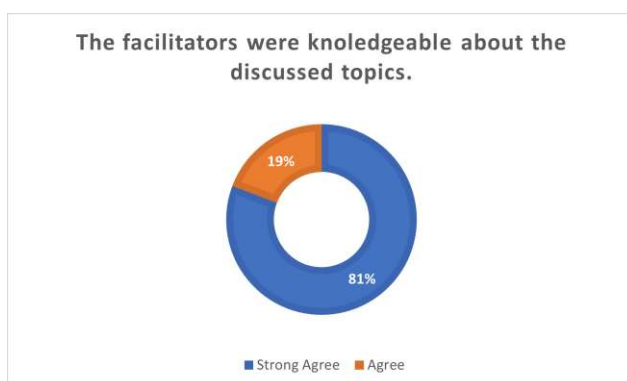
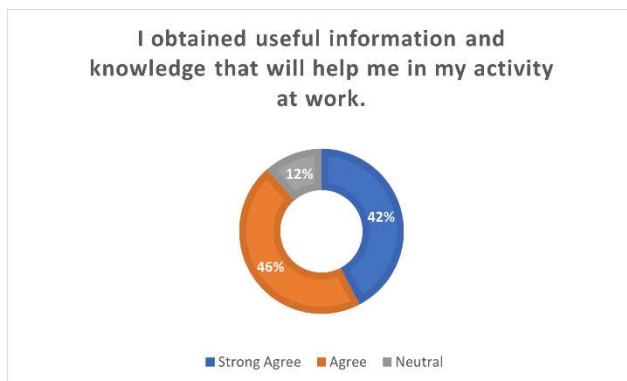
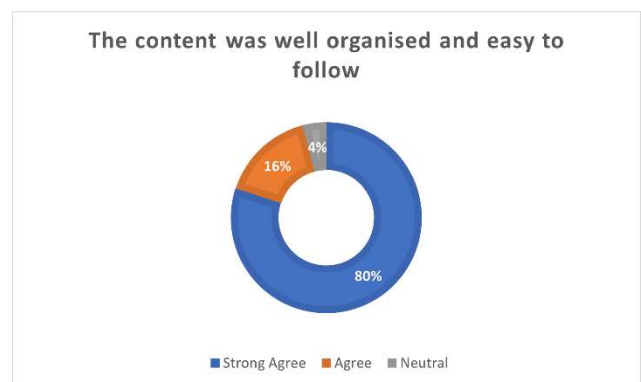
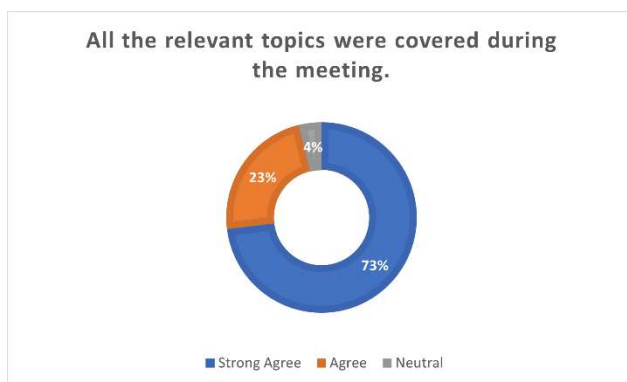
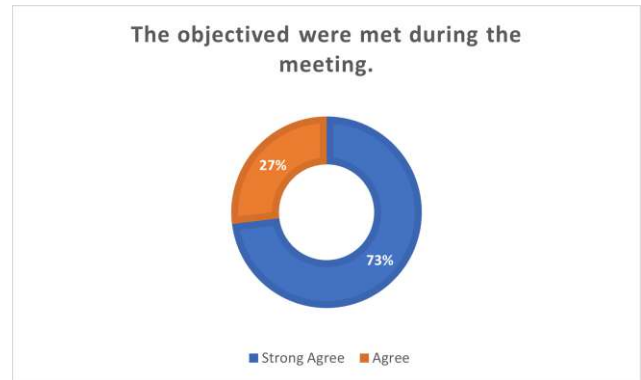
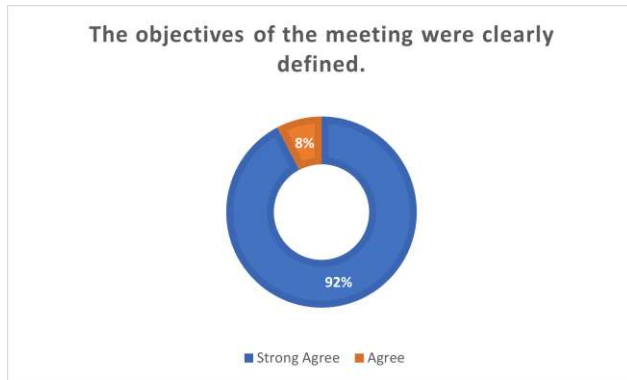
16. Please share other comments and suggestions that were not covered in the previous questions:

