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6.1

AN OVERALL PRESENTATION OF WP6 DELIVERABLE 6.1 TASKS

EXPLOITATION



METVET

JOINT HIGHER VET

COURSE IN THE METAL SECTOR

WP6 – D. 6.1 – Exploitation Plan



Co-funded by the
Erasmus+ Programme
of the European Union



Erasmus+ KA3 Joint Qualifications in VET
597806-EPP-1-2018-1-EL-EPPKA3-VET-JQ

The European Commission support for the production of this publication does not constitute an 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 there

ABOUT METVET

Metal, machinery and related trades workers are engaged in a range of skilled activities. Those workers need to understand work organization, and the specialist materials and tools to be used in their jobs, as well as of the nature and purpose the final product they are engaged in making.

According to Cedefop's European skills and jobs survey (ESJS), the **5 key skills** for metal, machinery and related trades workers are job-specific skills, problem solving, teamwork, learning and communication. These skills will support employees in this occupation to also tackle anticipated future skill challenges.

METVET project aims at a competence-based professional generic profile served as a basis for designing competence-based training programs. The underlying idea is that vocational education should enable trainees to acquire the competences needed in their future professions. While working as professionals, they should continue to develop competences in order to be able to react to and anticipate future developments in their work.

The project specifically aims at one hand designing, for **Aluminium & Metal Constructions technicians** including:

- **a professional (qualification) profile & a core curriculum (EQF 5)**
- **a corresponding VET program, including innovative teaching methods**
- **a qualification standard (according to ISO/IEC17024) for evaluation & certification.**

All the above will be achieved through the strengthening of the exchange of knowledge and practice between education and training institutions and the labor market. The METVET consortium complementarity will ensure a strong collaboration between the labor market (sectoral organizations) and the education and training institutions. The role of the sectoral organizations will be of ensuring that the developed training is in total adequacy with the employer's needs, supporting the implementation of the training for workers. The role of VET providers will be to develop an adapted, attractive and innovative VET program. The EU umbrella organization will promote the training in the other EU countries.

The purposes of this volume are to replicate the experience and results of METVET in other geographical contexts or other educational entities through the implementation of an Exploitation Plan and the subscription of a Memorandum of Understanding as well as Learning Agreements

The Project Partners

June 2020

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Wp6

EXPLOITATION

Introduction

1 ABOUT WP6 | INTRODUCTION

The European project in the framework of ERASMUS+, called: “**METVET – Creating a joint higher VET course in the Metal Construction Sector**” is being run by a transnational partnership of VET providers and stakeholders from Belgium, Germany, Greece and Italy to pursue the goal to upgrade qualifications of metal workers in small and medium sized enterprises (SME) to the capacity to help to achieve the European Climate goals.

“Metal Construction Sector” in this context means companies, which manufacture, assembly and repair Aluminium and other metal-constructions. It includes manufacturing and applying doors, windows, locking and security systems, metal roofing and metal facades etc. as part of the construction sector.

The aim of this work package (METVET WP6) is to initially investigate existing alternative possibilities of further **exploitation** of project’s results. By identifying and establishing a competitive advantage against these alternatives, the project will develop an appropriate sustainability model including as shareholders all concerned groups (national/region/local authorities, VET providers, business associations, policy makers, trainees). In-depth analysis of the project’s business potential will be realized, covering the countries involved in the project as well as the whole European market, when appropriate. The project’s potential will be assessed against measurable indicators. The Exploitation Plan will be a critical deliverable that will assist the consortium to decide on further courses of action and plan subsequent development, marketing and exploitation activities, either in-house or on a commercial basis. To this end, the present Exploitation Plan also includes a thorough analysis of further work phases.

1.1 Structure of the document

Chapters two, three and four of the present document will deal with a preliminary **background analysis**, respectively identifying the context and potential development of the METVET VET course, its potential beneficiaries, as well as partners & stakeholders.

The **desktop research** carried out under WP6 (“Desktop Research for the Exploitation Plan”) represented an exploratory step in the preparation of the exploitation plan. It is based on the contributions of the METVET partners and gives recommendations and inputs regarding the vision of the project after its end.

These inputs were useful in order to elaborate the **exploitation strategy** and guidelines for making the METVET project results sustainable and used in a long term prospective. The exploitation strategy itself, together with the main further courses of action of the VET course is presented in chapter five.

1.2 Object of the Exploitation Plan

METVET is a European co-funded project aimed to develop a competence-based professional generic profile & a core curriculum (EQF 5), a basis for designing competence-based training programs, focusing on enabling trainees to acquire the competences needed in their future professions, while working as professionals, to continue developing them in order to be able to react to and anticipate future developments in their work. The training, a corresponding VET program including innovative teaching methods, is designed for technicians, as well as other professionals working in the context of construction and planning. The project also focuses on developing a **qualification standard** (according to ISO/IEC17024 and ECVET) for evaluation & certification.

The object of this Exploitation Plan is therefore METVET's main product, i.e. an **innovative training course**, described within Deliverable D4.1 "Curriculum for Aluminium & Metal Constructions technicians" and, consequently, Deliverable D4.3 "Training Material" (Syllabus).

Both products are thoroughly presented in the document "Presentation of WP4 Tasks & Deliverables for the Creation of Curriculum, WP4 – Creation of Curriculum and Syllabus, Qualification standard, evaluation & certification (Vol. A)" and consecutive documents.

The Curriculum for the Aluminium and Metal Constructions Technician was created taking into account the respective Curricula from the countries participating in the METVET project, as well as from third countries.

The curriculum aims to i) upgrade experienced workers with at least 5 years' experience from EQF (European Qualifications framework) level 4 to EQF level 5; ii) provide an EQF level 5 qualification to youths who want to find a job in this sector. A qualification EQF level 4 implies that the trainee is a skilled worker with the capacity to act autonomously in a range of situations and tasks, supervising persons in their work. On the other hand, EQF Level 5 implies deepened knowledge, skills and competences combined with more autonomy and responsibility in one or more fields on the workplace.

In particular, knowledge will be upgraded to horizontal, green and vertical skills and given the impetus to change culture and assimilate a new way of organizing, working and implementing new practices and tools, which are essential for both environmental protection and adaptation of Enterprises in the new conditions of international competition.

Accordingly, the possible scenarios for exploitation of these project results are illustrated in the picture below:

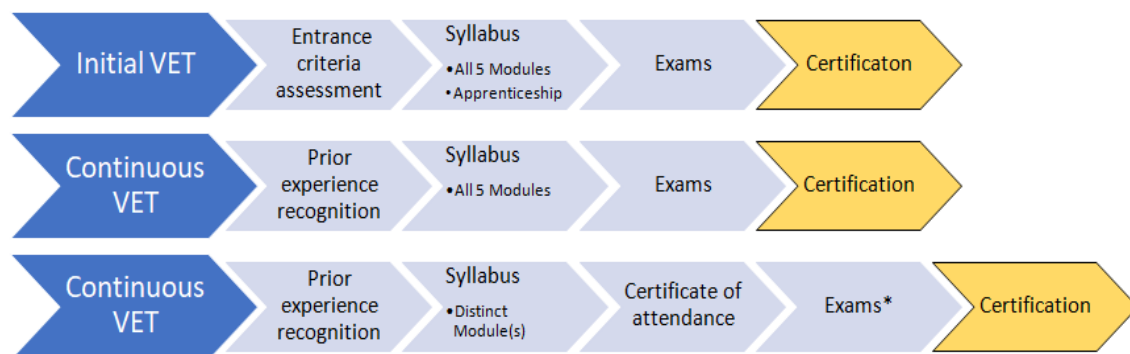


Figure 1 Exploitation scenarios for the METVET training course

The METVET curriculum is structured around 5 Learning Modules (LMs), each of them including 4 Learning Outcomes (LOs). Finally, each LO is composed of 3 units.

A first schematic depiction of the METVET curriculum is provided by the following picture (Figure 2), while its detailed structure is presented with Figure 3.

