Scouts 4 Green App

White Paper

GreenApprenticeship
Sustainable Development in VET.
An overview of the European Union and Selected Member States

The European Green Deal

- Transforming the EU's economy for a sustainable future
- Mobilising research and fostering innovation
- Increasing the EU's Climate ambition for 2030 and 2050
- A zero pollution ambition for a toxic-free environment
- Supplying clean, affordable and secure energy
- Preserving and restoring ecosystems and biodiversity
- Mobilising industry for a clean and circular economy
- From 'Farm to Fork': a fair, healthy and environmentally friendly food system
- Building and renovating in an energy and resource efficient way
- Accelerating the shift to sustainable and smart mobility
- Financing the transition
- Leave no one behind (Just Transition)
- The EU as a global leader
- A European Climate Pact

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Mapping and stock taking of Scouts for Green Apprenticeship

White Paper "GreenApprenticeship - Sustainable Development in VET"

Developed by IHF

Table of Contents

Introduction

The Scouts for Green Apprenticeship (S4GA) project aims at integrating environmental, economic, and social sustainability into vocational education and training (VET). By qualifying and sensitizing VET learners and staff during learning VET mobilities, the project seeks to prepare them for a labour market increasingly characterized by sustainable development and digitalization. Apprentices are the skilled workers of tomorrow, whose future must be made more sustainable and climate-friendly together and who need to be provided them with skills that they can use for a long-term sustainable professional life.

The challenge-based approach to environmental learning with a VET background raises learners' awareness of the importance of environmentally friendly actions, green industries, VET careers and healthy choices in the fight for climate protection. Through the Scouts4GreenApp project results, local VET provider and companies working with the beneficiaries have a tool which fosters interest and knowledge about VET with a green background. As this is equally important everywhere, the S4GA project offer great digital tools and attractive micro credentials before, during and after the Green ERASMUS+ VET mobility experiences.

Sustainable and Digital development in VET and company-related education is not just a trend, but a necessity. As we face global challenges such as climate change and resource scarcity, it is imperative that we equip our future workforce with the knowledge and skills to navigate and contribute to a sustainable economy. This is where the S4GA project steps in, providing a framework for the incorporation of sustainability principles into VET and company practices with support of digital technologies.

The S4GA project is particularly concerned with gauging the trends and dynamics of how the VET ecosystem embeds and implements elements of the Green Deal and SDGs in their operations. Particular focus is on the aspect of mobility and apprenticeship that are carried out in the VET programmes, i.e. during the implementation of the Work Based Learning activities.

The S4GA project is focused on the horizontal priority environment and fight against climate change. With digital technologies and innovative training curricula the S4GA project results contribute to innovation in VET and adapting VET to labour market needs.

The White Paper "GreenApprenticeship – Sustainable Development in VET" plays a crucial role in this project. It operationalizes existing frameworks such as the United Nations' Sustainable Development Goals (SDGs) and the European Union's Green Deal, making them applicable and ready to use in the context of VET and company mobility. By breaking down these broad concepts into practical applications, the White Paper bridges the gap between theory and practice, enabling companies and VET providers to effectively integrate sustainability into their operations.

To ensure the relevance and applicability of the White Paper, a comprehensive research methodology was employed. Key research questions were addressed, focusing on the awareness, understanding, and implementation of the SDGs and the Green Deal among actors in the VET and enterprise ecosystems. Both primary and secondary research were conducted, with each partner country providing a Country Snapshot summarizing their findings. These snapshots offer valuable insights into the state of play concerning sustainable development in VET and company-related education across different European countries.

The White Paper thus serves as a reference guide, providing a clear and concise overview of sustainable development in VET and company-related education. It sets the stage for the subsequent work packages of the S4GA project, ensuring that all activities are grounded in a thorough understanding of the current landscape and future potential of sustainability in VET and company-related education.

Executive Summary

The White Paper of the S4GA project is a comprehensive, practical implementation framework that combines theoretical and practical aspects of sustainable development in Vocational Education and Training (VET) and company-related education, aiming to contextualize and apply the UN's Sustainable Development Goals (SDGs) and other frameworks like the Green Deal to the realities of companies, based on a combination of desk research and qualitative interviews, and serving as a foundation for the project's subsequent work packages.

The methodology for the White Paper involves each partner conducting country-specific research and engaging with VET practitioners and SMEs, while IHF handles EU-level research. The process includes desk research, data collection on SGD and GD for VET and SMEs, and compiling findings into a "Country Snapshot," which IHF consolidates into the final White Paper.

The primary research for the White Paper engages at least 70 stakeholders from the VET and business sectors, using direct methods like interviews and focus groups. Stakeholder inputs, gathered through key research questions, are processed by each partner to create a Country Snapshot, ensuring a balanced representation from both VET and business perspectives. The secondary research for the White Paper entails desk research of various resources, focusing on sustainability in VET and enterprise sectors. It examines how VET providers and businesses, especially SMEs, integrate green principles and adopt SDGs and Green Deal measures.

Exhibit 1: S4GA WP2 Process
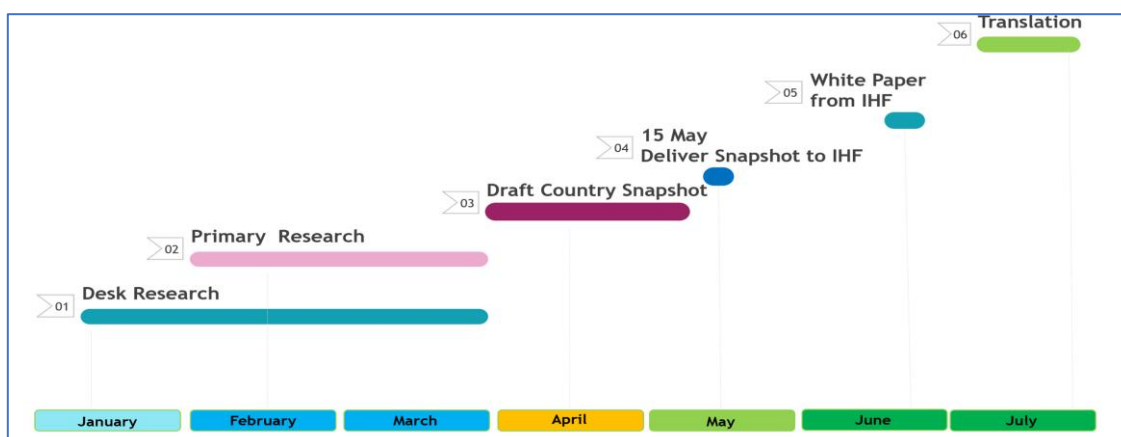
This White Paper is enriched by the diverse and multidisciplinary nature of the S4GA partnership, which encapsulates various facets of the VET ecosystem. The partnership unites operators from both formal and non-formal VET provision across Europe, reflecting the continent's diversity in VET, mobility, and Work Based Learning. This includes representation from both large and small member states, spanning Southern, Eastern, Western, and Northern Europe, thereby offering a comprehensive perspective on VET provision.

