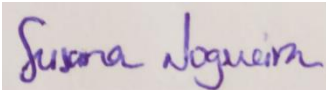





WP 6 Exchange of Knowledge Strategies' Implementation & Testing at National Level

D6.4 Roundtables

Version	Date	Author	Institution	Status	Change Description
0.1	19/06/2020		EFW	Draft	First draft
0.2	02/10/2020		EFW	Draft	Changes derived from partners' feedback
0.3	19/10/2020		EFW	Final	Update of the document

Author Institution Sign-Off 1	Signature	Date
Susana Nogueira EFW		19/10/2020
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Introduction

This report addresses all the roundtable sessions carried out under ADMIRE project's Work Package (WP) 6 – *Exchange of Knowledge Strategies' Implementation and Testing at National Level*, whose leader is the European Welding Federation for Welding, Joining and Cutting (EWF): National Roundtables and Common Partners' Roundtable.

As indicated by its title, this WP aims to pilot ADMIRE project's exchange of knowledge strategies to verify their usefulness and feasibility:

- Additive Manufacturing (AM) Hub/Platform developed in the scope of ADMIRE project,
- AM World Cafe Meetings at national level,
- AM Knowledge "Speed-datings" at national level.

The testing and analysis of the ADMIRE AM Hub/Platform (available at <https://www.ewf.be/admire>) was conducted by ADMIRE partners on specific National Roundtables, conducted in all countries of the partnership: France, Germany, Portugal and United Kingdom. Where possible, partners from the same country gathered in a collaborative way to organize and deliver their respective National Roundtable session (e.g. Cranfield University worked closely with University of Birmingham and the Manufacturing Technology Centre (MTC) for the National Roundtable in the United Kingdom (UK), and in Portugal Instituto Superior Técnico (IST) and EWF collaborated on the organization and realization of the session). Bremen University (DE) and IREPA Laser (FR) conducted their National Roundtables individually.

This report provides a description about how each National Roundtable was conducted and the main results achieved, based on participants' feedback about the AM Hub/Platform, which helped ADMIRE consortium to understand the necessary improvements needed to be made to the platform.

As for the AM World Cafe Meetings and AM Knowledge "Speed-dating", they were conducted by EWF. The strategies and methods used to conduct both ADMIRE exchange of knowledge strategies, as well as the results achieved, are duly described in their respective reports (*D6.2 Additive Manufacturing World Cafe meetings* and *D6.3 Additive Manufacturing Knowledge "Speed-Datings"*). Hence, this report describes the Common Partners' Roundtable carried out with ADMIRE partners on 24th September 2020, where the strategies and methodologies used to achieve the objectives of these two exchange of knowledge strategies of promoting connections between Education and Industry sectors, their usability and feasibility, were analysed by the partnership. In addition to the description of the session, this report also provides information about the results from the discussion held between partners on how to improve those strategies towards their future implementation, including after the project is concluded.

Due to the limitations imposed by the global pandemic to the realization of National Roundtables and Common Partners' Roundtable on face-to-face sessions, all sessions were conducted online, using communication platforms such as Microsoft Teams and Zoom. For confidentiality purposes, the print screens taken are blurred.

All evidence collected during the respective sessions are available in this Report.

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1 National Roundtables

National Roundtables focused on the [AM Hub/Platform](#), its features and functionalities, which were tested on these sessions by Teachers, Students and Company representatives, to which this platform aims.

In order to carry out the National Roundtables, EWF prepared a set of documents and shared them with all ADMIRE partners involved in the organization of the National Roundtable sessions so they could use them and share them with the sessions' participants:

- **Guide for Roundtable Events:** A guide with specific recommendations on how to prepare and deliver National Roundtables (External) and Common Partners' Roundtable (Internal), containing information on the purposes of the sessions, when and how to deliver them, characteristics of the participants to involve in the sessions and on how to report the collected results.
- **Heuristic Assessment Grid** (in Annex 1): An assessment questionnaire with a scale ranging from 1 (Strongly disagree) to 5 (Strongly agree) and space for comments, allowing ADMIRE Partners and National Roundtable participants to assess the Platform in terms of accessibility, terms & conditions of use, visual & graphics, interactivity, communication and usability (sent to Participants by email, before the session).
- **Terms & Conditions:** A document on the Platform's terms and conditions of use to be read and signed by all users that register on the AM Hub/Platform, in line with the General Data Protection Regulation. This document is available in PDF on the Platform and was sent to all National Roundtables' participants by email, before the sessions, to be signed.
- **Script (or Tutorial):** A visual document, part of the Guide for Roundtable Events, that allows ADMIRE Partners and all participants of the National Roundtable events to know and follow each step to take to access the AM Hub/Platform, create their Profile (Teachers, Companies or Students) and know how to navigate the AM Hub/Platform. It is also available in PDF on the Platform (sent to Participants by email, before the session).
- **Attendance List:** Prepared to identify the ADMIRE partner organization responsible for the session, its date and city/country of venue and to collect National Roundtable Participants' name, University or Company to which they are connected and their respective signatures as evidence of their attendance on the session;
- **Satisfaction Questionnaire** (in Annex 2): as partner responsible for ADMIRE Evaluation, IREPA prepared an online questionnaire, which link (https://docs.google.com/forms/d/e/1FAIpQLSdeHZjgoe_9i4sp8Ne51GiZqtpXCdRROQaowNjMk5qTufyacQ/viewform) was shared with all National Roundtables' Participants to allow them to assess the sessions in terms of logistics, management and contents, provide suggestions on how to improve future sessions and indication on whether they will be available share the information about the AM Hub/Platform with other colleagues and to participate on other sessions. The results from this Questionnaire are not addressed in this report.

All ADMIRE Partners previously created their own profile (Teachers and Companies, depending on whether the partner organization was a University or a Company) and explored the Platform to be familiar with its functionalities before carrying out the National Roundtable sessions with Teachers, Students and Companies' representatives, who then created their respective profiles and tested the Platform during the sessions, after being presented to the AM Hub/Platform.

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By using the provided Script/Tutorial, a visual document explaining step by step what to do during the session, participants started the session by creating their own profiles. The process of testing the Platform continued as such:

1. The Company representative created/uploaded a Problem-Based Learning (PBL) assignment.
2. The Teacher chose the PBL previously created/uploaded, ticked the box "I Want to participate in this PBL" and chose the Modules (namely Qualifications and Competence Units) associated to the PBL and connected to the European Metal AM Engineer MSc.
3. Student(s) searched for the PBL created/uploaded and ticked the box "I Want to participate in this PBL."
4. The Teacher created a Working Team for the PBL, checked for the Working Teams and tested the working on a PBL.
5. Student(s) then checked for the Working Team they were involved in and tested the working process on the PBL.
6. The Teacher submitted the final resolution of the PBL.
7. At this point the Company representative was notified via email that the PBL was finished.

Participants were then requested to fill in the Heuristic Assessment Grid (see Annex 1), which purpose was to perform an assessment of the Platform's usability, and to discuss its Strengths, Weaknesses, Opportunities and Threats (SWOT) as a way to provide qualitative feedback to the partnership. This assessment and analysis were also carried out by ADMIRE Partners themselves as part of an internal assessment.

The next sections present the main conclusions obtained from each National Roundtable session carried out by ADMIRE partners in their own countries, allowing the partnership to conclude on the positive aspects and improvements to be made to the AM Hub/Platform, which main purpose is to serve as bridge/contact point between Industry and Education and provide its users a problem-based learning environment and mindset, whilst responding to Industry's demand for highly qualified workforce in Metal Additive Manufacturing (AM) and the chance to access to a database with information about AM resources at European level.

1.2 National Roundtable in Germany (University of Bremen)

University of Bremen was the first ADMIRE partner to carry out the National Roundtable in an online session, on April 9th, 2020, gathering three participants: two Students from the University of Bremen and one representative from the company Leibnitz IWT, based in Bremen.

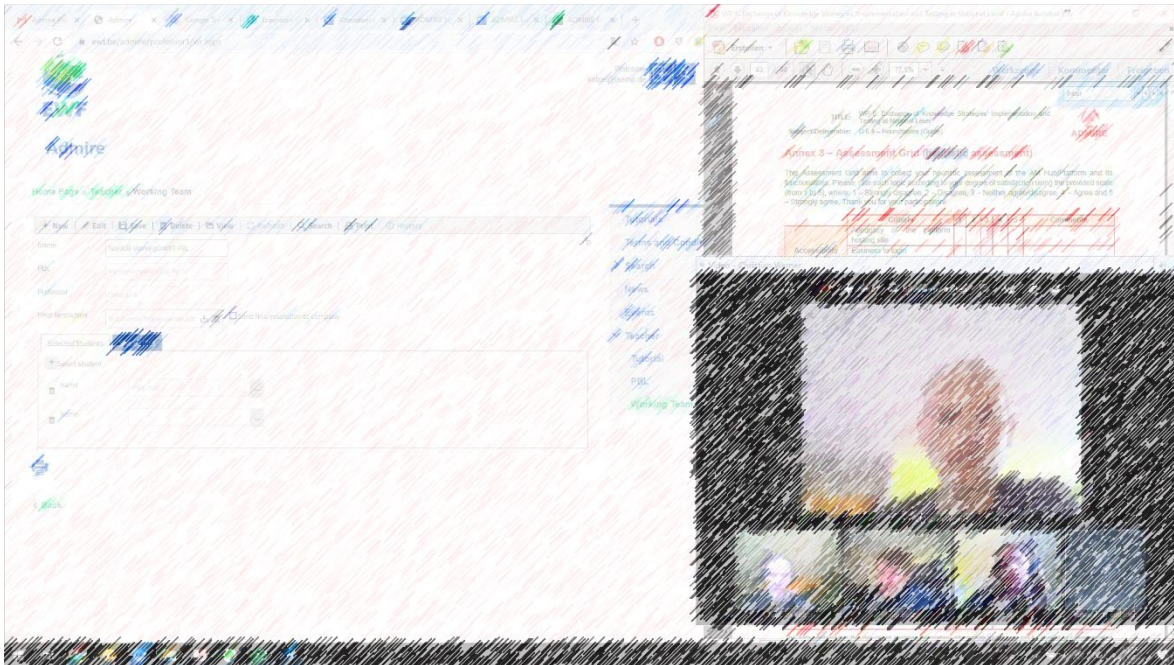


Fig 1: Participants of the German National Roundtable

1.2.1 Heuristic Assessment and analysis of the AM Hub/Platform

As previously mentioned, a heuristic assessment of ADMIRE AM Hub/Platform was conducted by ADMIRE Partners and by each National Roundtable session's participants, aiming to provide to the partnership the information needed to understand if the AM Hub/Platform is fully prepared to be used by Universities/Teachers, Students and Companies from the AM supply chain at European level, or if it needs to be improved to achieve its main purpose: to be a bridge between Education and Industry.

After concluding all steps needed to test the Platform's functionalities (as described above), participants of the German National Roundtable were requested to fill in the Heuristic Assessment Grid with their opinion about the AM Hub/Platform's accessibility, terms & conditions for its use, visual and graphics, interactivity, communication and usability levels, using the provided scale from 1 (Strongly disagree) to 5 (Strongly agree).

