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1. ABOUT INVEST

INVEST - Innovation in Green and Digital VET Skills for Sustainable Lifestyles is a project co-financed by the European Union under the Capacity Building Vocational Education and Training (CB-VET - 101128614) programme, with a duration of two years. The project commenced in December 2023 and will conclude in November 2025. It is coordinated by International Consulting and Mobilityagency, S.L., ([INCOMA](#)) in Spain, with the consortium comprising: Centro Italiano Opere Femminili Salesiane – Formazione Professionale ([CIOFS-FP](#)) and [CESIE-ETS](#), from Italy; Albanian Skills-National Association for Skills Competition ([AS-NASC](#)) from Albania; Chamber of Economy of Montenegro ([CEM](#)) from Montenegro, Kosova Chamber of Commerce ([KCC](#)) from Kosovo and Centre for Economic Technological and Environmental Development Sarajevo ([CETEOR](#)), from Bosnia and Herzegovina.

The economies of the Western Balkans face significant challenges related to employment and the development of human capital. Despite the critical importance of skills for economic prosperity, social cohesion, and overall wellbeing, there is a noticeable disconnect between the vocational education and training (VET) offered in the Western Balkans and the labour market's requirements, particularly concerning green and digital skills.

The INVEST project aims to enhance the readiness of institutions involved in VET to equip learners with the skills necessary for the green and digital transition in the Western Balkans. By aligning digital literacy and sustainability-focused competences with EU and international standards, INVEST will strengthen the role of VET institutions in delivering job-related skills and help establish them as hubs for Continuous Professional Development in secondary VET schools across Albania, Montenegro, Kosovo, and Bosnia and Herzegovina.

The INVEST Framework will outline the knowledge, skills, competences, values, and mindset that VET learners should acquire to transition effectively into the labour market, with a particular emphasis on green and digital transition skills.

Additionally, the INVEST Capacity Building Programme will empower trainers and educators in Vocational Education and Training with forward-looking green and digital skills, as identified in the INVEST Framework. It will also focus on updated methodologies, pedagogical strategies, and resources to enhance the sustainability-oriented values and mindset of learners.

Finally, the INVEST Local Pilots will facilitate the transfer of this knowledge, these skills, and methodologies to local secondary VET schools in Albania, Montenegro, Kosovo, and Bosnia and Herzegovina.

In this context, INVEST will pursue the following specific objectives:

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1. To promote the alignment of green and digital skills, competences, values and mindset in Vocational Education and Training in Albania, Montenegro, Kosovo and Bosnia and Herzegovina with EU benchmarks, EU policy developments and labour market skills needs.

For this purpose, Work Package (WP) 2 will lead to the design of the INVEST framework that will be described in the following sections.

2. To empower trainers and educators active in VET on forward-looking green and digital skills as well as on updated methodologies, pedagogical strategies and resources to boost the sustainability-oriented values and mindset of learners.

WP3 will result in the development and implementation of the INVEST Capacity Building Program (CBP): a train-the-trainers learning pathway designed to build the capacities of VET trainers on forward-looking green and digital skills as well as on updated methodologies, pedagogical strategies and resources to boost sustainability-oriented values among, and the mindset of, learners in Albania, Montenegro, Kosovo and Bosnia and Herzegovina.

In other words, the INVEST Capacity Building Programme will aim at empowering educators active in Vocational Education and Training from Consortium institutions on the competences described in the INVEST Framework, and on strategies and methodologies that allow them to boost skills acquisition processes among learners.

These professionals from Consortium institutions in Albania, Montenegro, Kosovo and Bosnia and Herzegovina, will be responsible for subsequently adapting the training contents and materials to their local contexts.

3. To consolidate the role of, while also enhancing the level of cooperation and synergies among, formal and non-formal VET providers as Continuous Professional Development hubs and key actors in delivering transferrable skills that are relevant for the labour market.

WP4 will promote the transfer of knowledge, skills and methodologies through four Local Pilots that will be organized by the partners with VET trainers and educators from VET schools in Albania, Montenegro, Kosovo and Bosnia and Herzegovina.

Indeed, trainers from the partnership that completed the Capacity Building Programme will transfer the knowledge, skills and methodologies acquired to local secondary VET schools.

For more information, INVEST website is available at this [link](#).

2. INTRODUCTION

The purpose of the present document is to describe in detail the proposed competence INVEST Framework for Green and Digital Skills for Sustainable Lifestyle. This framework is designed to serve as a comprehensive guide for the development of knowledge, skills, competences, values and mindsets that are essential for VET learners. Its primary purpose is to equip learners with the tools they need to successfully transition into a thrive within the modern labour market, with a particular emphasis on sustainability and digital transformation. This framework is especially crucial for the Western Balkans region, encompassing Albania, Montenegro, Kosovo, and Bosnia and Herzegovina, where economic and social development is closely tied to the ability to adapt to global trends in green and digital sectors.

Work Package 2 will lead to design the INVEST Framework, that is organised around two main areas of knowledge:

- Green skills: this refers to the set of knowledge, skills, attitudes, and values necessary for living, working, and acting in a sustainable manner. These competences facilitate effective and practical action in addressing real-world sustainability issues, challenges, and opportunities. This area encompasses topics such as integrating sustainability values, understanding the complexities of sustainability, envisioning sustainable futures, and taking action for sustainability.
- Digital Skills: These involve the confident, critical, and responsible use of digital technologies in learning, work, and social participation. This area covers various topics, including information and data literacy, communication and collaboration, media literacy, digital content creation, safety, intellectual property concerns, problem-solving, and critical thinking.

WP2 included various activities that have enabled the delivery of this INVEST Framework Handbook:

- Task 1: Definition of the WP2 operational framework, which include the allocation of responsibilities, internal deadlines, templates to be used as reference documents, and applicable Key Performance Indicators.
- Task 2.2: comparative analysis on green and digital skills for sustainable lifestyle. The activity aimed at identifying updated information on existing skills needs in the Western Balkans and international benchmarks related to green and digital skills. This comparative analysis included:
 - Identification of skills benchmarks (including the corresponding descriptors and progression levels) as proposed by EU competence frameworks such as DigComp, DigCompEdu, LifeComp, and GreenComp,

as well as analysis of EU policy developments and recommendations for VET institutions.

- Review and identification of updates/novelties to secondary VET trainers' curricula in WB countries and the extent to which green and digital skills are embedded.
 - Collection of evidence on green and digital skills needs originating in the labour market through the implementation of surveys in WB.
- Task 2.3. Preparation and celebration of the INVEST Knowledge Sharing Workshop. Was organised in INCOMA, Seville. This workshop provided a collaborative space to, on the one hand, present the evidence and main conclusions from T2.2 and, on the other hand, start the design of the INVEST Framework, which was finalised in the T2.4.
 - Task 2.4. Development of the INVEST Framework for Green and Digital Skills for Sustainable Lifestyles, that will be described in the following section.

The INVEST Framework have been developed through a collaborative process, drawing on findings from stakeholder consultations aimed at identifying emerging, mismatched, and/or missing green and digital skills in Albania, Montenegro, Kosovo, and Bosnia and Herzegovina.

3. BACKGROUND

To develop the INVEST Framework, a comparative analysis on Green and Digital skills for sustainable lifestyles was initially conducted.

In this regard, the research was carried out in Albania, Montenegro, Kosovo and Bosnia and Herzegovina:

- An online survey for which had been collected 86 respondents among teachers, trainers and VET professionals from Western Balkans.
- Desk research for a general overview about each National VET system, including information on:
 - Review of VET Trainer Programs
 - Analysis of existing programs for VET trainers in the Western Balkans
 - Identification of updates and innovations in the programs .
 - Evaluation of the integration of green and digital skills in training programs.
 - Labor Market in the Western Balkans.
 - Emerging mismatched, and/or missing green and digital skills.
- Interviews targeted around 5 privileged speakers on VET system and related Green and Digital policy in each Country, aimed to:
 - Identify skill benchmarks proposed by EU competence frameworks such as DigComp, DigCompEdu, LifeComp, and GreenComp, and analyse EU policy developments and recommendations for vocational education and training (VET) institutions.
 - Review and identify updates/novelties in secondary VET trainers' curricula in WB countries and the extent to which green and digital skills are embedded.
 - Collect evidence on green and digital skills needs originating from the labour market through the implementation of surveys in the Western Balkans.

