



ETV4INNOVATION

**Development of an online resource to train enterprises with
the final objective to foster them into Environmental
Technology Verification**



Summary of IO2: Joint Curriculum Definition

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1. Introduction

The aim of the deliverable is to compile the Joint Curriculum of ETV4INNOVATION project. This intellectual output has defined and analysed the most suitable curriculum according to the target groups needs defined in IO1. The Joint Curriculum has been designed in terms of the necessary areas of knowledge and pedagogical methodologies better optimised to fit the variety of job profiles and the target industries of ETV4INNOVATION project, by identifying the learning outcomes that the proposed training content requires, as well as the training units or address the specific needs of certain job profiles.

The main conclusions from the implementation survey in IO1 are related to the following:

- Environmental Technology Verification is unknown concept: only 8% of the respondents recognise that are sufficiently knowledgeable about ETV. ETV is known for a very narrow group of people.
- From the number of respondents which know something about ETV, a 90% haven't obtained the ETV certificate yet. There is a lack of knowledge about the procedure.
- The main reasons why some of the respondents were using ETV were testing of performance, results' documentation, access to international markets, prove of the technology's performance, etc.
- The vast majority of SMEs and other stakeholders enquired have energy technologies and water treatment technologies are their main areas of activity.
- Among the different obstacles to introduce eco-technologies in the market; respondents answered low environmental awareness, cost, legal services, procurement, etc.

2. Training modules and relevant learning outcomes

The number of modules is defined on the basis of the main conclusions from the report regarding the lack of skills and knowledge of SMEs and other stakeholders in ETV. On the basis of these conclusions in IO1, it was defined different learning outcomes and based in all of these resources, the training materials were formulated. Units are constructed and organised in a coherent way with regard to chosen criteria (i.e. relation to specific stages in tendering process, relation to the same field of skills).

Training paths are designed in terms of the necessary areas of knowledge, by providing a core training path, as well as training modules and their units in languages to address the specific

needs of certain job profiles. Each learning module is comprised by several sub-units built around remote learning techniques.

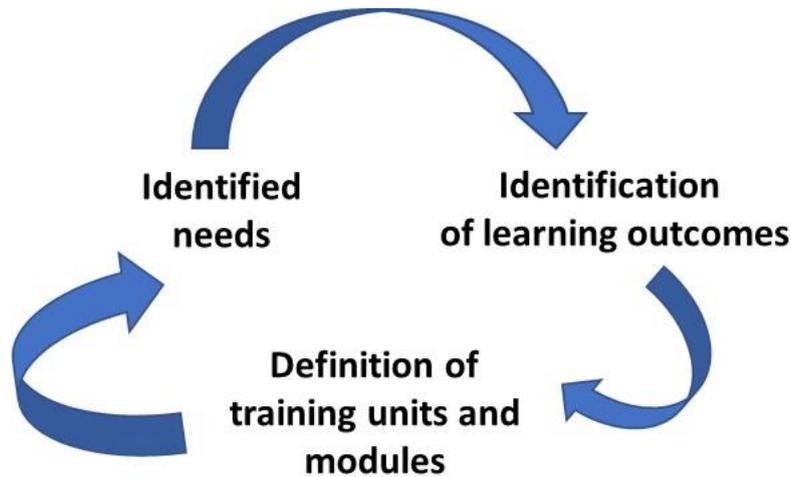


Figure 1. Methodology used to define training modules/units

Three modules were defined and the learning outcomes related are detailed below:

Module 1. Basic aspects of verification of environmental technology

- Understand what ETV is and the purpose of this verification
- Know the different entities that are involved in ETV
- Know and apply the basic vocabulary related to ETV
- Know and indicate people, entities that could benefit from ETV
- Know EU standards and other basic documents related to ETV
- Know and identify the features of ETV

Module 2. Environmental Technology Verification procedure

- Describe application of technology on the given examples;
- Define entrance parameters dedicated to technology area;
- Choose and specified data needed to application: matrix, purpose, specific operational conditions for technology given as an example;
- Identify eligible criteria;
- Characterize groups of criteria's: environmental added value; innovation level; relevance to user needs; fulfilment the legal regulations, determine affiliation to technology areas.
- Describe what documents are deliverable of each steps of verification;
- Indicate initial parameters and assess verifiable of technologies;

