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SEnDIng

D6.2

EVALUATION PLAN AND TOOLS

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Delivery Slip

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PROJECT SUMMARY

SEnDIng project aims to address the skills' gap of Data Scientists and Internet of Things engineers that has been identified at the ICT and other sectors (e.g. banking and energy) at which Data Science and Internet of Things have broad applications. To achieve this goal, SEnDIng will develop and deliver to the two aforementioned ICT-related occupational profiles two learning outcome-oriented modular VET programmes using innovative teaching and training delivery methodologies.

Each VET program will be provided to employed ICT professionals into three phases that include: (a) 100 hours of on-line asynchronous training, (b) 20 hours of face-to-face training¹ and (c) 4 months of work-based learning. A certification mechanism will be designed and used for the certification of the skills provided to the trainees of the two vocational programs, while recommendations will be outlined for validation, certification & accreditation of provided VET programs.

Furthermore, SEnDIng will define a reference model for the vocational skills, e-competences and qualifications of the targeted occupational profiles that will be compliant with the European eCompetence Framework (eCF) and the ESCO IT occupations, ensuring transparency, comparability and transferability between European countries.

Various dissemination activities will be performed – including the organization of one workshop at Greece, Bulgaria and Cyprus and one additional conference at Greece at the last month of the project – in order to effectively disseminate project's activities and outcomes to the target groups and all stakeholders. Finally, a set of exploitation tools will be developed, giving guides to stakeholders and especially companies and VET providers, on how they can exploit project's results.

¹ Due to COVID-19 restrictions this training has been delivered through online sessions





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1 Introduction

The scope of this deliverable is to specify the steps and instruments that will be used to evaluate the project. The evaluation will cover two main axes: the outputs (deliverables) of the project and the main activities of the project: development of training material and MOOC, vocational trainings, certifications exams, national workshops and final conference.

We would like to mention that this is the final version of the project evaluation plan that has been updated after the production of the core outputs of the project. The plan for the evaluation of project impact is described at the deliverable "D6.4: Impact evaluation methodology".

2 Project evaluation tools

The evaluation of the project activities and its main outputs will be performed at two levels:

- Level 1: internal evaluation by SEnDIng partners.
- Level 2: external evaluation by relevant stakeholders.

The main tools that will be used for the evaluation of project outcomes and core activities are questionnaires, observations and focus groups.

- **Questionnaires**. A questionnaire consists a research instrument that is composed by a series of questions for the purpose of gathering information from respondents. Although questionnaires are often designed for statistical analysis of the responses, this is not always the case and they are also used for evaluation purposes.
- **Observations**. It is a tool that can be used to monitor or evaluate a process or situation and document evidence of what is seen and heard. Observation is used in a variety of ways in evaluation. Often it is a transit method that leads to other methods. For example, an evaluator can initially pay attention to a wide variety of factors. In this case the evaluation begins with exploratory observation. This exploratory step helps narrow the study and refines the evaluation strategy. The next step could be a more focused observation using checklists. Or the exploratory observation might lead to other evaluation methods such as surveys, in-depth interviews, focus groups, secondary data or other strategies.
- **Focus groups.** A focus group is a group interview that involves a small number of people. Their reactions to specific researcher-posed questions are studied. The discussions can be guided or open.





The evaluation of project main activities and outputs will be performed based both on quantitative and qualitative data. All data are primary data coming from:

- Surveys through questionnaires that will be distributed during the implementation of project national workshops and final conference.
- Surveys through questionnaires that will be distributed to the trainees and trainers at the end of each phase of pilot trainings.
- Surveys through questionnaires that will be distributed to the participants in the certification exams.
- WP quality reports produced internally in the project.
- Data analytics from the MOOC.

3 Project evaluation plan

3.1 Level 1 Evaluation: Internal evaluation by SEnDIng partners

Level 1 evaluation is the internal evaluation of the project outputs and activities that is performed by SEnDIng partners. The internal evaluation takes place during different stages of the project:

- For each deliverable once it is produced. To ensure the maximum quality of each deliverable and for evaluation purposes, a set of review procedures will be applied which are described in detail in the project quality assurance plan. The partner responsible for the production of a deliverable should ensure that those procedures are applied and deadlines are met. For each deliverable a peer review system is defined, where at least two reviewers are appointed by the Work Package Leader after a consultation with the Technical Manager on the basis of their expertise on the deliverable's subject. For more information about the evaluation process for project deliverables, please refer to the deliverable "D6.1: Quality Assurance Plan".
- **For each WP at its end**. Each WP leader will provide at the end of the WP, a WP Quality Report that among others will include a list of measured quantitative and qualitative indicators used to evaluate the project and its impact.
- **For the whole project at its end**. At the project end, all SEnDIng partners will perform an evaluation of the project aiming to gather their perception about the effectiveness of its implementation, the quality of project outputs and their impact.