The last stage of Work Package (WP) 2 consists in the consolidation of the diverse findings from all partners in the White Paper. This document is a comprehensive and cohesive overview of training needs that will be tackled in the subsequent WPs of the project. This process ensures that the insights, experiences, and knowledge gathered from various contexts and perspectives are effectively integrated. The result is a rich, multifaceted understanding of sustainable development in VET, providing a robust foundation for the development of the training material. This consolidation marks a significant milestone in our journey towards promoting sustainability in vocational education and training across Europe.

Key takeaways on Green Apprenticeship

The key takeaways from the research conducted for the Green Apprenticeship White Paper provide a crucial understanding of the current state of sustainable development in Vocational Education and Training (VET) across Europe. These insights, drawn from both primary and secondary research, highlight the disparities, challenges, and opportunities in integrating the principles of the Green Deal and Sustainable Development Goals (SDGs) into VET ecosystems. The following points encapsulate the significant findings that emerged from the analysis of the country reports and stakeholder interactions.

1) **Uneven levels of awareness and understanding of Green Deal and SDGs in different European VET ecosystems:** the results of the primary and secondary research carried out at national levels seem to suggest a considerable divide in the perception, awareness and understanding of Green Deal and SDGs among VET operators and relevant stakeholders (i.e. policy makers, students, etc.). While some countries recognise the need to enhance environmental sustainability of VET practices, some other countries do not mention the Green Deal in VET-related policy documents. This may represent a geographical divide between Member States.

2) **The VET ecosystems across Europe are still far from full adoption of Green Deal and SDGs' related principles and practices:** Reportedly, a few features seem to undermine the speedy adoption of the Green Deal and SDGs across national VET ecosystems in the countries investigated, such as: a lack of awareness among stakeholders, insufficient integration of sustainability into VET curricula and training programs, lack of funding and resources for sustainable initiatives, and the need for capacity building and skills development in sustainable practices.

3) **Lack of systemic and comprehensive training service provision for Green Deal and SDGs:** a preliminary analysis of the country reports portrays a relatively unstructured provision of specialized training on Green Deal and SDGs. While many initiatives aim at raising awareness among VET operators, teachers and students, there are no national training options that encompass all three aspects of sustainability.

4) **Green Deal and SDGs are not fully integrated in apprenticeship and mobility:** The research findings indicate that the principles of the Green Deal and SDGs are not yet thoroughly embedded in apprenticeship programs and mobility initiatives across the European VET landscape. Despite the growing recognition of the importance of sustainability, there appears to be a gap in translating this awareness into practical applications within these key areas of VET. This gap is evident in the lack of specific sustainability-focused content in apprenticeship curricula, as well as in the limited opportunities for learners to gain practical experience in sustainable practices through mobility programs. Furthermore, the absence of a consistent approach to integrating the Green Deal and SDGs across different countries and regions exacerbates this issue. This highlights the need for a concerted effort to incorporate sustainability principles into apprenticeship and mobility initiatives, thereby equipping learners with the necessary skills and competencies to contribute to a greener future.

The key takeaway of "**Uneven levels of awareness and understanding of Green Deal and SDGs in different European VET ecosystems**" is indeed corroborated by the country reports. For instance, the Portugal report indicates that the awareness and understanding of the Sustainable Development Goals (SDGs) and the Green Deal among actors of the Vocational Education and Training (VET) and enterprise ecosystems are in their nascent stages, albeit gradually increasing. The report further highlights a significant challenge: a lack of awareness and understanding among relevant stakeholders about the importance of sustainable development and the role of VET and businesses in achieving the SDGs.

In the Austria report, it is highlighted that the trend towards sustainability and moral correctness is influencing the Austrian apprenticeship system. As young individuals decide on their future professions, there is a growing emphasis on ensuring that their choices are environmentally conscious and equitable. For apprentices, aspects like work-life balance, the appeal of green jobs, and the importance of mental health are becoming increasingly significant. These concerns, which align with the Sustainable Development Goals (SDGs), indicate a need for Austrian companies to adjust and cater to these evolving priorities.

Also, in the Slovenia report, interviewees from the VET system, which included VET teachers, Erasmus+ project managers, and employees at the Institute of the RS for vocational education and training, indicated that the level of awareness regarding sustainable development and the Green Deal is currently low, but it is showing signs of gradual improvement.

Similarly, the Finland report underscores this uneven awareness and understanding. According to Nygård, vocational teaching of sustainable development in Finland currently lacks a future-oriented perspective and a discourse on the emotional impact of climate change on individuals. While vocational learners often learn about sustainable development in practice, they lack the theoretical skills needed to understand the knowledge-based background of sustainable development.

At the European level, the unevenness in awareness and understanding of Green Deal and SDGs across different European VET ecosystems is evident. The Europe report states that the implementation of SDGs and the Green Deal is not evenly distributed across Europe. Some regions, particularly Northern and Western European countries, are more advanced in implementing the SDGs and the Green Deal than their Southern and Eastern counterparts. Furthermore, the report notes significant differences in awareness and practice of sustainability and SDGs depending on the sector in which a company operates.

The country reports validate the key takeaway that **Vocational Education and Training (VET) ecosystems across Europe are yet to fully embrace the principles and practices related to the Green Deal and Sustainable Development Goals (SDGs)**. For instance, the Germany report acknowledges the challenges in implementing the SDGs. The report states that while many companies recognize the need for sustainable development and have begun to implement some goals, the overall progress is slow. The report also notes that despite some lighthouse projects (e.g. INEBB), a general introduction of the SDGs into the German education system is yet to be seen. The last available study from 2017 suggests that the SDGs are only sporadically incorporated across the diverse German education systems and facilities.

Similarly, the Portugal report identifies several inhibitors and barriers to the implementation of the SDGs and the Green Deal in the VET and business ecosystems. These barriers further contribute to the slow adoption of these sustainability principles and practices.

In the Austria report, it is noted that while the SDGs and the Green Deal hold significant importance at the political level in Austria, their practical application in the VET sector and within companies is often limited to instances where it is deemed necessary, legally mandated, or economically beneficial. Even though the objectives of the SDGs are incorporated into the training and strategies of companies for moral correctness and compliance, it is not typically done with the explicit intent of fulfilling an SDG.

In the Slovenia report, it is highlighted that numerous projects within the VET system are geared towards transforming vocational education to align with sustainability and the Green Deal, involving institutions such as schools, the Institute of the Republic of Slovenia for Vocational Education and Training, the Ministry of Education, and the National Education Institute Slovenia. Furthermore, Erasmus projects play a pivotal role, especially in promoting green mobility for both educators and students.