- Focus groups involving VET key actors with diverse roles and experience and perspectives on green and digital skills, explored the current landscape of green and digital skills in the Western Balkans, building upon the insights gathered from the INVEST survey. In particular the focus groups wanted to:
 - Identify specific skill gaps and areas requiring further development.
 - Explore current and potential collaborations between green and digital skill sets within workplaces.
 - Gather recommendations for enhancing green and digital skills training and development opportunities in the region.

Both the interviews and the focus groups provided additional information starting from the survey results, in order to comment more in-depth what emerged by the questionnaires. The following provides a brief overview of the principal conclusions of the report:

Skills Mismatch:

- The emerging labour market demands skills that complement traditional disciplines.
- Basic digital skills are widespread, but advanced digital competencies are rare.
- Teachers' calls for more training is a positive sign, suggesting a willingness to adopt digital tools in the classroom.

Green Skills:

- While there is basic awareness and usage of sustainable practices in workplaces, green skills are not formally included in VET curricula.
- There is a lack of awareness about "green jobs".
- The green sector is still developing in Western Balkans, indicating a gap that needs addressing.

Strategies for Improvement:

- Update VET curricula to incorporate new technologies and evolving job markets requirements is required.
- Provide training for teachers has been claimed: offer professional development for educators to enhance their teaching skills.

- Adopt advanced digital tools and devices: implement modern digital technologies to support interactive learning, improve engagement, and enhance teaching and learning outcomes.
- Strengthen connections among VET schools, governmental institutions, and industry will be beneficial: develop and reinforce partnerships between vocational schools and other institutions to align training programs with industry needs and facilitate collaboration and resource sharing.

Raising Awareness:

- Emphasise the importance of sustainable development and green skills among the alumni is crucial for fostering a culture of environmental responsibility.
- Integrate concepts is essential, such as the circular economy, waste management, and footprint calculation into common knowledge base to better equip individuals for addressing contemporary environmental challenges.
- Recovering and modernising ancient sustainability and recycling traditions can offer valuable insights and practical solutions, bridging the gap between historical wisdom and modern sustainability practices.

Digital Skills Opportunities and Risks:

- Digital skills are seen as opportunities for better teaching, learning, and job prospects.
- Address issues like cyberbullying, hate speech, and digital discrimination is essential for ensuring a safe online environment.
- Providing training in digital protection and the responsible use of social media and digital platforms is essential for fostering a secure and informed digital presence.
- Encouraging critical thinking is crucial in combating fake news, phishing, deep fakes, and misinformation, thereby empowering individuals to navigate the digital landscape with discernment.

Gender Gap:

- Vocational Education and Training (VET) in the Western Balkans should actively promote the enrolment of women in courses traditionally dominated by men.
- Organising introductory courses or workshops specifically for girls is essential to increase their participation in these fields.
- Creating student-run groups to foster a sense of belonging for women in disciplines like computer science, as demonstrated by the University of California, Berkeley study, can significantly enhance their engagement and retention.

The report highlights the importance of raising awareness, improving access to funding and funds management through finance training, as well as facilitating capacity building in an engaging manner by proposing methods such as microlearning and workshops. It is crucial to spark interest and encourage teachers to foster awareness among their students. To achieve this, the implementation of awareness campaigns and networking initiatives within workplaces is suggested. Although 30% to 40% of respondents indicate that they already engage in sustainable practices, such as creating digital CVs or installing solar panels, it would be beneficial to provide them with clear standards to help them understand and achieve their goals, given their increasing awareness of these issues.

Enhancing Awareness and Application of Green Skills

In Albania, the higher awareness of green initiatives and sustainability should be leveraged to develop more advanced training programmes. Meanwhile, in Montenegro, Kosovo, and Bosnia and Herzegovina, efforts should focus on increasing familiarity with green technologies through targeted awareness campaigns and practical training initiatives. This tailored approach ensures that each country addresses its specific level of environmental consciousness effectively.

Strengthening Digital Competencies

Regarding digital skills, communication and content creation abilities are relatively standardised, but there is less familiarity with emerging technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), and blockchain. Albania's relatively strong digital skills, particularly in communication and the use of digital tools for teaching, can serve as a model for developing similar competencies in Montenegro and Kosovo. Special emphasis should be placed on improving programming and software development skills in these countries through specialised training and curriculum updates, addressing the current gaps in advanced digital competencies.

Leveraging Government Support and International Projects

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Bosnia and Herzegovina and Albania's active involvement in international projects related to green and digital skills training should be expanded and used as a foundation for further development. Conversely, Kosovo would benefit from increased support in improving educational infrastructure to better participate in such initiatives. Enhancing government support and fostering participation in international collaborations will strengthen the overall effectiveness of VET programmes across these countries.

Implementing Educational Policies Effectively

Although no significant issues are identified with educational legislation, there is an observed lack of effective implementation. Therefore, it is crucial to develop appropriate communication strategies to inform the relevant authorities about these shortcomings. Furthermore, an outdated mindset and resistance to embracing EU values persist, primarily due to a reluctance to change. In Bosnia and Herzegovina, administrative fragmentation complicates the implementation of educational reforms. This should be addressed by fostering greater collaboration between the various administrative units. Conversely, Montenegro's more centralised system offers an opportunity to implement reforms more efficiently, and this potential should be fully utilised to modernise the VET system.

In terms of environmental awareness, the foundation remains quite basic, with practices mostly limited to recycling. Montenegro, in particular, shows a deficiency in this area; thus, organising dedicated recycling workshops would be beneficial. Continuing with digital skills, it is observed that Bosnia has slightly greater familiarity with blockchain. However, given the need to integrate other foundational practices and knowledge, it may be more appropriate to consider blockchain as a lower priority in the current training. Instead, prioritising training in programming and software development should be considered, as these skills are essential in today's job market and crucial for any technological development. Since this training is aimed at teachers, it would be advisable to integrate these skills into their curricula.

The use of technology for educational purposes is not entirely unfamiliar to educators, although differences exist between the countries studied. Ideally, this aspect should also be included in workshops, with a strong focus on providing examples of related tools and techniques, such as gamification. Leveraging Albania's strengths in digital competencies can enhance the effectiveness of these technological integrations across all regions.

Leveraging government support and international projects is another critical area. Bosnia and Herzegovina and Albania's active involvement in international projects related to green and digital skills training should be expanded and used as a foundation for further development. Kosovo, on the other hand, would benefit from increased support in improving educational infrastructure to better participate in such initiatives.

The assimilation and integration of all these contents are crucial for lifelong learning and therefore should be a central part of the training framework. Establishing stronger links among VET schools, governmental institutions, industry experts, and sustainable development agencies will ensure that training programmes are aligned with industry requirements. This comprehensive approach will equip educators with the necessary tools to meet the evolving demands of the labour market and foster sustainable practices within their educational environments.

4. THE FRAMEWORK

4.1. Overview

As mentioned above, the present document will guide the development of knowledge, skills, competences, values and mindset that are essential for VET learners. To ensure a comprehensive understanding and effective implementation, it is crucial to delineate these concepts clearly and explore their interconnections:

1. Knowledge:

- Definition: Knowledge refers to the theoretical understanding of a subject, including facts, concepts, principles and theories that provide a foundation for further learning and application. It is often acquired through education and experience and forms the basis for developing more practical abilities (Eraut, 2000).
- Distinction: unlike skills or competences, knowledge is primarily cognitive. It answers the question of “what” a learner knows about a subject before they apply this understanding in practice.
- Relation to the Framework: within the INVEST Framework, knowledge is foundational to both green and digital skills. For instance, learners must comprehend core sustainability concepts and digital literacy principles as prerequisites for developing relevant skills and competences.

