



Executive Agency, Education, Audiovisual and Culture

ECVET-STEP



Strengthening Training to
Employment Pathways

**ECVET for Strengthening Training to
Employment Pathways**

Progress Report

Public Part

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Executive Summary

The key aim of ECVET STEP is to facilitate all stakeholders to make the best value of the ECVET system, thus promoting mobility learning in VET. The project addresses the agricultural domain, focusing on the needs of all stakeholders, including educational and training organisations offering VET, national bodies, agencies and awarding bodies, the labour market, as well as individual learners pursuing development of their skills and competencies, in accordance to existing training opportunities and specific job offerings across Europe. ECVET-STEP focuses on the development of an **ECVET Capability Maturity Framework** (ECVET CMF) which will allow VET-related organisations and individual actors across Europe, starting from the agricultural domain but ranging to other sectors, to understand and reap the benefits of ECVET from their perspective as well as to track their performance and to assure and control the quality of the integration of the ECVET system into their existing processes and workflows. In essence, ECVET STEP will support organisations to follow a step-wise, quality-controlled approach in adopting ECVET. In order to further facilitate organisations to “**take the ECVET-STEP**” the project builds upon a design patterns approach for the specification of shareable and **Reusable Units of Learning Outcomes** (RULOs) and the development of supporting **IT tools and services**. The ECVET-STEP instruments aspire to form a solid foundation for the creation of transparent and comparable descriptions of lifelong learners' achievements and their goals, of VET and employment opportunities as well as of recruitment needs, and for making definitions of learning outcomes reusable and accessible across learning and recruitment information systems. ECVET-STEP will facilitate the bond for the actual building of effective pathways between training and employment through technology based solutions and services. The ECVET STEP approach responds to the EU2020 priority for Strengthening Training to Employment Pathways, exposing major innovative aspects, in the sense that, apart from supporting the adoption of ECVET, it will provide a technical infrastructure to facilitate the ECVET process and the specification of reusable units of learning outcomes.

In order to achieve these objectives the ECVET-STEP consortium was composed of experts in the fields of VET, learning outcome and competence modelling, development of technical tools, agriculture, standardisation, European instruments and management of European projects. Moreover, the project consortium contains user organizations from target groups for the pilot testing and is therefore ideal for the implementation of the project. In the first year, agricultural VET mobility in Europe was investigated through research and implementation of national and sectoral events in partner countries. Consultations with ECVET experts and CEDEFOP have greatly contributed to the requirements elicitation and analysis processes. **A Model of Mobility for VET** (MoMoVET) actions has been designed, as a harmonized model of current processes and workflows related to VET and VET-related mobility, covering the perspectives of different stakeholders and contexts. The ECVET CMF has been produced to facilitate stakeholders to better understand their current status in relation to MoMoVET and discover ways of efficient and effective usage of the ECVET system for implementing mobility strategies. The RULO information model and associated metadata application profile has been specified, offering a solid infrastructure that can be deployed for the support and delivery of training to employment pathways through interoperable IT systems. During the whole project a quality management plan was implemented. Furthermore an exploitation plan and a dissemination plan for the project results as well as an affiliation programme have been developed and realized in order to assure a broad dissemination of the ECVET-STEP outcomes throughout Europe. The results of the project are being published on the project's website (www.ecvet-step.eu) and communicated in other publication channels (twitter, facebook, etc.), newsletters, events and conferences.

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1. Project Objectives

The ECVET-STEP project directly addresses the main objective of the Education and Training 2020 Work Programme: “Making lifelong learning and mobility a reality”. Within this framework the continuous development and management of knowledge, skills and competences at the individual and organizational levels is clearly set as a priority and challenge for the EU and member states, education and training providers, companies, workers and learners.

In particular, ECVET-STEP aims in making the best value of the ECVET system, facilitating the transfer, accumulation and recognition of credits and learning outcomes or competence acquired otherwise between countries, thus promoting mobility learning in VET. Towards this aim, the main goal of ECVET-STEP is to bridge the gap between descriptions of job profiles and training opportunities, while at the same time promoting mobility of people engaging in VET activities.

ECVET-STEP provides advanced and sustainable instruments to facilitate the integration of ECVET into national and sectoral qualifications and qualifications systems. The project specifically addresses the agricultural domain, focusing on the needs of all stakeholders, including educational and training organisations offering VET, national bodies, agencies and awarding bodies, the labour market, as well as the individual adult learners pursuing development of their skills and competencies, in accordance to existing training opportunities across Europe, in combination with demand from the labour market and specific job offerings.

The modelling of a common reference framework, the ECVET Capability Maturity Framework (ECVET CMF) as an instrument for any interested organisation, starting from the agricultural domain and ranging to other domains, aims to offer a methodology for assessing the organisation’s position and readiness in adopting ECVET and specific actions towards continuous and measurable improvement in the adoption process. An online software toolkit for ECVET CMF will be readily available to interested organisations in order to assess their ECVET level of maturity and to understand which ECVET principles and instruments better fit their operational model and workflows.

The Information model of Reusable Units of Learning Outcomes (RULOs), as an accessible, applicable and adaptable tool for all interested European stakeholders, aims to facilitate the creation, management and exchange of harmonized representations of learning outcomes and competences. This elaborate information model will be the basis of the ECVET-STEP online repository service with descriptions and insight from the usage of RULOs in the domain of agriculture, but also adaptable and applicable within any branch or sector.

Methodology and guidelines for integrating RULOs in VET Instruments will be compiled to offer guidance on how to link RULOs to several VET instruments (Europass documents, Qualifications, Individual VET plans, VET Programmes and Job Profiles), using the associated standardised specifications, notations and instruments.

The ECVET-STEP frameworks and services will be tested and evaluated by applying them to the agricultural sector. This pilot testing will be conducted according to the findings and results of the needs analysis conducted in this sector.

