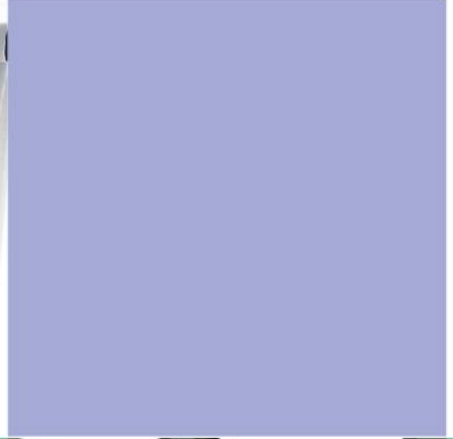
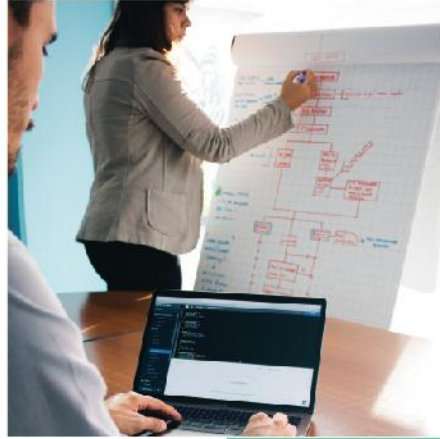
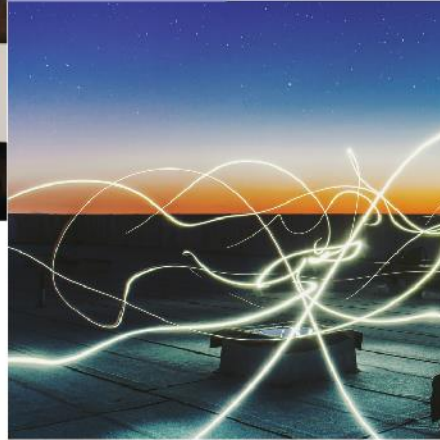
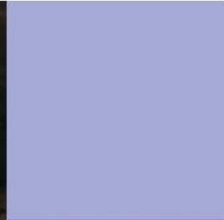




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Entrecomp
for transition



The future “Green Transition Facilitator”

Learning Path and Methodology



| | |
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List of Abbreviations

| Abbreviation | Definition |
|---------------------|---|
| AHOVOKS | Agency for Higher Education, Adult Education, Qualifications and Study Grants |
| AI | Artificial Intelligence |
| CFC | French-speaking Belgium Qualifications Framework |
| CNCP | National Catalogue of Professional Qualifications |
| ECTS | European Credit Transfer and Accumulation System |
| EC4T | EntreComp4Transition |
| ECVET | European Credit System for Vocational Education and Training |
| EHEA | European Higher Education Area |
| ENIC | European Network of Information Centres in the European Region |
| EPS | Education for social advancement |
| EQAVET | European Quality Assurance Reference Framework for VET |
| EQF | European Qualifications Framework |
| EU | European Union |
| FWB | Federation Wallonia-Brussels |
| HE | Higher Education |
| MBA | Master of Business Administration |
| MoNE | Ministry of National Education |
| MOOC | Massive Open Online Courses |
| NQF | National Qualifications Framework |
| NARIC | National Academic Recognition Information Centres in the EU |
| NVAO | Accreditation Organisation of the Netherlands and Flanders |
| SME | Small and Medium Enterprise |
| VEB | Vocational Education Board |
| VET | Vocational Education and Training |
| VLHORA | The Flemish Council of University Colleges |
| VLIR | The Flemish Interuniversity Council |



Abstract

The EntreComp4Transition Project

The EntreComp4Transition project

The twin green and digital transition is expected to bring benefits to all parts of the European society. However, for it to successfully happen, education, vocational education and training (VET) providers, and businesses need to join forces. EU citizens are called upon to upskill and re-skill themselves in the domain of entrepreneurship, which will work together with digital and green skills to ensure they can contribute with sustainable solutions to a stronger and more resilient Europe.

The [EntreComp4Transition](#) project aims to develop new, innovative, multidisciplinary approaches to teaching and learning, paving the way for the future “**Green Transition Facilitator**” by fostering an entrepreneurial mindset, facilitating co-creation, and ensuring recognition of learning outcomes. The project, co-funded by the European Union, is an alliance between SMEs (represented by the Chambers of Commerce), Higher Education/Vocational Education and Training (HE/VET) Institutions in **five different country clusters**: Austria, Belgium, Italy, Spain and Türkiye.

Activities include an in-depth analysis of skills gaps, the development of a dual blended methodology with innovative learning content delivered via a MOOC in line with ECVET and EQAVET frameworks, pilot sessions, a mobility scheme, and the creation of open badges to support Higher Education/Vocational Education and Training (HE/VET) and enable businesses to verify acquired competencies.

Underpinning these actions, the project will also produce a **sustainable Artificial Intelligence (AI)-based tool** to support companies in identifying skill gaps, to raise their competitiveness and to support them to adapt to the needs of the digital and green transition in Europe.

Profile of the Green Transition Facilitator

This report targets the design and development of learning paths in the field of entrepreneurial, green and digital skills leading to the profile of the Green Transition Facilitator. Beneficiaries of the learning paths are:

- Students at level EQF 5 and 6
- SME professionals

With the profile of the Green Transition Facilitator, the EntreComp4Transition project wants to benefit SMEs, which recognise that an adaption to more digitalised and sustainable processes are necessary.

Pedagogical Journey

The pedagogical journey incorporates the results and recommendations of EntreComp4Transition Work Package 3 “Market analysis on skills mismatches to reach the green and digital transition¹”. The learning paths are based further on three different European Frameworks: EntreComp², DigComp³ and GreenComp⁴ Framework. The goal is to address and satisfy the market needs, target the skills mismatch and take into account important previously identified competences in the field of entrepreneurship, digitalisation and sustainability.

¹ [EntreComp4Transition a Market Analysis and Learning Outcomes Recommendations](#)

² EntreComp – The European Entrepreneurship Competence Framework is a reference framework developed by the European Commission to explain what is meant by an entrepreneurial mindset: [online] [The European Entrepreneurship Competence Framework \(EntreComp\)](#).

³ DigComp – The Digital Competence Framework for Citizen provides a common understanding of what digital competence is [online] [The Digital Competence Framework for Citizens \(DigComp\)](#).

⁴ GreenComp – GreenComp is a reference framework for sustainability competencies [online] [The European sustainability competence framework \(GreenComp\)](#).

The learning paths for the future Green Transition Facilitator are defined in the field of entrepreneurship, digital and green skills, which are:

1. Learning Path 1: Sustainability Practitioner
2. Learning Path 2: Digital Transformation Practitioner
3. Learning Path 3: Entrepreneurship Practitioner
4. Learning Path 4: Green Transition Facilitator

The Green Transition Facilitator learning paths, modules and units are the following:

THE GREEN TRANSITION FACILITATOR

| Learning Path 1: Sustainability Practitioner Green Skills | Learning Path 2: Digital Transition Practitioner Digital Skills | Learning Path 3: Entrepreneurship Practitioner Entrepreneurial Skills |
|---|---|---|
| <ul style="list-style-type: none"> •Module 1.1 Valuing Sustainability •Unit 1.1.1 Sustainability System Thinking •Unit 1.1.2 Managing Transitions •Unit 1.1.3 Envisioning Futures •Module 1.2 Sustainability in Business •Unit 1.2.1 Renewable Energy •Unit 1.2.2 Circular Economy | <ul style="list-style-type: none"> •Module 2.1 Online Collaboration and Communication •Unit 2.1.1 Digital and new media literacy •Module 2.2 Artificial Intelligence and Data •Unit 2.2.1 Application of Artificial Intelligence •Unit 2.2.2 Data Analysis | <ul style="list-style-type: none"> •Module 3.1 Opportunities and Creativity / Innovation •Unit 3.1.1 Opportunity Discovery Canvas •Unit 3.1.2 Design Thinking and other Tools for creation, co-creation and innovation •Module 3.2 Business Model Navigator •Unit 3.2.1 Business Models Canvas |

Learning Path 4: Green Transition Facilitator Integration

- Module 4.1 Status quo: Green, Digital and Entrepreneurship Assessment
- Module 4.2 Twin Transition Strategy Development

Modules and units end with assessments and the learner can receive a badge after every completed learning path. The title as the « Green Transition Facilitator » is reached once learning paths 4 is completed and assessed.

Process

- Total time needed for all the four learning paths will be four month or 75 hours of learning activities. The learner will receive 3 ECTS/ECVET points in total, but not every learning path needs to be taken.
- The learning paths are designed at intermediate level. Therefore, basic knowledge in the fields of entrepreneurship, green and digital skills is required.
- The learning paths originate from a blended methodology, meaning the EntreComp4Transition project is blending different digital and non-digital learning tools.

How the EntreComp4Transition project continues

Digital and face-to-face content to foster the acquisition of entrepreneurship, digital and green skills will be developed as well as MOOCs, where the digital learning content will be integrated. These learning paths will be piloted and tested in the EntreComp4Transition country clusters: Austria, Belgium, Italy, Spain, Türkiye.



Introduction

The EntreComp4Transition Project

About this report

The EntreComp4Transition project aims at developing the profile of the Green Transition Facilitator to help guide SMEs through the digital and green transition. This report targets the learning paths leading to the profile of the Green Transition Facilitator. Target groups of these learning materials are European SMEs and their employees, who are interested in re- and upskilling and career conversion as well as students in EQF 5 and 6.

The EntreComp4Transition project develops four learning paths:

1. Learning Path 1: Sustainability Practitioner
2. Learning Path 2: Digital Transformation Practitioner
3. Learning Path 3: Entrepreneurship Practitioner
4. Learning Path 4: Green Transition Facilitator

These learning paths will be piloted and tested in the EntreComp4Transition country clusters: Austria, Belgium, Italy, Spain, Türkiye. Therefore, harmonisation of the learning materials is key and knowledge about the different national education and VET systems is necessary in order to find common ground in designing and developing the learning materials, so that the EntreComp4Transition project can give the opportunity to the countries to recognise and validate the learning paths and learning material. Therefore, this report gives an overview about the different systems and theoretical information about European qualification (ECVET, EQAVET) and validation.