- Expressed in a specific and unambiguous way using absolute measurable figures so that only one interpretation is possible;
- Reflect the needs and requirements of the users for specific applications at specific operational conditions;
- Know conditions of publication statement of verification;

Module 3. The ETV program as a commercial tool on domestic and international markets

- Identify and indicate the ETV benefits in terms of commerce and sales
- Identify the different level of technology readiness
- Identify the minimum requirements in terms of Technology Readiness to obtain an ETV
- Identify the benefits of clients which buy ETV products, process or service
- Create and integrate a marketing plan for an ETV product, process or service.
- Create map and define actual needs in technologies area;
- Identify and analyse of some success cases of ETV.

3. Specification

The platform that will host the course offers different options about the tools that can be used: videos, presentations, pdf, forum, etc.

Consortium has agreed the following points:

- All materials should be developed in English, and after that each partner will translate them to relevant national language. It is important to use the same software and the same quality level for the developed materials used in the course.
- Intellectual Property Rights: the material will have under Creative Common License with non-commercial use. The original source should be quoted if already developed materials are used.

Also, it is important to define the tasks of each partner in order to continue with the implementation of IO3 and IO4 of the project:

- INPT is responsible to draft a template for power points presentations and pdf documents. Templates will contain the same corporative image.
- CETEM will give teacher access to all partners in order to upload the content.
- CETEM will be responsible to upload the content in English after the whole check of Inventya.
- Each partner will be responsible to upload the content to the platform in relevant national language:
 - CETEM– Spanish version
 - GSC– Bulgarian version

- ITP – Polish version
- PurFil – Danish version
- INPT – French version
- All partners should develop and upload the content at the same time to see how it suits with the platform.

During the third Transnational Meeting, Consortium decided to evaluate the possibility of integrate at the beginning of the module, an introductory video in order to provide an innovative and interactive introduction about ETV which could engage more people as user of ETV4INNOVATION training content.

Due to the lack of budget for this specific task because partners would need to subcontract an ICT partner, Consortium decide to try to identify some videos already upload in Internet related to ETV and try to find any similarities with ETV4INNOVATION's objective and try to modify it with the permission of the video's author.

4. Assessment

This part of the specification will identify the assessment methods most appropriate to the short course.

After completing each lecture, students will be subjected to a questionnaire, concretely a quiz to check their skills. Students will receive a certain number of points for each part of the answers getting the required number of points means passing the training module with a positive grade.

After completing the course, each learner will be required to complete a general quiz basis on topics presented in the whole course. A positive test result will entitle the student to receive a confirmation certificate.

5. Conclusions

Three main modules have been defined: one based on basic concepts on Environmental Technology Verification (ETV) as introductory module to understand what this verification is, why it as created, etc. A second module based on ETV produce, to introduce the different steps which a product, process or service should complete in order to achieve the Statement of Verification. This second module will also have some success cases in terms of technical parameters.

Finally, a third module which will be prepared to be focused in the commercial part of ETV (benefits in terms of sales, new buyers, etc.)

With this defined topics, ETV4INNOVATION training course will train professionals of green technologies to acquire the necessary knowledge to be able to bid an ETV project with green criteria and update their companies to this new European tool in order to expand their domestic and international market.

The units of each module have been defined and organised in a coherent way with regard to chosen criteria (i.e. relation to specific stages in tendering process, relation to the same field

of skills, etc.).

Once the training paths have been generated, the contents will be carefully reviewed and improved to make sure that the transitions between consecutive modules are smooth, and there are no redundant or missing parts. Therefore, it is possible that the unit contents undergo minor changes. This activity will achieve the best results through a close collaboration among partners.

Partners decided that quiz will be the best assessment methodology due to the fact that it could be auto-corrected by the Platform automatically, providing students the possibilities of having the feedback about their knowledge acquired.

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