This evaluation will cover 3 different aspects: the project activities, the project outputs and the project impact. For more information, please refer to the deliverable "D6.5: Final internal evaluation report".

3.2 Level 2 Evaluation: External evaluation by relevant stakeholders

Level 2 evaluation is the external evaluation of the project outputs and activities that is performed by relevant stakeholders. The external evaluation takes place at the following stages of the project:

- **During the pilots** and more specific at the following phases
 - At the end of each online course at MOOC
 - At the end of the transversal skills training
 - o At the end of the work-based learning
 - At the end of the certification exams
- During the national workshops and the final conference

3.3 Evaluation of core outputs and activities

3.3.1 Curricula and MOOC

SEnDIng curricula combines technical knowledge and skills at the Data Science and IoT domains with transversal skills and competences. The curricula are multi-disciplinary, modular and learning outcomes-oriented. The curricula have been delivered through self-paced online courses at http://mooc.sending-project.eu.

The data that will be used for the evaluation of the curricula and MOOC are primary data coming from the MOOC, surveys at the end of each online course (see Annex 1) and the WP2 and WP5 Quality Reports. The stakeholders involved at the evaluation of curricula and MOOC are project partners and trainees, as well as others (i.e., VET providers). The indicators that will be used to evaluate the curricula and the MOOC are the following:

Quantitative Indicators

- Number of curricula produced
- · Number of learning outcomes defined
- Number of educational modules produced
- Number of online courses produced





Number of open educational resources produced

Qualitative Indicators

- Challenge for completion of online courses
- Fulfillment of expectations of trainees by the online courses
- Quality of training material at online courses
- Organization of training material at online courses
- Usefulness of online courses for the work
- Objectives of the online courses
- Time allocated for each online course
- Enhancement of knowledge by the online courses

3.3.2 Vocational trainings

The vocational trainings at Data Science and IoT will be piloted through 3 different stages:

- Online courses at MOOC
- Transversal skills training
- Work-based learning

The data that will be used for the evaluation of the vocational trainings are primary data coming from the MOOC, observations, surveys at the end of each stage of the training and the WP5 Quality Report. The stakeholders involved at the evaluation of the vocational trainings are the participants in the pilot trainings, i.e., trainees and trainers. The indicators that will be used to evaluate the vocational trainings are the following.

Quantitative Indicators

- Hours of online training provided
- Hours of face-to-face training provided
- Hours of work-based learning provided
- Number of participants in the vocational trainings for Data Science and IoT
- Number of companies participated in the vocational trainings for Data Science and IoT
- Number of MOOC users
- Completion rate of online courses at MOOC
- Completion rate of transversal skills training
- Completion rate of work-based learning





Qualitative Indicators

- For online courses at MOOC
 - User interface of MOOC platform
 - Reliability of MOOC platform
 - Availability of MOOC platform
- · For transversal skills training
 - Fulfillment of expectations from transversal skills training
 - Objectives of the transversal skills training
 - Content of the transversal skills training
 - Correspondence of theoretical knowledge to the needs of acquiring competences and skills
 - Innovation of modules
 - Online training platform used for transversal skills
 - Training material and methodology for the delivery of transversal skills training
 - Evaluation of trainer (by trainees) and trainees (by trainers)
 - Self-assessment of trainees and trainers
 - Overall evaluation of transversal skills training
- For work-based learning
 - Fulfillment of expectations from work-based learning
 - Connection of work-based learning with the previous phases of training
 - Outcomes of work-based learning
 - Work-based learning aspects
 - Training material and methodology for the delivery of work-based learning
 - Evaluation of trainers (by trainees) and trainees (by trainers)
 - Self-assessment of trainees and trainers
 - Overall evaluation of work-based learning

The evaluation questionnaires used to evaluate the transversal skills training are given at Annexes 2, 3, while the evaluation questionnaires used to evaluate the work-based learning, are given at Annexes 4 and 5.





3.3.3 Certification scheme

At the end of the vocational trainings, all those who have successfully completed the 3 phases of the project will pass through certification exams leading to the SEnDIng Data Science or IoT certification. Furthermore, all those who will successfully complete the online courses will receive a certification of achievement.

The data that will be used for the evaluation of the 2 certifications schemes (Data Science and IoT) are primary data coming from a survey at the end of the certification exams (see Annex 6) and the WP4 Quality Report. The stakeholders involved at the evaluation of the certification schemes are the participants in the exams. The indicators that will be used to evaluate the certification schemes are the following:

Quantitative Indicators

- Number of participants in the certification exams
- Success rate at the certification exams

Qualitative Indicators

- Overall experience of the certification procedure
- Certification system
- Prescence of the supervisor during the exams
- Organization of the certification procedure
- Documents and instructions sent before the exams

3.3.4 National workshops and final conference

The project will organize a set of national workshops and a final conference. The data that will be used to evaluate these events (as well as the project impact) are questionnaires that will be distributed to the participants during the events (please refer to the Annex 7 and 8) and the WP7 Quality Report. The stakeholders involved at the evaluation of these events are IT professionals and companies, associations of IT companies, professionals and scientists, HEIs, VET providers, as well as other relevant stakeholders (e.g., Policy Makers and Certification Bodies). The indicators that will be used to evaluate these events are the following.