2. Skills:

- Definition: skills refer to the ability to apply knowledge effectively and efficiently in specific tasks or situations. These can be technical (hard skills), such as using software tools, or interpersonal (soft skills), such as communication and teamwork (Cheetham & Chivers, 2001).
- Distinction: skills are more practical and procedural than knowledge, representing the “how” in terms of executing specific tasks or solving problems.
- Relation to the Framework: The INVEST Framework emphasises the development of both green and digital skills. For example, green skills might include the ability to implement sustainable practices in the workplace, while digital skills could involve proficient use of online collaboration tools. These skills enable learners to translate theoretical knowledge into actionable outcomes.

3. Competences:

- Definition: Competences are broader constructs that integrate knowledge, skills, and attitudes, enabling an individual to perform tasks or solve problems effectively in real-world contexts. Competence involves not only the application of skills and knowledge but also the ability to adapt to changing circumstances (European Commission, 2008).
- Distinction: Competences differ from skills in their scope; they encompass a wider range of abilities and are often context-dependent, reflecting the ability to perform effectively in diverse and complex situations.
- Relation to the Framework: In the INVEST Framework, competences are the ultimate goal of VET education. For instance, sustainability competences involve not just understanding and applying green practices, but also being able to address complex sustainability challenges holistically. Similarly, digital competences encompass the ability to navigate, evaluate, and create digital content effectively, and to solve problems using digital tools.

4. Values:

- Definition: values are the ethical and moral principles that guide an individual's behaviour and decision-making. They reflect what is deemed important and worthwhile in both personal and professional life (Schwartz, 1992).
- Distinction: unlike knowledge or skills, which are more easily observed and measured, values are internalized and subjective. They influence how individuals approach their work and interact with others.
- Relation to the Framework: Values are central to the INVEST Framework, particularly in promoting ethical responsibility in both sustainability and digitalization. For example, a commitment to environmental stewardship or digital privacy reflects core values that guide how learners apply their knowledge and skills in these areas.

5. Mindset:

- Definition: mindset refers to the attitudes, beliefs, and dispositions that influence how individuals approach learning, work, and life challenges. It includes elements such as growth mindset, adaptability, resilience, and openness to innovation (Dweck, 2006).
- Distinction: mindset differs from values in that it is more about an individual's approach to challenges and opportunities rather than their ethical stance. It influences how one utilises knowledge, skills, and competences.

- Relation to the Framework: the INVEST Framework underscores the importance of fostering a mindset that supports continuous learning, adaptability, and innovation. For instance, a digital mindset might involve a readiness to engage with new technologies, while a sustainability mindset could encompass a proactive approach to addressing environmental challenges.

4.2. Main Areas of Knowledge of the INVEST Framework

The INVEST Framework for Green and Digital Skills for Sustainable Lifestyles is systematically organised around two core areas: Green Skills and Digital Skills. These two pillars represent the essential competencies that VET learners must acquire to navigate the challenges of the modern labour market in the Western Balkans, which is increasingly defined by the twin imperatives of sustainability and digital transformation.

- Green Skills

Green Skills encompass the knowledge, abilities, and attitudes necessary to promote and implement sustainable practices in both personal and professional contexts. This area of the framework focuses on preparing learners to engage with and address the pressing environmental challenges facing the region and the world. As industries across the Western Balkans shift towards greener practices—driven by both global environmental standards and regional sustainability goals—the demand for workers with strong green competencies is growing.

The framework covers key competencies such as:

- Sustainability values and ethics: fostering a deep commitment to sustainability principles.
- Systems thinking and complexity: understanding the interconnected nature of environmental, social, and economic systems
- Sustainable innovation: developing new products, processes, and services that reduce environmental impact.
- Practical sustainability actions: implementing and advocating for sustainable practices in various sectors, from agriculture and energy to construction and manufacturing.

These green skills are crucial for aligning the region's economic activities with global sustainability targets, such as the United Nations Sustainable Development Goals

(SDGs), and for ensuring that industries can meet the regulatory demands of both local governments and international markets.

- Digital Skills

Digital Skills within the framework, refer to the competencies required for effective engagement with digital technologies in educational, professional, and societal contexts. The rapid digitalisation of industries and services in the Western Balkans has made digital literacy a prerequisite for employability across nearly all sectors. Whether it is in the use of digital tools for communication, data analysis, or problem-solving, workers are increasingly expected to be proficient in a range of digital competencies.

The framework addresses these needs by covering competencies such as:

- Information and data literacy: the ability to find, evaluate, and use digital information efficiently.
- Digital communication and collaboration: mastering the tools and platforms necessary for effective digital teamwork.
- Media literacy and digital content creation: understanding and producing digital content responsibly, with a focus on intellectual property and ethical considerations.
- Digital safety and cybersecurity: protecting personal and professional data in digital environments.
- Problem solving in digital contexts: applying digital tools to innovate, optimise, and troubleshoot in various industries.

These skills are directly aligned with the demands of a labour market that is increasingly digital-first, ensuring that VET learners are not only digitally competent but also competitive in a global economy where digital transformation is a key driver of growth

Each area will feature various skills, each with different levels of proficiency and a descriptor for each skill. The skills within this competence framework will be addressed by the Capacity Building Programme for VET Trainers (WP3).

4.3. Alignment with existing Competence Framework

4.3.1. Introduction to the EU reference frameworks

The rapidly evolving landscape of education and workforce demands necessitates a robust framework to ensure individuals possess the essential skills and competencies to thrive in the digital age, contribute to sustainable development, and lead fulfilling lives. In response to this need, the European Commission has developed several competency frameworks: DigCompEdu, DigComp, GreenComp, LifeComp, and so. Each framework addresses specific areas of competence essential for educators, learners, and citizens, providing a comprehensive guide for fostering digital literacy, sustainability, and personal growth.

- *DigCompEdu* focuses on the digital competencies required by educators. This framework outlines the specific skills and knowledge educators need to effectively integrate digital technologies into their teaching practices. It aims to enhance educators' digital pedagogical skills, thereby improving the learning experiences and outcomes for students.
- *DigComp*, or the Digital Competence Framework for Citizens, provides a reference for the digital skills that all individuals need to be active, responsible, and autonomous participants in the digital society. It encompasses a range of competencies from basic digital literacy to advanced problem-solving skills and ethical considerations in digital environments.
- *GreenComp* addresses the competencies required for sustainable development. As the world faces significant environmental challenges, GreenComp provides a structured approach to developing the skills and knowledge necessary to support and lead sustainable practices. It emphasizes the importance of integrating sustainability into education and training to foster a green and resilient economy.
- *LifeComp*, outlines the essential personal, social, and learning-to-learn competencies that individuals need to navigate and succeed in a complex and changing world. This framework supports lifelong learning and personal development, ensuring individuals are equipped with the skills to manage their own learning, work effectively with others, and adapt to new challenges.

4.3.2 Connecting European Frameworks with INVEST areas of knowledge

The labour market in the Western Balkans is at a critical juncture, with industries increasingly influenced by global shifts towards sustainability and digitalisation. As countries in this region strive to modernise their economies and align with European standards, there is a growing demand for a workforce that possesses both green and digital skills. These skills are not just complementary but essential for the region's economic resilience, innovation, and long-term prosperity.

- Green skills and labour market demands

In response to global environmental challenges and the commitments made under various international agreements, industries across the Western Balkans are being encouraged to adopt more sustainable practices. Sectors such as energy, construction, agriculture, and manufacturing are particularly affected, with an increasing demand for professionals who can implement eco-friendly technologies, manage resources sustainably, and ensure compliance with environmental regulations.

For example, the energy sector is transitioning from traditional fossil fuels to renewable sources like solar, wind, and hydroelectric power. This transition creates a need for workers skilled in renewable energy technologies, environmental impact assessment, and sustainable project management. Similarly, the construction industry is shifting towards green building practices, requiring workers who understand energy efficiency, sustainable materials, and waste reduction techniques.

The INVEST Framework recognises these demands and aims to equip VET learners with the necessary green skills to meet the evolving needs of the labour market. By fostering competencies in sustainability, the framework not only enhances the employability of learners but also contributes to the broader goal of sustainable economic development in the region.

- Digital skills and labour market demands

Digital transformation is reshaping every aspect of the global economy, and the Western Balkans are no exception. The ability to use digital tools and technologies effectively is now a prerequisite for participation in the modern workforce. This trend is evident across all sectors, from finance and healthcare to education and manufacturing, where digital literacy and advanced digital skills are becoming increasingly critical.