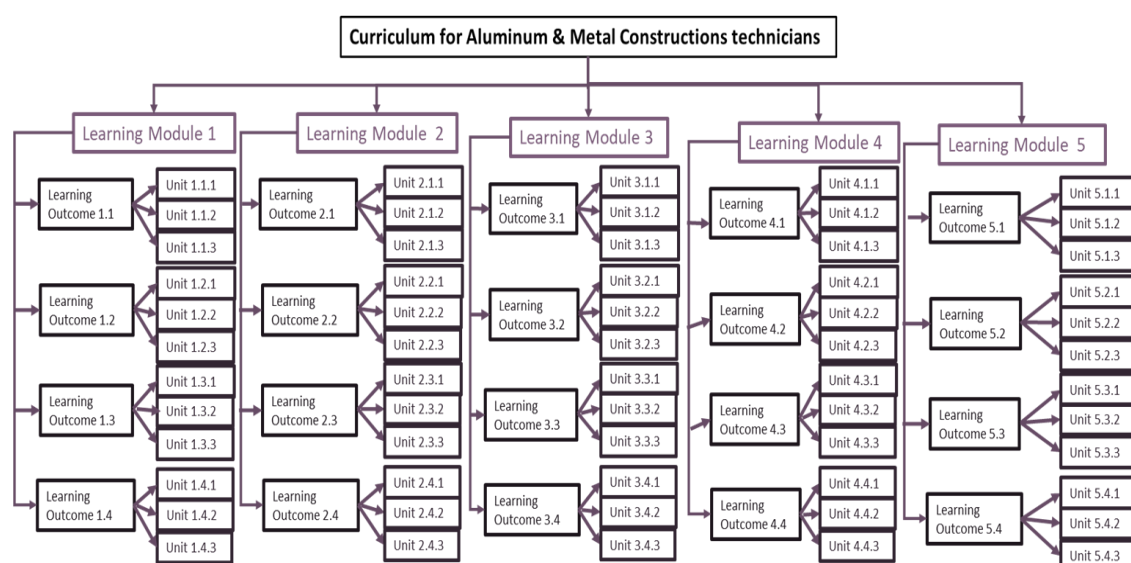


Figure 2 Schematic depiction of the METVET curriculum

LEARNING MODULES	LEARNING OUTCOMES	LEARNING UNITS
LM 1 Materials technology & applications in constructions	LO 1.1 Knowledge of metal Alloys & profiles	1.1.1. Aluminium alloys. Alloys for extrusion, architectural profiles, casting, hardware. 1.1.2. Metal alloys, Steel, Stainless steel. Profile / bending shapes. 1.1.3. Technical features / sheet bending / closed profiles - welding techniques.
	LO 1.2 Knowledge of technical specifications of filling materials	1.2.1. Technical characteristics & dimensioning of glazing for fenestrations. 1.2.2. Technical characteristics & dimensioning coverings. 1.2.3. Technical characteristics / dimensioning synthetic panels coverings.
	LO 1.3 Knowledge of applications for aluminium constructions	1.3.1. Fenestration, shutters, roller shutters typologies and their features. 1.3.2. Curtain walling systems and their features. 1.3.3. Outdoors systems, fences, pergolas, railing etc.
	LO 1.4 Knowledge of applications in metal constructions and interaction with aluminium structures	1.4.1. Metal construction products typologies with various alloys. 1.4.2. Special constructions, i.e. fire-resistant, anti-burglar, bullet proof etc. 1.4.3. Scope of metal-to-aluminium co-operation in metal pre-frame and other mixed- curtain walling, atrium-metal applications.
LM 2 Production facilities and equipment	LO 2.1 Handle and maintain mechanical equipment	2.1.1. Handling equipment for cutting, machining, assembling etc. 2.1.2. Tools and consumables 2.1.3. Basic maintenance principles.
	LO 2.2 Knowledge of production area, personnel - machines, for aluminium	2.2.1. Optimum layout of machinery in the production site. 2.2.2. Organize human resources based on production requirements. 2.2.3. Principles for cost estimation- Data collection, timesheets etc.
	LO 2.3 Knowledge of production area, personnel - machines, for metal and mixed production	2.3.1. Optimum layout of machinery in the production site. 2.3.2. Organize human resources based on production requirements. 2.3.3. Principles for cost estimation- Data collection, timesheets etc.
	LO 2.4 Knowledge of Health and safety practices in production & packaging & storage	2.4.1. Health and safety practices in the production area 2.4.2. Good health and safety practices in equipment handling 2.4.3. Health and safety practices after product manufacturing

LM 3 Production of aluminium constructions	LO 3.1 Communication skills. Perform basic technical drawings, energy performance calculations, costing and offering tasks.	3.1.1. Understanding customer/project needs. Relevant European and national legislation 3.1.2. Accounting and cost estimation software 3.1.3. Negotiations and final agreement
	LO 3.2 Plan and supply necessary raw materials, cutting and machining profiles.	3.2.1. Use of technical – production manuals, catalogues 3.2.2. Procurement of raw materials. Production planning 3.2.3. Cutting, machining, Recycling
	LO 3.3 Assemble profiles for various typologies & types of aluminium construction products.	3.3.1. Use of technical – production manuals, catalogues 3.3.2. Production planning 3.3.3. Assembling, fenestration & outdoors systems
	LO 3.4 Knowledge of quality control. Monitor and evaluate the implementation of the work. Implement health and safety good practices	3.4.1. Quality control 3.4.2. Health and safety good practices 3.4.3. Project documentation and monitoring
LM 4 Production of metal constructions	LO 4.1 Cost individual metal construction or combination of metal and aluminium	4.1.1. Costing techniques and relevant European and National legislation 4.1.2. Use of loads charts/tables, technical-economic characteristics of the metal profiles 4.1.3. Combining metal profiles with aluminium systems
	LO 4.2 Plan and supply necessary raw materials. Cut and weld all types of metal constructions, also for architectural use.	4.2.1. Using the appropriate of equipment for machining & welding 4.2.2. Use of suitable consumables - electrodes, gas, etc 4.2.3. Metal joining techniques, with bolts or welding
	LO 4.3 Assemble profiles in different typology of metal constructions as well as with steel-aluminium.	4.3.1. Use of technical – production manuals, catalogues 4.3.2. Mixed constructions assembling 4.3.3. Artistic aspects, finishing of joints & special structures
	LO 4.4 Knowledge of quality control. Health and safety practices. Archive and monitor	4.4.1. Quality control 4.4.2. Health and safety good practices 4.4.3. Project documentation and monitoring

LM 5 Installation of constructions	LO 5.1 Apply aluminium & metal constructions to the building component in the correct way. Implement building regulation requirements. Uninstall and repair old constructions.	5.1.1. Familiarization with the architectural drawings and building regulation requirements. Installing and uninstalling constructions 5.1.2. Proper levelling 5.1.3. Proper shimming
	LO 5.2 Place and fit aluminium and metal constructions in building components.	5.2.1. Interpretation of the forces applied in the construction and analysis of the typology of the anchor position 5.2.2. Selection of the appropriate anchor number and diameter, length 5.2.3. Connection and fastening of mixed aluminium-steel constructions
	LO 5.3 Apply proper insulation.	5.3.1. Assessment of the external and internal construction conditions for the selection and application of waterproofing materials 5.3.2. Evaluation of the construction level of the base for the correct selection & application of insulation materials 5.3.3. Waterproofing and insulation of mixed metal aluminium construction
	LO 5.4 Demonstrate products.	5.4.1. Illustration of the product technical features/performance 5.4.2. User manual explanation 5.4.3. Maintenance and cleaning products instructions

Figure 3 Structure of METVET's training Curriculum

As concerns teaching methodologies, following a careful analysis, the following ones were selected for the METVET curriculum:

LEARNING MODULE	METHODOLOGIES
LM 1 Materials technology & applications in constructions	Demonstration/ Work groups/ Case study/ Mind mapping/ Portfolio development
LM 2 Production facilities and equipment	Demonstration/ Work groups/Case study/Mind mapping/ Project method/ Problem-based learning
LM 3 Production of aluminium constructions	Avalanche/ Brainstorm/ Demonstration/ Work groups/ Case study/ Role play games /Simulation/Mind mapping/ Project method/ Problem-based learning/ Portfolio development/ Field study/ Multi-stage method - 4stage method*
LM 4 Production of metal constructions	Avalanche/ Brainstorm/ Demonstration/ Work groups/ Case study/ Role play games /Simulation/Mind mapping/ Project method/ Problem-based learning/ Multi-stage method - 4stage method*
LM 5 Installation of constructions	Demonstration/ Work groups/ Case study/ Simulation/ Mind mapping/Project method/ Field study/Problem-based learning/ Multi-stage method / 4stage method*

Figure 4 Learning Methodologies for the METVET course

Multi-stage method - 4stage method

The multi-stage method, usually understood as a four-stage method, is the most common method among the coming into operational practice for application methods:

- Stage 1: Preparation
- Stage 2: Demonstration of an operation
- Stage 3: Execution by the trainee
- Stage 4: Practice.

In theory, it is assumed that both the workplace, the learning material as well as the trainee is prepared for a training unit during the first stage. This means that the working environment, the materials and tools are prepared in an orderly manner. The trainee has to be prepared so that he/she is able to classify correctly the knowledge to be acquired on the basis of his/her previous knowledge, drop inhibitions and unreservedly approach the learning material.

The second stage is a gradual demonstrating and explaining of the different theoretical and practical contents and performances. This often requires an unusual approach of the trainer. The undivided attention of the trainees is here ultimately an essential foundation for success.

In the third stage the trainee comes into play by coping with previous demonstrated works, explaining them in his/her own words. Here the trainer has the role of the reviser and corrective.

In the fourth and final stage, the trainee shall exercise independently the acquired knowledge and skills. He/She is supervised by the trainer here. The performance should be evaluated together and recognized and possibly criticized professionally.

This mediating of knowledge base method plays an important role and has a high priority in company-based training (working place). When used in practice, a very good form of mediation of basic knowledge and basic skills occurs, in which the trainer as model, shows how something is to be done. This method is also suitable to practice manual skills and practical activities. It is one of the classical teaching methods which by transfer to the fourth stage, e.g. other material (for tapping first steel than aluminium) will lead to flexible application of skills.

Self-criticism, self-awareness, the possibility of distinguishing between a model and not worthy of emulation are certainly not the strengths of this method. Therefore, this method is ultimately only as good as the preparation and the trainer who brings this method of application. The method also stands and falls with the critical view and the commitment of the trainee. If the trainee is motivated and is not afraid to question processes critically, then this method is well-suited.