Quantitative Indicators

- Number of participants in the national workshops
- Number of participants in the final conference





Qualitative Indicators

- Availability of necessary information prior the event
- Fulfillment of event's goals
- Expectations before the event
- Impressions after the event
- Reasons to attend the event
- Contribution of the event to get a clear picture of project outputs
- Satisfaction from speakers, presentations, process, discussions, quality sessions, date
- Weakest and strongest points of the event





4 Annexes

The following Annexes are attached to this deliverable:

- Annex 1: Questionnaire for the evaluation of online courses at MOOC
- Annex 2: Questionnaire for the evaluation of transversal skills training by trainees
- Annex 3: Questionnaire for the evaluation of transversal skills training by trainers
- Annex 4: Questionnaire for the evaluation of work-based learning by trainees
- Annex 5: Questionnaire for the evaluation of work-based learning by trainers
- Annex 6: Questionnaire for the evaluation of certification exams
- Annex 7: Questionnaire for the evaluation of national workshops
- Annex 8: Questionnaire for the evaluation of final conference

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Annex 1 Questionnaire for the evaluation of online courses at MOOC

VIEW UNIT IN STUDIO

DS-EM5 course evaluation

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QUESTIONS

QUESTIONS					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.I have enjoyed the course.	0	0	0	0	0
2.This course was challenging.	0	0	0	0	0
3.The course meet my expectations.	0	0	0	0	0
4.The quality of the training material was high.	0	0	0	0	0
5.The content was well organized and easy to follow.	0	0	0	0	0
6.The course will be useful in my work.	0	0	0	0	0
7.The objectives of the course were clearly defined.	0	0	0	0	0
8.The time allocated for the course was reasonable.	0	0	0	0	0
9.The course enhanced my knowledge of the subject matter.	0	0	0	0	0
10.In this course, I have been challenged to learn more than I expected.	0	0	0	0	0





Annex 2

Questionnaire for the evaluation of transversal skills training by trainees

SEnDIng transversal skills online training -Trainees evaluation form

This is trainees' evaluation form for the assessment of SEnDIng transversal skills online

training. You are kindly asked to answer all questions. * Required Trainee profile 1. Sex * Mark only one oval. Female Male 2. Age group * Mark only one oval. 18-30 31-40 41-50

51-60

60+

3.	Educational level (choose the highest degree) *
	Mark only one oval.
	High School
	College/University
	Post-graduate studies - MSc
	Post-graduate studies - Phd
4.	Have you attended in the past any training on transversal skills? *
	Mark only one oval.
	Yes
	No
Ti	raining data
5.	1. Country *
	Mark only one oval.
	Greece
	Bulgaria
	Palestine
6.	2. Training start date *
	Example: January 7, 2019

7.	3. Training end date *	
	Example: January 7, 2019	
T	raining assessment	Please evaluate every aspect of the training (1= Not at all, 5=Completely)
8.		degree of the fulfillment of the expectations you had before aining according to the following evaluation criteria (Rate 1-5

Mark only one oval per row.

9. 5. Please evaluate the objectives of the training according to the following evaluation criteria (Rate 1-5): *

Mark only one oval per row.

	1	2	3	4	5
Meeting training objectives with real training needs					
Adequacy of cultivated knowledge, skills and competences to meet the needs for effective communication and presentation					
Adequacy of cultivated knowledge, skills and competences to meet the needs for adaptation to changes					
Adequacy of cultivated knowledge, skills and competences to meet the needs for effective teamwork					
Adequacy of cultivated knowledge, skills and competences to meet the needs for goal-setting					
Adequacy of cultivated knowledge, skills and competences to meet the needs for thinking out of the box					

Mark only one oval per row.					
	1	2	3	4	
Sequence, hierarchy and connection of modules content					
Adequacy of modules duration					
Relevance of the modules to the objectives of the SEnDIng project					
Presentation of new knowledge, approaches and theories (modules innovation)					
Usefulness of the theoretical knowledge (as a whole)					
Correspondence of theoretical knowledge to the needs of acquiring competences and skills					

Usability of the online training platform

Tools of the online training platform

12. 8. Please evaluate the training material and methodology of the training according to the following evaluation criteria (Rate 1 to 5) *

Mark only one oval per row.

	1	2	3	4	5
Adequacy of the training material					
Quality of the training material					
Usefulness and exploitation of the training material					
Appropriateness of proposed training methods and techniques					

13. 9. Please evaluate the trainer according to the following evaluation criteria (Rate 1 to 5)

Mark only one oval per row.

