BestAI Blueprint

The BestAI project is dedicated to creating a challenge-based training package that explores the potential of AI technologies for social entrepreneurship. Our goal is to enhance social innovations across Europe and support VET teachers and trainers in developing high-value digital and transversal skills.

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Declaration on the Responsible Use of Generative Artificial Intelligence

The BestAI consortium acknowledges the use of generative Artificial Intelligence (AI) tools as supporting instruments during the preparation of the BestAI Empowerment Blueprint.

Generative AI was used to assist specific research, analytical, drafting and editorial activities. It was not used as a substitute for the professional expertise, judgement or responsibility of the project partners. All substantive content included in the final Blueprint has been reviewed, assessed and validated by the responsible project partners.

The consortium remains fully responsible for the accuracy, relevance and quality of the information, conclusions and recommendations presented in this document. Where external evidence, legislation, policy frameworks, publications or other third-party sources are referred to, the relevant sources were independently reviewed and referenced. AI-generated outputs were not treated as authoritative sources in themselves.

Particular attention was given to the responsible use of AI, including the verification of generated content, protection of personal and confidential information, avoidance of unsupported claims, and preservation of human oversight throughout the development process.

Use of Generative AI in the BestAI Empowerment Blueprint

Type of assistance	Use of AI	Applied
Research and analytical support	AI was used to support the exploration and organisation of topics, identify connections between themes, and assist in structuring research questions. External sources and factual claims were subsequently verified by the project team.	✓
Stakeholder consultation analysis	AI was used to assist in organising, comparing and synthesising quantitative and qualitative stakeholder feedback. Interpretation of findings and conclusions remained subject to human review and validation.	✓
Text development	AI was used to support the drafting of selected passages, development of initial formulations, organisation of arguments and transformation of project evidence into structured narrative text.	✓

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Text revision and editing	AI was used to improve clarity, coherence, grammar, terminology, readability and consistency across sections drafted by different contributors.	✓
Rephrasing and summarisation	AI was used to condense, restructure or rephrase existing project material while preserving its intended meaning.	✓
Policy and recommendation development	AI was used as a supporting tool to structure and formulate recommendations derived from project results, stakeholder consultations and the policy evidence reviewed by the consortium. Final recommendations were assessed and validated by the responsible partners.	✓
Translation assistance	AI tools may have been used to support translation or linguistic adaptation of content. Any translated content included in the final document was reviewed by the responsible project partner.	✓
Visualisation support	AI tools may have been used to support the development or conceptualisation of diagrams, figures or other visual elements.	✓
Fully autonomous content generation	No section of the final Blueprint was accepted as AI-generated output without human review, adaptation and validation.	No

Human responsibility and validation

Generative AI was used as **an assistive tool rather than an autonomous author**. Responsibility for the Blueprint remains with the BestAI consortium and the individual partners responsible for the respective sections.

The project partners confirm that, before final publication:

- the content has been reviewed by the responsible human authors;
- factual and policy-related statements have been checked against appropriate sources;
- stakeholder evidence has been interpreted within the limitations of the consultation methodology;
- AI-generated suggestions have been critically assessed and modified or rejected where necessary;
- no AI output has been presented as independent empirical evidence; and
- the final conclusions and recommendations represent the professional judgement of the BestAI consortium.

Prepared and validated by: BestAI Consortium

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Executive Summary

BestAI in brief

Artificial Intelligence is increasingly reshaping the way people work, learn, make decisions and develop new products and services. For Vocational Education and Training (VET), this transformation creates an urgent challenge: learners need to develop the competences required to work effectively with AI, while educators and training organisations need practical, responsible and inclusive ways to integrate these technologies into teaching and learning.

This challenge is particularly relevant to the social economy. Social enterprises, associations, cooperatives, foundations and other mission-driven organisations operate in areas where technological innovation can generate significant social value, including education, employment, social inclusion, community development, healthcare and environmental sustainability. At the same time, these organisations often work with limited resources, vulnerable groups and sensitive information. Their adoption of AI therefore cannot be driven by technological opportunity alone. It must also take account of human judgement, ethics, accountability, accessibility and social purpose.