Below are the results achieved by the heuristic assessment carried out by the representative of University of Bremen and the German National Roundtable participants, with their comments to each item:

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Assessment Grid Heuristic Assessment Results							
Criteria	1	2	3	4	5	Comments	
Accessibility	Adequacy of the platform hosting site		x				Loading time
	Easiness to login			x			database is unhandy
	Efficiency of the notification procedures (e.g. email)		x				up to 30 min.; no info about the email from th
Terms & Conditions	Adequacy of the data treatment and privacy policies						Not available on the platform
	Adequacy of the security system for prevention of no authorized access						Not available on the platform
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)		x				not intuitive
	Attractiveness of the layout (e.g. images, balance between text and image)	x					more a...functional base
	Innovativeness of the layout and structure	x					quite old-fashioned
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)		x				minimal feedback, difficult database handli
	Easiness in moving between different sections			x			the scaling with smaller windows is not wor
	Easiness in uploading and downloading files				x		close to each other, no information about
Communication	Clear understanding of each section purpose	x					use-hovering info-boxes for field and sect
	Proper identification of the sections / menus and tabs	x					see above
	Amount of information in the different sections		x				
	Relevance of the contents / information given		x				information provided by the site, but content i
	Clear understanding of terminology used			x			Competence Units & Qualification unclear
Usability	User friendliness of the platform		x				
	Innovativeness of the platform		x				
1 – Strongly disagree, 2 – Disagree, 3 – Neither agree/disagree, 4 – Agree, 5 – Strongly agree							
							

Table 1: German National Roundtable Assessment Grid for Heuristic Assessment of ADMIRE AM Hub/Platform | Summary of results

According to these results, the AM Hub/Platform still needs some improvements in what regards to Visual and Graphics, Communication and Usability (with topics mostly rated 1 or 2). Participants felt the Platform was not intuitive enough and that its layout and structure was somewhat “old-fashioned”. In their opinion, the Platform’s sections are not properly identified, which hampers users’ understanding of their purpose. In terms of Usability, this heuristic assessment shows that the Platform needs to be more user-friendly and innovative.

On the other hand, these results show that it is easy to log in and to move between different sections of the Platform, which terminology is easy to understand by users (topics rated with 3), who found it easy to upload and download files (topic rated 4).

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The criteria Terms & Conditions was not assessed once participants were not able to find the document on the Platform at the time of this session.

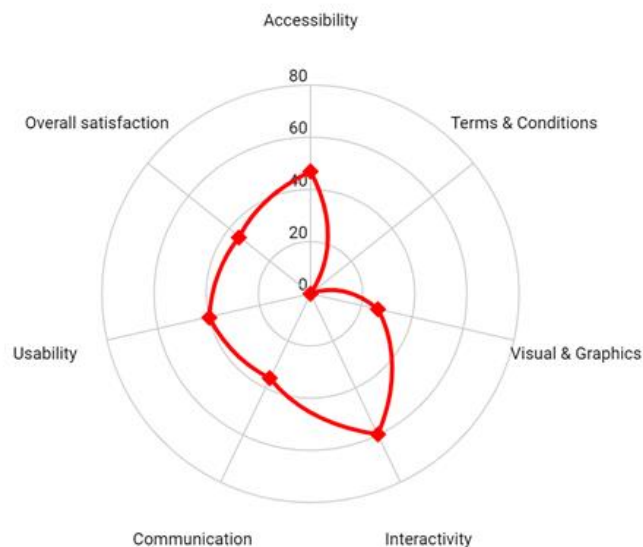
Table 2 below lists the overall agreement shown by the participants during the German National Roundtable. The satisfaction level towards the AM Hub/Platform's functionalities was approximately 35%, being Interactivity the highest-rated criteria (60%), a positive sign as one of the Platform's objective is to improve interaction between Universities/Teachers, Students and Companies.

However, the level of agreement falls below 50%, which is a sign that an improvement is needed.

Criteria	Percentage of agreement (%)
Accessibility	46.67
Terms & Conditions	0
Visual & Graphics	26.67
Interactivity	60
Communication	36
Usability	40
Overall satisfaction	34.89

Table 2: DE Heuristic Assessment | Overall Agreement results

Graphic 1 shows the radar plot of the level of agreement for several criteria set as per the assessment grid. The best experience by the participants was for interactivity, whereas the worst was for visuals and graphics (Terms and conditions criteria is neglected).



Graph. 1 DE Heuristic Assessment | Radar plot

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1.2.2 SWOT Analysis

In addition to the heuristic assessment, ADMIRE Partners and participants from the National Roundtables carried out a SWOT analysis, focusing on the Platform's Strengths, Weaknesses, Opportunities and Threats.

The results achieved are presented below, starting with the SWOT analysis carried out by University of Bremen (internal assessment), followed by the German National Roundtable participants' assessment results and qualitative feedback (external assessment).

Internal Assessment



The availability of such platform is a unique idea.



- The platform in its current state is neither very congenial nor intuitive and easy to use.
- Teachers should not have to set the working teams for or start the working itself on a PBL.



Great opportunity to bring Companies and Universities closer to each other and improve the content for students.



- No identification to clarify that students are actually students.
- Unintuitive website could deter the users, especially the industrial ones, who are necessary for the platform.

Table 3 University of Bremen | SWOT analysis results

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External Assessment



The availability of this platform is a unique idea. Fresh thoughts can be brought by Universities to industrial problems.



- Unintuitive handling, no tracking of “who uploaded what and when”.
- Industry partner received a mail for every exchanged file, without mentioning what has been changed.



Usage of PBLs for other courses outside of the European Metal AM Engineer Masters.



Internet accessibility and infrastructure can be threat to the platform.

Table 4 DE National Roundtable Participants | SWOT analysis results

1.2.3 Main Conclusions

ADMIRE AM Hub/Platform encompasses three main purposes:

- I. To develop a problem-based learning environment and mindset.
- II. To tackle the gap between industry/market and universities whilst responding to the compulsory demand and request for qualified people by the industry.
- III. To map education, human and material resources at European level.

Overall, the purpose of the website can be seen, but the overall usability and appearance in the current state must be improved so that the website can be used frequently by various users. Further improvements on the frontend regarding the layout and especially usability can lead to a promising platform. See Annex 4 for a detailed list of issues found and improvement suggestions resulting from the German National Roundtable.

Increasing the usability is important to motivate especially the users from the industry who are essential to tackle the gap between Industry/market and Universities. The idea of the platform, and especially the PBLs, offer a very good opportunity to create a synergetic link between Industries, universities, research institutes and students.

The mapping of resources seems not to be of greater use in general. During the discussion, only a few scenarios could be identified where such a list could be of interest. None of them was related to PBLs, really useful for students, or could be seen to narrow down the gap between industry and universities.

Participants of the German National Roundtable

- Christian Kober, University of Bremen (Research & Teaching Staff - Moderator)
- B. Philip Bolz, University of Bremen (Student)
- Lia Adam, University of Bremen (Student)
- Dr. Christian Wernner, Leibniz-Institut für Werkstofforientierte Technologien - IWT (Scientific Employee)

1.3 National Roundtable in Portugal (IST & EWF)

Before collaboratively conducting the National Roundtable on June 4th 2020, gathering a total of 5 participants (two Students from IST, two Company representatives from Fablab Benfica and Sodecia (based in China) and one teacher from IST) in an online session, both IST and EWF sent several invitation emails to Students and Companies from the AM supply chain presenting ADMIRE project and the main purposes of the session. Having selected the session's participants, an email was sent with the Script/Tutorial for the session, the Terms & Conditions document to be signed by each participant before the session, an editable PDF of the Heuristic Assessment Grid and the link for the Satisfaction Questionnaire, the latter to be filled in by each participant by the end of the session to assess its quality.

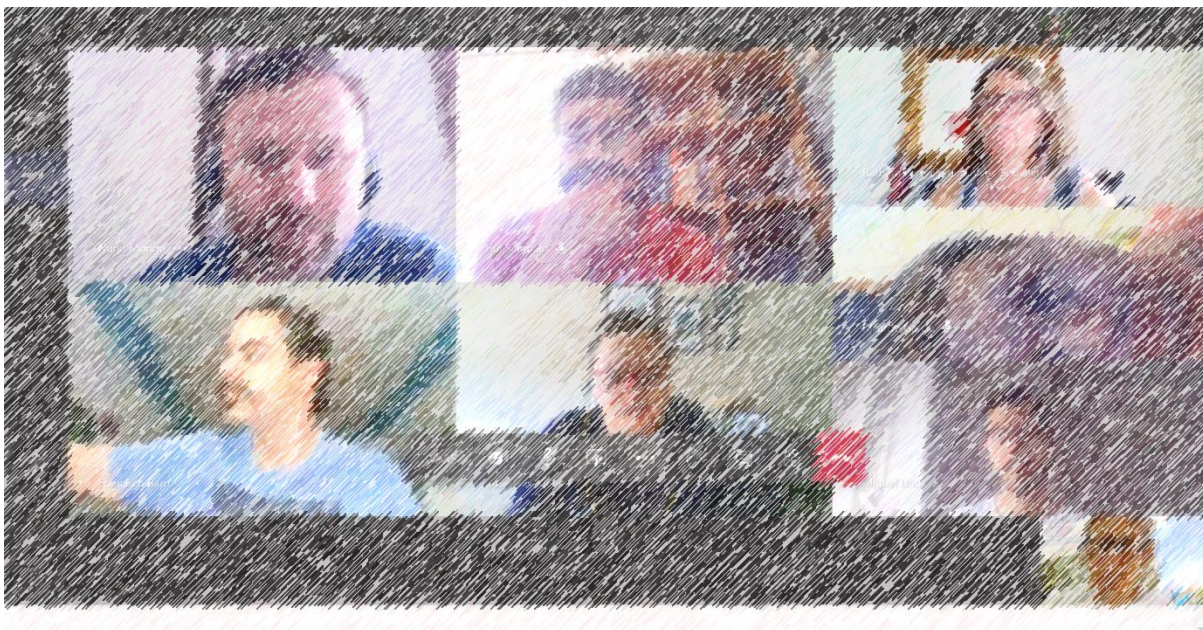


Fig. 2 Participants of the Portuguese National Roundtable (incl. one moderator from IST and two moderators from EWF)

Before starting the session, participants were introduced to ADMIRE project's objectives and main results achieved. An explanation about the National Roundtable's purposes was also given to provide a context to the session.

1.3.1 Heuristic Assessment and analysis of the AM Hub/Platform

Following the Script/Tutorial provided to all ADMIRE Partners by EWF with instructions on how to test the AM Hub/Platform with National Roundtable participants, IST and EWF requested all Portuguese National Roundtable participants to analyse the AM Hub/Platform after testing it and to fill in the Heuristic Assessment Grid accordingly. The table below shows the main results achieved and comments made to the criteria, which include IST's assessment. EWF did not participate on the heuristic assessment because it was the partner responsible for developing the AM Hub/Platform and so the proper conditions to assess it were not gathered. It is also important to mention that between the date of the previous National Roundtable session (in Germany) and

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this one, the AM Hub/Platform was updated by EWF and its team. The consequences of that update are visible on the results obtained.

Assessment Grid

ADMIRE AM Hub/Platform

This Assessment Grid aims to collect your heuristic assessment of the AM Hub/Platform and its functionalities. Please, rate each topic according to your degree of satisfaction using the provided scale (from 1 to 5), where: 1 – Strongly disagree, 2 – Disagree, 3 – Neither agree/disagree, 4 – Agree and 5 – Strongly agree.

Criteria		1	2	3	4	5	Comments
Accessibility	Adequacy of the platform hosting site				X		Unintuitive
	Easiness to login			X			is not very intuitive
	Efficiency of the notification procedures (e.g. email)		X				It took too long to send the registration email
Terms & Conditions	Adequacy of the data treatment and privacy policies				X		
	Adequacy of the security system for prevention of no authorized access				X		
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)		X				The platform is quite confusing and not intuitive
	Attractiveness of the layout (e.g. images, balance between text and image)		X				Doesn't have an appealing look and complex strings don't help
	Innovativeness of the layout and structure		X				The layout doesn't look very innovative
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)		X				Platform is not very user friendly
	Easiness in moving between different sections			X			Many steps to do most of the things
	Easiness in uploading and downloading files			X			PBL can only be submitted in pdf, docx, txt
Communication	Clear understanding of each section purpose				X		The meaning of the different menus should be explained
	Proper identification of the sections / menus and tabs			X			see above
	Amount of information in the different sections			X			
	Relevance of the contents / information given			X			there is little information on the steps to follow, other than in the .pdf tutorial
	Clear understanding of terminology used			X			some submenus like "search", are quite confusing
Usability	User friendliness of the platform	X					not intuitive
	Innovativeness of the platform			X			Not very innovative

Thank you for your participation!



