Addressing the current and Future skIll needs for sustainability, digitalization and the bio–Economy in agricuLture: European skills agenDa and Strategy

WP 2 -Priorities and strategy design

D2.5: Open transferability framework

Document description	This deliverable contains guidelines and references to allow transferability of the outputs (occupational profiles, curricula, trainings, strategies and roadmaps) within Europe.
Work package title	Priorities and strategy design
Task title	Task 2.5 Transferability framework
Status*	Final
Partner responsible	Lifelong Learning Platform
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Date	30 September 2022

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1. Work Package 2

1.1. Work Package Description

This work package focuses on priorities and strategy design. The consortium, as part of Work Package 1, has identified skill needs, the trends associated to these needs and best practices. In this Work Package, partners have attempted to standardise the skill needs and create occupational profiles which have been prioritised and will be the basis to create curricula and training for them inside the project. In order to create a global direction for the sector, a general EU skill strategy will be defined and its implementation roadmap created for all pilot countries. The Work Package consists of 5 tasks: i) Analysis of skill gaps and new profiles creation; ii) Profiles prioritisation; iii) European Strategy formulation; iv) National Roadmap formulation and refining and v) Transferability framework. A summary of the implementation of this work package is presented in section 3.

2. Task 2.5: Open Transferability Framework

2.1. Task Description

This task focuses on the transferability of the skills and knowledge depicted in the occupational profiles and other outputs of the project with the ESCO database as well as EU frameworks and tools such as EQF, ECTS, ECVET, EQAVET, etc.

Since the domains are quite innovative (sustainability, bioeconomy, digitalisation), the partner responsible of this task (LLLP) had the task to communicate with ESCO if there are important skills and/or knowledge concepts not yet available in the database (profiles were created in task 2.1), to ensure that the training strategy and training design and implementation will allow real uptake of the needed skills in agriculture, food industry and forestry. This task also had the aim to share feedback on skills and/or knowledge concepts currently in ESCO but that need to be modified or expanded so they can be considered for their integration in the database. Moreover, the overarching aim of this task was to establish general guidelines and references to allow transferability of FIELDS outputs within Europe.

Who?
- Lead partner: LLLP
- Contributing: EFVET, INFOR, AERES, AP, UNITO

Deliverable: Report Open transferability framework.
- Report and translations are not public (Restricted to other E+ Programme participants - including EACEA, Commission services and project reviewers).

3. Task Methodology and Implementation

3.1.   Methodology

The task leader (LLLP) started the work on the work package at the end of 2021 by organising meetings with contributing partners to determine the most suitable course of action. Two main tasks were identified: 1) explore ESCO and contrast the occupational profiles developed in 2.1 against the database and 2) explore the linkages between FIELDS outputs and the broader EU policies, frameworks and tools landscape to determine their transferability. The work on the first task is explained more in depth in section 4.a.i FIELDS Occupational profiles and ESCO. It covers the initial exploration, the consultation with partners and the exchange with ESCO secretariat to formalise our feedback before the next update process starts. The second task is included in the rest of section 4.a and 4.b. Moreover, in these sections, an in-depth exploration of the linkages between the work of the FIELDS consortium and current relevant EU policies, frameworks and tools are presented. The analysis was done after collecting grey literature and having interviews with experts from CEDEFOP on ECVET and EQAVET. General guidelines for partners were developed to facilitate the alignment and transferability of FIELDS outputs with the broader EU landscape. In section 4.c, due to time constraints, only an initial exploration was done into the linkages with national frameworks and tools.

3.2.   Timeline of implementation

- November - January:
    - preparation work, collecting grey literature
    - coordination meetings with partners
- February - May:
    - collect feedback on ESCO matching
    - exploration of EU policies, frameworks and tools
- May - June: Drafting feedback report for ESCO
- July:
    - Exchange with ESCO on FIELDS feedback
    - Exchange with CEDEFOP on ECVET and EQAVET
- August - October:
    - Final draft of task report
    - Feedback from High Steering Committee
    - Final report

4. Results

4.1.   Linkages of FIELDS outputs with European frameworks and tools

In previous work packages an exploration was made into different European level frameworks and policies that work as general reference points to support Member States and more specifically VET providers to develop a harmonised approach to VET training in areas such as learning outcomes, quality of the training and validation and recognition of skills and competencies to facilitate the mobility experiences. In the following sections, linkages are made between these frameworks and tools and the different FIELDS outputs.

In the application a mention of the *ECQA* platform had been made, however there is no specific mention of ECQA in this report as this platform is not an European-wide initiative or framework, but a private organisation that certifies job roles and provides exams (online and on premise) for other organisations. As well as certification of prior knowledge (formal, non-formal and informal learnings). The FIELDS partners will come in contact with this organisation if relevant and based on their needs in upcoming work packages.

There is a general awareness of EU frameworks and tools in the consortium; though not necessarily familiarity in terms of everyday work. In some cases for example, ESCO is used as a benchmarking tool on skills and competences; whereas other partners came into contact with ESCO only as part of the FIELDS project. Regarding other tools and frameworks, it was mentioned that the ECTS framework is followed by partners who are learning providers. Some of them also take active part in their national quality assurance reference points in which their work is linked to EQAVET and the work of the European Commission.

Overall, partners considered that these tools and frameworks will offer support in harmonisation and EU recognition. It was noted that working taking into account EU frameworks can help in making the educational programmes as suitable as possible for any national and regional context while also providing insights into overall EU needs.

4.1.1. FIELDS Occupational profiles and ESCO

European Skills, Competences, and Occupations (ESCO) describes, identifies and classifies professional occupations, skills and competences relevant for the EU labour market and the education and training sector. One of ESCO's main missions is to build stronger bridges between the world of education and training and the world of work, contributing to reducing skill mismatches and supporting the better functioning of the labour market.

The vision behind ESCO is the provision of a common reference language that could support transparency, translation, comparison, identification and analysis of the content of a qualification, thus helping to indicate how those relate to the skills and occupations needed across occupations and sectors. The ESCO Platform has been used in the project as a guide when working on the development of the occupational profiles and specific qualifications associated with these new profiles.

As stated previously, the work on task 2.5: linking occupational profiles (identified in task 2.1) with ESCO, started at the end of 2021. Gaps in these profiles were identified in terms of their transferability to ESCO: which skills and knowledge concepts are not found in or do not fully match the database. This encompassed using ESCO's search tool to match the entries and consultation with all partners involved in WP2 to make sure the findings in ESCO matched the profiles from 2.1 as they had envisioned. By engaging all partners involved in this work package, the profiles were reviewed and necessary modifications were made considering the ESCO formulations[1].

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[1] A more in-depth description of the linkages between FIELDS occupational profiles and ESCO can be found in the report: Linking FIELDS occupational profiles with ESCO skills and knowledge concepts (July 2022).

Some of the main feedback from FIELDS in terms of new skills and new knowledge concepts were grouped in different clusters. **Mismatches:** In some cases, there were mismatches between what was proposed by project partners and what could be found in ESCO. The label was not appropriate or it referred to other fields not covered by the project. Similarly with the description, some of them referred to general skills and knowledge concepts, whereas in some cases the profiles for FIELDS, given their focus, needed more nuanced ones. These issues led to increasing the difficulty of matching entries in ESCO with what was proposed in the profiles. **Competence level**: partners shared that the ESCO database does not offer different levels of a given competence. In the case of FIELDS which aims at building profiles for level 4 and 5 of the EQF it would be helpful if there would be descriptions of what can be achieved at each level. **Skills vs knowledge concept**: one of the problems when determining the skills was the labelling. In this case ESCO helped matching appropriate verbs to the skills proposed. **Relationships:** there were gaps between the relationships presented in the database and what happens in reality. For example systems thinking is only mentioned to be related to software concepts and linked to ICT occupational profiles when in reality it is a key transversal competence, also found as one of the sustainability competences in GreenComp.

Partners also established linkages related to the potential classification for the occupational profiles in development. In the case of profiles related to agriculture, the classification deemed more fitting was under ISCO-08 code 3: Technicians and associate professionals, in the subsection 3142 for agricultural technicians. Profiles related to the food industry were also identified under ISCO-08 code 3, in the subsection 3119 Physical and engineering science technicians not elsewhere classified which includes food technicians. The profiles for operators in the different sectors were more difficult to pinpoint. They were located under ISCO-08 code 6: Skilled agricultural, forestry and fishery workers. Given that the remit of these profiles includes agriculture, food industry and forestry, two subsections were identified 6130 (Mixed crop and animal producers) and 6210 (Forestry and related workers). The profile focused on forestry was identified under ISCO-08 code 6: Skilled agricultural, forestry and fishery workers in the subsection 6210 Forestry and related workers. As it is quite early in the process, it is still to be determined whether a new official classification will be sought.

Another aspect reflected jointly with partners was regarding the experience with ESCO and other EU tools and frameworks. As mentioned previously, there is an overall **awareness of EU frameworks and tools** though not necessarily familiarity in terms of everyday work. Among **the advantages of (using) ESCO**, partners identified: ESCO could be a useful tool for training design; benchmarking learning standards, skills and competences; facilitation of data exchange on labour demand, labour supply and human capital development. In this way, ESCO is effectively seen as a useful tool to integrate the European labour market and bridge the communication gap between labour market and education and training sectors.

Among the **limitations of ESCO**, partners highlighted that the database presents a bit of a rigid structure and gaps in skills and knowledge concepts. Similarly, it is considered not as detailed as partners would have expected (e.g. competence levels). There is still room for improvement in terms of user friendliness: there are difficulties to obtain clear detailed information (e.g. too many steps to find the right category), bugs in navigation friendliness and occasional lack of results produced when using the search function.

The consortium also highlighted the importance of the regular updates of the database and remaining open to a constant input of new suggestions by maintaining a constant dialogue between education and training providers and labour market actors to ensure a systematic provision of data on job openings and other

opportunities. An important aspect for ESCO has to be the work on matching people to employment opportunities across borders. This requires exchanging information on qualifications, occupational experiences and skills obtained in other countries. In this way, making ESCO fully applicable and relevant in any Member State.

Some partners considered that they are perhaps too small to remain regularly involved in the work of ESCO but they see the participation in EU funded projects as a way to continue this work. There was agreement that working as part of this type of consortium is a key opportunity for partners in providing inputs related to new knowledge concepts, skills and job profiles in their sectors.

Box 01: Exchange with the ESCO Secretariat

In July 2022, the FIELDS consortium met with the ESCO Secretariat to present the work carried out as part of 2.5 (and other work packages) and learn about the current and future work of the Secretariat. The main topics covered were:

- **ESCO update (January 2022):** green skill taxonomy, digital-related concepts, occupations and skills for researchers, transversal skills and competences and application of artificial intelligence.
- **Future plans for ESCO:** quality of content (improve ESCO hierarchy, link ESCO to ISCO, orphan skills, digital skills label, research occupations), quality of translations and labelling of digital skills.
- **Data Science for ESCO:** based on statistical analysis and machine learning to assist in maintenance, expansion and making ESCO easier to use.
- **Linking learning outcomes of qualification to ESCO skills (pilot):** this tool aims to cover both higher education and VET (EQF 3 to 8) and formal and non-formal education. The pilot will finalise in the Autumn 2022.
- **ESCO upcoming content update:** updates to existing ESCO content and entirely new content. Input from stakeholders will be received until October 2022 and the analysis of the input will take place until December 2022.