The **BestAI project** was created to address this intersection between Artificial Intelligence, VET and social entrepreneurship. Its objective is to explore how AI can strengthen social innovation while supporting VET educators, learners and social entrepreneurs in developing high-value digital and transversal competences.

BestAI approaches AI not as a purely technical subject, but as a tool that can be applied to authentic social and entrepreneurial challenges. Challenge-Based Learning (CBL), WebQuests and experiential learning are used to place learners in active roles: investigating problems, working with AI-supported tools, evaluating information, collaborating with others and developing solutions while reflecting on their ethical and social consequences.

The project has produced an interconnected ecosystem composed of the **BestAI Digital Incubator**, the **Empowerment Toolkit**, the **Guidelines for VET Providers** and this **Empowerment Blueprint**. Together, these resources support learners, educators, organisations and policymakers at different stages of AI adoption.

From AI tools to meaningful learning

The central educational output of the project is the **BestAI Empowerment Toolkit**, comprising 20 interactive WebQuests organised around the main stages and dimensions of social entrepreneurship. These cover areas including AI for social good, trustworthy AI and sustainable prompting, identification of social needs, AI-supported business models, development of products and services, social-impact measurement, and stakeholder engagement and communication. More than 200 sources and tools were reviewed and incorporated into the learning resources, which were made available in six languages.

The WebQuest methodology is important because it moves learners away from passive use of AI. Learners are required to research, compare sources, interact with digital tools,

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justify decisions and assess the quality and reliability of AI-generated outputs. This places critical thinking and responsible decision-making alongside technical competence.

The **Guidelines for VET Providers** complement the Toolkit by addressing the role of educators. BestAI found that one of the principal obstacles to AI adoption was not lack of interest in the technology, but educators' uncertainty about how to incorporate it into meaningful learning activities, how to assess AI-assisted work and how to deal with ethical and governance issues. The Guidelines therefore prioritise transferable pedagogical competences, experimentation and train-the-trainer approaches rather than training tied to particular applications.

The **BestAI Digital Incubator** brings these resources together within a single open-access environment. Openness, multilingual access and accessibility were treated as design principles. The platform was developed to support users with different levels of digital competence, including mobile access, low-connectivity contexts, screen-reader compatibility and high-contrast options.

Together, these resources reflect one of BestAI's most important lessons: sustainable AI adoption requires more than making new technologies available. Educators and learners also need structured methodologies, appropriate guidance and environments in which they can experiment safely.

What the project experience tells us

BestAI tested and validated its approach across the partner countries. Sixty learners, aspiring social entrepreneurs and social entrepreneurs participated in the Toolkit pilots, while 25 VET educators and experts contributed to the international Train-the-Trainer activity and related validation activities.

Across the pilots, participants recognised the potential of AI to enrich learning, stimulate creativity, support entrepreneurial thinking and improve access to information. However, positive attitudes towards AI were consistently accompanied by practical concerns. Educators identified difficulties in choosing suitable tools, designing AI-supported activities, assessing learner work and dealing with transparency, bias, data protection and the reliability of generated content.

The project therefore reaches a clear conclusion:

AI integration in VET is primarily a pedagogical and organisational challenge, not simply a technological one.

The experience also confirmed the value of learner-centred approaches. WebQuests and Challenge-Based Learning were consistently recognised as useful because they place AI inside real social and entrepreneurial problems rather than presenting it as an abstract technology.

Educators emerged as the critical actors in this transformation. Access to AI alone is not sufficient. Teachers and trainers need opportunities to experiment, practical resources that can be adapted to existing curricula and support in developing critical AI literacy, pedagogical design and ethical decision-making. BestAI therefore treats educator empowerment as a central condition for sustainable adoption.

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What stakeholders told us

The Empowerment Blueprint also draws on a dedicated consultation involving **40 stakeholders from six European countries**: Italy, Spain, Bulgaria, Cyprus, Estonia and Belgium. Participants included VET policymakers, social entrepreneurs, technology and digital-transformation experts, sectoral organisations, VET providers and other education-related stakeholders. The consultation was intended to identify transferable needs and priorities rather than provide statistically representative conclusions for the entire European VET system.