Table 5 Portuguese National Roundtable Assessment Grid for Heuristic Assessment of ADMIRE AM Hub/Platform | Summary of results

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Overall, the results show that participants found the AM Hub/Platform not intuitive enough for users and the difficulties felt by participants when navigating the Platform showed it was lacking user-friendliness (e.g. it required many different steps and the “Search” button was not clear on what it did). Visual & Graphics and Usability are the criteria with more topics rated 1 or 2.

Nevertheless, this heuristic assessment also shows positive results when it comes to the adequacy of the Platform in terms of data treatment and privacy policies (related to Terms & Conditions criteria) and Communication criteria, which topics were mostly rated 3. The topic related to the clearness of each Platform sections' purposes was rated 4.

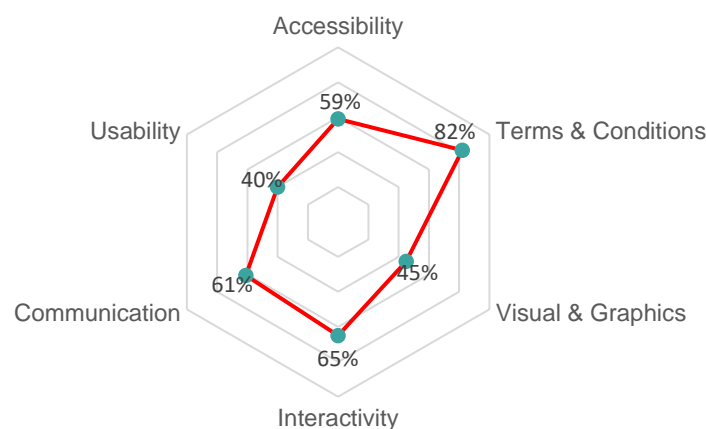
Once again, according to these results, there is still room for further improvements.

Table 6 below lists the overall agreement shown by participants during this National Roundtable. The satisfaction level is approximately 62% (higher than in German National Roundtable), an average resulting from the satisfaction levels achieved on Terms & Conditions (82%), Interactivity (65%) and Communication (61%) criteria. The level of agreement is above 50%, although some changes should be done to improve the usability, visual and graphics appearance of the Platform.

Criteria	Percentage of agreement (%)
Accessibility	59%
Terms & Conditions	82%
Visual & Graphics	45%
Interactivity	65%
Communication	61%
Usability	40%
Overall satisfaction	62%

Table 6 PT Heuristic Assessment | Overall Agreement results

Graphic 2 shows the radar plot of the level of agreement for several criteria set as per the assessment grid. The best experience by the participants was for Terms and Conditions, whereas the worst was for Visuals and Graphics and Usability.



Graphic 2 PT Heuristic Assessment | Radar plot

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1.3.2 SWOT Analysis

SWOT analysis allows ADMIRE partners to understand the impact and potentialities of the AM Hub/Platform, not only from Partners' point of view but also from the National Roundtable participants' perspective. Since EWF was actively involved on the construction of the AM Hub/Platform it did not participate on the internal assessment of the Platform. Therefore, only IST provided its inputs for the internal assessment.

Internal Assessment



- The platform itself.
- Universities to industrial problems.
- Share of knowledge.
- Networking.



- Unintuitive.
- To many paths/branches to do simples things.



- Collaboration between students, teachers and companies' staff.
- Job opportunities for students.



Confidentiality.

Table 7 IST | SWOT analysis results

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External Assessment

All Portuguese National Roundtable participants provided their inputs for the SWOT analysis, having agreed on most of the points mentioned below:



- The purpose of the platform itself
- Companies can present a problem to be solved
- Access to a European universities' network
- Share Knowledge
- Access to talent students by companies
- Access to companies by students
- Have contact with real business problems (Students)



- The way the platform works is neither intuitive nor easy to use
- Flowchart of procedures not obvious throughout the process of creating the Profile and PBL
- Lacks a good design
- Search engines have too many branches



- New job opportunities (Students)
- New business opportunity
- The company will receive a solution to their problem, which would otherwise be more difficult to obtain
- Great opportunity to bring companies and universities closer to each other.



- Confidentiality.
- Privacy and security
- PBL Resolution Intellectual Property
- Licensing /Disclaimer ("If the student solves the problem, and the company sells a product as a result, who gets the royalties?")

Table 8 PT National Roundtable Participants | SWOT analysis results

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1.3.3 Main Conclusions

As in the National Roundtable conducted by University of Bremen, the AM Hub/Platform purposes were identified by all participants. Nevertheless, it needs some improvements to be considered fit to be accessed daily by its users and used accordingly, as it lacks user friendliness and needs an improvement in terms of flowchart procedures (the ones currently available are sometimes confusing).

Nevertheless, participants were able to identify positive aspect on the AM Hub/Platform, mostly related to the fact it is a space where Universities/Students and Companies can connect to collaborate and companies will have the opportunity to ask Universities for help to find a solution to their real problems and the Platform. Platform's concerns with confidentiality and interactivity were also relevant aspects considered by participants as important features for all its target-groups.

Participants of the Portuguese National Roundtable

- Bárbara Gouveia (IST -Teaching Staff)
- Inês Pires (IST - Moderator)
- Francisco Barros (EWF - Moderator)
- Susana Nogueira (EWF - Moderator)
- Miguel Lino (IST - Student)
- Rui Sampaio (IST - Student)
- Nuno Monge (FABLAB Benfica)
- Ricardo Garcia (Sodecia)

1.4 National Roundtable in United Kingdom (Cranfield University, University of Birmingham and MTC)

The National Roundtable session to test and analyse the AM Hub/Platform in the UK was carried out on 9th of June 2020 by Cranfield University, with the support from the University of Birmingham and MTC.

This session involved the participation of a Company representative, a University professor and one student who participated in the European Metal AM Engineer MSc course (although two students were scheduled to participate in the event, one of the students was unable attend at the last moment) and was conducted by Cranfield University.

Before the actual session, the signed Terms & Conditions sheets were collected from all participants and an Agenda was drawn, as shown in Fig. 3, below.

Additionally, a Script/Tutorial on the platform was circulated to all participants before the session.

- Introduction to the AM Hub
- Use the script to create a profile
- Spend some time to get used to the interface
- The company representative uploads the PBL onto the platform
- The teacher 'accepts' it
- The students apply for the PBL and the teacher creates a working group
- The students exchange a couple of files to test the platform
- The teacher uploads the solution and sends it to the company

Fig. 3: Agenda for the UK National Roundtable

Participants were initially introduced to the project and to the AM Hub/Platform's objectives through a few slides, which also presented them the agenda of the session. Then, they were invited to use the Script/Tutorial to create and register their respective profiles in the platform, following the indications described in the beginning of this report.

Some difficulties were encountered when uploading the Problem-Based Learning assignment on the AM /Hub Platform (one of the tasks carried out during the testing, which was relatively straightforward). Those difficulties had impact on the time spent on the whole process, and included:

- The inability to edit the PBL's after they were uploaded, which meant that mistakes could not be rectified;
- The disappearance of the whole PBL if the teacher clicks on the 'PBL is ready to start' button before creating a working team;
- The difficulty in knowing when the document was in edit mode.

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Therefore, whenever a mistake was made, the whole process had to be re-started and as a result, the company representative had to upload the PBL more than once onto the platform. Additionally, due to these delays, the University professor had to leave the meeting for another appointment and the organiser (who also had a teacher account) had to take over.

However, once this issue was overcome and the working team was created, the supplementary documents (which were dummy documents) could be uploaded between the student and the teacher relatively easily, which also occurred whilst uploading the final solution document.

Once the exercise/testing was completed, both participants were invited to take part in a discussion about the platform (SWOT analysis). Also because of the delay experienced during the activity, the Heuristic Assessment and the Satisfaction Questionnaires were sent to the participants over an email and the results were collected. The results from these analyses are presented and discussed in the subsequent section.

1.4.1 Heuristic Assessment and analysis of the AM Hub/Platform

As previously mentioned, both ADMIRE Partners and participants of the National Roundtable sessions must analyse and assess the AM Hub/Platform as part of the internal and external assessment, respectively.

The organiser (Cranfield University) trialled the Platform before the UK National Roundtable by uploading another PBL onto it. In addition, due to the professor from the University of Birmingham not being able to complete the session, they also participated in the National Roundtable as a teacher for the PBL uploaded by the Company representative. The results from the Heuristic assessment completed by Cranfield University and the University of Birmingham are shown in Table 9 and Table 10, respectively.

	Criteria	1	2	3	4	5	Comments
Accessibility	Adequacy of the platform hosting site				4		
	Easiness to login					5	
	Efficiency of the notification procedures (e.g. email)				4		Sometimes, the emails were a little delayed
Terms & Conditions	Adequacy of the data treatment and privacy policies			3			
	Adequacy of the security system for prevention of no authorized access		2				
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)				4		
	Attractiveness of the layout (e.g. images, balance between text and image)				4		
	Innovativeness of the layout and structure			3			
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)			3			
	Easiness in moving between different sections				4		
	Easiness in uploading and downloading files					5	
Communication	Clear understanding of each section purpose		2				A brief description of the section could appear when hovering the mouse over
	Proper identification of the sections / menus and tabs		2				
	Amount of information in the different sections			3			
	Relevance of the contents / information given				4		
	Clear understanding of terminology used					5	
Usability	User friendliness of the platform		2				
	Innovativeness of the platform			3			

Table 9 Heuristic Assessment filed in by the Cranfield University

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Criteria		1	2	3	4	5	Comments
Accessibility	Adequacy of the platform hosting site				X		
	Easiness to login					X	
	Efficiency of the notification procedures (e.g. email)					X	
Terms & Conditions	Adequacy of the data treatment and privacy policies					X	
	Adequacy of the security system for prevention of no authorized access					X	
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)				X		Structure can be improved especially instead of a side menu to have a flow chart type platform or even numbering the steps.
	Attractiveness of the layout (e.g. images, balance between text and image)				X		Structure can be improved with more schematic illustrations.
	Innovativeness of the layout and structure				X		Basic layout; nothing fancy.
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)				X		Easy.
	Easiness in moving between different sections				X		
	Easiness in uploading and downloading files					X	
Communication	Clear understanding of each section purpose				X		
	Proper identification of the sections / menus and tabs				X		Improvement needed.
	Amount of information in the different sections				X		
	Relevance of the contents / information given				X		
	Clear understanding of terminology used					X	
Usability	User friendliness of the platform				X		The platform switched to Portuguese sometimes.
	Innovativeness of the platform				X		

Table 10 Heuristic Assessment filed in by the University of Birmingham

Table 11 and Table 12 show the Company representative's and Student's Heuristic Assessment, respectively:

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	Criteria	1	2	3	4	5	Comments
Accessibility	Adequacy of the platform hosting site				4		
	Easiness to login					5	
	Efficiency of the notification procedures (e.g. email)				4		
Terms & Conditions	Adequacy of the data treatment and privacy policies		2				
	Adequacy of the security system for prevention of no authorized access		2				
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)				4		
	Attractiveness of the layout (e.g. images, balance between text and image)		2				
	Innovativeness of the layout and structure		2				
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)			3			
	Easiness in moving between different sections				4		
	Easiness in uploading and downloading files			3			not all file formats supported
Communication	Clear understanding of each section purpose		2				
	Proper identification of the sections / menus and tabs			3			
	Amount of information in the different sections		2				
	Relevance of the contents / information given		2				
	Clear understanding of terminology used		2				
Usability	User friendliness of the platform				4		
	Innovativeness of the platform		2				

Table 11 Heuristic Assessment filed in by the Company representative

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Criteria		1	2	3	4	5	Comments
Accessibility	Adequacy of the platform hosting site			✓			
	Easiness to login					✓	password space - may think it is auto saved.
	Efficiency of the notification procedures (e.g. email)					✓	
Terms & Conditions	Adequacy of the data treatment and privacy policies						Not analysed
	Adequacy of the security system for prevention of no authorized access						
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)				✓		
	Attractiveness of the layout (e.g. images, balance between text and image)				✓		
	Innovativeness of the layout and structure			✓			
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)			✓			
	Easiness in moving between different sections				✓		
	Easiness in uploading and downloading files				✓		limited file formats.
Communication	Clear understanding of each section purpose		✓				
	Proper identification of the sections / menus and tabs				✓		
	Amount of information in the different sections			✓			
	Relevance of the contents / information given			✓			
	Clear understanding of terminology used						
Usability	User friendliness of the platform		✓				Some issues with edit button
	Innovativeness of the platform			✓			

Table 12 Heuristic Assessment filed in by the Student

1.4.2 SWOT Analysis

As previously mentioned, in addition to the heuristic assessment, both ADMIRE partners and participants from the National Roundtables carried out a SWOT analysis, focusing on the Platform's Strengths, Weaknesses, Opportunities and Threats (Internal and External assessments, respectively). Because the partner from the University of Birmingham left before the end of the meeting, the internal SWOT analysis was done by Cranfield University only.