4.1.2. FIELDS curricula and training programmes and ECVET, EQAVET and ECTS

European credit system for vocational education and training (ECVET)

The **European credit system for vocational education and training (ECVET)** was intended to become the European system of accumulation and transfer of credits. It had been designed to enable the recognition of the learning outcomes of an individual in a learning pathway to a qualification. The main purpose of this framework was to facilitate the transfer of learning credits from one qualification system to another being therefore linked to the mobility experience of learners. It offered a framework for making learners more mobile and qualifications more portable, laying down principles and technical specifications and making use of existing national legislation and regulations. It applied to VET qualifications at all levels of the EQF.

Box 02: ECVET structure - Recommendation from 2009[2]

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[2] *RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2009 on the establishment of a European Credit System for Vocational Education and Training (ECVET)*

The formal structure of ECVET included the following procedures:

1. **Identification of learning outcomes** of the qualification,
2. **Definition of units of learning outcomes**: defined as components of qualifications. Units can be assessed, validated and recognized,
3. **Attributing ECVET points**, which provide additional information about units and qualifications in a numerical form,
4. **Attributing Credits**: that is given for assessed and documented learning of a learning outcome of a learner,
5. **Signing a Memorandum of Understanding** between organisations involved in the mobility agreeing to the different roles that have been allocated with the terms and confirming their acceptance of quality assurance, assessment, validation and recognition criteria and procedures as adequate for credit transfer.

The latest Council Recommendation on VET[3] underlined that during the ten years of its implementation, ECVET has widely contributed to the development of a better-quality mobility experience through the use and documentation of units of learning outcomes (procedures 1 and 2 in Box 02). However, one of the key aspects of the framework, the concept of ECVET points, was generally not applied and thus did not lead to the development of a European credit system in VET (procedures 3 and 4 in Box 02). The Recommendation suggests that for vocational qualifications at post-secondary and tertiary level, the European Credit Transfer and Accumulation System already in use may be applied. Given these developments, the VET Recommendation in a way repeals the Recommendation on ECVET (procedures 3 and 4) but at the same time integrates its key principles (e.g. units of learning outcomes: procedures 1 and 2) related to flexibility. Similarly, it mandates the further developments of the ECVET tools (e.g. learning agreement and memorandum of understanding: procedure 5) which support mobility of vocational learners.

Box 03: VET recommendation 2020

The main takeaways from the text of the VET 2020 recommendation:

- **The principle that qualifications are made of units of learning outcomes is integrated and reinforced in the proposal (modularisation).** This is seen as a prerequisite to increase flexibility of the VET programmes and facilitate validation as means to boost the take-up of up- and reskilling. It is also instrumental in facilitating mobility of VET learners and the recognition of learning outcomes achieved during such mobility periods. Furthermore, it can also support the automatic mutual recognition of VET qualifications and cooperation at sectoral level. To this end, a concept of **European Vocational Core Profiles** will be explored with the aim to define a certain share of a common training content at European level. The profiles have the potential to significantly facilitate mobility of learners and workers, automatic recognition of vocational qualifications, and the development of joint VET qualifications and curricula.
- **The mobility tools developed under the 2009 Recommendation** (e.g. learning agreement and memorandum of understanding) related to supporting geographical mobility of VET learners **will be further developed** in the framework of other EU instruments such as those supported by the Erasmus+ programme and linked to the further development of Europass.
- **The credit points introduced by the 2009 Recommendation will be discontinued**, due to the very

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[3] Council Recommendation on vocational education and training (VET) for sustainable competitiveness, social fairness and resilience (2020) and Commission Staff Working Document (2020).

Alignment with the project: Taking this into account, the work of the FIELDS consortium is aligned with these updates in terms of developing learning outcomes and learning units for the training programmes following these recommendations. This work will be done as part of Work Package 3: New tools and training design (Curricula design, Training content creation and new tools). In the Guidelines (section 4.a.v) the last version used of the ECVET tools are presented and it is recommended to verify any modifications in the last two years so that partners can make use of them for recognition of learning and mobility.

European Credit Transfer and Accumulation System (ECTS)

The **European Credit Transfer and Accumulation System (ECTS)** is a tool of the European Higher Education Area for making studies and courses more transparent. It helps students to move between countries and to have their academic qualifications and study periods abroad recognised. ECTS allows credits taken at one higher education institution to be counted towards a qualification at another. ECTS credits represent learning based on defined learning outcomes and their associated workload.

As seen in the previous section, the latest VET Recommendation (2020) has suggested that for vocational qualifications at post-secondary and tertiary level, the European Credit Transfer and Accumulation System already in use may be applied. This was generated by the poor uptake of ECVET credit points for mobility outcomes. After 10 years of ECVET implementation, there was no establishment of an EU credit system in VET.

Alignment with the project: The FIELDS partnership will then adjust its outputs to this recommendation and consider the ECTS credits instead of ECVET credits when designing the training programmes.

European Quality Assurance Reference Framework (EQAVET)

The **European Quality Assurance Reference Framework (EQAVET)** is a reference tool aimed at helping EU countries to promote and direct the continuous improvement of their vocational training systems from common agreed references. In addition to contributing to improving quality, its purpose is to increase transparency, establish mutual trust between VET systems, foster mobility of workers and learners and facilitate the acceptance and recognition of the skills and competences acquired in different countries and educational settings.

The EQAVET Framework comprises quality criteria, descriptors and indicators applicable to quality management at both VET-system and VET-provider levels organised around the quality assurance and improvement cycle (planning, implementation, evaluation/assessment and review/revision). The EQAVET Framework also emphasises that learners' feedback is gathered on their individual learning experience and on the learning and teaching environment.

In the VET Recommendation (2020), it is highlighted that during the 10 years of implementation (2009-2019), the framework has stimulated reforms in national quality assurance systems. The set of reference quality indicators for developing quality in VET, which can be used to support the development and improvement of

VET systems and/or VET providers, has been used by many EU Member States to improve their QA arrangements and to exchange good practices with other EU Member States on these issues. However, it was underlined that the EQAVET Recommendation overall did not contribute significantly to the improvement of transparency of quality assurance arrangements.

In the Annex of the VET Recommendation (2020), the EQAVET Framework, which is used in national quality assurance systems, is described. The framework covers both initial and continuing vocational education and training: including all learning environments (such as school-based provision and work-based learning, including apprenticeship schemes) and all learning types (digital, face-to-face or blended), delivered by both public and private providers. The framework is underpinned by a set of indicative descriptors and common reference indicators, which were included in the Annex of the Recommendation, for quality assurance in vocational education and training applied both at system and provider level, according to national context. This set of reference indicators can be used to support the evaluation and quality improvement of national/regional VET systems and/or VET providers when implementing the EQAVET framework.

The new VET Recommendation includes the indicative descriptors developed in 2016 by the EQAVET Network. This new set is called EQAVET+ and is aimed to address the gaps in terms of topics such as learning outcomes and work-based learning. These EQAVET+ descriptors provide additional details regarding learning outcomes, involvement of social partners and other relevant stakeholders, etc.

Box 04: EQAVET in the 2020 VET Recommendation

The main changes to the EQAVET framework include:
- Repeal the 2009 EQAVET Recommendation and **integrate the work on quality assurance in VET in the EU into the new VET recommendation**.
- **Integrate the EQAVET+ initiative** adding elements about learning outcomes, certification and assessment, stakeholders' consultation, the role of teachers and trainers.
- **Add an additional indicative descriptor on flexibility of VET learning pathways** given the increased need to develop flexible VET provision and on the need to contribute to environmental sustainability. Include the aspect of the digital readiness of VET systems and institutions.
- **Define new working methods through peer reviews of quality assurance at VET system level** in order to improve mutual learning, enhance transparency of quality assurance arrangements of VET provision and reinforce mutual trust between Member States.
- **Maintain the mission and functions of EQAVET national reference points** (NRPs).

Alignment to the project: Overall, the outputs developed in the framework of FIELDS are quite linked with the EQAVET framework and its new developments. The curricula and training programmes will be thoroughly assessed following the framework in Work Package 6, using the VET provider guidelines. As part of the application, 5 EQAVET descriptors have been taken into account: Participation rate, Completion rate, Placement rate, Satisfaction rates and the quality of training material. Given the latest update made in 2020, it would be appropriate to contrast the consortium work in quality assurance with the updated version of the framework, including the EQAVET+ initiative and the additional descriptor on flexibility.

CEDEFOP has also touched upon the topic of ensuring quality certification in VET. In a study from 2015[4] CEDEFOP identified eight key quality features which guarantee that the certification processes are consistent across a VET system. It was underlined that to strengthen trust in certification, it is essential for learners to be assessed against a set of clear reference points expressed in terms of learning outcomes. It is also important that certification results are comparable across the VET system within a particular institution or at country level. In this process, the representatives of the world of work have a bridging role between VET and the labour market.

The key features of certification are: i) addressing certification in formal quality assurance mechanisms, ii) providing clear reference points for assessment, iii) providing information to stakeholders, iv) selection requirements and training of assessors, v) quality of assessment methods and procedures, vi) verification quality and grading, vii) appeal procedures and viii) documentation, evaluation and monitoring of certification. The study also makes a link with the EQAVET framework, proposing descriptors and indicators for each phase of the quality cycle in VET (planning, implementation, evaluation and review. Some of the EQAVET indicators might not directly relate to the main certification elements but they could be seen as relevant in terms of certification results such as: i) indicator 4 completion rate in VET programmes; ii) indicator 5, placement rate of VET graduates; iii) indicator 6, utilisation of acquired skills at the workplace and iv) indicator 9, mechanisms to identify training needs in the labour market.

BOX 05: Cedefop and learning outcomes in VET

Last June, CEDEFOP organised a _forum around learning outcomes in VET_ with a focus on the new publication "European Handbook on learning outcomes"[5]. It was highlighted that learning outcomes operating at the interface of VET, supply and demand side, and articulating how the demands of the labour market can be translated into national VET programmes and curricula, stand out as a key instrument for coordinating and governing VET. Below, relevant literature for FIELDS partners working on current and upcoming work packages is presented:
- _European Handbook on learning outcomes:_ provides practical guidance based on mutual learning and systematic research on defining, writing and applying learning outcomes.
- _Review and Renewal of Qualifications:_ This research paper forms part of CEDEFOP's _Comparing VET qualifications project_, which seeks to develop robust and scalable methods for analysing and comparing the content and profile of qualifications. Focusing on the dialogue (feedback loop) between VET and labour market stakeholders, the paper analyses existing methodologies in this area and outlines how to develop these further.
- _Comparing vocational education and training qualifications_: This report brings together the findings of the CEDEFOP project Comparing vocational education and training qualifications: towards a European comparative methodology. Looking into the challenges related to the in-depth analysis and comparison of the content of VET qualifications, the report provides a methodological basis on which both researchers and policy-makers can build.
- _The Future of VET - The changing content and profile of VET:_ This study examines changes in the way that knowledge, skills and competence are differentiated in curricula, and how learning is organised across different learning sites: in classrooms, workshops or laboratories, and at workplaces. The study collected information through CEDEFOP's ReferNet network, in-depth country case studies, and an online survey among almost 1 000 European VET providers.