The report is structured as follows:

- First, there is an overview about the theoretical know-how of the European qualification (ECVET, EQAVET) and validation, which shows the needed requirements, helps to understand the national education and VET systems and gives guidance in harmonising the EntreComp4Transition learning paths,
- second, the description of the national education and VET systems helps to understand how the different education systems work and what their specifications are. The chapter shows why the learning paths are important for the countries and how they could be implemented in the national education and VET systems in the future. This is needed for laying the foundation for the development of the learning paths, and
- third, the concept of the learning paths will be introduced and the defined modules and units will be rolled out.

The aim of the report is to give a framework for the following development of the digital and face-to-face content to foster the acquisition of entrepreneurship, digital and green skills. A MOOC will be further developed, where the digital learning content will be made accessible via the EntreComp platform ([EntreComp.com](https://entrecomp.com)), an entrepreneurial learning platform, full of sources and ideas about entrepreneurial education, entrepreneurial competences, the EntreComp framework and more. The EntreComp Community platform was created and developed by a team of dedicated individuals looking to bring together various European projects working in entrepreneurship. It hosts the EntreComp4Transition Country Clusters and it counts on over 1200 members from 85 different countries.



Harmonisation to the European Qualification and Validation

ECVET and EQAVET Requirements

ECVET and EQAVET⁵

ECVET (European Credit System for Vocational Education and Training) is a technical framework to facilitate the transfer, recognition and accumulation of individuals' learning outcomes with a view to achieving a qualification.

The objectives are:

- To help transfer and recognise learning that has taken place during a stay abroad, e.g. geographical mobility.
- To support lifelong learning, by allowing people to transfer and accumulate learning outcomes achieved in different contexts and places to build up to update or upgrade recognised qualifications.

EQAVET (European Quality Assurance Reference Framework for VET) was adopted with the objective of contributing: 'to quality improvement in VET and to increased transparency of, and consistency in, VET policy developments between Member States, thereby promoting mutual trust, mobility of workers and learners, and lifelong learning'. It was developed to recognise that the shift to a knowledge-based economy and the rapid evolution of jobs following technological advances required an adaptive and high-quality VET system.

ECVET and EQAVET requirements

ECVET requirements: ECVET has been designed as a European credit transfer system that is flexible enough to accommodate the characteristic features of VET systems, as well as to accommodate existing credit systems and arrangements. The implementation of ECVET ensures transparency and a common understanding of qualifications. The development of national qualifications frameworks (NQF) and, crucially, of the learning outcomes approach are two key components which create the transparency and mutual trust needed for successful ECVET implementation.

EQAVET requirements: EQAVET introduces a quality cycle, which forms the basis of monitoring and evaluating VET provision. It has four stages:

1. Purpose and Plan
2. Implementation
3. Evaluation
4. Review

The **Quality Cycle** describes the need to set goals and metrics to evidence of achievement, collect evidence to measure the extent to which these metrics are achieved, and then review this information to identify any actions that could improve performance. This then feeds back into the stage purpose and planning, and the cycle continues.

⁵ European Commission (2019): Study on EUVET Instruments (EQAVET and ECVET).

EQF, NQF Levels, ECVET points

The European Qualifications Framework

The EQF⁶ (European Qualifications Framework) is an 8-level, learning outcomes-based framework for all types of qualifications that serves as a translation tool between different national qualifications frameworks. This framework helps improve transparency, comparability and portability of people's qualifications and makes it possible to compare qualifications from different countries and institutions. The EQF covers all types and all levels of qualifications, and the use of learning outcomes makes it clear what a person knows, understands, and can do. The level increases according to the level of proficiency, level 1 is the lowest and 8 the highest level.

The 8 EQF Levels are:

| | |
|-------------|---|
| EQF Level 8 | Doctorate |
| EQF Level 7 | Master |
| EQF Level 6 | Bachelor |
| EQF Level 5 | Higher National Diploma |
| EQF Level 4 | Higher National Certificate, Upper Secondary Diploma |
| EQF Level 3 | Secondary Diploma, Vocational Diploma |
| EQF Level 2 | Secondary School with no diploma |
| EQF Level 1 | Primary School |

Figure 1: EQF Levels

The National Qualifications Framework

The NQF⁷ (National Qualifications Framework): All countries committed to the EQF are developing or implementing national frameworks mostly covering all levels and types of qualifications.

⁶ [The European Qualifications Framework](#)

⁷ [The National Qualifications Framework](#)

The NQF helps to make qualifications easier to understand and compare. It can also encourage countries to rethink and reform national policy and practice on education, training, and lifelong learning. The NQF classifies qualifications by level, based on learning outcomes – that is, what the holder of a certificate or diploma is expected to know, understand, and be able to do.

EQF transfer into NQF⁸

Countries can link their qualification levels to the EQF without an NQF, but it is the best way to meet the objectives and recommendations of the EQF if countries decided on an NQF. As it is shown in the next chapter, all EntreComp4Transition country clusters have implemented NQFs on the basis of the EQF.

Therefore, NQFs play a key role in linking national qualifications systems to the EQF reference levels and descriptors. International comparability and the need for a common qualification's language is of key importance. Furthermore, the NQF supports the introduction of explicit learning outcomes-based qualification levels, on which basis the EntreComp4Transition learning paths have been developed.

ECVET points

ECVET points are allocated to a qualification as a whole and to its units. Allocation of ECVET points to a qualification is based on using an agreement according to which 60 points are allocated to the learning outcomes expected to be achieved in a year of formal full time VET. ECVET points will also be allocated to the learning paths as they should be easily adopted and used by HE and VET providers and recognition should be made as easily as possible.

⁸ Cedefop (2012): [Development of national qualifications frameworks in Europe](#), Luxembourg: Publications Office of the European Union.



The National Education and VET Systems

Austria – Belgium – Italy – Spain – Türkiye

Austria

The structure of the Austrian education and VET system

Compulsory schooling⁹ in Austria begins at the age of six and lasts nine years. After that period, young people are required to attend an education or training program until the age of 18.

1. Primary Education

- Elementary school lasts for four years and provides all students with a comprehensive general education with the aim of developing their social, emotional, intellectual and physical abilities.

2. Secondary Education

- At the lower secondary level, students can choose between two types, both of which last four years from 10 to 14 years of age:
 - Neue Mittelschule (NMS): prepares students for the transfer to secondary school or dual vocational education and training.
 - Lower level of a general secondary school (AHS): provides a comprehensive and extended general education. It is offered in three educational tracks (humanistic, natural sciences and economics) as well as in various specialisations (e.g. music, sports).
- The last year of compulsory education is the first year of upper secondary education. At the upper secondary level, students can choose between pre-vocational, vocational and general education programs.
 - Pre-vocational schools provide general education and basic or in-depth vocational skills. First and foremost, the polytechnic school (PTS) is chosen as preparation for dual vocational training. One- and two-year vocational middle schools (BMS) also count as pre-vocational training.
 - Vocational qualifications can be acquired either in a school or in the dual system. Dual vocational education and training usually takes place both in the training company and in vocational school. Depending on the apprenticeship occupation, apprenticeship training lasts between two and four years.
 - Vocational secondary school (BHS) provides higher vocational education in various fields (e.g. tourism, mechanical engineering) and lasts five years.
 - Upper secondary level of general secondary school (AHS) follows ideally the lower level of AHS. This school primarily prepares for university education. It lasts four years.

3. Higher education

- Tertiary education is provided by universities, universities of applied sciences and colleges of education. All three institutions offer a three-year bachelor's degree and a two-year master's program. Graduates of a master's program have the opportunity to obtain a doctorate at universities.

4. Lifelong learning

- The continuing education landscape is characterised by a great institutional diversity (schools, universities, educational institutions of the social partners, non-profit continuing education institutions, private providers etc.) and associated with a broad range of offers.

⁹ [Das österreichische Bildungssystem](#)

European Qualification Framework (EQF) vs. National Qualification Framework (NQF)

Austria's National Qualification Framework is based on the [NQF Legal Act](#) of 2016 that is aligned with the EQF. It provides for mapping of both formal and non-formal qualifications. Mapping is voluntary, with the only exception of the qualifications of Bachelor (BA), Master (MA) and PhD.

Recognition and validation of training curricula and training materials

Responsible for the recognition/validation are the governing body responsible for the qualification in the case of formal qualifications and the VET provider in the case of non-formal VET.

- **Formal qualifications:**

Correspondence with all relevant requirements set out in the respective legal document governing the qualification, e.g., learning outcomes, qualification of training staff, conditions governing learning venue and infrastructure, criteria governing learner-centred skills development.

- **Non-formal qualifications:**

Criteria governing learner-centred skills development: Correspondence with market and learner needs, learner centric design, competence-based definition of learning outcomes, learning methods, learner support and validation of learning outcomes.

Importance of the learning paths for Austria

Austria's goal is to be climate neutral by 2040. Energy transition needs pioneers. Domestic innovations can relieve the burden on the climate and create climate-friendly added value. Currently, green jobs are created in Austrian regions. The “Green Transition Facilitator” combines sustainability, green and transition management skills with digital literacy and AI as well entrepreneurial skills for enabling a “green future” for companies. Training modules and curricula are shaped by competences that align with the professional situations that learners and trainees are likely to encounter. This competency approach facilitates the transition from training to the labor market by increasing the level of employability in key sectors and thus providing skilled labor for the green economy of the future.

Implementation and positioning of learning paths in the future

Austria has a wide network of use for the “Green Transition Facilitator”. The Learning paths can be integrated in university programs and schedules as well as offered by educational institutes like the Institute for Economic Promotion (WIFI) in addition to technical and management courses as they are designed for EQF 5 and 6. The Learning paths can also be part of an MBA or added to the curriculum of Austrian Universities of Applied Sciences (Fachhochschule) when revised accordingly.

Potential recognition of learning paths

There are currently around 330 training occupations that are recognised by the state. This means that they are clearly regulated in the Vocational Training Act: The associated training regulations, for example, state exactly what the rights and obligations are as an apprentice. It also specifies what content is to be taught during training and at what point in time. This ensures that all trainees have the same level of knowledge, i.e., the same skills and knowledge. For training companies, this means that they have an obligation to teach their trainees everything they will need in the future to perform their jobs. Examinations are also regulated in the training regulations. For recognition of new training courses, a lengthy process is needed including all relevant stakeholders, e.g., Trade Associations, Chambers, Companies, Ministries

of Education and Labour, etc., for the necessary job description created as well as the education and assessment.

Belgium

The structure of the Belgian education and VET system

Traditionally, there are three levels of education: primary, secondary and higher education. In addition to these levels of education, there is lifelong learning, which is mainly aimed at adults.

1. **Primary education** includes preschool and primary education.