Internal Assessment



- The interface was clean
- The log-in process was simple and easy
- Documents could easily be uploaded and viewed



- The platform did not allow any editions
- The registration mail could carry the right salutation
- Can upload only few types of documents



- AM is a rapidly growing field
- Include online courses
- Could include content for policy makers as well



- Other social media platforms (like LinkedIn)
- Users getting bored of the platform

Table 13 Cranfield University | SWOT analysis results

External Assessment



- Improves links between students, academia and industry
- Interface clean with no clutter
- Companies can test multiple 'real-life' ideas



- No deadlines for PBLs
- Navigation was difficult
- Only certain file formats were accepted
- Limited capacity to add and edit once the document is uploaded
- Platform was not user friendly
- Not sure where the data goes
- Make more information (like nationalities) mandatory



- Could be part of a degree programme to increase engagement
- Could have a separate confidential/invitation-only area
- Have a rewards system to motivate the stakeholders to participate
- Some means of internal communication between the stakeholders of the PBL



- IPR issues for PBL solutions; not sure what the exact agreement with information is
- Confidential information of companies
- Relies on a lot of goodwill (no filters) between the participants
- Lack of engagement/publicity
- Companies may not share a lot of information due to confidentiality

Table 14 UK National Roundtable Participants | SWOT analysis results

1.4.3 Main Conclusions

Cranfield University presents the conclusions taken from the Heuristic Assessment and Internal and External assessments in this section, combining Heuristic Assessment results and SWOT analysis. Suggestions for improvement are also addressed in this section. Therefore, this section considers the different assessments of all the participants in the UK National Roundtables. Mean and standard deviation (σ) scores for each criteria of the Heuristic Assessment are shown in Table 15:

Theme	Criteria	Average	Std deviation
Accessibility	Adequacy of the platform hosting site	3.8	0.5
	Easiness to login	5.0	0.0
	Efficiency of the notification procedures (e.g. email)	4.5	0.6
Terms & Conditions	Adequacy of the data treatment and privacy policies	3.3	1.5
	Adequacy of the security system for prevention of no authorized access	3.0	1.7
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)	4.0	0.0
	Attractiveness of the layout (e.g. images, balance between text and image)	3.5	1.0
	Innovativeness of the layout and structure	3.0	0.8
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)	3.3	0.5
	Easiness in moving between different sections	4.0	0.0
	Easiness in uploading and downloading files	4.3	1.0
Communication	Clear understanding of each section purpose	2.5	1.0
	Proper identification of the sections / menus and tabs	3.3	1.0
	Amount of information in the different sections	3.0	0.8
	Relevance of the contents / information given	3.3	1.0
	Clear understanding of terminology used	4.0	1.7
Usability	User friendliness of the platform	3.0	1.2
	Innovativeness of the platform	3.0	0.8

Table 15: Heuristic Assessment results

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When considering the different areas/themes of the Platform, it is seen that its accessibility scored high. One of the strengths identified in the SWOT analysis was that the login process was simple and easy. This was echoed in the Heuristic Assessments, where the AM Hub/Platform's login process was consistently rated 5/5 by all participants and partners. Additionally, the notification processes were also rated high (with a mean of 4.5/5 and σ of 0.6) although it was noted that the emails were sometimes a bit delayed and a bit impersonal; for example, one of the points raised in the SWOT analysis was that the registration emails could carry the right salutation. The results achieved for adequacy of the hosting site suggest that, although it may be good enough for the present requirements, it would definitely need an improvement for future updates.

The two aspects of the Platform's Terms and Conditions did not score very highly with a mean of 3.3/5 and 3/5 for the adequacy of the data treatment policies and the adequacy of the systems to prevent unauthorized access, respectively. However, the results show that some participants were happier with these aspects of the platform than the others, even though because data security is always a sensitive issue, it is thought that a 'worse case' scenario must always be assumed. In the SWOT analysis, one of the participants said that they were not sure where the data really goes. Therefore, it is believed that some additional information on the Platform's data storage security should be mentioned. Also, it is thought that an additional security question during login might help reduce the risk of unauthorized logins.

Moving on to the Visual and Graphics of the Platform, the adequacy of its structure was rated 4/5 by all the participants with them saying that the interface was clean with not much clutter. However, it was noted that the platform was not very user friendly and navigation within it was difficult which, perhaps reflected on its less than perfect rating. One suggestion in the assessment grid was to have a flowchart type platform instead of the side menu. The attractiveness of the layout also had a moderate rating of 3.5/5 ($\sigma = 1.0$) and the idea of including more schematic illustrations was mentioned by one of the participants. These points were further reflected in the Platform's innovativeness wherein the score was not very high i.e., 3/5 ($\sigma = 0.8$), suggesting some room for improvement particularly in increasing its attractiveness and user friendliness.

The AM Hub/Platform's Interactivity was assessed next. It is seen that the efficiency of the Platform's main functions were rated moderately (3.3/5, $\sigma = 0.5$). One reason identified for this could be the limited-edition capabilities of the Platform, for example, mistakes could not be rectified once the PBL was uploaded onto the platform. Additionally, one of the participants in the session also suggested making certain information like the user's nationality mandatory during registration thereby assisting companies that want to share potentially confidential information. The easiness in moving between the different sections of the platform was rated 4/5 consistently. A similar rating (4.3/5) was also given to the easiness in uploading/downloading documents. However, this criterion had a high variability ($\sigma = 1$) perhaps echoing a common point in the SWOT analysis that although the actual process of uploading/downloading documents were easy, the Platform accepted very limited file formats. Therefore, the different relative positions of the participants along this scale, accounts for this variability.

Another drawback identified was the lack of understanding about each section's purpose, this aspect had the lowest mean score of all criteria at 2.5/5 ($\sigma = 1$) and therefore needs to be improved upon. It is believed that this ties in with the other aspects of Communication such as the proper identification and amount of information in each of the sections and, the relevance of the contents;

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they all scored similarly with 3.3/5 ($\sigma = 1$), 3/5 ($\sigma = 0.8$) and 3.3/5 ($\sigma = 1$) respectively. One possible solution, as noted in the SWOT analysis, is to have a brief description of the button/section pop-up when a cursor hovers over it.

Finally, the Usability of the platform was assessed; this included its user friendliness and its innovativeness, both of which had a mean rating of 3/5 ($\sigma = 1.2$ and 0.8 respectively). The reasons for its relatively lower rating have already been discussed when considering similar criteria in the visual & graphics theme. It was additionally noted in one of the Heuristic Assessments that the platform sometimes switched to Portuguese which might be a note for future updates.

In addition to the strengths and weaknesses identified, the participants noted that the platform improves links between the various stakeholders in AM such as the Students, Industry and Academia. It was also thought that the Platform can be particularly beneficial for Companies to test some of their 'real-life' ideas.

However, it was noted that the PBL's did not carry any deadlines and hence would rely on a lot of goodwill between the different parties involved. This goodwill would need to be further extended since the PBL did not have any filters and hence the Company would have limited control on who has access to the data. This would subsequently restrict companies sharing a lot of information (particularly confidential data) on the Platform, thereby limiting its usage. Another threat identified for the Platform's success was the ownership of the Intellectual Property Rights (IPR) for the PBLs; the participants were not sure what the exact agreement between the parties for this was. Therefore, this would have to be drawn up and clarified for all users. Finally, the participants also flagged the lack of publicity as a potential threat to the Platform, which could demotivate the users and ultimately preventing them from accessing the webpage altogether and move to another social media platform.

Nevertheless, it was suggested in the internal SWOT analysis that because AM is a rapidly growing field, there is a place for such Platform, and it could potentially develop into a more comprehensive social media tool. However, it is believed that the Platform needed to make use of certain opportunities that would open up. For example, it was suggested that the PBL's in the platform could be part of a degree programme to increase its engagement and motivation of the students and/or the academics. There could also be a collection of online courses to further increase traffic and engagement. Additionally, the Platform could introduce a form of a rewards system that would motivate the participants. To counter the confidentiality issues identified in the previous paragraph, there could be secluded confidential/invitation only PBL's and/or activities. It was also believed that an internal chat system would allow more efficient communication between the stakeholders during different activities. Finally, it was suggested to include some content for policy makers as well thereby getting them to participate within the platform.

ADMIRE AM Hub/Platform encompasses three main purposes:

- I. To develop a problem-based learning environment and mind-set.
- II. To tackle the gap between industry/market and universities whilst responding to the compulsory demand and request for qualified people by the industry.
- III. To map resources at European level.

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Cranfield University analysed each of these purposes addressing their positive and less positive aspects, on dedicated Tables, based on the relevant insights gained from both the heuristic assessment and the SWOT analysis.

I. To develop a problem-based learning environment and mind-set

Table 16 summarises the positive and negative aspects of the current Platform for developing a problem based learning environment and mind-set. The positive points allow the participant(s) to get a better taste of the 'real-life' issues faced by the companies and countering the negative points would allow them to set and solve even more realistic problems.

Positives	Negatives
<ul style="list-style-type: none"> - Documents could be easily uploaded and downloaded whilst tackling a PBL - Very useful to test 'real-life' ideas - Could improve links and understanding between the various stakeholders - Could be included as a part of an established degree programme 	<ul style="list-style-type: none"> - Lack of filtering mechanisms for sharing confidential data - IPR issues for PBL solutions - Lack of information on how the data is treated and stored in the platform - Limited/no ability to edit or modify an uploaded PBL - Limited document file formats - The current setup relies on a lot of goodwill between the participants - Needs an internal messenger/chat system to improve communication

Table 16: Problem-Based Learning | Positive and Negative aspects

II. To tackle the gap between industry/market and universities whilst responding to the compulsory demand and request for qualified people by the industry

Once again, the positive and negative aspects of the Platform are analysed to identify how the platform would affect the gap between the industry and academic. In Table 17, the positive points help in better matching the skill requirements and the negative points, if not rectified, could potentially have an adverse effect.

Positives	Negatives
<ul style="list-style-type: none"> - Adequate performance of the hosting site - The concept of PBL's is a good strategy - Improves links between the different stakeholders of AM - Could make use of the rapid growth of AM - Could include a collection of online courses to further reduce the gap between the industry and universities 	<ul style="list-style-type: none"> - The PBLs need to be developed further (see previous section) - Improved terms & conditions (data security and storage) - Potential lack of engagement and publicity - Should have a general chat/communication system - Should also include content for policy makers as well

Table 17: Reduction of the gap between Industry and Universities | Positive and negative aspects

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III. To map resources

Finally, this section consolidates the various aspects of the Platform to effectively map resources between the different stakeholders of AM. As done previously, Table 18 details the positive and negative aspects of the current Platform within this framework; the positive points allow a more effective mapping of the resources between the participants and the negative points, if left unchecked, would hinder the objective.