Finally, as described in the document “Qualification Standard - WP4 – Creation of Curriculum and Syllabus, Qualification standard, evaluation & certification (D. 4.6 & 4.7)”, METVET provides to candidates and certified professionals a **qualification standard** (according to ISO/IEC17024 and ECVET) with all necessary information about their qualifications’ **certification** procedure, define the “Aluminium & Metal Constructions Technicians” **professional profile** and describe in detail the **examination mechanism** for the Certification of the knowledge, the skills and the competencies of the specific professionals. The mechanism consists of theoretical and practical examination and may be conducted by any Organization either partner or interested party in recognized examination centers, across all European countries. The aim of the examination mechanism is to identify individuals who achieve the predetermined level of competency and to confirm whether a candidate maybe certified, having exhibited a proficiency level at or above the minimum competency level.

1.3 Innovative aspects of the METVET curriculum and syllabus

The innovative aspects of the METVET curriculum and syllabus were identified as listed below:

- Provides response to new demand for environmental skills based on the EU's 20-20-20 goals.
- Targets to EQF Level 5.
- The qualification standard leads to certification awareness.
- Includes green skills responding to the new trends in the sector of construction and installation of the metal structures.
- Includes the processes to meet the latest EU regulations with regards to NZEB etc.
- Includes the latest innovations of the aluminum systems, e.g. minimal etc.
- Contains more sustainable aspects for aluminum and metal constructions as material recycling, environmental friendly working technics, energy saving, product safety and CE mark etc.
- Concerns the work-based learning elements.
- Concerns the use of e-learning tools.
- Facilitates the technicians’ mobility in EU labor market.
- It is structured in a modular and flexible way.
- Project outcomes are easily transferable.

Figure 5 Innovative aspects of the METVET curriculum and syllabus

1.4 Aims of the Exploitation Plan

The present document will pave the way to the incorporation of project outputs in the VET offer, both inside and outside the project geographical area, thus enlarging the project scope. Therefore, it was important to:

- analyze the market conditions and demands of VET in the target partner countries,
- develop a high-quality product according to the demands of the beneficiaries,
- adapt the product to national or regional conditions if necessary,
- engage with local/national relevant policy makers/authorities responsible for VET framework,
- plan and apply adequate dissemination and marketing activities.

During the METVET project implementation, several work phases have dealt with the above aspects. The present Exploitation Plan describes measures and processes on how to successfully implement an exploitation strategy at European (project) level, as well as at national or regional level. The latter will be represented by individual partner marketing and exploitation strategies.

In particular, the Exploitation Plan aims to:

- **Exploit the product and ensure its sustainability**
 - Approaching future clients and building up a solid client base
 - Placing the product in the respective markets

As well as, in parallel to the Dissemination Plan:

- **Increase product awareness at the target group level**
 - Providing relevant target groups with high quality information concerning the product
 - Informing further interest groups, networks and multipliers about the product
 - Widening awareness beyond the actual geographical project scope

The Exploitation Plan, therefore, briefly describes the results of the context/market and the product analyses that were carried out at the start of the project. Aspects of the project's dissemination activities will be taken up and partly integrated into the exploitation strategy. Therefore, the dissemination instruments of the "Dissemination Plan" will be directly related to the target groups and marketing phases. Based on these findings, an overall exploitation strategy for the project is developed.



Presenting **EXPLOITATION**

Analysis of the Context &
Potential Vet Course Development

2 D6.1| ANALYSIS OF THE CONTEXT & POTENTIAL VET COURSE DEVELOPMENT

Drawing from the WP2 Need Analysis and WP6 Desktop Research, this analysis concerns, in particular, the **iVET and cVET context** in the partner countries, i.e. Greece, Italy and Germany. Belgium is not considered as context of either iVET or cVET, as EVTA is an umbrella organization of VET providers in Europe. Therefore, independently from the context analysis, EVTA will carry out dissemination and exploitation activities at European and national levels in the form of enabling the project's outcomes to be included in debates on VET policy reforms by EU institutions and national governments and in the form of promoting the METVET curriculum training in other EU countries.

2.1 Analysis of the partner countries

The systems of vocational training and skills building in the partner countries of this project vary from country to country.

2.1.1 Germany

In Germany there is an advanced system of **joint apprenticeship as form of vocational education and training**, with a sophisticated system of occupations, established in a system of parity of social partners and scientists. This system is valid for the whole nation and qualifications are valid all over the nation. Most of them are also recognized in countries with similarly structured systems of VET. This is all regulated by a general Vocational Training Act, actual version from 2005, valid on national level.

Furthermore, occupations in the German system are developed and decided in parity among three groups of stakeholders: Employers, Workers and Government. They jointly shape the **“Dual VET”** system, by developing and maintaining the National one. Co-decision and cooperation are promoted through formal mechanisms and secured by laws, institutions and committees. Important national interlocking frame is the **“National Committee for VET”**, a system to develop & modernize Dual VET standards while keeping the whole framework well-coordinated, quality-ensured and recognized by all stakeholders.

The name of the occupation in the German system that is the closest to the subject of the METVET Project as well as to the case in Greece, is the “Metalworker in structural engineering”. Metalworkers in structural engineering find employment opportunities in the construction technology sector, particularly in metal working companies specializing in the manufacture, assembly and repair of steel and light-metal constructions. These include e.g. companies producing metal doors, metal windows, locking and security systems, metal roofing and metal facades. This is an occupation in the field of industrial occupations.

Additionally, the German craft occupation “Construction Mechanic” foresees a 40-month apprenticeship and a final practical and theoretical exam to achieve the diploma.

2.1.2 Italy

In Italy, the authority for VET are the regions and job and skills are usually described in repositories which are referred to regional contexts: some occupations may thus differ within the country from region to region. Nevertheless, it is a very elaborated system giving a deep training in the framework of vocational schools or VET centers, completed with internships in local or regional companies.

Additionally, with the Law Decree n° 13 of 16th January 2013, the “National Repository of education and training job titles and of professional qualifications” was created in Italy. This repository represents the framework reference for the certification of skills, based on the standardization of education and training job titles – including also those for vocational education and training (VET) – and of professional qualifications, which are indeed interrelated as they share a common system for recognition of course credits to be assigned in line with European standards. The national repository includes four different sections, although only two are currently available in the web, namely:

1. The Vocational Education and Training (VET) section, which includes three-year and four-year Vocational Education and Training (IeFP), Higher Technical Education and Training (IFTTS) and Higher Technical Education (ITS).
2. The national framework of regional qualifications section (at the present, 18 Regions’ directories/ repository can be consulted).

From the consultation of the national repository, it emerged that the profiles with skills related with the METVET project are associated with the mechanic sector, and the professional profiles that were identified as the most relevant for the purposes of the project were: steelworker, welding carpenter and building carpenter.

In March 2019, the Office for Economics Studies of UNICMI (the National Union of Metal Construction and Building Envelope Industries) published a Report on the Italian market of the metallic frames and curtain walls. Despite the recovery of the beginning of the 2016 year, 2018 has been characterized by a severe economic crisis in Italy. The economic slowdown has led to a reduction in the investments in the building sector that are expected to improve of 1.6% in 2019.

In fact, 2018 registered a moderate increase in the demand of frames and curtain walls. Indeed, the total demand of the last year overcame the 4.5 billion, of which 2.8 coming from the residential area and 1.7 from the non-residential one.

It is important to mention that the tax incentives for financial interventions of energy upgrading of buildings have substantially contributed to support the window/door frames' request for 2018. The tax incentives determined the 39% of the total request of Aluminium frames in Italy, with a volume of 580 million of Euros. Indeed, Aluminium-manufacturing companies have proved to have good penetration skills in the market segment referring to existing buildings and their renovation thanks to the sales policies and the tailored services developed so far.

For the forthcoming years, the companies of the construction sector will continue working and expanding in the residential area, more specifically in the replacement of frames, thus having to invest in marketing and communication services with a client-centered approach and being able to diversify their offer from other national/international competitors.

2.1.3 Greece

The system in Greece appears to be more like the Italian one. However, in contrast to the Italian system, it presents an extremely centralized procedure in terms of differentiation of specialties' content and curricula.

The same holds also for the different systems of apprenticeship, although small improvements to a more decentralized system with a higher level of independence for VET schools has been adopted but not necessarily implemented so far.

Although there is a statutory professional profile, **there is no level 4 or 5 training path** that leads to a qualification for the professions in the Metal Construction sector. In addition, there is a lack of technical education linking with existing sector's companies.

There is also no requirement for qualification to start a business in the aluminum and steel constructions sector. Most of the companies do not implement a proper training procedure for their employees, while the only organized efforts to train human resources in the sector are done by the Federation (POVAS), in co-operation with other organizations (IME GSEVEE etc.).

Over the past five years there has been a sharp shift in energy-saving issues in the building sector. This trend is expected to be strengthened in order to achieve the country's energy saving targets by 2030.

In Greece the most pertinent occupation was the profile of the “Aluminium and Metal Constructor”. The specific occupation deals with the processing of Aluminium architectural profile in order to manufacture and install frames and other custom made Aluminium alloy constructions in buildings for their energy performance, their exterior appearance as well as their interior arrangement. The scope of the specific occupation also includes the manufacture and installation of custom-made metal constructions, mainly out of ferrous metal, intended to be used in buildings for architectural purposes.

2.2 Overall conclusions

Starting from this analysis, the following professional profiles were studied and analyzed to identify existing skills in the three partner countries.

- **Greece:** “Aluminium and Metal Constructor”
- **Germany:** “State-recognized training occupation construction mechanic” and “State-recognized training occupation Metalworker – specialized in structural engineering”
- **Italy:** “Steel worker”, “Welding Carpenter” and “Building Carpenter”

It is also worth mentioning how the crucial difference between the social estimation of occupations in different countries is the extremely high appreciation of University degrees in some countries like Greece. It leads also to an underestimation of crafts-occupations and to a lack of high-quality workforce in these occupations.

