EntreComp for transition

EntreComp4Transition

training toolkit

Co-funded by the European Union

EntreComp for transition

Co-funded by the European Union

Disclaimer. *Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.*

JULY 2024

Table of Contents

INTRODUCTION

- Welcome! 05

THE EC4T PROJECT

- EntreComp4Transition 08
- Context 09
- Project objectives 10
- Target group 11

SKILLS FOR THE FUTURE

- Key competences 14
- The market analysis 18
- Objectives and findings 19
- Inspiring practices and business challenges 21

THE LEARNING PATHS

- Becoming a Green Transition Facilitator 27
- A blended methodology 29
- The EC4T Learning Paths 31
  - LP1 / Sustainability practitioner 32
  - LP2 / Digital transformation practitioner 37
  - LP3 / Entrepreneurship facilitator 40
  - LP4 / Green Transition Facilitator 43

HOW TO IMPLEMENT THE EXPERIENCE

- Designing your EC4T experience 47
- What do you need? 48
- EC4T Face-to-Face activities 52
- Assesing knowledge 57

CONCLUSIONS

- As a conclusion 59

Introduction

Welcome to the **EntreComp4Transition** Training Toolkit, a comprehensive guide designed to assist educators and trainers in navigating the innovative learning paths of the EntreComp4Transition project. This toolkit serves as both a teaching guide for developing pilot experiences in classroom settings and a mentoring resource for educators and trainers.

WHAT IS THE PURPOSE OF THIS TOOLKIT?

This set of training guidelines is meticulously crafted to support you through the use and experimentation with the materials created by the EntreComp4Transition project. It aims to provide you with the necessary tools to create impactful pilot experiences and establish a robust mentoring process for yourself and your fellow trainers. By using this toolkit, you have the opportunity to effectively integrate the project's recommendations into your training environments, whether in educational institutions or corporate settings.

FOR WHOM IS IT MADE?

Whether you are a classroom teacher or a corporate trainer, this toolkit is designed for you. It is a valuable resource for anyone committed to adopting new, innovative, and interdisciplinary methods to facilitate the twin transition. Our goal is to enhance the skills and competences of individuals who are passionate about leading the way in sustainable and transformative education.

HOW CAN I USE IT?

Consider this toolkit as your go-to guide for embracing the EntreComp4Transition methodologies and resources. By following these guidelines, you will be well-equipped to transform your training practices and contribute to a greener, more sustainable world, being able to:

1. **Develop Pilot Experiences**: Learn how to implement and refine pilot experiences that align with the framework we have developed in EntreComp4Transition, fostering an engaging and dynamic learning environment.

2. **Establish a Mentoring Process**: Gain insights into establishing a supportive mentoring process that will empower you, your colleagues, your students, your peers... ensuring continuous skilling growth and development.

3. **Adopt Innovative Methods**: Embrace and integrate new, interdisciplinary approaches that contribute to the green transition, preparing learners for a sustainable future.

THE ENTRECOMP4TRANSITION PROJECT

Working towards a Green and Digital Future

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 a transnational alliance between the business sector (represented by the Chambers of Commerce), Higher Education/Vocational Education and Training (HE/VET) and institutions in 5 different country clusters: Austria, Belgium, Italy, Spain, and Turkiye.

Activities include an in-depth analysis of skills gaps, the development of a dual blended methodology with innovative learning content delivered via a Massive Open Online Course (MOOC) in line with European Credit System for Vocational Education and Training (ECVET) and European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET) frameworks, pilot sessions, a mobility scheme, and the creation of open badges to support Higher Education/Vocational Education and Training and enable businesses to verify acquired competences.

For more information, **visit our project’s website**!

EntreComp4Transition is led by Eurochambres, the Association of European Chambers of Commerce and Industry, which represents the interests of 1,700 Chambers and their 20 million member companies from all economic sectors across 40 countries.

EntreComp4Transition
Context

Society is undergoing a significant shift as the European Union advocates for digital and sustainable solutions to drive the twin transition, aiming to create new business opportunities, combat climate change, and recover from the COVID-19 pandemic. This transition is crucial for the EU's next generation, leveraging innovations like AI to benefit society, enhance skills, and support the Green Deal's growth strategy. However, digital transformation presents challenges to the labour market, with automation potentially displacing jobs.

The European Skills Agenda prioritises upskilling and reskilling, emphasising entrepreneurship to spur job creation, competition, and innovation. In 2023, the average Entrepreneurship Activity Rate in the European Union is between 6% and 8%. This means that approximately 6% to 8% of the adult population (aged 18 to 64), between 27 and 36 million people in the EU, are involved in setting up a business or running one that is less than 3.5 years old.

A comprehensive vision for industry modernisation, technological transformation, and skills development is necessary, with clear goals and coordination across sectors. The COVID-19 pandemic has exacerbated economic challenges, increasing unemployment and highlighting the need for digital and green skills. Students, particularly affected by the pandemic due to the disruption to education, the potential delay of life milestones, the challenges faced with remote learning, or the impact on their families, must acquire these skills to meet labour market demands but also to minimize the impact of COVID in their future.

The pandemic has accelerated digital transitions in education, work, and daily life. Skills development should not only meet labor market needs but also prepare citizens for active participation in society and reduce inequalities. Environmental sustainability is integral to the EU's recovery plan, requiring green skills to navigate modern challenges. Green and digital technologies present job opportunities, demanding a socio-technical approach to support EU students' employability and society's sustainable growth. Intrapreneurship practices are vital for driving this transition, necessitating updates in vocational and higher education curricula. The European Entrepreneurship Competences Framework (EntreComp) provides a common understanding and progression model for entrepreneurial competences, fostering a mindset that creates financial, cultural, and societal value.

EntreComp's flexibility allows adaptation across sectors, promoting personal development, inclusion, employability, and active citizenship. Entrepreneurial skills are essential for exploiting opportunities in the digital and green transformations. Employee training in entrepreneurial competences is underdeveloped, highlighting the need for fostering green/digital consciousness, which includes soft, transversal skills for full labor market participation.

Green transition facilitators, akin to digital innovation hubs, are needed to identify sustainable opportunities and connect experts, creating new job opportunities across the EU. This holistic approach will enhance workers' resilience and adaptability, contributing to green growth, universal health, and societal resilience.

EntreComp4Transition

Project objectives

GENERAL OBJECTIVES

- To foster new, innovative, and multidisciplinary approaches to teaching and learning to support SMEs in green and digital transition
- To foster corporate social responsibility
- To improve the quality and relevance of skills developed and ensure certification
- To facilitate the flow and co-creation of knowledge between HE and VET, the public and the business sector
- To build and support effective and efficient HE and VET systems, and contribute to innovation

SPECIFIC OBJECTIVES

- To establish alliances (Country Clusters), gathering HEIs, VET providers, Chambers of Commerce (SMEs)
- To lay the foundations for the future "Green Transition Facilitator"
- To develop a learning path for students supported by the EntreComp framework, with innovative and practical learning materials to acquire appropriate entrepreneurial, digital and green skills via a flexible, blended teaching methodology designed for HE and VET
- To pilot the methodology, learning path and MOOC
- To ensure that the overall methodology is sustainable, scalable, and replicable over time

EntreComp4Transition
Target Groups

DIRECT TARGET GROUP

Formal education: Vocational Education and Training (VET)

Educators // Student representatives // Education leaders // Education organisations // Formal education networks // VET students

Formal education: Higher Education

Educators // Student representatives // Education leaders // Education organisations // University member networks // Students

Political representatives and policy makers at national, regional, local level

Political representatives // Policy makers // Government agencies // Decision-makers such as public advisory committees // above groups, responsible for areas such as education, employment, social inclusion, sustainability, digitalisation and economic development

INDIRECT TARGET GROUP

Adult education, training and non-formal learning

Educators // Student representatives // Education leaders // Education organisations // Formal education and Continuous training networks

Innovation and Start-ups

Educators and practitioners // Related organisations // Related networks

Employment

Employment agencies // Employee representatives / trade unions // Employees / Employers // Business managers and leaders // Human resources representatives

Industry

Sector practitioners // Sector focused organisations // Sector networks / Professional associations

SKILLS FOR THE FUTURE

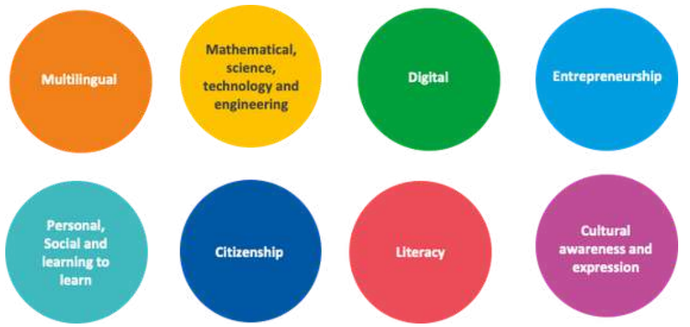
Key competences for **Lifelong Learning**

People need a set of skills and competences to keep a standard of living, to have a high employability rate and to foster social cohesion while keeping in mind the common good for society and the future of work. The 2006 **Recommendation of the European Parliament and of the Council on key competences for lifelong learning** supported the development of competence-oriented teaching and learning and the need for curricular reform in the European Union. Competence-oriented education focuses on the outcomes of learning processes as well as on the fact that learning takes place transversally in a wide range of contexts.

Competence-oriented education is seen as advantageous at a time when the knowledge base of our societies is developing at an immense speed, and the required skills need to be transferred and developed in many different social contexts. Key competences and basic skills are necessary for personal fulfilment and development, employability, social inclusion, civic participation and democracy.

In May 2018, the European Council adopted an updated Recommendation on key competences for lifelong learning to further promote the development of key competences in the European Union. The revised document emphasised the purpose of key competences by stating that *'in a rapidly changing and highly interconnected world, everyone will need a wide range of skills and competences and to develop them continuously throughout life'*.

This 2018 Council of EU Recommendation defines competences as a combination of **knowledge**, **skills** and **attitudes**. The key competences are developed throughout life, through formal, non-formal and informal learning in different environments, including family, school, workplace, neighbourhood and other communities. **All key competences are considered equally important** and aspects essential to one domain will support competence development in another. For example, skills such as critical thinking, problem-solving, teamwork, communication, creativity, negotiation, analytical and intercultural skills are embedded throughout the eight key competences:



The EntreComp4Transition project focuses on the definition of the **Green Transition Facilitator** in two of those lifelong learning competences: Digital, with the DigComp framework, and Entrepreneurship, with the EntreComp framework. And includes a third one for the skills we are looking for, the Green competences, with the GreenComp framework.
In the next section, you will find a more detailed explanation of these European Commission-created frameworks.