	1	2	3	4	5
Scientific knowledge of subject					
Ability to transfer knowledge					
Organization and preparation of face to face training					
Adequacy and Quality of material distributed					
Relationship with trainees					
Ability to handle group, problem solving, flexibility					
Proper behaviour					
Consistency - responsibility					
Communication skills - personal contact and cooperation					
Innovation in educational methods and techniques					
Implementation / use of supervisory means					
Adherence of schedule					

Selfassessment You are kindly asked to assess your performance during the transversal skills training

14.	10. Please evaluate your behavior and presence (Self-Assessment) during the
	training according to the following evaluation criteria (Rate 1 to 5) *

Mark only one oval per row.

	1	2	3	4	5
Participation in the educational process					
Consistency - responsibility					
Proper behaviour					
Relations with other trainees					
Cooperation with other trainees					
Relations with trainer(s)					
Taking initiatives					
Formulating opinions, approaches					
Use of educational tools					
Performance in exercises, tests, tasks					
Ability to adapt to the needs and specifics of training					
Felt prepared to apply new knowledge at work					

Other comments

15.	11. Do you have	other comm	ents/proposals?
-----	-----------------	------------	-----------------



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Annex 3

Questionnaire for the evaluation of transversal skills training by trainers

SEnDIng transversal skills online training -Trainers evaluation form

This is trainers' evaluation form for the assessment of SEnDIng transversal skills online training. You are kindly asked to answer all questions

* Required Trainer profile 1. Sex * Mark only one oval. Female Male 2. Age group * Mark only one oval. 18-30 31-40 41-50 51-60 60+

3.	Educational level (choose the highest degree) *
	Mark only one oval.
	High School College/University Post-graduate studies - MSc
	Post-graduate studies - Phd
4.	Years of experience in adult aducation *
	Mark only one oval.
	1-3 4-6 7-10
	More than 10
T	raining data
5.	1. Country *
	Mark only one oval.
	Greece
	Bulgaria
	Palestine
6.	2. Training start date *
	Example: January 7, 2019

7. 3. Iraining end date	
Example: January 7, 201	9
Training assessment	4. Please evaluate every aspect of the training (1= Not at all, 5=Completely)

8. Please evaluate the information that the trainees had at the start of the training according to the following evaluation criteria (Rate 1-5) *

Mark only one oval per row.

	1	2	3	4	5
The purposes of the training					
The transversal skills training modules					
The training schedule					
The subject of the training					
The rules of procedure of the training (rights - obligations of members)					

9. 5. Please evaluate the objectives of the training according to the following evaluation criteria (Rate 1-5): *

Mark only one oval per row.

	1	2	3	4	5
Meeting training objectives with real training needs					
Adequacy of cultivated knowledge, skills and competences to meet the needs for effective communication and presentation					
Adequacy of cultivated knowledge, skills and competences to meet the needs for adaptation to changes					
Adequacy of cultivated knowledge, skills and competences to meet the needs for effective teamwork					
Adequacy of cultivated knowledge, skills and competences to meet the needs for goal-setting					
Adequacy of cultivated knowledge, skills and competences to meet the needs for thinking out of the box					

Mark only one oval per row.					
	1	2	3	4	5
Sequence, hierarchy and connection of modules content					
Adequacy of modules duration					
Relevance of the modules to the objectives of the SEnDIng project					
Presentation of new knowledge, approaches and theories (modules innovation)					
Usefulness of the theoretical knowledge (as a whole)					
Correspondence of theoretical knowledge to the needs of acquiring competences and skills					
7. Please evaluate the online training pathe following evaluation criteria (Rate Mark only one oval per row.		utilized fo	or the trai	ining acco	ording
	1	2	3	4	5
Adequacy/quality of the online training platform					
Usability of the online training platform					

Tools of the online training platform

12. 8. Please evaluate the training material and methodology of the training according to the following evaluation criteria (Rate 1 to 5) *

Mark only one oval per row.

	1	2	3	4	5
Adequacy of the training material					
Quality of the training material					
Usefulness and exploitation of the training material					
Appropriateness of proposed training methods and techniques					

13. 9. Please evaluate the trainees of the training according to the following evaluation criteria (Rate 1 to 5)

Mark only one oval per row.

	1	2	3	4	5	
Participation in the educational process						
Consistency - responsibility						
Proper behaviour						
Relations among trainees						
Cooperation among trainees						
Relations with trainer(s)						
Taking initiatives						
Formulating opinions, approaches						
Use of educational tools						
Performance in exercises, tests, tasks						
Ability to adapt to the needs and specifics of training						
Expressed preparedness to apply new knowledge at work						

Selfassessment You are kindly asked to assess your performance during the transversal skills training $% \left(1\right) =\left(1\right) \left(1\right) +\left(1\right) \left(1\right) \left(1\right) +\left(1\right) \left(1\right)$

14. 10. Please evaluate your behavior and your presence (Self-Assessment) during the training according to the following evaluation criteria (Rate 1 to 5) *

Mark only one oval per row.

