



4.1- Report on the platform settings and heuristic's analysis on usability

EN

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INTRODUCTION

Earlier in the project, deliverable 3.2 “Document on the Platform Settings” was prepared to describe the platform main functionalities and to establish the mind-map sketch required to guide the development of the WOW platform.

The current report is an update to D3.2 and intends to describe the main features and usability settings of the WOW platform resulting from the testing and feedbacks received from its use by project partners, training centres, companies and trainees engaged in apprenticeships.

The first section of the report addresses the presentation of the platform.

While, the second part showcases the compiled results from the internal analysis and external heuristic assessment performed along the pilot implementation.

A summary conclusion about the overall achievements and sustainability of the platform is given in the third section.

SECTION 1 - WOW PLATFROM



Online Platform www.ewf.be/wow.aspx



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PLATFORM GOALS

The WOW online platform was developed in the context of work-based learning (WBL) as a tool to continuously support and manage apprenticeships, guarantee the interaction between users and to assess the quality of the triangle (trainee, tutor and mentor) composing the partnership.

The goals of the platform were twofold: on one hand to work as learning tool allowing trainees engaged in apprenticeships to have access to individual learning plans in a specific company; and in the other hand as quality tool enabling the assessment of the partnership cooperation.

The key characteristics and sub-characteristics of the platform are featured in figure 1.

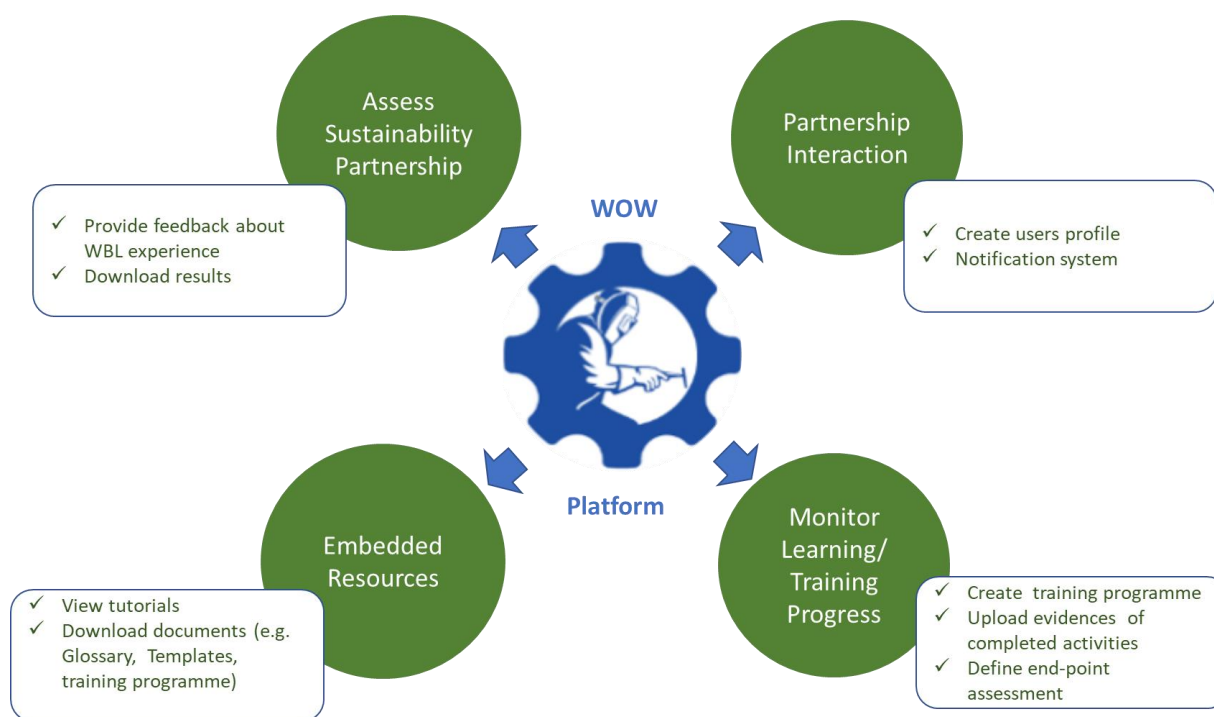


Figure 1 – Online platform features diagram

- 1) Partnership interaction starts with the creation and management of the users Profiles, e.g. tutor (ATB/Training Centre), trainee and mentor (host-company). Networking and exchange of information on WBL is possible throughout the platform;
- 2) The progress of the trainee is monitored based on the agreed individual training programme, created specifically for the WBL experience from the eligible parts from D1.2 Guideline with selected competence units and learning outcomes (as well as specific activities defined by the company);
- 3) View and download of embedded resources such as the WBL and platform tutorials; frequent questions and answers (FAQs) and glossary addressing each user. Also, project deliverables D1.2 Guideline on Learning Outcomes; D.2.1 Quality Assurance Guideline and supporting documents (templates, attendance list, apprenticeship contract agreement, WBL declaration);
- 4) Assessment of the sustainability of the partnership based on agreed criteria (e.g. facilities, health and safety, pedagogical support, etc).

DESCRIPTION OF THE MAIN FUNCTIONALITIES OF THE PLATFORM




Globally, the settings initially defined for the platform were kept in the final version, except for the layout which is significantly different and more focused on the functionality and less on graphical aspects.

It's important to highlight that the developed functionalities result from a careful analysis to the industry needs as well as to the national WBL best practices, in order to develop and implement a model and platform applicable to apprenticeship management in different context and countries.

FEATURE 0 – USERS PROFILE

Three Profiles of users were developed to grant access to the trainee(s), the mentor from the host-company and the tutor(s) from the authorised training body / training centre. Table 1 details the possible set of actions for each user.

Table 1 - Users permissions and actions

Access permissions	Actions in the platform
 Authorised Training Body (Tutor)	Manage ATB profile Create remaining profiles (for company and trainee) Create apprenticeships Create training programme Monitor and validate the progress within activities Validate the completion of the apprenticeship Upload end-point assessment results View tutorials Download files Provide feedback on VET- Business cooperation Assess feedback results (from tutor, mentor and trainee)
 Trainee	Manage trainee profile View individual training programme and progress Upload and edit training activities View tutorials Download files Consult results from the end-point assessment Provide feedback on triangle between VET- Trainee – Company cooperation
 Company (Mentor)	Manage company profile Define the on-job activities in the training programme Monitor and validate the progress within activities Validate the completion of the activities View tutorials Download files Consult results from the end-point assessment Provide feedback on triangle between VET- Trainee – Company cooperation

In Figure 2 is presented the **Homepage** for the (Mentor) company, which is the same for all users (Figure 3 and 4).



Figure 2 - Company user profile - homepage view



Figure 3 - ATB user profile - profile management view

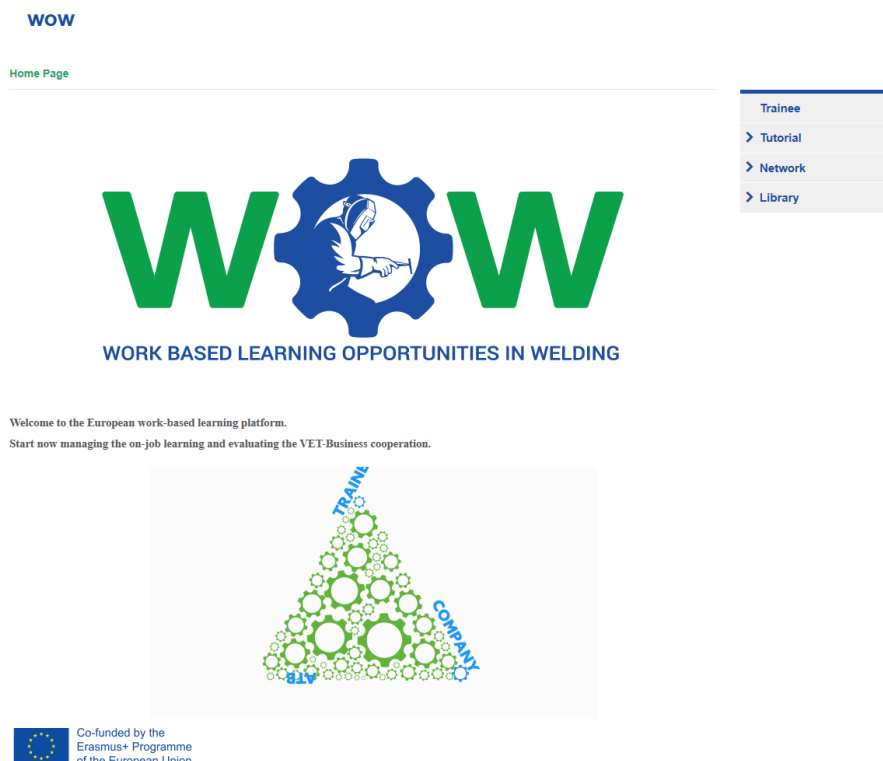


Figure 4 - Trainee user profile - homepage view

On the homepage, right side, it is possible to see the main menus of the platform which are from top to bottom:

- **User profile** – where each user can edit the personal and organisation data;
- **Tutorial** - three types of tutorials are available, explaining what work-based learning (WBL) is, including rights and responsibilities for each user; how to use the platform according to users profile; and another on how to interpret the quality model underpinning the WBL in Welding, only for the ATB profile.
- **Network** – where each user can access and edit information on the apprenticeship (e.g. details on learning progress and end-point assessment results) and assess the performance of the apprenticeship/cooperation as well as practical arrangements. The NETWORK menu encompasses several submenus, differing from user to user, which globally focus on the learning programme, evaluation, feedback, news and FAQs, among others.
- **Library** – where the main supporting documents for WBL can be accessed.
- **Terms and conditions of use** – is a formal declaration done under the scope of EU General Data Protection Regulation (GDPR) which focus on the consent to use information and addresses data treatment and the privacy policy statement. It requires validation (check-bottom) and is available along the platform.
- **Logout** – to exit the platform.