Lifelong learning
GreenComp

Click to download

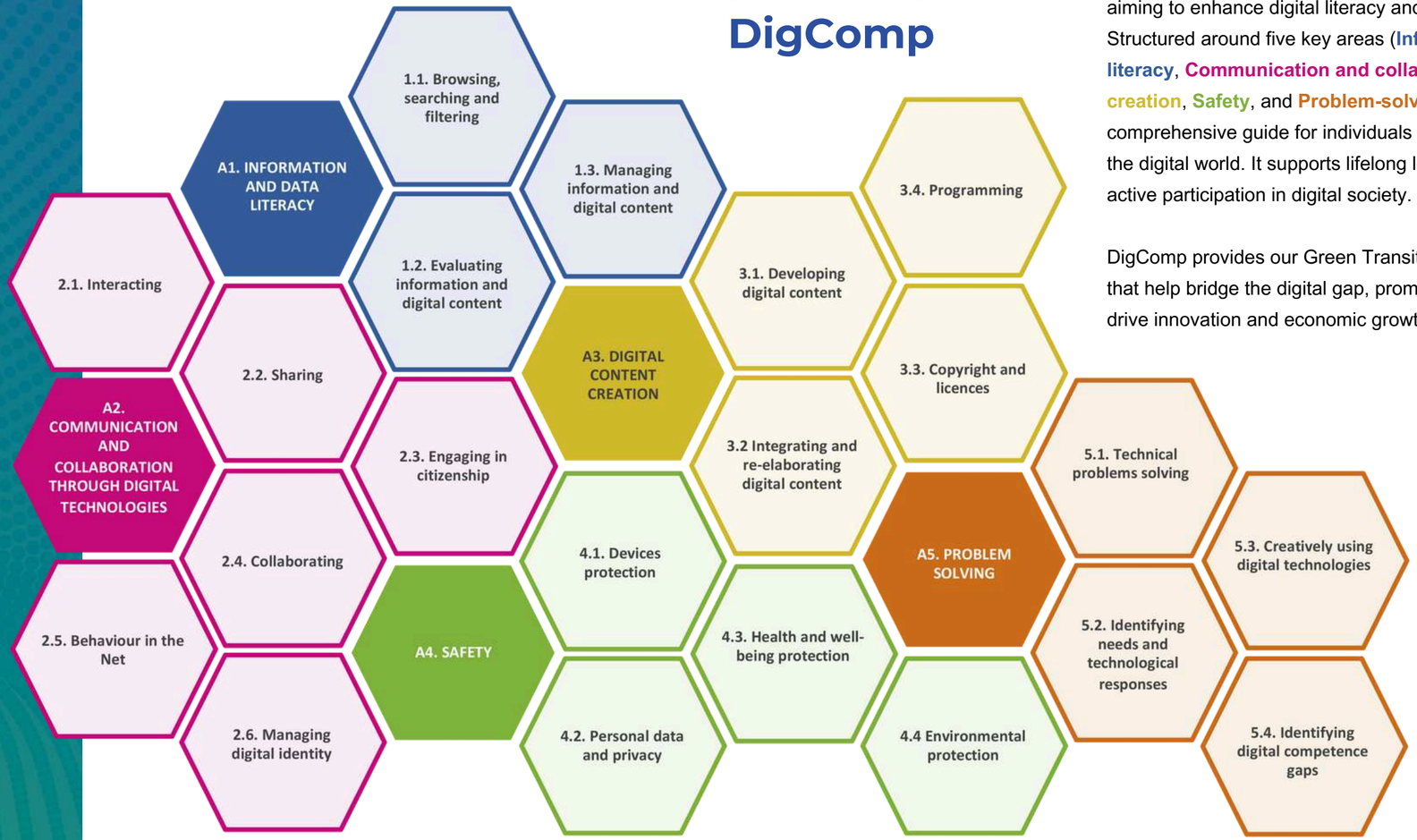
The EU GreenComp framework, launched by the European Commission, outlines essential competences for sustainability, aiming to empower individuals with the knowledge, skills, and attitudes necessary to drive the green transition. This framework is designed to support lifelong learning and educational systems in fostering environmental awareness and sustainable practices across Europe. GreenComp is structured around four interconnected dimensions: **Embodying sustainability values**, **Embracing complexity in sustainability**, **Envisioning sustainable futures**, and **Acting for sustainability**. Each dimension encompasses specific competences that encourage individuals to integrate sustainability into their daily lives, professional activities, and community engagements.

The importance of the EU GreenComp framework lies in its comprehensive approach to sustainability education, promoting a holistic understanding of environmental issues and solutions.

By embedding these competences into various educational and professional development programmes, the framework aims to create a workforce and citizenry equipped to tackle climate change, biodiversity loss, and resource scarcity. Additionally, it fosters critical thinking, systemic understanding, and proactive behavior, essential for achieving the EU's ambitious climate targets and fostering a sustainable future.

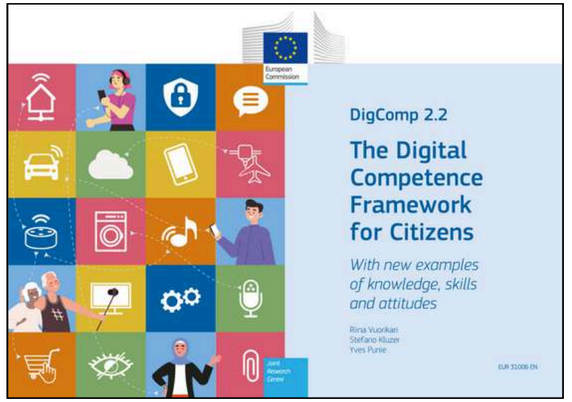
For the EntreComp4Transition project, GreenComp serves as a strategic tool for educational institutions, policymakers, and employers to cultivate a culture of sustainability, ensuring that all Europeans are prepared to contribute to a greener, more resilient society. Its competences are a vital part of the skills we propose for our Green Transition Facilitator.

Lifelong learning
DigComp



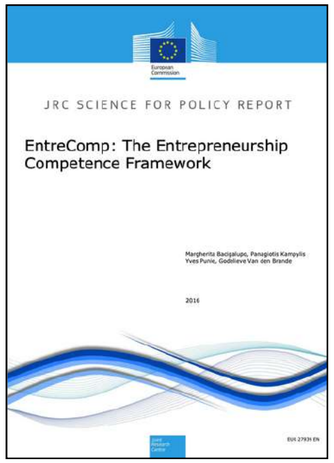
DigComp defines essential digital competences for citizens, aiming to enhance digital literacy and skills across Europe. Structured around five key areas (**Information and data literacy**, **Communication and collaboration**, **Digital content creation**, **Safety**, and **Problem-solving**) it provides a comprehensive guide for individuals to navigate and thrive in the digital world. It supports lifelong learning, employability, and active participation in digital society.

DigComp provides our Green Transition Facilitator profile skills that help bridge the digital gap, promote social inclusion, and drive innovation and economic growth.



Click to download

Lifelong learning
EntreComp



Click to download

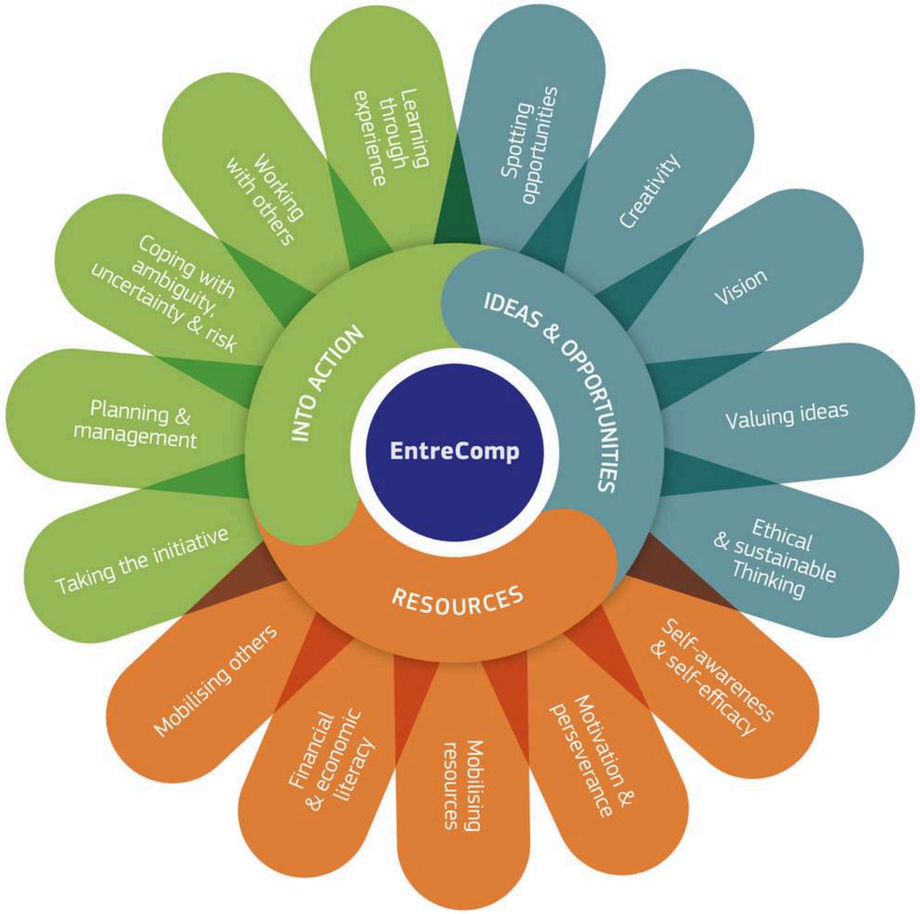
And last but not least, the EntreComp, a complete, flexible and multi-purpose common reference framework, that was designed by the EC in 2016 to help understand what entrepreneurship means as a lifelong learning competence.

The EntreComp outlines a comprehensive set of competences to cultivate entrepreneurial skills and mindset across Europe. Organised into three main areas: **Ideas and Opportunities**, **Resources**, and **Into Action**, it encompasses 15 competences essential for recognising and exploiting opportunities, mobilising resources, and transforming ideas into action.

It has been a crucial tool for fostering entrepreneurship education, enhancing employability, and promoting innovation. It provides a common reference for educators, policymakers, and businesses to design training programmes, curricula, and initiatives that develop entrepreneurial skills in individuals of all ages. By equipping people with the ability to think creatively, take initiative, and manage projects, EntreComp helps to create a more dynamic and resilient economy.

The framework supports lifelong learning and encourages a culture of entrepreneurship, which is vital for economic growth, competitiveness, and addressing societal challenges. It empowers individuals to create value, not only in business but also in social and cultural contexts, thus contributing to a more innovative, inclusive, and sustainable European society.

The EntreComp4Transition project strongly believes in the definition the framework gives about what's entrepreneurship: is when you ACT upon OPPORTUNITIES AND IDEAS and USE RESOURCES to transform those ideas into value for others. A value that can be economic, cultural and social. These skills and this vision have been included into the Green Transition Facilitator.



EntreComp4Transition
Market Analysis

Based on the GreenComp vision and the learning objectives identified in the EntreComp and DigComp frameworks by the European Commission, the EntreComp4Transition project aimed to identify skills mismatches between education and training and the labour market in terms of digital and green soft skills required by future "**green transition facilitators**", a new professional profile that brings together the three frameworks developed by the European Commission and that can help our society and SMEs to cope with the challenges we are facing to succeed on the twin transition.

The EC4T market analysis report provides findings and conclusions to help define the learning outcomes needed for students and professionals to advance in the green and digital transition. **To establish the appropriate learning outcomes and develop the EntreComp4Transition learning paths to address identified gaps and challenges, it was essential to involve key stakeholders in identifying these challenges and needs.** This approach lays the foundation for preparing future skilled workers and entrepreneurs in the green and digital sectors.

With this study, the project also aimed to:

- Identify inspiring practices at the business level, VET, and HE, that can motivate providers, students, and companies to address the new green and digital challenges.
- Capture the awareness, importance, relevance, and understanding of the potential and benefits of acquiring a business, as well as green and digital skills.
- Identify the qualities, roles, and potential of HE, IVET, and continuing VET providers, BSOs, and companies to extend and value the EntreComp framework.

RESEARCH METHODOLOGY

The research was based on three inputs provided sequentially by project partners:

1. DESK RESEARCH

Partners answered a questionnaire on the skills new workers need for businesses to adopt a more digital and sustainable model, and how HE/VET institutions meet these enterprise needs

2. FOCUS GROUPS

Partners held meetings with experts and stakeholders to discuss the digital and sustainability skills the workforce requires and the mismatches between HE/VET curricula and SME needs

3. IN-DEPTH QUESTIONNAIRE

Insights from the previous stages informed a detailed questionnaire for enterprises and related institutions (Business Support Organisations) to gauge SMEs' perceptions of workforce digital and sustainability competences

EC4T Market Analysis
Objectives and findings

As mentioned before, with this work, we aimed to establish learning outcomes to fill the gaps between the needs of the market for the digital and green transition, and the skills already available thanks to the existing curricula. We wanted to know as much as possible about the competences SMEs and other stakeholders from the five countries participating in our project considered needed for succeeding in the different challenges faced and to use all that information to **design the EntreComp4Transition learning paths** (see page 29).

In order to do that, the project consortium analysed the situation in the 5 different countries (Austria, Belgium, Italy, Spain and Turkiye) regarding the educational gaps in terms of digitalisation, sustainability, and entrepreneurship that should be addressed. The current training methodologies and supporting materials was also assessed to detect skill mismatches between formal education and the labour market and we collected data on SMEs' digitalisation and sustainability challenges, workforce competences, and identified gaps between required skills and available training.

More than 100 entities have participated, and their answers have been used to gather information about:

- The level of digitalisation and sustainability in SMEs, including their evolution in these areas.
- The obstacles that SMEs face in improving their digitalisation and sustainability efforts.
- The competences of the workforce related to digitalisation and sustainability.
- Identifying any mismatches between the competences required by SMEs and the training available.
- Assessing the entrepreneurial skills of the workforce.
- Evaluating the level of training provided by Higher Education/Vocational Education and Training institutions

Click to download

About the competences...