The Finland report, on the other hand, highlights the country's ambitious goal of achieving CO-neutrality by 2035 and CO-negativity thereafter, surpassing the current European Union Green Deal. However, it also implies that the adoption of sustainability practices in VET and business is still not widespread.

At the European level, the report confirms that the adoption of sustainability practices in VET and business remains relatively low. It identifies key challenges for implementing the SDGs and the Green Deal in VET and business, including a lack of awareness and understanding, limited resources and capacity, and a lack of incentives and policy frameworks to support sustainability practices.

The key takeaway "**Lack of systemic and comprehensive training service provision for Green Deal and SDGs**" is substantiated by the country reports. For instance, the Germany report indicates that within the context of vocational education and training, the content in the study report needs an update with the introduction of the new standard occupational profile items, established in April 2020. One of these new items is sustainability, a topic that is now mandatory for all 326 training occupations in Germany. This suggests that while steps are being taken to integrate sustainability into vocational training, the process is not yet comprehensive.

The Portugal report echoes this sentiment, highlighting among stakeholders an insufficient integration of sustainability into VET curricula and training programs. It also points to a lack of funding and resources for sustainable initiatives, and the need for capacity building and skills development in sustainable practices.

The Finland report identifies gaps in the business sector's adaptation of the SDGs, especially those dealing with social responsibility. It notes that while the Finnish VET ecosystem works closely with the business sector and develops its curricula based on the needs of the business sector, there is still room for improvement in the integration of the SDGs.

In the Austria report, findings from a survey conducted among members of the Österreichischen Städtebund indicate a pressing need to enhance dialogue with the general population, given the existing gaps in awareness. The report emphasizes that efforts to increase the understanding and awareness of Austrians about the SDGs and the Green Deal should be intensified and broadened.

At the European level, the report underscores the need for more educational and training programs to help stakeholders better understand and implement sustainable practices. It reveals that 30% of interviewees stressed the importance of providing more education and training programs to help stakeholders better understand and implement sustainable practices.

The country reports corroborate the key takeaway that **Green Deal and SDGs are not fully integrated in apprenticeship and mobility**, underscoring the need for more robust integration of these principles into vocational education and training.

In Germany, the SDGs are only occasionally incorporated into the education system, suggesting that the integration of Green Deal and SDGs in apprenticeship and mobility is not yet fully achieved. In 2020, the standard occupational profile items "organisation of the training provider, vocational training, and labour law and collective bargaining law" and "occupational health and safety at work" were updated. Training contents in the "environmental protection and sustainability" and "digitalised world of work" fields of expertise have been added. The new standards are mandatory for all dual training ordinances that come into force from 1 August 2021.

In Austria, while the Green Deal is integrated into apprenticeship training, such as resource conservation, the SDGs and the Green Deal are more likely to be applied in vocational school, but not during training or within the company. This indicates a gap in full integration within the apprenticeship and mobility sectors. However, Austria has made strides in green traveling in apprentice mobilities, with increasing opportunities for public transport use and companies providing climate tickets for apprentices.

In Slovenia, interviewees from the VET system who work on Erasmus+ projects emphasized the importance of green travel (green Erasmus), which promotes knowledge, skills, and attitudes towards climate change and sustainable development. They also highlighted several projects in the VET system aiming to transform vocational education to be sustainable and pursue a Green Deal, including promoting green mobility for both learners and teachers.

In Finland, the Scouts4GreenApp-project is assisting vocational learners in becoming more attuned to the significance of the sustainable development goals to their future professions, indicating efforts towards integrating Green Deal and SDGs in apprenticeship and mobility.

Similarly, in Portugal, stakeholders report insufficient integration of sustainability into VET curricula and training programs, indicating a lack of full adoption in apprenticeship and mobility.

European Policy Framework Analysis

The European Union is determined to achieve climate-neutrality by 2050 through its Green Deal initiative. To do so, various policy areas, such as energy, environment, mobility, and agriculture, need to undergo transformative changes. The European Commission has defined six political priorities:

1. A European Green Deal
2. An economy that works for people
3. A Europe fit for the digital age
4. Promoting our European way of life
5. A stronger Europe in the world
6. A new push for European democracy

The EU's Green Deal, EU Biodiversity Strategy for 2030, EU Skills Agenda, and Council Resolution on the European Education Area acknowledge the essential role of education and training in empowering people for environmental sustainability and developing the necessary skills for the green transition. In particular, the EU's work on learning for environmental sustainability builds on various movements and concepts that promote a transformative vision of education, embracing change and promoting sustainability, recognizing the interconnected nature of environmental, social, and economic issues (EC, https://education.ec.europa.eu/focus-topics/green-education/learning-for-the-green-transition).

The European Union's Green Deal is a comprehensive plan to make the EU's economy more sustainable and to help mitigate climate change. It is designed to transform the EU's energy, agriculture, transportation, and other sectors in a way that will allow the bloc to achieve climate neutrality by 2050. To achieve this, the Green Deal sets out a range of ambitious targets and initiatives, including reducing greenhouse gas emissions, protecting biodiversity, and promoting renewable energy.

One of the key aspects of the Green Deal is the recognition of the essential role that education and training must play in supporting the transition to a sustainable economy. The EU recognizes that vocational education and training can be a powerful tool for developing the necessary skills and knowledge needed to build a green economy. The EU's Skills Agenda, for example, aims to ensure that all EU citizens have the right skills for the jobs of the future, including those in the green economy.

Education and vocational training (VET) are also crucial sectors that must respond to the climate and ecological crises, both in their operations and in preparing learners for the future. The EU recognizes the significant role of education and training in empowering people for environmental sustainability and developing the necessary skills for the green transition (EC, https://erasmus-plus.ec.europa.eu/programme-guide/part-a/priorities-of-the-erasmus-programme).

In addition to the Skills Agenda, the EU has also published a range of other initiatives and policies aimed at promoting education and training for sustainability. For example, the EU's Biodiversity Strategy for 2030 includes provisions for promoting environmental education and raising awareness of biodiversity issues. The European Education Area, meanwhile, is a policy framework that aims to improve the quality and relevance of education and training across the EU.

To support the goals and ambition of the European Green Deal, the EU has been a pioneer in promoting and investing in vocational education and training. The Council Recommendation on VET for Sustainable Competitiveness, Social Equity and Resilience, published in 2020, outlines the EU's overall vision for the future of VET. The goal is to make VET an attractive and high-quality option for all students, including today's youth and adults who need to update and requalify themselves to adapt to a changing job market (CEDEFOP, https://www.cedefop.europa.eu/en/press-releases/green-transition-vocational-education-and-training-can-provide-skills-needed-greening-european-jobs).