For instance, businesses are adopting digital platforms for communication, data management, and service delivery, requiring employees who are proficient in digital tools and possess strong problem-solving skills in digital environments. The rise of e-commerce, digital marketing, and remote work also underscores the need for a

workforce that is not only digitally literate but also capable of navigating complex digital ecosystems.

The INVEST Framework addresses this need by incorporating digital competencies that align with current and future labour market demands. These competencies include information and data literacy, digital communication, content creation, cybersecurity, and critical thinking in a digital context. By embedding these skills in VET curricula, the framework ensures that learners are prepared for the digital challenges of today's and tomorrow's workplaces.

- GreenComp: The European Sustainability Competence Framework

GreenComp outlines the competencies required to engage with sustainability challenges effectively. It focuses on developing the knowledge, skills, attitudes, and values necessary to live and work in a sustainable manner. By integrating GreenComp into the INVEST Framework, learners are equipped with the competencies needed to tackle real-world sustainability issues, such as resource management, climate action, and sustainable innovation.

GreenComp serves as a critical reference for the green skills component of the INVEST Framework, ensuring that learners can contribute meaningfully to the green transition in their respective fields.

- DigCompEdu: the European Framework for the Digital Competence of Educators

DigCompEdu is a framework that outlines the digital competencies educators need to effectively integrate digital technologies into teaching and learning. While primarily focused on educators, the principles of DigCompEdu are also relevant to VET learners who must be prepared to navigate digital environments in both educational and professional settings.

By drawing on DigCompEdu, the INVEST Framework ensures that learners not only acquire digital skills but also understand how to apply these skills in educational contexts, thereby enhancing their ability to learn, teach, and train in a digital world.

- LifeComp: The European Framework for personal, social, and learning to learn Competence

LifeComp provides a comprehensive framework for the development of personal, social, and learning-to-learn competences. These transversal skills are essential for lifelong learning and adaptability in a rapidly changing world.

The INVEST Framework incorporates elements of LifeComp to ensure that VET learners develop the self-management, collaboration, and learning strategies necessary for success in both personal and professional life. By fostering these

competencies, the framework supports learners in becoming adaptable, resilient, and proactive in their careers.

- 2018/C 189/01: The European Framework for Digital Competence

The 2018/C 189/01 framework, also known as DigComp 2.1, is a key reference for digital competence in Europe. It outlines five areas of digital competence: information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving. These areas form the backbone of the digital skills component of the INVEST Framework, ensuring that learners are equipped with the competencies needed to thrive in a digitalised world. By aligning with DigComp 2.1, the INVEST Framework ensures that its approach to digital skills is comprehensive, current, and aligned with European standards.

Interconnections with GreenComp, DigCompEdu and LifeComp:

The INVEST Framework is grounded in well-established European frameworks that provide a robust foundation for the development of green, digital, and transversal competencies. By referencing these frameworks, the INVEST Framework ensures that its approach is aligned with European standards and best practices, making it relevant and applicable not only within the Western Balkans but also across the broader European context.

In summary, by grounding the INVEST Framework in these foundational documents, the framework not only aligns with European standards but also ensures that VET learners in the Western Balkans are equipped with the competencies needed to meet the demands of a dynamic and evolving labour market. This alignment strengthens the framework's relevance and applicability, positioning learners to succeed in both regional and European contexts.

5. Summary of the INVEST Framework Competences:

Based on the needs analysis conducted in the first part of the project (Task 2.2), on the European Competences Framework and on the topics proposed by the Application Form to be covered in the Capacity Building, the following INVEST Competence Framework has been developed.

5.1. INVEST Competences in Green Area:

The Green Skills component of the INVEST Framework focuses on developing the knowledge, skills, competences, mindset, and values necessary for VET learners to contribute to sustainable lifestyles and effectively address real-world sustainability challenges. This section outlines the core topics and competences within Green Skills, structured according to two levels of progression: Basic and intermediate.

INVEST Competence 1: Sustainability Values and Ethical Consumption Competence

Definition: the ability to foster a deep commitment to sustainability principles and ethical consumption, understanding the role of consumers in promoting social well-being, climate change mitigation, and environmental protection.

INVEST Competence 2: Understanding and Embracing Complexity in Sustainability Competence

Definition: the competence to understand and navigate the interconnectedness of social, economic, and environmental factors in sustainability, recognizing the complexities involved in achieving sustainable outcomes.

INVEST Competence 3: Sustainable Futures and Circular Economy Competence

Definition: the ability to envision sustainable futures and understand the principles of the circular economy, including product durability, repair, recycling, and the broader impacts of consumption choices on the planet.

INVEST Competence 4: Practical Sustainability Action Competence

Definition: the ability to develop and implement practical skills for sustainable living, including understanding the carbon footprint, the consequences of climate change, and how financial literacy contributes to economic and social well-being.

INVEST Competence 5: Consumer Rights and Responsibilities in Sustainable Transition Competence

Definition: the competence to understand and exercise consumer rights and responsibilities in the context of sustainable transitions, recognizing the role of consumers as active players in promoting sustainability at the national, regional, and European levels

INVEST Competence 1: Sustainability values and Ethical Consumption

Area of learning	Basic Level	Intermediate level
Competence	Learners understand basic sustainability principles and the ethical implications of their consumption choices. They can identify how their actions as consumers can impact the environment and society, and they begin to apply the principles of "reduce, reuse, recycle" in their daily lives.	Learners actively integrate sustainability values into their daily decisions, critically assessing the impact of their consumption on the environment and society. They understand consumer rights at the regional and European levels and can advocate for ethical consumption practices that promote social well-being and environmental protection.
Knowledge	- Understanding of fundamental sustainability principles, such as the importance of resource conservation, waste reduction, and the environmental impact of consumption practices. - Basic knowledge of ethical consumption concepts, including how purchasing decisions can influence social well-being and environmental protection.	- In-depth knowledge of consumer rights at the regional and European levels, and how these rights relate to sustainability and ethical consumption. - Comprehensive understanding of the connections between consumption decisions, climate change, and environmental and social sustainability.
Skill	- Ability to identify and apply the principles of "reduce, reuse, recycle" in daily life. - Skill in evaluating the ethical implications of basic consumption choices and making decisions that minimise negative environmental impacts.	- Ability to critically analyse the impact of consumption decisions on the environment and society. - Skill in advocating for and promoting ethical consumption practices in various contexts, including the ability to influence others to adopt more sustainable consumption habits.
Value	- Valuing sustainability and ethics in consumption as essential aspects of personal and professional behaviour. - Respect for the environment and an initial sense of responsibility towards the conservation of natural resources.	- Deep commitment to social and environmental justice, reflected in consumption decisions that prioritise sustainability. - Appreciation for equity and shared responsibility in environmental protection and the promotion of social well-being.
Mindset	- A mindset oriented towards adopting sustainable consumption practices, with a growing awareness of how individual actions can contribute to global sustainability. - Willingness to learn and adopt new habits that minimise negative environmental and social impacts.	- A critical and proactive mindset focused on integrating sustainability values into all consumption decisions, with a long-term perspective on the implications of these decisions. - An innovative and resilient approach to overcoming challenges associated with adopting more ethical and sustainable consumption practices.