FEATURE 1 – INTERACTION AND COMMUNICATION

Figure 5 illustrates how the interaction and communication occurs among users. As it is possible to see, the “triangle” is in close interaction regarding the management and record of the WBL learning process.

Communication and interaction flow in the online platform

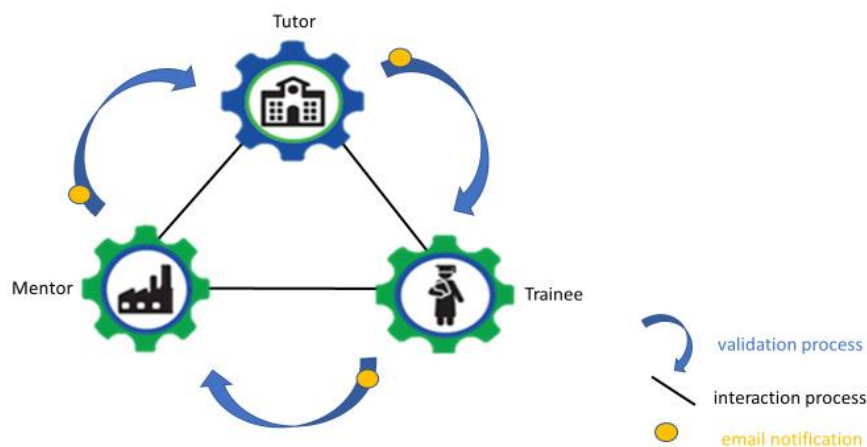


Figure 5 - Communication and interaction flow in the online platform

For instance, all activities performed by the trainee, which are uploaded in the platform, can be seen and monitored by the company and the training centre/ATB (Figure 6).

Trainee	Jose	sergio.teste4@gmail
Mentor	European	teste.company123@gmail
ATB	Testeola	

Competence Unit

View | Refresh | Search | Print | History

Competence Unit

PRATICAL EDUCATION 2

☒ I confirm the Trainee have done this activities (Company)

Learning Outcomes

Add new learning outcome

Learning Outcome

Activity description

TIG

Aqui terminnei o tig

☒ I confirm I have done this activity (Trainee)

Here the proof I done this activity (Trainee)

0047+-+Como+Definir+a+Segurança+de+

Figure 6- Logbook details – view of the trainee profile

Within the communication flow, intermediate validation steps (highlighted in blue in Figure 4) are required by the users in order to guarantee the compliance with WBL quality assurance.

The first notification is linked to the creation of the Profiles, meaning that both company and trainee receive an email with their login access.

Then, the first validation is required to indicate the availability in undertaken the apprenticeship, and specifically the agreement regarding the training programme.

Along the process, and whenever the trainee completes an activity, he/she needs to select a “check bottom” to confirm the accomplishment of the assigned tasks and related learning outcomes (LOs).

Automatically, the company will receive an email notifying the completion of the activities and the platform will display “Competence unit on Approval” in the mentor Profile. The next step will be the company validation represented in Figure 7.

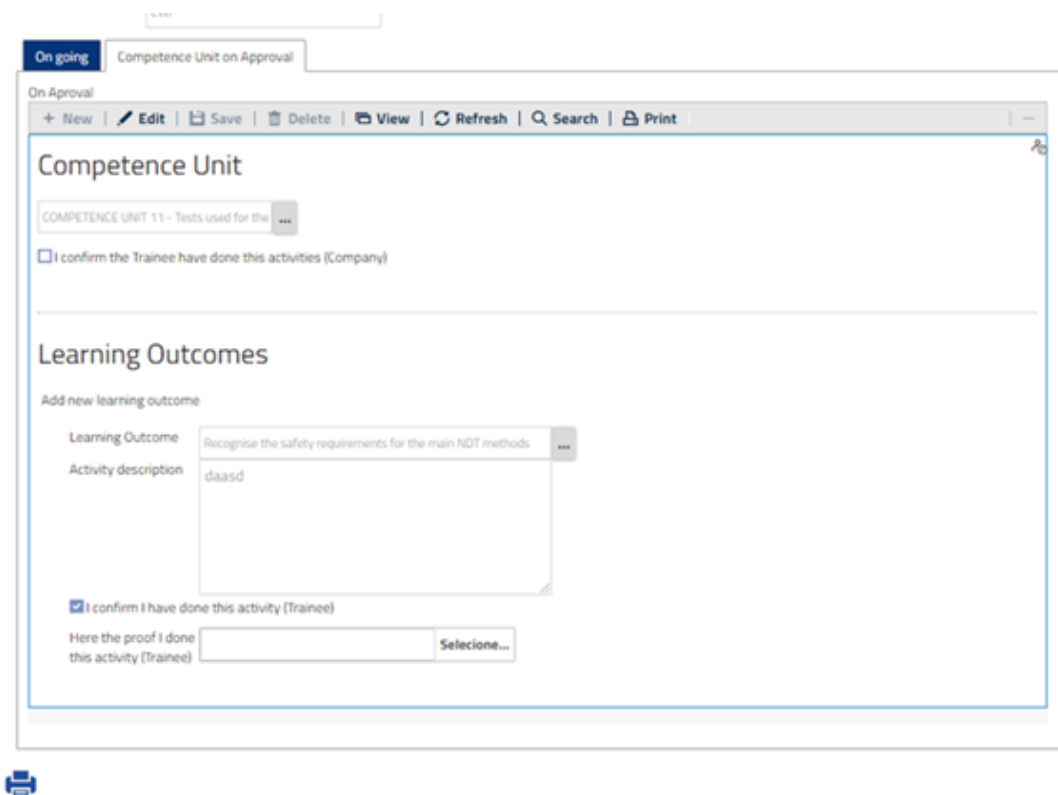


Figure 7 – Company validation of performed tasks – view of company profile

The ultimate notification (represented by the yellow round-points in Figure 4) will be received by the ATB indicating the completion of all learning outcomes / competence units assigned to the training programme. Consequently, he/she will perform the validation of LOs and proceed to define the type of examination.

Moreover, all users Profiles have email information, therefore communication can also be promoted outside the platform, however the platform is a critical tool for the apprenticeship monitoring and report.

Other interactions among users are possible through the “comment box” available in the feedback (Represented in Figure 8) form and FAQs section.

Do you consider that the tools used for the end-point assessment is suitable to assess the acquired knowledge and skills? *


Do you consider that the skills / knowledge achieved through the apprenticeship scheme allows you to progress in your career? I*