Our Green Transition Facilitator profile is aligned with DicComp, EntreComp and GreenComp. Regarding the competences related to these three EU Frameworks, the SMEs interviewed expressed the main needed skills in the future are:

DIGCOMP

INFORMATION AND DATA LITERACY

- Browsing, searching and filtering data, information and digital content
- Managing data, information and digital content
- Evaluating data, information and digital content

COMMUNICATION & COLLABORATION

- Sharing data, information and digital content through digital technologies

DIGITAL CONTENT CREATION

- Developing digital content
- Integrating and re-elaborating digital content

SAFETY

- Protecting personal data and privacy in digital environments

PROBLEM-SOLVING

- Creatively using digital technology

ENTRECOMP

IDEAS AND OPPORTUNITIES

- Spotting opportunities

RESOURCES

- Motivation and perseverance

INTO ACTION

- Planning and management
- Dealing with uncertainty, ambiguity and risk

GREENCOMP

EMBODYING SUSTAINABILITY VALUES

- Valuing sustainability

EMBRACING COMPLEXITY IN SUSTAINABILITY

- To approach sustainability problems thinking and understanding how the elements interact within and between the systems

ENVISIONING SUSTAINABLE FUTURES

- To manage transitions and challenges in sustainability situations and making decisions taking into account the uncertainty

ACTING FOR SUSTAINABILITY

- To act for change in collaboration with others

Inspiring practices and **business challenges**

As mentioned before, in order to identify the adequate EC4T learning outcomes and pave the way to new learning paths, it was fundamental for the EntreComp4Transition project team to make sure that the different actors and stakeholders were properly involved in defining actual challenges and needs to develop the basis for future entrepreneurial, green and digital skilled workers and entrepreneurs, the future **Green Transition Facilitators**. These challenges, and the inspiring practices that have been compiled in the analysis serves in two important ways:

1. They help us to better identify the needs, and therefore to design, the EntreComp4Transition learning outcomes to contribute to fill the gaps between training offer and the market's demands.
2. They are a pillar of the EC4T learning proposal, as solving a local challenge is suggested as a transversal learning-by-doing approach during the EntreComp4Transition experience, aiming for practical, real-world problem-solving within a business context.

Challenge solving aligns learning with real-world business needs, ensuring that competences are practical and applicable, and also engages learners by providing meaningful and challenging work. Furthermore, we can contribute to develop a broad range of skills beyond theoretical knowledge, among the skills proposed by EntreComp4Transition for the Green Transition Facilitator, but also develop a holistic understanding of how businesses operate and succeed, preparing them for the complexities of the modern world.

The desk research work developed aimed to retrieve information from each country about the skills that new workers must have for companies to move towards a more digital and sustainable business model, and to know how HE/VET institutions are aligning their training programmes towards entrepreneurship, digitalisation and sustainability. In turn, focus groups explored the current training methodologies, materials and skills mismatches between education and labour market in the context of green and digital transition.

In Austria, companies with direct customer contact fear digitalisation's impact on jobs, varying by industry. Some are fully digitalised, others hybrid, and some rely on in-person interactions. The effect of digitalisation depends on implementation, with some sectors finding costs higher than outcomes. Challenges include infrastructure and cybersecurity, requiring substantial investments. Internet fraud is prevalent due to low awareness. Cybersecurity is critical, with potential future challenges and concerns over data mishandling, and therefore data security awareness needs to be included in curricula.

Austria recognises the importance of investing in education and training and needs qualified immigration for skilled workers. Companies struggle to stay informed on all sustainability and digitalisation regulations, needing easy access to information and streamlined bureaucracy. The automotive industry pressures suppliers for innovation and sustainability, while tourism needs significant improvement, especially in winter tourism.

Belgian firms face challenges in digitalisation and sustainability, with a significant gap between small and large companies, particularly in electronic payments. Many digital tools are designed for large firms, not suitable for self-employed individuals, making digital literacy crucial. Generation Z values sustainability, leading to investments in sustainable building transformations. European and Belgian laws are increasingly stringent on sustainable development.

CEOs and shareholders drive digitalisation and sustainability in large companies, often motivated by subsidies. However, it's essential to find more ways to engage individuals and integrate green and digital tools into daily life. Professions vary in their reliance on digital tools, and suitable software availability is an issue. Cybersecurity and data security are critical concerns.

Sustainability challenges differ by sector. Agriculture needs new production methods and recognition of non-productive functions. The energy sector requires building adaptations, sustainable energy sources, and reduced, decarbonised consumption. The industrial sector focuses on technical innovation, circular economy, and carbon neutrality.

In Italy, the pandemic accelerated digital technology adoption, but many small businesses remain under-digitalised. Regarding the challenges companies face in the twin transitions, the participants of the focus group summarised them as cultural and awareness challenges. This has led to low investments in digital and environmental innovation and skills. There is also a technological challenge, particularly in the area of data management and the issue of networks and ecosystems. SMEs are struggling to generate critical mass by coming together and forming strong networks, and are not finding professionals with digital skills and adapting to the green transition, especially in construction, automotive, and tourism.

Companies prefer graduates with tertiary degrees and high grades, expecting advanced digital skills and industry 4.0 proficiency. Essential digital skills include basic IT, internet technology use, and digital communication tools. Sustainability skills, like energy preservation and reducing environmental impact, are also crucial. Higher education institutions expect graduates to be proficient in internet technologies and multimedia communication, especially in electronic and information engineering. There's increasing demand for green skills across all fields. However, businesses struggle to find professionals with specific digital competences, particularly electrotechnical engineers, IT maintainers, and technical programmers. Green job positions are also hard to fill due to a lack of qualified candidates.

In Spain, companies often prioritise acquiring new technology over hiring digitally skilled employees. SMEs face significant challenges in digitalisation and sustainability, often viewing these as costs rather than investments. New legal regulations

mandate changes, requiring companies to stay informed and compliant to avoid sanctions. The transition to digital and sustainable models demands advanced, often unavailable technologies and specialised professionals. Companies also need sustainable suppliers, adding complexity. They seek graduates with digital and sustainability skills, especially in engineering and computer sciences, though sustainability is less prioritised in hiring criteria.

While companies are quick to embrace digitalisation due to the perceived link with competitiveness, sustainability initiatives lag behind.

The perception is that education and training should catch up both in digitalisation and sustainability. Formal education institutions face challenges in incorporating new content and competences into curricula, resulting in slow adaptation. Graduates often acquire digital and green competences through additional training rather than their formal education. Spanish entrepreneurs recognise the importance of technology but often lack the necessary skills, though sustainability is seen with more urgency. Studies highlighting the benefits of sustainable practices are increasing awareness among new entrepreneurs.

In Türkiye, businesses are increasingly adopting digitalisation and sustainable practices, often managed independently by different departments. Companies are installing solar panels but face challenges such as a lack of skilled workforce, limited understanding of digitalisation's importance, and concerns about technological infrastructure security. Budget constraints also hinder investment in green technology due to the lack of immediate returns, and there has not been much success in adapting the workforce and applying the technology required by digitalisation, especially at SME level, despite the impact of the pandemic.

Moreover, it is an important fact that SMEs have problems in triggering the digitalisation process due to young people leaving Türkiye for reasons such as digital migration. Another major obstacle for digitalisation is the cost of the digital transition.

Turkish companies require new graduates to have digital literacy, internet proficiency, software knowledge, and communication skills. They specifically demand skills in AI, programming, robotics, and machine learning, along with waste management and renewable energy expertise. Educational institutions are adding courses to address these skill gaps and enhance digital literacy.

Major challenges include a lack of knowledge and skills among current workforces and brain drain due to better opportunities elsewhere. However, entrepreneurs are showing strong interest in e-commerce, and the focus on digital education is preparing a new generation of digitally savvy entrepreneurs.

If you want to know more, please visit our website and **download the full report**.

As part of the analysis EntreComp4Transition partners have conducted, we have also included some examples of inspiring practices serving challenges of enterprises in the digital and green transition, from the five different participating countries.

These inspiring practices at business, but also VET and HE levels, aim to motivate stakeholders, educators, students, and companies that would be interested in implementing or adapting the EntreComp4Transition learning methodology and resources on how to face new green and digital challenges.

Our EC4T desk research aimed to identify some of the main inspiring practices and business challenges that companies are facing in today's market when it comes to the twin transition. These examples are merely a small sample intended to assist you in implementing the EntreComp4Transition pilot experience. We recommend identifying a local challenge to address in collaboration with your local ecosystem and the participants or students throughout the proposed learning process.

These are the examples of inspiring practices you will be able to find in our market analysis report's Annex 2:

AUSTRIA

- Sustainability Challenge

BELGIUM

- Next Circular Wallonia
- W.Alter
- Era-Mın

ITALY

- Adopt a School
- Technical-Professional Centre for Mechanics in Fornovo di Taro -Motor Valley

SPAIN

- LOCALCIR Design Methodology for Green Itineraries
- Sustainability in Final Projects Higher Technician Curricula

TÜRKIYE

- DDX Digital Transformation Model
- Hack the Normal Sustainability
- Adapting the Textile Industry in Izmir to EU Green Deal

Each example provides information on the stakeholders involved, its geographical reach, a brief summary of its implementation process, outcomes, and target audience. Additionally, it highlights the business challenges addressed by each inspiring practice and includes useful links for accessing further details about the practice.

Now that you have some context and understand the approach, you will be introduced to the EntreComp4Transition methodology and Learning Paths.

THE ENTRECOMP4TRANSITION LEARNING PATHS

Becoming a **Green Transition Facilitator**

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, and SMEs all over Europe are in need to adapt to that changed environment to stay competitive in the fast-paced world.

Entrepreneurial skills enable acquiring new green and digital skills, cutting across various subjects and fields. An entrepreneurial mindset is crucial for adaptation, stimulating initiative, and fostering entrepreneurial attitudes. These skills are vital for identifying and exploiting opportunities presented by new technologies and creating sustainable impact as entrepreneurs or employees with flexibility, creativity, and collaboration in both digital and green contexts. A new entrepreneurial culture focusing on intrapreneurship, sustainability, and digitalisation is essential. Promoting green and digital entrepreneurial awareness will drive necessary change and facilitate implementation. Hence, the **Green Transition Facilitator** profile has been developed to combine and enhance the strengths of these areas, aiding SMEs in addressing the twin transition

THE OBJECTIVES

The objectives in designing and developing learning paths that lead to achieving the Green Transition Facilitator profile 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 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 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, VET and non-formal education providers to adapt the content to their existing programmes or to create ad-hoc paths, as well. As such, the methodology is sustainable and can be easily used by other groups and entities of different educational levels in the future.

WHO CAN BE TRAINED TO BECOME A GREEN TRANSITION FACILITATOR?

The profile of the Green Transition Facilitator should benefit SMEs, which recognise that an adaption 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. We aim to engage both students, who are shaping the future, as well as trainers and employees from EU SMEs, who are at the forefront of driving positive change.

TARGET: STUDENTS

The profile of the Green Transition Facilitator targets students at the European Qualifications Framework Levels 5 and 6 who are post-upper secondary level with higher national diploma (EQF 5) or Bachelor (EQF 6)

TARGET: 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

TARGET: 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

In conclusion, the Green Transition Facilitator profile has been developed with a cross-sectorial approach, for students and SME professionals interested in contributing to sustainable goals and facilitating the digital and green transition with synergy to entrepreneurship. It further is a flexible, creative and leadership profile, which targets educators, students and 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 world more connected than ever.

The EntreComp4Transition **Blended Methodology**

The learning paths for the Green Transition Facilitator are defined in the field of entrepreneurship (EntreComp), digital (DigComp) and green skills (GreenComp), and originate from a blended methodology, meaning the EntreComp4Transition learning paths blend different digital and non-digital learning tools.

The blended methodology, made of online videos gathered in a MOOC (a distance learning course, accessible through the Internet) and face-to-face lesson plans for trainers, is designed to enhance engagement and effectiveness.

The EntreComp4Transitions learning paths' lessons have been produced in the format of video and readings to make sure the learning content is attractive to the learners and close to the spirit of our 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 that some of the content is developed for digital use, serving as an introduction to entrepreneurial, digital and green skills, and other tools and resources are explored to enable transfer to the classroom. Practical exercises, pilots and face-to-face activities are included to offer a complete and innovative learning experience.

WHAT IS BLENDED LEARNING? AND WHY A MOOC?

The EntreComp4Transition blended methodology is presented as a Massive Open Online Course (MOOC) and educators resourcers.

The MOOC provides a comprehensive and accessible platform for a course that addresses entrepreneurial, digital, sustainability, and integration aspects. It offers flexibility, interactivity, scalability, and the potential for continuous learning, making them an ideal choice for individuals and organisations seeking to thrive in an ever-evolving business landscape, providing learners with flexibility, personalised learning, enhanced engagement, improved outcomes and peer collaboration and communication:

- Online Learning: Access to digital content such as videos, readings and external content, online discussions, and a self-paced learning, allowing learners to progress at their own speed.
- Educators resources: To combine with traditional classroom teaching, having direct interaction with teachers and peers, hands-on activities, discussions, and collaborative projects.
- Integration of Technology: the online content is available in the EntreComp Community as the EC4T learning management system (LMS), incorporating our multimedia resources to enhance understanding and the use of online assessments and feedback tools.

The EntreComp4Transition **Learning Paths**

To reply and find solutions to the needs and challenges of the market and create the Green Transition Facilitator profile, EntreComp4Transition has developed the four EntreComp4Transition Learning Paths.