Flanders

- There is ordinary and special primary education. Ordinary primary education is for children aged 6 to 12 and usually includes six consecutive years of schooling and is subject to compulsory education.

Wallonia

- Ordinary nursery and primary education establishments are divided according to the organising authority on which they depend between **4 networks**: official schools organised by the French Community, official schools organised by provinces and municipalities, non-denominational free schools, denominational free schools (Catholic, Protestant, Jewish, Islamic, Orthodox).
- Basic education includes two levels:
 - **Nursery education**: education provided to children aged at least 2 years and 6 months old;
 - **Primary education**: education provided for 6 consecutive years of study to children who reach the age of 6.

2. **Secondary education** is designed for young people aged 12 to 18.

Four different forms of education are distinguished: **general** secondary education emphasises broad general education. In **technical** secondary education, the focus is on general and technical-theoretical subjects. **Art** secondary education links a general, broad education to active art practice. **Vocational** secondary education is a practice-oriented form of education in which the young person learns a specific profession in addition to general education.

3. **Higher education**

Higher education in Flanders includes programs leading to the degree of bachelor and master. It also includes programs that can be concluded with a postgraduate certificate and continuing education courses. In addition, higher education also awards the degree of doctor. Bachelor programs in Flanders are either professionally oriented or academically oriented.

- Professionally oriented bachelor programs are in the first place oriented towards professional practice and aim to bring students to a level of general and specific knowledge and of competences necessary for the independent practice of a profession or group of professions. Thus, they offer a direct outflow possibility to the labour market. These programs as well as bachelor-after-bachelor programs are set up only within the colleges of higher education.
- Academic bachelor programs, organised by universities or colleges of higher education, emphasise a broad academic education or training in the arts. They are based on scientific research and have the objective of advancement to a master's program or outflow to the labour market.

- Master's programs emphasise advanced scientific or artistic knowledge and competencies necessary for the independent practice of science or art, or for the practice of a profession.

The higher education system in the Federation Wallonia-Brussels (FWB) is a **binary system** characterised by the coexistence of “short-type” or professionally-oriented higher education and “long-type” or academic-oriented education. The professionally-oriented higher education system leads to certifications classified on level 5 or 6 on the European Qualification Framework while the long-type higher education system leads to certifications scaled on level 6, 7 and 8.

- **“Short-type” or professionally-oriented higher education**, which closely relates theory and practice in terms of pedagogy, is organised by university colleges (Hautes Ecoles), arts colleges (Ecoles supérieures des Arts) and adult higher education (Etablissements de promotion sociale) (it generally leads to Bachelor’s degrees of 180 ECTS and exceptionally 240 ECTS).
- **“Long-type” higher education**, which is based on fundamental concepts, experimentations and illustrations, is organised by universities, university colleges (Hautes Ecoles), arts colleges (Ecoles supérieures des Arts) and adult higher education (Etablissements de promotion sociale). It is organised in 2 cycles: the first cycle leads to a bachelor degree of at least 180 ECTS; the second ‘professionalised’ cycle leads to a master degree (mostly in 120 ECTS and exceptionally of 60 or 180 ECTS).
- The adult higher education institutions / social promotion establishments (Etablissements de promotion sociale) also offer higher education programmes (“short-type” or “long-type”) in modular structure, which lead to the Bachelor’s and Master’s degrees. Within the first cycle, highly professional-oriented programmes are also organised, with the specific purpose of accessing a clearly identified profession.

4. Lifelong learning

Flanders

- Part-time arts education is supplementary education and addresses children, adolescents as well as adults. Part-time art education aims at the broad artistic education of children and adults.
- Adult education is separate from the initial educational career. Learners can obtain a recognised diploma, certificate or qualification. Adults aged at least 18, and young people who have fulfilled full-time compulsory education, may enrol.

Wallonia

- Education for social advancement (EPS) is part of the dynamics of lifelong learning in Wallonia. It offers adults, often from very diverse backgrounds, a wide range of training at secondary or higher level, at the end of which it issues recognised titles. Thanks to the flexibility of its organisation (modularity, adapted schedules, etc.), the EPS makes it possible to reconcile studies and employment. It meets various individual and collective needs: initiation, qualification, improvement, retraining, reskilling, specialisation, personal development.

European Qualification Framework (EQF) vs. National Qualification Framework (NQF)

In the Flemish qualification structure, qualifications are grouped into **8 levels**, from primary education to university. There are **vocational qualifications** and **educational qualifications**. A **vocational qualification** defines what you must know and be able to do in order to practice a certain profession. An **educational qualification** states what you must know and be able to do in order to undertake further studies, function in our society or practice a particular profession.

In Wallonia, the **Qualifications Framework**¹⁰ makes it possible to understand the level of skills acquired during training. Based on the model of the European Qualifications Framework, it comprises 8 levels on which the skills validation certificates and certifications for education and vocational training in the public sector in French-speaking Belgium can be positioned.

Recognition and validation of training curricula and training materials

Applications of the Flemish qualification structure

Educational Qualifications

AHOVOKS (Agency for Higher Education, Adult Education, Qualifications and Study Grants) supports the development of educational qualifications from levels 1 through 5. Educational qualifications aimed at the labour market include at least one vocational qualification. Educational providers within secondary education, adult education, part-time arts education, and graduate programs align their curriculum with recognised qualifications. For each educational program from levels 5 through 8, the domain-specific learning outcomes are described under the coordination of VLIR and VLHORA, with quality control by the Accreditation Organisation of the Netherlands and Flanders (NVAO). NVAO is a quality assurance agency that safeguards the quality of higher education in the Netherlands and Flanders, in an expert and independent manner, and that fosters the quality culture pursued within the higher education institutions in the Netherlands and Flanders. It accredits existing and new programmes and assesses the quality assurance of higher education institutions.

Vocational qualification pathways

AHOVOKS supervises the drafting of vocational qualifications. Organisations from the public, private or public-private sector, which meet quality criteria, can issue recognised professional qualifications after a training, in which the competencies from the professional qualifications are taught and/or tested.

Application of the Wallonia qualification structure

Service for trades/jobs and qualifications of the Wallonia-Brussels Federation¹¹:

The Belgian French-speaking (Wallonia-Brussels Federation) Service of Trades and Qualifications (Service Francophone des Métiers et des Qualifications - SFMQ) is a service of the Governments of Wallonia, the French Community (Wallonia-Brussels Federation) and the College of the French Community Commission of Brussels, set up via a Cooperation Agreement.

Its main **missions** are:

- Produce **Job Profiles** ([Profils Métiers](#)) that reflect the professional activities carried out by the workers;
- Produce **Training Profiles** ([Profils Formations](#)) corresponding to the Job Profiles and thus guarantee consistency between the achievements at the end of training and the needs of the world of work;
- To participate in the positioning of certifications within the French-speaking Belgium Qualifications Framework (CFC).

¹⁰ [Cadre francophone des certifications - CFC](#)

¹¹ [Le Service Francophone des Métiers et des Qualifications - SFMQ](#)

Skills Validation Consortium (Consortium de Validation des compétences)¹²:

Anyone over the age of 18 with professional experience can have their skills validated free of charge. After passing a skills validation test (professional situation) in an approved Center, you obtain a Competence Title, issued in the name of French-speaking governments. With this Title you can prove your skills to an employer, resume training with exemption or even access the profession.

ENIC-NARIC Center¹³:

The ENIC-NARIC Center recognises foreign higher education diplomas. The ENIC-NARIC centre of the Wallonia-Brussels Federation is part of the European network of national information centres on academic recognition, established in 1984 by the European Commission, as well as the ENIC network of the European region established by the Council of the Europe and UNESCO to implement the Lisbon Recognition Convention. Through their close collaboration, they ensure an important mission of expertise in terms of academic and professional mobility at the international level.

Importance of the learning paths for Belgium

As a recent [Federal report on the impact of the climate transition on the labour market](#) (2023) in Belgium is outlining, Belgium is facing a number of challenges on its' path towards climate neutrality in 2050, such as job positions decline in specific sectors, transformation of existing jobs and creation of new green jobs. It will be strongly impacted by the rapidly aging population, proper transition support and protection mechanisms in place to protect most vulnerable individuals. Report states, that as much as half of jobs could be directly or indirectly impacted across sectors by green transition. A need of accessible quality training and materials becomes necessary for number of reasons:

- Ensuring equal access to the same educational content across different regions in Belgium for trainers and learners.
- Meeting new regulations and changing business conditions, by providing companies a free access to upskill their workforce through their local chambers network¹⁴.
- Generating interest and informing the population about green jobs in order to attract the workforce.
- Providing resources for ethical transition in line with the labour rights.

Implementation, positioning and potential recognition of learning paths in the future

Creating a cooperation between private and public sectors stands high in the sustainability development agenda across Europe as well as in Belgium. Learning paths developed in the consultation with the European companies aim to showcase a strong private sector interest for cooperation in education and training by addressing labour market needs. Building on these grounds and the common interest from both sides (as public sector is seeking for the resources, good practices and rationalisation of training offer¹⁵), there is a big potential interest for open access green training resources harmonised on European level. While the official recognition path requires high personnel and time resources, coordinating the process in the complex Belgian bureaucratic environment, non-formal recognition of learning modules remains a great possibility in the country context in collaboration with universities.

¹² [CVDC | Site de la validation des compétences](#)

¹³ [Reconnaissance des diplômes étrangers d'enseignement supérieur - Centre Enic-Naric](#)

¹⁴ Project partner Eurochambres is the Association of European chambers of Commerce and Industry, representing more than 20 million businesses through its members and a network of 1700 regional and local chambers across Europe

¹⁵ [Federal report on the impact of the climate transition on the labour market \(2023\)](#)

Italy

The structure of the Italian education and VET system

The Italian education system is organised according to the principles of subsidiarity and of autonomy of institutions.

1. Primary education

- Early Childhood Education for children aged less than 3 years is offered by educational services (servizi educativi per l'infanzia), which include nurseries, playgrounds, centres for children and families, and home-based services. Early Childhood Education and Care (ECEC) for children aged from 3 to 6 years is available at pre-primary schools (scuole dell'infanzia).
- The first cycle of education, which is compulsory, starts with [Primary education](#) (istruzione primaria) at 6 years of age and lasts 5 years.