As a result, in those countries there is to find a large mismatch between occupational degrees and the needs of the labor market.

This formed the basis for the creation of a questionnaire that was distributed to stakeholders in the three countries, with the aim of extracting the list of joint skills and identifying the overall Skills' demands for Aluminium & metal constructions technicians (List of Joint Skills).

The main points that were highlighted through the questionnaires are the following:

- companies that typically employ the professional figures targeted by the METVET project are small ones, where technicians with EQF level 5 shall have a generic and holistic overview of the processes, since he/she will need to execute parallel tasks far and beyond the strict framework of a typical technician in a large company;
- Aluminium and Metals Construction Technicians mainly work for the Building sector. For the pure mechanical sector, technicians are more focused on forming, joining and processing of metals, mainly steels, with constructions of structural loads. Even though companies from the mechanical sector collaborate with those of the Building sector, the needs and the qualifications in the Building sector are typically different, as already mentioned: identifying this gap was of crucial importance for the concept followed within METVET.
- The same companies answering the questionnaire, agreed on the need of a joint higher VET course such as the one proposed by the METVET project, specifying a series of topics that such a course should cover. For a detailed depiction of said topics, please refer to the document “WP2_PEDS_31012020” – Definition of Joint skills demands-Need Analysis.

At last, the results of the questionnaire allowed the project partners to divide the existing skills from the above-mentioned professional profiles, enrich them with additional ones, and group them in the following clusters:

Theoretical Skills	<ul style="list-style-type: none"> • Understand the legal and regulatory requirements for aluminum constructions (CE marking, Regulations for Energy Saving in Buildings etc.) • Organize and select the appropriate legal and regulatory requirements for each construction • Procure information • Realization of workmanships on metal sheets • Knowledge of mechanical-qualitative materials behavior • Practical and productive knowledge • Knowledge of production methods • Reading of technical drawing • Basic Knowledge of Statics and Load stress, Dynamic load, Wind load, Corrosion problems • Processing procedure appropriate to the material used • Practical knowledge of construction methods • Understand basic circular economy aspects • Understand basic corporate finances
Practical Skills	<ul style="list-style-type: none"> • Organize and apply the appropriate measurement and construction techniques • Choose the right combinations of materials (profiles, glass, etc.) • Recognize and apply the requirements of the system designer's technical manuals when assembling frames, in order to achieve maximum energy outcomes • Recognize and apply the requirements of technical guidelines during product installation, in order to achieve maximum energy outcomes • Handle equipment properly (machine tools, presses, pantographs, hand tools) • Handle the measuring equipment correctly • Calculate dimensions from construction drawings, sketches Handle welding machines and hand tools • Implement the appropriate measurement techniques for quality control • Apply good practices for raw materials and final products storage • Handle technical manuals for the manufacture of aluminum systems • Measure and test mechanical and physical values • Make separable and inseparable connections

Practical Skills	<ul style="list-style-type: none"> • Manufacture work pieces and components using various manual and machine production processes • Treat and protect surfaces • Secure loads, transport components and sub-assemblies and use lifting gear • Produce components and construction elements and assemble and dismantle metal and steel constructions • Plan and control work processes, check, protocol and evaluate work results • Maintain metal and steel constructions • Carry out welding processes practicing different technical solutions • Dismantle and assemble components and sub-assemblies; check, monitor and remedy errors and malfunctions; carry out routine repairs to control systems and components and document results • Apply standards and guidelines to ensure product quality and continuous improvement of work processes in the company • Manufacture parts, assemblies, and metal constructions from sheets, tubes or profiles by means of manual and mechanical production methods • Carry out welding processes, taking work safety and environmental protection into account • Install and uninstall metal constructions and use various jointing techniques • Create auxiliary structures, devices, templates and flat patterns • Select testing devices and methods and apply the company's quality assurance system • Carry out required maintenance work on systems, machines and tools • Identification, cut and steel shaping for reinforcement points • Positioning and assembling of steelwork for reinforcement points • Cutting and welding of steel constructions for reinforcement points • Carrying out manual metal arc (MMA) welding with coated electrode • Carrying out metal arc welding in Metal Inert Gas (MIG) or Metal Active Gas (MAG) • Carrying out manual metal arc (MMA) welding with Tungsten Inert Gas procedure (TIG) • Welding of metal materials with flame processes (i.e. oxy-acetylene welding, brazing) • Assembling welded structures of metal carpentry • Induce and evaluate production plates
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Green Skills	<ul style="list-style-type: none"> • Understand and choose the most appropriate techno-economic & energy-efficient solution • Understand the requirements for energy saving in buildings through aluminum constructions • Manage the recyclable materials correctly • Calculate thermal properties (e.g. U value) for various construction products by using appropriate software tools • Assemble products in energy-efficient ways according to the assembly designer's requirements • Identify critical checkpoints, pertinent to construction quality which can affect thermal energy losses • Understand & calculate the energy performance of products (energy labeling) • Understand the environmental performance of products (environmental product declaration) • Implement waste reduction culture • Implement holistic view on processes • Understand and implement Near Zero
Transversal Skills	<ul style="list-style-type: none"> • Implement good working practices (working field, equipment, etc.) • Implement good working practices (suitable vehicle, appropriate means of support, customer loyalty etc.) • Explain the operating and maintenance instructions for the products, the rules of the warranty and its obligations as a manufacturer • Handle software for calculating thermal properties • Handle software to calculate constructions cost • Implement health and safety rules at work • Explain the information contained in the Declaration of Performance and CE products Marking • Organize the file of each completed project • Carry out work assignments autonomously and work as part of a team according due consideration to the relevant regulations and safety provisions and on the basis of technical documentation and work orders • Plan coordinate and agree work with line managers, with colleagues and with other work divisions using technical terminology • Document work and initiate quality assurances measures and measures for health and safety at work and environmental protection

Transversal Skills	<ul style="list-style-type: none"> • Set up workplaces at building sites • Use IT systems, including in digitalized processes • Apply regulations relating to data protection and information security • Being able to organize the steel workings for reinforcement points • Read, understand and apply CAD-produced and presented descriptions and work orders • Understand and use 3D-Equipment for production of tools, parts etc. • Organize collaboration with external partners (specifications, times, costs, etc.) • Sharing knowledge • Continuous improvement mindset • Planning of time • Implement logistics and warehouse good practices
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Figure 6 METVET List of Joint Skills



THE

EXPLOITATION

Identification of the Beneficiaries

3 D6.1 | IDENTIFICATION OF THE BENEFICIARIES

A study of the **potential beneficiaries** of the METVET training curriculum and syllabus was carried out by means of the already mentioned “Desktop Research for the Exploitation Plan”, which served as a basis for the drafting of the present document.

The **main target** group(/s) in each country was/were identified through the following aspects:

- a. age (range definition);
- b. employment status: employed/unemployed (both);
- c. the reasons why the beneficiaries should be interested in the training course (which training gap they need to fill in, their motivation);
- d. time availability (how much time per day or per week they can devote to training);
- e. training modality for the theoretical lessons: the preferences (or availability) to have a blended training (in presence + online), or a fully online or fully in presence training;
- f. training modality for work-based learning: the possibility to carry out the training in enterprises (through traineeships or apprenticeships), or in labs through project works;
- g. availability to pay for the training (fully or partly) or not;
- h. potential size of the target group (in the specific country or region).

The detailed analysis referred to the countries participating in the project is presented in the following chapters, while the main beneficiaries identified per partner country are:

PARNTER COUNTRY	MAIN BENEFICIARIES TARGETED BY EXPLOITATION ACTIVITIES
Greece	Students Adults - employed
Italy	Students Adults – employed Adults - unemployed
Germany	Adults – employed Adults - unemployed

Identified target groups covered by the research slightly differ from country to country; however, in general METVET’s curriculum might be attractive for both students and workers from the metal sector (iron & aluminum). In particular, as to the adults, they are characterized by qualifications on **EQF level 3 or 4**, with a significant professional experience in the metal construction sector. METVET curriculum will be useful for them to upgrade their skills to EQF level 5.

3.1 Beneficiaries in Greece

The main target groups in Greece are students and employees, as illustrated below:

	STUDENTS	ADULTS EMPLOYED
	Age of 18-25	Age of 18-55
	Unemployed	Employed
Training gap/motivation	Students that wish to become relevant technicians of EQF level 5.	Existing technicians that wish to improve their knowledge and get certified. They might be interested to upgrade their skills from EQF level 3-4 to 5 in order to have the opportunity to improve their professional position by taking on tasks required higher responsibility and autonomy than until now. Be facilitated in the mutual recognition of qualifications within the EU.
Time availability	According to apprentices' legislation 1 day (7h) per week for 9 months.	Usually available at afternoons and weekends, willing to spend maximum 40 hours of training. Continuous VET courses in Greece are in general taken place on evenings or on Saturday mornings, outside the working time of the above target groups. More specific, the time availability is in general between 4 hours per day (17.00 – 21.00) for 3 days per week. So, the available time is 12 hours per week.
Training modality (theoretical lessons)	According to apprentices' legislation, blended learning is not an option.	Younger technicians prefer blended learning, while older in presence. Blended learning should be a well-balanced mixture of face-to-face and on-line learning is the most proper type of training.
Training modality (work-based learning)	According to legislation, it is obligatory to be done in enterprises.	Both labs and enterprises. For work-based lessons it would be appropriate to do it inhouse (if they have the necessary equipment) or in an external lab (in case their enterprise does not have the necessary equipment) through traineeship.
Able to pay	In most cases no, as it is part of the public VET system.	They would prefer to pay partly, but some of them could pay fully. Generally, the attendance in continuous VET courses is paid by each participant or by a specific training fund in Greece (LAEK).
Potential size in the region	According to 2019 POVAS latest national market analysis, the estimated number for new technicians is around 2000 to 2500 due to energy retrofitting projects in the existing building stock.	According to 2019 POVAS latest national market analysis, the estimated number of existing technicians is 20000 – 25000.