Why EntreComp for Transition? Because entrepreneurial skills have the capacity to enable the acquisition of new, green and digital skills. They are transversal and can cross-cut different subjects and fields of work.

These are the four learning pathways that have been created for the Green Transition Facilitator profile!

LP1 - Sustainability Practitioner will introduce the participants to the concepts needed to be a successful sustainability practitioner

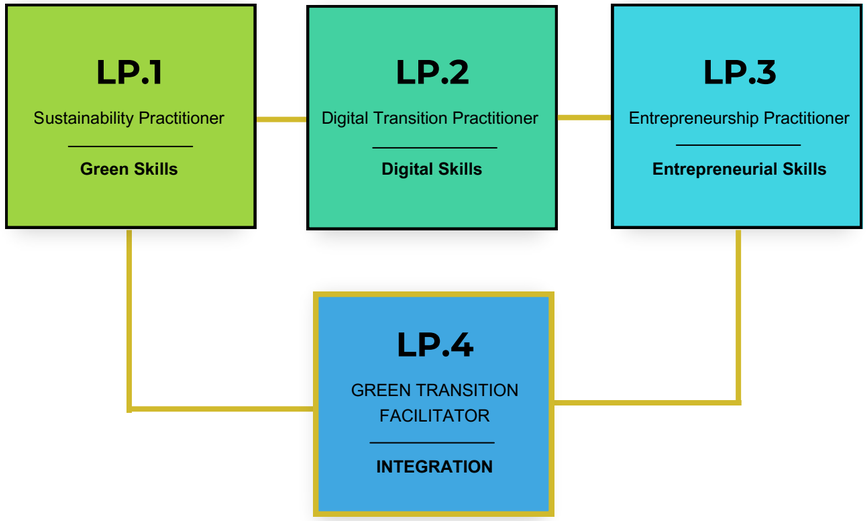
In LP2, participants learn methods and tools that will allow them to work well together in the digital world, while using artificial intelligence software to collect data

In LP3, participants will learn about different entrepreneurial perspectives, from the pursuit of an opportunity, a service, a design or a process as well as an entrepreneurial mindset

LP4: Green Transition Facilitator will introduce you to the concepts needed to be a successful Green Transition Facilitator, combining the learning from LP1, LP2 and LP3.

Each learning path is designed for one month, so in total, **the time needed will be 75 hours of learning activities**. If desired, the first three learning paths can be done in parallel. 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.

At the end of each learning path you have the opportunity to receive a digital badge by completing a survey. If you get all four learning paths badges you will also automatically receive a special course completion badge.



EC4T Learning Path 1

Learning Outcomes

Subject: Green Skills

Learning material:
- Definition Green Skills / Sustainability
- GreenComp Framework

Evaluation method:
- Micro-Credential: badge “Sustainability Practitioner”
- Assessment: Quizzes

	LEARNING OUTCOME
System Thinking for Sustainability	Understand causality Be aware of the difference between 'system' and 'non- system' Identify and describe causal relations in systems thinking Identify the stakeholders of a system Identify the actors of a system Design simple and multiple causal relations
Managing Transition	Understand the system model Define multiple relations Understand loops in systems thinking and systems behaviour analysis Construct a systems loop Understand the leverage points in systems thinking and the change in systems Define the output of a system loop and change the behaviour of a system loop
Envisioning Future	Understand the system model Understand the future, construct a future scenario using the system model and alternate the future scenarios Define the scenario Define the time orientation Map a system model based on a given future environment

EC4T Learning Path 1

Learning Outcomes

Subject: Green Skills

Learning material:
- Definition Green Skills / Sustainability
- GreenComp Framework

Evaluation method:
- Micro-Credential: badge “Sustainability Practitioner”
- Assessment: Quizzes

	LEARNING OUTCOME
Sustainability Strategy and Transformation	Describe low carbon economy and be aware of the drivers of low carbon economy Identify the framework of the drivers for sustainability Synthesise the criticality of greenhouse gas emissions for sustainability Describe the risk analysis for organisations and understand the concept of adaptation plans Identify the importance of organisational resilience and coping strategies towards the change required by sustainability trends and goals and understand the benefits of catching opportunities emerging with sustainability trends in different scales Describe the process of decarbonisation and understand the methods of decarbonisation with their pros and cons; and explain the approaches to decarbonise business process Understand the pressure exerted on companies to remove carbon from operations, manufacturing, product designs, and supply chains and synthetise the comprehensive environmental strategies that align business priorities with planetary boundaries
Renewable Resources in Business	Define and understand the pros and cons of each renewable resource and understand and distinguish each renewable resource and its implications for business. Identify the global trend toward renewable resources and its key variables and interactions Discuss the impact of renewable resources in global and business sustainability and define the reasons of the global trends toward renewable resources Understand the scope of Kyoto protocol and its brief history with implications and the Green Funds Discuss the impact of renewable resources in global and business sustainability, identify the benefits of renewable energy for a business and understand the advantage of being energy independent, the opportunity of making a business more marketable and the advantages of cutting your carbon footprint for competition Identify the general framework of United Nations Sustainable Development Goals and European Green Deal Principles, analyse and discuss how each certification adds value to companies’ sustainability and synthesise the dynamic structure of the green certifications with different variables and interactions

EC4T Learning Path 1

Learning Outcomes

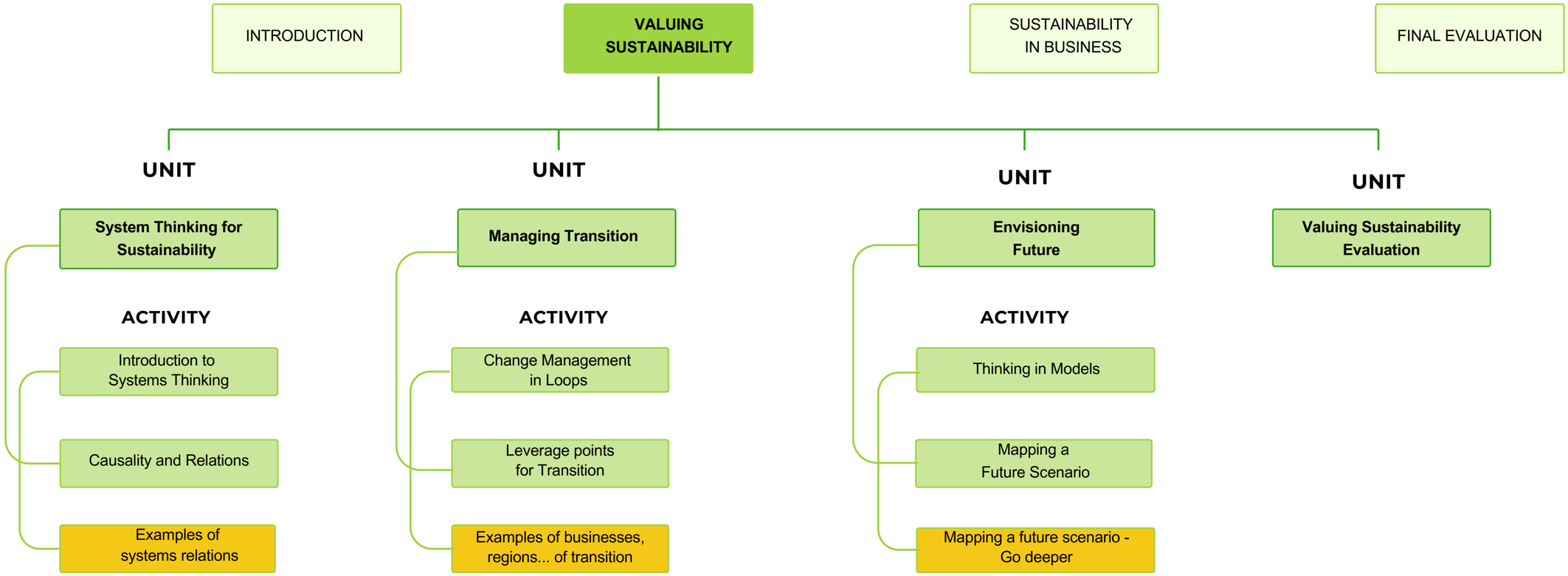
Subject: Green Skills

Learning material:
- Definition Green Skills / Sustainability
- GreenComp Framework

Evaluation method:
- Micro-Credential: badge “Sustainability Practitioner”
- Assessment: Quizzes

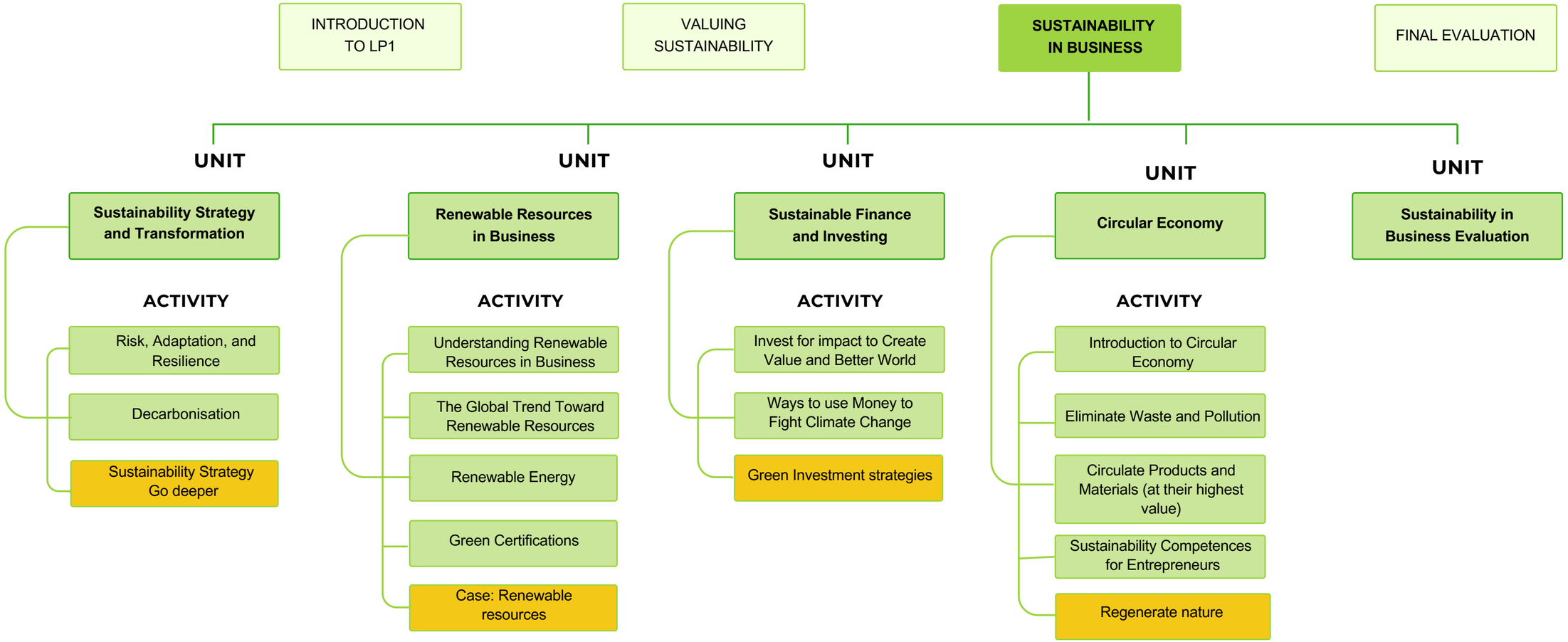
	LEARNING OUTCOME
Sustainable Finance and Investing	Identify the principles of investing for impact to create value and a better world Understand the ways to use the money to fight climate change business value through enterprise-wide sustainable investment strategies. Discuss the variables and relations and wholistic picture of the system using causal loop diagrams Analyse the dynamic structure of fight against climate change and leverage points to shift the trend back.
Circular Economy	Understand the principles of circular economy and compare the difference between linear and circular economy using causal loop diagrams Discuss the key variables, relations and leverage points to enhance the loops supporting the circular economy principles and investigate their importance and impact Understand the importance of the elimination of waste and pollution. Discuss the strategies and innovative approaches in the field and synthesise strategies to keep products in use as long as possible and find effective ways to collect them and recycle Understand the importance of the efforts of circulating products and materials as long as possible at their highest value and discuss strategies and innovative approaches in the field Synthesise strategies to keep products in use as long as possible and find effective ways to collect them and recycle Understand the evolution of sustainability in education in EU, the importance of sustainability competences in sustainability education and the importance of learning about sustainability