Positives	Negatives
<ul style="list-style-type: none"> - Simple/easy login process - Adequate notification process - Interface was clean with no clutter 	<ul style="list-style-type: none"> - Interface was not very user friendly and navigation was difficult - The platform's structure was not very innovative - More information about the participants must be made mandatory - Difficult to identify each section and its purpose is

Table 18: Mapping of resources | Positive and negative aspects

Participants of the UK National Roundtable (Attendance List on Annex 5 of this Report)

- Suryanarayanan Krishnaswamy (Cranfield University -Teaching Staff)
- Moataz Attalah (University of Birmingham – Teaching Staff)
- Jon McAlinden (GKN – Part time MAM student)
- Lakshmi Parimi (GKN – AM specialist)

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1.5 National Roundtable in France (IREPA)

The last National Roundtable session was carried out by IREPA LASER in an online session, on June 17th 2020, which gathered a total of 6 participants: two Students from University of Lorraine and two teachers from INSA School of engineers and ICUBE of CNRS lab of University of Strasbourg, two representants from IREPA LASER and one company representative from BEAM Machining SAS. Attendees received 3 email to:

- Present them the purpose of the National Roundtable and about ADMIRE project. In this email they also received a link to connect for Doodle poll to decide for a common date;
- Once they accepted to participate, they received another email to inform them about the tasks they would have to accomplish during the National Roundtable;
- The last email received was to confirm both the dates, link of Microsoft Teams meeting and to send documents about RGPD, Heuristic Assessment grid, SWOT analysis and the meeting guideline.

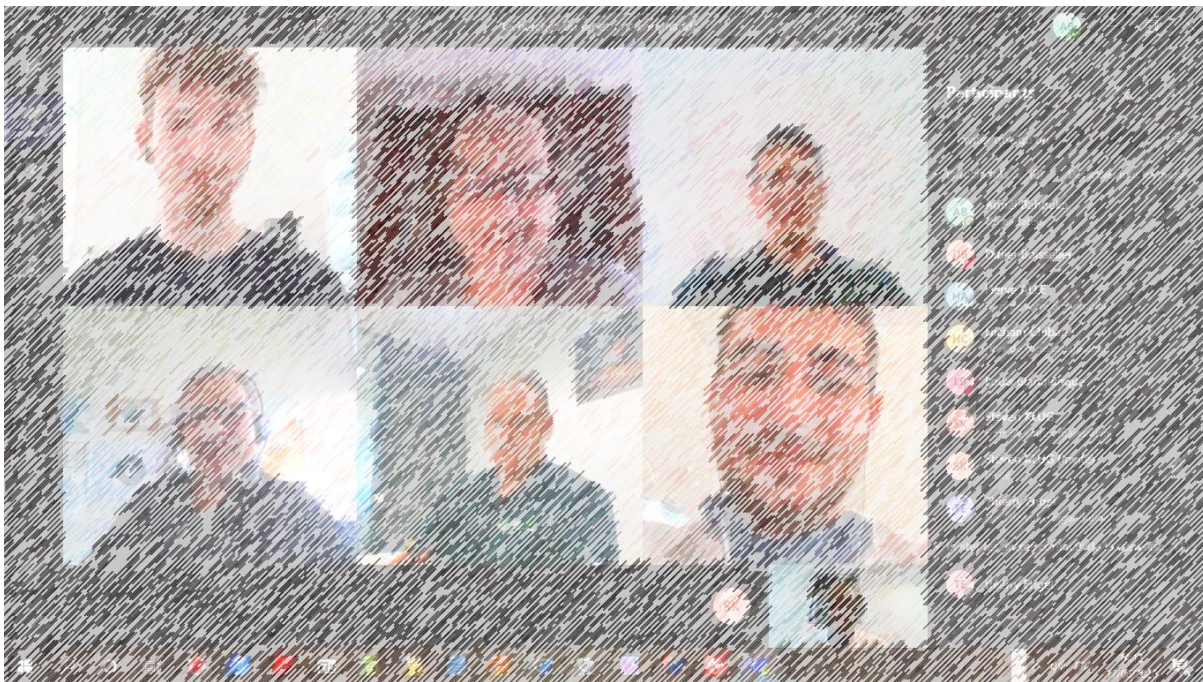


Fig. 4 Participants of the French National Roundtable

1.5.1 Heuristic Assessment and analysis of the AM Hub/Platform

The Heuristic Assessment grid on the usability of ADMIRE AM Hub/Platform was filled in by IREPA and participants of the French National Roundtable after testing the platform, in accordance with the Script/Tutorial sent previously to participants. The main results achieved with this assessment are found in the table below, where the most used rate for each criteria is shown, as well as the comments made by participants.

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	Criteria	1	2	3	4	5	Comments
Accessibility	Adequacy of the platform hosting site			3			The platform was not operational. There were errors which led to its improper use - it was not possible to create a profile. This platform is very confusing. We do not see a logical thread. It is very difficult to understand the architecture of the platform. Should take example from PLM solutions for CAO. Not very clear on the process. Creating data before login is not so easy to understand.
	Easiness to login			3			Think of using tab key instead of CR key not to validate too early! (and go again). No comments. Works fine. The "cadenas" is not clearly visible.
	Efficiency of the notification procedures (e.g. email)			3			It takes a long time. There are no notifications for students (new PBL created / Possibility to join team / answer from teacher). The notification mails take too long to arrive. Takes time (lag that make you feel that nothing has been registered).
Terms & Conditions	Adequacy of the data treatment and privacy policies			2			We don't have the user charter on the website. No idea about data treatment and of course the privacy policies. No control of data plugged in the system. Everything seems ok. You can create your profile before being informed about all that. There is no validation process that informs you about the way the data will be treated.
	Adequacy of the security system for prevention of no authorized access			2			No idea either. No process like ask for keyword for see a PBL. Everything seems ok.
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)			2			No translation of the errors (Portuguese language?) The structure seems quite obvious to see, but when using, it's very tricky as you can be stuck on creation for example. Not so easy to download document and not so ergonomic. Creating a working team is not in working team. Simple but seems to work fine. Colors are not "new". Bricks are not so easy to use. The sections are not so ergonomic.

	Attractiveness of the layout (e.g. images, balance between text and image)									3	Why linking another web page at each choose point. All the available space on the website is not used efficiently. The platform seems very old.
	Innovativeness of the layout and structure									2	Platform ergonomic is not so appropriate. No innovation...at all. Classic design. Nothing seems new.
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)									2	Once again the Platform ergonomic is not relevant. Not easy way to manage the main functionalities.
	Easiness in moving between different sections									2	It was my first-time connection and without any guidance I assume I could fail. No direction link between sections.
	Easiness in uploading and downloading files									3	Was hard to do... No comments. Not so easy because of the "edit" process.
Communication	Clear understanding of each section purpose									3	1st time connection was hard... The logic in the thread is not easy.
	Proper identification of the sections / menus and tabs									3	1st time connection was hard... OK but written to small.
	Amount of information in the different sections									2	1st time connection was hard. A lot of information and architecture and process not easy to follow.

	Relevance of the contents / information given	2					1st time connection was hard. OK
	Clear understanding of terminology used	2					1st time connection was hard. OK
Usability	User friendliness of the platform	2					The Platform is not usable as is. There should be a reminder that you have to click on edit, to modify a something. Not at all Too many hided bars
	Innovativeness of the platform	2					The Platform is not usable as is. What innovation? Old school May add video and chat or chatbot

Table: 19 French National Roundtable Assessment Grid for Heuristic Assessment of ADMIRE AM Hub/Platform | Summary of results

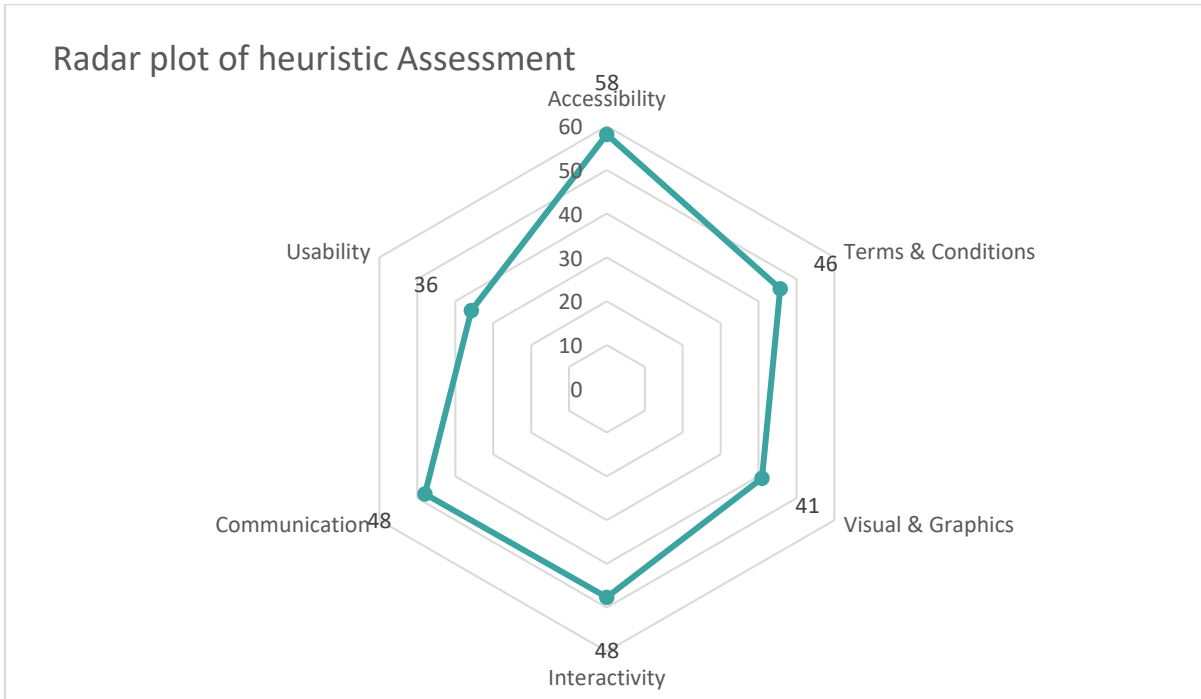
Table 20 lists indicates an overall poor agreement shown by the participant during the National Roundtable. The satisfaction level is approximately 46%. The level of agreement falls above 50%. Therefore, some improvements should be done to improve the usability, visual and graphics appearance of the Platform.

Accessibility	58
Terms & Conditions	46
Visual & Graphics	41
Interactivity	48
Communication	48
Usability	36
Overall satisfaction	46

Table 20 Heuristic Assessment

Table 3 shows the radar plot of the level of agreement for several criteria set as per the assessment grid. The best experience by the participants was for accessibility, whereas the worst was for visuals and graphics and usability.

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Graphic 3 Radar plot of heuristic Assessment

1.5.2 SWOT Analysis

Again, in addition to the Heuristic Assessment, both ADMIRE partners and participants from the National Roundtables carried out a SWOT analysis, focusing on the Platform's Strengths, Weaknesses, Opportunities and Threats.

The results achieved are presented below, starting with the SWOT analysis carried out by IREPA (Internal Assessment), followed by the National Roundtable participants SWOT analysis (External Assessment)

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Internal Assessment



- Good point for industries that can access to students' profiles of good academic level
- Good point for teachers who want to evaluate their students using PBLs from companies
- This platform can stand for a good way to gather companies and workforce



- Not so easy to understand
- It looks like there are too many hidden information
- The platform is not attractive enough
- Access to profiles does not work correctly
- Confirmation procedures are not clear



- Job offering platform
- Improve mutual comprehension
- Visibility of works done by people
- Profiles of high to reach
- Creation of a real community of AM



- Reverse engineering by "fake" profiles
- Misinformation
- Confidentiality
- Concurrence by other universities and job appliance platform (in France e.g. IUMM...)
- Companies' boycott

Table 21 IREPA | SWOT analysis results



- The project is very good and replies to real companies needs reaching high level people: students and teacher
- Universities can get in touch with real PBLs that can give them ideas for their courses and cursus
- Students are in the middle of a big project: this is very enthusiastic and a good element for their motivation



- The platform is not intuitive enough
- Many menus are not understandable
- The graphics are old fashion
- The process to elaborate an answer is not obvious: you don't know easily who stars the process
- The notification process is too slow, so that you can validate many times an answer before you receive the notification
- The system is not stable enough: teachers with the same rights cannot see the same parts of the platform



- Should add some functions as:
 - videos
 - chats
- The use of better colouring threads
- The use of "process flow" figure or menu to help visitor to connect
- links with other initiatives in Mediterranean countries



- reverse engineering by "fake" profiles
- platforms like linked in and research gate

Table 22 French National Roundtable Participants | SWOT analysis results

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TITLE: WP 6 Exchange of Knowledge Strategies' Implementation & Testing at National Level

Subject/Deliverable: D6.4 Roundtables



1.5.3 Main Conclusions

According to the results achieved in this National Roundtable session, the Platform and most of its functions are ready to use. However, the graphics are not attractive at all and the lack of a process flow menu is very damageable for the Platform, which needs to be more user-friendly.

