



D.4.2 Report on the Piloting Events



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1. INTRODUCTION

The purpose of this report is to compile the results of the pilot sessions carried out at national level with the aim of testing: WOW Online Platform for Work-Based Learning (WBL), the Quality Assurance System for WBL and the tools developed for VET-Businesses cooperation (i.e. training programme model, assessments, practical arrangements for apprenticeships, etc.).

Pilots were carried out by each WOW partner (MHtE, IIS, ISQ, ISIM, CESOL and TWI), involving a total of **29 participants** from Hungary, Italy, Portugal, Romania, Spain and United Kingdom. The national findings were respectively reported in each “Country Pilot Report” available in the appendix section 1 and supported by a compendium of evidences¹ (e.g. signed attendance lists and training programmes).

The number and profile of the participants involved in the national WBL experience is summarized in table 1.

Table 1 - General characterization of WOW Pilot’s Participants

	Trainees	Tutors	Mentors	In-Company Trainer
Number	13 Participants	7 Participants	7 Participants	2 Participants
Course(s)	From European Welding Practitioner (10 trainees) and Specialist (3 trainees) courses	N.A.*	N.A.*	N.A.*
Competence Unit(s) addressed	Practical Education (Part 2); CU2 Welding and Cutting Conventional Processes; CU9 General Features for Quality Management; and CU11 Tests used for the Quality Control of welded joints	N.A.*	N.A.*	N.A.*
Age	Between 17 and 45 years old	N.A.*	N.A.*	N.A.*
Years experience (incl. area)	N.A.*	Between 2 and 45 years of experience in Training, Welding Coordination, Management and Apprenticeships	Between 5 and 27 years of experience in Training, Welding Coordination,	Between 7 and 10 years of experience in Industry
Academic Background	N.A.*	Welding Engineers, Mechanical Engineers, Welding Experts, Practitioners	Welding Technologists, Welding Trainers, Welder Experts,	Welding Inspectors, Welding Technologists, Welding Practitioners

*N.A. – Non-Applicable

¹ Restricted access to the EACEA and project partners

In the case of the Spanish trainees (4) it is important to mention that they attended the European Welding Practitioner (EWP) course covering Practical Education /Part 2, and also Competence Units 9 and 11 of the Guideline for Recognition of Work-Based Learning in the EWF Qualification Routes for European Welding Specialist (EWS) and EWP.

In the Portuguese case, the trainees (5) attended Practical Education and Competence Unit 2 of the EWP course. In Italy (1), Romania (1) and in the UK (1) one trainee attended Part 2 / Practical education of the EWS course, while one trainee (1) was engaged in Part 2/ Practical education in the EWP course taking place in Hungary.

Note that there were Mentors who also carried out the role of In-Company Trainers (in Romania, Italy, and Spain) who were counted as Mentors. Only in Portugal and Hungary there was one Mentor and one In-Company Trainer.

The companies involved in the pilots were: GÉMTECH Kft (Hungary), UPT (Romania) TECNOLAFER (Italy), ISQ (Portugal), INDUSTRIAS RUYMOR, S.A (Spain) and TWI (UK).

All pilots were carried out in the period between November 2018 and June 2019. After each national WBL experience all intervenient were asked to provide feedback about the pilots by accessing and filling-in an online questionnaire, made available on the [Work-Based Learn \(WBL\) Platform](#).

In addition to these feedbacks, roundtable sessions were conducted with relevant stakeholders in each country in order to validate the quality and relevance of the WBL programme using the SWOT methodology.

The results from the questionnaires and of the SWOT analysis are provided in section 3 of this document.

Finally, the WOW consortium conducted a roundtable meeting to agree on the necessary improvements to the project outcomes as well as the recommendations to the sustainability of the WBL model for the Welding Sector, which overview is given in the “Conclusion”.

2. QUESTIONNAIRE RESULTS

As previously mentioned, participants were invited to indicate their degree of satisfaction by completing an online questionnaire focusing on the Deliverables developed under WOW project and on the key elements supporting the WBL experience, namely on the following topics:

- **Facilities** (i.e. quality conditions of where the WBL took place),
- **Contract** (e.g. between the employer, the trainee and VET entity),
- **Safety** (i.e. in terms of Health and Safety),
- **Health and Safety** (i.e. preparation given to trainees to comply with Health and Safety regulations, etc.),
- **WBL** (i.e. compliance with principles and rules for the WBL, etc.),
- **Platform** (i.e. usability, quality of the available information, etc.),
- **Pedagogical Support** (i.e. suitability of the training programme, support provided to trainees, quality of the pedagogical materials, etc.),
- **Learning Experience** (i.e. information provided to the trainee on the company's background, suitability of the monitoring tools, relation with the Tutor and Monitor, etc.),
- **Industry Needs** (i.e. alignment of the WBL with the needs of the industry, etc.),
- **General Appreciation** (i.e. indication about the possibility to repeat the experience, etc.).