▼ GENERAL APPRECIATION

Would you undertake another apprentice with these organisations? *

Would you recommend this partnership for WBL to others? *

Comment Box

B *I* U ~~S~~ ^{X²} _{X₂}  12 ▼ **A** ▼

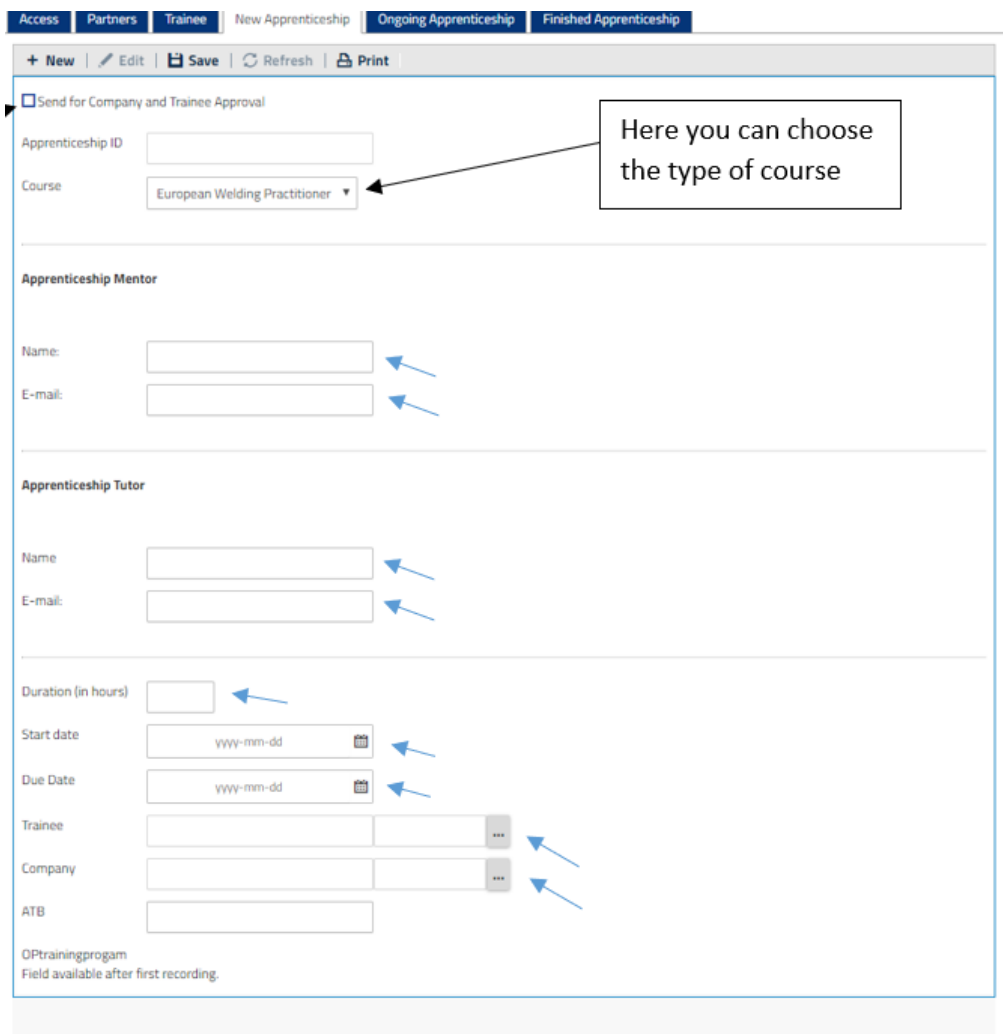


Figure 9 – Details about the Apprenticeship – view of ATB

The training programme is composed by the selected competence units and learning outcomes (at the responsibility of the ATB/Tutor) as well as the learning activities (assigned by the Company/Mentor based on existing scope and conditions). The trainee is responsible for validating his/her individual learning plan. The tabs addressing the training programme are similar for all Profiles. The CUs and LOs have to be selected from the existing list to ensure harmonisation of the apprenticeship across different companies and also across different countries.

The progression within the completion of the CUs assigned to the training programme, as well as the upload of evidences (logbook) and continuous monitoring is performed through “check boxes”, instead of progress bars as initially planned.

It’s important to mention that both trainee and company can upload the evidences regarding the performed activities, which is important to reflect the engagement of both in the WBL experience.

As mentioned in Feature 0 “Interaction and Communication “, several validation steps are required along the educational monitoring process with the sequence illustrated in Figure 10:

- First the trainee uploads the activities (step 1), and confirms he/she has completed the related LOs (step 2);
- Then, the mentor validates that the activities (step 3) were performed according to the given LOs (4); and validates the competence units (s) (step 5);
- Finally, the Tutor is notified to verify if the performed tasks comply with the initial learning programme (steps 6 to 9).

Validation sequence along the monitoring process

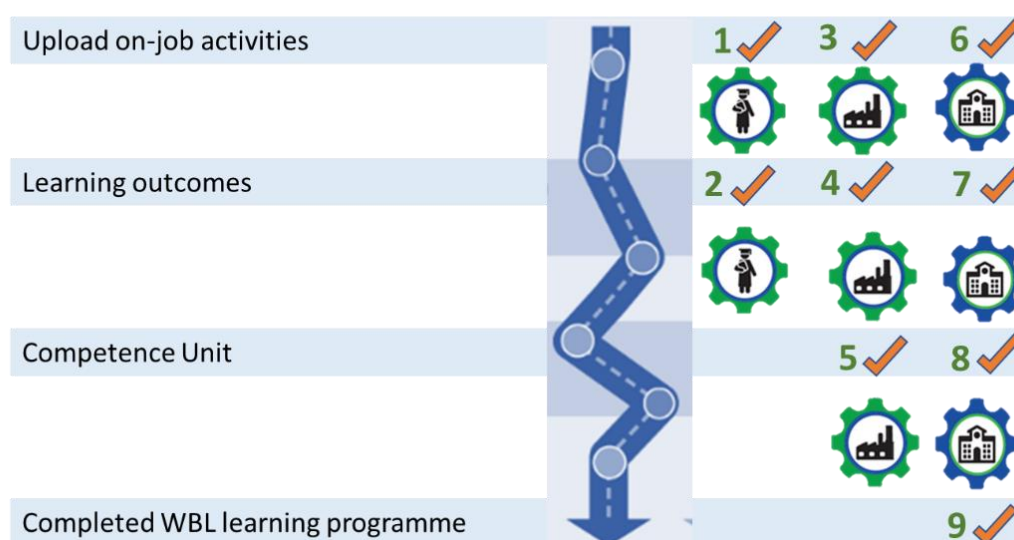


Figure 10 - Validation sequence along the monitoring process

The presented validation sequences are important to guarantee the continuous monitoring of the learning process, specially the acquisition of intend knowledge and skills by the trainee. In addition is also a confirmation if the activities defined by the company are aligned and adequate the LOs.

Within the platform, the EVALUATION tab enables to view details regarding the apprenticeship progress (Logbook – view in Figure 10), including to provide proofs on the performed activities. Further information regarding the end-point assessment is also available there, namely the evaluation method used and results achieved (approved or not approved).

Trainee	Jose	sergio.teste4@gmail
Mentor	European	teste.company123@
ATB	Testeola	

 Competence Unit

View | Refresh | Search | Print | History

Competence Unit

PRATICAL EDUCATION 2

☒ I confirm the Trainee have done this activities (Company)

 Learning Outcomes

Add new learning outcome

Learning Outcome

TIG

Activity description

Aqui terminnei o tig

☒ I confirm I have done this activity (Trainee)

Here the proof I done this activity (Trainee)

0047+-+Como+Definir+a+Segurança+de+i



[< Back](#)

Figure 11 – Details of Performed Activities – Trainee view

It will be the ATB responsibility to decide about the end-point assessment, which consists in the evaluation of the knowledge and skills gained along the WBL experience. The end-point assessment will take place in the training centre.

The ENDPOINT ASSESSMENT tab has different view for the ATB, company and trainee. For instance, the ATB is able to edit the evaluation method and results (represented in Figure 12) and has the overview of all assessments performed by each trainee (represented in Figure 13).

Home Page » Network » Evaluation » End Point Assessment » On Review

Edit | Save | View | Refresh | Search | Print | History

END POINT ASSESSMENT

Trainee Name:

Hosting Company Name:

Date:

Procedure used for written assessment:

☐ Essay Questions
☐ Questionnaires
☒ Projects or products produced
☐ Professional Interview
☐ Others

Result: ☐ Approved ☐ Not Approved

ATB
> Tutorial
> Network
> Apprenticeship
> Evaluation
Logbook
> End Point Assessment
On Review
Approved
Not Approved
> Feedback
News
Events
Faq
> Library

Figure 12 - End-point assessment method and result - view ATB

Home Page » Library » End Point Assessment » Approved

Date	Hosting Company Name	Trainee Name
2019-07-01	testum	sergio

Page 1 de 1
 1 Record(s) found

Records per page: 25
 Jump to page: 1

Back

ATB
> Tutorial
> Network
> Library
CU List
> End Point Assessment
On Review
Approved
Not Approved
Documents

Figure 13 - List of results of end-point assessment - view ATB

While the company and trainee are only able to see the outcome of the end-point assessment, meaning the method and if approved or not approved (represented in Figure 14 – example of view of the trainee).