The 2030 Agenda and its Sustainable Development Goals were endorsed by the world community in September of 2015 (SDGs). Hence, 17 objectives to advance socioeconomic development and environmental sustainability were approved by all 193 UN member states. The Addis Ababa Action Agenda for financing development had been approved earlier in the year, and the Paris Climate Accord was finalised at the end of the year. Nine years later, however, the world is severely behind schedule in attaining the majority of these objectives, and numerous crises have caused the SDG progress to reverse (UN, https://sdgs.un.org/2030agenda).

The 2030 Agenda remains a priority for the European Commission. The Commission has submitted an ambitious policy programme to advance sustainability in the EU and beyond, under the direction of President von der Leyen. The Sustainable Development Goals (SDGs) are central to all sectors' internal and external policymaking and are an integral aspect of the President's political principles.

The UN's 2030 Agenda must be fully implemented if we are to increase resilience and get the world ready for upcoming shocks as we start the twin green and digital transitions. The Commission has concentrated on implementing specific measures that will result in noticeable progress towards the Sustainable Development Goals (SDGs). The Commission's plan to implement the SDGs is comprised of the President's political directives and her annual work programmes. The SDGs are included into all ideas, policies, and initiatives from the Commission by the President. As seen in the figure below, each of the six headline aspirations included in President von der Leyen's Political Guidelines includes one or more of the 17 SDGs:

Figure 1: European Commission Priorities. Eu holistic approach to sustainable development.

Source: EC, https://commission.europa.eu/strategy-and-policy/international-strategies/sustainable-development-goals/eu-holistic-approach-sustainable-development_en , 2020

Although the Commission leads the way with policy initiatives, support tools, and funding mechanisms at the EU level, member states have the power to implement the necessary reforms. Through the Osnabrück Declaration, member states have already approved and committed to concrete actions. It is time to undertake these reforms and contribute to realizing our collective vision for VET in Europe.

The Commission has been requested by the European Council, the European Parliament, and the Council of Ministers to develop a comprehensive strategy for implementing the SDGs in the EU. The approach taken by the Commission is to concentrate on delivering initiatives that will result in real progress towards the SDGs. The Commission's plan to implement the SDGs is based on the President's political directives and her annual work programmes, placing a heavy emphasis on implementation. The European Green Deal, the climate law, the new European Industrial Strategy, the Annual Sustainable Growth Strategy 2020 and 2021, the new European Skills Agenda, and the European Education Area are just a few of the profoundly transformative policies that have already been introduced in the past year.

As shown in the figure below, the new Commission's comprehensive or "whole of government" approach to implementing the SDGs consists of various strands. The main components of this strategy are:
- designing and successfully implementing profoundly transformative policies;
- the European Semester of Economic Governance, which coordinates economic policies;
- the Multiannual Financial Framework and the recovery tool "NextGenerationEU";
- mainstreaming the SDGs in policymaking using better regulation tools;
- ensuring policy coherence for sustainable development;
- EU engagement in the world;
- monitoring and reporting;
- and the involvement of civil society, the private sector, and other stakeholders.

Figure 2: The new Commission's comprehensive or "whole of government" approach to implementing the Sustainable Development Goals

Source: https://commission.europa.eu/system/files/2020-11/delivering_on_uns_sustainable_development_goals_factsheet_en.pdf

The European Green Deal, the Climate Law, the New European Industrial Strategy, the Annual Sustainable Growth Strategy 2020 and 2021, the new European Skills Agenda, and the European Education Area are the core strategic and policy documents that the European Commission has launched in the past few years that have a direct impact on the way policy makers, providers, teachers and learners in the VET ecosystem operate.

The "whole of government" strategy taken by the new Commission to accomplish the Sustainable Development Goals is divided into numerous strands, including: A political agenda with high goals has been developed by the Commission to create a sustainable European Union.

From January 1, 2019, the Commission has made a number of policy suggestions that will put the EU on a stronger path towards sustainability, resource efficiency, and social justice. These proposals are guided by the 17 SDGs. In order to make sure that the EU stays on the proper long-term course, sustainable development is fully integrated into the processes of policymaking and economic coordination.

The Commission also continues to keep a close eye on developments in these areas. In the post-coronavirus era, the EU also plays an ongoing pioneering role in fostering global alliances to assist the realisation of the 2030 Agenda. In the upcoming years, the "whole of government" strategy will continue to develop in order to attain sustainability at home and abroad. This is a journey towards a Union that grows and shares prosperity while maintaining the natural ecosystems that support life and the economy for the current generation and the ones to come. A Union that permits its people to live happily within the confines of the earth (EC, https://commission.europa.eu/strategy-and-policy/international-strategies/sustainable-development-goals_en).

Policies influencing every aspect of the economy need to be thoroughly rethought in order to reflect the importance placed on safeguarding and reestablishing natural ecosystems, utilising resources responsibly, and enhancing human health. This is the area where transformative change is both most necessary and has the most potential to benefit the economy, society, and environment of the EU. At the same time, maintaining free and competitive markets is crucial because it ensures that the European Green Deal's and the SDGs' goals will be achieved in the most resource- and cost-effective manner. The EU should also encourage and make investments in the tools and digital transformation that are required because they are crucial for many of the important changes that are needed.

Such revolutionary measures are especially pertinent to the European Green Deal and cut across several of the European Commission's major objectives. The von der Leyen Commission took a number of significant actions very early on, and Box 1 lists them all to show its commitment to implementing the SDGs through both internal and external EU policies. A number of strategies and action plans selected during the first year lay out a sequence of steps that are or will be delivered gradually over the following few years. Further revolutionary policies may be taken into consideration by the Commission as part of its future annual work programmes, if necessary and consistent with better regulation practises.

The EU is committed to achieving climate-neutrality by 2050 through the European Green Deal, and education and training are crucial sectors in this effort. The EU recognizes the vital role of education and training in empowering people for environmental sustainability and developing the necessary skills for the green transition. The Council Recommendation on VET for Sustainable Competitiveness, Social Equity and Resilience outlines the EU's overall vision for the future of VET. While the Commission leads the way, member states have the power to implement the necessary reforms to realize our collective vision for VET in Europe (EC, https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2050-long-term-strategy_en).

Member States play a pivotal role in implementing the policies and regulations developed by the European Commission at country level. Not only do the Member States enact and enforce national policies and regulations, but they also play a crucial role in monitoring the advancements in achieving the goals of the Green Deal and the implementation of the SDGs at national level.

The S4GA project investigated also the dynamics and trends around the themes of Green Deal and SDGs in the VET system at the national levels of the countries represented by the project partners, i.e. Austria, Finland, Germany, Italy, Portugal, Slovenia. The Annex section provides a highlight of the key trends and takeaways from the analysis carried out by partners in their respective operational environments.

GreenComp: the European sustainability competence framework

The development of a European sustainability competence framework is one of the policy actions set out in the European Green Deal. The aim of GreenComp is to foster a sustainability mindset by helping users develop the knowledge, skills and attitudes to think, plan and act with empathy, responsibility, and care for our planet. GreenComp identifies a set of sustainability competences to feed into education programmes to support learners to act and care for our planet and for public health.