During the whole project lifetime an online community will be built which will be included in the whole development process. The online community will give valuable feedback with the help of organized discussion panels and online surveys and address all key stakeholders

like agriculture industry employees, farmers and individual learners as well as education and training providers.

After the finalization of the online population services a pilot testing phase will be implemented. Within this phase the project outcomes will be validated and optimized. The whole project will be accompanied by a detailed quality management plan including a continuous improvement cycle.

Finally, the ECVET-STEP outcomes and services will be disseminated throughout Europe and submitted to the European Standardisation Bodies towards the launch of an official European Norm (EN) initiative. In addition, consultation with European policy makers (CEDEFOP, DGEAC, and ECVET European Network) will be pursued.

The developed framework and tools are providing a generic mobility infrastructure for all EU countries that can be adapted to national and regional level and specific situations across whole Europe. The expected benefits for European citizens, being life-long learners engaging in VET activities with trans-national mobility, are equally important, ranging from enhanced possibilities to expand and enrich their professional competence, to opportunities for individualisation of their learning paths and integration of internationality in their personal study plans, enhanced quality of mobility and easier to validate competence acquired abroad, easier job hunting across Europe and, generally, a more transparent and understandable system for life-long personal development and matching of preferences with existing job opportunities.

2. Project Approach

The 2010 Communication “A new impetus for European cooperation in Vocational Education and Training to support the Europe 2020 strategy” clearly identifies: (i) the systematic use of ECVET, EQF and Europass for transparent qualifications and portable learning outcomes; as well as (ii) the integration of services to facilitate transitions from training to employment and between jobs, with emphasis on the support of flexible and modularised individual learning pathways, as key actions in VET to support lifelong learning and mobility.

ECVET, the European Credit system for Vocational Education and Training, is a technical framework for the transfer, recognition and where appropriate, accumulation of individuals’ learning outcomes with a view to achieving a qualification. The two broader objectives of ECVET are (1) to promote trans-national mobility primarily within the European Union, and (2) to facilitate life-long learning.

The key aim of ECVET-STEP, in alignment with these two objectives, is to facilitate the integration of ECVET into national and sectoral qualifications and qualifications systems.

The ECVET-STEP approach responds to the high priority requirement for Strengthening Training to Employment Pathways. ECVET-STEP exposes major innovative aspects, in the sense that, apart from designing supporting instruments for enhancing the adoption of ECVET (through the ECVET Capability Maturity Framework and the ECVET maturity software toolkit), it will also provide a technical infrastructure and online services to facilitate the ECVET process and the specification of reusable units of learning outcomes (on the basis of the RULO information model and the online repository service).

The target groups are explicitly stated and easy to identify: All European stakeholders related to VET and employment, including educational and training organisations offering VET, national bodies, agencies and awarding bodies, the labour market, as well as the individual adult learners pursuing development of their skills and competencies, in accordance to existing training opportunities across Europe, in combination with demand from the labour market and specific job offerings. The project specifically addresses the agricultural domain, as the sector for the specific adaptation and implementation of the outcomes and their pilot testing.

By employing state-of-the-art-analysis the project has developed significant outcomes, ranging from an innovative framework and model to associated instruments, transferable and adaptable within all VET systems and sectors. The execution of ECVET-STEP work programme during the 1st period of the project implementation, has demonstrated explicitly a well-structured methodology within the work packages including definitions of tasks, deliverables, and milestones.

The first project year focused on the development of the ECVET CMF and the RULO information model: An interlinked and organised development cycle was defined, starting with the creation of MoMoVET, a Model of Mobility for VET activity (WP1). MoMoVET is meant as an elaborate, harmonized and well-defined model of processes and workflows related to VET and VET-related mobility, covering the perspectives of different stakeholders across EU countries and different contexts including formal, non-formal and informal VET activities. Emphasis has been put in researching, documenting and modelling the current common approaches and best practices according to the principles of LdV mobility actions, using the process modelling concepts in the OMG standard for BPMN 2.0. The current experience of the consortium partners in VET and ECVET adoption, existing models from other competence-related LLP projects, outcomes from the organization of national and

sectoral events as well as collaboration with ECEVT experts and CEDEFOP have been core sources for the development of MoMoVET.

National workshops, focus groups and interviews have in each partner country Greece, Germany, Spain, the Netherlands, Czech Republic and Slovenia were organized to identify and analyse the specific VET mobility requirements of the agricultural sector by starting from the research results of WP1. The events were realized following the guidelines which had been developed beforehand. The results of the events have been recorded and were analysed afterwards for the formulation of MoMoVET.

The MoMoVET model has been the basis for the ECVET Capability Maturity Framework (ECVET CMF) (WP2) aiming to facilitate stakeholders engaged in learning mobility to better understand their current status, in relation to MoMoVET and discover the ways they can adopt efficient and effective usage of the ECVET system for implementing mobility strategies, introducing tangible quality aspects.

In order to further facilitate the adoption of ECVET, the project follows an approach based on generic systems architecture for the creation and management of shareable and reusable units of learning outcomes by means of the RULO information model (WP3)

The second year is dedicated to the technical software development of the ECVET CMF online toolkit that will assist organisations and individuals in the uptake of the ECVET CMF, the identification of their ECVET maturity level. Moreover, the online repository service shall be developed and deployed with descriptions and insight from the usage of RULOs in the domain of agriculture (WP4) as well as to the formulation of methodologies and guidelines for integrating RULOs in VET instruments (WP3) and recommendations for sustainability and transfer to other domains (WP7). The second year also involves an extensive pilot testing of the ECVET-STEP online services (WP5) at both national/partner driven and public levels and their optimization (WP4). Quality Management of the project and its processes and results has established a continuous improvement cycle from the start until the end of the project (WP8). Very detailed and broad dissemination activities (WP6) and exploitation strategies (WP7) are also addressed during the entire project period.

Clear responsibilities are defined: One responsible partner for each WP, for each task, and for the related deliverables according to the expertise of the consortium partners. This transparent and balanced project organisation and work programme has been carefully chosen to achieve the deliverables and project results on time and according to budget plans.