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INVEST Competence 2: Understanding and Embracing Complexity in Sustainability Competence

Area of learning	Basic Level	Intermediate level
Competence	Learners are aware of the basic interconnections between social, economic, and environmental factors in sustainability. They can identify simple cause-and-effect relationships and understand how changes in one area can impact others.	Learners can critically analyse the complex relationships between different sustainability factors, recognising trade-offs and synergies. They can assess how decisions in one sector (e.g., economic policy) can have far-reaching environmental and social impacts, and they apply this understanding to real-world scenarios.
Knowledge	- Understanding the fundamental connections between social, economic, and environmental factors in sustainability. - Knowledge of simple cause-and-effect relationships, such as how economic activities can influence environmental outcomes and social well-being.	- In-depth knowledge of the complex interdependencies and interactions between various sustainability factors, including trade-offs and synergies. - Comprehensive understanding of how decisions in one sector, such as economic policy, can have broad and far-reaching effects on environmental sustainability and social equity.
Skill	- Ability to identify and describe basic interconnections between social, economic, and environmental factors. - Skill in recognising straightforward cause-and-effect relationships within sustainability contexts, such as the impact of resource use on environmental degradation.	- Ability to critically analyse complex relationships between different sustainability factors, recognising the potential trade-offs and synergies - Skill in assessing the broader implications of decisions in one sector on other areas of sustainability, applying this understanding to real-world scenarios and decision-making processes.
Value	- Valuing the interconnectedness of social, economic, and environmental factors, with an appreciation for how these connections shape sustainability outcomes. - Respect for the need to consider multiple perspectives and factors when addressing sustainability challenges.	- Commitment to a holistic and balanced approach to sustainability, recognising the importance of addressing the complexities involved in achieving sustainable outcomes. - Appreciation for the ethical implications of decisions that affect sustainability, with a focus on equity and long-term impact.
Mindset	- A mindset that is open to exploring the basic complexities of sustainability, with a developing curiosity about how different factors interconnect. - Willingness to consider how changes in one area might impact others, fostering a broader perspective on sustainability.	- A critical and analytical mindset focused on understanding and navigating the complexities of sustainability, with a proactive approach to problem-solving. - Resilience in addressing the challenges of sustainability, recognising that achieving sustainable outcomes requires thoughtful consideration of multiple, often conflicting, factors.

INVEST Competence 3: Sustainable Futures and Circular Economy Competence

Area of learning	Basic Level	Intermediate level
Competence	Learners understand the basic concepts of the circular economy and can describe the importance of reducing waste and increasing product durability. They are aware of the impact of their consumption choices on the environment and begin to consider these factors in their decision-making processes.	Learners can critically evaluate and apply circular economy principles in various contexts, understanding the long-term benefits of product durability, reparability, and recycling. They are capable of envisioning and planning for sustainable futures, considering the broader impact of consumption choices on the environment and society.
Knowledge	- Understanding the fundamental concepts of the circular economy, including the principles of reducing waste, product durability, reparability, and recycling. - Basic knowledge of how individual consumption choices impact the environment, including awareness of the environmental footprint of products throughout their lifecycle.	- In-depth understanding of the principles and practices of the circular economy, including the long-term benefits of product durability, reparability, and efficient resource use. - Comprehensive knowledge of how circular economy practices contribute to sustainable development, with an emphasis on the broader environmental and societal impacts of consumption choices.
Skill	- Ability to describe and apply basic circular economy principles, such as reducing waste and increasing product durability, in everyday decision-making. - Skill in recognising the environmental impact of personal consumption choices and beginning to incorporate sustainability considerations into decision-making processes.	- Ability to critically evaluate and apply circular economy principles across various contexts, including both personal and professional settings. - Skill in planning and envisioning sustainable futures, incorporating long-term strategies for product durability, reparability, and recycling, while considering the broader impact on the environment and society.
Value	- Valuing the principles of the circular economy, including a commitment to reducing waste and enhancing product durability as part of a sustainable lifestyle. - Respect for the environment and an emerging sense of responsibility for making consumption choices that minimise environmental harm.	- Deep commitment to sustainability and the circular economy, with an appreciation for the ethical implications of consumption choices on both the environment and society. - Strong respect for resource conservation and a proactive attitude towards advocating for and implementing circular economy practices in all areas of life.
Mindset	- A mindset oriented towards adopting circular economy practices, with a growing awareness of how these practices contribute to sustainability. - Willingness to incorporate considerations of waste reduction, product durability, and environmental impact into everyday decisions.	- A strategic and forward-thinking mindset, focused on envisioning and creating sustainable futures through the application of circular economy principles. - A proactive approach to sustainability challenges, with a strong belief in the importance of long-term planning and innovation in achieving sustainable outcomes.

INVEST Competence 4: Practical Sustainability Action Competence

Area of learning		Basic Level	Intermediate level
Competence		Learners can identify the basic stages of the carbon footprint chain (production, distribution, disposal) and understand the fundamental consequences of climate change. They are beginning to apply financial literacy skills to make informed, sustainable decisions that contribute to economic and social well-being.	Learners can critically analyse the carbon footprint of different products and practices, understanding the full environmental impact of their choices. They are proficient in applying financial literacy to promote sustainability, making informed decisions that balance economic, environmental, and social factors. They actively engage in sustainable practices and can lead initiatives to reduce carbon footprints and promote climate action.
Knowledge		Understands the basic stages of the carbon footprint (production, distribution, disposal) and the fundamental consequences of climate change. Begins applying financial literacy to make sustainable decisions that benefit economic and social well-being.	Critically analyses the carbon footprint of products and practices, understanding their full environmental impact. Applies financial literacy to balance economic, environmental, and social factors in decision-making.
Skill		Identifies key stages of the carbon footprint and recognises the impact of climate change. Begins to use financial literacy for sustainable decision-making.	Critically evaluates carbon footprints and leads initiatives to reduce them. Proficiently applies financial literacy to promote sustainability in various contexts.
Value		Values the importance of reducing carbon footprints and making sustainable choices. Appreciates the link between economic well-being and sustainability.	Deep commitment to sustainability and ethical decision-making. Strong advocacy for integrating economic, environmental, and social considerations into life.
Mindset		Focused on incorporating sustainability into daily life, with a growing understanding of the broader impact of individual actions. Willingness to learn and apply financial literacy for sustainability.	Strategic mindset for evaluating sustainability in decision-making. Proactive and resilient in leading sustainability initiatives and reducing carbon footprints

INVEST Competence 5: Consumer Rights and Responsibilities in Sustainable Transition Competence

Area of learning		Basic Level	Intermediate level
Competence		Learners are aware of their basic consumer rights and responsibilities concerning sustainability in their country. They can identify new duties as consumers in promoting sustainable practices and begin to ask fundamental sustainability-related questions before making purchases.	Learners have a thorough understanding of consumer rights and responsibilities in the context of sustainability at national, regional, and European levels. They can critically evaluate and make informed decisions that support the sustainable transition, actively advocating for responsible consumption and sustainability in the market.
Knowledge		Understands basic consumer rights and responsibilities related to sustainability within their country. Recognises new consumer duties in promoting sustainable practices and begins to ask fundamental sustainability-related questions before purchasing.	Thoroughly understands consumer rights and responsibilities regarding sustainability at national, regional, and European levels. Critically evaluates decisions to support the sustainable transition.
Skill		Identifies basic consumer rights and responsibilities in sustainability and begins to apply this knowledge in everyday decisions. Starts to question the sustainability impact of purchases.	Critically evaluates consumer choices with a focus on supporting sustainability. Advocates for responsible consumption and sustainability in the market.
Value		Values the importance of understanding consumer rights in promoting sustainability. Appreciates the role of responsible consumption in contributing to sustainable development.	Deep commitment to exercising consumer rights to foster sustainability. Strong belief in the ethical responsibility of consumers to advocate for sustainable practices.
Mindset		Developing an awareness of the role consumers play in sustainability, with a growing focus on responsible consumption. Willingness to begin questioning the sustainability of everyday choices.	Proactive and critical mindset towards making informed consumer choices that support sustainability. Actively engages in promoting and advocating for sustainable consumption at various levels.

5.2. INVEST Competences in Digital Area:

The Digital Skills component of the INVEST Framework equips VET learners in the Western Balkans with the essential knowledge, skills, competences, mindset, and values necessary for confident, critical, and responsible engagement with digital technologies. These competences are crucial for success in learning, work, and broader societal participation. Below is an outline of the core topics and competences within Digital Skills, structured across three levels of progression: Basic and intermediate

INVEST Competence 6: Information and data literacy competence:

Definition: ability to effectively locate, evaluate, and organise digital information while understanding the ethical implications of data use.

INVEST Competence 7: Communication and Collaboration Competence

Definition: Proficiency in using digital tools to communicate effectively and collaborate with others in both virtual and physical environments.

INVEST Competence 8: Media Literacy Competence

Definition: the ability to critically analyse and evaluate digital content, recognising bias, hidden advertising, algorithmic influences, and the ethical implications of media production and consumption.