For each topic, participants used a score that ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). Topics were covered depending on the type of participant, as showed below:

Table 2 – Topics covered by the Questionnaires handed out

PARTICIPANTS	TOPICS								
	Facilities	Contract	Health and Safety	WBL	Platform	Pedagogical Support	Learning Experience	Industry Needs	General Appreciation
Trainees	x	x	x	x	x	x	x		x
Tutor (VET Entity)	x	x		x	x	x	x	x	x
Mentor (Company)	x	x	x	x	x	x	x	x	x

2.1 TRAINEES SATISFACTION SURVEY | MAIN RESULTS

a. Facilities

Trainees' assessed Facilities in a very positive manner with an average of 92,33%, which indicated a high degree of satisfaction regarding this specific topic. Some Trainees' commented that, in general, facilities where pilots took place were clean and appropriate for

the WBL experience, with good conditions for welding activities and enough amount of equipment for trainees to perform the welding training.

b. Contract

This topic got an average assessment of 91%, showing Trainees' high degree of satisfaction. All trainees signed a contract and considered its terms as "very clear and transparent", complying with national guidelines and regulations.

Nevertheless, the Spanish trainees felt that the signed contract did not include a pay or compensation apart from their wages as employees of the company where WBL was carried out.

c. Safety

Only Trainees assessed this topic, as indicated in Table 2 *Topics covered by the Questionnaires handed out*.

Overall, Safety was rated with a percentage of 94% of satisfaction among Trainees, who indicated that education and information on Health and Safety was in line with national regulations during the apprenticeship and helped preventing injuries.

d. Work Based Learning (WBL)

This topic was rated 86% degree of satisfaction. Trainees were aware about WBL principles, rules of training, duties and rights mostly due to the information provided by companies before hand through the tutorials. This fact has contributed to Trainees' satisfaction and feeling of rewarding. Romania was a case of success in terms of WBL result as the trainee became the company's employer by the end of the apprenticeship.

e. Platform

Trainees rated the platform positively with an overall percentage of 67% of satisfaction, even though this topic had the lowest rate of all.

According to some Trainees' comments, it is excellent as a communication platform and tutorials provided on how to use the Platform were considered clear and very useful.

Still according to this target group, there is a need for improvement for the "user friendly" aspect of the Platform, as well as its different sections, which were not easy to understand. The fact that not all Trainees were familiar with this type of tool can explain these comments.

f. Pedagogical Support

This topic got a satisfaction rate of 94% among Trainees, who described the pedagogical support as very useful and efficient due to Tutors' and Mentors' qualification, experience and also due to the pedagogic materials provided. Trainees considered the support as crucial for the development of training activities in companies.

g. Learning Experience

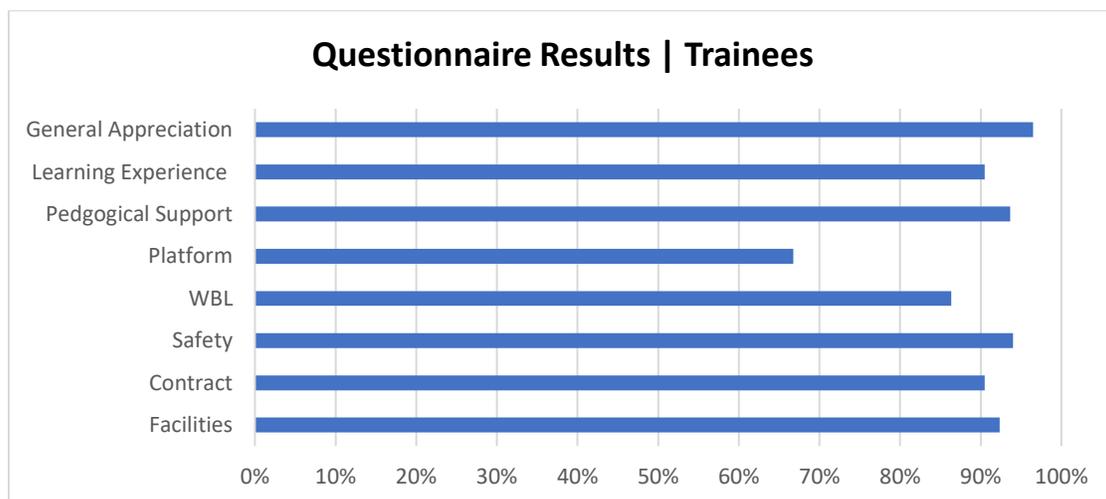
The Learning Experience was rated with 90,5% degree of satisfaction, revealing that Trainees appreciated the WBL activities, the experience and knowledge acquired.

One of the aspects to consider in the future is the information on companies' background, which helps Trainees engaged in apprenticeships understanding the industrial scope of activities.

h. General Appreciation

The General Appreciation is very positive, rated as 96,5% among Trainees involved in WBL. Several Trainees mentioned that they would like to undertake another apprenticeship with the same companie(s) and would recommend the WBL partnership established between Training -Centre – Host Company to other people.