The dissemination work-package (WP6) is an extensive one including a Joint European Conference on ICT standardisation and services for European Policies at the end of the project. In addition a separate work-package (WP7) was reserved and foreseen for the exploitation of the project results with a special focus on the time beyond the project.

For internal guidance, the monitoring of the progress and the direction of the project, a quality management plan including a continuous improvement cycle was developed in the first project year. This quality plan is based on the "ISO quality standard for learning, education, and training ISO/IEC 19796-1" developed by the International Standardization Organization committee ISO/IEC JTC1 SC36/WG5 and published in 2005. It provides guidelines for every phase of the project starting with the need analysis and includes, along with other issues, the development, the pilot testing and the evaluation of the ECVET-STEP outcomes and services. Furthermore, a questionnaire has been developed and completed for every deliverable by every partner to allow the monitoring of each single working unit. A final report which summarises the results of the questionnaires will be provided at the end of the project. Recommendations for sustainability and transfer of results in other sectors will also be provided as a distinct exploitation output.

The consortium demonstrates the capacity and clear strategies for the valorisation by valuable dissemination and exploitation strategies and by involving partners from all relevant target groups (including agricultural educational and training organisations offering VET, national bodies, agencies and awarding bodies, chambers, the labour market, as well as the individual adult learners). In addition, it maintains close collaboration and consultation links with European VET policy makers (CEDEFOP) and ECVET Networks. Therefore ECVET-STEP will ensure the optimal use of the deliverables and project results by their broad dissemination and exploitation throughout Europe.

The dissemination of the project is based on several channels, including the ECVET-STEP website (<http://ecvet-step.eu>), press releases, newsletters, a multi-lingual brochure, the active participation on social networks such as Twitter and Facebook. Furthermore, contribution to several European and international conferences has been carefully planned from the beginning of the project in order to maximise impact and awareness for the project itself, the consortium, the specific outcomes as well as ECVET overall.

To this end, ECVET-STEP has been presented at several national and international conferences like the Learning Innovations and Quality (LINQ) 2014 International Conference in Crete (GR), the National day of Green Education in Wageningen (NL), the 2014 Pan-Hellenic Conference on Informatics (PCI) with international participation, in Athens (GR), the ECVET Forum in Vienna (AT). These events have primarily served to disseminate project goals and interim project results; they have been supplemented with a series of national, sectorial and policy-related workshops and focus groups held in all of the partner countries, during which experts and professionals in the target fields were able to contribute their expertise and experience to project progress. In addition, the project has been disseminated to consortia and target groups of related EU projects, with which ECVET-STEP has established liaisons. This combination between wider dissemination at larger conferences and targeted dissemination within the specific sectors pertinent to the project has been undertaken in order to maximize the spread and impact of project marketing.

Apart from that, an extensive exploitation programme was also developed in the first year of the project. This programme focuses on the involvement of several standardisation and policy making bodies, most prominently the CEN Workshop on Learning Technologies and CEN TC 353 and CEDEFOP. Through the close connections of project members TEIA and UDE with CEN, great interest has been instilled in those bodies as to the potential of the ECVET-STEP outcomes to drive initiatives for further activity in European learning-outcome and competence related standardization.

A partner affiliation programme has been developed in order to extend opportunities for further cooperative work with partners in agricultural, IT-related, educational and VET fields, among others, which greatly increases the potential dissemination of the project's goals and results.

The core project outcomes, the MoMoVET model, the ECVET CMF framework, the RULO Information Model and the ECVET-STEP online services can be adopted by all stakeholders in the agricultural domain as well as in other sectors. The technical tools can be implemented in all IT architectures, repositories and online platforms and portals: Broad impact into VET systems, according to the ECVET philosophy and provisions, can be obtained by specific dissemination and exploitation strategies. ECVET-STEP has defined three strategies:

1. The provision of the agricultural sector-specific frameworks and services that can be used "off-the-shelf"
2. The compilation of sustainability, transfer and integration methodologies and guidelines for the facilitation of generic ECVET-STEP tools that can be adapted

according to the specific sectorial and regional needs, with a clear focus on European developers of learning-outcome based VET and employment opportunity specification instruments and services.

3. The exploitation and submission of the ECVET-STEP outcomes to European VET policy makers (ECVET Networks and CEDEFOP) and to the European standardization committee for contributing to the activities towards the development of learning outcome and competence related standards.

3. Project Outcomes & Results

The project outcomes and results produced during the implementation of the first reporting period of the ECVET-STEP project will be presented in this section classified according to the relevant work-packages.

Work-package 1: Analysis of agricultural learning mobility in VET

The main objective of WP1 and the main outcome of this work-package is the development of a Model of Mobility for VET actions, the so-called MoMoVET. MoMoVET is an elaborate, harmonized and well-defined model of processes and workflows related to VET and VET-related mobility, covering the perspectives of different stakeholders across EU countries and different contexts including formal, non-formal and informal VET activities

WP1 has been implemented in terms of three complementary deliverables for achieving the foreseen analysis of agricultural learning mobility in VET and generating MoMoVET, a concise harmonized model of related current processes and workflows.

Within **D1.1 “Report on national implementation of VET processes”** an extensive analysis of the stakeholders, workflows and associated instruments in the field of learning mobility in VET has been conducted from partners from six of the seven participating countries. The analysis has been carried out as desktop research around national VET policies, processes, practice and ECVET adoption, including experience from other related LLP projects and reported impact of complementary European policies and instruments (EQF, Europass and the e-competence framework).

The issues and findings of this work have been put under national consultation and feedback has been sought from several stakeholder categories from the agricultural and VET domain from each country (**D1.2 “ECVET in agriculture national workshops”**). The feedback collected from all consultation activities at national level (D1.2) has been integrated into revised versions of the reports on national implementation of VET processes (D1.1).