Many improvements can be done (cf. Annex 4), the most urgent concerns the profile's creation and stability.

Participants of the French National Roundtable

- Arnel Bahouka, IREPA LASER (Moderator)
- Didier Boisselier, IREPA LASER (Company representative)
- Hicham Chibane, Insa Strasbourg (Teacher)
- Thierry Engel, INSA de Strasbourg & Icube Laboratory (Teacher)
- Hervé Alle, BEAM SAS (Company representative)
- Louis Blanquinque, Université de Lorraine UIMM (Student)
- Steven Klug, Université de Lorraine UIMM (Student)

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1.6 General conclusions from all National Roundtables

Overall, the AM Hub/Platform was considered by all participants (a total of 18) of the National Roundtables as a valuable tool for connecting different stakeholders from AM field, including Universities/Teachers, their Students and Companies, in line with the main purposes of the Platform.

The main issues identified (which list may be found in Annex 4) were related to its visual and graphic features, which must be improved to attract its users and to motivate them to explore/use the Platform.

Some participants had difficulties creating their own profile, stating it took a long time to receive the email with the credentials needed to access and edit their accounts.

They also had difficulties in navigating the platform and considered it hard to find information regarding its different sections' purposes. The main comment made was that it is not intuitive and "user-friendly" enough. It needs improvements in terms of flowchart procedures, as the ones available were sometimes confusing to participants.

The process of uploading documents was somewhat easy, but in the case of the PBLs (one of the tasks to be completed by participant during the testing of the Platform), problems arose when participants tried to edit them, after uploading the PBL.

Nevertheless, participants were also able to make suggestions on possible solutions to the issues found, which include:

- Adding information on the Platform's data storage security to account for any issues with confidentiality, or another security question during the login process to reduce the risk of unauthorized logins;
- Including more schematic illustrations to improve the layout of the Platform;
- Provide a brief description of the button/section pop-up when a cursor hovers over it.

Nevertheless, it was also possible to point out positive aspects of the Platform:

- It is easy to log on and to move between its different sectors;
- The terminology used is also easy to understand;
- There is adequacy of the Platform regarding the data treatment and privacy policies;
- It can be beneficial to all its users, specially to companies, which will be able to have new ideas for their real problems;
- It has the potential to be a more comprehensive social media tool.

Some issues identified by the National Roundtable Participants were already tackled by EWF, who will continue solving them, even after ADMIRE project's conclusion, as EWF will integrate the AM Hub/Platform on the AM Observatory, currently under development in the scope of the AM Blueprint project **SAM** – *Sector Skills Strategy in Additive Manufacturing* (<http://www.skills4am.eu/>). This connection between ADMIRE AM Hub/Platform and the AM

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Observatory will enable to continue updating the Platform and to improve it in accordance with results achieved on all National Roundtables.

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2 Common Partners' Roundtable

As explained in the beginning of this report, the Common Partners' Roundtable aimed to gather all ADMIRE partners to analyse the feasibility and usability of the AM World Cafe meetings and AM Knowledge "Speed-dating" for promoting connections between Education and Industry sectors, and to discuss the methods and strategies used to pilot these strategies in order to understand if there is a need to improve them for further use.

EWF was the partner leading the session, and IREPA was the partner responsible for developing the Satisfaction Questionnaire (<https://forms.gle/8CgtLq7bBenSb5326>) to be filled in by all partners after the session ended to assess its quality (Annex 3). The results from this Questionnaire are not addressed in this report.

Before the session, EWF sent a Doodle poll in order to help partners deciding a date, according to their own availability. Therefore, the session was held on September 24th, 2020. Even though GKN Aerospace and MTC were not able to attend, an email was sent to partners after the session, with the main results from the discussion held for collecting additional inputs. Their contributions are also part of this report.

Partners were already aware of the Common Partners' Roundtable's purpose. Nevertheless, at the beginning of the session, EWF reminded them of the aims of the discussion and the importance of its results for the improvement of the strategies and methods used on the AM World Cafe meetings and AM Knowledge "Speed-Dating". Those improvements will ultimately impact their use in future events, not only by ADMIRE partners but also by the general public, as they intend to promote the bridging of Education and Industry sectors for future collaborations at European level.

The AM World Cafe meetings were conducted by EWF and followed the principles and the components initially planned for these sessions in order to achieve their main purposes: to develop a collaborative and innovative sharing and learning environment among its participants by setting a welcoming environment providing participants all the materials needed to participate on the sessions (I), introducing the session and its objectives (II), constituting small group rounds (III), designing powerful questions (IV) and collecting participants' insights for high quality results (V).

The AM Knowledge "Speed-Dating" aimed to bridge different sectors that might intersect in AM supply chain, opening ways for future collaborative work between their respective key stakeholders.

EWF prepared a presentation to help illustrating the methods used to conduct the AM World Cafe meetings and AM Knowledge "Speed-Dating" and to show the main results achieved in the sessions held (which, once again, are fully described on their respective reports – D6.2 and D6.3):

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Fig. 5 Cover slide of the PPT presentation and Agenda of the Common Partners' Roundtable

After presenting the methods used to conduct both exchange of knowledge strategies, EWF presented the main results achieved, which are in line with their main objectives:



Fig. 6 Slide presented to ADMIRE Partners with main results achieved on AM World Cafe meetings and AM Knowledge "Speed-Dating"

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2.1 Main results achieved

After the presentation, EWF opened the discussion by asking Partners to comment on the usability and feasibility of both exchange of knowledge strategies, and on what must be improved in terms of methods and strategies towards their future implementation.

The overall opinion was that the methods and strategies used indeed fit their purpose, even though some partners reminded that there can be complications when organizing “speed-dating” due to the possibility of having participants who may not feel comfortable in meeting other people in such circumstances. However, the common agreement was that, that when people participate in events such as the one in which the AM Knowledge “Speed-Dating” took place (EWF 2nd AM Qualifications Workshop), most of them are ready to expose to strangers and to network with people they never spoke to before. Thus, this aspect was considered by partners as a one-off challenge, easily overcome by AM Knowledge “Speed-Dating” organizers.

Both exchange of knowledge strategies occurred in face-to-face events, before the global pandemic. Therefore, given the current situation that impacts the realisation of events in person, all events must be planned to occur in a different context, i.e., online, which is sometimes challenging.

Looking at both exchange of knowledge strategies, partners agreed that only World Cafe meetings would have conditions to be carried out online, as AM Knowledge “Speed-Dating” (due to their specific features) would require “heavy” resources, difficult to gather in such context/setting.

Below are the main conclusions drawn from the discussion held by ADMIRE Partners on this Common Partners' Roundtable:

2.1.1 AM World Cafe meetings

- There was a different strategy used to present these sessions to their respective participants: one more formal (with PPT presentations about the event, its purposes and dynamics) and another more casual/informal (where the introduction to the session was made using a conversational tone with participants). The casual approach was considered by partners to be the better one, even though one must take into account that it is not always possible to apply. Therefore, both approaches can be used, depending on the contexts (e.g. type of event);

- Depending on the setting, i.e. face to face or online session, the strategy to conduct the World Cafe meeting must be different in order to accomplish its purpose. An online World Cafe meeting must rely on videos (e.g. videos about the topics to be discussed in the session) and other interactive tools (e.g. Kahoot), to help participants to engage and actively participate on the discussions;

- It is important to have one moderator per table/chat room who is able to conduct the discussions in a way that engage/motivate all participants to provide their contributions, even though the challenge of this strategy is that multiple moderators might be needed in order for the session to be successful.

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2.1.2 AM Knowledge “Speed Dating”

- Partners agreed on the activity held to carry out the AM Knowledge “Speed-Dating”;
- A possible challenge is that participants may feel uncomfortable meeting people they do not know in such circumstances. Partners agreed that in a face-to-face speed-dating (held in the scope of an event such as the one addressed in the Common Partners’ Roundtable) this specific challenge is less possible to occur given the fact that participants of such events are previously prepared to engage with other people;
- Even though it is relatively easy to conduct a “speed-dating” in person, this type of exchange knowledge strategy is more challenging to hold online, as the resources needed to conduct a speed-dating in such setting are considered “too heavy” and dependent on the online applications used;
- One possible solution is to adjust the chat room features in order to provide participants the chance to meet without interference throughout the speed-dating time frame.

In sum, both AM World Cafe meetings and AM Knowledge “Speed-Dating” exchange of knowledge strategies are useful and feasible, even though the strategies used to organize and conduct them depend on whether they are held in person or during online sessions, which rely on specific resources. Partners considered that the less challenging exchange of knowledge strategy to carry out online is the AM World Cafe meeting, as it does not require as many resources as the AM Knowledge “Speed-Dating” in terms of settings preparation.

Hence, according to ADMIRE Partners, little or no improvements are need to be made to the strategies and methods used to conduct AM World Cafe meetings and AM Knowledge “Speed-Dating” since those put in practice have made it possible to achieve the intended results for each session. However, those strategies/methods must be adapted to the context in which they are carried out (in person or online).

2.2 AM World Cafe Meeting at ADMIRE Final Conference | Skilling the AM Future 2020

ADMIRE Final Conference | Skilling the AM Future 2020 was held on October 15th, 2020, on a half-day online session, in partnership with #ErasmusDays2020 initiative.

All Partners considered useful to conduct an AM World Café meeting with the event's participants after presenting to them the ADMIRE results and their advantages to Education and Industry sectors. Therefore, and complying with some of the suggestions provided by Partners at the Common Partners' Roundtable for holding AM World Café meetings online, Cranfield University (ADMIRE Partners responsible for organizing the project's Final Conference) created two separate chat rooms. Participants of both rooms were randomly allocated using ZOOM's breakout rooms feature; the ADMIRE partners in each room were decided prior to the event to ensure that representatives from education and industry were present in a room to ensure a more fruitful discussion. In each room, one moderator belonging to ADMIRE partnership (MTC and EWF) ensured the flow of discussions with participants of its respective room, with a set of questions focusing on how can ADMIRE consortium ensure the project's results' sustainability and exploitation at national and European levels, considering participants' own experiences and their organizations' activities and strategies.

Thus, in compliance with the Final Conference's Agenda, Cranfield University placed the event's participants (including project partners) in each room, according to plan and, at the end of the discussion (which took 30 minutes), all participants returned to the "general room" and each moderator presented the main results from the discussions held as a way to promote further discussions on the matters at hand.

A guide to assist the moderators of this AM World Cafe meeting was previously prepared by EWF, following the strategy used in previous AM World Cafe meetings, describing:

- Title of the session ("How to ensure ADMIRE results' Sustainability & Exploitation?");
- Duration of the session and respective moderators,
- Purpose of the session,
- Dynamics of the session (including World Cafe "netiquette", where Moderators and Participants must "listen to understand" and contribute with their thinking to the discussion);
- Phases of the session (based on the five components of the World Cafe meetings, mentioned above in this report);
- ADMIRE results to be addressed (i.e. European Metal AM Engineer MSc and specializations, AM Hub/Platform and Exchange of Knowledge Strategies);
- Five questions to be asked, in line with the session's purposes.

To allow the session to be more interactive, a PPT presentation was also previously prepared by EWF to illustrate the explanation of this AM World Cafe meeting session, provided to participants of each room, about the session's purposes and dynamics, also showing all questions (one at the time) to ensure all participants understood them, for the sake of a fruitful discussion.