EC4T Learning Path 1
Sustainability Practitioner



EC4T Learning Path 1

Sustainability Practitioner



EC4T Learning Path 2

Learning Outcomes

Subject: Digital Skills

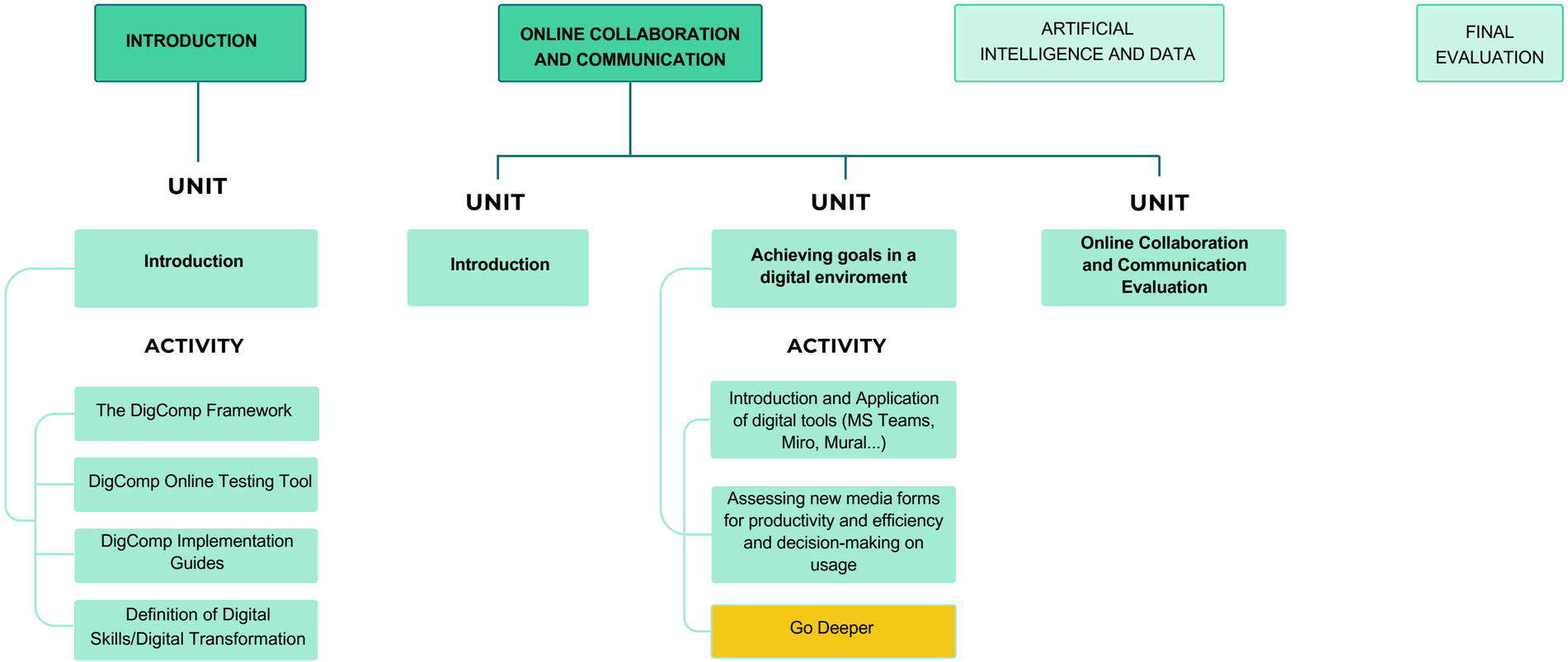
Learning material:
- Definition Digital Skills / Digital transformation
- DigComp Framework

Evaluation method:
- Micro-Credential: badge “Digital Transformation Practitioner”
- Assessment: Quizzes

UNIT	LEARNING OUTCOME
Achieving goals in a digital enviroment	You will understands how to effectively use digital tools for online communication and collaboration and how to critically assess and develop new media forms and to leverage the media for persuasive communication
Artificial Intelligence and Data	Learning about AI and data and their influence on the digital transition of companies, increasing motivation towards the contents to be covered in the module

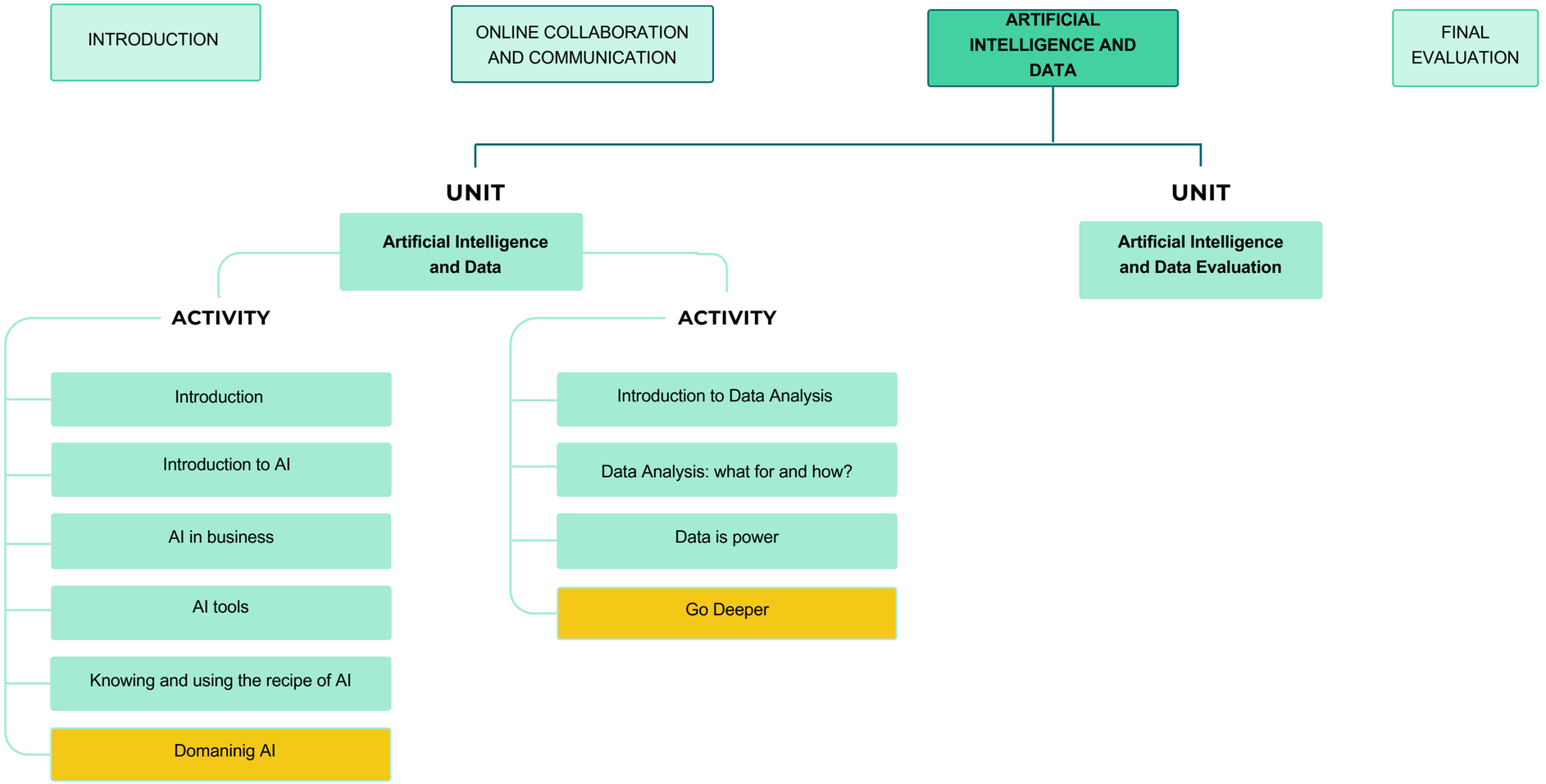
EC4T Learning Path 2

Digital Transition Practitioner



EC4T Learning Path 2

Digital Transition Practitioner



EC4T Learning Path 3

Learning Outcomes

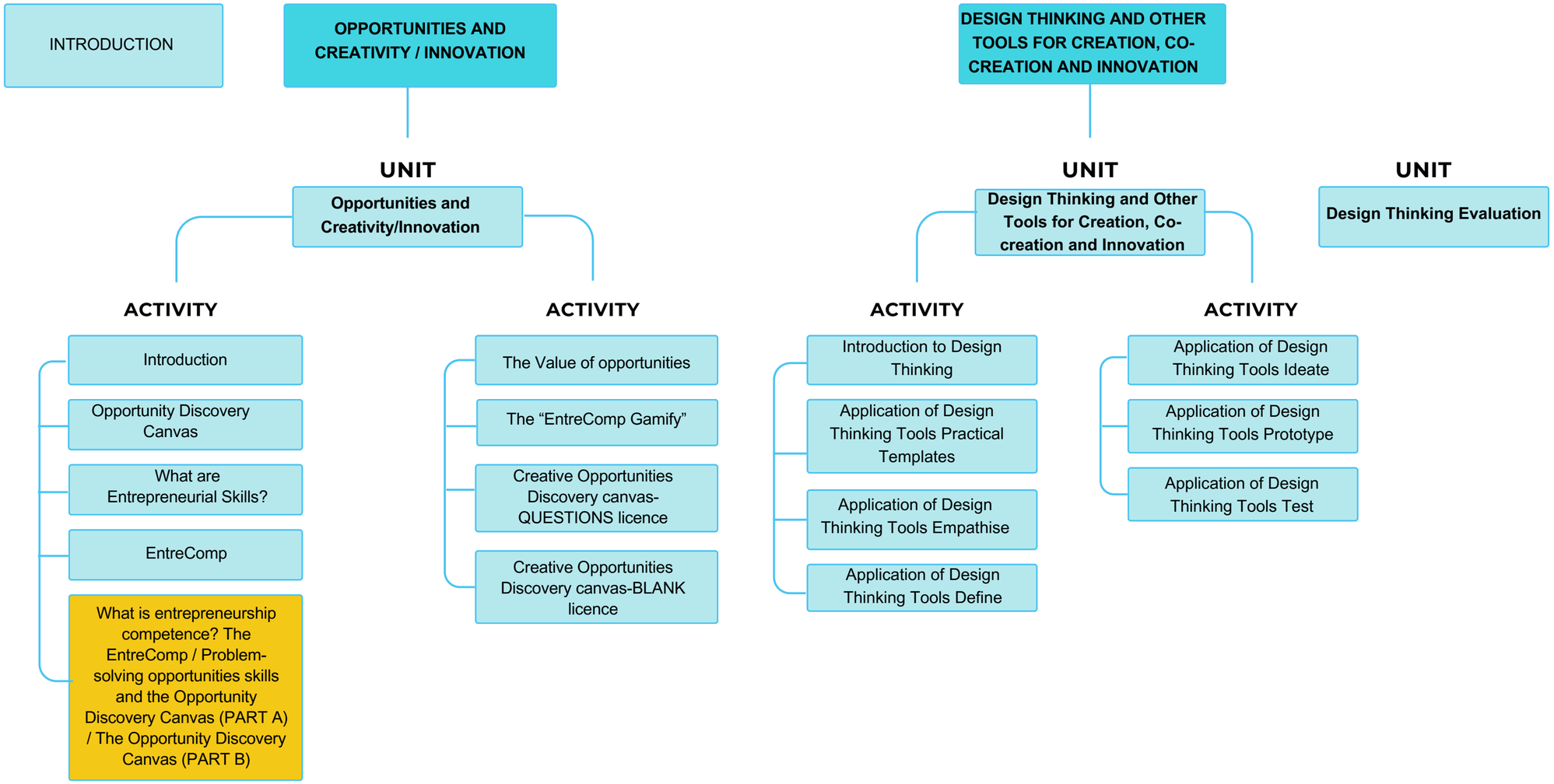
Subject: Entrepreneurial Skills

Learning material:
- Definition Entrepreneurial Skills / Digital transformation
- EntreComp Framework

Evaluation method:
- Micro-Credential: badge “Entrepreneurship Practitioner”
- Assessment: Quizzes

UNIT	LEARNING OUTCOME
Opportunities and Creativity/Innovation	Understand what being entrepreneurial and having an entrepreneurial mindset mean. Reflect upon the key entrepreneurial competences identified in the EU EntreComp framework. Understand the impact of asking the right questions to assess and recognise the viability, feasibility and utility value of opportunities.
Design Thinking and Other Tools for Creation, Co-creation and Innovation	Get familiar with the key principles and methods of design thinking Learn by doing through the different five steps of a design thinking cycle and knows how to adapt its tools in real life scenarios.
Business Models Canvas	Acquire basic knowledge on the preparation and presentation of the Business Model Canvas, based on a visual language, quick to learn and accessible without professional background: 9 blocks allow to visualise and imagine the constituent elements of each Business Model.