Graphic 1 - Questionnaire Results | Trainees



As seen in the graphic 1, the high degree of satisfaction is noticeable due to the fact that almost all topics had an average rating of 90% or more.

The less rated topic among Trainees was the Platform, which indicates the need for some improvements, namely in terms of user friendliness.

It is important to point out the fact there were no mobility programme in the realisation of apprenticeships/WBL process.

2.2 TUTORS SATISFACTION SURVEY | MAIN RESULTS

a. Facilities

Tutors rated Facilities quality conditions with 92%, which show a high degree of satisfaction. Facilities were considered modern and clean, complying with Health and Safety regulations and aligned with the environmental requirements and properly equipped with all materials, calibrated and metrologically checked for the activities performed during the apprenticeships.

b. Contract

The majority of Tutors who filled in the online questionnaire stated that the contract was signed between trainees, companies and training institutions in line with relevant national rules, containing clear instructions (i.e. tasks to be performed by each part, rights, and responsibilities) and providing a monetary compensation by the time spent in training.

Tutors from MHtE, Hungary, and Romania did not provide a satisfaction rate for this specific topic, which contributed for a rate of 63%.

c. WBL

This topic was rated positively with 76%. In terms of duration, Tutors, were satisfied with time devoted in WBL to allow trainees to acquire and consolidate knowledge, indicating no need for extending the apprenticeship period. Overall, Tutors agreed to have understood the WBL rules, duties and rights inherent to their work and that all-important information were clearly provided. The WBL process was useful both for trainees and for companies.

d. Platform

Similar to what happened to the evaluation of this topic by Trainees, the WBL Platform also gathered a low rating among Tutors, with an overall score of 50%. Tutors found the Platform to be “uneasy” to handle, suggesting a more “user-friendly” layout in order to make it simpler.

e. Pedagogical Support

Pedagogical support was scored as 76% satisfaction among Tutors. Communication between Tutors, Mentors, In-Company-Trainers and Trainees was good, promoting the necessary support and discussions.

f. Learning Experience

Tutors in general were very satisfied with this topic scoring it with 90%, which indicates their opinion towards the effectiveness of on-job learning. The activities performed during the apprenticeships were aligned with companies’ needs and the problem-solving process was flexible, according to their statements.

g. Industry Needs

For Tutors, the European Welder Practitioner and Specialist training system, including the proposed WBL experiences, was elaborated according to industry’s needs, enabling professionals with more practical competences.

The overall score for this topic was 80%, which indicated a high degree of satisfaction among these participants. Even though there were Tutors who suggested a more flexible WBL process to help having more trained personnel.

h. General Appreciation

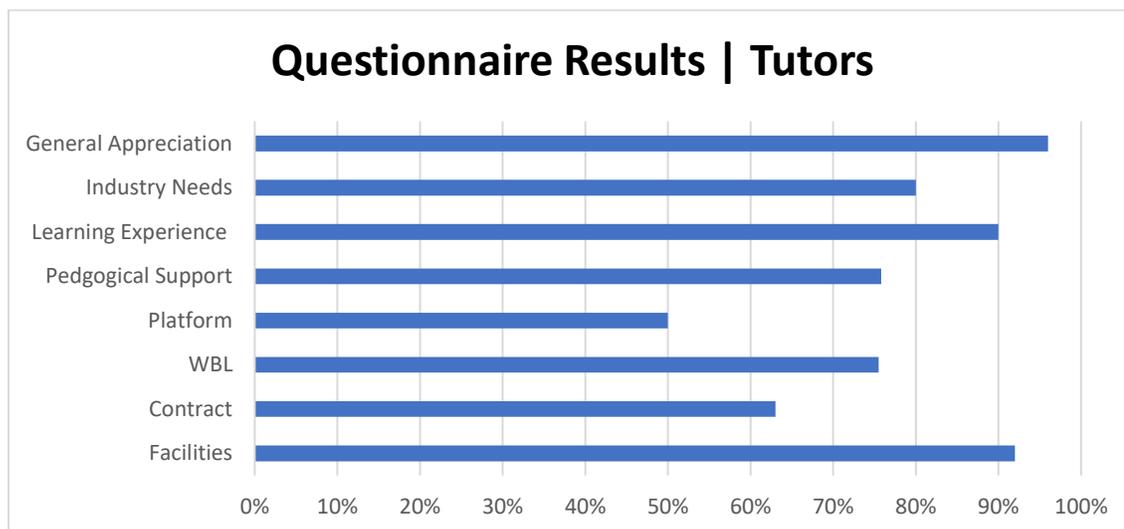
The general appreciation of Tutors was the highest score with a total of 96% of satisfaction, which shows that in overall participants think that the pilot course was organized and carried out in accordance with the WBL rules.

Considering most comments provided in this topic there is a strong possibility that some of the Tutors will undertake another apprenticeship with the organizations involved in this process and recommend the partnership arrangements.

