



ETV4INNOVATION

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



Summary of IO1: Report of current needs and skills required towards Environmental
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The world is being confronted with urgent environmental challenges such as climate change, the unsustainable use of resources and a loss of biodiversity. Innovative technologies can make a significant difference in terms of resource and cost saving, and indeed, there are many innovative environmental technologies, new and emerging products and re-designed services, in the design and concept phase. However, many of them, because of their innovative status, fail to reach the market since they cannot demonstrate a successful track record of previous applications, often failing to reach the market, simply because they are new and not validated. For this reason, this project: *Development of an online resource to train enterprises with the final objective to foster them into Environmental Technology Verification (ETV4INNOVATION)*, has been developed.

The overall aim of the Erasmus+ ETV4INNOVATION project is to design and develop Joint Curricula for filling knowledge gaps regarding ETV; aimed at current and future managers and workers in technological sectors such as materials, waste & resources technologies, water technologies and energy technologies. The project has been created to support the development and the implementation of an innovative practice; a new training path in Environmental Technology Verification (ETV).

The goal of this report is to provide a complete analysis of the current skills and needs of technological sectors in order to replace the knowledge gap with high level of competences, enabling enhancement of the competitiveness of the eco-technology sectors and the green innovative requirements. This desk-based research was carried out to identify, 1; the future and current needs related to eco-technology and ETV, and 2: the main needs and requirements of European technology industry and other stakeholders to face these challenges. The primary basis of the desk research was to consider the general skills and competences required by SMEs. The ETV4INNOVATION team carried out the search in predominantly in Europe, though other areas were addressed, particularly covering the countries that have already implemented ETV.

This desk research identified and analysed the ability, capacity, skills and competence needs sets of SMEs' and their requirements regarding ETV. To this end, a planned survey was conducted with 90 participants from SMEs & related stakeholders; including regional administrations, universities, development agencies, research and innovation entities, VETs, etc. The questionnaire was prepared in online format, available in English, to target international stakeholders.

Overview of ETV

The overview of the concept itself was initially explained. As spelled out in the larger report, ETV is a documentation mechanism of technology which helps innovative technologies with environmental benefits to more rapidly enter the market. All ready-for-market technologies, which show a potential for innovation and environmental benefits can be proposed and evaluated using the ETV mechanism and this program is intended to be used in a business-to-business context. Before any technology can enter the ETV programme it must meet specific criteria and these are documented in the full report.

The verification of the technology is provided by qualified, accredited, independent organisations called Verification Bodies. The procedures of verification include different phases and these various assessments are covered below:

- Proposal phase: manufacturer contacts Verification Body, quick assessment of the technology is made, advice is given whether to undertake the verification or not
- Specific verification protocol preparation: in this stage definition of technical parameters is verified also requirements on tests are specified, data quality tests are held
- Assessment of existing data: existing data will be checked to find out if it meets all requirements, further tests will be designed, if necessary
- Testing: innovative technology will be tested, if necessary, definition of the test plan will be developed, testing process and then reporting on tests process
- Assessment of all data and Verification: final assessment of the test data and verification requirements
- Reporting and the publication of Verification Statement is the last step

The two main documents of ETV (GVP and ISO standard 14043) were explained, and their relevance to ETV was presented. General Verification Protocol stands for the main technical reference for the implementation and ISO 14034 is a standard for ETV issued by the International Organization of Standardization.

Target groups

The market support offered by ETV was viewed as particularly useful for Small and Medium-Sized enterprises (SMEs): Out of all the companies submitting a technology for verification, 90% are SMEs and over 50% are micro-enterprises. The main target groups for the survey were identified: Environmental Technology developers, Technology purchasers, Representatives of SME's, Testing companies and Investors. In this section all the countries that have implemented ETV already, have been examined in order to understand their practises and experiences. This will be used for future development of curricula. The information provided was used to identify the main repetitive problems during ETV implementation.

Endorsement survey

The online survey was launched to gather data on the ability, capacity, skills and competence needs sets of SMEs' and their requirements regarding ETV. To this end, a planned survey was conducted with 90 participants from SMEs, related stakeholders; including regional administrations, universities, development agencies, research and innovation entities, VETs, etc. The questionnaire was prepared in online format available in English to target international stakeholders. These 90 participants surveyed from various countries including: Denmark; Ireland, Spain, France, Bulgaria, Poland

Most of the respondents represented small companies with less than 10 employees. Efficiency, energy savings, innovative and green technology, waste recovery were the key features named when selling their products. The questionnaire also helped to get a picture of where respondents are exporting their products; the answers were: Europe, Nordic countries.

The survey helped to assess the level of the representative knowledge of ETV by SMEs. The results demonstrated that almost 72% of all the respondents haven't heard about ETV before. The ones that have heard about ETV did that during the various meetings, from business partners, testing bodies.

The survey asked respondents to indicate the 3 obstacles for placing any innovative eco-technology on the domestic market. Respondents answered that legislations are the main obstacle. The following were also mentioned: low environmental awareness, lack of logistics, cost.

The responses gave insightful information about the difficulties, knowledge and experience the respondents have had when addressing ETV. In this respect, the survey can be said to have fulfilled its brief of collecting data on the: the main reasons from SME representatives why ETV is being used, what are the advantages or disadvantages of the structure, what is the current level of knowledge about it.

The survey provided very good insights for the creation of the Curricula. Knowing the problems SMEs are facing after the desk research and survey, facilitates an easier construction of relevant and informative learning material.

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