	1	2	3	4	5
Creation of a comfortable learning environment					
Good relationship with trainees					
Group handling, problem solving, flexibility					
Effective facilitation to participants during activities					
Knowledge transfer to trainees					
Full coverage of the planned content and duration					
Mastery of the content					
Kept learning outcomes consistently in mind					
Made adjustments in delivery to better meet participant needs					
Utilised the most appropriate training techniques					
Adequacy and quality of material distributed					
Felt prepared					

Other comments

15.	11. Do you have other comments/proposals? *



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Annex 4 Questionnaire for the evaluation of work-based learning by trainees

WBL evaluation report by trainees

This is the evaluation report to be filled by each trainee after the end of the work based learning.

*	* Required	
Т	Trainee profile	
1.	Company. *	
2.	Sex	
	Mark only one oval.	
	Male	
	Female	
3.	Age group. *	
	Mark only one oval.	
	18-30	
	31-40	
	41-50	
	51-60	
	60+	

4.	Educational level (choose the highest degree). *						
	Mark only one oval.						
	High School College/University						
	Post-graduate studies - MSc						
	Post-graduate studies - Phd						
5.	Years of work experience in the field of Data Science. *						
	Mark only one oval.						
	0 1-5						
	6-10						
	11-20 Many theor 20						
	More than 20						
6.	Years of work experience in the field of IoT. *						
	Mark only one oval.						
	0						
	1-5						
	6-10						
	11.20						
	More than 20						

7.	Have you attended any training related to your profession? *						
	Mark only one oval.						
	Yes						
	No						
W	ork Based Learning data						
8.	Work based learning sta	art date. *					
	Example: January 7, 2019						
9.	Work based learning en	nd date. *					
	Example: January 7, 2019						
10.	SEnDIng program atte	nded.					
	Mark only one oval.						
	Data Science						
	loT						
	Data Science and I	оТ					
	ork based learning	Please evaluate every aspect of Work Based Learning (WBL) - (Rate 1: Not at all - 5: Completely).					
E,	valuation						

11.	Please evaluate the degree of the fulfillment of the expectations you had before
	the beginning of WBL according to the following criteria. *

Mark only one oval per row.

	1	2	3	4	5
Improvement of knowledge, skills and competences					
Acquiring more qualifications					
Professional development					
Enhancement of professional capacity					
Facilitation of labour mobility					
Fulfillment of expectations I had before the beginning of WBL					

12	Please evaluate the	connection of WBL	with the othe	r phases of SF	nDlng training *

	1	2	3	4	5
The online training at Data Science/IoT and transversal skills training had adequately prepared me for WBL					
There was correlation between the theoretical and practical part of the training					
The allocation of hours between the online training at Data Science/IoT, the transversal skills training and the WBL was adequate.					

13. Please evaluate the outcomes of WBL training according to the following criteria. *

	1	2	3	4	5
The training objectives met the real training needs					
Exploitation of theoretical knowledge during WBL					
Acquiring knowledge, skills, competences and changed behaviour during the WBL					
There is strong potential of exploiting the outcomes of WBL in my company					
The training objectives of WBL met the market needs					

14. Please evaluate the WBL training according to the following criteria. *

	1	2	3	Column 4	5
Implementation and management of WBL					
Consulting and support during WBL from SEnDIng partners					
The time was sufficient to complete the WBL					
Quality of WBL					
Cohesion between the theoretical and practical part of the modules					
Adherence to WBL scheduling					
Involvement of employers, supervisor and other colleagues in WBL					
Level of satisfaction from the way that the in-company trainer provided training					

15. Please evaluate the training material and methodology of work based learning according to the following criteria. *

	1	2	3	4	5
Adequacy of the training material					
Quality of the training material					
Usefulness and exploitation of the training material					
Appropriateness of proposed training methods and techniques					

16. Please evaluate your in-company trainer according to the following criteria *

	1	2	3	4	5
Scientific knowledge of subject and professional experience					
Creation of a comfortable learning environment					
Knowledge transfer to trainees					
Organization and preparation of WBL training					
Adequacy and quality of distributed material					
Relationship with trainees					
Group handling, problem solving, flexibility					
Facilitation to participants during activities					
Ability to adapt to the needs and particularities of trainees					
Utilised the most appropriate training techniques					
Adequacy and quality of additional material distributed					
Level of preparation					
Proper behaviour					
Consistency - responsibility					
Communication and collaboration skills					
Implementation / use of supervisory means					

	Adherence	of schedule	WBL evaluation re	port by trainee	es					
		on with employers and ot e implementation of the	her							
Selt ass	f- essment	You are kindly asked to a 1: Not at all - 5: Complete		rmance duri	ng the work	based learr	ning (Rate			
17.	Please evaluate your behavior and your presence during the work based learning according to the following criteria. * Mark only one oval per row.									
			1	2	3	4	5			
	Participatio	n in the WBL								
	Consistenc	y - responsibility								
	Proper beha	aviour								
	Relations w	ith other trainees								
	Cooperation	n with other trainees								
	Relations w	ith trainer(s)								
	Taking initia	atives								
	Formulating	g opinions, approaches								
	Use of educ	cational tools								
	Performanc	ee in allocated tasks								
	Ability to ac	lapt to the needs and training								

Felt prepared to apply new knowledge

at work

Other comments

18. How do you generally evaluate SEnDIng work-based learning? *

Mark only one oval.