In the graphic 2 it is possible to see that between Trainees and Tutors there are similar results, namely in terms of the scores provided to Facilities, Learning Experience and General Appreciation.

The Platform topic was once again the lowest scored topic, which indicates that, for both Trainers and Tutors, there is a need for improvement.

Graphic 2 - Questionnaire Results | Tutors



2.3 MENTORS SATISFACTION SURVEY | MAIN RESULTS

a. Facilities

Mentors overall satisfaction regarding the Facilities was 98%, which shows a high degree of satisfaction towards the conditions where the WBL took place: equipment in good condition and properly maintained, complying with safety regulations.

b. Contract

In Mentors' opinion, the contracts contained the interests of the persons involved (i.e. Trainees, Tutors and Mentors) and were aligned with national regulations. Companies and training institutions provided a monetary compensation for the time spent in the training, except for the Romanian participants, who did not need a specific contract due to the fact that there was already a contract signed. This topic had a score of 83%.

c. Health and Safety

Having one of the highest scores in terms of satisfaction among Mentors, 98%, these participants reported that Health and Safety was always a concern for host-companies involved in the pilots. The information about the risks associated with the activities performed was provided allowing risk assessments, as well as the use of specific protection to prevent injuries.

d. WBL

This topic had a general score of 90%, a very positive result connected to the fact that WBL promoted an in-depth knowledge related to companies, facilities and personnel. Mentors were aware of WBL's principles, rules of the training, duties and rights and all information about the process was available.

Mentors considered this learning approach has the added value of being aligned with the industry's needs, even though a few Mentors indicated that this process required a dedicated attention from Managers and was time consuming.

In Mentors' opinion, time devoted to apprenticeship was adequate for trainees to acquire the fundamental knowledge though this process, without needing to extend the WBL experience period.

e. Platform

The degree of satisfaction among Mentors regarding WBL Platform was scored with 70%. Some of these participants reported they have seen some improvements in terms of its "user-friendly" aspect. However, the majority of them stated that it needs additional improvements in terms of practical training, feedback which will be taken in to account by the partnership.

f. Pedagogical Support

Pedagogical support overall score was 96%: This high level of satisfaction is related to the fact that most Mentors were familiar with the EWF Qualification System, leading to an easier uptake of the proposed WBL training programme. These participants reported to have good communication and conducted the necessary discussions with the remaining apprenticeships participants in a way that ensured successful implementation of the WBL. process.

g. Learning Experience

Learning experience topic gathered a score of 94%. Mentors referred advanced learning programme and curriculum as two of the components that ensured an efficient and successful transfer of knowledge and skills. Learning outcomes were also clearly defined, and the tools used in WBL were suitable to assess trainees' knowledge and skills acquired in the process.

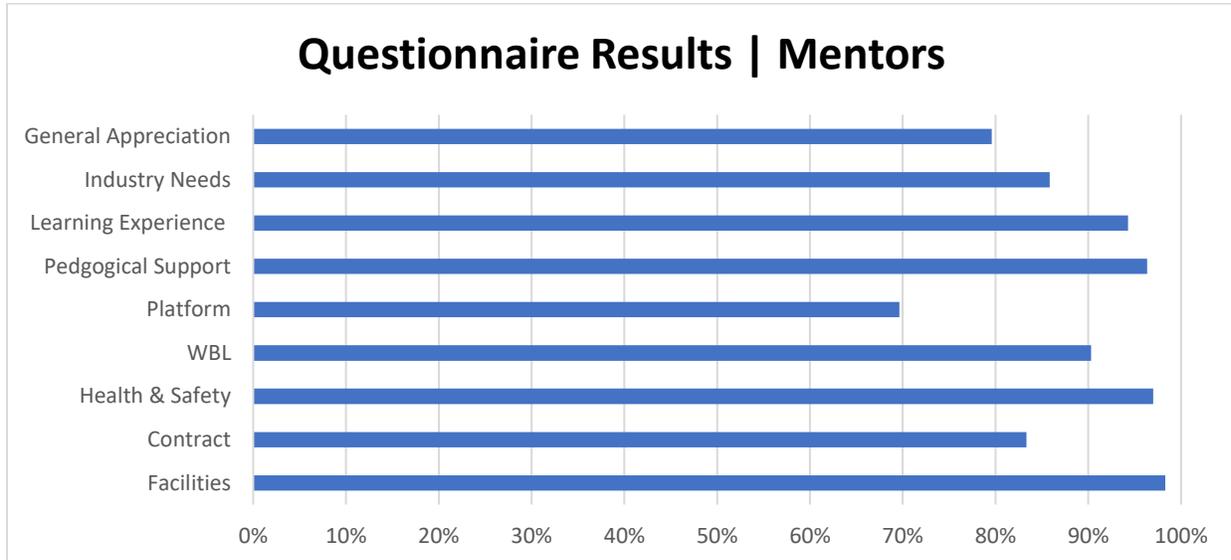
h. Industry Needs

This topic was rated with 86%, which revealed a high satisfaction with the linkage between the WBL approach and Industry needs. Mentors considered that the model was suitable to provide both trainees and companies with a opportunity to achieve successful synergies that benefits all sectors involved.