EC4T Learning Path 3
Entrepreneurship Practitioner



EC4T Learning Path 3

Entrepreneurship Practitioner

INTRODUCTION TO LP3

OPPORTUNITIES AND CREATIVITY / INNOVATION

DESIGN THINKING AND OTHER TOOLS FOR CREATION, CO-CREATION AND INNOVATION

BUSINESS MODEL CANVAS

FINAL EVALUATION

UNIT

Business Model Canvas

ACTIVITY

- Value Proposition and the Relationship with Potential Clients
- What is the Canvas?
- How to use the Business Model Canvas
- Business Model Canvas Part I
  - Customers, Value Proposition, Channels-Which ones we use, Channels-Purchase, Delivery and After Sales, Customer Relationships-GET, Customer Relationship-Keep and Grow, Revenues, Key Activities, Key Resources, Key Partners, Costs
- Business Model Canvas Part II- Examples of applications
  - Introduction to BMCs from large companies, The Value Proposition of large companies, The channels of large companies, Clients of large companies, Customer relationships in the parts of get keep and grow, Revenues in large companies, The activities of large companies, The resources of large companies, Partners of large companies, costs
- Delphi and Ulisse tests

EC4T Learning Path 4

Learning Outcomes

Subject: Integration Module

Learning material: Green Transition Facilitator Toolbook

Evaluation method:
- Micro-Credential: badge “Green Transition Facilitator”
- Assessment: Ninjable

UNIT	LEARNING OUTCOME
Green, Digital and Entrepreneurship Assessment	Understand the importance of assessment as crucial part for implementing changes in your work environment and learn about different assessment methods. By using EntreComp4Transition self-assessment tool you will develop practical skills in using indirect assessment methods in your work environment and analysing the results. You will learn to use AS IS – TO BE canvas to integrate and synthesise the findings of analysis of the green, digital, and entrepreneurial status of your work environment.
Entrepreneurial twin transition strategy development	Understand the strategy concept and reflect on your TO BE profile results, identifying the opportunities and setting the priorities for your strategy. The second unit will guide you through translating your course learnings into action by creating your own green transition model canvas.

EC4T Learning Path 4

Green Transition Facilitator

INTRODUCTION

GREEN, DIGITAL AND ENTREPRENEURSHIP ASSESSMENT

UNIT

Green, Digital and Entrepreneurship Assessment

ACTIVITY

- Introduction to Assessment: Why and How to Assess
- Self assessment tool for SMEs
- Setting up an AS IS-TO BE profile
- As is to be profile: go deeper
- Get inspired by others

ENTREPRENEURIAL TWIN TRANSITION STRATEGY DEVELOPMENT

UNIT

Entrepreneurial twin transition strategy development

ACTIVITY

- Introduction to Entrepreneurial Twin Transition Strategy Development
- Entrepreneurial Twin Transition Strategy Development
- Spotting Opportunities
- Valuing ideas
- Twin Transition Strategy Canvas
- Individual test
- Testing Your Model

FINAL STEPS

HOW TO IMPLEMENT THE ENTRECOMP4TRANSITION COURSE

Designing your **EC4T Experience**

Now is the moment for you to design a training experience based on the EntreComp4Transition resources, so your learners can gain the competences needed to become Green Transition Facilitators. We recommend you follow some steps:

1. **Analyse the EC4T MOOC Content**. Review our Learning Paths and identify the competences you want to work with your learners, in relation with their profiles.
2. **Identify a real challenge** with a local company regarding the digital and/or green transition, so it can be a challenge-based learning experience that motivates your students. If you don't have access to a local challenge, you can use as an example the challenges identified by our project in the EAC4 Market Analysis.
3. **Define the learning objectives** for your course and align them with the EC4T MOOC learning outcomes, while adapting to the needs and context of your students.
4. **Develop a course structure** in a modular format similar to the MOOC, using a Blended Learning Approach.
5. **Use the online content from the MOOC** that aligns with your learning objectives and create other additional resources to complement the ones provided by EC4T.
6. **Plan Face-to-Face Activities** that promote the practical application of the knowledge obtained to work with the local company challenge. Invite experts and organize study visits. You can also find a lot of examples of Face-to-Face activities in the EntreComp4Transition learning resources.
7. **Evaluate and Improve**. Plan how to collect feedback from your students on the effectiveness of the course and areas for improvement, with clear evaluation criteria.

WHAT YOUR LEARNERS WILL OBTAIN

The topics and activities included in the EntreComp4Transition learning paths have been designed to support learners to:

LP1. SUSTAINABILITY PRACTITIONER

- Explore the principles and strategies of sustainability practices
- Understand how to value sustainability
- Understand how to apply sustainability in business

LP2. DIGITAL TRANSFORMATION PRACTITIONER

- Delve into various aspects of digitalisation, exploring its meaning, challenges and opportunities, and embracing its importance, complexities and potential
- Navigate the dynamic realm of digital technologies, equipping ourselves with the knowledge and skills to effectively guide others through this transformative journey

LP3. ENTREPRENEURSHIP PRACTITIONER

- Explore the principles and strategies of entrepreneurial practices
- Understand how innovation, design thinking and effective entrepreneurial competences tools are crucial to transforming ideas into action
- Understand how to spot and assess business opportunities and how to create business models

LP4. GREEN TRANSITION FACILITATOR

- Assess the knowledge acquired in the previous modules
- Develop a twin transition strategy

What do you need for the EC4T Experience?

When designing the adaptation of the EntreComp4Transition training courses to your students' context, you will need to take into consideration also the course requirements:

ONLINE LEARNING

HOURS OF ONLINE LEARNING

47 hours in total for this integrative part and the four learning paths

WHAT DO YOU NEED?

The EntreComp4Transition open educative resource MOOC provides you with all the information required to get this goal.

You can access here the EC4T Massive Open Online Course

FACE-TO-FACE LEARNING

HOURS OF FACE-TO-FACE ACTIVITIES

28 hours in total for this integrative part.

WHAT DO YOU NEED?

Each activity contains a specific section with the resources needed, such as an internet connection, a computer, papery, post its or marker pens...

You can access here the EC4T Face-to-Face activities examples

REAL BUSINESS CASES

HOURS OF BUSINESS CASES

Additional resources that can take a month

WHAT DO YOU NEED?

For the integrative part, it is fundamental that your learners analyse and find a strategy based on a real business case.

How can this happen?

- Select a local challenge. We recommend you identify a local SME challenge, so you can interact more easily. If not, you can use one of the EC4T identified challenges.
- Use the local challenge as a vehicular learning-by-doing for your students to put into practice the knowledge gained.
- Ideally, organize a mobility exchange.

You can access here the EC4T inspiring practices and challenges

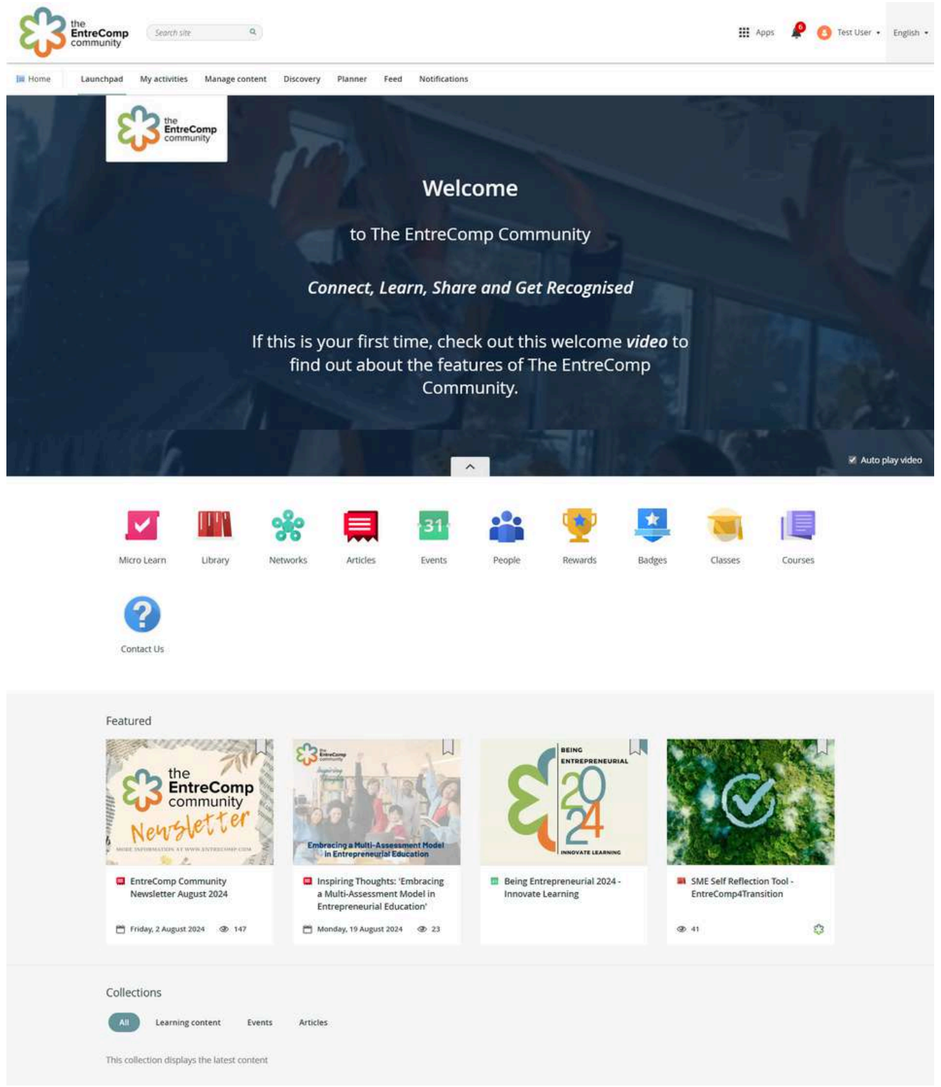
HOW TO ACCESS THE EC4T MOOC

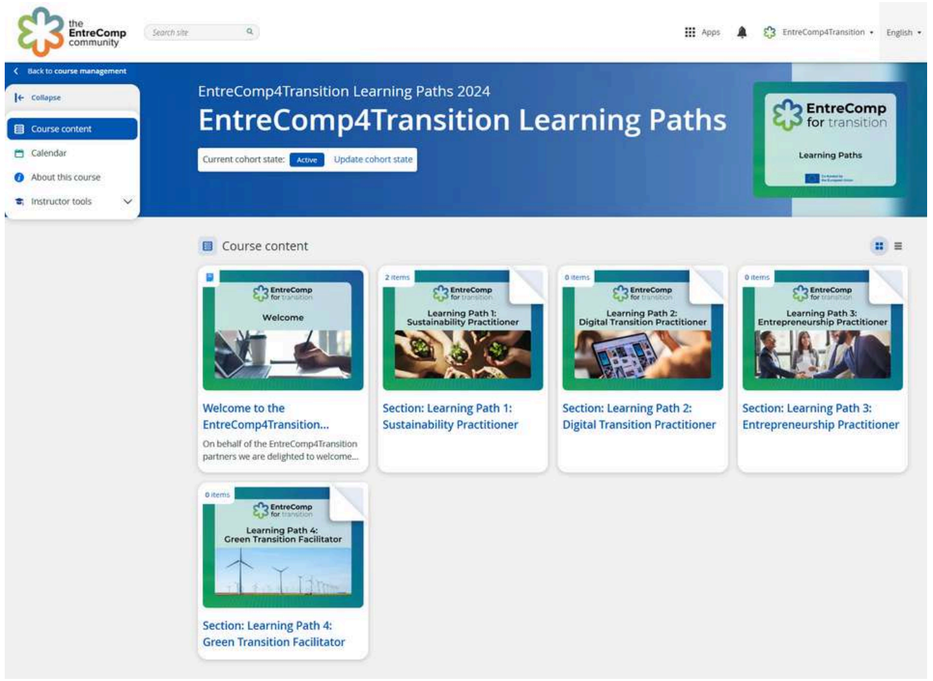
All our materials are available, as an open educative resource, and can be accessible from our project webpage and/or from the **EntreComp Community**, a multilingual user-friendly platform that fosters an inclusive and engaging learning environment, and it's EntreComp4Transition's LSM.

If you don't have an account yet, just go for the "Sign up" section and follow a couple of very simple steps. Same case for your learners, they will need to create an account in order to have access to the MOOC.

Once you have an account, you will be granted with all the permissions needed for accessing courses on the platform. Of course, **EntreComp Community is a free tool and no fee or subscriptions needs to be paid** in any form.