INVEST Competence 9. Digital Content Creation Competence:

Definition: skills in designing, creating, and managing high-quality digital content that adheres to ethical standards and engages targeted audiences effectively.

INVEST Competence 10. Safety and Intellectual Property Competence

Definition: awareness and application of digital safety measures and the ethical use of digital content, including the recognition and protection of intellectual property rights.

INVEST Competence 11. Problem Solving and Critical Thinking Competence

Definition: the ability to apply critical thinking and problem-solving skills to identify, analyse, and resolve complex issues using digital tools.

INVEST Competence 12: Digital Ethics and Consumer Protection Competence:

Definition: understanding and applying principles of digital ethics, particularly in the context of consumer protection, e-commerce, and fair use of digital technologies.

INVEST Competence 13: Digital Literacy in Identifying Misinformation and Dark Patterns:

Definition: the ability to critically identify and combat misinformation, dark patterns, and other deceptive practices in digital environments.

INVEST Competence 6: Information and data literacy competence

Area of learning		Basic Level	Intermediate level
Competence		At the basic level, the learner can conduct simple online searches, identify reliable sources of information, and demonstrate an awareness of basic data privacy principles. They can organise when information is credible and relevant to their needs and can organise this information for straightforward tasks.	At the intermediate level, the learner independently evaluates the quality and reliability of various digital sources, critically assesses information for bias or misinformation, and applies ethical considerations in data management. They are capable of using more sophisticated search strategies and tools to manage and synthesise information for complex tasks.
Knowledge		Understands the fundamentals of conducting online searches and identifying reliable sources of digital information. Has basic awareness of data privacy principles and how to organise credible information for straightforward tasks.	Possesses in-depth knowledge of evaluating the quality and reliability of digital sources, with an understanding of bias, misinformation, and the ethical considerations involved in data management.
Skill		Can perform simple online searches and identify reliable information sources. Able to organise credible information relevant to their needs and apply basic data privacy practices.	Independently uses sophisticated search strategies and tools to manage and synthesise complex information. Critically evaluates digital content for bias and misinformation while applying ethical data management practices.
Value		Values the importance of finding reliable information and maintaining basic data privacy. Appreciates the need for accuracy and credibility in digital information.	Strong commitment to ethical data use and the critical evaluation of information. Values transparency, integrity, and responsibility in managing and sharing digital information.
Mindset		Developing a cautious and curious mindset towards digital information, with an emphasis on understanding and applying basic data privacy principles	Proactive and analytical mindset, focused on critically assessing and ethically managing digital information. Continuously seeks to improve information literacy and data handling practices

INVEST Competence 7: Communication and Collaboration Competence

Area of learning		- Basic Level	- Intermediate level
Competence	-	At the basic level, the learner can use basic digital communication tools such as email and messaging apps to interact with peers and instructors. They participate in simple collaborative activities and understand the fundamentals of digital communication etiquette.	At the intermediate level, the learner confidently uses a range of digital platforms (e.g., video conferencing, collaborative documents) to manage and participate in more complex team projects. They demonstrate the ability to facilitate virtual meetings, coordinate tasks among team members, and resolve communication challenges effectively.
Knowledge		Understands the fundamentals of using basic digital communication tools such as email and messaging apps. Has a basic understanding of digital communication etiquette and how to participate in simple collaborative activities	Possesses comprehensive knowledge of various digital platforms (e.g., video conferencing, collaborative documents) and their application in managing and participating in complex team projects. Understands strategies for effective virtual communication and task coordination.
Skill		Able to use basic digital tools for communication with peers and instructors, participating in straightforward collaborative tasks. Demonstrates an understanding of digital communication etiquette.	Proficient in using a range of digital platforms to manage and participate in complex team projects. Skilled in facilitating virtual meetings, coordinating tasks, and resolving communication challenges within teams.
Value		Values the importance of clear and respectful communication in digital environments. Appreciates the role of collaboration and teamwork in achieving common goals.	Strong commitment to effective digital communication and collaboration, valuing inclusivity, transparency, and the efficient coordination of team efforts. Upholds the importance of resolving communication challenges ethically and constructively.
Mindset		Developing a collaborative mindset with a focus on participating in digital communication respectfully and effectively. Open to learning and applying new communication tools.	Proactive and cooperative mindset aimed at enhancing team collaboration through effective use of digital platforms. Continuously seeks to improve communication strategies and foster a collaborative team environment.

INVEST Competence 8: Media Literacy Competence

Area of learning	Basic Level	Intermediate level
Competence	At the basic level, the learner can identify and critically evaluate straightforward digital content, recognising obvious biases and simple hidden advertisements. They are aware of the basics of algorithmic influence on content visibility and can spot obvious cases of misinformation.	At the intermediate level, the learner critically engages with complex digital content, identifying subtle biases, dark patterns, and sophisticated hidden advertising. They understand algorithmic discrimination and can critically assess the reliability of information from search engines and social media. They are proficient in using tools to verify the authenticity of digital media, such as videos and images, and actively work to avoid spreading misinformation.
Knowledge	Understands the basics of digital content analysis, including recognising obvious biases, simple hidden advertisements, and basic algorithmic influences on content visibility. Has awareness of how misinformation can be presented in digital media.	Possesses in-depth knowledge of complex digital content, including subtle biases, dark patterns, sophisticated hidden advertising, and algorithmic discrimination. Understands the tools and techniques for verifying the authenticity of digital media, such as images and videos.
Skill	Able to identify and critically evaluate straightforward digital content, recognising clear biases and simple hidden advertisements. Can spot obvious cases of misinformation and understands basic algorithmic impacts on content visibility.	Proficient in critically engaging with complex digital content, identifying subtle biases, dark patterns, and sophisticated hidden advertisements. Capable of using tools to verify the authenticity of digital media and actively works to prevent the spread of misinformation.
Value	Values the importance of recognising bias and misinformation in digital content. Appreciates the need for ethical consideration in media consumption and basic awareness of algorithmic influences.	Strong commitment to ethical media consumption and production, with a deep appreciation for transparency and accuracy in digital content. Values the ethical implications of algorithmic influence and actively seeks to mitigate the impact of misinformation.
Mindset	Developing a critical mindset towards evaluating digital content, with a growing focus on identifying obvious biases and misinformation. Cautious approach towards understanding the basic impacts of algorithms on media visibility.	Proactive and analytical mindset focused on critically assessing and verifying digital content, with a strong emphasis on ethical media consumption. Continuously seeks to improve awareness and understanding of complex media influences, including subtle biases and algorithmic discrimination.

INVEST Competence 9: Digital Content Creation Competence

Area of learning	Basic Level	Intermediate level
Competence	At the basic level, the learner can create simple digital content using basic tools, such as text documents, presentations, or simple graphics. They understand the basic principles of digital storytelling and design and can publish content with guidance.	At the intermediate level, the learner can create more sophisticated digital content, such as multimedia presentations, videos, and complex graphics, using a range of digital tools. They understand the principles of audience engagement, content strategy, and ethical content creation, and can manage content across multiple platforms effectively.
Knowledge	Understands the basic principles of digital content creation, including digital storytelling, design, and the use of simple tools such as text documents, presentations, and basic graphics. Has foundational knowledge of how to publish digital content with guidance.	Possesses comprehensive knowledge of creating sophisticated digital content, including multimedia presentations, videos, and complex graphics. Understands audience engagement, content strategy, and the ethical considerations in digital content creation. Has a strong grasp of managing content across multiple platforms.
Skill	Able to create simple digital content using basic tools, such as text documents, presentations, or simple graphics. Can follow basic principles of digital storytelling and design and publish content with some guidance.	Proficient in creating complex digital content using a variety of digital tools, including multimedia presentations, videos, and advanced graphics. Skilled in applying principles of audience engagement, developing content strategies, and ensuring ethical content creation. Capable of managing and distributing content across multiple digital platforms effectively.
Value	Values the importance of clarity, creativity, and ethical standards in creating digital content. Appreciates the need for simple yet effective communication through digital mediums.	Strong commitment to producing high-quality, engaging, and ethically sound digital content. Values the impact of well-strategized content on targeted audiences and the importance of adhering to ethical guidelines in all aspects of digital content creation.
Mindset	Developing a creative and detail-oriented mindset, focused on applying basic principles of design and storytelling to digital content. Open to guidance and learning in the content creation process.	Proactive and strategic mindset geared towards creating impactful digital content that effectively engages audiences. Emphasises continuous improvement, innovation, and ethical considerations in digital content creation and management.