These revised versions have served as a basis for a report resulting in **D1.3 “A Model of European-wide learning mobility in Agricultural VET”** (MoMoVET) using the Business Process Model and Notation (BPMN) approach. The MoMoVET BPMN representation and executive summary have been translated in the seven partner country languages in order to be used for early dissemination activities and raise interest around the project’s outcomes.

In the official project workplan further activities have been planned for the continuation of MoMoVET work. In the first version of D1.3 (D1.3a) MoMoVET has been designed to represent the common processes and elements that have been encountered in all partner countries through the analysis and consultation phases. The future outcome of this activity (to be reported in D1.3b) will focus on the development of MoMoVET application profiles for each participating country with augmented information on additional processes or instruments applied at a national level, thus showcasing the various national instantiations. This is expected as a valuable outcome, as it will offer compact and comprehensive representations of the national VET mobility landscapes, which can be leveraged for comparison and best practice formulation from policy makers and researchers in the field.

Apart from this activity, ECVET-STEP plans to reach out to the agricultural community through an “open requirements” action to collect and analyse more information on stakeholder needs and requirements that should be taken into account for MoMoVET. This action shall be implemented through an electronic survey that will be particularly promoted and supported by agricultural communities and fora related to project partners, by

individuals and organizations participating in the affiliation plan prepared within the context of WP7, D7.1 “Exploitation, Partnership and Affiliation Plan” and through other important open agricultural channels and networks, such as the FAO e-Agriculture virtual forum (<http://www.e-agriculture.org>). The survey will be made available through the official project website and social media. Furthermore, invitations shall be emailed to specific contacts, affiliated partners and community/network members.

Work-package 2: ECVET Capability Maturity Framework

WP2 mainly targets the development of the ECVET Capability Maturity Framework (CMF), one of the project’s key products, which provides a set of instructions and instruments aiming to allow organisations to monitor their performance and control the quality of the adoption of ECVET into their existing processes and workflows. The ECVET CMF has been built upon MoMoVET and is being documented in **D2.3 “The ECVET Capability Maturity Framework”**. Its basic goal is to facilitate uptake of ECVET by allowing educational and training organisations engaged in learning mobility actions, to better understand their current status and to discover the ways they can adopt efficient and effective usage of the ECVET system for implementing mobility strategies, giving added value to the use of ECVET framework implementation and use.

The first stage of this work has included a detailed review of the existing information models and metadata implementations in systems that exchange, process, use and combine various competence-related information objects in VET, together with an elaborate analysis of ECVET’s provisions, tools and guidelines and their relevance to the MoMoVET workflows, presented and described in the **D2.1 “Report on ECVET provisions for MoMoVET”**.

In parallel, considerable emphasis was put on quality management procedures for the ECVET adoption process and **D2.2 “Quality Management for the ECVET adoption”** is devoted to this critical issue. The detailed guidelines for all components of quality management, including quality planning, quality control, quality assurance and quality improvements have been presented, in order to provide a helpful guide to the interested organisations to monitor their performance and control the quality of the adoption of ECVET into their existing VET processes and workflows.

A coherent analysis of the previous work (D2.1 and D2.2) has been conducted and taken into account for the ECVET CMF (D2.3), that has provided a STEP-wise methodology and instrument for any interested organisation, starting from the agricultural domain and ranging to other domains, for assessing its position and readiness for adopting ECVET and taking specific actions towards continuous and measurable improvement in the adoption process. The ECVET CMF will help stakeholders to understand ECVET from their perspective, reap the benefits of adopting ECVET and advance exploitation of the expected benefits towards raising the level and relevance of skills in Europe.

The update and refinement of the ECVET CMF will be an important future activity of this work-package. During the implementation and evaluation of the related web toolkit (foreseen in D4.3 and D5.2 & D5.3 respectively) CMF will be continuously reviewed / improved / updated with further key practices along with guidance on their interpretation. The update process will be based on the consensus of all project partners and associated stakeholders, who will be invited to review and contribute online throughout the project’s lifecycle.

The model along with an executive summary shall be translated in all seven national languages of the partners (Greek, German, Spanish, French, Dutch, Slovene and Czech) and shall be formally reported to National Consultations.

Work-package 3: Reusable Units of Learning Outcomes for ECVET instruments

WP3 aims in further facilitating the adoption of ECVET by VET-related organisations engaged in mobility learning by providing an approach based on a generic systems architecture for the creation and management of shareable and reusable units of learning outcomes (RULOs).

The activities and outcomes of the first year of the project include:

- The analysis of the information components and entities exchanged in the context of Training to Employment Pathways and description of the notion of RULOs.
- The design of a domain and associated information model for the concept of Reusable Units of Learning Outcomes. The emphasis has been on (a) documenting the analysis of the information that ought to be embedded in RULOs, providing a representation of concepts and the relationships, constraints, rules, and operations to specify data semantics for the chosen domain of discourse and (b) the implementation of a supporting metadata application profile that has been on the Dublin Core approach and reuses an existing European-wide schema for the representation of learning outcomes and competences. The outcome of this work is presented in **D3.1 “Information Model for representing RULOs”**.
- A proposal for a technical interoperability specification (binding) for the implementation of digital learning outcome descriptions in alignment with ECVET and all related European instruments and framework requirements (EQF, Europass CS and e-CF) documented in the first version of **D3.2a “Interoperability Specification of RULOs in alignment with related European Standards”**.