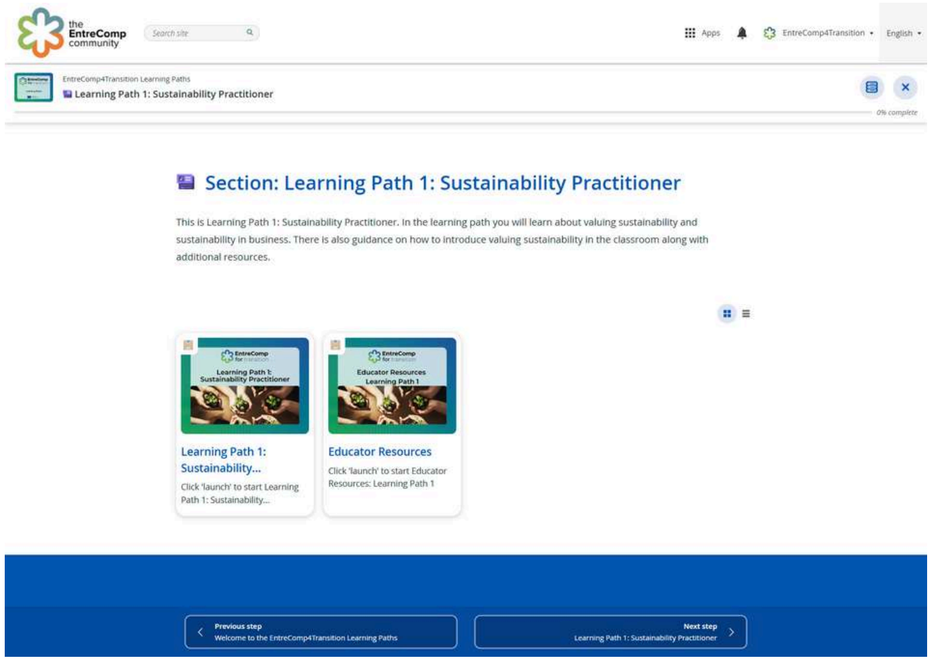
Now that you have access, you will see on the home page a number of icons with different options. We recommend you explore all of them, and especially, to enrol in every community you find interesting!.

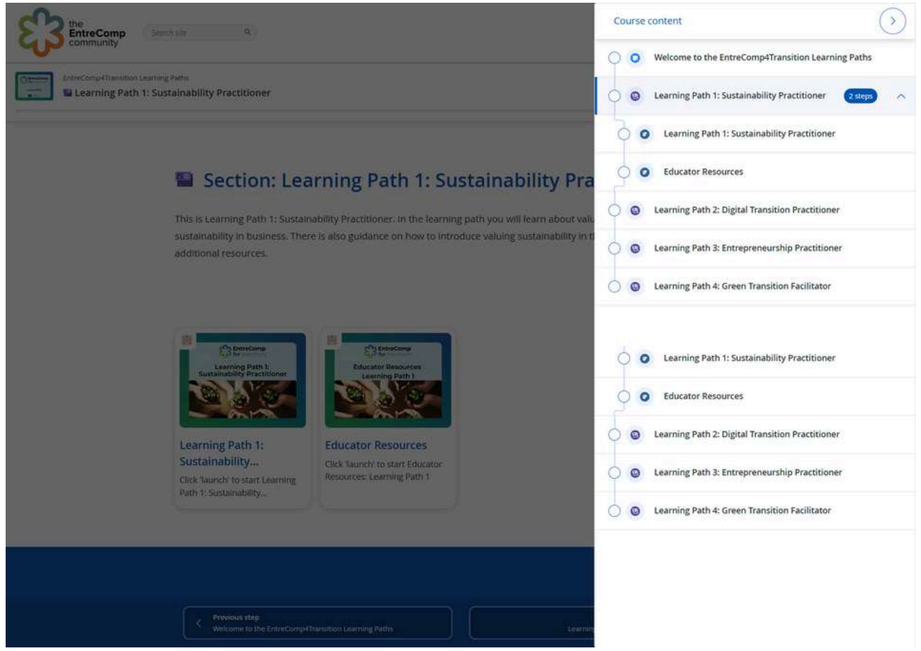




To find among the courses offered in the EntreComp Community the four EntreComp4Transition training courses, that together constitute the Green Transition Facilitator profile we have developed, if you go to the menu on the left, you just have to **select "EntreComp4Transition"**, and the platform will filter the four training courses accordingly.

Once you can see the EC4T Learning Pathways ("LP1: Sustainability Practitioner", "LP2: Digital Transformation Practitioner", "LP3: Entrepreneurship Practitioner" and "LP4: Green Transition Facilitator", you just have to **click on one of them** and you will find a landing with all the information regarding the course, including the learning outcomes. Now you just need to **"Go to the course"** and start the experience!





A SMALL CHECKLIST

You can use this checklist to follow-up the preparation of the EntreComp4Transition training, the steps we recommend you to take to be sure you have all you need

ACTION	CHECK
A. Select the EC4T Learning Paths you are going to implement	
· LP1: Sustainability Practitioner	☐
· LP2: Digital Transformation Practitioner	☐
· LP3: Entrepreneurship Practitioner	☐
· LP4: Green Transition Facilitator*	☐
· The complete EC4T Training Experience	☐
B. Plan/Schedule follow-up of the course	
· Previous permissions to implement the training (if necessary)	☐
- Theoretical contents	☐
- To work in class	☐
- To work on their own	☐
· F2F: selection of the most relevant ones	☐
- Necessary resources (templates, post-its; markers...)	☐
- Necessary spaces (reservation of rooms; technological tools...)	☐
- Collaborating persons (asking for hours from other teachers, or specific speakers according to contents if necessary).	☐
· Evaluations	☐
- Platform evaluations: all together, individually...	☐
- Off-platform evaluations	☐
C. Review the contents of the course	
· Identifying useful additional resources in the section "How to..."	☐
· Check links of trainers and learners	☐
D. Introduction Session with Students	
· Aims of the course	☐
· Methodology to be followed	☐
· How students will use the platform: sign up, organising contents...	☐
· Timing: start and end, evaluations...	☐
· Information on student mobility (if applicable).	☐
E. Establishing Collaborative Work Teams	
· Group Dynamics (from the resources for trainers)	☐
F. Collaboration company or business	
· Select company (proposed by students or previously selected)	☐
· Contact the company or business	☐
- Do you have a contact person?	☐
- Integration of that person in sessions (face-to-face or online)	☐
- Definition of the challenge to work on with the company or business**	☐
G. Implementing the training	
H. Feedback with students (once the training has finished)	
· A final form given by EC4T (if applicable)	☐
· Final reflection session on usefulness, contents, methodology...	☐

** Remember that, for achieving the Green Transition Facilitator, you have to certify the knowledge content in the three previous EC4T Learning Pathways (LP1, LP2 and LP3) by using the evaluation for each of them*

*** We really recommend you to identify and define a local challenge with a company from your local context, but if you do not have access to one, you can use the examples the EntreComp4Transition provides in our Market Analysis (see page 20 or click **here**)*

The EC4T **Face-to-Face activities**

As we mentioned in previous sections, our pedagogical approach is based on the **EntreComp4Transtion blended learning methodology**, with a proposal that combines both online learning that you can access through the EntreComp Comunity in the different Learning Paths, and in-person activities that you can develop in your classroom or in other spaces you select.

So once your learners have gone through the online learning independently, or maybe you have introduced the concepts in the classroom, we recommend you reinforce and deepen their understanding of the different concepts with face-to-face activities.

Here are some examples:

- Group Discussions: Divide the learners into small groups and assign each group a specific topic from the online material. Encourage them to discuss and share their insights, ask questions, and clarify doubts. This collaborative approach promotes critical thinking and allows learners to benefit from diverse perspectives.
- Hands-On Projects: Design projects that require learners to apply the concepts they have learnt. Whether it's building a model, conducting experiments, or creating a presentation, hands-on projects help solidify knowledge through practical application.
- Role-Playing Scenarios: Create scenarios related to the subject matter and have learners role-play different situations. This method is particularly effective for subjects like history, social studies, or business, where understanding different viewpoints is crucial.
- Peer Teaching: Pair up or group of students and have them teach each other different concepts. Teaching is one of the best ways to learn, as it requires a deep understanding of the material and the ability to communicate it clearly.
- Debates: Organise debates on relevant topics. This activity hones learners' research, public speaking, and critical thinking skills, and encourages them to explore different sides of an issue.
- Case Studies: Present real-world case studies that require learners to apply their knowledge to solve problems. This method bridges the gap between theoretical learning and practical application, making the material more relevant and memorable.
- Reflection Sessions: Hold sessions where learners can reflect on what they have learnt, share their experiences, and express any challenges they faced. Reflection promotes self-awareness and helps learners internalise the material more deeply.

By incorporating face-to-face activities, you provide a balanced blend of independent and collaborative learning experiences that cater to different learning styles and enhance overall comprehension. Take also into consideration when designing these activities the local challenge you will collaborate with.

WE HAVE DESIGNED FACE-TO-FACE ACTIVITIES FOR YOU...

In case you prefer to use the Face-to-Face activities we have designed, or you want to take a look at them so you can get some ideas and inspiration for the ones you will develop with your learners, in this section you will find them divided among the four different EntreComp4Transition Learning Pathways.

Each of our face-to-face activities has been constructed on a way that you may be able to replicate them easily, and for that, we have also created a similar structure for all of them. So, when you access any of those through the EC4T MOOC, you will find the following layout:

EntreComp for transition

TEMPLATE LESSON PLAN

MODULE:	***Analysis of relations***
Unit:	*Examples of business, regions... of transition*
Name of the activity:	*Leveraging Change in the Healthcare System*
Brief description	*This lesson will explore...*
Learning outcomes	*The topics and activities included in this learning path have been designed to support you to: ...*
Overall timing	*How long will it take (approx.)*
Competences which will be developed	*Divided per EU framework (DigComp, EntreComp, GreenComp)*
Content situation	*What content, specific terms and concepts do the students already know in connection with the subject? It is therefore specifically about the prior knowledge of the students.*
Learners' living environment	*What do the learners come into contact with at school, at home or outside the school in connection with this subject?*
Organizational situation	*Description of the learning environment according to the activity, e.g. materials needed*
After the exercise	*If it's ONLINE : evaluation method / assessment (test)* *If it's IN PERSON: self-reflection. Self-reflection is about looking back on your own experiences to learn from it.*

LP1 Face-to-Face activities

Sustainable Agricultural System	*An application of systems thinking to the context of sustainable agriculture in a developing nation. It helps learners familiarise themselves with defining the variables, actors, and stakeholders involved, analyse the causal relations, evaluate the balancing loops, and assess the delays in the context of this complex system.*
Leveraging Change in the Healthcare System	*A case based on a scenario in a healthcare system facing the challenge of reducing patient readmissions, which is both costly and detrimental to patient outcomes. In this case, students will analyse how leverage points can be identified and utilized to address this issue. It helps students to explore how identifying leverage points and applying effective change management strategies can address critical issues and improve system performance*
Navigating the Future of a Sustainable City	*A case based on a scenario in a city grappling with the challenges of rapid urbanization, environmental degradation, and increasing demands for resources. The city's leaders are determined to transform it into a sustainable urban centre, and they have created an observed system model to understand the dynamics and potential future outcomes. It helps students to examine the development of a sustainability to gain a profound understanding of the intricacies involved in shaping the future.*
EcoSolutions Inc.	*A case based on a scenario about a fictive company that has historically operated without a strong focus on sustainability. However, in response to global pressures, increasing customer demands, and growing concerns about environmental issues, the company has decided to embark on a journey of sustainability transformation.* *The case addresses key questions related to the main variables for global sustainable development, identifying loops within the system, the representation of subsystems, leverage points, vulnerability to shocks, and the behavior of subsystems.*
EcoGlow Enterprises	*A case based on a scenario in a well-established fictive company with a reputation for quality products. However, it is increasingly challenged to align its operations with environmental and social sustainability. The company's leadership recognizes that embracing sustainability is not only a moral imperative but also an opportunity for competitive advantage. This transformation will affect various aspects of the business. The case addresses a causal loop diagram depicting the variables, relations, interactions, dynamic and non-linear behaviour of renewable resources at business level.*
A1.3.13: Green Investment strategies	*A case based on an analysis, which will address several key questions that can help to understand the complexities and opportunities associated with sustainability. The analysis explores the concept of green investments referring to the allocation of financial resources to projects or companies that focus on sustainable practices, environmentally friendly technologies, and the conservation of natural resources, the strategies supporting businesses that contribute positively to the environment while generating financial returns for investors*

Regenerate Nature	*A case based on an analysis will address several key questions that can help to understand the concept of the regenerating nature. Regeneration of nature refers the circular economy's third principle:* • *The characteristics of a circular economy, as opposed to a take-make-waste linear economy, support natural processes and create more space for nature to flourish.* • *The circular economy's main aim namely "regenerating nature" instead of extracting and creating natural capital as opposed to perpetually destroying,* • *The farming techniques that let nature regenerate soils, boost biodiversity, and replenish the earth's biological resources*