2. Secondary education

- The first cycle of education continues with [Lower secondary education](#) (istruzione secondaria di I grado), which starts at 11 years of age and lasts 3 years. At the end of the first cycle of education, students sit for a final exam that, if successfully passed, allows to progress directly to the second cycle of education, being the first two years of the second cycle compulsory.
- The [second cycle](#) of education starts at the age of 14 and offers two different pathways:
 - **the upper secondary school education, general (liceo) and technical (istituto tecnico):** Courses last 5 years. At the end of the upper secondary school education, students who successfully pass the final exam, receive a certificate that gives them access to tertiary education.
 - **the regional initial vocational education and training system (Istruzione e formazione professionale - IeFP):** The regional initial vocational training system (IeFP) offers three and four-year courses organised by accredited training agencies or by upper secondary schools. At the end of regional courses, learners receive a qualification that gives them access to second-level regional vocational courses or, under certain conditions, to courses at Higher technological institutes (Istituti tecnologici superiori – ITS Academies), at EQF level 5.

3. Higher Education

The following institutes offer education at tertiary level:

- Universities or equivalent institutions
- Institutes of the Higher education for the fine arts, music and dance (Alta formazione artistica, musicale e coreutica - Afam)
- Higher technological institutes (Istituti tecnologici superiori - ITS Academies)

4. Lifelong learning

[Adult education](#) includes all activities aimed at the cultural enrichment, requalification and professional mobility of adults. Within the broader term 'adult education', the domain "school education for adults" (istruzione degli adulti) only refers to formal education and to literacy and Italian language courses. Adult education is provided by centres for school education for adults (Centri provinciali per l'istruzione degli adulti - CPIA) and by upper secondary schools.

European Qualification Framework (EQF) vs. National Qualification Framework (NQF)

The National Qualifications Framework (Quadro Nazionale delle Qualifiche – [QNQ](#)) is the tool that describes all qualifications released within the national system for the certification of competences. The QNQ refers national qualifications to the European Qualification Framework (EQF) to coordinate the national system and qualifications to the ones of the other countries.

As for higher education, the Italian Qualifications Framework (Quadro dei Titoli Italiani - [QTI](#))¹⁶ groups together information on qualifications released by Italian higher education institutions, both universities and institutions of the Higher education for the fine arts, music and dance. Moreover, the QTI also includes reference legislation for the higher education sector and specific descriptions on regulated professions.

The Framework is organised according to the three main higher education levels as defined through the Bologna Process and it shows the qualifications released for each cycle as well as the relative ECTS credits and learning outcomes.

Recognition and validation of training curricula and training materials

The Italian National Agency for the evaluation of universities and research institutes (Agenzia Nazionale di valutazione del sistema universitario e della ricerca - [Anvur](#)) is the national agency for quality assurance as foreseen by the European Higher Education Area (EHEA). Anvur is a public body under the surveillance of the Ministry of university and research (ministero dell'università e della ricerca - Mur).

Approaches and methods for quality assurance

The Self-evaluation, recurrent evaluation and accreditation of the university system (Autovalutazione, valutazione e accreditamento - [AVA](#)) is based on the Standards and Guidelines for Quality Assurance in the European Higher Education Area that are drawn up by the European Association for Quality Assurance in Higher Education.

The Quality assurance system of Anvur has an advisory orientation and aims at the improvement of the quality of universities and research institutes.

The internal Quality assurance system is the requirement for the accreditation of courses and settings. The accreditation is an external evaluation procedure carried out by Anvur and is divided into an initial and a recurrent accreditation.

- Initial accreditation is awarded to courses and settings according to minimum quantitative and qualitative requirements.
- After having obtained the initial accreditation, courses and settings undergo recurrent accreditation. Recurrent accreditation is based on visits at universities from the Committees of expert of evaluation.

The National evaluation system that implements the quality assurance in school education also includes the adult education system.

¹⁶ Available online both in Italian and English.

Importance of the learning paths for Italy

The learning paths and the profile of the Green Transition Facilitator are important for Italy because they will help to ensure that the country has the skilled workforce it needs to successfully transition to a green economy. The green transition is a complex process that will require a wide range of skills, from technical expertise to project management to communication and outreach. The Green Transition Facilitator will need to be able to understand the challenges and opportunities of the green transition, and to help businesses, communities, and individuals make the transition to a more sustainable future.

Specifically, the learning paths and profile of the Green Transition Facilitator will be important for Italy in the following ways:

- They will help to identify the skills that are needed for the green transition.
- They will provide a framework for training and upskilling workers in these skills.
- They will help to create a network of Green Transition Facilitators, who can share knowledge and best practices.
- They will help to promote the green transition to businesses, communities, and individuals.

Implementation, positioning and potential recognition of learning paths in the future

One way would be to create a national Green Transition Facilitator training program. This program could be offered by a variety of organisations, including universities, government agencies, and private sector companies. The program would need to be designed to meet the specific needs of Italy, and would need to be accredited by a recognised body.

Another way to implement/integrate the learning paths would be to create a network of Green Transition Facilitators. This network could be used to share knowledge and best practices, and to provide support to facilitators working in different parts of Italy. The network could also be used to promote the green transition to businesses, communities, and individuals.

The learning paths could be positioned in a number of different ways. They could be offered as part of a university degree program, as a stand-alone training program, or as part of a continuing education program. The learning paths could also be offered online or in a blended format.

The implementation/integration of the learning paths will require a coordinated effort from a variety of stakeholders. This includes government agencies, universities, businesses, and non-profit organisations. By working together, these stakeholders can help to ensure that Italy has the skilled workforce it needs to successfully transition to a green economy.

Spain

The structure of the Spanish education and VET system

1. Primary Education

Primary education follows pre-school education and normally covers the period from six to twelve years of age, and is compulsory and free of charge. It consists of six consecutive and progressive academic years in which progress is made once the objectives of the year have been achieved.

2. Secondary Education

- Compulsory secondary education (ESO): Compulsory secondary education covers four years, normally from the age of 12 to 16. It is divided into subjects and consists of two periods,

the first of three years and the second of one academic year. The second cycle, the fourth year, is mainly preparatory.

- Basic vocational education and training (VET), also known as basic training cycles, which together with primary education and ESO make up the free compulsory basic education of the education system.
 - The basic vocational training cycles respond to a professional profile, so the curriculum of these courses must respect the requirements of the National System of Qualifications and Vocational Training (SNCyFP).
 - ESO students who simultaneously meet certain age and academic requirements, may be proposed by the teaching team for incorporation into basic vocational training cycles. Successful completion of all the areas included in a basic level training cycle leads to the award of two diplomas: the Compulsory Secondary Education Graduate and the Basic Technician in the corresponding speciality, the latter to facilitate the justification in the workplace of the professional competences acquired.
- High School Diploma (Bachillerato)

Students who successfully complete compulsory education can access the baccalaureate, intermediate vocational training courses and, by passing the corresponding exam, intermediate vocational plastic arts and design courses and intermediate sports courses. The baccalaureate and intermediate vocational training constitute post-compulsory secondary education and allow students who have obtained the Compulsory Secondary Education Graduate diploma to choose between the academic and vocational branch when continuing their studies.

The baccalaureate comprises two school years, generally from the age of sixteen to eighteen. Students may remain in ordinary education for four years.
- Intermediate vocational training (VET)

It's organised into different training cycles with a modular organisation, of variable duration and with theoretical-practical contents appropriate to the different professional fields. Among these modules, it is compulsory to include a training module in the workplace, which represents between 23% and 36% of the Training Grade and makes it possible to complete the learning and perfect the professional qualification in a company in the sector.

All the existing training cycles refer to the National Catalogue of Professional Qualifications (CNCP) and their curriculum is in accordance with the requirements derived from the National System of Qualifications and Vocational Training.
- Dual VET

The particularity of this training is the alternation of students between teaching in educational centres and learning in the workplace, the duration in hours in each centre is variable according to the needs of the training. Companies can participate in the model of organising the training, with the promotion of corporate social responsibility, which allows for a perfect relationship between the company and the VET centre.

3. Higher Education

- University education: The university system carries out the public service of higher education through research, teaching and study. The universities are endowed with legal personality and carry out their functions autonomously and in coordination with each other.
- Non-university education
 - Higher vocational education and training (VET)

Vocational training comprises the set of training actions that enable the qualified performance of different professions, access to employment and active participation in social, cultural and economic life. Up to 25% of the training is devoted to the completion of a training module in the workplace.

- Artistic education and higher sports education

4. Lifelong learning

- Strategic plan for lifelong learning: The main strength of the Strategic Plan is the cooperation of education administrations to increase participation in lifelong learning and to ensure that the adult population to acquire the highest possible level of education and training through a continuous updating and acquisition of the necessary competences to ensure the personal, professional and social fulfilment of all citizens, in order to achieve the highest possible level of education and training.
- Vocational training for employment: The aim of vocational training for employment is to offer workers, both employed and unemployed, training adjusted to the needs of the labour market and which meets the productivity and competitiveness requirements of companies and the aspirations of professional promotion and personal development of workers, so that they are qualified for the qualified performance of the different professions and for access to employment. It shall consist of training leading to the award of certificates of professionalism. A Certificate of Professionalism is an instrument that accredits, in the labour field, the set of professional competences that a person must possess in order to carry out a labour activity identified in the labour market.

European Qualification Framework (EQF) vs. National Qualification Framework (NQF)

Spain has adopted the EQF in its national education system.

Recognition and validation of training curricula and training materials

Steps to identify and develop the NQF:

- Data preparation and formation of the working group
Collection and analysis of information on professional sectors, employment and training for the configuration of the field of observation of each professional family. The working group of experts is created, according to the professional profiles defined by INCUAL.
- Design of the qualification
Apart from the observation camp, applying functional analysis methodology, the general competence, the units of competence and the professional scope of each vocational qualification are defined.
- **Definition of the associated training**
For each unit of competences, an associated training module is defined in terms of competences with corresponding assessment criteria, specifying the contents and parameters of the training context. The quality of the qualification designed by the working group is verified by means of an internal contrast.
- **External contrast**

The vocational qualification is evaluated, in order to improve its quality and its adjustment to the production systems of goods and services, through the general and autonomous administrations, business and trade union organisations, represented in the General Council of Vocational Training, and other organisations linked to the qualification developed.

- **Approval of the qualification regulations**

The Government finally approves the qualifications to be included in the Catalogue, after consulting the General Council for Vocational Education and Training and the State School Council, as well as the ministerial departments involved. The classification is officially established in the form of a Royal Decree of the Ministry of the Presidency, as it is a joint proposal of the Ministry of Education and Science and the Ministry of Labour and Social Affairs.

- **Updating**

The CNCP and the Modular Catalogue of Vocational Training are always kept up to date by means of periodic revision, within a period of no more than five years from the date of inclusion of the qualification in the CNCP.