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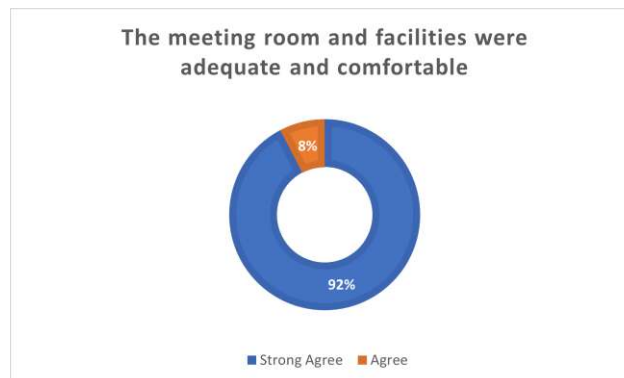
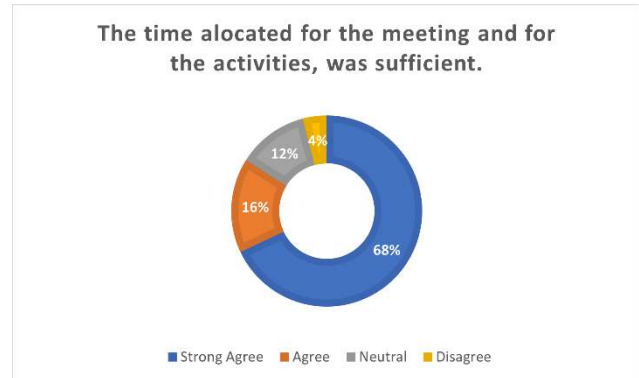
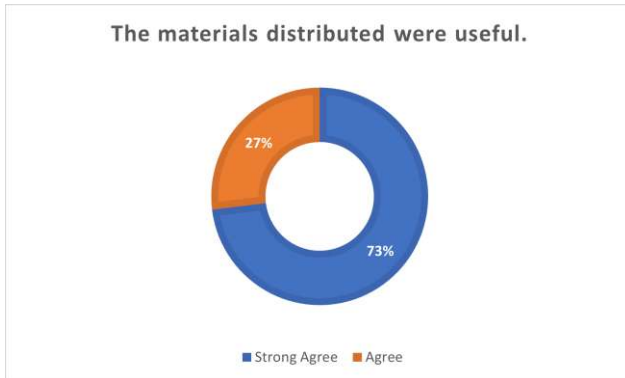
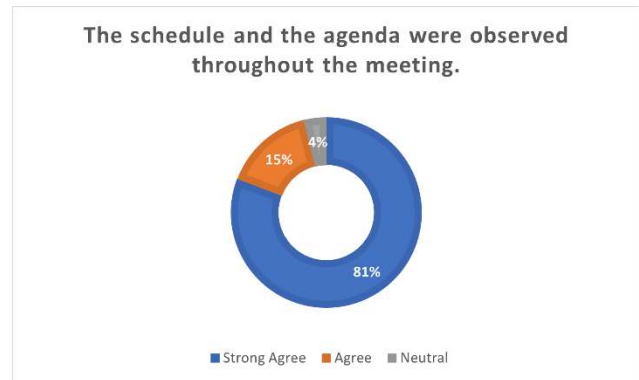
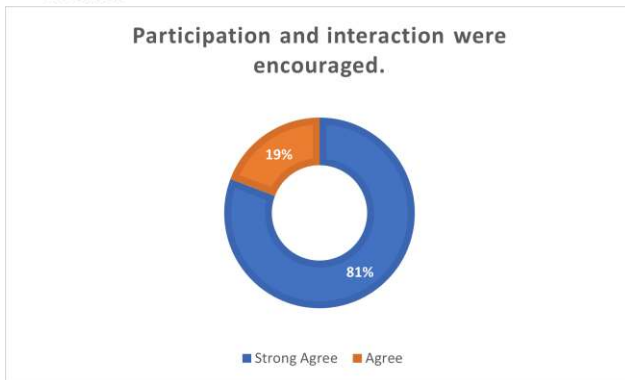


A total of 28 participants completed the feedback questionnaires and the result is presented in the following graphs:



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For the questions 14, 15, 16 the answers were:

What did you like the most about how the meeting was organized?

- I like how the meeting was organized, it was very interactive and focused on the subject
- I like how the meeting was organized
- The presentations were very well organized, and the information was useful
- Nice location, on schedule and respecting the social gathering requirements
- The strong collaboration between project partners
- People displacement in the presentation room
- I like all of the materials distributed, the time allocated, the guys of this project
- Knowledge obtained, materials well presented, interactive
- The organizers seemed very passionate about the topics discussed
- The presenters were dedicated and answered all the addressed questions

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- The meeting was well organized, easy to follow and to obtain new information about the technical domain
- Speech, presentation, timing
- The organization, the speech, the information provided
- The degree of professionalism
- The accuracy of the topics presented
- The presented subject
- Presenters' dedication
- The brief presentations

What aspects of the organization could be improved?

- Everything was perfect
- All the aspects were on the high level
- I think that's nothing to be improved
- Advertising
- The project should be advertised more
- The project advertising

Please share other comments and suggestions that were not covered in the previous questions:

- Mind 2.0 -> the Mind project could be applied in the private sector if it would be evolved into a training course for new employees
- All the results have to be implemented in industry
- Thank you for the invitation
- Interaction with the public
- For some subjects, more time should have been allocated

4. Conclusion

The results of the questionnaire show that the attendees were mostly satisfied with the organization part of the event (the place and time), the objectives of the Multiplier Event were clearly presented and achieved at the end of the event (according to the answers of the question 2).

Also, the materials of the presentations were well structured, and it was easy to follow the aspects that was discussed, even for the participants that weren't familiar to Mechatronics and Industry 4.0.

About the improvements that can be done, it was mentioned the lack of advertising, so for the next events, the organizations will take it into account and will be more active also on social media platforms.

It needs be mentioned that plenty of questions were received during the Q&A session after the presentation about the MIND Platform and didactic videos, that shows the interest of the participants for the results of the intellectual outputs presented during the event. The attendees were motivated to try the platform and develop new mechatronic skills, that are needed for integration of the Industry 4.0 in the companies that didn't adopt this technologies yet, or are at the beginning of this process.

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