Figure 7 METVET course's beneficiaries in Greece

3.2 Beneficiaries in Italy

The main target groups in Italy are students, employees and unemployed people, as illustrated below:

	ITS ¹ STUDENTS	ADULTS EMPLOYED	ADULTS UNEMPLOYED
	Age of 19-21	Age of 18-65	
	Unemployed	Employed	Unemployed
Training gap/motivation	Acquisition of innovative knowledge, skills and competences, with particular regard to green skills and ICT to meet requests for e.g. home automation, energy efficiency, NZEB buildings.	Acquisition of additional knowledge, skills and competences to favor career advancement or to start one's own business. Possibility to update knowledge, skills and competences requested by the job market, like home automation, energy efficiency, NZEB buildings. Need for increasing professional training credits.	Possibility to find a job. Acquisition of the additional qualification/title (upskilling). Possibility to start one's own business based on solid preparation.
Time availability	8 hours/day	4 hours/week	20 hours/week
Training modality (theoretical lessons)	In presence + online	Online	In presence + online
Training modality (work-based learning)	Traineeships or apprenticeships	Labs	Traineeships or apprenticeships
Able to pay	No	Yes	No

¹ Higher technical institutes.

<p>Potential size in the region</p>	<p>Number of relevant ITS courses – Energy Efficiency (EE) and Home System (HS) (source INDIRE, 2020): in Piedmont: 1 EE in Lombardy: 2 EE + 2 HS in Veneto: 1 EE Number of students attending ITS courses (source INDIRE, May 2020): EE courses: 1,245 in Italy, of which 213 in Lombardy, 240 in Veneto; HS courses: 276 in Italy, of which 131 in Lombardy, 49 in Veneto.</p>	<p><u>DATA retrieved from ISTAT (23.07.2020)</u> Average number of people employed in the 2511, 2512, 2562 and 2599 NACE sectors in 2018 in Italy: 362.595,41. Number of companies active in the 2511, 2512, 2562 and 2599 NACE sectors in 2018 in Italy: 56.063. In 2018 in Italy, 8.534 companies active in the 2511, 2512, 2562 and 2599 NACE sectors were looking to hire. 11.540 companies hired new HRs in the fields of Industrial design (min. EQF lev. 5), R&D (min. EQF lev. 5), technical and engineering functions in support to production, advanced informatics, company organization and management, production (EQF lev. 3 TO 5), marketing and sales, quality assurance. In 2018 in Italy, 9.996 companies active in the 2511, 2512, 2562 and 2599 NACE sectors carried out non-compulsory professional training activities (internal/external training courses, lifelong internal/external staff training, internal/external re-skilling of staff assigned to new duties).</p>	<p>The number of unemployed people aged 25-64 in 2019 was: 121,000 in Piedmont, 267,000 in Lombardy, 115,750 in Veneto, and 33,000 in Friuli Venezia Giulia. NOTE: The above-given data include all age groups.</p>
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Figure 8 METVET course's beneficiaries in Italy

3.3 Beneficiaries in Germany

The main target groups in Germany are employed and unemployed adults as illustrated below:

	ADULTS EMPLOYED	ADULTS UNEMPLOYED
	Age of 25-50	Age of 25-50
	Employed	Unemployed
Training gap/motivation	EQF level 5 gives the opportunity to come to a position with higher responsibility and a higher degree of autonomy than level 4. If it is clearly to be seen that a METVET course is definitely an upgrade, people might be interested to participate in it.	Sometimes there is a special need of highly qualified personal in region, or it is policy of a company only to employ persons to special posts with a convenient qualification i.e. in level EQF 5. Public employment service will help the company to find and to train personnel for its special need on labor market.
Time availability	Courses in continuous vocational training in Germany are in general taken extra-occupational, that means they carried out in the evening or on Saturdays, because normal work continues. The time availability is in general between 10 and 16 hours per week.	Courses for unemployed persons, if they are suggested and paid by the public employment service are normally full-time-courses. In this way they are short and an employment can be found easily in the near future.
Training modality (theoretical lessons)	Blended learning. This means besides online lessons and tasks there are times face-to-face of presence, in general on Saturdays.	In general, theoretical lessons are given in face-to-face-modus Nevertheless, blended learning is in every case very good modus for a METVET training. This means besides face-to-face lessons there are additional tasks and input online.
Training modality (work-based learning)	It would be appropriate to be carried out in labs.	In general, there is a mix of seminars, labs and guided internships. Internships are important to get the unemployed person in contact with companies to potentially find an employment in this way
Able to pay	It is usual to pay for such a course.	In general, course for unemployed people are suggested and approved by the public employment service – if they help to come into employment by passing the course. The course will be paid by the public employment service. Sometimes it is also the will of the unemployed person to go to the course and he also will pay by himself.

<p>Potential size in the region</p>	<p>It cannot be estimated, as it depends on the attractiveness of the content and on the recognition by the competent bodies.</p> <p>If this course can start as an attractive way for employment security and career, it might become successful. The experience shows that in the region where ifb operates, a course with 15 to 25 persons can be held per year.</p>	<p>It is hard to estimate the dimension of the target group because it depends on the attractiveness of the content and on the recognition by the competent bodies.</p> <p>Looking at the recent development on labour market one can see large fluctuations. Nevertheless, there are some data showing that there will be a field for some further education and upgrading training:</p> <p>There are approx. 33,5 million regular employees in total in Germany</p> <p>In the first 6 months 2020 ~3,4 million persons became redundant but in the same time approx. 2,8 million persons left unemployment – a large part of them for new employment.</p> <p>In the sector of Metal and Electric industry there are ~ 4,5 million employees</p> <p>In June 2020 there were approx. 2,8 million persons unemployed</p> <p>In the same time there were 570.346 job offers</p> <p>144.491 persons were granted by the public employment service for further education</p> <p>This shows the following: there is a good potential for upgrading training offers. It depends from the recent development in industry which hardly can be predicted, how the sectors develop after COVID-19 and lockdowns.</p> <p>Source: Monatsbericht der Agentur für Arbeit zum Ausbildungs- und Arbeitsmarkt, Juni 2020 (Monthly report of the federal employment service for June 2020).</p>
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Figure 9 METVET course's beneficiaries in Germany



THE EXPLOITATION

Partners & Stakeholders Identification

4 D6.1 | IDENTIFICATION OF PARTNERS & STAKEHOLDERS

As highlighted in the “Desktop Research for the Exploitation Plan”, main partners and stakeholders for METVET’s curriculum exploitation may be divided in the following groups:

- **policy makers at regional, national and European level in the VET field**
- **trade associations, workers’ federations / confederations, chambers of commerce, social partners representing the Aluminum & Metal Constructions sector;**
- **accreditation bodies in the education and training sector;**
- **VET providers.**

A detailed identification of the partners and stakeholders in the countries involved in the project is illustrated in the following sections.

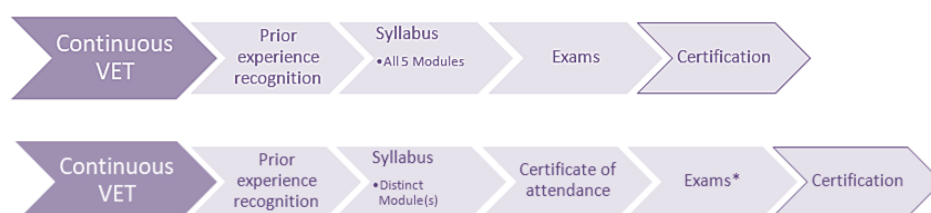
4.1 Greece

Initial training in Greece may only be offered by secondary education Vocational Schools (EPAL) or by Institutes of Vocational Training (IEK) registered in the General Secretary of LifeLong Learning of the Hellenic Ministry of Education as initial training.



According to the Greek legislative framework, only continuous VET providers (KEDIVIM) registered in the General Secretary of LifeLong Learning of the Greek Ministry of Education are able to deliver METVET course in continuous training. In this case, the training will follow the below-given path:

If there are perspectives and business interest, then the delivery process could be done either through continuous VET providers or through private training centers having suitable infrastructure. Additionally, chambers, local unions and national federations would be entitled to deliver the METVET curriculum. In this case, the training will follow one of the following paths:



4.2 Italy

In Italy, the METVET curriculum will be delivered by different VET providers, depending on the target groups concerned.

In the case of students, the following *ITS* foundations (higher technical institutes EQF 5) were taken into account as an example:

- *ITS Foundation for the energy saving and new green building technologies* (Veneto and Lombardia regions) with the following training paths: *Building manager* and *Energy manager*, in which Enaip is one of the participation partner;
- *ITS Foundation “Territory, energy, build”* (Emilia Romagna region) with the following training paths: Sustainability and energy efficiency in the building-territory system and Management of the energy systems sustainable 4.0;
- *ITS Foundation “Development of the ecosustainable energy systems”* (Piemonte region).