Importance of the learning paths for Spain

- Helping companies to comply with European legislation.
- Self-awareness as European citizens committed to sustainable development.
- A shared learning path for a shared goal to promote mobility and drive the expected transition.
- The new workforce, with green and digital competences, will take care of the twin transition within SMEs.
- Companies that are prepared to tackle the green and digital transition will be better able to be in the business network and adapt to society's requirements.

Implementation, positioning and potential recognition of learning paths in the future

Both proposals should be approved and integrated by the competent administrations in each case, and can be offered as a tool to help teachers meet those objectives, set at each level, which are in line with EC4T.

- Within formal education, both in Vocational Training and in University, proposing a complementary training programme, adapted to the times and characteristics of the academic year.
- Within the training for employment (non-formal education), as a transversal module complementary to the compulsory modules included in the different certificates of professionalism.

Türkiye

The structure of the Turkish education and VET system

The Ministry of National Education (MoNE) conducts educational activities on a central level in the Republic of Turkey. The **cycle of education** is made up of **Early Childhood, Primary and Lower Secondary, Upper Secondary and Higher Education**. Compulsory education in Turkey increased to 12 years and is divided into three stages.

1. Primary education

- **Early Childhood** and

- **Primary School** with 1st, 2nd, 3rd and 4th grade, which is the first stage of compulsory education.

2. Secondary education

- **Lower Secondary:** the second stage of compulsory education is 4 years and consists of 5th, 6th, 7th and 8th grade.
- **Upper Secondary** is the third compulsory stage and consists of 4-years high school (9th, 10th, 11th and 12th grade) from age 14 to 18.
Upper Secondary Education covers Anatolian High School, Science High School, School of Fine Arts, Sports High School, School of Social Sciences, the Anatolian Religious High Schools and High Schools conducting vocational and technical programs.

3. Higher education

Higher education includes individuals over the age of 17 and is made up of state and foundation universities. Higher Education in Turkey constitutes associate, bachelors, masters and doctoral programs, provided by the tertiary education institutions. The Council of Higher Education is responsible for the regulation of all activities related to higher education.

4. Lifelong learning and Vocational Education and Training

- In Turkey, MoNE governs VET along with its sub-government bodies – the Board of Education (Board of Education and Discipline), the Directorate General of Vocational and Technical Education, the Directorate General of Lifelong Learning, the General Directorate of Special Education and Guidance Services, the General Directorate of Private Education Institutions and the Strategy Development Department are all involved in the majority of governance functions.
- Also playing a crucial role is the Vocational Education Board (VEB), which comprises representatives of the ministries, trade and employers' unions, public institutions and agencies and other key social partners.

European Qualification Framework (EQF) vs. National Qualification Framework (NQF)

NQF of Türkiye called TQF (Turkish Qualifications Framework) is fully aligned with European Qualification Framework.

Turkey is a member of the European Qualifications Advisory Group and participates in the European higher education field (Bologna process). Türkiye adopted the National Qualifications Framework in 2015. There are eight-qualification framework levels in Turkey and include qualifications and certificates of all types and levels.

Vocational Qualifications Authority (MYK), Ministry of National Education (MEB) and Higher Education Council (YÖK) have developed and implemented it together.

TQF primarily includes:

- Qualifications given within the scope of the Ministry of National Education (MEB) covering the relevant Basic Education, Special Education and Guidance Services, Secondary Education Directorates Education, Vocational and Technical Education, Lifelong Learning and Religious Education;
- Qualifications granted by 239 authorised certification bodies under the authority of the Vocational Qualifications Authority (VQA);

- Higher education qualifications awarded under the coordination and supervision of the Council of Higher Education (YÖK).

Recognition and validation of training curricula and training materials

Since it is the centralised system in Türkiye, Ministry of National Education is the main institution for recognition and validation of newly developed training curricula.

For the **University level**, Higher Education Council is in charge of recognition and validation.

VET Formal Education: Vocational Qualifications Authority should define new vocational qualifications and asked Ministry of National Education to open new training curricula.

Importance of the learning paths for Türkiye

The Green Transition Facilitators need to understand the challenges and opportunities of the green transition, Specifically, the learning paths and profile of the Green Transition Facilitator will be important for Türkiye as they will help to identify the skills that are needed for the twin transition. Furthermore, they will provide a framework for training and upskilling workers in these skills. Finally, upskilled/reskilled workforce and the new workforce will provide twin transition within SMEs.

Another aspect is that a significant shift is taking place towards a future-focused education and training system in Türkiye. National policy emphasises the development of the entrepreneurial mindset and practical entrepreneurial learning as it raises learners' skills and develops the mindsets needed to change their lives and the world around them through entrepreneurial action for social and economic impact. It is the basis for empowering learners to know they can generate the creative ideas needed in the 21st century. In conclusion learning path based on entrepreneurial learning offered by EntreComp4Transition is valuable for Türkiye.

Implementation, positioning and potential recognition of learning paths in the future

In order to effectively implement the learning paths, collaborative efforts involving educational institutions (both VECs and universities), government bodies (Ministry of National Education and YOK), and TOBB, as the representative of the private sector, are crucial. Strategically positioning the learning paths within existing educational systems, such as universities, vocational training centres, and continuous education centres, is vital. Prompt integration can be achieved by offering specialised courses in undergraduate management programs and MBA programs. Additionally, the learning paths could be designed as certification programs through continuous education centres. Authorisation and accreditation from relevant authorities will ensure the recognition of these learning paths. Specialised courses on the learning paths will gain recognition if offered by an accredited university. The integration of learning paths into VET curriculum necessitates close cooperation with the Turkish Ministry of National Education and Vocational Qualifications Authority (MYK).



Learning Path and Methodology

The future Green Transition Facilitator

Introduction

Designing and developing learning paths

Entrepreneurial skills driving the green and digital transition

Entrepreneurial, green and digital skills are needed nowadays more than ever. The twin transition is one of the main challenges of the EU and policy-makers are calling for digital and sustainable solutions leading the way towards the twin transition to foster new business opportunities and create awareness within the society. To manage these challenges, the right knowledge, skills and competences are needed. SMEs all over Europe are in the need to adapt to that changed environment to stay competitive in the fast-paced world.

Entrepreneurial skills have the capacity to enable the acquisition of new green and digital skills. They are transversal and cross-cut different subjects and fields of work. Therefore, an entrepreneurial mindset is key in the adaptation process and in stimulating a sense of initiative and entrepreneurial attitudes. Europe needs a society which is capable of **acting upon opportunities, generating ideas and transforming problems into values** in order to speed up the twin transition. Entrepreneurial skills are essential in spotting and exploiting opportunity and possibilities brought by new technologies and adding value and producing sustainable impact either as an entrepreneur or as an employee driven by flexibility, creativity and a collaborative spirit with both a digital and green perspective. A new entrepreneurial culture emphasising intrapreneurship practices, awareness, knowledge, skills and competences regarding sustainability and digitalisation is key. Furthermore, fostering a green and digital entrepreneurial consciousness will aim for necessary change and facilitate implementation. Therefore, the goal was to develop the profile of the “Green Transition Facilitator” to combine and reinforce the strengths of the three areas and to further help SMEs to tackle the twin transition.

Objectives

The objectives in designing and developing learning paths for the profile of the Green Transition Facilitator were:

- **Designing an innovative, blended learning methodology**, which includes both formal and informal education, supporting the future Green Transition Facilitator;
- Developing **different learning paths targeting both students in EQF 5 and 6 and professionals** interested in re-skilling and career conversion and that can be used and integrated both in HE and VET;
- Enabling HE and VET with the **appropriate framework and tools** to improve students' entrepreneurial, digital, and green skills, hence improving their employability and contribution to a sustainable development;
- Harmonising the learning paths to the ECVET and EQAVET frameworks and **enabling recognition of acquired learning outcomes** via self-assessment.

This flexibility allows HE and VET providers to adapt the content to their existing programmes or to create ad-hoc paths. As such, the methodology is sustainable and can be easily used by other groups and entities of different educational levels in the future.

Beneficiaries

The profile of the Green Transition Facilitator should benefit SMEs, which recognise that an adaptation to more digitalised and more sustainable processes is necessary. Furthermore, the profile should help SMEs to move ahead and help to collaborate to achieve common digitalisation and sustainability goals across Europe. Therefore, the Green Transition Facilitator should be prepared for a “new culture” to market and implement the synergies of entrepreneurship, digitalisation and sustainability.

With the profile of the Green Transition Facilitator, the EntreComp4Transition project targets

- on the one side students, who are part of designing the future and
- on the other side employees working in European SMEs, who are at the forefront of guiding and implementing positive change.

Students:

The profile of the Green Transition Facilitator targets students at the European Qualifications Framework Level 5 and 6 – as explained in the Chapter on ‘Harmonisation to the European Qualification and Validation’ – who are post upper secondary level with higher national diploma (5) or Bachelor (6).

SME professionals:

The profile of the Green Transition Facilitator targets European SME professionals across different sectors and for different, already existing profiles on the basis of transversal competences, who would like to address challenges regarding the twin transition and adapting an entrepreneurial mindset.

Trainers:

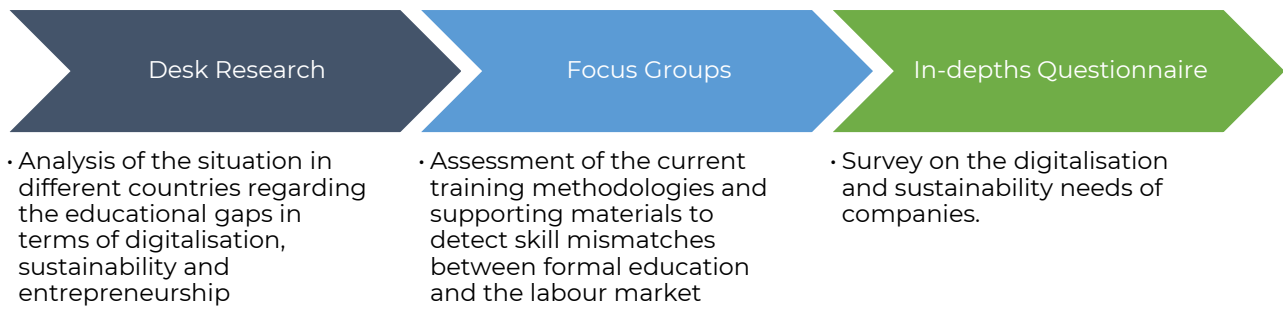
Moreover, trainers with entrepreneurial, digital and/or green skills background need to be trained to deliver on the new profile of the Green Transition Facilitator.