i. General Appreciation

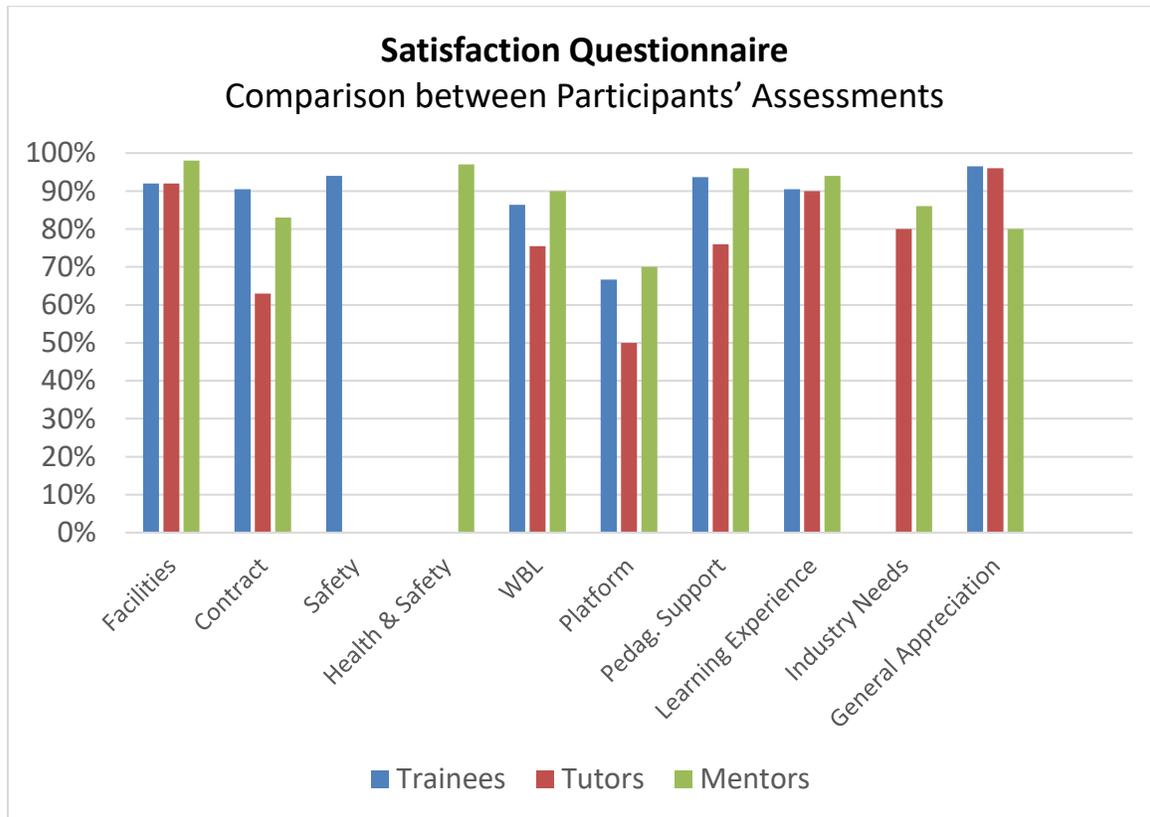
General appreciation was rated by Mentors with 80%, a high degree of satisfaction, which was confirmed by their wish to undertake another apprenticeship when the opportunity arise.

Graphic 3 - Questionnaire Results | Mentors



Graphic 3 shows that, in general, all Mentors were very satisfied with this experience, rating all topics above 80%, except to what refers to the WBL platform which, could benefit from improvements. Close to 100% (complete satisfaction) were: s Facilities, Health & Safety and Pedagogical Support.

In order to be easier to understand all results provided by each Participant (i.e. Trainees, Tutors and Mentors) to the topics assessed by them in the Satisfaction Questionnaire, a comparative graphic is provided. Note that Trainees did not have to assess *Health & Safety* and *Industry Needs* topics, Tutors did not assess *Safety* and *Health & Safety* topics and Mentors did not assess *Safety* topic, as indicated on Table 2 – *Topics covered by the Questionnaires handed out*.



Overall Quality Assessment was performed by all Participants. The results from these assessments show that the WBL programme was successful for the ones involved in the process, who rated it used a score between 88% and 90%.