1	2	3	4	5	

19.	Do you have any other comments or suggestions? "					



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Annex 5 Questionnaire for the evaluation of work-based learning by trainers

WBL evaluation report by trainers

This is the evaluation report to be filled by each trainer/mentor after the end of the work based learning.

*	Required		
Т	rainer profile		
1.	Company. *		
2.	Sex.	_	
۷.	Mark only one oval.		
	Male Female		
3.	Age group. *		
	Mark only one oval.		
	18-30		
	31-40		
	41-50		
	51-60		
	60+		

4.	Educational level (choose the highest degree). *
	Mark only one oval.
	High School College/University
	Post-graduate studies - MSc
	Post-graduate studies - Phd
	Post-graduate studies - Fild
5.	Years of work experience in the field of Data Science. *
	Mark only one oval.
	0
	1-5
	6-10
	11-20
	More than 20
6.	Years of work experience in the field of IoT. *
	Mark only one oval.
	0
	1-5
	6-10
	11-20
	More than 20

Work Based Learning data

7.	Work based learning start date. *							
	Example: January 7, 2019							
8.	Work based learning end date. *							
	Example: January 7, 2019							
9.	SEnDIng program attended by trainees	5						
	Mark only one oval.							
	Data Science							
	loT							
	Data Science and IoT							
	ork based learning Not at all - 5: Convaluation		et of Work Ba	ased Learniı	ng (WBL) - (F	Rate 1:		
10.	Please evaluate the information that t based learning according to the follow			•	inning of	work		
	Mark only one oval per row.							
		1	2	3	4	5		
	The purposes of WBL training							
	The subject of WBL training							
	The WBL schedule							
	The rules and procedure of WBL training (rights - obligations of people involved)							

11.	Please evaluate the connection of work based learning with the other phases of
	SEnDIng training. *

Mark only one oval per row.

	1	2	3	4	5
The online Data Science/IoT training and the transversal skills training had adequately prepared trainees for WBL					
There was correlation between the theoretical and practical part of the modules					
The allocation of hours between the online Data Science/IoT training, the transversal skills training and the WBL was adequate.					

12. Please evaluate the outcomes of WBL according to the following criteria. *

	1	2	3	4	5
The training objectives meet the real training needs					
Exploitation of theoretical knowledge during WBL on behalf of the trainees					
The trainees obtained new knowledge, skills, competences and changed their behaviour during the WBL					
There is strong potential of exploiting the outcomes of WBL in my company					
The training objectives of WBL meet market needs					
The expectations I had before the beginning of WBL have been fulfilled					

Please evaluate the WBL training according to the following evaluation criteria. *

13.

14.

1	2	3	4	5
1	2	3	4	5
		and methodology	and methodology of WBL a	and methodology of WBL according

Selfassessment You are kindly asked to assess your performance during the work based learning (Rate 1: Not at all - 5: Completely).

15. Please evaluate your behavior and your presence during the work based learning according to the following criteria. *

	1	2	3	4	5
Creation of a comfortable learning environment					
Relationship with trainees					
Group handling, problem solving, flexibility					
Effective facilitation to participants during activities					
Knowledge transfer to trainees					
Full coverage of the planned content and duration					
Kept learning outcomes consistently in mind					
Made adjustments in delivery to better meet participants' needs					
Utilised the most appropriate training techniques					
Adequacy and quality of additional material distributed					
Felt prepared					
Proper behaviour					
Consistency - responsibility					
Communication and collaboration skills					
Implementation / use of supervisory means					
Collaboration with employers and other staff for the implementation of WBL					

|--|

Other comments

16. How do you generally evaluate SEnDIng work-based learning? *

Mark only one oval.

1	2	3	4	5	

s?
3



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Annex 6 Questionnaire for the evaluation of certification exams

Sending Evaluation Form for the Certification Procedure

The SEnDIng project (Sector Skills Alliance for the design and delivery of innovative VET programmes to Data Science and Internet of Things professionals) is a strategic partnership for Sector Skills Alliance (SSA) which is implemented under the key action Cooperation for innovation and the exchange of good practices of Erasmus+ programme with a project number 2017-3184/001-001.