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[4] CEDEFOP (2015): _Ensuring the quality of certification in vocational education and training_

[5] CEDEFOP (2022): _Defining, writing and applying learning outcomes_

4.1.3. FIELDS outputs and EQF

The European Qualifications Framework (EQF) is a reference framework that helps communication and comparison between qualifications systems in Europe. Structured in 8 levels where level 1 represents the lowest level of proficiency and 8 the highest, these reference levels are described in terms of learning outcomes: knowledge, skills and competences. This allows any national qualification systems -national qualifications frameworks (NQFs)- in Europe to relate to the EQF levels.

As explained in work package 1 (*Deliverable 1.1 - Stakeholder strategic plan and analysis report*), learners, graduates, providers and employers can use these levels to understand and compare qualifications awarded in different countries and by different education and training systems. This approach enables the comparison of all types and levels of qualifications including qualifications from higher education, vocational education and training and general education, but also qualifications awarded by the private sector and international organisations. Currently, all the countries that integrate the partnership of the FIELDS Project have an NQF aligned with the EQF, despite the fact that countries have different stages of development and there are small variations in level descriptors.

Alignment with the project: In the application, it was proposed that FIELDS will work with programmes at EQF level 4 which will be offered for farmers, foresters, SMEs and the EQF level 5 which will be offered to farm advisors, students. Each module will be splitted in many small modules that can be taught separately. Since the FIELDS consortium aims for the recognition of its outputs (occupational profiles, training programmes and certifications), the EQF recommendation from 2017 should be considered[6], more specifically Annex 4 on Quality assurance for qualifications (see Box 06).

Box 06: Quality assurance principles for qualifications

In accordance with national circumstances and taking into account sectoral differences, quality assurance of qualifications with an EQF level should:

1. **address the design of qualifications** as well as application of the **learning outcomes approach**;
2. **ensure valid and reliable assessment** according to agreed and transparent learning outcomes-based standards and address the process of certification;
3. consist of **feedback mechanisms and procedures for continuous improvement**;
4. **involve all relevant stakeholders** at all stages of the process;
5. **be composed of consistent evaluation methods**, associating self-assessment and external review;
6. **be an integral part of the internal management**, including sub-contracted activities, of bodies issuing qualifications with an EQF level;
7. **be based on clear and measurable objectives, standards and guidelines**;
8. **be supported by appropriate resources**;
9. **include a regular review of existing external monitoring bodies or agencies**, carrying out quality assurance; include the electronic accessibility of evaluation results.

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[6] *COUNCIL RECOMMENDATION of 22 May 2017 on the European Qualifications Framework for lifelong learning*

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Table 01: Summary of linkages between FIELDS outputs with EU frameworks and tools

	Occupational Profiles	Curricula and Training programmes
ESCO	• Connects FIELDS profiles with EU level • Profiles (with their skills and knowledge) as part of the upcoming ESCO update	• Partners can make use of descriptors to develop learning outcomes.
ECVET		• Guidelines from VET Recommendation will support the development of learning outcomes • ECVET tool will support the work on mobility: learning agreement and Memorandum of Understanding (in the Annex)
ECTS		• The use of the credit system will support the transferability of the FIELDS training programmes across pilot countries.
EQAVET		• The descriptors and indicators will be the basis for the quality assurance of FIELDS training programmes.
EQF	• EQF level 4: Operators 1) for Digitalisation in agriculture, food industry and forestry, 2) for Bioeconomy in agriculture, food industry and forestry, 3) for Sustainability in agriculture, food industry and forestry. • EQF level 5: Technicians 1) for agricultural digitalisation, 2) for food-industry digitalisation, 3) for agricultural bioeconomy, 4) for food-industry bioeconomy, 5) for Sustainable Agriculture, 6) for Sustainable Food Industry and 7) for sustainability, digitalisation and bioeconomy in forestry	• Guidelines on quality assurance for qualifications will help align the training programmes and potential qualifications.

4.1.4. FIELDS outputs and other EU frameworks

Apart from the main frameworks and tools which had been considered in the application, linkages can also be identified with other related frameworks and tools developed by the EU institutions in collaboration with Member States. Given the topics touched upon by the project, the skills and competences of the occupational profiles are aligned with different frameworks and tools developed in the digitalisation, sustainability and entrepreneurship sectors, among others. The FIELDS outputs also have linkages to broader frameworks such as the one on apprenticeships.

European Framework for Quality and Effective Apprenticeships (EFQEA)

The **European Framework for Quality and Effective Apprenticeships**[7] is directly linked to the apprenticeship scheme to be developed as part of Work Package 3. The Framework sets out 14 criteria to define quality and

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[7] *COUNCIL RECOMMENDATION of 15 March 2018 on a European Framework for Quality and Effective Apprenticeships*

fields

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effective apprenticeships, ensuring both the development of job-related skills and the personal development of apprentices.

The framework takes into account the diversity of vocational education and training (VET) systems across the EU and respects the Member States' competence in the area of VET. There are two main criteria: learning and working conditions and the criteria focused on framework conditions:

- **for learning and working conditions:** i) Written agreement, ii) Learning outcomes, iii) Pedagogical support, iv) Workplace component, v) Pay and/or compensation, vi) Social protection, vii) Work, health and safety conditions.
- **for framework conditions:** i) regulatory framework, ii) Involvement of social partners, iii) Support for companies, iv) Flexible pathways and mobility, v) Career guidance and awareness raising, vi) Transparency, vii) Quality assurance and tracking of apprentices.

Alignment with the project: The recommendation states that this framework needs to be considered when making use of European Union funds and instruments supporting apprenticeships. Therefore, in order to align the FIELDS apprentice scheme at EU level, the partnership will look mainly into the criteria regarding learning and working conditions.

Table 02: Criteria for Quality and Effective Apprenticeships for learning and working conditions

Criteria	Description
Written agreement	Before the start of the apprenticeship a written agreement should be concluded to define the rights and obligations of the apprentice, the employer, and where appropriate the vocational education and training institution, related to learning and working conditions.
Learning outcomes	The delivery of a set of comprehensive learning outcomes defined in accordance with national legislation should be agreed by the employers and vocational education and training institutions and, where appropriate, trade unions. This should ensure a balance between job-specific skills, knowledge and key competences for lifelong learning supporting both the personal development and lifelong career opportunities of the apprentices with a view to adapt to changing career patterns.
Pedagogical support	In-company trainers should be designated and tasked to cooperate closely with vocational education and training institutions and teachers to provide guidance to apprentices and to ensure mutual and regular feed-back. Teachers, trainers and mentors, especially in micro-, small and medium-sized companies, should be supported to update their skills, knowledge and competences in order to train apprentices according to the latest teaching and training methods and labour market needs.
Workplace component	A substantial part of the apprenticeship, meaning at least half of it, should be carried out in the workplace with, where possible, the opportunity to undertake a part of the workplace experience abroad. Taking into account the diversity of national schemes, the aim is to progress gradually towards that share of the apprenticeship being workplace learning
Pay and/or compensation	Apprentices should be paid or otherwise compensated, in line with national or sectoral requirements or collective agreements where they exist and taking into account arrangements on cost-sharing between employers and public authorities.
Social protection	Apprentices should be entitled to social protection, including necessary insurance in line with national legislation.
Work, health and safety conditions	The host workplace should comply with relevant rules and regulations on working conditions, in particular health and safety legislation.

The Commission published a report in 2021[8] taking stock of how EU Member States are putting into practice the European Framework for Quality and Effective Apprenticeships. The report shows that the 7 criteria on learning and working conditions are in place in the majority of Member States, while further progress is needed in implementing the 7 criteria on framework conditions. In section 4c, the current state of implementation - based on this report- at national level is presented for each pilot country of the project.

A CEDEFOP report on long-term apprentice mobility[9] underlined that training standards can differ considerably between host and sending countries especially when it comes to country-specific requirements regarding training content and training settings for vocational occupations across Europe. This situation causes concern over the recognition of the skills acquired by apprentices during their time abroad. CEDEFOP highlights that learning-outcomes-based and competence-based approaches to apprenticeship curriculum design seem to be favourable preconditions to enable cross-border long-term apprenticeships since they provide space for greater flexibility in adapting curricula and ensure clarity in the structure of curricula. However, apprenticeship curricula are not always designed with these approaches; when they are, in practice, it is not always easy to translate and explain the national learning outcomes to employers abroad. This work needs to be coordinated with the employer side since many receiving companies might not have enough resources to oversee the achievement of the specific learning outcomes.

Alignment with the project: Another important step in this work will be to make the pledge as a consortium to join the European Alliance for Apprenticeships. The *European Alliance for Apprenticeships (EAfA)* unites governments and key stakeholders with the aim of strengthening the quality, supply and overall image of apprenticeships across Europe, while also promoting the mobility of apprentices. These aims are promoted through national commitments and voluntary pledges from stakeholders. The FIELDS consortium will be submitting a voluntary pledge in view of the development of the apprenticeship scheme.

DigComp 2.2: The Digital Competence Framework for Citizens

The *Digital Competence Framework for Citizens*, also known as DigComp, provides a common language to identify and describe the key areas of digital competence. Digital competence is one of the Key Competences for Lifelong Learning. DigComp is an EU-wide tool to improve citizens' digital competence, help policy-makers formulate policies that support digital competence building, and plan education and training initiatives to improve the digital competence of specific target groups. The competences are divided into 5 areas with a total of 21 competences. The areas are: i) Information and data literacy, ii) communication and collaboration, iii) digital content creation, iv) safety and v) problem solving.

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[8] Commission Staff Working Document (2021): *Putting into practice the European Framework for Quality and Effective Apprenticeships – implementation of the Council Recommendation by Member States*
[9] CEDEFOP (2021): *Cross-border long-term apprentice mobility*

A set of around 10 to 15 examples is given per digital competence to motivate education and training providers to update their curriculum and course material to face today's challenges, these examples do not aim to be an exhaustive list of what the competence entails.

Alignment with the project: This section can be of relevance for the FIELDS partnership to review in order to maintain the outputs of the project updated and relevant with the current developments at EU level. The occupational profiles developed in task 2.1 include several digital competences both sector-specific and transversal.

EntreComp: The entrepreneurship competence framework

Another framework relevant for the FIELDS project is the *entrepreneurship competence framework*. Entrepreneurship is one of the eight Key Competences for Lifelong learning. This framework describes entrepreneurship as a lifelong competence, identifies the elements that make someone entrepreneurial and describes them to establish a common reference for initiatives dealing with entrepreneurial learning. The framework is divided in three competence areas (15 competences in total): i) Ideas & Opportunities, 2) Resources and 3) Into action.

Alignment with the project: The consortium could benefit from the progression's levels underpinned to EntreComp. In Work Package 2, all profiles developed contain a section on entrepreneurship as a transversal competence. The framework associates a learning outcome to every thematic thread across 8 progression levels from foundation to intermediate, advanced and expert level, each split into two sub-levels. This hierarchisation could be relevant when working on learning outcomes in Work Package 3.

GreenComp: the European sustainability competence framework

Linkages can also be established with *GreenComp*: a reference framework for sustainability competences. The framework provides a common ground to learners and guidance to educators, advancing a consensual definition of what sustainability as a competence entails. It is designed to support education and training programmes for lifelong learning, which makes it relevant for the FIELDS project. GreenComp is written for all learners, irrespective of their age and their education level and it applies to any learning setting (formal, non-formal and informal).

Alignment with the project: In the case of FIELDS, sustainability is looked at specifically in its intersection with the agriculture, food and forestry sectors. However, from the transversal competence lens, it could provide inspiration for partners developing Work Package 3. GreenComp encompasses 12 competence groups in 4 competence areas: i) embodying sustainability values, ii) embracing complexity in sustainability, iii) envisioning sustainable futures and iv) acting for sustainability.