LP2 Face-to-Face activities

Go Deeper 1: Practice Your Online Presentation Skills in Teams	*This activity aims to enhance students' online presentation skills through collaborative teamwork. Each team will create a Google Slides presentation focusing on a project concept, covering key aspects like the problem statement, proposed solution, target audience, and conclusions*
Go Deeper 2: Organize an end-of-academic-year party with Trello	*Collaboratively plan an end-of-academic-year party using Coggle.it for brainstorming and Trello for task and responsibility management. This activity fosters teamwork and project management skills in a digital environment.*
Domaining AI 1	*This activity aims to deepen students' understanding of the practical applications of AI in business. Teams will develop a proposal for an AI solution that addresses a specific business challenge, detailing the technology, implementation strategy, potential impact, and ethical considerations.*
Domaining AI 2	*This activity is designed to give students hands-on experience with various AI tools, including ChatGPT, Midjourney, and Whisper, to understand their applications, strengths, and limitations. Teams will explore these tools through a series of tasks, culminating in a presentation that demonstrates their findings and insights into how these tools can be leveraged in different scenarios.*
Comprehensive Data Analysis Project	*This comprehensive exercise is designed to integrate and apply the concepts learned across the data analysis modules. Students will work in teams to complete a data analysis project from start to finish, encompassing data collection, cleaning, analysis, and interpretation, culminating in a presentation of their findings and insights.*

LP3 Face-to-Face activities

The EntreComp Gamify	*An amusing individual activity that envisages a final debate and sharing in plenary. It helps learners familiarise with the EntreComp within real-life and authentic scenarios helping them to reflect about their entrepreneurial competences and potentials*
The Creative Opportunity Discovery canvas (Part A and Part B)	*Part A: This lesson will help learners understand and learn about one of the core abilities that is at the core of an entrepreneurial mindset: the ability to discover problem-solving opportunities regardless special talents, access to abundant venture capital or creating breakthrough technology* *Part B: This lesson is the second part of the activity started by the leaners in the previous lesson PART A, where they will complete their Creative Opportunity Discovery (COD) canvas. At the end, they will be able to assess and validate their solutions and the utility value of the opportunity they have spotted.*
The Ideal Wallet exercise	*In this lesson participants will engage in practical exercises, case studies, and group projects to apply design thinking tools and methodologies*
Delphi and Ulisse Tests	*Functional tests proposal for those who intend 1) to start their own business to learn about the strengths and weaknesses of the personality, to improve the weak points, or even look for travel companions with characteristics complementary to their own; 2) to evaluate the risk associated with starting and running their own business*

LP4 Face-to-Face activities

AS IS TO BE profile: go deeper	*Once learners have gone through the as is to be phases, they will need to apply their findings and recommendations to solve the business challenge. This may involve implementing changes, testing new processes, and monitoring the results.*
Get inspired by others	*This activity encourages participants to engage with both internal and external sources of inspiration to enhance their green transition initiatives. Participants will first map stakeholders within their organization to understand diverse perspectives and insights. Subsequently, they will research how other companies have tackled similar challenges, focusing on inspirational success stories.*
Testing your model	*Green Ideas Exchange: A Peer Feedback Workshop A dynamic, 2-hour workshop where participants present their green transition ideas (expressed on the Twin Transition Canvas), fostering collaborative learning through constructive feedback, discussions, and rapid-fire critique sessions.*

EntreComp4Transition
Assessing Knowledge

THE PURPOSE OF ASSESSMENT

The primary goal of assessment within the EntreComp4Transition project is to evaluate and enhance learners' entrepreneurial, digital, and green competences. These assessments ensure that learners can effectively apply the knowledge and skills gained through the programme to real-world challenges, particularly in entrepreneurial, sustainability, and digital transformation contexts. Additionally, assessments provide feedback to educators and learners on the effectiveness of teaching methods and learning materials, promoting continuous improvement in the educational process.

WHY NOT START WITH AN INITIAL DIAGNOSTIC?

Initial diagnostic assessments identify learners' current levels of knowledge, skills, and competences in areas covered by the EntreComp4Transition framework. These assessments help tailor learning paths to address individual learners' specific needs and gaps. By understanding each learner's starting point, educators can provide more personalised and effective instruction, ensuring all participants achieve the desired learning outcomes. A recommended approach is to invite all learners to complete the ‘Reflection Journey Scenarios’ that you will find in Learning Path 4." This self-assessment can serve as a pre-test to determine their capabilities and skills in entrepreneurship, sustainability, and digital transformation before starting their own EntreComp4Transition learning journey.

FORMATIVE AND SUMMATIVE ASSESSMENT

Formative assessments are integral to the learning process within the EntreComp4Transition project. These ongoing assessments monitor learner progress, provide timely feedback, and adjust instruction. Formative assessments include quizzes, peer reviews, project-based evaluations, and reflective exercises. The goal is to support learners in achieving incremental improvements, with many options available in resources for trainers and Face-to-Face activities.

Summative assessments are conducted at the end of each learning path to evaluate the overall achievement of learning outcomes. These assessments not only aim to measure how well learners have acquired the competences defined the EntreComp, DigComp, and GreenComp frameworks, but also by the content included in the different learning paths. As you may know, summative assessments can include final projects, presentations, exams, and practical demonstrations that require learners to synthesise and apply their learning in complex, real-world contexts. These assessments can provide a clear indication of the learners' readiness to act as Green Transition Facilitators, as they progress through each on the learning paths and specially after going through the integration path, the last one.

UNDERSTANDING ASSESSMENT OF, FOR, AND AS LEARNING IN THE EC4T LEARNING JOURNEY

Assessment of Learning

This assessment is used to measure the achievement of learning outcomes at the end of instructional units. This type of assessment, often summative, includes final projects, presentations, exams, and practical demonstrations. These assessments provide a clear indication of learners' proficiency in entrepreneurial, digital, and green competences, ensuring they meet the standards set by the EntreComp, DigComp, and GreenComp frameworks. At the end of learning paths 1, 2, and 3, you will find a final evaluation containing a selection of questions designed to help you and your learners assess the extent of new knowledge and skills acquired. Learners are expected to achieve a score of 70% or higher. If a learner scores below this threshold, it is recommended that they review the content, focus on areas of doubts, and then retake the final evaluation. Each learner has three attempts, with a different set of questions presented each time they take the final evaluation.

In the EC4T MOOC, each LP includes an assessment form to recognize the learning, and grants a digital badge. Completing all four paths earns a special Completion Badge

Assessment for learning

This is an ongoing process integral to the EntreComp4Transition programme, designed to enhance and guide the learning process. This formative approach involves regular mini quizzes, peer reviews, project evaluations, and reflective exercises that provide immediate feedback to learners and educators. By identifying areas where learners struggle or excel, educators can adjust instructional strategies to better meet learners' needs. This invitation to a continuous feedback loop helps learners understand their progress and guides them towards achieving the desired competences effectively. Throughout the first three learning paths you will encounter some “check your knowledge questions” after some of the activities that are directly linked to the application of new knowledge. These short check-ups should be answered by learners and checked by trainers if considered necessary.

Assessment as learning

This kind of assessment empowers learners to take an active role in their educational journey. This approach encourages self-assessment and reflection, helping learners to monitor their own progress and understand their learning processes. Activities such as self-reflective journals, peer discussions, and goal-setting exercises enable learners to develop metacognitive skills, fostering a deeper understanding of the content. Trainers are encouraged to include as many of these opportunities as possible. You will find lots of application activities and canvases for learners to work through, especially in learning paths 3 and 4. By engaging in assessment as learning, learners become more autonomous and take greater responsibility for their personal and professional development, aligning with the programme's goal of cultivating entrepreneurial mindsets and sustainable practices. In Learning Path 4 you will find the final Twin Transition Strategy Canvas which ideally should be developed in small groups to ensure meaningful discussions and feedback. Present real-world SME challenges to the learners, for them to develop the strategy on the Canvas. The presentation to others of the Twin Transition Strategy Canvas can be considered, in the classroom, as their final project. In the guide provided about this Canvas, you will find guiding questions and tips on how to complete each section; plus, a “transforming the twin transition strategy into action” chapter where learners will find real application recommendations.

The Reflection Journey Scenarios

In Learning Path 4, the innovative Reflection Journey Scenarios self-assessment tool presents learners with a range of scenarios and options for each competence, generating a personalised learning journey. The assessment can be taken more than once to show progress over time and can help learners to identify strengths and develop learning goals. It is recommended as both a pre-learning check-up and as a post-learning self-assessment. The scenarios will spark new ideas, options and possibilities in learners, becoming the perfect ‘assessment as learning’ activity.

EARNING DIGITAL BADGES

Completion of Learning Paths 1, 2, 3, and 4 is recognized with a digital badge, which can be shared online, on professional profiles, and in email signatures. Completing all four paths earns a **special Completion Badge** recognising learners as Green Transition Facilitators, reflecting comprehensive learning in real-world contexts.

SYNOPTIC ASSESSMENT AND THE TWIN TRANSITION STRATEGY CANVAS

A synoptic assessment integrates and applies learning from across the entire programme. In Learning Path 4, the Twin Transition Strategy Canvas serves as a synoptic assessment, requiring learners to synthesise and apply entrepreneurial, digital, and green competences to real-world challenges. Developed in small groups, it encourages discussions and feedback. The final presentation of the canvas showcases learners' comprehensive understanding and readiness to act as Green Transition Facilitators. This evidence can be presented to awarding bodies for recognition of prior learning and, if requirements are met, certification.

ECTS ACCREDITATION POTENTIAL

The EC4T programme's structured assessment methods, including the synoptic assessment via the Twin Transition Strategy Canvas, demonstrate its comprehensive coverage of learning outcomes and workload, making it suitable for accreditation equivalent to 3 ECTS credits. The programme was designed based on 75 hours of dedication, ensuring learners are equipped with the necessary competences.

CONCLUSIONS

As a
Conclusion

The EntreComp4Transition project wants to provide insights and recommendations to contribute to aligning educational and training programs with the needs of the digital and green transitions in the labour market. This training guidelines, this toolkit, aims to support educators and stakeholders in achieving that very strategic goal.

As our market research concludes, there are significant mismatches between the skills required by the labour market and those provided by current education and training systems. Key areas where gaps exist include digital marketing, mobile devices, professional social media work, circular economy, and social responsibility. Also, SMEs face challenges in improving digitalization and sustainability due to high investment costs and the need for specialized skills, and tend to hire specialized digital and sustainable professionals externally rather than investing in training their current staff. This indicates a need for educative and training institutions to raise awareness about the benefits of in-house expertise and offer continuous and in-company training. HE and VET institutions must update their curricula to include digital and sustainable competences, and the EntreComp4Transition project aims to support that process.

The collaboration between formal education institutions, business schools, continuous training institutions, and non-formal education is crucial to developing and recognising micro-credentials. Companies should be involved in training curriculum design and development to align with market needs, fostering a bi-directional relationship between enterprises and training centres.

The EntreComp4Transition project underscores the importance of developing Green Transition Facilitators, a new professional profile that bridges digital, green, and entrepreneurial competences. This role is essential for supporting SMEs in navigating the twin transition of digitalisation and sustainability. We also promote the adoption of innovative, interdisciplinary training methodologies that include practical, real-world problem-solving within a business context. This approach ensures that competences are practical and applicable, engaging learners through meaningful work.

Emphasizing lifelong learning and continuous improvement is vital. Our methodology recommends including formative assessments like mini quizzes, peer reviews, project evaluations, and reflective exercises to provide immediate feedback and adjust instructional strategies accordingly. Also, summative assessments, including final projects, presentations, exams, and practical demonstrations, are essential to measure overall achievement and readiness to act as Green Transition Facilitators.

However, we also need to find ways to recognise this knowledge. The completion of learning paths in the EC4T program is recognized with digital badges, and completing all four learning paths earns a special Completion Badge recognizing comprehensive learning in real-world contexts. The structured assessment methods of the EC4T program makes it suitable for accreditation, ensuring learners are equipped with the necessary competences.

We are here to help!

If you have any doubts or need more information, please don't hesitate to contact us:

josecarlos@cise.es
mariav@cise.es
ec4transition@eurochambres.eu

Project name	**Building upon the EntreComp Framework for a green and digital transition**
Project Acronym	EntreComp4Transition
Work Package	5
Document Title	Deliverable 5.2 Training guidelines for teachers - toolkit
Author(s)	Centro Internacional Santander Emprendimiento (CISE) - Fundación UCEIF

EntreComp for transition

Co-funded by the European Union

***Disclaimer**. Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.*

JULY 2024

EntreComp for transition

@entrecomp4transition

www.entrecomp4transition.eu

Co-funded by
the European Union