GreenComp consists of 12 competences organised into the four areas:

1) Embodying sustainability values, including the competences
• valuing sustainability
• supporting fairness
• promoting nature

2) Embracing complexity in sustainability, including the competences
• systems thinking
• critical thinking
• problem framing

3) Envisioning sustainable futures, including the competences
• futures literacy
• adaptability
• exploratory thinking

4) Acting for sustainability, including the competences
  • political agency
  • collective action
  • individual initiative

(https://joint-research-centre.ec.europa.eu/greencomp-european-sustainability-competence-framework_en)

The **GreenComp** is therefore an important building block for the curricula and the teaching and learning credential in Scouts4GreenApp. Learning for environmental sustainability has the potential to be a catalyst for change among young and adult generations, through the acquisition of sustainability competences.

Another challenge in Europe is a "Europe fit for the digital age". Therefore, it is consistent that we will take into account the DigComp of the EU in the S4GA project. With the innovative S4GA learning app, we combine digital application / competences with the sustainability goals .

Source: https://wds.uni-hohenheim.de/en/research-program

11

DigComp Framework - European Commission

The Digital Competence Framework for Citizens (DigComp) provides a common understanding of what digital competence is. There is also an increasing need to address the green and sustainability aspects of interacting with digital technologies. In the Scouts4GreenApp project we are addressing exactly these needs.

DigComp identifies the key components of digital competence in five areas and 21 specific competences. The framework also describes eight proficiency levels, examples of knowledge, skills and attitudes, and use cases in education and employment contexts.

The five areas of the DigComp are:

1. Information and data literacy
2. Communication and collaboration
3. Digital content creation
4. Safety
5. Problem solving

DigComp is a basis for framing digital skills policy, curricula development and assessment of digital skills, both in the education sphere and for the labour market. For this reason, it is important for us to consider these digital skills in close unity with the topic of sustainability in learning VET mobility. Smartphones and Fridays for Future: these are the topics that have a significant impact on our target group, Generation Z! (https://joint-research-centre.ec.europa.eu/digcomp_en)

In addition, we have the **Digital Competence Framework for Educators** (DigCompEdu) at the European level, which is aimed in particular at educational and VET staff. In addition to the DigCompEdu framework, SELFIE for Teachers, a highly interesting DC self-reflection tool, as well as numerous teaching and learning materials such as videos, infographics and leaflets are published at European level. (https://joint-research-centre.ec.europa.eu/digcompedu_en)

SELFIE is not only a tool for teachers - SELFIE is a free, easy-to-use, customisable tool to help schools assess where they stand with learning in the digital age. SELFIE can help schools to understand how digital technologies are used to support teaching and learning. (https://education.ec.europa.eu/selfie)
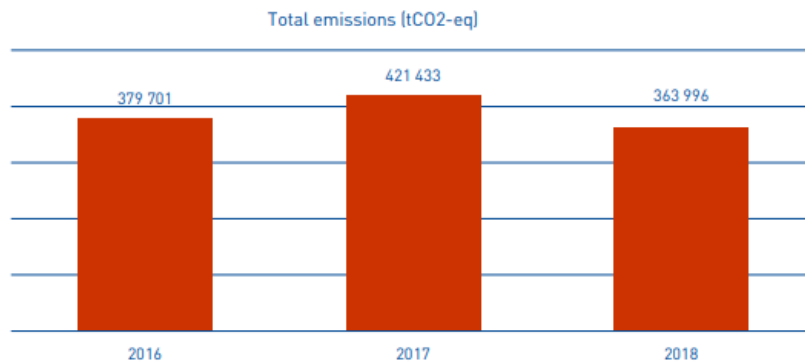
Sustainability and digitalisation are therefore topics that are at the top of the European agenda. The rapid transition to a climate-neutral Europe and the digital transformation are changing the way we work, learn, contribute to society and live our everyday lives. Only with the right skills can we in Europe take advantage of these opportunities.

The Erasmus+ Programme is one of the most successful European initiatives, providing great opportunities to work and live abroad for many Europeans. Erasmus+ mobility has positive effects on educational, social, personal and professional development, in that it enhances knowledge, skills and attitudes, improves employability, helps confidence-building and independence, stimulates curiosity and innovation, fosters the understanding of other people, and builds a sense of European belonging.

Erasmus+ in 2022 had a total budget of €4 billion, with 26,000 projects, around 73,000 organisations and some 1.2 million participants in mobility activities. The Erasmus programme has contributed to a more integrated and inclusive European continent. However, this has an impact on the travel behaviour of young people.

In May 2020 a snapshot survey to understand the travel behaviour of Erasmus+ students during their mobility was carried out amongst the members of the Erasmus Student Network by Eurail. A total of 1,967 former Erasmus+ participants from 20 different European countries took part. The most used method of transport was by plane, both for their move to their Erasmus destination (75%) and return from their mobility at the end (79%). Driven by cheaper and faster means of transportation, only 15% of respondents factored in environmental factors in their decision about transport (https://project.greenerasmus.org/)

FIGURE 3-1. TOTAL EMISSIONS ANNUALLY.

Total emissions (tCO2-eq)

379 701	421 433	363 996
2016	2017	2018

The fact that emissions per mobility were highest in call year 2017 must therefore be due to higher emissions per flight and not due to a higher share of flights. In 2017 the flights per mobility have been on average about 20 km longer than e.g. in 2018, which means that in 2017 there have been significantly more flight kilometres.

Source: https://www.oph.fi/sites/default/files/documents/Feasibility_Study_Compensation_ErasmusPlus.pdf

Research shows that even in a low-emission scenario, mobility under the new Erasmus+ would cause 1.5 times more emissions than the previous programme, for a total of 668,750 tonnes of CO2, primarily due to the air travel of students and staff.

During the Council's Finnish presidency in 2019, the agency conducted the study "FEASIBILITY STUDY ON COMPENSATION SCENARIOS FOR THE NEW AND GREENER ERASMUS+ PROGRAMME 2021–2027 " on compensation scenarios for Erasmus+ emissions, which influenced the new programme's guidelines.

This report provides information for decision making concerning means to reduce the carbon footprint of the Erasmus+ Programme for education, training, youth and sport. It is based on the idea that the first step to decrease greenhouse gas emissions is to measure the carbon footprint of the activities, then implement possible measures to reduce it and finally compensate the remaining carbon footprint.

In line with the European Green Deal, the ERASMUS+ programme will lead by example, by encouraging participants to use lower carbon transport as an alternative to flying. Erasmus funding will also be channelled into building up knowledge and understanding of sustainability and climate action, so that Europeans acquire the world-leading competences needed to create sustainable societies, lifestyles and economies.