Future plans in this work-package include the update and refinement of the aforementioned work and outcomes, as well as the design of a methodology, guidelines and examples for the exploitation of the produced information model and technical binding from the stakeholder communities. More specifically,

- The domain and information model of (D3.1) will be further refined as specific examples (with an emphasis on mobility and the agricultural field) are gathered for D3.2b and new information description requirements arise for the connection of RULOs to other information objects (such as training opportunities, competence definitions, job profiles, diplomas and certificates).
- The work on D3.1 and D3.2 will provide the basis for the design of a methodology and guidelines on how RULOs ought to be linked to related European instruments (e.g. Europass documents, Qualifications, Individual VET plans, VET Programmes and Job Profiles), using the produced specifications, notations and instruments. The outcomes of this activity will be documented in **D3.3 “Methodology and guidelines for integrating RULOs in VET Instruments”**.
- A set of real-world examples, drawing from partners’ experience in the agricultural domain, will be gathered and documented to showcase the usage of the ECVET-STEP approach, associated models and RULOs concept in creating reference instruments for their learning mobility in VET needs. The resulting “design patterns” or usage scenarios (to be documented in **D3.4 “ECVET-STEP patterns for Training to Employment Pathways”**) will allow interested organisations to easily reap the benefits of ECVET-STEP and follow a template-driven roadmap for integrating RULOs into, for example, Europass documents, qualifications specifications, individual VET plans, descriptions of VET programmes, job profiles, etc.
- The activities and experience gathered through this work-package will continue to be reported to and discussed with the European Standardization bodies and CEDEFOP, through the collaboration channels pursued and established since the beginning of the project.

Work-package 4: ECVET STEP Online Services

The main objective of WP4 is transferring the systems architecture design and associated metadata application profile for RULOs into a set of software components and services that can allow and facilitate the implementation and interoperability of competence-oriented software applications for VET.

In order to meet this goal, two online software instruments have been foreseen:

- A web-based software toolkit that will be readily available to interested organizations in order to assess their ECVET level of maturity (on the basis of the ECVET CMF) and to understand which ECVET principles and instruments better fit their operational model and workflows,
- an online repository of Reusable Units of Learning Objects (RULOs) shall be setup, which will facilitate the “design patterns” template driven ECVET STEP approach and will be populated with descriptions and insight from the usage of RULOs in the domain of agriculture as well as suggestions for transferring to other domains.

A first version of the software design and description of the essential use cases has been documented in **D4.1a “Design of the ECVET-STEP Online Services”**. A second version of this document is currently into conclusion, as **D4.1b “Design of the ECVET-STEP Online Services”**, which documents the overall software systems’ design, the associated use case model according to the requirements of the different stakeholders and the specific needs of the underlying framework and information model. The development of both software products has already been initiated.

Future activities involve:

- The conclusion of the implementation and deployment of **D4.2 “Online Repository of RULOs for the Agricultural Domain”** for the digital representations of RULOs from the agricultural domain.
- The deployment of **D4.3 “Online toolkit for ECVET adaption and Instrument for the ECVET Capability Maturity Framework”**, as a software product consisting of a set of web pages and associated services for the evaluation of the ECVET maturity and adoption in accordance with the Capability Maturity Framework.
- The Public Release of the **D4.4 “Online Portal and Services”**, which will package the final versions of the project’s software products, taking into account the feedback of the pilot testing phase reported in D5.2 and D5.3. The online services shall be made available through a selected domain name, contemplated by associated publicity mechanisms, search engine optimizations and dissemination of information through online notification channels, in order to secure its sustainability and discoverability by interested partners.

Work-package 5: Pilot Testing and Evaluation

The main objective of WP5 is the technical and user-based evaluation validation activities that will take place during the lifecycle of the project. Currently, the first stage of the task has been completed, as scheduled, within **D5.1 “Pilot Testing Methodology and Evaluation Plan”**, where the detailed description of the methodology for the evaluation of the project and the pilot testing of the ECVET-STEP instruments and services is provided.

The conducted work and its associated documentation in deliverable D5.1, ensures the optimization of all ECVET STEP’s outcomes, since the plan provides: (a) the validation methodology and suitable tools, (b) analytical guidelines for the assessment of the associated framework, models and services, (b), suggested ways for involvement of the various stakeholders, and (d) the appropriate instrument types for collecting feedback from the users.

In order to fulfil the required work for the completion of the WP5, a preparatory phase has already begun where all the necessary contacts of the target audience, material and list of potential events is being collected by the involved partners.

The future activities involve two pilot deployment periods: a period focusing on the organization of controlled national trials of 1 month duration, starting at M16 and a period devoted to public demonstrators (M22).

According to the workplan, it is foreseen that, regarding the first pilot deployment period, four national events addressing stakeholders, mainly from the agricultural domain, will be conducted by the partners in Netherlands (AOC), Spain (INEA), Slovenia (CAFS) and the Czech Republic (IAEI). The collected feedback of the participants will be analysed and the ECVET-STEP instruments and associated online services will be evaluated and validated; the identified problems and issues will be used for the improvement of the services until the end of the project and will be presented in the deliverable **D5.2 “National evaluations of the ECVET STEP Online Services for Agriculture”**.

In parallel to the national evaluations, two rounds of online public evaluations will be conducted in the context of relevant scientific events and conferences, making use of online questionnaires and a specifically designed feedback collection mechanism integrated in the online services of ECVET STEP. In order to provide a rich set of data for describing the evolution of ECVET STEP outcomes, the received feedback will be combined with metrics, statistics and analytics that will be automatically collected from the associated services and recorded to deliverable **D5.3 “Public evaluation of the ECVET STEP Online Services for Agriculture”**. Conclusively the collected results and analyses will be summarized and integrated to an evaluation report that will provide suggestions for the improvement of the procedures for the corresponding results, to be presented in **D5.4 “Report on public and national evaluations of the ECVET STEP Online Services for Agriculture”**.

Work-package 6: Dissemination

The main goal of the WP6 is the broadest possible dissemination of the ECVET-STEP results across Europe.

Within **D6.1 “Dissemination Plan”**, the project’s strategy was carefully set out for disseminating project information and outcomes. The main channels were identified that will serve as means for the distribution of the dissemination material; specific emphasis was put on the identification of targeted contacts, the exploitation of appropriate social media (facebook, twitter) and the setup of the project website (<http://www.ecvet-step.eu>). Moreover, with the contribution of all consortium partners, the initial list of planned dissemination activities has been compiled and a contacts database of contacts has been developed.