The profile was developed for students and SME professionals interested in contributing to sustainable goals and in facilitating the digital and green transition with synergy to entrepreneurship. It further is a flexible, creative and leadership profile, which targets students or SME professionals who would like to be capable of creating new, sustainable business opportunities and contribute to society development by exploiting innovation as the key to raising competitiveness and working in a more than ever connected world.

Development Process

The pedagogical journey builds on the results and recommendations of EntreComp4Transition Work Package 3 “Market analysis on skills mismatches to reach the green and digital transition¹⁷”. Skills mismatch between education and training, on the one hand, and the labour market on the other hand, got identified, which need to be addressed from the profile of the **Green Transition Facilitator**. The learning paths are built incorporating the most important results from the analysis carried out, which consisted of three parts:

¹⁷ [EntreComp4Transition a Market Analysis and Learning Outcomes Recommendations](#)



The EntreComp4Transition market analysis shows the following main results¹⁸:

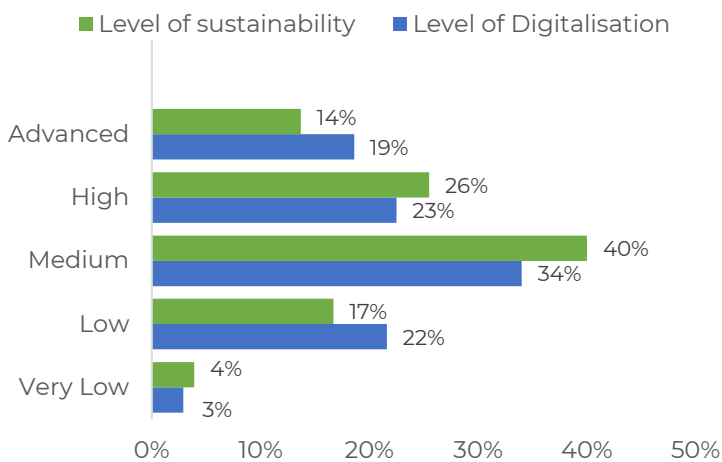


Figure 2: Market Analysis Main Results

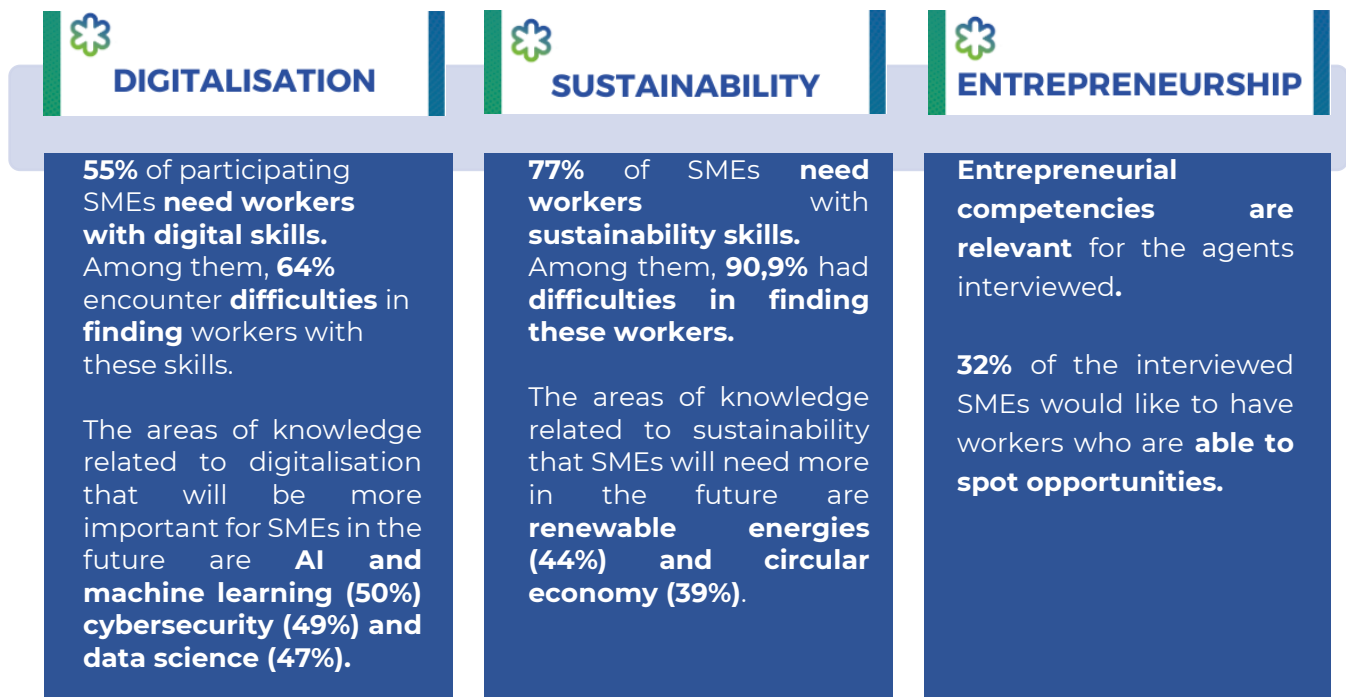


Figure 3: Market Analysis Conclusions

¹⁸ [EntreComp4Transition a Market Analysis and Learning Outcomes Recommendations](#)

Regarding the competencies, the **SMEs interviewed think the main needed skills in the future are:**

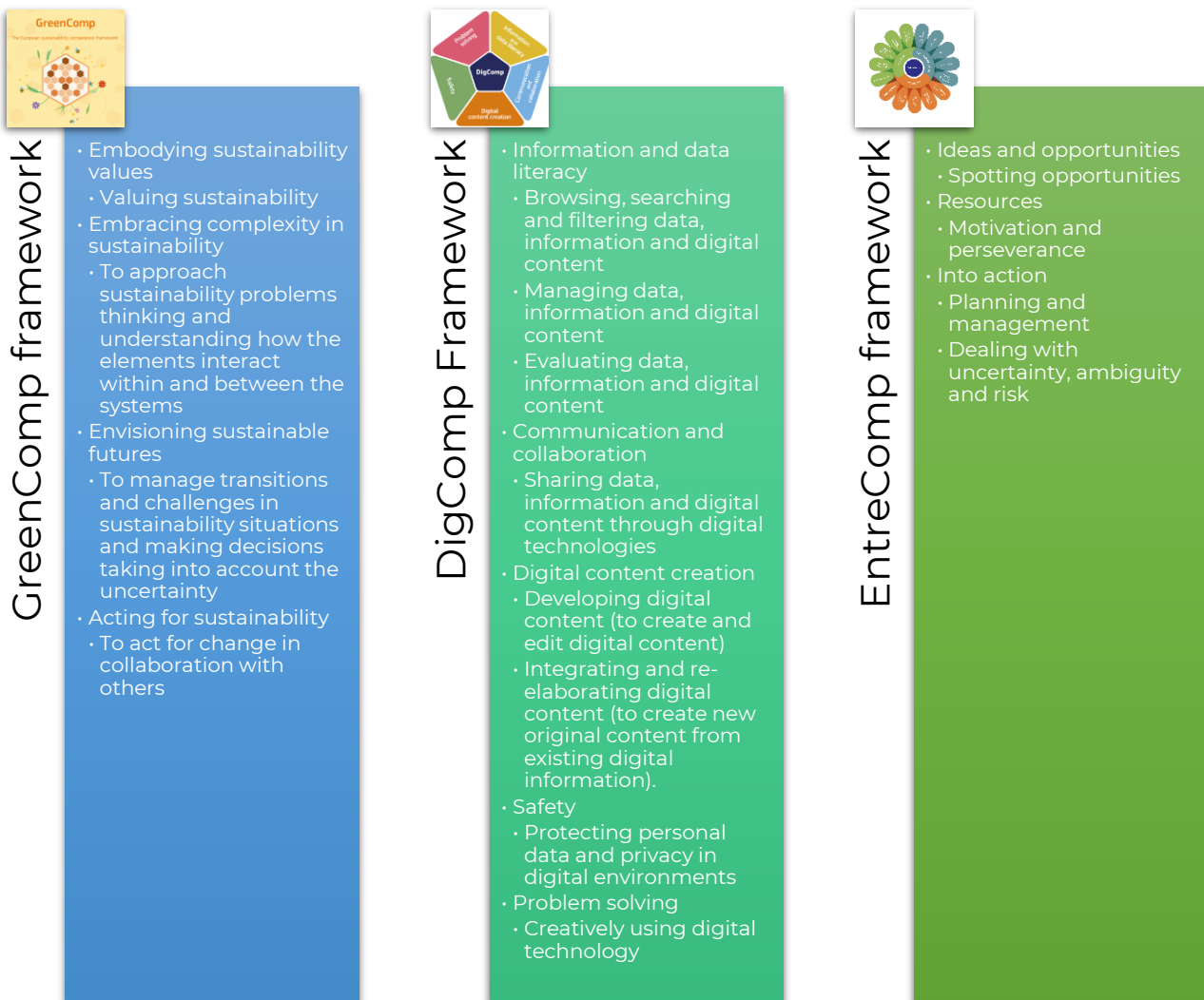


Figure 4: Key components and specific competences of European Frameworks

Therefore, the learning paths were designed and developed in line with the main results mentioned above and based on three different European Frameworks: EntreComp¹⁹, DigComp²⁰ and GreenComp²¹ Framework to address and satisfy the market needs, target the skills mismatch and take into account important previously identified competences in the field of entrepreneurship, digitalisation and sustainability.

¹⁹ EntreComp – The European Entrepreneurship Competence Framework is a reference framework developed by the European Commission to explain what is meant by an entrepreneurial mindset: [online] [The European Entrepreneurship Competence Framework \(EntreComp\)](#).

²⁰ DigComp – The Digital Competence Framework for Citizen provides a common understanding of what digital competence is [online] [The Digital Competence Framework for Citizens \(DigComp\)](#).

²¹ GreenComp – GreenComp is a reference framework for sustainability competencies [online] [The European sustainability competence framework \(GreenComp\)](#).

Blended Methodology

The learning paths for the future Green Transition Facilitator are defined in the field of entrepreneurship, digital and green skills. The learning paths are broken into learning modules and units and for each, learning outcomes are defined. Moreover, the modules and units end with assessments and the learner can also receive a badge after every completed learning path. To get the title as the « Green Transition Facilitator » the learner needs to pass learning path 4 as an integration of learning paths 1-3.