The new generation of Erasmus programmes promotes environmentally friendly practices, including the use of sustainable means of transport. Green travel is defined as travel that uses low-emission modes of transport such as bus, rail or carsharing for the majority of the trip. Students will receive a one-off payment of €100 and, where applicable, additional support for travel days of up to four days for a return journey. Staff will receive a different amount depending on the travel distance and, where applicable, additional support for travel days of up to four days for a return journey.

The European Erasmus+ programme aims to help generations of Europeans to become active citizens, with the skills, knowledge and experience to tackle the challenges facing our society, both now and in the years to come.

With the ERASMUS+ project [Scouts4GreenApprenticeships](), we follow the Vision of Mika Saarinen, director of Finland's Erasmus+ agency:

> "We would want the students to think about not just travelling by land, to the destination that they're going to, but to choose their living spaces sustainably, to choose their lifestyle, and their food choices sustainably there,"
>
> Mika Saarinen, Director of Finland's Erasmus+ agency

The project Scouts4GreenApprenticeships supports the incorporation of ecological, economic and social sustainability in vocational education and training through qualification and sensitisation of VET learners and staff in the context of learning mobilities.

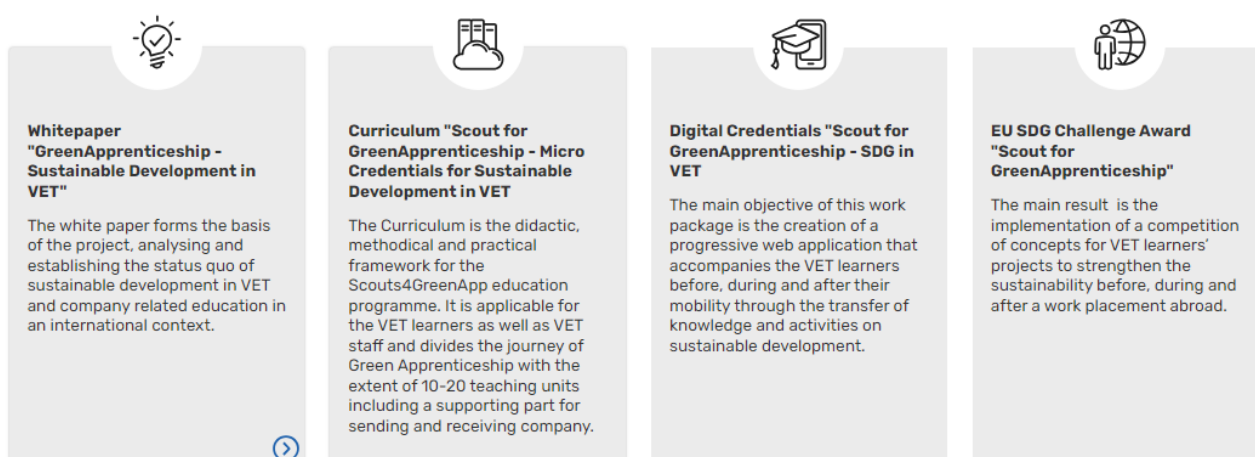## Concluding Remarks and Linkages with subsequent Work Packages

The country reports have identified four key takeaways that highlight the current state of the Vocational Education and Training (VET) ecosystems across Europe in relation to the Green Deal and Sustainable Development Goals (SDGs). These findings underscore the need for strategic actions to enhance the integration of these principles into the VET systems.

1. The first takeaway points to uneven levels of awareness and understanding of the Green Deal and SDGs across different European VET ecosystems. To address this, it is crucial to enhance the understanding and ownership of the key concepts of the Green Deal and SDGs among all participants in the VET ecosystem. This includes not only VET operators, teachers, and students, but also decision-makers and companies that interact with the VET system, either as hosts of work-based learning (WBL) or as future employers of current VET students.

2. The second takeaway reveals that the VET ecosystems across Europe are still far from full adoption of Green Deal and SDGs' related principles and practices. This calls for the development of operational tools that can be utilized by all stakeholders to implement greener and more sustainable mobilities in VET.

3. The third takeaway highlights the lack of systemic and comprehensive training service provision for the Green Deal and SDGs. In response to this, there is a need to develop training and educational tools or resources that can empower and equip the relevant stakeholders in the VET ecosystem.

4. The fourth takeaway indicates that the Green Deal and SDGs are not fully integrated in apprenticeship and mobility. This emphasizes the need for a more robust integration of these principles into vocational education and training.

In light of these findings, the S4GA project aims to develop a curriculum (WP3) and a progressive web application (WP4) that can address these needs.

The curriculum will provide learners with knowledge about sustainability in the operational context and the applicability of the SDGs before and during their mobility.

The web application will serve as a digital, web-based training tool, offering modularised training content in the form of digital credentials to allow on-the-spot training according to the actual VET and company needs.

Whitepaper "GreenApprenticeship - Sustainable Development in VET"

The white paper forms the basis of the project, analysing and establishing the status quo of sustainable development in VET and company related education in an international context.

Curriculum "Scout for GreenApprenticeship - Micro Credentials for Sustainable Development in VET

The Curriculum is the didactic, methodical and practical framework for the Scouts4GreenApp education programme. It is applicable for the VET learners as well as VET staff and divides the journey of Green Apprenticeship with the extent of 10-20 teaching units including a supporting part for sending and receiving company.

Digital Credentials "Scout for GreenApprenticeship - SDG in VET

The main objective of this work package is the creation of a progressive web application that accompanies the VET learners before, during and after their mobility through the transfer of knowledge and activities on sustainable development.

EU SDG Challenge Award "Scout for GreenApprenticeship"

The main result is the implementation of a competition of concepts for VET learners' projects to strengthen the sustainability before, during and after a work placement abroad.

From the country reports, it has been identified that certain Sustainable Development Goals (SDGs) are more urgent in the countries covered by the White Paper and at the European level.

These SDGs, listed with their respective urgency references, are as follows:

1. No Poverty (SDG 1) has been referenced once as an urgent goal.

2. Zero Hunger (SDG 2) has been cited five times, indicating a significant level of urgency.

3. Good Health and Well-being (SDG 3) has been referenced twice.

4. Quality Education (SDG 4) has been highlighted three times.

5. Gender Equality (SDG 5) has been mentioned twice.

6. Clean Water and Sanitation (SDG 6) has been referenced twice.

7. Affordable and Clean Energy (SDG 7) has been cited twice.

8. Decent Work and Economic Growth (SDG 8) has been referenced five times.

9. Industry, Innovation and Infrastructure (SDG 9) has been mentioned three times.

10. Reduced Inequalities (SDG 10) has been cited twice.

11. Sustainable Cities and Communities (SDG 11) has not been referenced as an urgent goal.

12. Responsible Consumption and Production (SDG 12) has been highlighted eight times, indicating a high level of urgency.