2.4 ASSESSMENT OF THE PARTNERSHIP RELATION | MAIN RESULTS

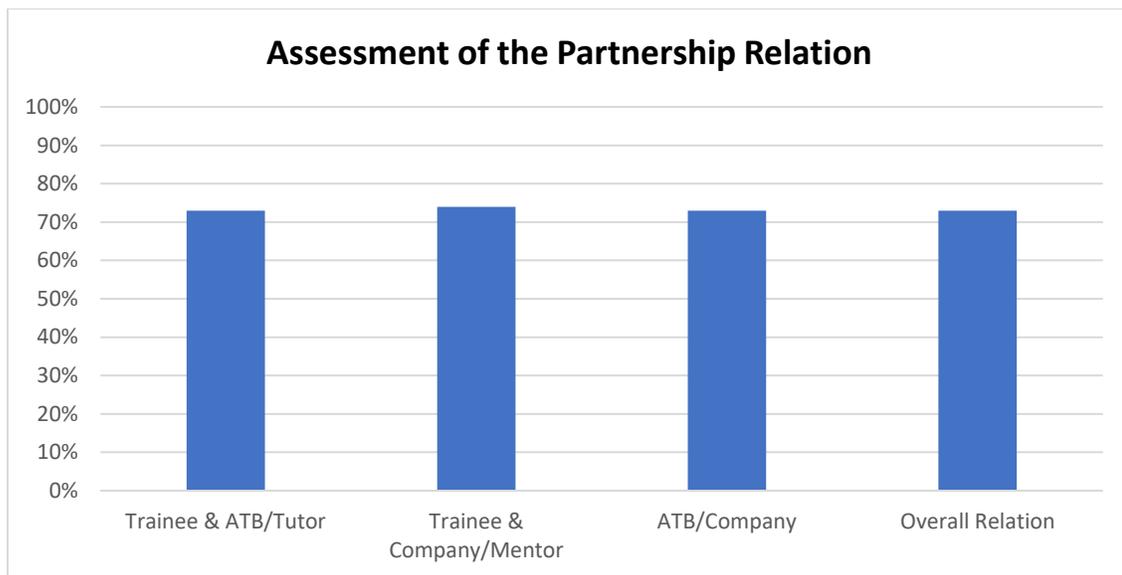
Participants were asked to assess the Partnership relation, meaning the cooperation between Trainee – Tutor (representing the Training Centre /Approved Training Body (ATB)/Tutor) and – Mentor (representing the Host -company), as well as between Tutor – Mentor (ATB – Company).

In the graphic 4 it is possible to see that, in average, these relations scored 73%. These partnerships were regarded as a good opportunity for long-term cooperation between all participants involved in the pilots.

The relation between Trainees and ATBs/Tutors was very successful. Their relationship with Companies/Mentors was also successful, mostly due to the fact that in WBL process both spent more time together and Mentors showed a right attitude towards trainees and the process itself.

Regarding the partnership between ATBs/Tutors and Companies/Mentors, participants reported that, in general, it was effective and acceptable. ATBs need to have a good relationship with Tutors, while WBL scheme needs to be well prepared among them in order to help Host-companies to schedule the activities and monitor the activities as closely as possible. Host-companies, on the other hand, need to choose qualified and experienced Mentors, which can welcome trainees and guide them through the WBL process.

Graphic 4 - Questionnaire Results | Assessment of the Partnership Relation



3. NATIONAL DEBRIEFS/FOCUS GROUP MEETINGS | MAIN RESULTS

After conducting the pilot sessions, each partner carried out national debrief sessions with representatives from Host-companies, Welder Trainers, Welding Experts and Coordinators, Mentors, Tutors, Authorised Nominated Bodies ANBs and ATBs.

The objective of these national debrief sessions/focus group meetings was the validation of the results obtained in the pilots, and encompassed the following steps:

1. WOW project objectives,
2. Cooperation arrangements for apprenticeships in the Welding Sector (e.g. overview on Guideline, training programme, Quality Model),
3. National Pilots implementation,
4. Findings per category, overall quality of WBL and partnership relation),
5. Analyses and discussions,
6. Conclusion/next actions.

The characterization of the Focus Groups' sessions and Participants is presented in the table below:

Table 3– National Debriefs/Focus Groups | Characterisation

Country/City	Date	Nr. of Participants	Background
Hungary/Budapest	September 2019	12	Tutors, Mentors, Trainers, ANBs, ATBs and Companies
Italy /Genoa	September 2019	3	Welding Coordinators and Companies
Portugal/Oeiras	September 2019	4	Trainers, Welding Experts and Companies
Spain/Madrid	September 2019	5	Trainers, Welding Experts and Companies
United Kingdom/Cambridge	September 2019	2	N.A.
Romania/Timisoara	July 2019	4	ANBs, ATBs and Companies

Participants in the session **analysed, decided and agreed** on the **consistency of the feedback provided by each intervenient in the WBL cooperation** (trainee, tutor, mentor). Also, they agreed on the relevant and **critical aspects that required improvements**, the overall quality of the proposed WBL model and in the partnership relation. The main findings coming out from this national debrief are summarised in table 4:

Table 4– National Debriefs | Summary

Topics	Comments	Decision
Facilities	Overall, participants reported Facilities' quality and suitability for conducting WBL activities.	Implement recommendations in D.5.1 Recommendations for EWF's quality assurance system Recommendation of efficient and periodical cleaning process;
Contract	Contract were in line with national requirements and participants were, in general, satisfied with contracts which preserved participants rights and duties.	It was considered as best practice to be used in the future;
Safety	Considered excellent once all facilities were prepared according to national safety regulations.	Safety measures should be maintained permanently
Health and Safety	Excellent as companies usually provided the necessary personnel protective equipment and it meets the needs of all partners in the WBL process.	Health and Safety measures should be maintained permanently
WBL	Excellent cooperation between all actors involved. and good results were achieved, which helped to overcome initial difficulties inherent to the WBL process kick off	WBL process was in line with Industry state of the art and needs.
Platform	The Platform was considered very useful. However, some constrains were found by the participants (e.g. server did not work, lack of user-friendliness, time consuming, etc.).	Needs improvements in terms of layout, attractiveness and user-friendliness. Before starting to use it, users should agree on its technical requirements in terms of IT system's status;
Pedagogical Support	Considered <i>good</i> . Some of the participants suggested to improve it with Augmented Reality Welding Training (ARWT) devices and with complete involvement of all parts.	Try to find a solution to integrate ARWT. Develop a training session on soft and pedagogical skills to deliver to in-company mentors, specially to those with no training experience.
Learning Experience	Considered <i>excellent</i> . Some of the participants suggested to improve it with Augmented Reality Welding Training (ARWT) devices.	Try to find a solution to integrate ARWT. Participants proposed that in company praxis should be greater than 25 hours.
Industry needs	Participants agree that the WBL "totally" meets the industry needs and at times addressed in a much deeper level. Some participants recommended more companies to share their own experience.	General technical development should be monitored and WBL curriculum should be in line with industry's technical level. Networking should be extended. Recommendation of establishing a working group to monitor the welding technology and provide recommendations for changing WBL curriculum every three years.

General Appreciation	WBL implementation was positive for education and training of EWP and EWS providing trainees with knowledge and practical skills which are in line with the requirements.	There is a need for establishing a mobility programme for EWP and to offer WBL opportunities to other industrial sectors.
Overall quality of WBL model	In Participants' opinion, the WBL process promoted the acquisition of high knowledge and specific skills necessary for the EWP and EWS courses. The results obtained are useful for practical activity of Companies.	Maintain the WBL model used in WOW project's pilots.
Quality of Partnership Relation	Participants reported that the purposes of WOW project were achieved due to the good quality of the partnership's relations. A harmonised way of working among partners will enable a greater practical experience in WBL.	It is important to inform partnership of the documents to use in the scope of WBL in order to be identified and ready.

3.1 SWOT ANALYSIS | MAIN RESULTS

After the quantitative assessment to WBL pilots, participants of the national debrief sessions were asked to perform a qualitative assessment through a SWOT analysis. Based on this, it was also possible to draw global appreciation about the WBL cooperation arrangement's strengths, weaknesses, opportunities and threats identified by all WOW pilot's Participants. Here are the main results achieved with this activity:

Table 5 – SWOT Analysis

STRENGTHS (S)	WEAKNESSES (W)
<ul style="list-style-type: none"> -Trainees gained full experience of what labour market is; - Trainees' empowerment and acquisition of real competences aligned with industry's needs, - Job opportunities for young people, - Many useful data, - Innovative ideas, - Trained Trainers for practical aspects of the curriculum, - Improvement of the relation VET/Tutor/Trainee, - WBL is an effective training method that benefits Trainees and Host-companies, providing high skilled employees, - WBL is a mechanism to overcome training needs in the labour market, - Facilities, equipment and personnel can be used for other activities, - More candidates can access to such courses. 	<ul style="list-style-type: none"> - Risk of low acknowledge by local labour market, - Geographical distance between ATBs and Host-companies in some cases were time consuming and made it difficult to build an efficient team spirit, - The evaluation features of the platform didn't run automatically -Platform attractiveness,

OPPORTUNITIES (O)

- Tasks and responsibilities of all actors should be clear in order to achieve positive results from the beginning of the project,
- Development of effective cooperation among schools, company and ATB,
- Faster qualification route,
- Possibility to be used in other industrial sectors,
- VET centers can sell other types of training to the Company (Health & Safety),
- It will help with Host-company's certification process,
- Increase Trainees' responsibility and motivation
- Increase Host-companies involved in WBL processes,
- Increase networking and employers' and employees' involvement in their tasks,
- Improve teaching/learning methodologies,
- Development of new cooperation with other entities on a regional and national levels,
- Accessing new training methods that can be later used in other learning topics.