The deliverable **D6.2 “Project Website and online dissemination resources”** has been produced as a software service; in addition a supporting report provides a proper and detailed documentation of the design and functionality aspects of the system. The ECVET-STEP website serves as the main point of access to the project results holds material and information related to the project description, its objectives, information about project consortium and project evolution and activities, news and outcomes, project meetings and events.

All the dissemination activities that the project consortium has realized in relation to the initial plans and the relevant resources developed (such as logos, document and presentation templates, leaflet and newsletters) are summarized in the first version of the **D6.4 “Dissemination Report” (D6.4a)**.

Regarding the future plans of the WP6 the following activities will be carried out:

- The D6.1 activity will continue throughout the project's lifetime and the plan will be periodically reviewed and updated according to emerging needs and requirements, to the evaluation results of the pilot testing and to the quality management and evaluation results. New target audiences will be identified and contacted as the actual new outcomes and products are gradually finalized.
- Evolution of the website is foreseen during the project's lifetime and beyond. The content will be regularly updated and enriched with material derived from project activities, results and services. Selected content will be made available in all project languages. Moreover, the web site will be linked to other online communication channels and services, to further achieve dissemination, discoverability and exploitation of the project outcomes.
- The communication and interaction with domain experts for the promotion, exploitation and sustainability of the project outcomes will be pursued through the organization of the **D6.3 "Joint European Conference on ICT standardisation and services for European Policies"** event that will take place in Brussels, Belgium at the ending period of the project. During this conference the project outcomes will be reviewed and discussed by the participating experts and this will be also an excellent opportunity for the dissemination of the services which will be developed in this project. The consortium has already started working on and concretizing the list of key experts for this event. Representatives of the ECVET European Network, the ESCO Working Group, DG EAC, EFTA, CEDEFOP and other important European actors will be invited.
- The second version of D6.4 will describe all dissemination activities that the project consortium has realized and relevant resources (such as publications, presentations, posters, leaflets, etc.) that have been used by project partners or external parties in the second project year.
- Also, the regular newsletter and press releases will continue on monthly basis and partners will be encouraged to translate the material into the local language, provide printed flyers and, continually keep contact with relative thematic and special interest groups.
- Moreover, the final dissemination report will provide insight and feedback for the exploitation of the project outcomes, which will be further analysed and documented by the work of WP7. Last, but not least, the final dissemination report will provide suggestions for the sustainable dissemination of ECVET STEP's outcomes after the project's end.

Work-package 7: Exploitation

The main aim of WP7 is the broadest exploitation of ECVET-STEP in whole Europe through the creation of an exploitation and affiliation plan. The plan identifies strategies for establishing a sustainable ECVET-STEP partner network that will ensure the uptake and spread of the project outcomes and their sustainable implementation beyond the partner countries.

The specific objectives of the Exploitation WP are to:

- Encourage communities/associations of users and practitioners (i.e. organizations developing/providing vocational education/training) to use the ECVET STEP frameworks, tools and online services and to become affiliated partners.
- Interact with the agricultural sector and associated training and employment organisations
- Consult with key European Standardization and Policy Making Bodies
- Analyse the possibilities of transfer of the ECVET STEP to other sectors

The core task of the compilation of deliverable **D7.1 “Exploitation, Partnership and Affiliation Plan”** has already been carried out. The plan will be, as foreseen in the Project Description, regularly updated according to the identified needs and requirements, the evaluation results of the pilot testing, and the quality management and evaluation results.

At the same time, the work related to **D7.2a “Submission to and Collaboration with Standardization Bodies”** is underway since the early stage of the project implementation. The first version of the associated publication (D7.2a) reports on the activities realized within the first year. More specifically, technical consortium partners (TEIA and UDE) actively participate as experts in the international standardization committee (ISO/IEC JTC1 SC36 WG5 “Quality Assurance and Descriptive Frameworks”) and the European standardization committee (CEN/ TC 353 “ICT for Learning, Education, and Training”) where solid dissemination and collaboration with regard to the project’s outcomes and achievements has been established. This activity will continue for the rest of the project’s lifetime and beyond. ECVET-STEP is bound to the promotion and evolution of European standards, by applying and reusing existing specifications and by providing valuable feedback to and proof-of-concept for specifications related to the project’s scope.

Apart from the European Standardization Committee ECVET-STEP has established a strong collaboration and consultation channel with CEDEFOP, the European Centre for the Development of Vocational Training, through the participation of consortium members in focused consultation meetings and in ECVET-related workshops organised by CEDEFOP. This collaboration will be continued and ECVET-STEP has already been invited to participate in the 2015 European ECVET Network Conference.

Furthermore, ECVET-STEP will target the consultation with the European Commission’s DG EAC in order to present opportunities for exploitation of the project’s outcomes in the evolution and promotion of European learning outcome and competence related instruments like Europass, the e-competence framework and the newly designed ESCO, the multilingual classification of European Skills, Competences, Qualifications and Occupations.

Last but not least, the future activities include the compilation of a set of best scenarios and use cases for the exploitation and transfer of the project results and ECVET-STEP instruments, including adaptation recommendations for their utilization in cross-sector VET and qualification systems (**D7.3 “Report and Recommendations for Sustainability and Transfer”**).

Work-package 8: Project Management and Coordination

The main objective of WP8 is the overall management of the work carried out in the project, the support of WP leaders in coordinating their tasks, achieving enhanced communication and productive collaboration among all partners to produce timely and high-quality results. Administrative management included the preparation of the Consortium Agreements (on the basis of the Grant Agreement) established at the project start.

In order to reduce risks and management problems, the deliverable **D8.1 “Project Handbook”** has been completed at the beginning of the project, where all the administrative management, financial and reporting issues are described; all formal rules, procedures and obligations concerning project cooperation and implementation activities have been clearly defined. The establishment of the Steering Committee (SC) of the project, consisting of one management representative from each partner and chaired by the coordinator, ensures the close involvement of the partners in the management and coordination of the project. A detailed list of the deliverables and the reporting obligations are defined, the internal and external communication is presented to ensure close and efficient collaboration to achieve best results.