WOW

Home Page » Network » Evaluation » End Point Evaluation

END POINT ASSESSMENT

Trainee Name:

Hosting Company Name:

Date:

Procedure used for written assessment:


☐ Essay Questions

☒ Questionnaires

☐ Projects or products produced

☐ Professional Interview

Result: ☒ Approved ☐ Not Approved



Trainee

> Tutorial

> Network

> Apprenticeship

> Evaluation

End Point Evaluation

> Feedback

News

Events

Faq

> Library

CU List

End Point Assessment

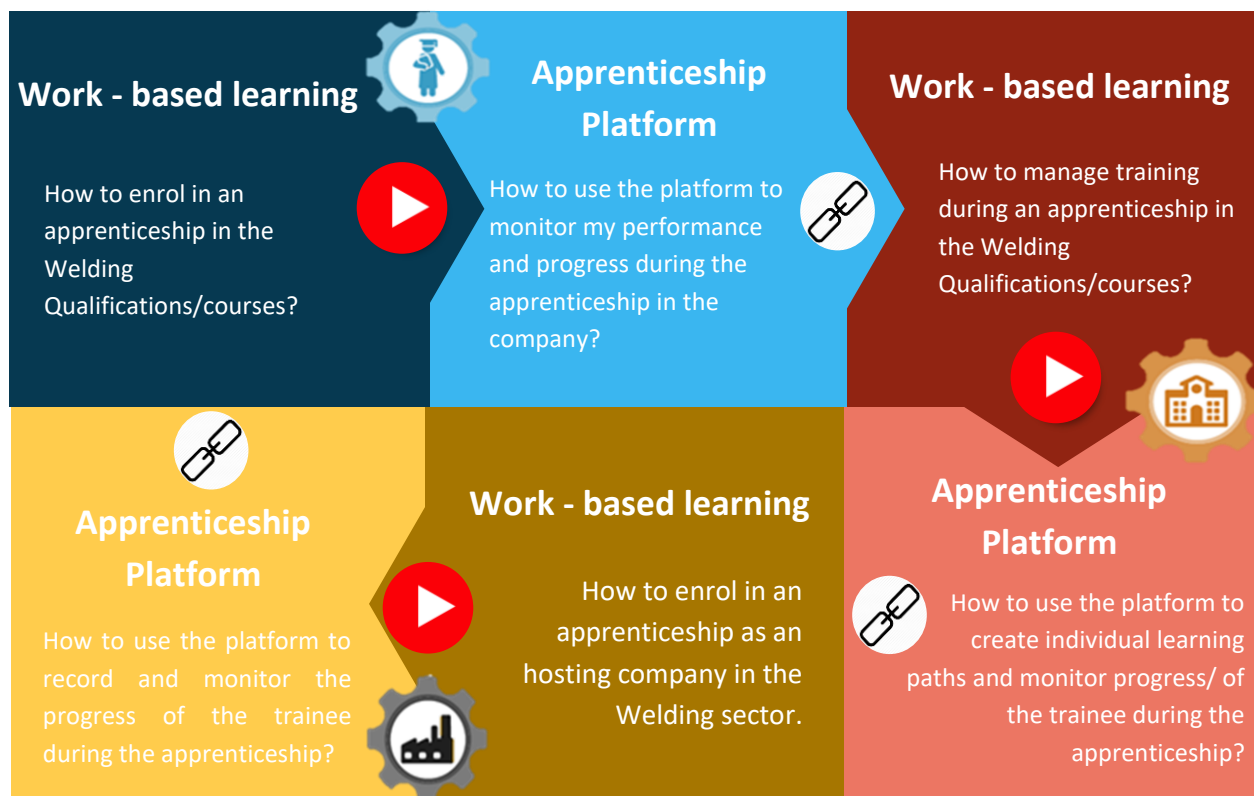
Documents

Figure 14 – Details about End-point assessment – view of trainee

FEATURE 3 - EMBEDDED RESOURCES (TUTORIALS ON WBL AND PLATFORM; TEMPLATES OF TRAINING PROGRAMMES, GLOSSARY OF TERMS)

The platform is a repository of relevant documentations supporting the implementation of WBL. The Tutorial menu contains different types of tutorials in the video and pdf formats, available according each Profile.

A total of seven tutorials were developed to capacitate the identified stakeholders regarding the use of the WBL methodology. The tutorials addressing the online platform and the WBL quality model are illustrated in Scheme 1.

Scheme 1 - Tutorials Description (with hyperlink)

To sum up, the **trainee tutorial on WBL** describes the principles underpinning WBL, advantages of WBL, own responsibilities, duties and rights; roles of each actor; stages and tools involved in the WBL process, practical arrangements (duration, contract, assessment, network of ATBs). While the tutorial on the **apprenticeship platform** addresses the platform features and settings as well as how to conduct the follow up of individual training programme, upload /edit training activities, consultation of results from end-point assessment, and how to perform the final assessment of the the triangle cooperation between VET – Trainee – Company.

The **Training Centre /ATB tutorial on WBL** follows the same reasoning as above, meaning it details the principles underpinning WBL, advantages of WBL, own responsibilities, duties and rights, roles of each actor, how to engage in VET Business partnership, which are the stages and tools involved in the WBL process and the practical arrangements (duration, contract, assessment). Regarding the platform use, the **tutorial on the platform** deals with platform features and settings, creation of a personalized learning plan (profiles, selecting the LOs of the training programme), upload /edit training activities, upload of results from end-point assessment and the feedback on the the triangle cooperation between VET – Trainee – Company. The Training Centre /ATB has an additional tutorial on “**How to use the Quality Model for WBL?**” which focus on the categories of the quality model, partnership relation quality assessment and on how to interpret and analyze data.

Finally, the **Hosting Company tutorial on WBL** includes the principles underpinning WBL, advantages of WBL, own responsibilities, duties and rights, roles of each actor, how to become a hosting company, stages and tools involved in the WBL process and the practical arrangements (duration, contract, assessment, network of ATBs). The **tutorial on the platform** explains “How to use the platform to record and monitor the progress of the trainee during the apprenticeship?”. This tutorial addresses the Platform features and settings, specific activities linked to the training programme, how to upload /edit training activities, how to verify results from the end-point assessment and how to provide feedback on the triangle cooperation between VET – Trainee – Company.

Coming back to the platform settings, all users can see all the list of animated tutorials on WBL as represented in Figure 15, which are displayed in YouTube.

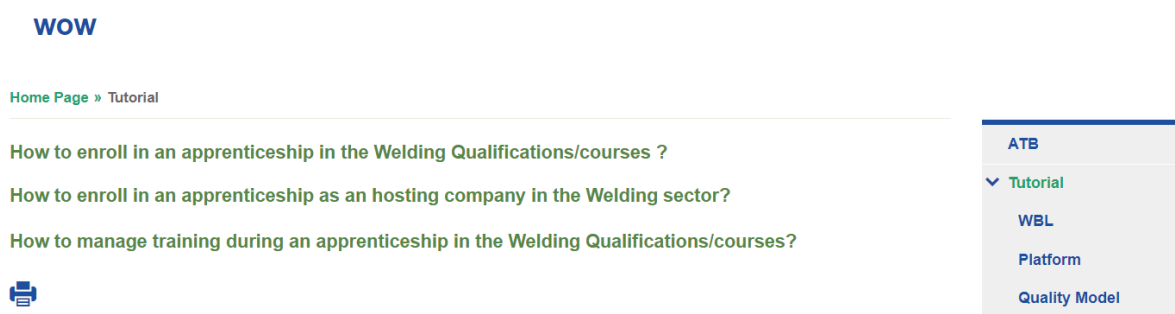


Figure 15 - List of WBL Tutorials - View ATB

The remaining tutorials are available respectively in each profile to capacitate them to use the platform, which is represented by Figure 16 (view of Tutorial platform) the pdf document is available for download.

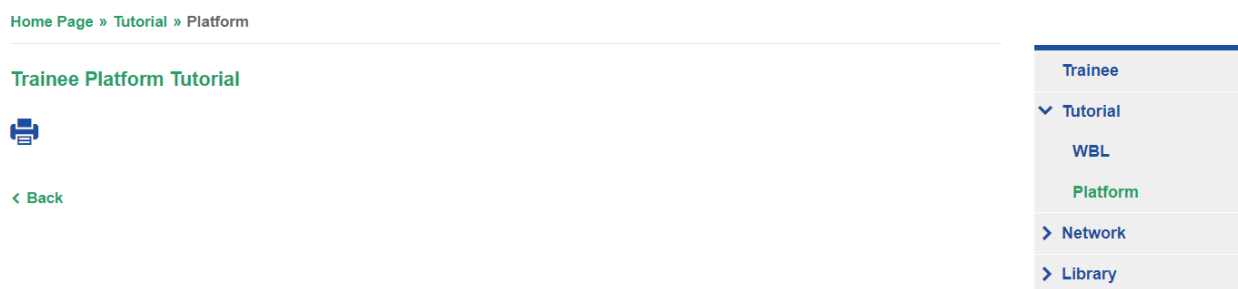


Figure 16 – Tutorial on the platform – view of the trainee

The logbook is an essential element of the resource’s storage, since it enables to upload the evidences from the performed activities during the apprenticeship, as represented in Figure 17.