Key competences for lifelong learning

The Council of the European Union adopted a *recommendation on key competences for lifelong learning* in May 2018. The recommendation identifies eight key competences essential to citizens for personal fulfilment, a healthy and sustainable lifestyle, employability, active citizenship and social inclusion.

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These are the eight key competences: i) Literacy competence, ii) Multilingual competence, iii) Mathematical competence and competence in science, technology and engineering, iv) Digital competence, v) Personal, social and learning to learn competence, vi) Citizenship competence, vii) Entrepreneurship competence, viii) Cultural awareness and expression competence. As it can be seen, this is an overarching framework encompassing different frameworks mentioned previously such as the one for digital and entrepreneurship competencies.

Alignment with the project: Although not focused on the areas touched upon by FIELDS, this framework is an overarching reference tool for education and training stakeholders because it sets up a common understanding of competences needed nowadays and in the future. Moreover the framework presents successful ways to promote competence development through innovative learning approaches, assessment methods or support to educational staff; aspects which are relevant at all stages of lifelong learning, including initial and continuing VET.

Transversal skills and competences

During the development of the occupational profiles in Work Package 2, a transversal module was agreed which encompasses soft skills (some of which are understood in some contexts as transversal competences) and entrepreneurship. This module is highly linked to the work by the Commission on *transversal skills and competences*. The framework covers 3 layers – from most transversal to least ; 6 categories – from internal to external; 24 clusters and 89 skills.

Alignment with the project: The classification has been added to the latest update of the ESCO database, which was used in section 4.a to match with the occupation profiles from FIELDS. This classification can support the partnership in identifying, within the project profiles and training programmes, the competences which are transversal in nature.

Table 03: Summary of linkages of FIELDS outputs with other EU frameworks and tools

	Occupational Profiles	Curricula and Training programmes
EFQEA	● Some of the occupational profiles will include an apprenticeship component.	● An apprenticeship scheme is to be developed as part of Work Package 3. The framework will be considered in its development.
DigComp	● The profiles take into consideration field-specific and transversal digital competences.	● The framework could be useful for the developments of the curricula and training programmes.
EntreComp	● The profiles take into consideration developing entrepreneurship competence in learners.	● The competence framework can support the development of learning outcomes related to entrepreneurship.
GreenComp	● The profiles take into consideration sustainability, with specific profiles focused on this area.	● The competence framework can support the development of learning outcomes related to sustainability in the broader sense.
Key competences	● The profiles touch upon several of the key competences i.e. digital, entrepreneurship.	● There is an indirect link with this framework through various key competences such as digital and entrepreneurship.

Transversal Skills and Competences	● The profiles contain several transversal skills and competences which were identified in the matching exercise with the ESCO database.	● The classification, which is part of ESCO, can support the development of learning outcomes related to these skills and competences.

4.1.5.   v. Guidelines on EU frameworks and tools

In Table 04, a set of guidelines is presented dealing with the transferability of FIELDS outputs with the main EU tools and frameworks covered by the FIELDS project: ESCO, ECVET, EQAVET, ECTS and EQF. As stated in the application, the aim is to have an open framework, meaning the guidelines can be adjusted according to the needs and context of each partner while following an overarching view of the linkages between the outputs of the project and the EU tools and frameworks.

In Table 05, another set of guidelines was prepared dealing with other EU tools and frameworks that might have some relevance to the work done in the FIELDS project. Even though they might not be the main focus of the project, they do have important aspects which need to be considered when implementing the work packages related to occupational profiles, curricula and training programmes.

Table 04: Guidelines for the FIELDS consortium in relation to ESCO, ECVET, EQAVET, ECTS and EQF

Framework or tool	Guidelines
ESCO	● Provide feedback to the ESCO Secretariat before October 2022 so that inputs can be considered in the next round of updates to be released in December 2023. ● After sharing inputs with ESCO, continue improving the linkages between FIELDS outputs and ESCO database while maintaining a degree of flexibility to allow for the transferability in national, regional and local contexts. These results could be shared with ESCO in a future update process. ● Maintain the dialogue with the ESCO secretariat to support the work on linking learning outcomes from qualifications to ESCO skills after the pilot project is finalised in October 2022 and the tool is rolled out to Member States.
ECVET	● Partners should take into account the changes to ECVET in the latest VET Recommendation which include: 　○ Limit the use of the ECVET name as a tool since the credit system as such has been repealed and discontinued. 　○ Take into consideration learning outcomes (and the units) when developing the curriculum and training programmes 　○ Given the latest changes the curricula and training programmes should no longer be based on the ECVET credit points but the use of ECTS is recommended. There is no ECVET certification to be achieved at EU level[10], as explained by CEDEFOP experts, the recognition of the credits awarded will depend on agreements reached in the consortium at the national/regional level. 　○ Use the learning agreement and memorandum of understanding tools developed as part of ECVET. These tools should be used to develop agreements within the consortium and external partners in terms of mobility of learners and recognition of learning outcomes (you can find *here* the learning agreement and *here* the MoU templates that were used under ECVET). ● Other suggestions on this regard include:

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[10] In the application it was stated: "In particular, the EQAVET procedure will be followed in order to get ECVET certification for the relevant training created in WP3".

	○ Partners could explore the connections to Europass and how this tool could support mobility for VET learners taking part in FIELDS training programmes.	
	○ Explore the opportunities for feedback as part of the development of European Vocational Core Profiles which aim to facilitate mobility of learners and workers, automatic recognition of vocational qualifications, and the development of joint VET qualifications and curricula.	
	○ Maintain the connections with CEDEFOP to ensure up to date exchange of information that could support the work on this area. Their resources could be consulted, especially the ones touching upon learning outcomes in VET and the future of VET. These resources can be helpful for the curricula and training programme design as well as for the European Strategy.	
ECTS	● The FIELDS partnership will adjust its outputs to the latest VET Recommendation and consider the ECTS points and credits instead of ECVET credits when designing the training programmes.	
EQAVET	● FIELDS partners should take into account the updates on the previous recommendations. A review of the descriptors/indicators considered in the application could take place to ensure that the quality assurance of the curricula and training programmes are in line with the addition of EQAVET+ update (learning outcomes, certification and assessment, stakeholders' consultation, the role of teachers and trainers). Similarly, the addition of the extra indicative descriptor on flexibility of VET learning pathways.	
	● As with ECVET, CEDEFOP experts explained that there is no EQAVET certification or accreditation provided at EU level[11]. The quality assessment based on EQAVET will then be cross checked with the relevant national or regional frameworks and agencies in charge to achieve their recognition.	
	● Depending on their resources and the relevance for the consortium, it would be interesting to monitor the developments of the Expert Group on EQAVET (project partner EfVET is a member) to gain insight into mutual learning opportunities where perhaps the results of FIELDS could be disseminated. Similarly, with the work of EQAVET national reference points (NRPs) for the partners that have connections with them. Having this contact would ensure maintaining FIELDS work relevance for EU and national stakeholders.	
	● Another important point of contact is the CEDEFOP staff working on EQAVET who can provide updated information about the developments at EU level. The resources from CEDEFOP could support the work in this area. Some relevant resources include their work on ensuring quality certification and comparing VET qualifications.	
EQF	● Depending on the national circumstances and taking into account sectoral differences, it would be interesting to contrast the work on qualifications as part of FIELDS with the guidelines on quality assurance of qualifications from the EQF Council Recommendation.	

Table 05: Guidelines for the FIELDS consortium in relation to other EU frameworks and tools

Framework or tool	Guidelines
EFQEA	● Following the guidelines of the recommendation which states that the EFQEA needs to be taken into account when making use of European Union funds and instruments supporting apprenticeships: the project consortium should align the FIELDS apprentice scheme at EU

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[11] In the application it is stated: "The idea is to put in place all measure and quality indexes used to obtain the EQAVET certification. "

ADDRESSING THE CURRENT AND FUTURE SKILL NEEDS FOR SUSTAINABILITY, DIGITALIZATION AND THE BIO-ECONOMY IN AGRICULTURE: EUROPEAN SKILLS AGENDA AND STRATEGY - AGREEMENT 612664-EPP-1-2019-1-IT-EPPKA2-SSA-B

	level by taking into consideration mainly the criteria regarding learning and working conditions. ● The consortium should ensure that the curricula and training programme of the apprenticeship schemes in each pilot country are learning-outcomes-based and competency-based to enable cross-border long-term apprenticeships. This will ensure greater flexibility in adapting curricula, ensure clarity in the structure of the apprenticeship scheme and enable the recognition of the learning outcomes across pilot countries. ● The consortium is advised to maintain contact with CEDEFOP to ensure maintaining an overview of the developments in apprenticeships and mobility at EU level. This is particularly important given that training standards can differ considerably between host and sending countries.
DigComp	● The consortium could explore the examples provided on digital competences when working on the curriculum and course material. This section would support the alignment and relevance of FIELDS outputs at EU level.
EntreComp	● The consortium could benefit from the progression's levels underpinned to EntreComp given that FIELDS occupational profiles developed contain a section on entrepreneurship as a transversal competence. The framework associates a learning outcome to every thematic thread across 8 progression levels. This hierarchisation could be relevant when working on learning outcomes in Work Package 3.
GreenComp	● With sustainability being one of the key areas for the FIELDS project, it would be warranted to take a look at this competence framework as it is designed to support education and training programmes for lifelong learning, which makes it relevant for the FIELDS project. Though this framework has been developed with a more transversal lens, it could still be relevant for partners developing Work Package 3.
Key competences	● Since the framework is more indirectly linked to the project, no specific action is expected from the consortium. However, it is a good framework to keep as a reference tool since it sets up a common understanding of competences needed nowadays and in the future.
Transversal skills and competences	● This classification can support the partnership in identifying, within the project profiles and training programmes, the competences which are transversal in nature. Since they have been included in the ESCO database, they have been incorporated in the updated versions of the occupational profiles.

4.2. Alignment of FIELDS outputs with EU policies

In this section, the alignment of FIELDS outputs with EU policies related to the project's main topics is explored. The aim was to position the project in the broader EU policy landscape to have an overview and support partners in making linkages with the EU level. Policies were analysed at different levels: i) macro level for the overarching EU policies, ii) VET level takes a more detailed look at VET policies, iii) thematic and sectoral level (thematic referring to digitalisation, sustainability and bioeconomy and sectoral referring to agriculture, food industry and forestry). The policy database from task 5.1 was used as a basis for analysis. The main policy documents were chosen based on the linkages to the project and the time constraints.

4.2.1. At macro level

At a macro level the outputs of the FIELDS project are aligned with the overarching policies of the EU such as the European Green Deal and more specifically in Education and Training: the European Education Area and the Skills Agenda.

- The *European Green Deal* sets out the path of transformational change to turn the EU into the first climate neutral continent by 2050. To get there, Member States pledged to reduce emissions by at least 55% by 2030, compared to 1990 levels. This transformation will bring about new opportunities for innovation and investment while reducing emissions, creating jobs, addressing energy poverty, reducing external energy dependency and improving health and wellbeing.

  - The FIELDS project is clearly aligned with innovation in the area of jobs and improvements in health and wellbeing by upskilling and reskilling workers in the agriculture, food and forestry sectors to ensure better quality products for the EU market and better-quality jobs for the sector.