INVEST Competence 10: Safety and Intellectual Property Competence

Area of learning		Basic Level	Intermediate level
Competence		At the basic level, the learner understands and applies basic digital safety practices, such as creating strong passwords and recognising phishing attempts. They are aware of intellectual property rights and respect these in their own use of digital content	At the intermediate level, the learner implements advanced digital safety measures, such as encryption and secure data handling practices. They have a solid understanding of intellectual property laws, can navigate the complexities of content licensing, and actively protect their own and others' intellectual property in digital environments.
Knowledge		Understands the fundamental principles of digital safety, including the importance of creating strong passwords and recognising phishing attempts. Has a basic awareness of intellectual property rights and how they apply to the use of digital content.	Possesses comprehensive knowledge of advanced digital safety measures, such as encryption and secure data handling practices. Understands the complexities of intellectual property laws, including content licensing and the protection of intellectual property in digital environments.
Skill		Able to apply basic digital safety practices, such as setting strong passwords and identifying phishing attempts. Demonstrates respect for intellectual property rights in their use of digital content.	Proficient in implementing advanced digital safety measures, including the use of encryption and secure data management. Skilled in navigating intellectual property laws, managing content licensing, and actively protecting intellectual property rights in various digital contexts.
Value		Values the importance of digital safety and the ethical use of digital content. Respects the intellectual property rights of others and appreciates the need for basic digital security measures.	Strong commitment to maintaining high standards of digital safety and ethical practices in the digital environment. Values the protection of intellectual property and the responsible management of digital content, both personally and professionally.
Mindset		Developing a cautious and responsible mindset towards digital safety, with a focus on protecting personal information and respecting intellectual property rights. Open to learning and applying foundational safety practices.	Proactive and vigilant mindset committed to advanced digital safety practices and the ethical management of digital content. Prioritises the protection of intellectual property and continuously seeks to enhance security measures in digital environments.

INVEST Competence 11: Problem Solving and Critical Thinking Competence

Area of learning		Basic Level	Intermediate level
Competence		At the basic level, the learner can use simple digital tools to address straightforward problems, applying logical reasoning to find solutions. They demonstrate an emerging ability to think critically about digital information and situations.	At the intermediate level, the learner confidently uses a range of digital tools to tackle complex problems, applying advanced critical thinking skills. They can independently analyse situations, develop innovative solutions, and critically assess the outcomes of their decisions in a digital context
Knowledge		Understands the basic principles of problem-solving and logical reasoning in digital contexts. Has foundational knowledge of using simple digital tools to address straightforward issues.	Possesses in-depth knowledge of advanced problem-solving techniques and critical thinking strategies. Understands how to use a wide range of digital tools to analyse complex issues and develop innovative solutions.
Skill		Able to use simple digital tools to solve straightforward problems, applying logical reasoning to find effective solutions. Demonstrates an emerging ability to think critically about digital information and situations.	Proficient in using a variety of digital tools to tackle complex problems. Applies advanced critical thinking skills to independently analyse situations, develop innovative solutions, and critically assess the outcomes of decisions in digital contexts.
Value		Values logical reasoning and the application of basic problem-solving techniques in digital environments. Appreciates the importance of thinking critically about digital information.	Strong commitment to applying critical thinking and innovative problem-solving in complex digital contexts. Values the ethical implications of decision-making and the importance of thorough analysis in achieving effective solutions.
Mindset		Developing a logical and analytical mindset, focused on applying problem-solving techniques to straightforward issues. Open to learning and improving critical thinking skills in digital contexts.	Proactive and innovative mindset, dedicated to tackling complex problems with advanced critical thinking. Continuously seeks to refine problem-solving strategies and critically evaluate the effectiveness of solutions in digital environments.

INVEST Competence 12: Digital Ethics and Consumer Protection Competence

Area of learning	Basic Level	Intermediate level
Competence	At the basic level, the learner can identify common ethical issues in digital spaces, such as the misuse of personal data or unfair online advertising practices. They understand basic consumer rights in the context of electronic commerce and can recognise simple instances of unethical behaviour online	At the intermediate level, the learner has a solid understanding of e-commerce rules in the Western Balkans and the EU, including consumer protection laws. They can critically assess digital business practices, recognise ethical dilemmas, and advocate for fair treatment of consumers in digital transactions. They are also aware of the impact of algorithmic decisions on consumer rights and can navigate these challenges effectively
Knowledge	Understands the fundamental principles of digital ethics, including common ethical issues such as misuse of personal data and unfair online advertising practices. Has a basic knowledge of consumer rights in the context of electronic commerce and can recognise simple unethical behaviours online.	Possesses a thorough understanding of e-commerce rules and consumer protection laws in the Western Balkans and the EU. Has in-depth knowledge of the impact of algorithmic decisions on consumer rights and can navigate ethical challenges in digital business practices.
Skill	Able to identify common ethical issues in digital spaces, such as data misuse and unfair advertising. Demonstrates an understanding of basic consumer rights in e-commerce and recognises simple instances of unethical behaviour online.	Proficient in critically assessing digital business practices and recognising ethical dilemmas in online transactions. Skilled in advocating for fair treatment of consumers and navigating the complexities of algorithmic impacts on consumer rights.
Value	Values the importance of digital ethics and the protection of consumer rights. Appreciates the need for fairness and transparency in digital transactions.	Strong commitment to upholding digital ethics and consumer protection. Values the fair and ethical treatment of consumers in e-commerce and the responsible use of digital technologies.
Mindset	Developing an ethical and responsible mindset towards digital spaces, with a focus on protecting consumer rights and recognising unethical practices. Open to learning more about digital ethics and consumer protection.	Proactive and ethical mindset dedicated to advocating for consumer rights and fairness in digital transactions. Critically engages with the ethical implications of digital business practices and strives to address challenges posed by algorithmic decisions.

INVEST Competence 13: Digital Literacy in Identifying Misinformation and Dark Patterns:

Area of learning		Basic Level	Intermediate level
Competence		At the basic level, the learner can identify simple misinformation online and use basic tools to verify the authenticity of digital content, such as images or videos. They are aware of the existence of dark patterns and can recognise obvious examples in websites or apps.	At the intermediate level, the learner is skilled at spotting more sophisticated forms of misinformation, using advanced tools to verify digital content. They understand and can identify various dark patterns on the web, such as hidden online advertising or manipulative design choices, and are equipped to avoid falling prey to these tactics. They also have a strong awareness of algorithmic bias and its impact on information access, applying lateral reading strategies to ensure diverse and accurate information intake.
Knowledge		Understands the basics of misinformation and how to identify it online. Has foundational knowledge of verifying the authenticity of digital content, such as images or videos, using basic tools. Aware of the existence of dark patterns and can recognise obvious examples in websites or apps.	Possesses in-depth knowledge of more sophisticated forms of misinformation and how to combat them using advanced verification tools. Understands various dark patterns on the web, such as hidden online advertising and manipulative design choices. Has a strong understanding of algorithmic bias and its impact on information access.
Skill		Able to identify simple misinformation and use basic tools to verify the authenticity of digital content. Recognises obvious dark patterns in websites or apps and understands their basic implications.	Skilled at spotting sophisticated misinformation and using advanced tools to verify digital content. Proficient in identifying various dark patterns and avoiding manipulative tactics. Applies lateral reading strategies to ensure access to diverse and accurate information, recognising the impact of algorithmic bias.
Value		Values the importance of accurate information and the ethical use of digital tools to verify content. Appreciates the need to recognise and avoid obvious deceptive practices, such as dark patterns, in digital environments.	Strong commitment to combating misinformation and ensuring the ethical use of digital content. Values transparency, integrity, and critical thinking in digital environments, with a focus on recognising and avoiding sophisticated deceptive practices and algorithmic biases.
Mindset		Developing a critical and cautious mindset towards digital information, with an emphasis on identifying and verifying content accuracy. Aware of deceptive practices like dark patterns and open to learning how to avoid them.	Proactive and analytical mindset focused on identifying and combating sophisticated misinformation and dark patterns. Committed to ensuring the accuracy and ethical use of digital content, while continuously refining strategies to navigate and mitigate the effects of algorithmic bias.