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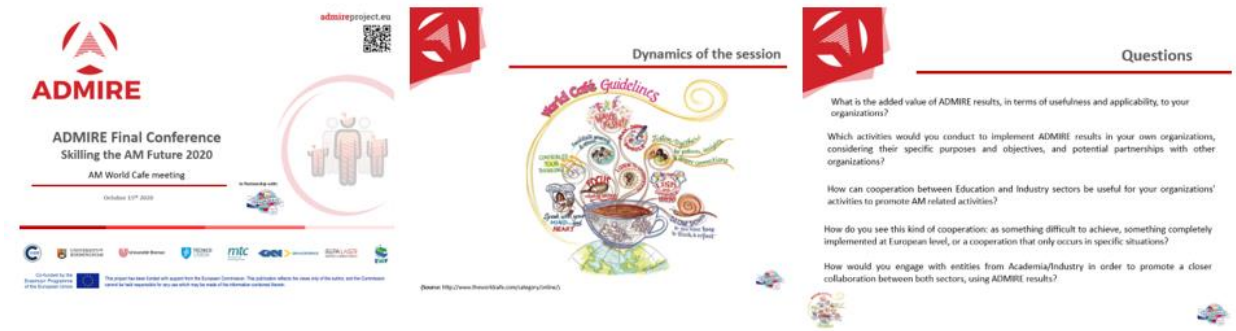


Fig. 6 Excerpt of the PPT presentation prepared to conduct the AM World Cafe meeting, at ADMIRE Final Conference | Skilling the AM Future 2020

At the end of this AM World Cafe meeting, all results achieved during the session/discussions were collected by each room moderator, which will be considered on the final Dissemination, Sustainability and Exploitation Plan (D7.4).

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ANNEX 1 – Heuristic Assessment Grid

ADMIRE AM Hub/Platform

This Assessment Grid aims to collect your heuristic assessment of the AM Hub/Platform and its functionalities. Please, rate each topic according to your degree of satisfaction using the provided scale (from 1 to 5), where: 1 – Strongly disagree, 2 – Disagree, 3 – Neither agree/disagree, 4 – Agree and 5 – Strongly agree.

	Criteria	1	2	3	4	5	Comments
Accessibility	Adequacy of the platform hosting site						
	Easiness to login						
	Efficiency of the notification procedures (e.g. email)						
Terms & Conditions	Adequacy of the data treatment and privacy policies						
	Adequacy of the security system for prevention of no authorized access						
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)						
	Attractiveness of the layout (e.g. images, balance between text and image)						
	Innovativeness of the layout and structure						
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)						
	Easiness in moving between different sections						
	Easiness in uploading and downloading files						
Communication	Clear understanding of each section purpose						
	Proper identification of the sections / menus and tabs						
	Amount of information in the different sections						
	Relevance of the contents / information given						
	Clear understanding of terminology used						
Usability	User friendliness of the platform						
	Innovativeness of the platform						

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ANNEX 2 – Satisfaction Questionnaire | National Roundtable

ADMIRE National Roundtable Satisfaction Questionnaire

ADMIRE - 2020
This questionnaire aims to understand your satisfaction degree in terms of the organisation, venue and content of the National Roundtable, carried out in the scope of ADMIRE project. Your participation will help us improve future events. Thank you in advance for your contribution!

***Obrigatório**

Roundtable in general

Overall, are you satisfied with how the roundtable went on? *

Very satisfied

Satisfied

Neutral

Dissatisfied

Very dissatisfied

What is your status ?

Teacher-academic,

Industrial,

Student,

Business professional,

Researcher,

Regulator,

Organisation team member

Other

How have you been informed about this roundtable ?

- Via mail invitation
- Via partners
- Via colleagues ,
- ADMIRE's web site
- ADMIRE official invitation
- Other

Roundtable's logistic

How satisfied are you with... *

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
...the logistic information of the roundtable venue?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...the roundtable location?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Was the roundtable the appropriate duration? *

- Too short
- Appropriate
- Too long

Prior to the roundtable , where there enough information on its content and aim ? *

- No information
- Not enough information
- Enough information
- Too much information

Roundtable's management

How satisfied are you with... *

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
...the roundtable coordinator's moderation of the session?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...the group dynamic and the interaction you had with other participants?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...how productive the roundtable was?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any comments? What did you find most/less effective?

A sua resposta

Roundtable's content

How do you agree with the subjects of the roundtable and the fitting of the agenda with your questions:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
Quality of discussions?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relevance of subjects ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relevance of theoretical contributions ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of debriefing ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Were all of your issues addressed? *

Yes

No

If the issues related to the Roundtable were, in your opinion, not fully addressed, please specify

A sua resposta

Is there any additional topics you would like to address at a future roundtable ?

A sua resposta

After the roundtable

Are your follow-up actions clear? *

Yes

No

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Are you willing to participate in such other roundtable ?

Yes

No

Would you be interested in presenting ADMIRE AM Hub/Platform to other colleagues?

Yes

No

Which subjects do you want to be developed in such roundtable ?

A sua resposta

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Improvement suggestions

Would you recommend such event ?

Yes

No

Please share any suggestions you might have to improve the session.

A sua resposta

Please share any suggestions you might have to improve this survey.

A sua resposta

About you

What experience or knowledge did you have in the field, before the roundtable? *

A sua resposta

Do you think that your background and knowledge were enough for a good start in this roundtable ? *

Clearly yes

Rather yes

Rather no

Clearly no

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Name *

A sua resposta

Organisation *

A sua resposta

E-mail adress

A sua resposta

Submeter

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ANNEX 3 - Satisfaction Questionnaire | Common Partners' Roundtable

ADMIRE | Common Partners' Roundtable Satisfaction Questionnaire

On line with all ADMIRE's project partners on september the 25th 2020


*Obrigatório

On line with all ADMIRE's project partners on september the 25th 2020



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Overall, are you satisfied with how the roundtable went on? *

Very satisfied

Satisfied

Neutral

Dissatisfied

Very dissatisfied

Roundtable logistic

How satisfied are you with... *

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
...the logistic information of the workshop venue?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...the workshop location?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Subject/Deliverable: D6.4 Roundtables



Was the roundtable the appropriate duration? *

- Too short
- Appropriate
- Too long

Prior to the roundtable, where there enough information on its content and aim? *

- No information
- Not enough information
- Enough information
- Too much information

Roundtable management

How satisfied are you with... *

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
...the roundtable facilitator's moderation of the workshop?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...the group dynamic and the interaction you had with other participants?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...how productive the roundtable was?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any comments? What did you find most/less effective?

A sua resposta

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Roundtable content

Do you agree with the following statements? *

	Strongly agree	Agree	Disagree	Strongly disagree
You were well informed about the objectives of this workshop.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
This workshop lived up to your expectations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The content of this workshop was relevant to the project.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Any comments? What did you appreciate or found was missing?

A sua resposta

Improvement suggestions

Please share any suggestions you might have to improve the roundtable.

A sua resposta

Please share any suggestions you might have to improve this survey.

A sua resposta

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About you

Name *

A sua resposta

Organisation *

A sua resposta

E-mail adress

A sua resposta

Submeter

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ANNEX 4 – List of issues and improvement suggestions for the AM Hub/Platform

University of Bremen

a. Creating an account:

- Participants felt like the account creation is unnecessarily complicated
- Long loading times of the website
- Databases as used for the “nationality” section is not user friendly
 - o Suggestion - Better would be a type-in-field with an auto search / fill option
 - o Search icon (magnifying glass) was not seen by the invited users
- “Name” field for creating Company account is not clear (username or company name, could be avoided if a company AND according user are created)
- Field for phone does not prohibit letters
- Sometimes “save” leads to the error message: “Argument Index not a valid value”
- (Company profile) Clicking ‘+’ for AM Process, Software, Materials, Supply Chain leads not to the possibility of adding information
- (Teacher Profile) cannot add Equipment, Partners, etc. to the profile
- In Teacher profile – Typo in “Title”
- If an invalid email address is entered, the whole field is cleared, would be more user-friendly if it would only be marked as “invalid email address”
- Choosing an own password would be preferable
- After creating a teacher account, the salutation in the received email is unusual "Dear Mr Professor: Christian K"
 - o Mr OR Professor (since a gender is never chosen preferable would be “prof” or just “Dear _name_”)
 - o no ":"
- After saving nearly no information is changeable
- When trying to save a company’s employee I get an "Argument 'Index' is not a valid value." error message, but no reference which field has an invalid value! (But the message is English!)

Creating a University

- No list / database for selecting the country (differs from other profile creation procedures)
- What is the criteria for the size of the university?
 - o Is this information necessary?
- Tell us if you are registered in university or a VET * → where is the * (what is a VET?)
- new created university is not added to the own data automatically / directly;
- I cannot add the new created university to my profile at all

Login

- No notification that an email with a password was sent
- Lock-symbol in the top right corner can be easily overlooked
- No information is provided if a false password is entered
- Wrong username leads to the EWF homepage (should trigger an error message)

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- In general, a login using the email-address would be preferred (or email and/or username)
 - o Email is unequivocally
 - o Users do not have to remember the email and username to the regarding website
- After first login the website shows the message: "Please login or create a user account to continue"

Profile

- Fields do look like they are editable, but they are not
- A lot of information is not editable at all after first account creation
 - o CV
 - o Adress
 - o University
 - o Login Data
 - o Email
- There is no option to remove an account / profile
- The "linked In" field is not aligned with the other fields

PBL Creation

- After clicking "save" no further changes possible
- In general not very intuitive (but ok)
- "modules" unclear for industrial members
 - o Why are the "qualifications" labelled with "name"?
 - o What is a "Competence Unit"?
- If the qualifications remain, there should be "rules" when a qualification is to be assigned to a PBL
- Leaving the page discards unsaved changes without notice
- (as Teacher) when trying to change the "competence Unit" I get the message
 - o **"O seu perfil de utilizador não tem permissões para seleccionar registos."**
 - o No further changes in the PBL possible without leaving completely.
- (as teacher) when creating a PBL the visibility can be chosen between Student, University, platform outsiders; when entering it again, one can also select "other companies" - should be the same in both cases
 - o And it is not visible that choosing one might include others (students can always see PBLs, can't they?)

PBL in general

- When creating accounts / PBLs one fills the fields from top to bottom, but the save button is in the top again, it would be user-friendly to have one at the bottom of a page again.
- Why do public PBLs open in a new window, private PBLs in the same one?
- PBLs do not consider the given number of working teams - after starting a PBL (as a teacher) it is only available via "working team"
- When "editing" a PBL it is not available for others → could lead to problems when e.g. s.b. forgets to close a "editing session"
 - o PBL remains "blocked" if user is logged out!

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- Additionally, others can see who is blocking the PBL, could be a problem regarding privacy (except for members of a working team)
- Company member should only receive a single email, when the final version is uploaded, not for every shared document
 - Typo in the received mail
- What is the purpose of “Shared Files”?
 - (email) information to Working group members about new material could be useful for collaboration
 - It should be saved who saved what and when
- Final resolution should be “submitable” – after final submission (with timestamp) no further changes are possible
 - Maybe still changeable or set to be editable by teaching staff
- It is not possible to leave a PBL, even if the student is removed by teaching staff, the PBL is still “active” for the student
- Why are teachers able to add all students from all universities to a working group? (That staff member is only responsible for Students from the own University. At least a filter option would be good, especially when there are later hundreds of students listed)
- PBLs→Modules→ "select a competence unit" – is even displayed if no possibility to change is given.
- It would be nice to have a list “my PBLs” to see which PBLs:
 - Students → did work on
 - Techers → did create; declared as available as a supervisor
 - Companies → did create
- Students should be able to create working teams by themselves (should not be the job of the teacher)

Other / General

- When having the browser smaller (half desktop for example) the menu switches from “right hand side, steady open” to “left hand side, pop-up menu”; would be more user-friendly if the side would remain the same (often the menu is on the left hand side) (industrial partner did not recognize the pop-up menu at all)
- In profiles and PBLs, unchangeable text is sometimes hard to read due to low contrast
 - The whole PBL description for example
- In “Search → PBLs”, why are “public” PBLs listed in the “private” section as well?
 - Maybe a third option “all PBLs” or a database with filter-options would be better
- Nearly all links on the website are leading to an exception
 - Ocorreu um erro
Ocorreu um erro inesperado na aplicação. O administrador do sistema foi notificado. Lamentamos o sucedido e pedimos que volte a tentar.
Página Principal
- "broken image" icons everywhere
- Nearly all pop-ups and error-messages are in Portuguese
- Why is there the “printer” icon on all pages?
- Leaving a page being in “edit mode” should lead to a warning about unsaved changes
- Techer → Working Team → new leads to:
ERRO: ocorreu um erro inesperado na aplicação. O administrador do sistema foi notificado. Lamentamos o sucedido e pedimos que volte a tentar.
 - Sometimes “Conversion from type 'DBNull' to type 'Integer' is not valid.”