Home Page » Network » Evaluation » Logbook

+ New | Edit | Save | Delete | Refresh | Search | Print

Apprenticeship ID: TrCafe1312

Duration (in hours): 200

Due Date: 2019-07-13

On going: **Competence Unit on Approval**

Competence Unit

+ New | Edit | Save | Delete | View | Refresh | Search | Print

COMPETENCE UNIT 8 - Design for Welding & Brasing

Page 1 de 1

1 Record(s) found

Records per page: 25

Jump to page: 1

Competence Unit

+ New | Edit | Save | Delete | View | Refresh | Search | Print

COMPETENCE UNIT 8 - Design for Welding

Learning Outcomes

Add new learning outcome

Learning Outcome: Point out the characteristics phenomenon of cyclic load of welded

Activity description:

☐ I confirm I have done this activity (Trainee)

Here the proof I done this activity (Trainee):

Selecione...

Learning Outcome: Point out the characteristics phenomenon of cyclic load of welded

Activity description:

☐ I confirm I have done this activity (Trainee)

Here the proof I done this activity (Trainee):

Selecione...

Trainee

- > Tutorial
- > Network
- > Apprenticeship
- > Evaluation
 - Logbook
 - End Point Evaluation
- > Feedback
- News
- Events
- Faq
- > Library

Logbook

End Point Evaluation

- > Feedback
- News
- Events
- Faq
- > Library

Figure 17 – Example of selection of activities for CU8 (Logbook details) – view of trainee

Finally, the LIBRARY menu is the main repository of supporting documents, where the list of Competence Units (as represented in Figure 18), Guidelines on WBL, Glossary and useful templates (attendance list, individual training programme, contract agreement), among others, can be found in several languages (as represented in Figure 19). Please refer to the D3.5. Kit of Documents for a detailed overview on the supporting documents.

WOW

Home Page » Library » CU List

Acronym	Title
CU10	COMPETENCE UNIT 10 - Quality Assurance/ Quality Control on Welded Joints
CU11	COMPETENCE UNIT 11 - Tests used for the Quality Control of Welded Joints

EWS - Learning Outcomes:
Specialised and theoretical, principles and applicability of:

- Identification of imperfections and application of acceptance criteria
- Identification of destructive and non-destructive testing of materials and welded joints

EWP - Learning Outcomes:
Factual and broad of:

- Identification of imperfections and application of acceptance criteria
- Identification of destructive and non-destructive testing of materials and welded joints

CU2	COMPETENCE UNIT 2 - Welding and Cutting Conventional Processes
CU8	COMPETENCE UNIT 8 - Design for Welding & Bracing

EWS - Learning Outcomes:
Specialised and theoretical, principles and applicability of:

- Welding drawings interpretation and calculation for simple welding joints
- Specification of weld joints types and fit up based on drawings interpretation
- Methods to improve the fatigue strength on welding joints

EWP - Learning Outcomes:
Factual and broad of:

Trainee

Tutorial

Network

Library

CU List

End Point Assessment

Documents

Figure 18 - CU list in the Library - view trainee

Home Page » Library » Documents

Platform glossary - EN
 Platform glossary - IT
 Platform glossary - ES
 Platform glossary - RO
 Platform glossary - PT
 Apprenticeship timesheet - EN
 Apprenticeship timesheet- RO
 Apprenticeship timesheet - HU
 Apprenticeship timesheet - IT
 Apprenticeship timesheet - PT
 Apprenticeship timesheet - ES
 Training programme template - EN
 Training programme template - IT
 Training programme template - ES
 Training programme template - RO
 Training programme template - PT
 Terms of condition and use - EN
 Guideline mutual learning outcomes - EN
 Quality assurance guideline - EN

Trainee
> Tutorial
> Network
▼ Library
CU List
End Point Assessment
Documents

Figure 19 - List of documents available - view trainee

FEATURE 4 - ASSESS SUSTAINABILITY OF THE PARTNERSHIP (FEEDBACK AND QUALITY MODEL)

Within the NETWORK tab, it's possible to provide feedback on the WBL experience, in terms of individual categories, overall quality and cooperation/relation between the involved parts.

Through the platform the assessment is provide in the FEEDBACK tab, and consists in an online questionnaire where participants indicate their degree of satisfaction from 1 to 5, (where 1- Strongly disagree, 2-Disagree, 3- Neither agree/disagree, 4- Agree, 5-Stronglyagree) regarding the following categories:

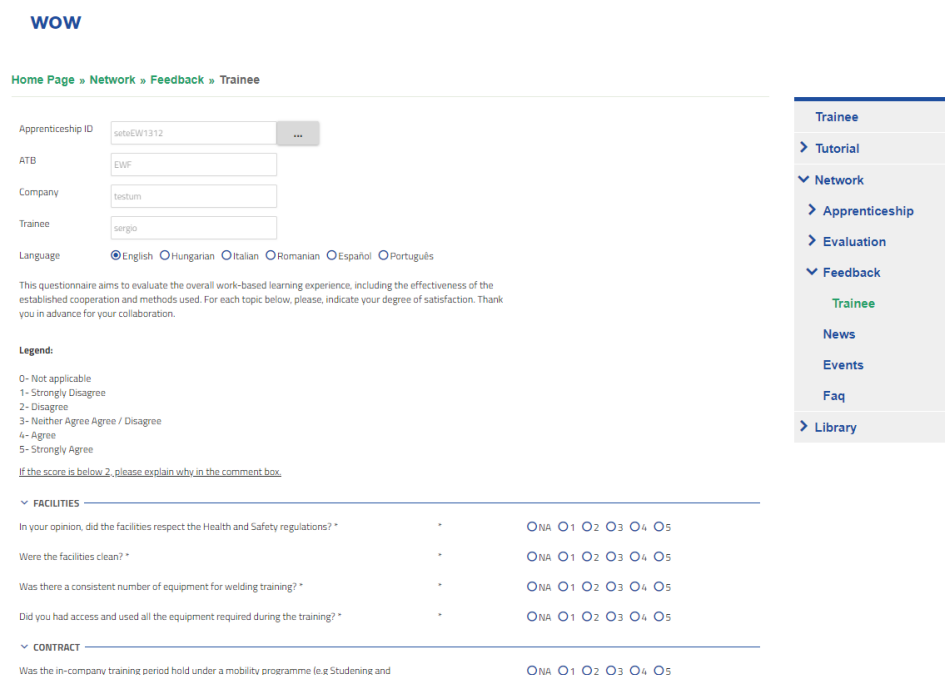
- **Facilities** (i.e. quality conditions of where the WBL took place),
- **Contract** (i.e. between the employer, the trainee and VET entity),
- **Safety** (i.e. in terms of Health and Safety),
- **Health and Safety** (i.e. preparation given to trainees to comply with Health and Safety regulations, 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.)

The above topics are covered in the online questionnaire (represented in Figure 20), which was prepared based on matrix of questions targeting a specific type of participant, as showed in table 2:

Table 2 – Criteria used in the WBL Assessment

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



WOW

Home Page » Network » Feedback » Trainee

Apprenticeship ID: ...

ATB:

Company:

Trainee:

Language: ☒ English ☐ Hungarian ☐ Italian ☐ Romanian ☐ Español ☐ Português

This questionnaire aims to evaluate the overall work-based learning experience, including the effectiveness of the established cooperation and methods used. For each topic below, please, indicate your degree of satisfaction. Thank you in advance for your collaboration.

Legend:

0- Not applicable
 1- Strongly Disagree
 2- Disagree
 3- Neither Agree / Disagree
 4- Agree
 5- Strongly Agree

If the score is below 2, please explain why in the comment box.

FACILITIES

In your opinion, did the facilities respect the Health and Safety regulations? * ☐ NA ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Were the facilities clean? * ☐ NA ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Was there a consistent number of equipment for welding training? * ☐ NA ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Did you had access and used all the equipment required during the training? * ☐ NA ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

CONTRACT

Was the in-company training period hold under a mobility programme (e.g Studening and ☐ NA ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Figure 20 – View of trainee online questionnaire

The ATB will be responsible to compare the results against the criteria by using the quality model of partnership. For that, he/she is able to export data from the excel file and use this information to inform the triangle about the overall quality of the cooperation (please refer to D5.1 Recommendation for EWF's quality assurance system).