As concerns the target of employed and unemployed adults, these can be reached by VET providers (e.g. ENAIP NET), as well as Trade associations (e.g. FederPosa, Unioncoop, Confartigianato, CNA, EBAV, Chamber of Commerce), their training centres and the special companies connected with them:

- <https://www.to.camcom.it/tag-condivisi/formazione>
- <https://www.tb.camcom.gov.it/formazione.asp>
- <https://ud.camcom.it/P42A0C0S3926/Formazione.htm>
- <http://www.camcom.gov.it/P43K363O0/corsi-di-formazione.htm>

4.3 Germany

In Germany, any training institution providing continuous vocational training in the field of metal construction will be able to deliver METVET courses. Moreover, vocational schools could do it, if they meet the following needs:

- the course is attractive;
- the course offers real job perspectives;
- the course leads to a career advancement.

4.4 Belgium and Europe

Given the added value of an extended exploitation of the METVET course, some further reflections on potential partner and stakeholders in Belgium and at European level were also carried out by the project partner EVTA, which, thanks to its role and position, could indeed manage to involve:

- **Belgian national and regional policy makers in the field of vocational education and training, accreditation bodies and public bodies from the education and training sector;**
- **Belgian VET providers and associations (e.g. Le Forem, IFAPME, VDAB, Bruxelles Formation), workers' federations and confederations, chambers of commerce, and social partners;**
- **Belgian national stakeholders representing the metal construction sector.**

Furthermore, the project partner agreed that the promotion of the METVET curriculum to a broader range of stakeholders, also at European level, represents a fundamental issue in the formal recognition process. In fact, the consortium will be able to catch the interest of the following international associations (educational, industrial, etc.) that could help in lobbying for a European recognition of the METVET curriculum and for the replicability of project results:

- European Forum for Vocational Education and Training (EfVET), in which some partners are members;
- European Association of Institutes for Vocational Training (EVBB), in which some partners are members;
- European Centre for the Development of Vocational Training (CEDEFOP);
- European Vocational Training Association (EVTA) which, besides being a project partner, is also the association in which some other project partners are members. EVTA is a network of European organisations in the field of human capital development, which comprises 23 members from 16 European countries, representing thousands of national training centre's and, in certain cases, national employment services. EVTA can advocate on project results with EU representatives;
- Chain5 – a European network of vocational training institutes, VET schools and universities, aiming at promotion of higher VET for EQF Level5 – occupations;
- SMEunited, formally known as UEAPME, in which some partners are members UAMPE is the association of crafts and SMEs in Europe with around 70-member organizations from

over 30 European countries. SMEUnited is a recognised employers' organisation and European Social Partner and acts on behalf of crafts and SMEs in the European Social Dialogue and in discussions with the EU institutions;

- VET4EU2 Platform (and members of their members);
- Lifelong Learning Platform (and their members);
- European Alliance for Apprenticeship;
- PAMINA Weiterbildungspark: a network in the field of transnational vocational education in the French-German border-area along the upper Rhine.
- Moreover, the partners can present project results to relevant regional authorities which can advocate on them through their representatives in Brussels.

Finally, the TÜV AUSTRIA Group will promote the METVET curriculum in over 40 countries around Europe.



Ensuring **EXPLOITATION**

Sustainability

5 D6.1 | SUSTAINABILITY

5.1 Communication and Exploitation Strategy

The METVET curriculum presents many interesting opportunities for exploitation. It certainly is a good practice to address needs in a changing labour market, with the previously identified skills gap in the Aluminium & Metal Constructions sector. The EQF level 5 is relevant for the beneficiaries because having a certain level qualification could enhance the mutual recognition of qualifications within the EU.

The METVET curriculum emphasizes horizontals, green and ICT skills and can help change culture and assimilate a new way of organizing, working and implementing new practices and tools necessary in the Aluminium & Metal Constructions sector, aspects that are essential for both environmental protection and adaptation of enterprises in the new conditions of international competition.

The coverage of the exploitation activities potentially concerns all the European countries considering the network of partners and stakeholders that can be involved.

Lobbying actions in some sectorial organisations can be useful for the formal recognition of the METVET curriculum and its capillary diffusion in the vocational European system, providing a response to new demand for environmental skills based on the EU's 20-20-20 goals.

Furthermore, the relevance of the partners involved will allow the engagement of the target groups most interested in the training pathway, through the most appropriate promotional channels to ensure success.

For these reasons, in order to maximize efficiency, all exploitation measures need to be specifically suitable for the target groups of the METVET product. Therefore, the dissemination and marketing measures were chosen according to their:

- **target group adequacy** – the potential to reach the target groups effectively
- **product adequacy**
- **practical applicability**
- **sustainability** in terms of the cost/benefit ratio

A thorough presentation of the possible delivery scenarios and strategies is provided in the following chapters.

5.1.1 Delivery scenarios

As agreed by the project partners, METVET results will be exploited in one of the two scenarios illustrated below:

➤ **1st scenario: Initial VET**



Young trainees will first prove their eligibility for participation in the METVET course. Then they will attend a course based on the 5-Module Syllabus. After the successful completion of the course, they will take the exams and, if they pass their exams, they will get a certification.

➤ **2nd scenario: Continuous VET**

The second scenario targets employed/unemployed technicians with minimum EQF level 3 and at least 5 years of relevant experience with two different options:

- i. recognition of achieved knowledge as well as skills and then attendance of a course based on the 5-Module Syllabus. After successful completion of the course, they will take the exams and, if they pass their exams, they will get a certification.



- ii. recognition of knowledge as well as skills gained in work environments (informal learning) and then attendance of selected modules in a specific time-frame, according to both the offer of the chosen VET provider and their personal needs. After successful completion of the course, they will take the exams and, if they pass their exams, they will get a certification.



Note on examinations

In order to get the EQF level 5 certification, trainees will have to take the exam foreseen at the end of the 5-module Syllabus.

Regarding the partners involved in the project, all the above scenarios will be applied for the training delivery, even if the majority of VET providers involved will act in the framework of the 2nd scenario – option ii, i.e. training course composed by distinct module(s). It is attractive because the VET providers involved normally offer courses for people with prior work experience in the metal sector or at least with prior VET education. Additionally, the possibility to offer the modular parts of the curriculum and syllabus would be attractive for trainees with specific training needs/competence gaps.

Furthermore, it is very important to note that in Europe and every member state, professionals' qualifications acquired through non-formal and lifelong learning, as is the case with METVET outcomes, can be assessed and certified either by National Education Systems - and relevant Organizations of the public sector - or by accredited Persons' Certification Bodies, according to the international standard ISO/IEC 17024. In each state, the competence of accredited Persons' Certification Bodies is assessed regularly on voluntary basis by a National Accreditation Body. There is a single National Accreditation Body in each country which has been appointed according to the requirements of article 4 of European Regulation (EC) No 765/2008 of 9 July 2008 and is part of European accreditation infrastructure.

5.1.2 Delivery strategies of the training at national level

5.1.1 Greece

In Greece the approval of the Ministry of Education will be necessary for the **initial VET** (1st scenario), specifically for the implementation of METVET curriculum in VET schools.

In particular, the partnership with the General Secretariat for Lifelong Learning (Ministry of Education), as well as with the National Organisation for the Certification of Qualifications & Vocational Guidance (EOPPEP) will be an attempt to include the METVET outcomes as an independent unit in the context of the vocational schools and institutions for vocational training.

As to continuous VET, the registered **Continuous VET** Providers (KEDIVIM) is not expected to acquire any approval from a relevant competent body to provide the course. However, Greek Law 4547/2018 (A '102), as in force with article 71 of law 4623/2019 (Government Gazette 134 /A'/ 09-08-2019), stipulates that from 01.09.2020 Continuous VET providers (KEDIVIM) are obliged to provide certified courses.

More specifically, the Ministers of Education and Finance will issue a joint decision following a proposal from the National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP). This proposal will indicate the certification system of the continuous Vocational Training Curriculums provided by KEK, including terms and conditions, supporting documents, and certification process of the courses as well as fees for their certification. The above joint Ministerial Decision has not been issued until now.

Undoubtedly, a VET provider should be supported by the relevant stakeholders of the Aluminum & Metal Constructions sector, like POVAS or IME GSEVEE, able to provide an added value to the delivery process. In particular, the support of trade unions, SME's, SMB's and LE's and sectorial associations would be relevant in the exploitation of METVET curriculum. The Greek project partners (e.g. GSEVEE) participate in the boards of the above mentioned competent bodies (EOPPEP and OAED), so they will play an important and active role in the support/approval/funding of METVET courses.

Certainly, the participation of POVAS (Panhellenic Federation of Craftsmen in Aluminium and Metal Constructions) as a project partner will provide an added value to the training delivery, as it is connected with potential beneficiaries and stakeholders. Moreover, the project partners already have a strong collaboration with business associations and companies through the Production Link department (Liaison Office with the labour market).

Generally, if there is business interest and market demand, the curriculum can be implemented by continuous VET providers or by private training centres without the approval of any authority.

The training organisations can offer the course by themselves or in cooperation with chambers, associations of companies in the metal sector and with relevant HE Faculties.