The four learning paths are:



Figure 5: Learning Paths Structure

Each learning path is designed for one month, so in total, time needed will be four months or 75 hours of learning activities. If desired, the first three learning paths can be done in parallel. At completion of the four learning paths, the learner will receive 3 ECTS/ECVET in total. There is also the possibility that learners do not take every learning path because they have already sophisticated knowledge, skills and competences in that field. Then, the learner needs to prove this in the assignment for the Green Transition Facilitator.

Hours needed and ECTS/ECVET points associated to the learning paths are the following:

| Learning Path | Hours | ECTS/ECVET |
|----------------------------|---|--------------|
| Learning Path 1 - 3 | <ul style="list-style-type: none"> • 50 hours in total • 16,6 hours a month • 4,2 hours a week | 2 ECTS/ECVET |
| Learning Path 4 | <ul style="list-style-type: none"> • 25 hours in total • 6,25 hours a week | 1 ECTS/ECVET |

The developed learning paths target students in EQF 5 and 6 and SME professionals interested in re-skilling and career conversion. Regarding the EQF levels, the learning outcomes are defined in terms of knowledge, skills, responsibility and autonomy. This means, knowledge is described as theoretical and/or factual, skills are described as cognitive and practical and responsibility and autonomy is described as the ability of the learner to apply knowledge and skills autonomously and with responsibility²².

²²²² European Union: Description of the eight EQF levels. [online] [Description of the eight EQF levels | Europass](#) [accessed on: 12.07.2023]

The learning paths are designed at **intermediate level**, meaning basic knowledge in the fields of entrepreneurship, green and digital skills is required. This is due to the fact that the Green Transition Facilitator is a flexible, creative and leadership profile targeting economic and societal challenges. Therefore, a certain level of knowledge in the field of entrepreneurship, digitalisation and sustainability can and must be assumed to deliver on the big intentions regarding the twin transition.

The learning paths originate from a blended methodology, meaning the EntreComp4Transition project is blending different digital and non-digital learning tools. The blended methodology, supported with a MOOC, is designed to enhance engagement and effectiveness. Lessons will be produced in the format of video pills to make sure the learning content is attractive to students and close to the spirit of the times as well as to facilitate its comprehension. With the digital learning tools, a wide audience can be targeted, while the offline settings deepen learning, interaction and the feedback process.

This means, some of the content will be produced for digital use, serving as an introduction to entrepreneurial, digital and green skills and other tools and resources will be explored to allow the transfer to the classroom. Practical exercises, pilots and face-to-face activities will be included to offer a complete and innovative learning experience.

Regarding the MOOC platform, the learning paths and the digital content will be included. Teachers and trainers should be able to use modules of the platform as their educational resources for their work in the classroom, so that students can benefit as well from the digital work. The offline setting makes sure that the interaction between teacher and student is beneficial to the parties involved and necessary for the learning outcomes.

Therefore, carrying out learning activities in a combination of online and offline setting benefits flexibility and self-responsibility as well as teamwork, the exchange with other interested students and the transfer of knowledge beyond the topics covered by the EntreComp4Transition project.

Furthermore, the learning paths, modules and units can be integrated in HE and VET and approach the ECVET and EAQVET requirements.

Figure 6 shows the four learning paths with modules and units. The fourth learning path has to be completed in order to receive the title of the Green Transition Facilitator.

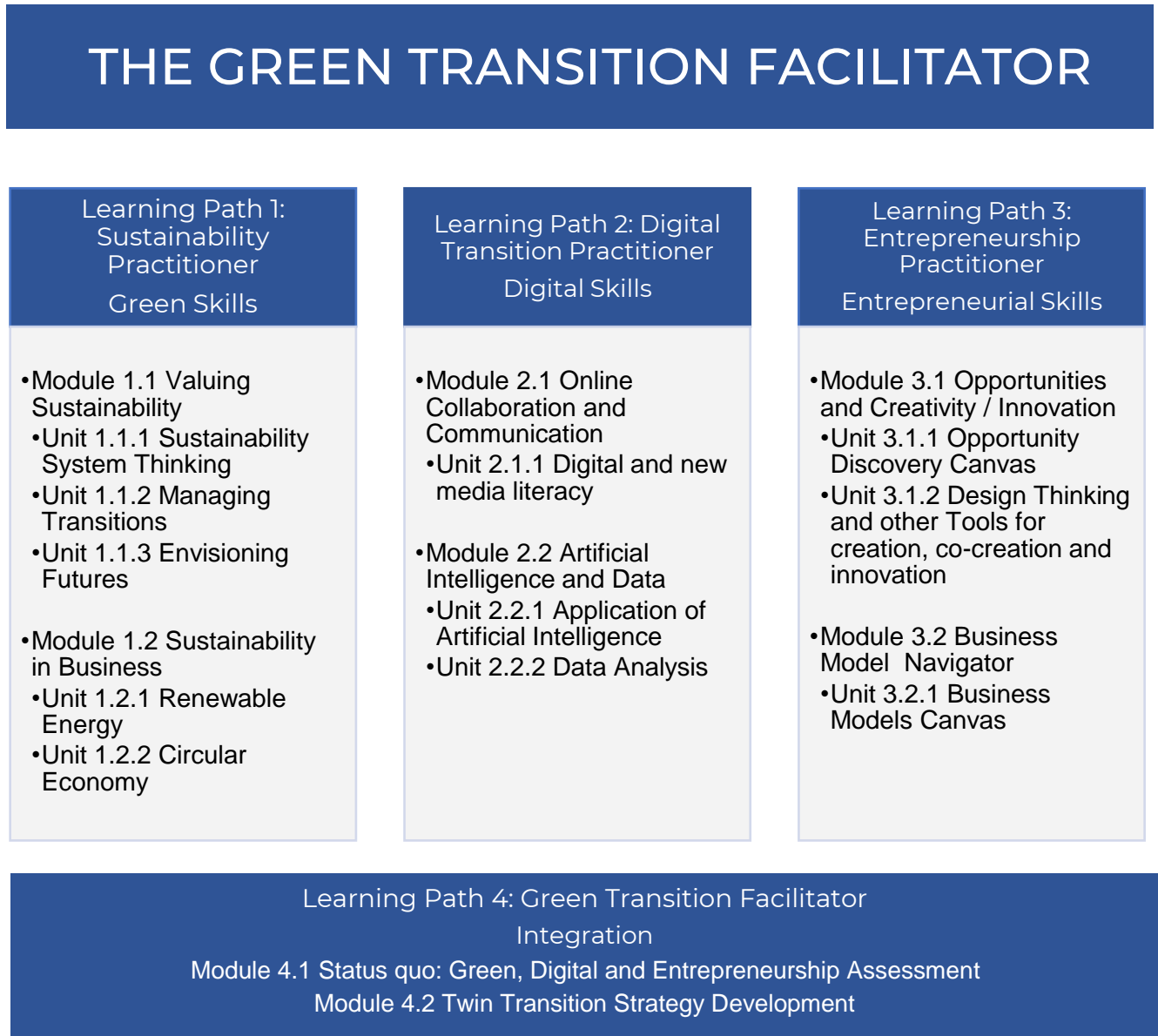


Figure 6: The Green Transition Facilitator: Learning Paths, Modules and Units

Next, the four learning paths with the modules and units, offered learning materials, evaluation method and learning outcome will be described.

Learning Path 1: Sustainability Practitioner

Learning Path 1: Sustainability Practitioner

- Module 1.1: Valuing Sustainability
- Module 1.2: Sustainability in Business

| Subject | Learning Material | Evaluation method |
|---------------------|---|---|
| Green Skills | <ul style="list-style-type: none"> • Definition Green Skills / Sustainability • GreenComp Framework | Micro-Credential: badge: Sustainability Practitioner Assessment: Quiz |

Module 1.1: Valuing Sustainability

Learning Outcome: The learner is able to reflect on values and perspectives in relation to concerns for sustainability. The learner can articulate their values.

| Unit | Learning Material | Evaluation method | Learning Outcome |
|---------------------------------------|---|--|---|
| Sustainability System Thinking | <ul style="list-style-type: none"> • Video tutorials • Paper / articles | - | The learner is able to think and reflect regarding the relation of interacting systems and understand and identify those relationships and articulate problems related to sustainability. |
| Managing Transitions | <ul style="list-style-type: none"> • Paper / articles | - | The learner recognises, understands and manages the process of change from a previous condition into a new, desired one. |
| Envisioning Futures | <ul style="list-style-type: none"> • Future Scenario Mapping Tool | Application of Theory: Mapping a future scenario | The learner understands how to envision alternative sustainable futures by imagining and developing alternative scenarios and identifying the steps needed to achieve a preferred sustainable future. |

| Knowledge | Skills | Competences |
|---|---|--|
| <ul style="list-style-type: none"> • Understanding the principles and concerns of sustainability. • Knowledge of interacting systems and their implications on sustainability. • Understanding the process of change management towards a sustainable state. • Awareness of potential sustainable future scenarios. | <ul style="list-style-type: none"> • Ability to reflect and articulate values and perspectives regarding sustainability. • Skill to analyse the relationships of interacting systems regarding sustainability. • Capability to manage transitions from a previous condition to a desired, sustainable one. • Capability to envision and plan for sustainable futures. | <ul style="list-style-type: none"> • Ability to reflect on values and the larger concerns of sustainability. • Competence in problem-solving by addressing systemic issues related to sustainability. • Competence in managing transitions towards sustainable conditions. • Ability to design, articulate and pursue desired sustainable futures. |

Module 1.2: Sustainability in Business

Learning Outcome: The learner understands the necessity to transform the business to be in alignment with social, economic and environmental values.

| Unit | Learning Material | Evaluation method | Learning Outcome |
|-------------------------|---|---|--|
| Renewable Energy | <ul style="list-style-type: none"> • Mapping the difference: Examples from businesses with and without the use of renewable energy | Compare pro and contra of renewable energy: transition thinking | The learner understands the benefits of using renewable energy in the business process. |
| Circular Economy | <ul style="list-style-type: none"> • Mapping the difference: Examples from businesses with and without circular economy | Compare pro and contra of circular economy: transition thinking | The learner understands the need for a new model of production and consumption, where the life cycle of products is extended within the value chain. |

| Knowledge | Skills | Competences |
|---|--|---|
| <ul style="list-style-type: none"> • Understanding of the role of sustainability in business. • Knowledge of the benefits and challenges of using renewable energy in business. • Knowledge of the principles and practices of circular economy and its implications for production and consumption. | <ul style="list-style-type: none"> • Ability to align business practices with principles of sustainability. • Proficiency in evaluating and analysing the potential impacts and benefits of using renewable energy solutions in business practices. • Capability to evaluate strategies for extending the life cycle of products within the value chain through the principles of circular economy. | <ul style="list-style-type: none"> • Ability to align business practices with social, economic, and environmental sustainable values. • Competence in advocating for the benefits of using renewable energy in business processes. • Ability to promote circular economy principles in business. |