As such, the ATB profile, contains a specific section called **FEEDBACK RESULTS**, where he/she is able to access the results of the feedback of all apprenticeships undertaken at your ATB (represented in Figure 21)

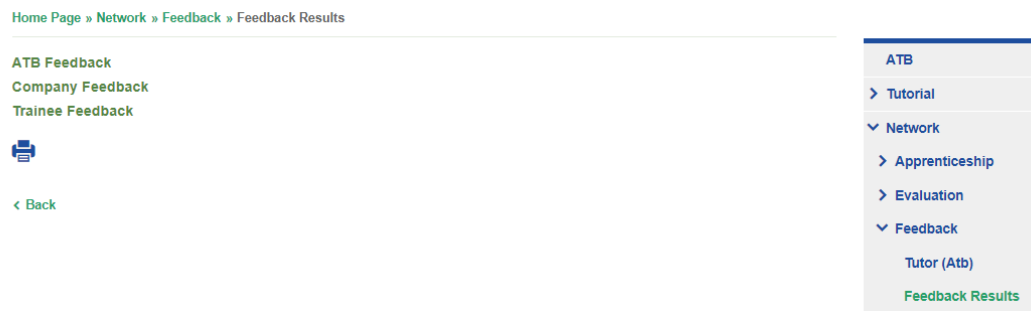


Figure 21 - Feedback results - view ATB

In the future the overall quality model will be displayed in the platform (represented in Figure 22), by running the quality model automatically (which at the time being happens manually). After all participants of the WBL fulfil the questionnaire the following image will appear with the results of the specific relations.

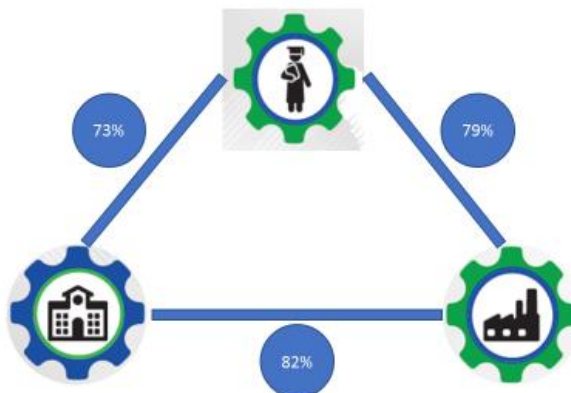


Figure 22- Overall quality of the partnership - sustainability

Due to the project duration and resources allocated to the development of the Platform, partners focused on the developing the mandatory needed functionalities. However, the partners already identified improvements that will be undertaken (using the partners own resources) during the upcoming months.

SECTION 2 – HEURISTIC ANALYSIS OF THE PLATFORM



2.1 INTERNAL ASSESSMENT

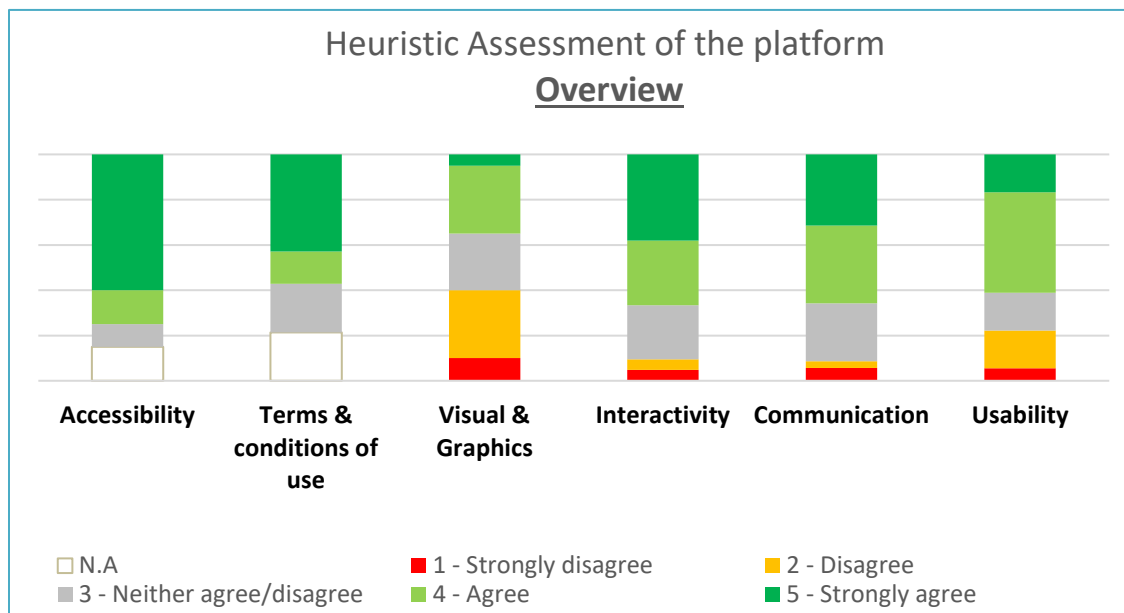
This heuristic analysis on the usability of the WOW platform was conducted by each partner, engaging with the companies and trainers, based on the same satisfaction questionnaire. Six criteria (subdivided into 19 topics) were defined, covering: accessibility, terms & conditions of use, visual & graphics, interactivity, communication and usability, as detailed in table 3.

Table 3 - Criteria used for the internal assessment of the platform

	Criteria
Accessibility	Adequacy of the platform hosting site
	Easiness to login
	Efficiency of the notification procedures (e.g. email)
Terms & conditions of use	Adequacy of the data treatment and privacy policies
	Adequacy of the security system for prevention of no authorised 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
Usability	Clear understanding of terminology used
	User friendliness of the platform
	Innovativeness of the platform
	Adequacy in fulfilling the function of support in WBL partnership cooperation

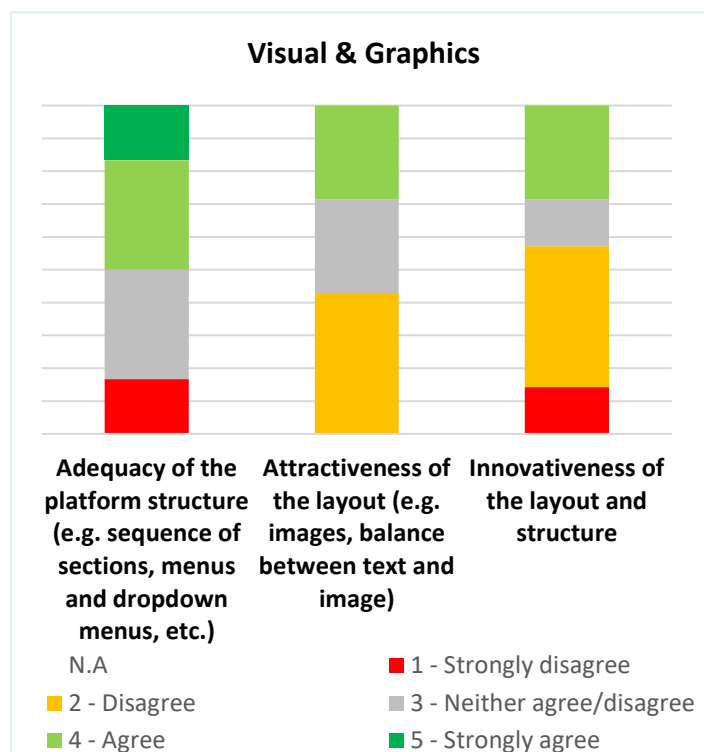
The results (Graphic 1 – Heuristic Assessment Overview) revealed that internal users are satisfied with the platform “Accessibility” and “Terms and Conditions of Use”.

For the remaining criteria, the level of satisfaction differ, for instance: “Interactivity”, “Communication” and “Usability” have at least one low (Disagree - represented in orange in the graphic) and very low rating (Strongly Disagree – represented in red in the graphic) combined with high (Agree – represented in green) and very high ratings. (Strongly Agree represented in dark green). These results indicate that although the platform has an average positive assessment in terms of interactivity, communication and usability, some improvements on these areas could be introduced.



Based on this feedback, and because the commitment of the partners in using and improving the Platform, some future developments were already identified.