The METVET curriculum and syllabus will be used in the framework of the existing VET system with similar programs available in the country, like:

- iVET vocational schools and institutes for vocational training
- cVET lifelong learning centres
- similar programs for other technical specializations in Greece, such as geothermal and solar installations, private security personnel, refrigeration installations technicians, etc.
- through KEK GSEVEE (Vocational Training Centre of the Hellenic Confederation of Professionals Craftsmen and Merchants),
- to employers/employees in very small enterprises, to self-employed people in metal sector who want to upgrade their skills from EQF level 3-4 to 5.

5.1.2 Italy

In Italy, the METVET curriculum is subject to support and approval from national/regional/local authorities, following the steps/strategies described below:

ITS	Adults employed	Adults unemployed
The procedure for approving a new curriculum to deliver in ITS courses is very structured and long. It is the result of specific agreements inside Conferenza Stato-Regioni (State-Regions Conference), the institution responsible for all deliberations and agreements between the State and the Regions. After being approved by this Institution, a curriculum will have also to be approved by the specific ITS Foundations that settle the criteria for the courses to be approved.	In this case support/approval/funding is not necessary. The VET provider delivers the course in the market context and gets paid. If a VET provider is accredited by the relevant regional authority, it can attribute so-called “training credits” to its course. This is particularly interesting to professionals who have to prove that their competences are up-to-date, in a LLL perspective.	The recognition of the training gap has to be recognized by the relevant regional authority. Consequently, the regional authority can decide to support/fund a new training program, and issue a call for proposals to grant a number of courses which are deemed to prepare individuals for specific job profiles. Also in this case, VET providers have to be accredited by the regional authority in order to submit a proposal.

Moreover, the support of other organisations would represent an added value in the approval of the METVET curriculum by the national/regional/local authorities, as described below:

ITS	Adults employed	Adults unemployed
ITS courses are the results of the joint work of technical secondary schools and accredited VET providers with companies, universities, research agencies, and local public bodies. They are organized in Foundations.	In this case not necessary, but the added value can be represented by the partnership with the trade associations, in order to confirm the relevance of the course.	In this case not necessary, but the added value can be represented by the partnership with the trade associations, in order to sensitize the regional authority about the relevance of the training path.

Once ready to deliver the training, a training organisations would need to work in partnership with other organisations, as specified below:

ITS	Adults employed	Adults unemployed
Partnership with the enterprises is needed for the traineeship or apprenticeship paths.	The partnership is not necessary, but the added value would be represented by a partnership e.g. with universities or companies, which may deliver specific lectures. Particularly, lectures held by company specialists can add practical insight which is much appreciated by students.	Partnership with enterprises is needed for the traineeship or apprenticeship paths.

There are similar programs available in Italy and the METVET curriculum and syllabus will be used in the frame of them:

- training with “Check for Work” (*Assegno per il Lavoro AxL*) craft sector, [basic course](#) of window and door frame maintenance (serramentista) and maintenance of doors, windows and entrance doors provided by Unioncoop;
- [posing course](#) provided by Posa Clima (private training);
- posing course and high thermo-acoustic laying [course](#) (EQF3) and [the correct choice of the insulating glass](#) provided by Ambrosi Partner – Training Academy for window and door frame manufacturers (private training);
- [course](#) for senior window installers consistent with the contents of UNI 11673-3 provided by Giordano Institute (private training);
- [course](#) for senior window installers provided by FederPosa – National Association of Installation, Plant and Energy Efficiency Operators;
- [window installation course](#) provided by the World of Pose;
- [course](#) for qualified installers provided by WoodWood;
- European Social Fund course for unemployed persons (FVG region): course weldcarpenter (1000 hours);
- Manufacture and assembly of fixtures, frames and window fitters, Regione Liguria, (EQF 3).

5.1.3 Germany

In Germany the METVET curriculum and syllabus, as every course in the field of vocational training, has to be approved by the competent bodies, which, in the metal construction sector is the Chamber of Commerce and Industry and/or the Chamber of Crafts. In order to get the approval, it is necessary to provide a detailed description of the course and the modalities that will be used for its delivery.

Obtaining the approval of a new curriculum is always a time-consuming and challenging process. The network with companies and social partners is required, as well as negotiations with the regional authorities and the competent bodies.

A training organisation can offer the course by itself or in cooperation with the competent bodies – it depends on the goals to be achieved. In particular, two different scenarios can be delineated:

1. If a training organisation intends to offer important contents and the courses that permit to acquire knowledge, skills and competences relevant in the professional growth, it can deliver the courses and award a certificate by itself. The acquired certificate will demonstrate what the trainee has participated at the course, but it will not be recognized generally.
2. If a training organisation aims at an officially recognized qualification, in this case on a high EQF-level, it has to cooperate with the competent bodies for vocational training. In this case the involvement of the Chamber of Commerce and Industry or the Chamber of Crafts is required, as they are the only public authorities in this field of vocational training that can award the qualification and it is recognized by other competent bodies.

5.1.4 Belgium

The METVET curriculum delivery in Belgium is subject to the support/approval/funding of the following authorities:

- [Service Francophone des Métiers et des Qualifications](#)
- [AKOV Agency for Quality Assurance in Education and Training](#)

5.2 Exploitation activities and tools

5.2.1 Phases of the Exploitation/Marketing process

The overall METVET exploitation framework is divided into three phases, the **“Start-up Phase”, the “Trial Phase” and the “Expansion Phase”**. These phases represent major steps towards the establishment of an effective sustainability and dissemination of the product. To a certain degree, these phases can also be used as success indicators or milestones in the overall exploitation process chain.

The first steps of exploiting the project’s results were already started with the beginning of the project itself thanks to the Dissemination Strategy produced by the project partner EVTA. Information campaigns about the project and its results are indeed important initial exploitation activities for the future product.

During this phase, information was disseminated via flyers, brochures, website, newsletters and mailings, etc. These activities paved the way for any other later exploitation measure, as traditional marketing and exploitation instruments are believed to underpin the reliability of a product. A mixture of offline and online marketing measures increases the probability to reach as many members of the target groups as possible, regardless of e.g. age, communication behavior or organizational background.

Start-up Phase

The Start-up Phase covered the initial phase of the project, when direct contact with the future clients needed to be established. It can also be seen as an orientation phase, because it was not totally clear at that stage if the services and products would have been appropriate or available at the end of the project.

Its aim was indeed to inform about the existence, objectives and steps of the project. It focused on activities at local, regional, national and international level, whose purpose was to:

- Raise awareness – let others know what is being done
- Inform – educate the community
- Engage – get input/feedback from the community
- Promote – “sell” outputs and results.

By defining the purpose of their dissemination activities, the METVET partners already made a first step to decide on the audience, message, method and timing of the communication, which were subsequently integrated in the exploitation of the project. The dissemination strategy of the METVET project is made of several objectives and entails a thorough methodology, both with a vertical and horizontal dimension. The objectives are:

- Ensuring the visibility of the project’s objectives, activities, and results and the transfer of knowledge through all participating countries;
- Promoting the results of the project to the target groups and the audience identified by the project;
- Provide information on the quality, relevance and effectiveness of the results;
- Creating awareness about the project results in policy makers at European and national level;

- Strengthen the initial project network with and between all stakeholders;
- Facilitating the collaboration and exchange of information between the partners and other interested parties.

Trial Phase

As this phase can't be carried out during the project implementation period, it is the consortium decision to apply for a new project, METVET II, that will actually deal with the piloting of all METVET's outcomes as much as the training and certification of Aluminium and Metal Constructions Technicians. Finally and concerning the Greek market, Sivitanidios in collaboration with Povas, IME GSEVEE and TÜV AUSTRIA HELLAS are planning to launch a pilot training and certification process, as a demand of local and national technicians' unions.

In general, and since the process of trial, evaluation and optimization of the training is a crucial process for the future success of the product on the market, the project partnership suggests to any organisation interested in delivering the course to test it beforehand with a piloting activity. In order to reach as many beneficiaries and stakeholders as possible, broad marketing measures are needed and were launched as soon as the main milestones as the METVET project were achieved. Such measures are:

- Prepare and disseminate product-specific information material
- Contact clients, particularly thematic networks, associations, lobby groups and multiplier organizations
- Present the METVET product at conferences and fairs
- Evaluate and optimize the product in cooperation with future client groups
- Establish local / regional information campaigns
- Further development of a METVET product specific brand
- Lobby EU, national, regional and local institutions

The dissemination of the project's results in this phase is used to widen the debate and facilitate a sustainable exchange of ideas and outcomes in support to the exploitation and sustainability of the results. The continuous interaction between project partners and the direct target and the potential beneficiaries is indeed necessary not only during the implementation period of the project, but also once it is concluded.

Expansion Phase

The Expansion Phase covers the post-project period only. The main purpose of this phase is a) the consolidation, and b) the expansion of the client base and the introduction of the product to new markets.

These new markets may be outside the current reach and scope of the project partners and therefore the Expansion Phase is not necessarily limited and may possibly run for several years. In particular, the following actions need to be put into practice:

- Establishing a profit generating product
- Realization of long-term marketing measures
- Extension of the client base
- Extension of the geographical scope of product availability
- Introduction of marketing measures in the new markets
- Lobbying EU, national, regional and local institutions

As mentioned before (trial phase), it is the consortium will to apply for a new project, METVET II., in order to expand exploitation capabilities. Nevertheless and to enhance project sustainability and help VET providers implement the course, Sivitanidios in collaboration with Povas, IME GSEVEE and TÜV AUSTRIA HELLAS and after the pilot testing, decided to try to deliver a training by means of a remote workshop for trainers/VET providers to train them in the course delivery. It will be a sort of ToT to get VET providers ready for the course implementation and aware of innovative aspects of this course (e.g. green skills, ICT, etc.).