Learning path 2: Digital Transition Practitioner

Learning Path 2: Digital Transition Practitioner

- Module 2.1: Online Collaboration and Communication
- Module 2.2: Artificial Intelligence and Data

| Subject | Learning Material | Evaluation method |
|-----------------------|---|--|
| Digital Skills | <ul style="list-style-type: none"> • Definition Digital Skills / Digital Transformation • DigComp Framework | Micro-Credential: badge: Digital Transition Practitioner Assessment: Observation work: The learner has to image he/she works in an SME with a number of departments. The learner needs to go into discussion with employees from the departments to understand how AI can help them to be more efficient and productive. The |

| | | |
|--|--|--|
| | | learner needs to use two online tools. |
|--|--|--|

Module 2.1 Online Collaboration and Communication

Learning Outcome: The learner understands and experiences the skills and attitudes needed to participate productively as a member of a virtual team.

| Unit | Learning Material | Evaluation method | Learning Outcome |
|--|---|---|---|
| Digital and new media literacy: understanding digital tools and platforms | <ul style="list-style-type: none"> Guideline: how to work effectively in online settings | Simulation environment: online role play activity: The learner needs to ask colleagues or friends to join a meeting and solve a task. Roles needs to be defined. | The learner understands how to effectively use digital tools for online communication and collaboration. The learner understands how to critically assess and develop new media forms and to leverage the media for persuasive communication. |

| Knowledge | Skills | Competences |
|--|--|---|
| <ul style="list-style-type: none"> Understanding of how to participate effectively as a member of a virtual team. Understanding of digital literacy and new media literacy, including the use of digital tools for online communication and collaboration. | <ul style="list-style-type: none"> Capabilities in participating effectively as a member of a virtual team and using digital tools for online communication and collaboration. Capabilities in critically assessing and developing new media forms for persuasive communication. | <ul style="list-style-type: none"> Competence in effective participation as a member of a virtual team and using digital tools for online communication and collaboration. Competence in critically assessing and developing new media forms and leveraging these for persuasive communication. |

Module 2.2 Artificial Intelligence and Data

Learning Outcome: The learner understands how to employ different types of data and their representation and how to use it efficiently in the working environment. The learner understands how to perform tasks with the help of generative artificial intelligence.

| Unit | Learning Material | Evaluation method | Learning Outcome |
|---|--|--|---|
| Application of Artificial Intelligence | <ul style="list-style-type: none"> • Video material • Paper / articles | <ul style="list-style-type: none"> • Summarisation of the article • Preparation of a presentation with the use of AI tools | The learner understands how AI is used in different contexts and can integrate these insights for the benefit of the business. |
| Data Analysis | <ul style="list-style-type: none"> • Video material introducing data literacy, data visualisation | - | The learner understands how to process data that is inspected, cleaned, transformed and modelled in order to extract the most valuable information from the data. |

Knowledge

- Understanding of how to employ different types of data and their representation.
- Understanding of the application of artificial intelligence and its use in different contexts.
- Knowledge of data analysis processes.

Skills

- Capabilities in using different types of data and their representation.
- Capabilities in using artificial intelligence tools.
- Capabilities in data analysis and modelling data to extract valuable information.

Competences

- Competence in efficiently using different types of data and their representation.
- Competence in employing artificial intelligence for tasks.
- Competence in processing data effectively and modelling data to extract valuable information.

Learning Path 3: Entrepreneurship Practitioner

Learning Path 3: Entrepreneurship Practitioner

- Module 3.1: Opportunities and Creativity / Innovation
- Module 3.2: Business Model Navigator

| Subject | Learning Material | Evaluation method |
|-------------------------------|---|--|
| Entrepreneurial Skills | <ul style="list-style-type: none"> • Definition Entrepreneurial Skills / Entrepreneurship • EntreComp Framework | Micro-Credential: badge: Entrepreneurship Practitioner Assessment: The learner needs to pitch the results and outcome of the opportunity discovery and business model canvas. |

Module 3.1 Opportunity and Creativity / Innovation

Learning Outcome: The learner can find opportunities to create values for others and recognises opportunities to address needs that have not been met. Learners can develop, test and refine multiple ideas that create value for others.

| Unit | Learning Material | Evaluation method | Learning Outcome |
|---|---|---|--|
| Opportunity Discovery Canvas | <ul style="list-style-type: none"> • Guidelines for « Opportunity Discovery Canvas » | Spotting opportunities: <ul style="list-style-type: none"> • Discover areas in the world, where there needs to be change. Business and personal context. | The learner can use a tool to critically assess perceived opportunities. |
| Design Thinking and other Tools for creation, co-creation, ideation and innovation | <ul style="list-style-type: none"> • Video tutorials | - | The learner is aware of different design thinking tools and their usage. |

| Knowledge | Skills | Competences |
|---|---|---|
| <ul style="list-style-type: none"> • Understanding of the concepts of value creation and the process of identifying needs as opportunities. • Knowledge of the Opportunity Discovery Canvas and other tools. • Understanding of different design thinking tools and their usage. | <ul style="list-style-type: none"> • Capabilities in identifying opportunities to create value and address unmet needs. • Ability to use the Opportunity Discovery Canvas and other design thinking tools effectively to critically assess perceived opportunities. | <ul style="list-style-type: none"> • Competence in identifying opportunities for value creation and developing ideas to address unmet needs. • Competence in using the Opportunity Discovery Canvas and other design thinking tools. • Competence in applying design thinking tools effectively. |

Module 3.2 Business Model Navigator

Learning Outcome: The learner is aware of different Business Modelling Tools.

| Unit | Learning Material | Evaluation method | Learning Outcome |
|-------------------------------|--|--|---|
| Business Models Canvas | <ul style="list-style-type: none"> • Video tutorials for canvas • Collection of business modelling tools | The learner should integrate the opportunity discovery canvas into the business model canvas. Miro or another tool should be used as an online learning space. | The learner is able to critically assess perceived opportunities using Business Model Canvas. |

| Knowledge | Skills | Competences |
|---|--|---|
| <ul style="list-style-type: none"> • Understanding of different Business Modelling Tools. • Understanding of how to apply the Business Model Canvas to critically assess perceived opportunities. | <ul style="list-style-type: none"> • Capabilities in using different Business Modelling tools. • Ability to critically assess perceived opportunities using the Business Model Canvas. | <ul style="list-style-type: none"> • Competence in the application of different Business Modelling Tools. • Competence in critically assessing perceived opportunities using the Business Model Canvas. |

Learning Path 4: Green Transition Facilitator

Learning Path 4: Green Transition Facilitator

- Module 4.1: Status quo: Green, Digital and Entrepreneurship Assessment
- Module 4.2: Twin Transition Strategy Development

Learning Outcome: The learner is able to integrate the three learning paths and understands that the learning goals of each path interact.

Module 4.1 Status quo: Green, Digital and Entrepreneurship Assessment and Module 4.2 Twin Transition Strategy Development

| Subject | Learning Material | Evaluation method | Learning Outcome |
|---------------------------|--|---------------------------------|---|
| Integration Module | <ul style="list-style-type: none"> • Green Transition | The learner analyses the status | <ul style="list-style-type: none"> • The learner knows how to evaluate the current |

| | | | |
|--|-------------------------|--|---|
| | Facilitator Toolbook | quo of a business and develops a strategy as it should be and measures the impact. | <p>situation of the business regarding sustainability, digitalisation and entrepreneurship.</p> <ul style="list-style-type: none"> The learner is able to create a novel strategy for the business regarding sustainability, digitalisation and entrepreneurship to reach defined goals and knows how to measure impact. |
|--|-------------------------|--|---|

| Knowledge | Skills | Competences |
|---|--|---|
| <ul style="list-style-type: none"> Understanding of the principles and methodologies for evaluating the current status of a business in relation to sustainability, digitalisation and entrepreneurship. Understanding of strategic planning principles in relation to sustainability, digitalisation and entrepreneurship. Knowledge on how to measure the impact of strategies in relation to sustainability, digitalisation and entrepreneurship. | <ul style="list-style-type: none"> Ability to apply evaluation methodologies to assess a business' current status in terms of sustainability, digitalisation and entrepreneurship. Ability to plan strategically with focus on sustainability, digitalisation and entrepreneurship. Ability to measure and evaluate the impact of implemented strategies. | <ul style="list-style-type: none"> Ability to evaluate and assess the current state of a business regarding sustainability, digitalisation and entrepreneurship and to identify areas for improvement. Competence in developing a strategic plan related to sustainability, digitalisation and entrepreneurship to reach defined goals. Competence in measuring impact of the developed strategies and using the information to adjust strategic planning. |

Note: As most of the assessments are practically related and therefore need feedback and evaluation, the EntreComp4Transition project leaves the possibility to exchange those to self-assessments and quizzes as the course size expands.



Conclusion

To tackle the twin transition with the developed learning paths and blended methodology is a massive objective, where teachers, trainers, students, professionals and citizens need to join forces. To gain the title as the Green Transition Facilitator is a major undertaking but will benefit European businesses as well as the society.

The four developed learning paths – Sustainability Practitioner, Digital Transition Practitioner, Entrepreneurship Practitioner, Green Transition Facilitator – with their modules and units are the basis for the development of the digital and face-to-face content to foster the acquisition of entrepreneurship, digital and green skills. The digital learning content will be further integrated into the MOOCs on the [EntreComp learning platform](#), which hosts 18 networks working on entrepreneurial competences development, over 1200 members and which is constantly growing.

The project continues with implementing pilots in the EntreComp4Transition country clusters to collect feedback from participants. According to the feedback received, there is the possibility that the learning paths, learning content and blended learning methodology can be adjusted, which is a big asset and gives validation to the EntreComp4Transition work.

Furthermore, the EntreComp4Transition project will work on the recognition of acquired competences, especially when it comes to the new profile like the Green Transition Facilitator. Therefore, the project tests a new approach and integrates recognition via micro-credentials to make recognition not too burdensome and bureaucratic. This will hopefully lead to the targeted groups taking advantage of the developed training and countries implementing the profile into their national education and VET systems in the future.

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