The following three of the five scheduled meetings have already taken place:

- In Greece, in January 2014 (20-22/01/2014) which has been organized by TEIA
- In Netherlands, in July 2014 (01-03/07/2014) which has been organized by AOC
- In Spain, in December 2014 (01-03/12/2014) which has been organized by UAH
- The next project meetings shall take place:
 - In Slovenia, in June 2015, which will be organized by CAFS
 - In Belgium in November, where the Final Project Meeting and Joint European Conference will be held.

Also, monthly recorded online meetings (using the Flash Meeting tool) organized by the coordinator, have taken place within the consortium members as a means of enhancing internal communication and work plan effectiveness.

The plan of the Quality Management System including a continuous improvement cycle has been developed initially and presented in the deliverable **D8.2 “Quality management and Continuous Improvement Cycle”**. This process-oriented instrument was based on the unique ISO quality standard for learning, education, and training ISO/IEC 19796-1 developed by the international standardization committee ISO/IEC JTC1 SC36/WG5 and published in 2005.

All the project activities within the first year from a formal, administrative and financial point of view are presented by the project coordinator in the deliverable **D8.3 “Interim Management Report”**.

Future activities involve the continuous management and the cooperation between project partners; it is significant that a strong partnership has been built among partners aiming to provide the best possible results. It should be noted that D8.1 could be updated and shall be distributed in the form of revised versions of this document. The latest version shall always be available in the project partners' online management environment, the ECVET-STEP Head-Quarters (HQ), at: <http://hq.ecvet-step.eu>

Deliverable **D8.4 “Final Management report”** will provide the description of all activities completed during the reporting period of the project from a formal, administrative and financial point of view, presented by the project coordinator.

4. Partnerships

ECVET-STEP seeks to bring together all European stakeholders related to VET and employment, including educational and training organisations offering VET, national bodies, agencies and awarding bodies, policy makers, the labour market, as well as the individual adult learners pursuing development of their skills and competencies, in accordance to existing training opportunities across Europe, in combination with demand from the labour market and specific job offerings. The project specifically addresses the agricultural domain, as the sector for the specific adaptation and implementation of the outcomes and their pilot testing.

ECVET-STEP helps to promote cooperation in ECVET adoption, quality assurance in VET-related mobility in education and training in Europe. The collaboration and consultation with all responsible VET mobility and ECVET stakeholders (including the EC, CEDEFOP, national and European ECVET Networks, the national qualifications and VET agencies) will be enabled, facilitated, and improved by the new ECVET-STEP services and instruments for the quality assurance, quality management, and quality development of the VET mobility throughout Europe and all sectors.

The ECVET-STEP developments will be readily available to interested individuals and organisations. With the help of various events the ECVET STEP consortium collaborates with experts from the aforementioned main target groups. The result of our survey and communication during the national events and expert focus groups, confirms the innovative aspects of both the proposed Capability Maturity Framework and the envisaged IT tools and services for the promotion of ECVET and the enhancement of Vet mobility in Europe.

Moreover, the consortium works closely with experts from several standardization committees like the international standardization committee (ISO/IEC JTC1 SC36 WG5 "Quality Assurance and Descriptive Frameworks") and the European standardization committee (CEN/ TC 353 "ICT for Learning, Education, and Training"). This close collaboration will also foster the inclusion of the project outcomes into new developed standards and EU instruments like ESCO. Furthermore the ECVET-STEP consortium will include the European Commission within the elaboration of a harmonized competence model which will consider all relevant European policies like the EQF, ECVET or the e-competence framework.

Therefore the ECVET-STEP will offer brand new solutions for quality VET mobility and lifelong learning in whole Europe and for enhanced training to employment pathways.

Through the Partner Affiliation Programme and the so far established liaisons to related EU projects (QAFP, AGRO-BUSINESS START and QAFP) we aim to find potential stakeholders who are interested in improving, disseminating and exploiting the project's results. For example they could be involved in future related projects combing and taking forward the previous achievements.

The creation of an online community is a key activity for finding potential partners. The regularly produced newsletters with detailed info on the project progresses and results serve as a prompting material for active involvement and participation.

The ECVET-STEP consortium itself consists of eight partners from seven European countries (Greece, Germany, Spain, Belgium, The Netherlands, Czech Republic and Slovenia). As the projects aims at working with several European policies the multi-country partnership provides many advantages. Thus it is possible to investigate the specific circumstances of the VET sector and the agriculture sector in every participating country through the involvement of the partners. For the analysis of the dissemination

and usage of the ECVET it was possible to gain information directly from responsible bodies in every participating country. Every perspective from the different partners enriches the development of the project and leads to more flexibility and adaptability in the results. Moreover, the pilot testing phase will be organized in every country and will provide an important picture of the acceptance and usability of the ECVET-STEP tools and services throughout whole Europe.

The diverse expertise of the ECVET-STEP consortium is a precondition for the accomplishment of the project. Besides a long experience in research programmes the consortium connects expertise in the fields of VET, competence modelling, European mobility frameworks, instruments, the development of technical tools, agriculture, standardisation and dissemination. The consortium includes higher education and research institutions (TEIA, UDE, UAH), national bodies (AOC, KGZS), training and research institutions for agriculture (INEA, IAEI), and private companies working in the software development sector (EUM).

5. Plans for the Future

The adoption and promotion of the ECVET philosophy and provisions, the harmonization and combination the European Qualification and VET instruments and the development of appropriate technical infrastructure and makes sense only at the European level.

The ECVET-STEP CMF, the RULO model and the associated online services, as the main results of the project, are exploitable and will be leveraged in all European countries. Dissemination, exploitation and sustainability will be ensured through the planned development of explicit methodology and guidelines for integrating RULOs in VET Instruments (Europass documents, Qualification specifications, Individual VET plans, VET Programmes and Job Profiles), using the associated standardised specifications, notations and instruments and the compilation of recommendations for adaptation and transfer to any preferred sector, branch, and region in Europe.