The SEnDIng alliance brings together twelve partners coming from Greece, Bulgaria, Cyprus and Ireland with different profile, expertise and culture (higher education institutes, VET providers, IT associations, SMEs and a certification body) that share a common vision: to provide the European labor market with high qualified DS and IoT professionals.

The evaluation form is anonymous and is part of the project cycle of Sending Project

* Required







1.	How would you rate your overall experience of the certification procedure? *
	Mark only one oval.
	Very dissatisfied
	Somewhat dissatisfied
	Neutral
	Somewhat satisfied
	Very satisfied

2.	How would you rate the UNICERT S.A.'s certification system? *
	Mark only one oval.
	Very dissatisfied
	Somewhat dissatisfied
	Neutral
	Somewhat satisfied
	Very satisfied
3.	How would you rate the presence of the UNICERT S.A.'s supervisor? *
	Mark only one oval.
	Very dissatisfied
	Somewhat dissatisfied
	Neutral
	Somewhat satisfied
	Very satisfied
4.	How would you rate the organisation of the certification procedures of UNICERT S.A.? *
	Mark only one oval.
	Very dissatisfied
	Somewhat dissatisfied
	Neutral
	Somewhat satisfied
	Very satisfied

5.	How would you rate the documents and the instructions which were sent by UNICERT S.A.? *
	Mark only one oval.
	Very dissatisfied
	Somewhat dissatisfied
	Neutral
	Somewhat satisfied
	Very satisfied
6.	How would you rate the documents and the instructions which were sent by UNICERT S.A.? *
	Mark only one oval.
	Very dissatisfied
	Somewhat dissatisfied
	Neutral
	Somewhat satisfied
	Very satisfied
7.	Have you been aware of the webpage of UNICERT S.A. as a certification body? *
	Mark only one oval.
	Yes
	○ No
8.	Please give us any additional comments regarding your experience

Thank you for your response!

The European Commission support for the production of this publication does not constitute endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

GDPR Consent: We would like to inform you that during the certification of the SEnDIng program and in the context of the project, we will obligated to collect the evaluaton forms anonymously. Also in this context we are obliged by EU and Erasmus + regulations to keep in our file all personal data and material that we collect and produce during this project for at least 5 years after the completion of the project.



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Annex 7 Questionnaire for the evaluation of national workshops





WORKSHOP EVALUATION FORM

The purpose of the questionnaire is to collect feedback from ICT industry representatives (stakeholders) in order to evaluate the SEnDIng project impact on the different target groups.

Your comments and recommendations are highly appreciated.

GDPR agreement	
$\hfill \hfill $	publicly used for the purpose of the SEnDIng projec
implementation and impact evaluation.	

Workshop: Building the Data Science and IoT skills and competences of IT professionals

Date: 14 February 2020

Place: UniCert premises, Akadimias 98-100, 106 77, Athens, Greece

Organizers: Greek Computer Society, Universal Certification Solutions, University of Patras

	QUESTIONS	m	in		m	ıax	
A1	Which were your expectations about the workshop (topics, goals, etc.) PRIOR your attendance?	1	2	3	□ 4	□ 5	
A2	What are your impressions from the workshop AFTER after your attendance?	□ 1	2	3	□ 4	□ 5	
A3	Would the presented Vocational Training Program for IoT & Data Science be useful for:						
A3.1	Up-skilling of ICT professionals and especially Data Scientists and IoT engineers in order to meet new challenges in the work field	□ 1	2	3	□ 4	□ 5	
A3.2	Training your employees in skills and competences that are more tailored to the needs of ICT learners and industry based on a learning outcomes oriented vocational curricula	□ 1	2	3	□ 4	□ 5	



Q3



A3.3	Development of a more aware and professionals	d flexible mind-set amongst ICT	1	2	3	□ 4	□ 5
A3.4	More interactive learning opportunities learning technologies for learners;	es via the use of new teaching and	1	2	3	□ 4	□ 5
A3.5	Reduced training expenses for ICT buthe VET programs.	usinesses due to the free access to	1	2	3	□ 4	□ 5
A3.6	Free access to learning opportunities businesses that lack training facilities		□ 1	2	3	□ 4	□ 5
B1	Overall workshop content:		1	2	3	□ 4	□ 5
B2	Workshop organization:		1	2	3	□ 4	□ 5
Q1	Do you think that the presented Voca to the elimination of the ICT skills' gap		ıta Sc	ience	can d	contrib	ute
	YES	PARTIALLY	NC)			
	Any comments:						
Q2	Do you think that the presented Voc needs of market?	ational Training Program for IoT &	Data	Scien	ce m	eets th	ne real
	YES	PARTIALLY	NC)			
	Any comments:						

Which topic you would like to be included or elaborated in more details in such a workshop?