- The *European Education Area* is an initiative to support Member States work together to build more resilient and inclusive education and training systems. The European Education Area will work in synergy with the *European Skills Agenda* to harness knowledge, making it the foundation of Europe's recovery and prosperity.

  - The priorities of this initiative are: i) improving quality and equity in education and training, ii) teachers, trainers and school leaders, iii) digital education, iv) green education and the geopolitical dimension.

  - The FIELDS project is linked to several priorities such as improving the quality of VET supporting both upskilling and reskilling of learners but also preparing trainers. Moreover, the focus on digitalisation, sustainability and bioeconomy are aligned with the priority on digital and green education of the EEA.

  - The FIELDS project is also linked to the various means and milestones proposed in the EEA Communication including i) the learning mobility, ii) fostering transversal skills, iii) *centres of vocational excellence* and iv) internationalisation of education providers.

  - As part of the EEA, a *Working Group was established on vocational education and training and the green transition*. The main objective of the Working Group is to enable technical exchanges, which will help Member States implement the principles and objectives of i) the *Council Recommendation on vocational education and training (VET) for sustainable competitiveness, social fairness and resilience* and ii) the *Osnabrück Declaration on vocational education and training* as an enabler of recovery and just transitions to digital and green economies, with particular reference to the green transition.

- The *Skills Agenda* to help individuals and businesses develop more and better skills and to put them to use, by i) strengthening sustainable competitiveness, as set out in the European Green Deal, ii) ensuring social fairness and building resilience to react to crises, based on the lessons learnt during the COVID-19 pandemic.

  - The European Skills Agenda includes 12 actions: 1) A Pact for Skills, 2) Strengthening skills intelligence, 3) EU support for strategic national upskilling action, 4) Proposal for a Council Recommendation on vocational education and training (VET), 5) Rolling out the European

Universities Initiative and upskilling scientists, 6) Skills to support the twin transitions, 7) Increasing STEM graduates and fostering entrepreneurial and transversal skills, 8) Skills for life, 9) Initiative on individual learning accounts, 10) A European approach to micro-credentials, 11) New Europass platform and 12) Improving the enabling framework to unlock Member States' and private investments in skills.

○ The FIELDS project and its outputs have direct connections with actions 1) A Pact for Skills (more in section 4.2.2), 2) Strengthening skills intelligence , 4) VET Recommendation (more in section 4.2.2), 6) Skills to support the twin transitions, 7) increasing STEM graduates and fostering entrepreneurial and transversal skills (transversal module on soft skills and entrepreneurship) and 10) on micro-credentials (more in section 4.1.2).

4.2.2. At VET level

At a VET level, the FIELDS project is directly connected with various EU policies and initiatives which are part of the overarching files seen above. These policies and initiatives include:

● The latest **_VET Recommendation_** on vocational education and training for sustainable competitiveness, social fairness and resilience provides the foundation to make sure VET equips young people and adults with the skills to support both the recovery and the green and digital transitions, while ensuring inclusiveness. This Recommendation is Action 4 of the European Skills Agenda. It also puts forward EU level actions to support VET reform and clear quantitative objectives.

○ The main objectives of the recommendations are divided into 7 thematic sections: 1) Vocational education and training is agile in adapting to labour market changes; 2) Flexibility and progression opportunities are at the core of vocational education and training; 3) Vocational education and training is a driver for innovation and growth and prepares for the digital and green transitions and occupations in high demand; 4) Vocational education and training is an attractive choice based on modern and digitalised provision of training/skills; 5) Vocational education and training promotes equality of opportunities; 6) Vocational education and training is underpinned by a culture of quality assurance; and 7) Implementation at national level. The FIELDS project activities and outputs are closely linked to all the thematic sections of the Recommendation.

● The **_Pact for Skills_**, Action 1 of the Skills Agenda, is a shared engagement model for skills development in Europe which includes companies, workers, national, regional and local authorities, social partners, cross-industry and sectoral organisations, education and training providers, chambers of commerce and employment services. The Pact for Skills aims to support a fair and resilient recovery and deliver on the ambitions of the green and digital transitions by taking concrete actions to upskill and reskill people in Europe.

○ The FIELDS project will take part in the Pact for Skills among other companies, associations, EU organisations, national federations, universities or training centres, supporting the EU to develop this plan. The partnership has participated on the event that took place in February 2022 launching Pact for Skills for the Agri-Food Ecosystem.

- The *Micro-credentials Recommendation* seeks to support the development, implementation and recognition of micro-credentials across institutions, businesses, sectors and borders while instilling an effective culture of lifelong learning. Shorter forms of learning opportunities such as micro-credentials, are being developed rapidly across Europe. With opportunities being made available by a wide variety of public and private providers, including in the VET sector, in response to the demand for more flexible, learner-centred forms of education and training. Micro-credentials also have the potential to reach a wider range of learners, including disadvantaged and vulnerable groups.

  - This Recommendation is linked with the VET Recommendation and the Skills Agenda. The VET Recommendation calls to explore the concept and use of micro-credentials, including in VET, together with Member States and relevant stakeholders (e.g. European Qualifications Framework Advisory Group).
  - The Micro-credentials Recommendation states specifically Member States should facilitate the ongoing and emerging development of micro-credentials within formal learning settings, including by that supporting the exploration by VET providers of the role of micro-credentials in continuing VET to support upskilling and reskilling of adults, including through the activities of VET Centres of Vocational Excellence.
  - This Recommendation is directly linked with the approach taken in the FIELDS projects regarding the modularity of the training programmes. This modularity, using the ECTS, would allow learners to follow the training which fits better their needs. It also allows for the provision of a higher number of trainings offers to the learners: the full training programmes (full certification) and the different modules (which would be equivalent to micro-credentials). The partnership will explore how this modularity is to be developed in upcoming work packages 3 and 4.

Box 07: CEDEFOP and micro-credentials

In line with the work on the Council Recommendation on Micro-Credentials, CEDEFOP was tasked with carrying out *a study on micro-credentials*, which looked at their characteristics, how they are designed, delivered and recognised, why they are in demand, how they are being used, as well as their advantages and limitations. This study will be a good tool for project partners when discussing the modularity of the training programmes in Work Package 3. Some of the results from the study are summarised below:
- **Strengths**: Micro-credentials respond to the changing needs of the labour market, promote lifelong learning, assist in upskilling and reskilling, enable learners to build and validate professional skills (non-formal and informal learning), offer opportunities for better understanding and cooperation between education providers and employers, have the potential to provide access to education to a greater variety of learners and provide flexible learning pathways.
- **Weaknesses**: Micro-credentials cause uncertainty among stakeholders as to their benefits, proliferate in unregulated ways, confuse users owing to their complexity and variety, lack transparency as to who ensures their quality, present challenges concerning their recognition, are often unable to reach the most vulnerable or disadvantaged learner groups.

4.2.3. At thematic and sectoral level

Another level of linkages between FIELDS and other EU policies and initiatives refers to the thematic and sectoral level.

Thematic level

The FIELDS project is heavily connected to several EU policies and initiatives related to digitalisation, sustainability and bioeconomy. These include but are not limited to:

- ○ **On digitalisation:**
  - ■ *The Digital Education Action Plan*: The Action plan encompasses 14 actions under 2 priorities. Priority 1 refers to Fostering the development of a high-performing digital education ecosystem and priority 2 covers Enhancing digital skills and competences for the digital transformation. The Actions of the Digital Education Action Plan are the following:
    - ● **Priority 1** includes *Action 1*: Structured Dialogue with Member States on the enabling factors for successful digital education and skills. *Action 2*: Council Recommendation on blended learning approaches for high-quality and inclusive primary and secondary education. *Action 3*: European Digital Education Content Framework. *Action 4*: Connectivity and digital equipment for education and training. *Action 5*: Digital transformation plans for education and training institutions and *Action 6*: Ethical guidelines on the use of AI and data in teaching and learning for educators.
    - ● **Priority 2** includes *Action 7*: Common guidelines for teachers and educators to foster digital literacy and tackle disinformation through education and training. *Action 8*: Updating the European Digital Competence Framework to include AI and data-related skills. *Action 9*: European Digital Skills Certificate (EDSC). *Action 10*: Proposal for a Council recommendation on improving the provision of digital skills in education and training. *Action 11*: Cross-national collection of data and an EU-level target on student digital skills. *Action 12*: Digital Opportunity Traineeships. *Action 13*: Women's participation in STEM and the *European Digital Education Hub*.
    - ● From the actions listed above, the FIELDS project has the most direct links to the frameworks on digital competences and digital education content as well as improving the provision of digital skills in education and training. There are also indirect linkages to connectivity and digital equipment for education and training, digital transformation plans for education and training institutions as well as use of AI and data in teaching and learning.

- ○ **On sustainability:**
  - ■ *Learning for the green transition and sustainable development*: The Recommendation aims to stimulate and support policies and programmes about learning for the green transition and sustainable development. This is crucial to ensure learners of all ages acquire the knowledge to live more sustainably, obtain the skills needed in a changing labour market and take action for a sustainable future.

- The FIELDS project is clearly linked to the main priority of this policy which is learning for the green transition and sustainable development through the various learning opportunities to be created as part of the training programmes. The outputs are also linked to the aim of enhancing teaching through its programmes for trainers. Moreover, a number of skills and knowledge concepts which make up the occupational profiles have connections to the European Competence Framework on Sustainability (GreenComp).

- *Ensuring a fair transition towards climate neutrality*: The Recommendation invites Member States to adopt measures which address the employment and social aspects of climate, energy and environmental policies. A number of aspects considered in the Recommendations are linked to the work as part of the FIELDS project. The outputs of the project are mainly connected to the actions to support people most affected by the green transition and the focus on education and training measures. More specifically the project outputs support:
  - promote entrepreneurship, including enterprises and all other entities of the social economy
  - develop up-to-date labour market and skills intelligence and foresight, identifying and forecasting occupation-specific and transversal skills needs
  - provide high-quality accessible, affordable and inclusive initial education and training, including vocational education and training, which equips learners with skills and competences relevant for the green transition
  - introduce or strengthen support schemes for apprenticeships and, where possible, for paid quality traineeships and job shadowing schemes with a strong training component
  - increase adult participation in training throughout the working life, in line with the upskilling and reskilling needs for the green transition.

- *Circular Economy Action Plan:* The Plan aims a transition to a circular economy that will reduce pressure on natural resources and will create sustainable growth and jobs. It is also a prerequisite to achieve the EU's 2050 climate neutrality target and to halt biodiversity loss. The new action plan covers initiatives along the entire life cycle of products: design, processes, sustainable consumption, and waste prevention.
  - Circular economy is present throughout the occupational profiles and training programmes being developed as part of the FIELDS project. The implementation of the project in this way would be supporting the achievement of the various actions of the Plan related to FIELDS sectors and thematic areas: plastics, water and nutrients, food and packaging, waste.

- *8th Environmental Action Programme*: The main aim is to accelerate the green transition in a just and inclusive way. The Programme has six thematic priority objectives: i) greenhouse gas emissions reductions, ii) adaptation to climate change, iii) a regenerative growth model, iv) a zero-pollution ambition, v) protecting and restoring biodiversity, and vi) reducing key environmental and climate impacts related to production and consumption.
  - The FIELDS project is positively aligned with these goals and its implementation will support the success of the programme through training programmes geared towards

adaptation to climate change, protecting and restoring biodiversity and climate impacts related to production and consumption.