THREATS (T)

- Adaptability regarding guideline updates
- Not all workplaces are suitable for apprenticeship programme,
- Possibility of the process not be carried out if it does not comply with national requirements,
- Some trainees felt that welding is much difficult than expected,
- Possibility of one of the parts leaving the WBL process,
- Possibility that companies do not comply with the necessary requirements,
- Lack of preparation of Mentors in Host-companies to welcome trainees,
- Cost of materials and consumables,
- Lack of collaboration or communication between partners,
- Adaptation of guidelines to Companies' facilities,
- Lack of Mentors' knowledge or capability to train/lack of experience of training personnel.
- replacement of Tutor and Mentor



4. CONCLUSION

Based on the findings reported in Section 2 (Questionnaire Results) and Section 3 (National Debriefs/Focus Group Meetings | Main Results), WOW partners conducted an online roundtable meeting on the 26th September 2019 to be able to conclude about future improvements to be made in WBL cooperation arrangements. A summary of the topics addressed are in table 5:

Table 5 – Conclusion on the improvement to the WBL cooperation arrangements

	Adjusted*	Not adjusted*	Evidences supporting the decision	Improvements required
Facilities	Yes		Agreed by the majority (>70%)	Regular cleaning; no need for improvement; make sure that there are equipment and material available in sufficient number;
Contract	Yes		Agreed by the majority (>70%)	No need for improvement;
Safety	Yes		Agreed by the majority (>70%)	Maintain permanently; no need for improvement;
Health and Safety	Yes		Agreed by the majority (>70%)	Maintain permanently; no need for improvement;
WBL	Yes		Agreed by the majority (>70%)	To maintain in line to the technical development; continuous efforts towards the inclusion of more topics in the development of WBL system;
Platform	Yes		Agreed by the majority (>60%)	IT system development including teaching; improvement of features, layout, ease of use and thumbnail theme;
Pedagogical support	Yes		Agreed by the majority (>70%)	Fulfilling EWF requirement; regular updates of documentation, as per new issued norms;
Learning Experience	Yes		Agreed by the majority (>70%)	To enlarge the practical teaching hours in company
Industry needs	Yes		Agreed by the majority (>70%)	Establish working group for monitoring the industrial needs and curriculum update
Overall quality of WBL model	Yes		Agreed by the majority (>70%)	Using the international experiences
Quality of Partnership Relation	Yes		Agreed by the majority (>70%)	International transaction and mobility for continues improvement

*Adjusted /Not Adjusted to the purposes of the project

Because feedbacks and lesson learnt are crucial for continuous improvement, the WOW project partners have agreed on the main recommendations to guarantee the future sustainability of the WBL Model implementation in the Welding sector.

Table 7 – Conclusion on the recommended improvement actions for the sustainability of WBL model in the Welding sector

	Recommendations/actions for improvement
Cooperation arrangement between companies/factories and VET providers	<p>Actions to foster and improve cooperation:</p> <ul style="list-style-type: none"> - Suitable arrangements and tools to implementation Apprenticeships; - Guarantee that the rights and obligations of trainees, training centre/ATB and host-companies are understood and well communicated; - Guarantee an early identification of regional training host-companies and it's condition, willing to continue this cooperation with other trainees; - Guarantee the use of an effective platform for continuous communication and monitoring.
Guideline for EWP and EWS, namely the Competence units addressed in WBL	<p>Actions to improve the Guideline/Competence units addressed in WBL:</p> <ul style="list-style-type: none"> - Suitable section of contents /learning outcomes for WBL, such as Part 2 and CU 2,8, 9, 11 of the EWP and EWS guideline; - Development also for the Engineer level of same opportunities.
WBL Platform	<p>Actions to improve user-friendliness and navigation:</p> <ul style="list-style-type: none"> - Include wizard /info tool in all sections to guide the users in the use of the platform; real-time tutorial; - Avoid repetition of information; - Simple saving procedures related to data edition; avoiding unnecessary intermediate steps; - Improved features and layout, make it user-friendly.
WBL Quality Assurance System	<p>Actions to foster and improve WBL quality assurance system:</p> <ul style="list-style-type: none"> - Smooth introduction of the trainees to the host-company is crucial for their integration; - Adequate coaching of the trainees, tutors (ATB) and mentors (Host-company) to enrol in the WBL (e.g namely regarding the use of the platform, using a demo-version in this sessions); - Certification of host-companies is not a requirement to establish WBL, but should be seek; - Harmonised procedures that would help newer members interested in implementing WBL.
WBL training programme	<p>Actions to improve the training programme:</p> <ul style="list-style-type: none"> - Recommended duration of the apprenticeship between 30 to 40 hours, although flexible; - Short training sessions on pedagogical and soft skills for in-company trainers and mentors.
Assessment /End point-assessment	Have an external auditor.
Others (e.g. Tutorials)	Time devoted to the preparation of the intervenient for the WBL experience in terms of principles, tools and use of the platform is crucial for the success of the cooperation.

5. APPENDIX 1 – LINKS FOR COUNTRY PILOT REPORTS

	Hungary – MHE	Hungary Pilot Report - link
	Italy – IIS	Italy Pilot Report - link
	Portugal – ISQ	Portugal Pilot - link
	Romania – ISIM	Romania Pilot Report - link
	Spain – CESOL	Spain Pilot Report - link
	UK – TWI	United Kingdom - link