In order to achieve these objectives the ECVET-STEP project will focus on the further activities in the second year:

The ECVET-STEP online toolkit for the ECVET CMF will be developed and will be readily available to interested organisations in order to assess their ECVET level of maturity and to understand which ECVET principles and instruments better fit their operational model and workflows. In addition, the repository of RULOs for the agricultural domain will be implemented and populated with descriptions of learning outcomes and usage patterns.

After the finalization of the online services, pilot testing will take place in partner countries at both national and public levels. The next step will be the final publication of the ECVET-STEP services on the ECVET-STEP platform. The results of the pilot testing will be important both for the evaluation of the implemented services and for the optimisation of the tools. Furthermore, the pilot testing will provide important information for the sustainable use of the ECVET-STEP products after the project's end. The optimisation of the tools will take place at the end of the second year after the pilot testing. Therefore the pilot testing is an important element of the whole project.

Concerning the dissemination and the exploitation of the project several activities in the second year of the project are planned.

The consortium will provide regular newsletters/releases to inform all stakeholders and interested individuals and organisations about the latest developments in the project. Furthermore, the presence on several web platforms like twitter, facebook and flicker will be extended and updated regularly.

The ECVET-STEP project is planned to be presented on further international conferences. Moreover, a Joint European Conference on ICT standardisation and services for European Policies be organised in Brussels, at the end of the project. Within this conference the project outcomes will be reviewed and discussed by the participating experts. This conference is also an excellent opportunity for the dissemination of the services which will be developed ECVET-STEP.

Further consultation events with experts and members of the European Commission, CEDEFOP and the ECVET Networks, for presenting and reviewing the ECVET-STEP CMF and technical tools will be pursued during the second year of the project.

Another planned activity of the ECVET-STEP consortium is to focus on the enhancement of the online community and the implementation of its affiliation programme. This affiliation programme includes different partnerships. Interested organisations, projects, and individuals can join the project as a consortium partner, a media partner, or a community

partner. Through the media partnerships the dissemination of the outcomes of the project will be significantly supported.

Due to the European and inter-disciplinary ECVET-STEP consortium possessing the complementary competences and skills, the trans-sectoral, cross-border, and trans-national exchange of knowledge and experiences can be ensured. Multi-linguistic and multi-cultural issues are addressed and integrated within the ECVET-STEP products for easy adaptation to further sectors and regions.

Finally, ECVET-STEP will focus on the reuse, refinement and optimization of the first model for learning outcomes and competences, building the basis for a concrete application profile and technical tools in agriculture. The dissemination and exploitation of this standardized description and its usage will be an important contribution towards the first competence standard in Europe, in alignment with all relevant European policies, frameworks and instruments.

6. Contribution to EU policies

The representation, exchange and reuse of learning outcome and competence information is an important and necessary step towards outcome-based Education and Training practice that ensures higher transparency, mobility and employability of European lifelong learners. In order to achieve the ambitious goal for mobility throughout the European Education, Training and labour space, the development of competences and learning outcomes descriptions related to individual profiles as well as to training and employment opportunities, is a core process towards the vision of “e-Skills in the 21st Century: Fostering Competitiveness, Growth and Jobs”.

Addressing these European requirements, the ECVET-STEP project seeks to build a harmonization basis, combining ECVET with other leading European frameworks, instruments and valuable outcomes of European standardization and LLP projects to develop (1) an operational and transferable framework for managing the ECVET process, for all VET stakeholders (2) design patterns for reusable units of learning outcomes associated with credits and methods for assessment, validation and recognition, covering the perspectives of different stakeholders and different contexts including formal, non-formal, informal VET activities and (3) valuable technology based solutions and services that will facilitate the ECVET process and the specification of reusable units of learning outcomes, while at the same time enable the management of ECVET related evidence and form the technical basis for the actual building of effective European-wide pathways between training and employment opportunities.

Many main deliverables, in addition to their original English versions, will be translated to the partners' national languages, i.e. Greek, German, Spanish, French, Dutch, Slovene and Czech. The pilot testing will be conducted in the respective partners' countries.

ECVET STEP will build upon ECEVT, EQF, European specifications as the e-Competence Framework as well as other relevant European interoperability standards, namely the European Learner Mobility Achievement Information (EuroLMAI) model and the Metadata for Learning Opportunities (MLO). In addition, the project will benefit from and leverage the experience and outcomes of related European funded projects that have provided major contribution in the establishment of Learning Outcome and Competence Model descriptions (i.e. CEN ELM Integrating Learning Outcomes and Competences (InLOC), eCOTOOL, WACOM). An appropriate collaboration and convergence with CEN ICT Workshop projects (completed and ongoing) and agreements will be established as a systematic and profound basis for bridging the qualifications and certifications with the current and future needs of the industry and ICT practitioners.

ECVET-STEP, through the consolidation of the RULO design patterns and their interoperability representations, aims to provide a core tool, which will enhance the expressiveness of training opportunity and job profile descriptions, thus boosting their transparency and comparability at a European level. These technical representations will then serve as integral informational entities for the production of a number of value-added services regarding personal and professional development, action planning and target setting, outcome-based training and employment opportunity exploration, recruitment and development of labour force's competences, for stakeholders of education, training and employment throughout Europe, including the European Union and Commission, the Member States and their governments.

The developed framework and tools are providing a generic mobility infrastructure for all EU countries that can be adapted to national and regional markets and specific situations across whole Europe. The expected benefits for European citizens, being life-long learners

engaging in VET activities with trans-national mobility are equally important, ranging from enhanced possibilities to expand and enrich their professional competence, to opportunities for individualisation of their learning paths and integration of internationality in their personal study plans, enhanced quality of mobility and easier to validate competence acquired abroad, easier job hunting across Europe and, generally, a more transparent and understandable system for life-long personal development and matching of preferences with existing job opportunities.