- ○ *EU Biodiversity Strategy for 2030*: It is a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems. The main aim is to put Europe's biodiversity on a path to recovery by 2030, for which it seats specific actions and commitments. The long-term goal is to build our societies' resilience to future threats such as i) the impacts of climate change, ii) forest fires, iii) food insecurity and iv) disease outbreaks - including by protecting wildlife and fighting illegal wildlife trade.
    - ■ The connection to FIELDS outputs is quite clear and direct. With the new occupational profiles and the innovations in curricula and training programmes, current and new workers in the sector will be supporting the process to build resilient futures for our societies through dealing with the aforementioned threats.

- ○ **On bioeconomy:**
    - ○ *A sustainable bioeconomy for Europe*: In 2018, the Commission updates its strategy and action plan on bioeconomy. The strategy aims to accelerate the deployment of a sustainable European bioeconomy. It presents 5 goals: i) ensure food and nutrition security, ii) manage natural resources sustainably, iii) reduce dependence on non-renewable, unsustainable resources, iv) limit and adapt to climate change and v) strengthen European competitiveness and create jobs.
        - ■ The goals and activities of the FIELDS project are directly aligned with the goals of this strategy and the results will support the advancement of this sector at EU level.
        - ■ The Action plan on the other hand encompasses 14 actions to which, the FIELDS project, is also connected.
            - ● In the first area i) Strengthening and scaling up the biobased sectors, unlock investments and markets, the FIELDS project is linked with the mobilisation of stakeholders in developing and deploying sustainable biobased solutions.
            - ● In the second area ii) deployment of local bio-economies rapidly across the whole of Europe, the project supports the development of sustainable food and farming systems, forestry and biobased products and the promotion of education, training and skills across the bioeconomy.
            - ● Finally, the activities and goals of FIELDS are directly in tune with the area of iii) understanding the ecological boundaries of the bioeconomy. Through its outputs the project supports enhancing the knowledge on biodiversity and ecosystems, promotes good practices and enhances the benefits of biodiversity in primary production.
        - ■ The national dimension is supported through the *Standing Committee on Agricultural Research (SCAR)* which has been instrumental in developing national bioeconomy research and innovation strategies for EU countries and for the Commission. Currently, 9 EU countries have a national bioeconomy strategy: Austria, Finland,

France, Germany, Ireland, Italy, Latvia, the Netherlands and Spain. Apart from Germany and Latvia, all countries are part of the FIELDS consortium.

■ It is worth noting that as action under the 2018 EU Bioeconomy Strategy, a study on bioeconomy education, training and skills has been launched in June 2021. The findings of this study will be published in the Summer of 2022.

Sectoral level

FIELDS is connected and aligned to key policies and initiatives in agriculture, food industry and forestry. Some of the main ones include but are not limited to:

● *Common agriculture policy*: This policy package is envisioned as a partnership between agriculture and society, and between Europe and its farmers. The aims of the CAP are: i) support farmers and improve agricultural productivity, ensuring a stable supply of affordable food; ii) safeguard European Union farmers to make a reasonable living; iii) help tackle climate change and the sustainable management of natural resources; iv) maintain rural areas and landscapes across the EU; and v) keep the rural economy alive by promoting jobs in farming, agri-food industries and associated sectors.

  ○ On 2 December 2021, the agreement on reform of the common agricultural policy (CAP) was formally adopted. The new legislation is due to begin in 2023. The main objectives are: i) to ensure a fair income for farmers; ii) to increase competitiveness; iii) to improve the position of farmers in the food chain; iv) climate change action; v) environmental care; vi) to preserve landscapes and biodiversity; vii) to support generational renewal; vii) vibrant rural areas; viii) to protect food and health quality; and ix) fostering knowledge and innovation,

  ○ The work of the FIELDS project is closely aligned with this policy and more specifically with objective ix on fostering knowledge and innovation. This objective encompasses modernising agriculture and rural areas through fostering and sharing knowledge, innovation and digitalisation, and by encouraging their uptake by farmers through improved access to research, innovation, knowledge exchange and training. The FIELDS project will be supporting the achievement of this objective through its occupational profiles, curricula and training programmes.

● *Farm to fork strategy*: The aim of this strategy is to accelerate our transition to a sustainable food system that is able to i) have a neutral or positive environmental impact, ii) help to mitigate climate change and adapt to its impacts; iii) reverse the loss of biodiversity, iv) ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food and v) preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade.

  ○ Some of the initiatives part of this strategy include: ii) a proposal for a *legislative framework for sustainable food systems* in order to support the implementation of the strategy. and ii) a contingency plan for ensuring food supply and food security.

  ○ The outputs of the FIELDS project are heavily connected to the aims of this strategy. By updating the curricula and training programmes, FIELDS will support lowering the environmental impact of agricultural activities, mitigate climate change and its impact, reverse loss of biodiversity, ensure food security and preserve the affordability of food.

- *EU Forest Strategy for 2030*: This strategy builds on the EU biodiversity strategy for 2030. The strategy is meant to contribute to achieving the EU's biodiversity objectives as well as greenhouse gas emission reduction target of at least 55% by 2030 and climate neutrality by 2050. The central and multifunctional role of forests is recognised as well as the contribution of foresters and the entire forest-based value chain. The strategy has a vision of improving both the quantity and quality of EU forests.
  - The actions part of the strategy include: i) promoting the sustainable forest bioeconomy for long-lived wood products, ii) ensuring sustainable use of wood-based resources for bioenergy, iii) promoting non-wood forest-based bioeconomy, including ecotourism, iv) developing skills and empowering people for sustainable forest-based bioeconomy, v) protecting EU's last remaining primary and old-growth forests, vi) ensuring forest restoration and reinforced sustainable forest management for climate adaptation and forest resilience, vii) re- and afforestation of biodiverse forests and viii) providing financial incentives for forest owners and managers for improving the quantity and quality of EU forests.
  - The work of FIELDS around forestry (also bioeconomy) is directly linked to this strategy. By providing new occupation profiles, an updated curricula and training programmes, the project is supporting action iv focused on developing skills and empowering people for sustainable forest-based bioeconomy. All FIELDS outputs will contribute in one way or another to the other aforementioned actions of the strategy.

Table 06: Summary of linkages between the FIELDS project and EU policies

		FIELDS Outputs
Macro level	**Green Deal**	● The work of FIELDS is linked with the goals of innovation and investment while reducing emissions, creating jobs and improving health and wellbeing
	European Education Area	● Through its innovative training programmes, FIELDS is linked to improving quality and equity in education and training. The training for teachers supports the focus on teachers, trainers and school leaders of the EEA. Moreover, with digitalisation and sustainability at its core, the outputs of the project are directly linked with the main dimensions of the EEA on digital and green education. The FIELDS project is also linked to the various means and milestones proposed in the EEA Communication including: i) the learning mobility, ii) fostering transversal skills and iii) internationalisation of education providers.
	Skills Agenda	● The FIELDS consortium is closely connected with the i) A Pact for Skills; ii) Strengthening skills intelligence by maintaining exchanges among partners and with the ESCO Secretariat; iii) the VET Recommendation, iv) the skills to support the twin transitions (as mentioned with the EEA, the project is focused on the digital and sustainability dimensions throughout their outputs); v) increasing STEM graduates and fostering entrepreneurial and transversal skills and vi) on micro-credentials (with the modularity in the training programmes).
VET level	**VET recommendation**	● The FIELDS projects is underpinned by the VET Recommendation and its goals: 1) Vocational education and training is agile in adapting to labour market changes; 2) Flexibility and progression opportunities are at the core of vocational education and training; 3) Vocational education and training is a driver for innovation and growth and prepares for the digital and green transitions and occupations in high demand; 4) Vocational education and training is an attractive choice based on modern and digitalised provision of training/skills; 5) Vocational

		education and training promotes equality of opportunities; 6) Vocational education and training is underpinned by a culture of quality assurance; and 7) Implementation at national level.
	Pact for Skills	● The FIELDS consortium will join the Pact for Skills for the Agri Food ecosystem.
	Micro-credentials	● This Recommendation is linked with the development of modular courses as part of the FIELDS training programmes.
Thematic level	**Digitalisation**	*Digital Education Action Plan* ● The FIELDS project has the most direct links to the frameworks on digital competences and digital education content improving the provision of digital skills in education and training. As well as indirect linkages to connectivity and digital equipment for education and training, digital transformation plans for education and training institutions, use of AI and data in teaching and learning
	Sustainability	*Learning for the green transition and sustainable development* ● Through its outputs, the project is connected and supports the main goals of the Recommendation such as i) Establish learning for the green transition and sustainable development as priority ii) Provide learning opportunities in formal, non-formal and informal settings, iii) Support and enhance teaching and learning for the green transition and sustainable development, iv) provide fact-based and accessible information on the climate, environmental and biodiversity crisis and its drivers and v) Help educators to take part in professional development programmes related to sustainability.
		Ensuring a fair transition towards climate neutrality ● Through its outputs, the project is connected and supports the main goals of the Recommendation such as: i) promote entrepreneurship, ii) develop up-to-date labour market and skills intelligence and foresight, iii) provide high-quality accessible, affordable and inclusive initial education and training, including vocational education and training, iv) introduce or strengthen support schemes for apprenticeships and v) increase adult participation in training.
		Circular economy action plan ● Circular economy is present throughout the occupational profiles and training programmes being developed as part of the FIELDS project. The implementation of the project in this way would be supporting the achievement of the various actions of the Plan related to FIELDS sectors and thematic areas: plastics, water and nutrients, food and packaging, waste
		Environmental action programme ● The FIELDS project is positively aligned with the goals: i) greenhouse gas emissions reductions, ii) adaptation to climate change, iii) a regenerative growth model, iv) a zero-pollution ambition, v) protecting and restoring biodiversity, and vi) reducing key environmental and climate impacts related to production and consumption. The implementation of the project will support the success of the programme through training programmes geared towards adaptation to climate change, protecting and restoring biodiversity and climate impacts related to production and consumption.
		Biodiversity Strategy for 2030

		● The connection to FIELDS outputs is quite clear and direct. With the new occupational profiles and the innovations in curricula and training programmes, current and new workers in the sector will be supporting the process to build resilient futures for our societies through dealing with the aforementioned threats. In this way, the project will support the achievement of the goals related to: i) the impacts of climate change, ii) forest fires, iii) food insecurity and iv) disease outbreaks - including by protecting wildlife and fighting illegal wildlife trade.
	Bioeconomy	*A sustainable bioeconomy for Europe* ● The goals and activities of the FIELDS project are directly aligned with the goals of this strategy: i) ensure food and nutrition security, ii) manage natural resources sustainably, iii) reduce dependence on non-renewable, unsustainable resources, iv) limit and adapt to climate change and v) strengthen European competitiveness and create jobs. The results will support the advancement of this sector at EU level. ● The Action plan on the other hand encompasses 14 actions to which, the FIELDS project, is also connected. In the first area i) Strengthening and scaling up the biobased sectors, unlock investments and markets, the FIELDS project is linked with the mobilisation of stakeholders in developing and deploying sustainable biobased solutions. On the second area ii) deployment of local bio-economies rapidly across the whole of Europe, the project supports the development of sustainable food and farming systems, forestry and biobased products and the promotion of education, training and skills across the bioeconomy. Finally, the activities and goals of FIELDS are directly in tune with the area of iii) understanding the ecological boundaries of the bioeconomy. Through its outputs the project supports enhancing the knowledge on biodiversity and ecosystems, promotes good practices and enhances the benefits of biodiversity in primary production.
Sectoral level	**Agriculture**	*Common Agricultural Policy* ● The work of the FIELDS project is closely aligned with this policy and more specifically with objective ix on fostering knowledge and innovation. This objective encompasses modernising agriculture and rural areas through fostering and sharing knowledge, innovation and digitalisation, and by encouraging their uptake by farmers through improved access to research, innovation, knowledge exchange and training. The FIELDS project will be supporting the achievement of this objective through its occupational profiles, curricula and training programmes.
	Food Industry	*Farm to Fork Strategy* ● The outputs of the FIELDS project are heavily connected to the aims of this strategy. By updating the curricula and training programmes, the project will support the achievement of the goals such as i) have a neutral or positive environmental impact, ii) help to mitigate climate change and adapt to its impacts; iii) reverse the loss of biodiversity, iv) ensure food security, nutrition and public health and v) preserve affordability of food.
	Forestry	*EU Forest Strategy for 2030* ● The work of FIELDS around forestry (also bioeconomy) is directly linked to this strategy. By providing new occupation profiles, an updated curricula and training programmes, the project is supporting action iv focused on developing skills and empowering people for sustainable forest-based bioeconomy. All FIELDS outputs will contribute in one way or another to the other aforementioned actions of the strategy.