Q4	Which are the strengths of the presented Vocational Training Program for IoT & Data Science related to your business:
Q5	Which are the weaknesses of the presented Vocational Training Program for IoT & Data Science:
<u>Contac</u>	<u>ct information</u> (*Optional)
C1.1	Name:
C1.2	Company/organization:
C1.3	Position:
C1.4	E-mail:
_ TI	HANK YOU!





Annex 8 Questionnaire for the evaluation of final conference

SEnDIng final conference - Evaluation form

The questionnaire aims to collect feedback from SEnDIng stakeholders in order to evaluate the final conference and the project impact on the different target groups.

* Required Dimiter Shalvardjiev, Code Runners Personal details 1. GDPR agreement * Check all that apply. I consent the results of the survey to be processed by the SEnDIng consortium for reporting reasons 2. Name, Surname Organization 3. Type of organization * 4. Mark only one oval. VET provider **Higher Education Institution** Enterprise Policy maker

Other

5.	Industry *	
	Mark only one ova	I.
	ICT	
	Energy	
	Utilities	
	Health	
	Education	
	Finance	
	Other	
	onference valuation	You are kindly asked to evaluate the conference by providing your feedback at the following questions.
6.	Did you receive al	II the information you needed before the conference? *
	Mark only one ova	I.
	Yes	
	◯ No	
7.	Do you think the	conference met its goals? *
	Mark only one ova	I.
	Vac	
	Yes	
	O No	

8.	Which were your expectations about the conference (topics, goals, etc.) PRIOR yo attendance? *	ur
	Mark only one oval.	
	1 2 3 4 5	
	Very Low Very High	
9.	Which are your impressions from the conference AFTER your attendance? * Mark only one oval.	
	1 2 3 4 5	
	Very bad Very Good	
10.	Did the conference contribute in a substantial way to get a clear picture of SEnDIng project's outputs and how you can exploit them? * Mark only one oval. Yes No Not sure	
11.	Why did you choose to attend the conference and what are you hoping to take away from the experience? *	
	Check all that apply.	
	Learning more about the SEnDIng project Learning how I can exploit SEnDIng outputs	
	Learning more about initiatives, policies and frameworks for digital skills development especially at the domains of Data Science and IoT	
	Networking with relevant stakeholders	

	1 2	3	4	5		
Very Low				Very Hi	gh	
Indicate you Mark only one			the follo	wing aspect	s of the	conferer
	V	ery Low	Low	Moderate	High	Very Hig
Online Platfo	rm					
Speakers						
Presentation	S					
Process						
Discussions						
Quality of Se	ssions					
Date						

15.	Which was the strongest point of the conference? *							
	Mark only one oval.							
	Speakers							
	Presentations							
	Discussions							
	Quality of Sessions							
	Networking opp	portunities						
16.	Which was the wea	akest point of the conference? *						
	Mark only one oval.							
	Speakers							
	Presentations							
	Discussions							
	Quality of Sessions							
	Networking op	portunities						
17.	Please mention any	other comment about the conference						
	SEnDIng impact You are kindly asked to evaluate the impact of SEnDIng project by providing your feedback at the following questions. evaluation							
eve	evaluation							

18. Evaluate the overall impact of SEnDIng training program on the following aspects *

	Very Low	Low	Moderate	High	Very High
Up-skilling of ICT professionals and especially Data Scientists and IoT engineers in order to meet new challenges in the work field					
Training in skills and competences that are more tailored to the needs of ICT professionals					
Development of a more aware and flexible mind-set amongst ICT professionals					
More interactive learning opportunities via the use of new teaching and learning technologies for learners					
Reduced training expenses for enterprises and other organizations due to the free access to the VET programs					
Free access to learning opportunities and training methodologies for ICT businesses that lack training facilities and departments					
Ability of ICT professionals throughout Europe to respond to the needs of different ICT markets and other sectors like banking, insurance and energy					

	Very Low	Low	Moderate	High	Very High
Curicculum	Very Low		Woderate		Very riigh
MOOC on Data Science					
MOOC on Internet of Things					
MOOC on transversal skills					
Work based learning methodology					
Do you think that SEnDIng traini skills gap at the domains of Data Mark only one oval.	_			he elimii	nation of t
skills gap at the domains of Data	_			he elimii	nation of t
skills gap at the domains of Data Mark only one oval. Yes No Partially Do you think that SEnDIng traini Mark only one oval.	a Science a	nd loT?	*		
skills gap at the domains of Data Mark only one oval. Yes No Partially Do you think that SEnDIng traini	a Science a	nd loT?	*		

ZZ .	which are the strengths of SenDing training program?
	Check all that apply.
	MOOC on Data Science
	MOOC on IoT
	Transversal skills development
	Work based learning
	None of the above
	I do not know
23.	Which are the weaknesses of SEnDIng training program? *
	Check all that apply.
	MOOC on Data Science
	MOOC on IoT
	Transversal skills development
	Work based learning
	None of the above
	I do not know
24.	Do you have any other comment about SEnDIng impact on stakeholders?



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