5.2.1 Exploitation Tools

The METVET exploitation strategy includes the following steps and tools:

	Greece	Italy	Germany	Belgium
Building METVET curriculum awareness	X	X	X	X
Creating interest in the METVET curriculum and showing its innovativeness (promotion through existing VET networks, federations, associations, trade unions).	X	X	X	X
Generating demand making the METVET curriculum attractive.	X	X	X	X
Developing the following promotional tools:	Promotional material: flyer/brochure containing METVET curriculum description: objectives, modules, training modality, time required.	X	X	X
	Poster exposed in the common spaces of the organisations involved.	X	X	
	Newsletter/e-mailings.	X		X
	Social media (Facebook, LinkedIn, Twitter, Youtube, Instagram, Telegram).	X	X	
	Free demo/sample content.	X		
	Website.	X	X	
	Thematic events (workshops, forums, congresses, exhibitions) involving policy makers, companies, VET providers and trade associations at regional, national and European level.	X	X	X
	Press release. Articles and advertisements in local media and newspapers.		X	X
Geographical area covered with the marketing/promotional activities.	The whole area of Greece ² .	Friuli Venezia Giulia, Veneto, Lombardia & Piemonte ³ .	Pfalz (Palatinate) ⁴ , Nordbaden ⁵ .	The whole area of Belgium.

Figure 10 METVET Exploitation Tools

² TÜV AUSTRIA Hellas is a 100% subsidiary of TÜV AUSTRIA which has a presence in over 40 countries in Europe, Middle East and Asia so this could be done through the whole Group.

³ Northern part of Italy.

⁴ Eastern part of the Land Rheinland-Pfalz (Rhine-Palatinate).

⁵ North-western part of the Land Baden-Württemberg. In the Pfalz and Nordbaden areas there are two key-clusters: “Metropolregion Rhein-Neckar” and “Technologieregion Karlsruhe” each of them with a high number of Universities and key-industries which generates a high demand for highly skilled workforce.

Guidelines for thematic events

DESCRIPTION : The METVET partners might find themselves organising or participating to thematic events, such as workshops, forums, congresses, exhibitions, fairs, conferences, etc. These will be great opportunities for METVET exploitation with a wider audience.

TARGETS :

- policy makers
- companies
- VET providers (managers, teachers/trainers, staff)
- trade associations

at regional, national and European level.

AIMS

- raise awareness and interest in the METVET curriculum
- extend the client/stakeholders/beneficiaries' base
- promoting the curriculum as an innovative and attractive product

PROMOTIONAL MATERIALS : **PAPER MATERIALS**

- flyers/brochures
- posters
- participants' folders

ONLINE MATERIALS/TOOLS

- promotion via social media/organisation's website/newsletter prior to and following the event
- press releases prior to and following the event
- ad-hoc invitations (if applicable)

EVIDENCE COLLECTION :

- Agenda/Programme
- Attendance sheets
- Pictures
- Feedback questionnaire (if applicable)

PROPOSED AGENDA (if applicable)

SUGGESTED TIME	AGENDA ITEM
10 minutes	Welcome and Introduction
20 minutes	Presentation of METVET project (over all project objectives and outcomes)
15 minutes	Presentation of METVET curriculum and syllabus
15 minutes	Exploitation opportunities for the METVET training course
45 mins – 1hour	Panel discussion with experts/stakeholders/policy makers)

5.2.2 Timing

The following tables indicate which of the instruments are suitable according to time (long and short-term), target groups and market phases. The short-term phase comprises mainly the project duration, whereas long-term means the following exploitation period.

	Short Term	Long Term
Traditional dissemination & marketing instruments		
Flyer/Brochure	X (Project flyer)	X (Product flyer)
Poster	X	X
Press release/Media communication	X	
Online dissemination and marketing instruments		
Websites (Product, project or partner websites)	X	X
Social Media	X	X
Direct dissemination and marketing instruments		
E-mailings	X	X
Newsletter	X	
Thematic Events		
Workshops/Forums	X	X
Exhibitions/Fairs	X	X

Figure 11 Long and short-term exploitation instruments

	Start-up Phase	Trial Phase	Expansion Phase
Traditional dissemination & marketing instruments			
Flyer/Brochure	X (Project flyer)	X (Product flyer)	X (Product flyer)
Poster	X	X	X
Press release/Media communication	X	X	X
Online dissemination and marketing instruments			
Websites (Product, project or partner websites)	X (Project website)	X (Partner / Product website)	X (Partner / Product website)
Social Media	X	X	X
Direct dissemination and marketing instruments			
E-mailings		X	X
Newsletter		X	X
Thematic Events			
Workshops/Forums		X	X
Exhibitions/Fairs		X	X

Figure 12 Marketing Instruments and marketing phases



Figure 13 Timeline for the overall exploitation steps (Exploitation strategy)

5.2.2 Success Indicators

Indicators for measuring the success of the exploitation strategy success can be quantitative or qualitative. To keep it simple and measurable, only two main quantitative success indicators are proposed for the METVET product exploitation:

- **Product perception: target group / audience reach**
- **Product success: number of clients / training course participation**

Product perception is the key success factor for any marketing / exploitation strategy. The main objective of all marketing measures is to make the product known among the defined target group. Only if a critical number of the target audience perceives the product there is a chance for the sales to increase.

Online/e-mail surveys via questionnaires will be appropriate instruments to measure this after the project end. These recommended surveys need to be repeated frequently; the division into different sub target groups might be an adequate measure to get a more detailed and precise picture concerning the development of the product perception. In addition, it is of utmost importance to include the questions concerning the impact of every marketing instrument into the surveys.

From a quantitative point of view, the decisive indicator for the success of the training product is the number of persons participating to the training course.

Product success: number of clients / training course participation

These figures are easy to ascertain, since for each course there are participant lists. It will be important to compare the development of attendance a) in the course of the time and b) as regards the geographical development of the participation to the training course (at regional, national and EU-level).

It is advisable that each organization exploiting the METVET training product carries out additional activities to measure the exploitation success. The scale mainly depends on the resources (finance, staff) which are available for this at institutional level.

The results of the above mentioned surveys will be the basis for further analyses of the marketing activities and the product itself. For both aspects, interventions are necessary in case that the results are unsatisfactory (fall-back strategy).

If there are instruments with no or minor impact on the target audience, they should not be applied anymore or changed structurally. As a result, only those tools will be used which are adequate for the product specific target group. A continuous proof of effect followed by changes and replacements is very important for the product's success and to ensure that it addresses the needs of both its beneficiaries and stakeholders.

5.3 Funding

5.3.1 Greece

In Greece, the financial support of METVET course can be assured by the specific training fund (LAEK) managed by Greek Manpower Employment Organisation (OAED), with the co-operation of Greek national social partners, in annual base. Such support can be delivered to a company, for example.

Normally, a training organization in Greece needs the support of a relevant stakeholder in Aluminum & Metal Constructions, as project partners POVAS or IME GSEVEE, in order to ask European Union funding. IME GSEVEE, for example, is a potential contractor of the Greek Government for the co-funded projects of public interest using calls and invitations in the frame of the Operational Program "Competitiveness, Entrepreneurship & Innovation" (EPAnEK). The projects concern the issues, like consulting, training and certification of beneficiaries in specific fields. METVET's objectives are included in EPAnEK goals so the METVET curriculum could be implemented by a possible contractor using the funds of the abovementioned Operational Program.

Alternatively, if there is business interest and market demand, the METVET curriculum can be implemented by continuous VET providers or by private training centers without requesting any external funding.

5.3.2 Italy

In Italy, in case of the target group represented by “adults employed”, the funding is not necessary. In this case the VET provider delivers the course in the market context and it gets paid.

In case of “adults unemployed” a training gap has to be first recognized by the relevant regional authority. Consequently, the regional authority can decide to support/fund a new training program, and issue a call for proposals to grant a number of courses which are deemed to prepare individuals for specific job profiles. In this case, VET providers have to be accredited by the regional authority in order to submit a proposal and be entitled of funding.

5.3.3 Germany

In Germany, in case of the target group represented by “adults employed”, the funding is not necessary. In this case the VET provider delivers the course in the market context and the participating person will pay for it. If it is a career-relevant course, they can receive a grant for upgrading their skills by the state (i.e. “Meister-Bafög” or others).

In case of “adults unemployed” a training gap has to be recognized by the public employment service. Consequently, the PES can decide to support the participation in a course, running in the area. This course has to be recognized and the VET provider has to be accredited by the PES before. This fact given, it will be paid by PES.

5.4 Intellectual properties

The preparation of the exploitation of the METVET results started in M12 with the provision of the Consortium Agreement that lays down aspects of content rights and IPR and is agreed by all partners. The Exploitation Agreement provides a further framework for the clarification of IPR with regard to the exploitation of project results after the project ends.

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5.4.1 Branding and corporate design

The main aspects of the METVET corporate design are laid down in the project Dissemination Plan. The colours, the logo, as well as other graphic elements represent a partnership of highly acknowledged institutions working mainly in the field of education, planning and training. During the project implementation, the corporate design represents the project, in the long run it should also be used for the product placement and exploitation. If needed, an update of the corporate design should be considered which could form the branding of the product to be disseminated in the different countries.

METVET PARTNERS

Joint Venture Networking