As with section 4a, to close this section a set of guidelines was prepared in order to maintain awareness of the broader EU policy landscape to ensure the partnership can adapt to the upcoming developments in each case.

Table 07: Guidelines for FIELDS partnership

	FIELDS outputs
Macro level	- In order for the partnership to maintain its alignments with developments at EU level, an update to the database on policies and initiatives (task 5.1) should be considered so that the European Strategy, National Roadmaps and other outputs maintain their relevance and coherence. - Depending on its resources, the partnership will maintain awareness of the implementation of the European Education Area and the Skills Agenda to ensure the outputs of the project are relevant and updated.
VET level	- Maintain awareness of the implementation of the VET Recommendation and the work of its working groups such as the one on VET and the green transition (project partner EfVET is a member). Similarly with the work of the Advisory Committee on VET. - The consortium will ensure to take an active role in the Pact for Skills among other companies, associations, EU organisations, national federations, universities or training centres, supporting the EU to develop this plan. The consortium will also be active in the European Alliance for Apprenticeships. - The partnership will follow the implementation of the Micro-credentials Recommendation and take it into account when developing the modularity of the training programmes. Maintaining connections with CEDEFOP and their resources could be a good support to project partners. A study on Micro-credentials in VET will be published in 2022.
Thematic level	- Maintain awareness of the implementation of the Digital Education Action Plan, the Recommendations on a fair transition and learning for the green transition, the Circular Economy Action Plan, the Environmental Action Programme and the Biodiversity and Bioeconomy Strategies as they touch upon key aspects of the project. - The European Strategy and National Roadmaps should as much as possible align with the thematic level policies to maintain the project's outputs relevant and coherent at EU level. - As with the Commission Working Groups on VET, the consortium could monitor the work of the *Standing Committee on Agricultural Research (SCAR)* when it comes to developments in the field of bioeconomy. Similarly, attention should be given to the upcoming study on bioeconomy education, training and skills which is expected for 2022.
Sectoral level	In line with previous guidelines, depending on the resources of the partnership, awareness could be maintained in relation to the implementation of the CAP, the Farm to Fork and Forests Strategies in order to ensure the coherence and relevance of FIELDS outputs.

4.3. Linkages of FIELDS outputs with National frameworks and tools

As part of the transferability framework, an exploration into the connections with national qualification frameworks was also conducted. In the first part, a more in-depth look is given into the implementation of the EQAVET recommendation at national level and into the current situation of National Quality assurance systems based on the CEDEFOP database. A look is also taken at the implementation of the EFQEA framework following a study from CEDEFOP and the Commission. In the second part, the focus is the linkages between FIELDS

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outltputs and national qualifications systems. For this, the work by CEDEFOP into VET qualifications per country was looked into and is presented in a comparative manner.

4.3.1. FIELDS outputs and National Quality assurance frameworks

A summary of each pilot country Quality Assurance systems is found below based on the results from the *Virtual Library* of the European Commission (DG EMPL).

- **Austria:** The country has a comprehensive quality management system – QMS (Quality Management System for Schools). QMS is a common quality management system for all schools from general education to vocational education and training. The system addresses the school as an organisation as well as individuals and it provides QM instruments and tools for different levels of use. VET schools and colleges in Austria are obliged to use QMS. The responsible authorities for VET are: Federal Ministry of Economy (For the company-based part of the apprenticeship training), DG for general and vocational education in the Austrian Federal Ministry of Education, Science and Research (BMBWF). For CVET, there is a national QA scheme (Ö-Cert) that functions as an umbrella programme for regional quality assurance schemes, however, the Ö-Cert certification scheme does not correspond with the EQAVET descriptors. At the provider level, it was identified that as CVET is a rather heterogeneous sector there is no general framework for QA. Following the last governance reform that was started in 2017, there is now a joint. Austria does not use an EQAVET label or seal to certify VET providers in the country.

- **Finland:** The responsibility for the provision of VET is shared between the national administration and VET providers (they are authorised by the Ministry of Education and Culture). Finland's quality assurance approach promotes and implements the EQAVET Framework which is guided nationally by the Finnish National Agency for Education (EDUFI). There is a National Quality Strategy for VET 2030 which outlines quality management in all vocational education and training and its various forms of implementation. At provider-level, it is obligated by law to self-evaluate the education and training they provide and to participate in external audits performed by an independent evaluation agency. The results are published (not in rankings) so they can be used by VET providers to improve their programmes. Finland does not use an EQAVET label or seal to certify VET providers in the country.

- **France:** The country has a long-established system for QA in VET that covers IVET and CVET. The responsible bodies for QA in VET are the Ministry of National Education and Higher Education and the implementation agency France competences (works to improve the efficiency of the professional training and apprenticeship system). The Ministry of Agriculture has a parallel responsibility for vocational training in agriculture. The Labour Ministry oversees CVET for young people, adult jobseekers and VET for private sector employees. Other ministries, such as the Ministry of Youth and Sport, are in charge of training and vocational diplomas in the areas for which they are responsible. The VET quality assurance legislation in France is in line with the EQAVET principles. There is also an obligation of certification of VET providers, completed by a third party, on the basis of a unique national reference framework so that they can use public or mutual funds. France does not use an EQAVET label or seal to certify VET providers in the country.

- **Ireland**: Quality and Qualifications Ireland (QQI) is the statutory agency responsible for the external quality assurance of all post-compulsory education and training nationally, including universities. In Ireland there is no separation between IVET and CVET and they incorporate VET, along with adult education and training, up to EQF Level 5, as further education and training (FET). For CVET, quality assurance (QA) is conducted through provider accreditation and programme validation. For IVET, school-based QA arrangements focus on schools' self-evaluation and external inspections. The body responsible for decision making and implementing further education and training, including most VET provision in Ireland is SOLAS in conjunction with the 16 ETBs (they are both agencies of the Department of Further and Higher Education Research Innovation and Science. Starting from 2016, Ireland's higher education authority also plays a role in the oversight of VET programmes that are delivered in higher education institutions. Ireland does not use an EQAVET label or seal to certify VET providers in the country.

- **Italy:** The national quality assurance approach in the country is aligned with the EQAVET quality cycle, indicative descriptors and indicators. IVET providers are required to prepare a self-assessment report consisting of five areas: context, output, processes, self-evaluation process and priorities identification. External evaluation is implemented through audit visits made by inspectors from the Ministry of Education. In CVET, vocational training agencies, on a voluntary basis, undertake quality certification processes and undertake self-assessment. The Ministry of Education is the competent body for quality assurance in vocational education while for vocational training, at national level, the competent body is the Ministry of Labour and Social Policies. At regional level, the competent authorities for quality assurance in IVET are the Regions and the Autonomous Provinces. Italy does not use an EQAVET label or seal to certify VET providers in the country.

- **Netherlands:** Their system does not make a clear distinction between IVET and CVET, therefore their quality assurance framework applies to both equally. All EQAVET framework indicators are being used in the Netherlands' VET system (with two indicators are partially used). In the Dutch VET law it is mandated that VET providers set up a quality assurance system which can be designed according to their own context but meeting nationally set quality standards. External reviews of public and private VET providers are conducted by the Inspectorate of Education. On one hand, the Ministry of Education, Culture and Science is responsible for outlining the general conditions for VET and on the other the administration and management of schools as well as vocational education are regionally organised. Providers are responsible for quality assurance. The Netherlands does not use an EQAVET label or seal to certify VET providers in the country.

- **Spain:** Ministry of Education and Vocational Training through the General Secretary for Vocational Training is in charge of the monitoring of the assessment and management of the quality of vocational training at the national level and the Regional authorities are responsible in their own remits. In their new organic Law for the Organisation and Integration of Vocational Training a specific section for quality is found in the title: Evaluation and Quality of the Vocational Training System. In Spain, there is no mandatory self-assessment, however, educational administrations of the Regional Authorities must help and promote school self-evaluation in order to improve their practice. Currently in Spain, the different Regional Authorities have regulations on quality in VET, although there is no homogeneity in their procedures. Spain does not use an EQAVET label or seal to certify VET providers in the country.

As it can be seen from the summaries, none of the pilot countries in the project use EQAVET labels or seals to certify VET providers; however, pilot countries comply to a high degree in having their quality assurance systems linked to EQAVET. An EQAVET report from 2018[12] indicates that Austria, Finland, France, Italy, have devised the approach utilising the EQAVET Framework and that the framework has inspired the measures and reforms. Similarly, in Ireland, Spain and the Netherlands the development of the national approach to quality assurance is in line or aligned with the EQAVET Framework. Project partners working on quality assurance will need to take this into account when developing quality assurance and find a balance between EQAVET and each country and region quality assurance frameworks, especially the ones where currently, even though there is alignment with EQAVET, different characteristics prevail.

A key dimension of the VET Recommendation from 2020 is the continuation of the work with the Quality Assurance National Reference Point for vocational education and training. This actor aims to bring together all relevant stakeholders at national and regional levels to conduct a series of actions including:

i) take concrete initiatives to implement and further develop the EQAVET Framework,
ii) inform and mobilise a wide range of stakeholders to contribute to implementing the EQAVET framework,
iii) support self-evaluation as a complementary and effective means of quality assurance to allow the measurement of success and the identification of areas for improvement,
iv) participate actively in the European network for quality assurance in vocational education and training,
v) provide an updated description of the national quality assurance arrangements based on the EQAVET Framework and
vi) engage in EU level peer reviews of quality assurance to enhance the transparency and consistency of quality assurance arrangements, and to reinforce trust between the Member States.

It was stated by FIELDS partners that there are organisations which have close connections to the NRP in their own countries. These connections can prove to be a valuable asset when it comes to design the quality assurance plans for the FIELDS curricula and training programmes.

EFQEA Framework

Member States are also progressing with regards to Apprenticeship schemes, more specifically in the implementation of the criteria set forth by the EFQEA recommendation - In the table below a comparison between FIELDS pilot countries is presented based on the state of play report by the European Commission[13].