6. Methodology and proposed pedagogies

The training methodology within the INVEST Framework is underpinned by several key educational theories that inform how Digital and Green Skills should be taught and learned. These theories guide the design of learning activities, the development of competences, and the overall pedagogical approach:

6.1. Pedagogical Approach

1. Constructivist Learning Theory

- Core Principle: Constructivist theory posits that learners build their own understanding and knowledge of the world through experiences and reflecting on those experiences. Learning is seen as an active, contextualized process of constructing knowledge rather than acquiring it.
- Application in INVEST: The INVEST Framework encourages an active learning approach where VET learners engage in hands-on activities that relate directly to real-world digital and sustainability challenges. By constructing knowledge through exploration and application, learners are better able to internalize concepts and apply them in practical settings.

2. Experiential Learning Theory (Kolb)

- Core Principle: According to Kolb's Experiential Learning Theory, knowledge results from the combination of grasping and transforming experience. It emphasizes learning as a process where knowledge is created through the transformation of experience.
- Application in INVEST: The INVEST methodology incorporates experiential learning by involving learners in practical projects and real-world scenarios that require the application of both digital and green competences. These experiences are critical in helping learners understand the relevance of their skills in actual work environments, thus bridging the gap between theory and practice.

3. Social Constructivism (Vygotsky)

- Core Principle: Vygotsky's theory of social constructivism emphasizes the role of social interaction in the development of cognition. Learning is viewed as a collaborative process, where learners construct knowledge through social interaction and dialogue.
- Application in INVEST: The INVEST Framework promotes collaborative learning environments where learners engage in group projects and peer-to-peer learning activities. This social aspect of learning is crucial for developing communication,

teamwork, and leadership skills, which are essential for both digital and green competences.

6.2. Pedagogical approach

Based on the theoretical foundations outlined above, the INVEST Framework recommends several pedagogical approaches that are particularly effective for teaching Digital and Green Skills in VET settings

1. Project-Based Learning (PBL)

- Description: Project-Based Learning involves learners working on a project over an extended period, allowing them to explore and respond to complex questions, challenges, or problems.
- Application in INVEST: in the context of INVEST, PBL might involve projects where learners design a sustainable business model using digital tools, develop a digital platform for community engagement in sustainability, or create a campaign to promote digital literacy and environmental awareness. PBL encourages learners to apply their skills in a meaningful context, fostering deeper understanding and retention.

2. Blended Learning

- Description: Blended Learning combines traditional face-to-face instruction with online learning activities, offering a flexible approach that caters to diverse learning styles.
- Application in INVEST: the INVEST Framework incorporates blended learning by integrating online modules that cover foundational knowledge in digital and green skills, supplemented by in-person workshops and practical sessions where learners apply these concepts. This approach allows for a more personalised learning experience, where learners can pace their studies while still benefiting from direct interaction with instructors and peers.

3. Problem-Based Learning (PBL)

- Description: Problem-Based Learning centers around learners tackling real-world problems that require them to apply their knowledge and skills to find solutions.

- Application in INVEST: in the INVEST Framework, Problem-Based Learning could involve scenarios such as developing solutions to reduce a company's carbon footprint using digital technologies, or creating a digital tool that helps small businesses implement sustainable practices. This approach not only develops technical skills but also encourages critical thinking and innovation.

4. Collaborative Learning

- Description: Collaborative Learning involves learners working together to achieve a common goal, emphasizing the importance of teamwork and collective problem-solving.
- Application in INVEST: the framework encourages collaborative learning through group projects that require the integration of both digital and green skills. For example, learners might work together to develop a digital platform that tracks sustainability metrics for a local business. Collaborative learning helps learners develop essential interpersonal skills, such as communication, leadership, and conflict resolution, which are critical in today's workforce.

5. Reflective Practice

- Description: Reflective Practice encourages learners to think critically about their learning experiences, analysing their successes and challenges to improve future performance.
- Application in INVEST: reflective practice is integral to the INVEST methodology, where learners are encouraged to maintain reflective journals or participate in discussion groups to assess their progress in developing digital and green skills. This reflection helps learners internalize their experiences and fosters continuous improvement and lifelong learning.

Conclusion:

The theoretical framework and pedagogical approaches recommended within the INVEST Framework are designed to create a robust, adaptable, and learner-centered education model for VET in the Western Balkans. By integrating theories such as Constructivism, Experiential Learning and Social Constructivism, the framework ensures that learners not only acquire the necessary technical skills but also develop the critical competences, mindsets, and values needed to navigate and thrive in a rapidly changing world. The proposed pedagogies—Project-Based Learning, Blended Learning, Problem-Based Learning, Collaborative Learning, and Reflective Practice—are specifically chosen to align with these theoretical foundations, ensuring that the teaching and learning processes are both effective and meaningful.

7. CONCLUSIONS

Building capacity in digital and green skills is essential for advancing education in the Western Balkans. Integrating advanced digital tools, promoting sustainable practices, and addressing the gender gap in technical fields will lead to a more skilled and informed workforce. Moreover, by updating curricula, training educators, and increasing public awareness, the region can better meet the demands of the modern labour market and align with sustainable development goals. These efforts will help these European countries align more closely with core EU values. Therefore, implementing competency frameworks such as DigComp, DigCompEdu, LifeComp, and GreenComp will lay a strong foundation for this transformative journey.

The INVEST Framework's theoretical foundation and recommended pedagogical strategies are crafted to establish a resilient, flexible, and student-focused education system for VET in the Western Balkans. By incorporating educational theories such as Constructivism, Experiential Learning, and Social Constructivism, the framework is designed to ensure that learners not only gain the essential technical abilities but also cultivate the critical competences, mindsets, and values necessary to succeed in an increasingly dynamic environment. The selected pedagogical approaches—Project-Based Learning, Blended Learning, Problem-Based Learning, Collaborative Learning, and Reflective Practice—are intentionally aligned with these theoretical principles, guaranteeing that the teaching and learning experiences are both impactful and relevant.

The INVEST Framework is a comprehensive educational initiative designed to equip VET learners in Albania, Montenegro, Kosovo, and Bosnia & Herzegovina with the critical competencies needed for success in both green and digital domains. These competencies are essential for navigating the intertwined challenges of sustainability and digital transformation in these regions, which are crucial for their socio-economic development.

- **Green Competencies:** The sustainability competencies within the framework emphasize a deep commitment to sustainability values and ethical consumption, empowering learners to become proactive contributors to environmental protection and social well-being. Understanding the complexity of sustainability (Competence 2) ensures that learners can navigate the interconnectedness of social, economic, and environmental factors, making informed decisions that consider the broader impact of their actions. The focus on practical sustainability skills (Competence 4) and consumer rights (Competence 5) further ensures that learners are prepared to implement sustainable practices in their daily lives and advocate for systemic change at multiple levels, from national to European.
- **Digital Competencies:** The digital competencies within the framework prepare learners to thrive in an increasingly digital world by developing essential skills in information literacy, communication, media analysis, and content creation. By promoting ethical use of digital technologies (Competence 12) and critical engagement with digital media (Competence 8), the framework ensures that learners are equipped to navigate digital

environments responsibly and effectively. Competencies in digital safety, problem-solving, and identifying misinformation (Competences 10, 11, and 13) further enhance learners' ability to protect themselves and others in the digital space, fostering a generation of informed and ethical digital citizens.

In summary, the INVEST Framework integrates sustainability and digital literacy competencies to create a holistic approach to education in the Western Balkans. This dual focus ensures that learners are not only proficient in the necessary technical skills but are also critically aware, ethically grounded, and capable of leading their communities towards a sustainable and digitally empowered future. By equipping learners with these competencies, the framework plays a pivotal role in preparing them to contribute meaningfully to the economic, social, and environmental development of their respective countries.

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