13. Climate Action (SDG 13) has been referenced ten times, making it the most urgent SDG.

14. Life Below Water (SDG 14) has been cited five times.

15. Life on Land (SDG 15) has been mentioned three times.

16. Peace, Justice and Strong Institutions (SDG 16) has been referenced twice.

17. Partnerships for the Goals (SDG 17) has been cited once.

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5 basic tips to understand sustainable development and the 2030 Agenda

Based on the frequency of these SDGs being highlighted as most urgent, the subsequent work packages of the S4GA project, specifically the development of a curriculum (WP3) and a progressive web application (WP4), shall address these needs. The training developed shall cover all the SDGs, with a particular focus on those perceived as most pressing in the countries and the European region involved in the S4GA project. This approach will ensure that the curriculum and the web application are tailored to the specific sustainability challenges and priorities identified in these regions, thereby enhancing the relevance and impact of the S4GA project.

Annex 1: Country Perspectives and Emerging Trends in Selected Members States

Germany

The Sustainable Development Goals (SDGs) are widely recognized and shared among Germany, with numerous academic and non-academic papers available on the topic. The Bertelsmann Stiftung, a foundation for political and social improvement, declares the SDGs as relevant for companies, addressing five main goals: people, earth, prosperity, peace, and partnerships (Scheerer, 2023). A survey by the Chamber of Commerce in Munich and Upper Bavaria found that two-thirds of entrepreneurs see a use in the SDGs for their company, such as a stronger focus on sustainability and aligning company strategy with societal desires (IHK München und Oberbayern, 2017).

However, while many companies are aware of the SDGs, this does not always translate into incorporating these goals into their businesses. Most companies have developed or plan to develop products and services that support individual goals, but only a third integrates the SDGs into their company strategy (IHK München und Oberbayern, 2017). Companies expect more support from politicians, desiring more specific information for the economic sector about the SDGs and priorities within the Agenda 2030 for Germany as a whole and the specific federal states (IHK München und Oberbayern, 2017).

The role of the public sector is also a topic of concern for companies when it comes to the Green Deal. A survey by the Chamber of Commerce in Lower Saxony shows that companies expect higher costs, enlarging bureaucracy, and more regulations while facing a growing lack of skilled workers (IHK Lower Saxony, 2023). Despite these concerns, a majority of interviewees also expect a boost in innovation and a better market environment for new technologies (IHK Lower Saxony, 2023).

In terms of training for the implementation of SDGs, several initiatives have been developed. The IHK Bavaria created an SDG guide for small and medium-sized companies to help them implement the goals of the German and the Bavaria sustainability strategy into their daily practice (IHK Bavaria, 2020). The Bundesverband Nachhaltige Wirtschaft, a federal association for Sustainable Economy, connected SMEs with a strong interest in realizing the SDGs and provided them with ready-to-use ideas (Bundesverband Nachhaltige Wirtschaft, 2023).

A special feature of the high quality of vocational training occupations in the German dual system is the constant adaptation to the requirements of the economy. The German Federal Government and its social partners pay attention to changes in the economy and update or supplement training ordinances and framework curricula of the vocational training occupations. As a result, new demands on skilled workers are incorporated into the training cycle promptly and dynamically.

Qualification requirements that are identical in all vocational training occupations are integrated into all training ordinances as standard occupational profile items. In 2020, the standard occupational profile items "organisation of the training provider, vocational training, and labour law and collective bargaining law" and "occupational health and safety at work" were updated. Training contents in the "environmental protection and sustainability" and "digitalised world of work" fields of expertise have been added. The new standards are mandatory for all dual training ordinances that come into force from 1 August 2021 and should at best be integrated in all professions right now.

While there are quite some offers available in Germany for training in the SDGs, these trainings are mostly still in the pilot phase or only offered on a smaller regional scope. There is no national training yet that encompasses all three aspects of sustainability and helps young learners to find their own way which would match their interests and their companies' needs at the same time. As part of the federal initiative "Sustainability as a future perspective for your in-company training (INEBB)", the Chamber of Industry and Commerce certificate course "Vocational Training meets Sustainability" was created for in-company training staff.

Portugal

In Portugal, the Vocational Education and Training (VET) and enterprise ecosystem are becoming increasingly cognizant of the implications, challenges, and opportunities that arise from the Sustainable Development Goals (SDGs) and the European Green Deal. However, the depth of understanding and engagement varies across different sectors and organizations. Portuguese companies are taking proactive steps to implement more sustainable practices in their operations. These steps include reducing their carbon footprint, improving energy efficiency, and investing in renewable energy (CEPROF, 2022).

The Portuguese Association of Corporate Responsibility and Sustainability has conducted a study titled "Sustainability in Portuguese Companies". This study provides valuable insights into the sustainability practices of Portuguese companies and their understanding of the SDGs and the Green Deal. However, the majority of professionals interviewed confessed to not knowing any implementation initiatives regarding SDGs or Green Deal.

In the education sector, the Portuguese Tourism School (Escola de Hotelaria e Turismo de Portugal) offers courses and workshops on sustainable tourism management. These programs aim to educate professionals in the tourism industry about the importance of SDGs, the Green Deal, and how to incorporate sustainable practices into their daily operations.

Despite these efforts, there are several challenges to the successful implementation of the SDGs and the Green Deal in the VET and business ecosystems in Portugal. These challenges include a lack of awareness among stakeholders, insufficient integration of sustainability into VET curricula and training programs, lack of funding and resources for sustainable initiatives, and the need for capacity building and skills development in sustainable practices.

To address these challenges and successfully implement the SDGs and the Green Deal in the VET and business ecosystems in Portugal, a multi-stakeholder approach and a concerted effort from all relevant actors is required. This includes active involvement and collaboration between the government, businesses, VET institutions, and civil society organizations. They need to prioritize sustainable development in policy frameworks, allocate adequate resources for training and capacity building, foster partnerships and knowledge sharing, and promote a culture of sustainability and innovation.

Austria

Austria is committed to the Sustainable Development Goals (SDGs) and the Green Deal, with a focus on three main themes: digitalisation, inclusion of women and youth, and climate protection and adaptation. The digital transformation is aimed at expanding the modern digital infrastructure and increasing the digital skills of the population, which has implications for VET in terms of integrating digital skills into their curricula (UN-Agenda 2030: Die globalen Nachhaltigkeitsziele / SDGs im Bereich Bildung, n.d.).

The inclusion of a gender perspective and the participation of young people in decision-making processes are essential for achieving the SDGs. This implies that VET and company-related education should promote gender equality and youth participation. The Austrian health system fights poverty and social inequality, which suggests that VET and company-related education should also contribute to these efforts (Republik Österreich, 2020).