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TITLE: WP 6 Exchange of Knowledge Strategies' Implementation & Testing at National Level

Subject/Deliverable: D6.4 Roundtables

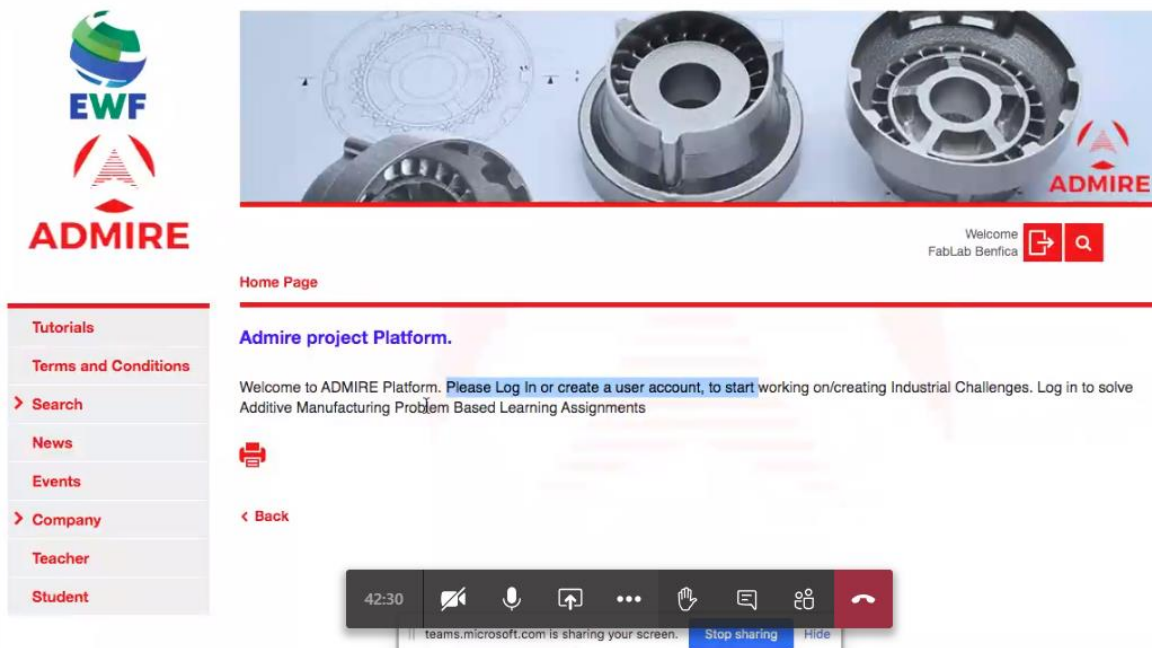


IST & EWF

Creating an account:

Lock-symbol in the top right corner for LOGIN can be easily overlooked, it would be more intuitive if a LOGIN Symbol appears instead

Platform should have a Warning saying that the user would receive an email with the log in credentials (add that it may take a few minutes)



Text, like the one indicated in the figure above, appears after log in is made. This type of information shouldn't appear. That sentence should be removed and replaced by list indicating what can be done on the platform.

The platform could have a text that would ask for attention to the use of "edit" and "save" commands at the top of the pages

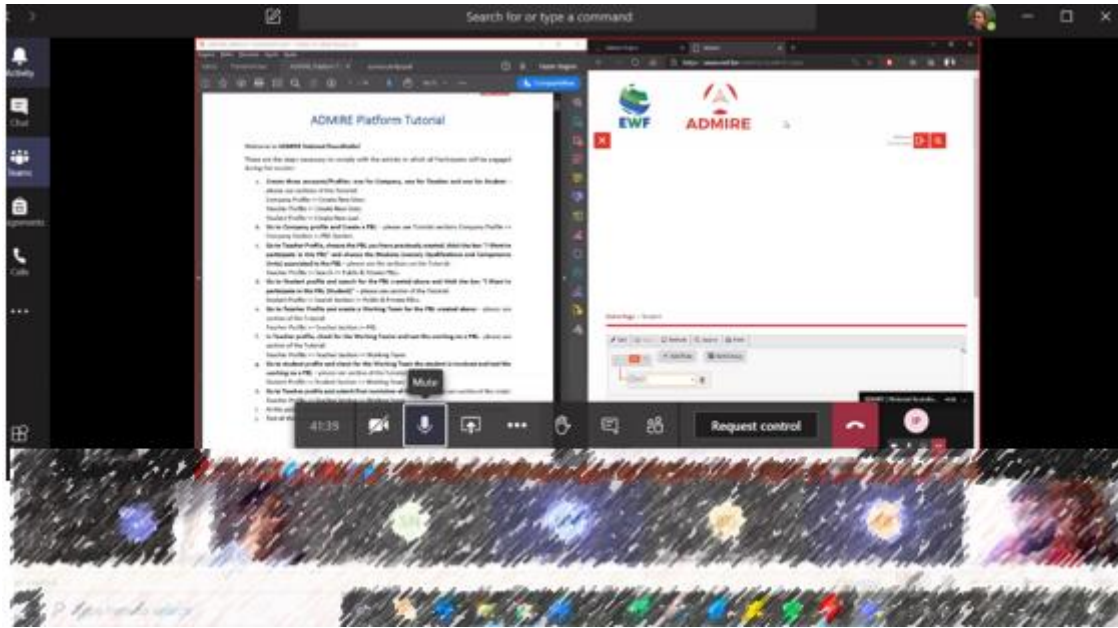
Search engine to intricate, lots of branches

Choosing an own password would be preferable

It should appear that the user needs to click Save after adding an information, otherwise the information should be automatically saved.

When having the browser smaller (half desktop for example) the menu switches and a blank space appears between the platform header and the beginning of its contents/menu.

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Teacher profile

Home Page » Teacher

Edit Save Refresh Search Print

Title

Full Name

E-mail

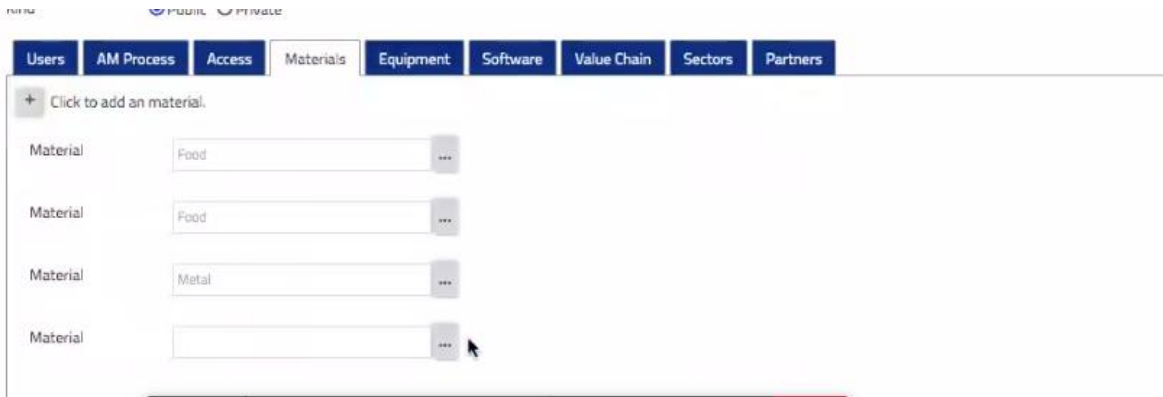
The search "tab" shouldn't exist

Teacher Profile cannot add Equipment, Partners, etc. to the profile

Company

Industry profile- in the contents of the tab: Materials, Supply Chain, sectors is missing the dustbin button

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PBL

After the creation of the PBL, the platform does not allow to edit what had already been written before, delete is not also possible.

Students were able to select the PBL created by following the steps in the Tutorial, however, It would be interesting to see a list of the PBLs in which the students are enrolled.

When something is deleted, a window should appear asking if we really want to delete that information instead of deleting it right away, as it does on the platform.

Give the possibility to choose documents already placed on the platform before sending the final resolution, and the possibility to upload documents in another format rather than PDF;

After the resolution of the PBL by the students, the company should have access to the resolution documents

In the notification email that the company receives, it should be indicated the steps the company must follow to access the resolution (i.e. go to Working Team to seek PBL resolution);

When the company validates the PBL resolution, a message should be sent to the student's working team with a note that the PBL has been solved.

There could be an option that would allow Students to keep in touch with the company and the with the Teacher during the period in which the PBL is under resolution.

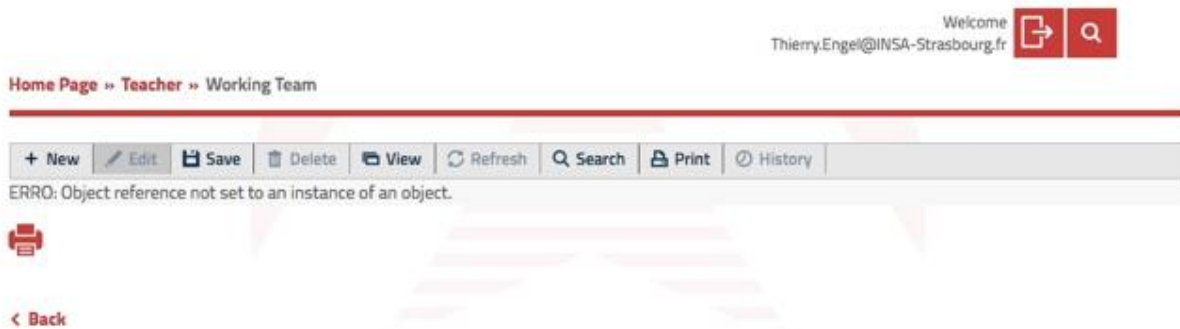
IREPA

Creating an account:

- Many bugs appeared while trying to create the profile
- The errors are written in Portuguese only
- You can a validated profile (mail for confirmation) and by the same way not being grated to access the platform "edit" menu

Creating a working team

- The process is not obvious at all
- Many trails to find out that you should create first the PBL than the team
- Student cannot be aware of how to get into a working team since they do not see the team before
- It should be better to give the opportunity the gather as a team or to give the opportunity to teachers to know that people are willing to work in the team, they created
- The process of team creating is not stable



- Difficult to create the university and to be connected and visible with that affiliation



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Creating and resolving a PBL

- The upload of the PBL for companies is not obvious
- The “button” to make it visible by everybody is too small and not visible enough
- You will receive the mail confirmation (very late! (it took 10 minutes)) but no one will see it (among teachers) The notification of PBL solving takes a lot of time to come
- Teachers do not have confirmation about the PBL status

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ANNEX 5 – UK National Roundtable Attendance List



National Roundtable ATTENDANCE LIST

Responsible Partner: Cranfield University
Support from: University of Birmingham and MTC
City/Country: United Kingdom
Date: 9th June, 2020

Name / Surname	University/Company	Signature
Suryanarayanan Krishnaswamy	Cranfield University	
Moataz Attallah	University of Birmingham	
Jon McAlinden	Part Time MAM student GKN aerospace	
Lakshmi Parimi	Process SPecialist AM, GKN Aerospace	



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