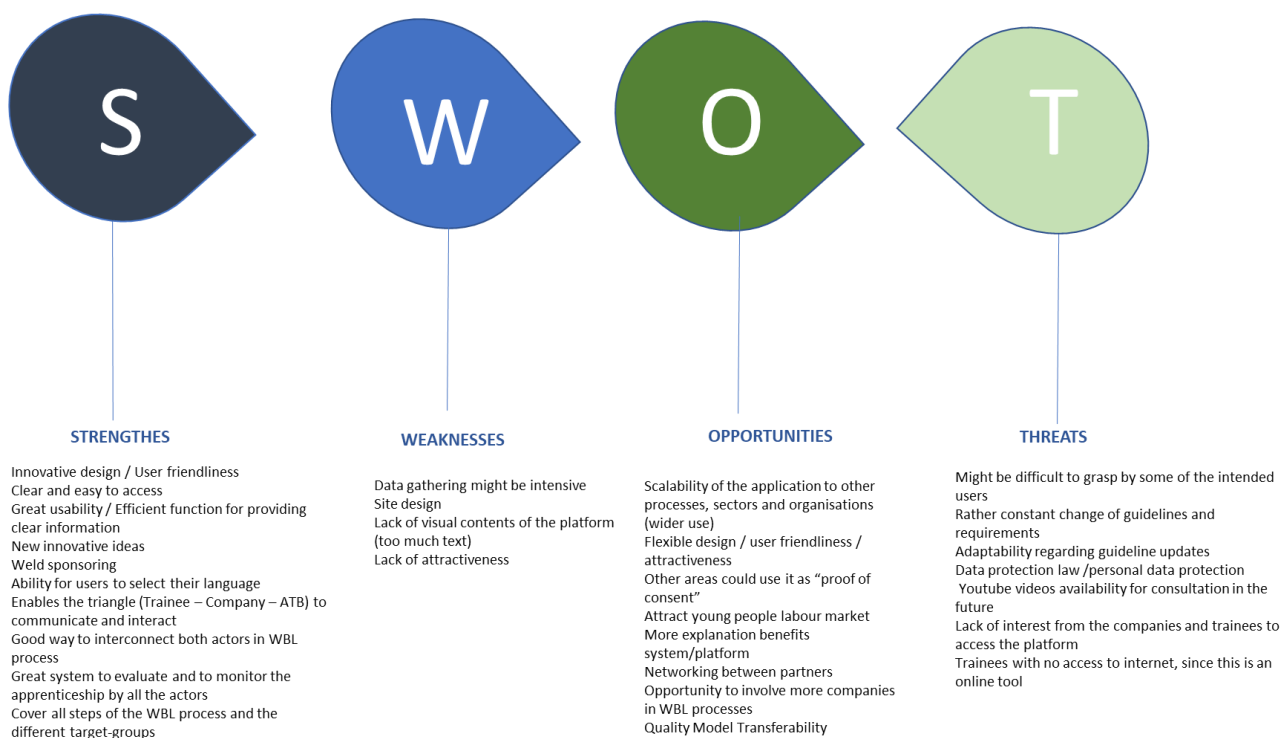
Looking in more detail on this topic (Graphic 2 - Visual and Graphics), it's possible to see that majority of users were not satisfied with the attractiveness of the layout neither the innovativeness of the layout and structure. The adequacy of the platform image to its purpose was rated as medium.



To conclude, the results indicate that an improved layout (more attractive and innovative one) should be adopted for the WBL platform. However, the focus of the partners during the project duration was on developing the functionalities of the Platform, which were already very complex.

After rating the criteria mentioned in table 3, partners undertook a SWOT analysis, based on the received feedback. 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 project partners. In Figure 23 the main results achieved with this activity are summarized:

Figure 23 - SWOT analysis results



2.2 EXTERNAL ASSESSMENT

As documented in **D4.2 Report on the pilot event**, participants in the WBL experience were invited to indicate their degree of satisfaction by completing an online questionnaire focusing on several criteria, including the WOW platform usability and quality.

Rating by trainees, tutors and mentors varied between 67%, 50% and 70%, respectively, indicating some opportunities for improvement linked to the user-friendliness and attractiveness of the layout despite the overall usefulness of the tool.

After discussing the findings with external stakeholders during the national debrief sessions, the consortium agreed on implementing the following changes to the online tools (please refer to table 4).

Table 4 - Improvements actions

<p>WBL Platform</p>	<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.
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SECTION 3 – CONCLUSION AND SUSTAINABILITY

The results achieved enable to conclude that the WOW platform is adequate to its purpose and a must have tool to monitor the learning process in WBL and assess the quality of the cooperation between the “triangle” trainee, tutor and mentor in the Welding Sector. It was clear during the project duration that to have the “triangle” working in different countries, a platform like the one developed was mandatory.

When comparing the initial settings of the platform (D3.2) with the final one (D4.2), it’s possible to conclude that the main functionalities and features are aligned, even if the global graphical layout has changed. But as explained, the focus of the functionalities development was to guarantee the alignment with industry needs as well as to the national WBL best practices, in order to implement a model and platform applicable to apprenticeship management in different context and countries.

The feedback from external and internal stakeholders is consistent and confirms the usability of the platform settings, although some improvements in terms of attractiveness and user friendliness are identified as needed. For this reason, the following actions were agreed to be undertaken to guarantee the sustainability of the tool:

- 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
- Implement an automatic running system for the quality model

It’s important to mention that the initial time estimation for the platform development and implementation was unrealistic as it didn’t consider the number of needed functionalities. As such the platform development was longer, without significantly affecting the remaining project outcomes and it ended by providing a necessary tool for managing apprenticeship in different countries.

The qualitative assessment to the platform, performed through the SWOT analysis (Figure 23), enable to recognize its added value for networking and for approaching all aspects of the WBL process, although it could benefit from a more effective and attractive handling. Opportunities for exploring the tool in the future are immensely, namely by applying it to more companies, trainers and trainees, including from other industrial sectors, but for that a continuous engagement with stakeholders is recommended. Along the project, the interest about WBL has smoothly raised among 29 external stakeholders, but needs to reach and attract more users at national level. At this regard, as well, stakeholders have identified the opportunities to transfer the developed methodology and tools for WBL to new qualifications and to new countries.

After the project end, the WOW platform will be kept by EWF as online tool to manage WBL, which will benefit from the creation and approval of a new European working group with experts from different countries. This group has the goal of dealing with the rules and procedures for the integration of the WBL into the EWF Qualification System, which implies to update the Guidelines on WBL and the Quality Assurance System, as well to foster the integration and implementation of the methodology in other qualifications and countries. In terms of sustainability, the integration of WBL within the EWF

Qualifications system, represents the opportunity to extend the model (including the platform use) within a network of more than 650 authorised training centres and 30 Welding Associations (EWF members) from 30 European countries.

In the future, the development of the platform is planned to continue through the update of the existing functionalities and specific actions were already identified in table 5.

The WBL platform will be integrated as an additional functionality of the “EWF Modular Systems”, which is an existing platform for training management within EWF Qualification System, thus addressing EWF Members (ANB’s), ATB and trainees. Since ANB’s are responsible for supervising training activities, in the future they should have access to the WBL platform in order to be able to manage the ATB activities in this field of WBL as well. The platform functionalities enable to add more fields of expertise and competences units to the platform, so it means that in the future the scope of activity is easily updated.

Table 5 - Next Actions for the Platform Development

Action	Owner	Timeline	Resources
1. Delete repetitions between sections	EWF	February 2020	EWF IT team
2. Include wizard/info tool in all sections	EWF	February 2020	EWF IT team
3. Improved layout	EWF	February 2020	EWF IT team
4. Include automatic quality model run	EWF	March 2020	
5. News update	EWF	Continuous	EWF IT team
6. FAQ update	EWF	Continuous	EWF IT team
7. Translation of all sections	WBL working group	March 2020	WG
8. Documents update	WBL working group	Every 3 years if needed	WG
9. Integration in EWF Modular Systems Platform	EWF	March 2020	EWF IT team
10. Creation of new user Profile for ANB – Authorized Nominated Bodies	EWF	March 2020	EWF IT team
11. Add more fields of expertise (e.g. Additive Manufacturing)	EWF	April 2020	EWF IT team
12. Add new Competence Units and LOs	EWF	April 2020	EWF IT team

APPENDIX SECTION

INDIVIDUAL HEURISTIC ASSESSMENT OF THE PLATFORM

Heuristic Assessment of the Platform (ISIM)

This heuristic analysis on the usability of the WOW platform was conducted by **CESOL** following the criteria proposed in table 1 and the SWOT analysis.

Each topic was rated according to the perceived degree of satisfaction from 1 to 5, where (1- Strongly disagree, 2-Disagree, 3- Neither agree/disagree, 4- Agree, 5-Strongly agree), as detailed below:

Table 2 - Criteria and internal assessment of WOW platform

	Criteria	N.A	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 of use	Adequacy of the data treatment and privacy policies						X	
	Adequacy of the security system for prevention of no authorised access						X	
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)						X	
	Attractiveness of the layout (e.g. images, balance between text and image)					X		
	Innovativeness of the layout and structure					X		a wizard like tool could have been useful
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)						X	
	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	
	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	
	Innovativeness of the platform						X	
	Adequacy in fulfilling the function of support in WBL partnership cooperation						X	

Results from the **SWOT** analysis to the focusing **(S)**trengths, **(W)**eaknesses, **(O)**pportunities and **(T)**hreats were :

STRENGTHS (S)

- innovative design
- great usability
- user friendliness
- efficient function for providing clear information

WEAKNESSES (W)

- data gathering might be intensive
- the procedure can be hard to grasp
- lack of a “wizard like function”

OPPORTUNITIES (O)

- scalability of the application to other processes
- flexible design
- other areas could use it as “proof of concept”

THREATS (T)

- might be difficult to grasp by some of the intended users
- rather constant change of guidelines and requirements

Heuristic Assessment of the Platform (MHtE)

This heuristic analysis on the usability of the WOW platform was conducted by **MHtE** following the criteria proposed in table 1 and the SWOT analysis.