Climate protection and adaptation are a further priority for Austria. The country has committed to reducing greenhouse gas emissions by about 36% by 2030 and increasing renewable energy sources from 46 to 50%. This has implications for VET and company-related education in terms of integrating climate protection and adaptation into their programs. The Green Deal, announced by the European Commission, will have direct repercussions on Austria's climate and energy policy, suggesting that VET and company-related education should align with these changes (Republik Österreich, 2020).

From the country report, it emerged the need for greater awareness of the SDGs and the Green Deal among companies, as well as the need for financial support and reduction of bureaucratic and administrative barriers. This suggests that VET and company-related education should play a role in raising awareness and facilitating the implementation of the SDGs and the Green Deal in the business sector (focus group, 2023).

The initiatives of the European Union, particularly the SDGs and the Green Deal, have significant implications for VET and company-related education in Austria. These implications include the need to integrate digital skills, promote gender equality and youth participation, contribute to poverty reduction and social equality, integrate climate protection and adaptation, raise awareness of the SDGs and the Green Deal, and facilitate their implementation in the business sector (focus group, 2023; Republik Österreich, 2020; UN-Agenda 2030: Die globalen Nachhaltigkeitsziele / SDGs im Bereich Bildung, n.d.).

Slovenia

The analysis of the state of Sustainable Development Goals (SDGs) and the Green Deal implementation in Slovenia across the Vocational Education and Training (VET) and business ecosystem reveals a complex landscape. Slovenia, while having a high share of GDP generated by activities related to the circular economy (1.3%), the second highest in the EU, has not seen a significant increase in this area over the last decade. Furthermore, the country lags behind in activities related to environmental protection and resource management, ranking 19th in the EU.

The Eco-Innovation Index (EC, 2022e) shows that Slovenia improved its position from 16th to 11th place in 2018-2020, but the gap to the EU average has remained unchanged. This progress is due to increased eco-innovation inputs, mainly government investment in environmental and energy research. However, these changes are not yet reflected in improved resource efficiency or socio-economic outcomes, where Slovenia still lags noticeably behind.

According to the EIB (2022), the share of Slovenian companies that have internal carbon and energy targets and monitoring increased significantly in 2020. At 57%, Slovenia has the third highest share of such enterprises in the EU, and among large enterprises, this share is the second highest in the EU. This represents significant progress compared to the situation a decade ago.

Slovenia's regional development policies promote sustainable development in all Slovenian regions while preserving resources and opportunities for future generations. However, there are significant differences in regional development in Slovenia. In areas with high unemployment, programmes for promoting competitiveness are implemented. The development of social entrepreneurship, cooperatives, and economic democracy is also stimulated within the regional policy. The Slovenian Regional Development Fund is responsible for developing incentives.

Slovenia has made significant strides in implementing sustainable practices and policies, but there is still room for improvement, particularly in the areas of resource efficiency and socio-economic outcomes. The country's focus on eco-innovation and regional development policies that promote sustainability are promising steps towards achieving the SDGs and the Green Deal objectives.

Italy

The landscape of Sustainable Development Goals (SDGs) and Green Deal implementation in Italy across the Vocational Education and Training (VET) and business ecosystem is diverse and complex. The country faces significant barriers and skill-gaps that slow down the establishment of sustainable development paradigms.

In terms of quantitative indicators, Italy has made some progress towards achieving the SDGs. However, there is a lack of consistent legislation due to the autonomy of the regions regarding the formulation and application of the framework defined at the state level by the Ministry of Education. This leads to divergences both in terms of the formulation of educational content and training modalities and in the speed of application of the constituted regulations, as much for the VET ecosystem as for the SMEs ecosystem.

The post-pandemic economic crisis resulting from the SARS pandemic COVID-19 has also presented significant challenges. The Italian government, with the help of the structural funds of the PNRR, is trying to reformulate some central issues of the education-training system, including the VET ecosystem, and bring it closer to the challenges posed by the sustainable transition.

There is also a cultural gap in the Italian context, with a lack of perception of the importance of the issues related to the SDGs for an important segment of the population. This cultural backwardness sometimes inhibits both parts of the potential of the business world and that of education and vocational training. In fact, 38% of Italian SMEs complain of a market that is not yet fully mature to respond to and embrace sustainability issues.

In terms of qualitative descriptions, the ReGeneration School Plan is a notable initiative. This is an Implementation Plan of the UN Agenda 2030 goals promoted by the Ministry of Education that aims to support schools, and the VET ecosystem, in the cultural and ecological transition to sustainability values.

While Italy has made some progress towards achieving the SDGs and implementing the Green Deal, significant challenges remain. These include legislative barriers, the impact of the post-pandemic economic crisis, and a cultural gap in understanding and embracing sustainability issues. Overcoming these challenges will be crucial for Italy to fully integrate sustainable development principles into its VET and business ecosystems.

Finland

Finland, a country recognized for its commitment to sustainable development, has been implementing the United Nations' Sustainable Development Goals (SDGs) across various sectors, including Vocational Education and Training (VET) and business ecosystems. The country's efforts have been internationally acclaimed, with Finland ranking first in an international comparison of sustainable development by the United Nations in 2021 (Government Communications Department, 2021).

Finland's approach to achieving the SDGs is comprehensive, involving all sectors of society. The country's Ministry of the Environment compiles an Annual Climate Change Report, which serves as the basis for public discussion on climate change mitigation and adaptation (Finnish Ministry of the Environment). Finland's goal is to achieve CO-neutrality by 2035 and CO-negativity thereafter, aiming to exceed the European Union Green Deal's targets (Greiner, A. 2022).

Finland's VET sector is actively involved in promoting sustainable development. The country has developed a model called "KEKE Pedagogy," which incorporates sustainable development into vocational education and training (Amke. (n.d.). Tarina Kekepedagogia Mallin Takana, https://www.amke.fi/ajankohtaista/blogi/kirjoitus/tarina-kekepedagogia-mallin-takana.html). The model is based on exploratory learning, continuous development, and strengthening cooperation with businesses. It aims to equip students with the work-life skills of the future and train transformation agents for sustainable development.

Finland's Ministry of Economic Affairs and Employment initiated a project in 2021-2022 called "Developing Finland's Sustainable Finance Ecosystems". The project aimed to increase financing for ecosystems that provide solutions for reaching the SDGs in Finland and globally (Ministry of Economic Affairs and Employment of Finland, https://tem.fi/en/developing-finlands-sustainable-finance-ecosystems).

Another significant project is VISIONS (Education and Skills Need of Green Transitions), which aims to study and describe the skills and education needs created by the green transition in Finnish society and working life (The Research Institute of the Finnish Economy, https://www.etla.fi/en/research/green-transitions-education-and-skills-needs/). The project also examines ways of promoting green competences outside of the formal education system and in the third sector.

Finland's commitment to sustainable development and the green transition is evident in its policies, projects, and initiatives. The country's approach to integrating the SDGs into its VET and business ecosystems serves as a model for other countries aiming to achieve sustainable development.