To understand the table, the colour system is explained below:

- **Dark Green**: From Advanced stage of system/scheme change to fully in place
- **Light Green**: From Initial stage of system/scheme change to a large extent in place
- **Yellow**: (Some) discussions have started, but this did not lead to any new measures (yet)

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[12] EQAVET Secretariat (2018): *Supporting the implementation of the European Quality Assurance Reference Framework*
[13] Commission Staff Working Document (2021): *Putting into practice the European Framework for Quality and Effective Apprenticeships – implementation of the Council Recommendation by Member States*

- **Light red**: Somewhat in place
- **Dark orange**: Not in place at all

Table 08: Implementation of apprenticeship quality criteria in FIELDS pilot countries

	Austria	Finland	France	Ireland	Italy	Netherlands	Spain
Written agreement	green	green	light green	green	green	green	cream
Learning outcomes	green	green	green	green	light green	green	cream
Pedagogical support	green	light green	light green	green	light green	green	cream
Workplace component	green	green	green	light green	green	green	cream
Pay and/or compensation	green	green	green	green	green	green	cream
Social protection	green	green	green	green	green	green	green
Work, health and safety conditions	green	green	light green	green	green	green	light green
Regulatory framework	green	cream	green	light green	light green	green	green
Involvement of social partners	green	light green	green	green	light green	green	green
Support for companies	green	light green	green	cream	light green	cream	light green
Flexible pathways and mobility	green	light green	green	light green	light green	green	light green
Career guidance and awareness raising	green	cream	green	cream	light green	green	light green
Transparency	green	green	light red	dark orange	light green	green	light green
Quality assurance and tracking of apprentices	green	cream	light green	light green	cream	green	light green

It can be observed that at the time of writing, all FIELDS pilot countries were rather advanced in their implementation of the EFQEA, with the majority of criteria in the initial or advanced stage of reforms (the fullest being in Austria) or with the discussions around the reforms having already kicked off (Spain has 5 criteria under initial discussions). Being aware of these and other differences among partners will support the development of the apprenticeship scheme in Work Package 3.

4.3.2. FIELDS outputs and National Qualification frameworks

As part of the consultation with project partners it was found that the work with the ESCO database is helpful and the content found there is relevant but it will not be the most suitable support to transfer FIELDS outputs to the national contexts given their own characteristics. For example, Ireland learning standards are used through the NFQ and this relates to skills and competencies in the context of a training programme, rather than a job profile, so it will be difficult to connect the two concepts. Another example was from Austria where it will be difficult to transfer these new occupational profiles because there is already a large number of available educational programs emphasising on the FIELDS four big topics (sustainability, digitalisation, bio-ecology and soft-skills).

One of the main impacts of ECVET impact at national level is related to the introduction and implementation of learning outcomes approaches and the structuring of qualifications into units or groups of learning outcomes. ECVET has also influenced the development of better mobility at national level through more effective agreement on, and documentation, of learning outcomes. In some countries this has reinforced the shift to use learning outcomes acquired abroad to obtain a VET qualification, while also ensuring that the mobility experience is better structured, organised and quality assured. As explained in the previous section, at national level, countries which implement national credit point systems for VET programmes or ECTS for mobility have not adopted ECVET points for mobility outcomes. On the side of qualification frameworks, all pilot countries have had their NQF linked to the EQF (the Spanish Framework for Lifelong Learning was launched in April 2022 - pending compatibility certification[14]). Table 1 from the Task 1.1 *Stakeholder strategic plan and analysis report* (see below), shows a comparison among the pilot countries (*Austria*, *Finland*, *France*, *Ireland*, *Italy*, *The Netherlands* and *Spain*), an adapted version of the table can be found below including the linkages between EQF and NQFs:

Table 09: Linkages between National Qualifications Framework and European Qualifications Framework

Country	Scope of the framework	Number of levels	Level descriptors	NQF linked to EQF
Austria	Designed as a comprehensive NQF; currently, includes qualifications awarded in higher education and VET qualifications at levels 4, 5 and 6 from formal education and training; it includes two qualifications from the health sector at level 8.	Eight	• knowledge • skills • competence	2012
Finland	Comprehensive framework including all State-recognised qualifications. No qualification linked to EQF level 1.	Eight	• integrated level descriptors include knowledge, skills and key competences	2017
France	NQF covers all levels and types of vocationally and professionally oriented qualifications and the	Eight	• complexity of knowledge	2010

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[14] *Real Decreto 272/2022, de 12 de abril, por el que se establece el Marco Español de Cualificaciones para el Aprendizaje Permanente.*

	national baccalaureate (general, technological and vocational). Open to qualifications awarded outside the formal education system.		• level of skills and know-how • degree of responsibility and autonomy	
Ireland	Comprehensive NQF including all types and levels of qualification from formal education and training	10 with five classes of award type: major, minor, special purpose, professional and supplemental	• knowledge • skills • competence	2009
Italy	Designed as a comprehensive framework; it will include all levels and types of qualification from formal education and training and regional qualifications.	Eight	• knowledge • skills • autonomy and responsibility	2013
Netherlands	Comprehensive NQF including all levels and types of qualification from formal education and training (except primary education). Open to qualifications offered outside the formal education system. Qualifications below EQF level 1 included at entry level.	Eight, including a sublevel at level 4 (4+), and an entry level	• context, • knowledge • skills • responsibility and independence	2011, 2019 update
Spain	Designed as a comprehensive NQF for lifelong learning; will include all levels and types of qualification from formal education and training.	Eight	• knowledge • skills and abilities • competence	2022

Table 10: Comparing EQF level 4 and 5 level qualifications between pilot countries and the FIELDS occupational profiles

Country	EQF Level 4 FIELDS Operator profiles (3,6,9)	EQF Level 5 FIELDS Technician profiles (1,2,4,5,7,8,10)
Austria	● VET school qualification – 3 and 4 year programmes (BMS) (Abschluss der berufsbildenden mittleren Schule) ● Apprenticeship certificate (Lehrabschluss) ● Level 4 professional qualification awarded by regional governments – agricultural technical schools – 3 years (Abschlussprüfung an der landwirtschaftlichen Fachschule)	● VET college/school leaving certificate – 5-year programmes (BHS) (Reife- und Diplomprüfung der berufsbildenden höheren Schulen)
Finland	● Upper secondary vocational qualifications (Ammatilliset perustutkinnot) ● Further vocational qualifications (Ammattitutkinnot)	● Specialist vocational qualifications (Erikoisammattitutkinnot) ● Vocational qualification in air traffic control (Lennonjohdon perustutkinto)
France	● National baccalaureate diploma – general, technological or vocational education (Diplôme national du baccalauréat général, technologique ou professionnel)	● Undergraduate technician certificates (Brevet de technicien supérieur – BTS) ● Undergraduate technician certificates in agriculture (Brevet de technicien supérieur agricole – BTSA)

	- Secondary vocational certificates at level 4 - Professional certificates/titles (Titres professionnels) – level 4 - Professional qualification certificates (CQP) – level 4	- Professional certificates/titles (Titres professionnels) – level 5 - Professional qualification certificates (CQP) – level 5
Ireland	Level 5 certificate e.g. level 5 certificate in hospitality operations	Advanced certificate e.g. level 6 advanced certificate in horticulture
Italy	- Upper secondary education diploma – technical schools – Diploma di istruzione tecnica - Upper secondary education diploma – vocational schools – Diploma di istruzione professionale - Professional technician diploma – Diploma tecnico professionale - Higher technical specialisation certificate – Certificato di specializzazione tecnica superiore	Higher technical education diploma – Diploma di tecnico superiore
Netherlands	- VET level 4 (MBO 4) - Application training food technology (Applicatie opleiding levensmiddelentechnologie)	Associate degree
Spain	- Vocational Training Technician Title (Título de Técnico de Formación Profesional) - Vocational Training Specialisation Courses of the educational system whose access requirement is to be in possession of a Vocational Training Technician degree (Cursos de Especialización de Formación Profesional del sistema educativo cuyo requisito de acceso sea estar en posesión de un título de Técnico de Formación Profesional)	- Higher Vocational Training Technician Certificate (Título de Técnico Superior de Formación Profesional) - Vocational Training Specialisation Courses of the educational system whose access requirement is to be in possession of a Higher Vocational Training Technician degree (Cursos de Especialización de Formación Profesional del sistema educativo cuyo requisito de acceso sea estar en posesión de un título de Técnico Superior de Formación Profesional).

As it can be observed, all pilot countries' national qualification systems have undergone an alignment process against the EQF. However, when looking at the different qualifications at level 4 and level 5 per country, a variety of certifications exist. In this regard, the use of the EQF levels supports the matching of FIELDS profiles across pilot countries. In addition, the use of learning outcomes will support the transferability of the courses and training programmes from one country to another. The use of learning outcomes will also be useful in countries such as Ireland where the NQF refers to learning standards for training programmes and not directly to job profiles.

4.3.3. Guidelines for the consortium

As it was mentioned in the section 3 on the methodology, an exploration between the national quality assurance and qualification frameworks was carried out. Given the expertise of the task leaders which focuses

on the EU level, a more in depth look into these connections can be made as part of the national roadmap formulation which is going to link with the training material (work package 3) and training implementation (work package 4) for which the national frameworks and European frameworks will be taken into account.

Table 11: Guidelines for the consortium regarding linkages between the EU and national levels

	Guidelines
EQAVET / Country level QA	● Project partners working on quality assurance are recommended to take into account the national developments in the implementation of EQAVET. These differences will be important to find a balance between EQAVET and each country and region quality assurance frameworks, especially the ones where currently, despite being aligned to EQAVET, differences remain. ● Given the close connections to the NRP in various pilot countries, it would be warranted to strengthen these connections as they can be a valuable asset when it comes to design the quality assurance plans for the FIELDS curricula and training programmes.
EFQEA / Country level apprenticeship QA	● Being aware of the differences in the implementation of the EFQEA and other differences among partner countries will support the development of the apprenticeship scheme in Work Package 3 in a way that can accommodate national and regional characteristics.
EQF / Country level QF	● The alignment between national qualification frameworks of pilot countries with the EQF will support the transferability of FIELDS outputs across pilot countries. Despite the variety of level 4 and level 5 certifications at national level, working based on learning outcomes should allow FIELDS partners to develop training programmes with a high degree of compatibility across pilot countries. Achieving this will involve strong coordination from all partners to ensure developing programmes that are both aligned to the EU level and are adaptable to the national/regional contexts.

5. Conclusions and next steps

- Overall, the FIELDS project is well aligned with relevant EU policies both on the side of education and training as well as with thematic and sectoral policies. The various activities of the project will support their implementation and the achievement of the long-term goals. In terms of specific FIELDS outputs, the use of learning outcomes to develop training programmes should ensure their transferability since it follows the logic of European frameworks and the linked national frameworks. This will facilitate the cross-border validation of learning outcomes, however, as gaps still remain between countries, partners will need to achieve a consensus when met with challenging differences in their systems. Maintaining a channel of communication with EU agencies such as CEDEFOP could provide support in terms of resources and expertise since their work focuses on navigating the different contexts and providing a common understanding at EU level.
- The next steps include an integration of the various EU frameworks and tools to the process of developing and implementing the training programmes as well as when designing and implementing the quality assurance mechanisms. This will ensure transferability across borders and alignment with the EU level. Moreover, according to partners' resources, maintaining awareness of broader policy developments will support the relevance of the project's outputs. This aspect related to the update of the legislation database and funding database as part of work package 5. Maintaining the databases up to date will contribute also with the work on the European Strategy and National Roadmaps.