Each topic was rated according to the perceived degree of satisfaction from 1 to 5, where (1- Strongly disagree, 2-Disagree, 3- Neither agree/disagree, 4- Agree, 5-Strongly agree), as detailed below:

Table 3 - Criteria and internal assessment of WOW platform

	Criteria	N.A	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 of use	Adequacy of the data treatment and privacy policies					X		
	Adequacy of the security system for prevention of no authorised access						X	
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)					X		
	Attractiveness of the layout (e.g. images, balance between text and image)					X		
	Innovativeness of the layout and structure					X		
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)						X	
	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	
	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		
	Innovativeness of the platform					X		
	Adequacy in fulfilling the function of support in WBL partnership cooperation					X		

Results from the **SWOT** analysis to the focusing (S)trengths, (W)eaknesses, (O)pportunities and (T)hreats were :

STRENGTHS (S)

- Many useful of data
- New innovative ideas

WEAKNESSES (W)

- Not identified documents
- Difficult handling

OPPORTUNITIES (O)

It is developing
It can be used in other industrial sectors as well

THREATS (T)

- Difficult to use
- Maybe this will not apply
-

Heuristic Assessment of the platform (IIS)

This heuristic analysis on the usability of the WOW platform was conducted by IIS following the criteria proposed in table 1 and the SWOT analysis.

Each topic was rated according to the perceived degree of satisfaction from 1 to 5, where (1- Strongly disagree, 2-Disagree, 3- Neither agree/disagree, 4- Agree, 5-Strongly agree), as detailed below:

Table 1 - Criteria and internal assessment of WOW platform

	Criteria	N.A	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)							
Terms & conditions of use	Adequacy of the data treatment and privacy policies				X			
	Adequacy of the security system for prevention of no authorised access				X			
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)				X			
	Attractiveness of the layout (e.g. images, balance between text and image)			X				
	Innovativeness of the layout and structure			X				
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)				X			
	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			
	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				
	Innovativeness of the platform			X				
	Adequacy in fulfilling the function of support in WBL partnership cooperation			X				

Results from the **SWOT** analysis to the focusing **(S)**trengths, **(W)**eaknesses, **(O)**pportunities and **(T)**hreats were:

STRENGTHS (S)

- Young targets
- Weld sponsorship
- (...)

WEAKNESSES (W)

- Procedure not clear
- Need a “Help” section
- (...)
- (...)

OPPORTUNITIES (O)

- Young people
- Labor market
- (...)
- (...)

THREATS (T)

- Adaptability regarding guideline updates
- Personal data protection
- (...)

Heuristic Assessment of the Platform (TWI)

This heuristic analysis on the usability of the WOW platform was conducted by **TWI** following the criteria proposed in table 1 and the SWOT analysis.

Each topic was rated according to the perceived degree of satisfaction from 1 to 5, where (1- Strongly disagree, 2-Disagree, 3- Neither agree/disagree, 4- Agree, 5-Strongly agree), as detailed below:

	Criteria	N.A	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 of use	Adequacy of the data treatment and privacy policies		X					Can't tick box I declare I have read doc
	Adequacy of the security system for prevention of no authorised access				X			Can't check
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)		X					Unclear too many +new buttons
	Attractiveness of the layout (e.g. images, balance between text and image)				X			
	Innovativeness of the layout and structure		X					Very basic
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)		X					I'm lost when I can't fill in 3th box telephone number
	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		
	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			Can't fill boxes

	Innovativeness of the platform							Not latest state of the art
	Adequacy in fulfilling the function of support in WBL partnership cooperation							No

Results from the **SWOT** analysis to the focusing (S)trengths, (W)eaknesses, (O)pportunities and (T)hreats were:

STRENGTHS (S)

- Looks simple not complex
-

WEAKNESSES (W)

- Can't tick boxes or fill in fields
- No goals for trainee to find why then go there?? No need to use it
-

OPPORTUNITIES (O)

- More explanation benefits system/platform

THREATS (T)

- No need to use it, not working properly

Heuristic Assessment of the Platform (CESOL)

This heuristic analysis on the usability of the WOW platform was conducted by CESOL following the criteria proposed in table 1 and the SWOT analysis.

Each topic was rated according to the perceived degree of satisfaction from 1 to 5, where (1- Strongly disagree, 2-Disagree, 3- Neither agree/disagree, 4- Agree, 5-Strongly agree), as detailed below:

Table 4 - Criteria and internal assessment of WOW platform

	Criteria	N.A	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 of use	Adequacy of the data treatment and privacy policies						X	
	Adequacy of the security system for prevention of no authorised access						X	
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)				X			
	Attractiveness of the layout (e.g. images, balance between text and image)			X				
	Innovativeness of the layout and structure			X				
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)					X		
	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		
	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		
	Innovativeness of the platform				X			
	Adequacy in fulfilling the function of support in WBL partnership cooperation					X		

Results from the **SWOT** analysis to the focusing **(S)**trengths, **(W)**eaknesses, **(O)**pportunities and **(T)**hreats were :

STRENGTHS (S)

- Users have the ability to select their preferred language
- The platform enables the triangle partnership (Trainee – Company – ATB) to communicate and interact
- Great system to evaluate and to monitor the apprenticeship by all the actors of the Work-based Learning.

WEAKNESSES (W)

- Site design
- The platform does not give solutions that are intuitive for the users
- There is a risk of lost the personal communication between WBL partnership

OPPORTUNITIES (O)

- Networking between partners
- The opportunity to involve more companies in WBL processes
- Weaknesses' self Identification of the companies and improve them

THREATS (T)

- Lack of commitment between WBL triangle partnership
- Lack of information due to a poor assessment
- Data protection law

Heuristic Assessment of the Platform (EWF)

This heuristic analysis on the usability of the WOW platform was conducted by **EWF** following the criteria proposed in table 1 and the SWOT analysis.

Each topic was rated according to the perceived degree of satisfaction from 1 to 5, where (1- Strongly disagree, 2-Disagree, 3- Neither agree/disagree, 4- Agree, 5-Strongly agree), as detailed below:

Table 5 - Criteria and internal assessment of WOW platform

	Criteria	N.A	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)							N/A
Terms & conditions of use	Adequacy of the data treatment and privacy policies							Did not see any information
	Adequacy of the security system for prevention of no authorised access							Did not see any information
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)						X	
	Attractiveness of the layout (e.g. images, balance between text and image)			x				
	Innovativeness of the layout and structure			x				
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)					X		
	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	
	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		
	Innovativeness of the platform		X					
	Adequacy in fulfilling the function of support in WBL partnership cooperation				X			

Results from the **SWOT** analysis to the focusing **(S)**trengths, **(W)**eaknesses, **(O)**pportunities and **(T)**hreats were:

STRENGTHS (S)

Cover all steps of the WBL process and the different target-groups
Enable to monitor the progress during the apprenticeship

WEAKNESSES (W)

Lack of visual contents of the platform (too much text)
Repetition of elements in different sections

OPPORTUNITIES (O)

Allow communication between target-groups involved in WBL process

- User friendliness
- Quality Model Transferability
- Platform transerability to other sectors
-

THREATS (T)

Sustainability of the platform after the project is concluded
Youtube vídeos availability for consultation in the future

Heuristic Assessment of the Platform (ISQ)

This heuristic analysis on the usability of the WOW platform was conducted by **ISQ** following the criteria proposed in table 1 and the SWOT analysis.

Each topic was rated according to the perceived degree of satisfaction from 1 to 5, where (1- Strongly disagree, 2-Disagree, 3- Neither agree/disagree, 4- Agree, 5-Strongly agree), as detailed below:

Table 6 - Criteria and internal assessment of WOW platform

	Criteria	N.A	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						Lack of opportunity to test this feature
Terms & conditions of use	Adequacy of the data treatment and privacy policies					X		
	Adequacy of the security system for prevention of no authorised access						X	
Visual & Graphics	Adequacy of the platform structure (e.g. sequence of sections, menus and dropdown menus, etc.)					X		
	Attractiveness of the layout (e.g. images, balance between text and image)				X			
	Innovativeness of the layout and structure				X			
Interactivity	Efficiency of the main functionalities (e.g. creation of profiles, management of apprenticeships, feedback and assessment)					X		
	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		
	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		
	Innovativeness of the platform				X			
	Adequacy in fulfilling the function of support in WBL partnership cooperation					X		

Results from the **SWOT** analysis to the focusing **(S)**trengths, **(W)**eaknesses, **(O)**pportunities and **(T)**hreats were :

STRENGTHS (S)

- A good way to interconnect both actors in WBL process
- Clear and easy to access
- Make processes easiest
-

WEAKNESSES (W)

- Lack of attractiveness
- Platform bugs

OPPORTUNITIES (O)

- It is possible to improve the platform and make it more attractive
- Dissemination of the platform to companies and VET centres to a wider use

THREATS (T)

- Lack of interest from the companies and trainees to access the platform
- Trainees with no access to