The results provide strong validation of BestAI's practical approach. **90%** of respondents rated the Digital Incubator's accessibility features at 4 or 5, **80%** gave the Challenge-Based Learning methodology a rating of 4 or 5, and **92.5%** rated the clarity of the WebQuest structure at 4 or 5. Stakeholders also clearly expressed a preference for an implementation-oriented Blueprint: 82.5% identified good practices as useful content, followed by policy recommendations, partnership models, AI-governance guidance and implementation roadmaps.

The consultation reveals a generally positive but pragmatic attitude towards AI. Stakeholders do not see it as valuable simply because it is new. Its value depends on whether it can contribute to meaningful learning and help address concrete educational, social, economic or environmental challenges.

This is also reflected in the competence priorities identified by respondents. **Ethical AI governance was selected by 70%**, while **prompt engineering and human–AI collaboration were each selected by 62.5%**. Data literacy and AI-assisted decision-making were also considered relevant.

The message is significant: future AI competence should not be understood simply as technical proficiency.

For BestAI, a future-oriented competence profile combines three dimensions:

Dimension	What it means
AI literacy and practical use	Understanding AI tools, structuring prompts, working with data and using AI appropriately for defined tasks
Human and transversal capabilities	Critical thinking, complex problem-solving, human–AI collaboration and ethical decision-making
Responsible AI governance	Bias awareness, transparency, privacy, intellectual property, accountability and understanding of regulatory responsibilities

This balanced approach is particularly important in social entrepreneurship, where decisions may affect individuals, communities and vulnerable groups. A learner who knows how to operate an AI application but cannot assess its reliability, recognise bias or decide when human judgement should take precedence is not adequately prepared for responsible professional practice.

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The real barriers to AI adoption

The consultation indicates that the main obstacles to AI integration in VET are interconnected rather than isolated.

Financial constraints affect not only the purchase of technology but also licences, connectivity, equipment, staff development, technical support and the time educators need to introduce new practices. Smaller providers, NGOs and organisations in rural or under-resourced environments are particularly exposed.

The most important human barrier is teacher and trainer capacity. Educators need to know how to select tools, understand their limits, design meaningful activities, evaluate generated outputs and use AI safely in real educational contexts. Stakeholders consequently favour practical, hands-on professional development over one-off theoretical training.

Organisational barriers include rigid curricula, limited institutional strategies, insufficient leadership support and processes that struggle to adapt at the speed of technological change. Regulatory uncertainty can create additional hesitation, particularly around data protection, responsibility and the use of AI in assessment or decision-making.

The Blueprint therefore proposes moving away from a narrow technology-adoption model and towards an **institutional readiness model** based on five interconnected dimensions:

Readiness dimension	Core question
Human	Do educators and staff have the competences and confidence to use AI responsibly?
Organisational	Does the institution have leadership, strategy and processes supporting implementation?
Technological	Are connectivity, devices and suitable tools available and usable?
Regulatory	Are there clear rules for safe, transparent and compliant AI use?
Financial	Are there sustainable resources for technology, training, staff time and support?

The weakest of these dimensions can constrain the whole adoption process. Funding without competences does not guarantee implementation; technology without appropriate infrastructure does not guarantee access; training without organisational support does not lead to sustained practice; and innovation without governance cannot guarantee responsible use.

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Responsible AI should be built into practice

The Blueprint proposes seven principles for integrating AI responsibly into social-economy VET.

Human agency means that people define problems and remain responsible for final decisions. **Purpose before tool** means that AI should be used because it adds educational or social value, not simply because it is available. **Transparency** requires organisations and learners to be clear about when and why AI has been used. **Data protection** requires careful treatment of personal and sensitive information. **Fairness and bias awareness** require AI outputs to be questioned and verified rather than treated as neutral. **Inclusion by design** means resources should remain usable in low-resource and low-connectivity contexts. Finally, **environmental proportionality** requires organisations to consider whether the computational cost of AI is justified by the benefit obtained.

These principles should not be confined to a separate ethics lesson. They should appear throughout curriculum design, teaching, assessment and institutional governance.

This is especially relevant to assessment. If learners are assessed only on a finished product that AI can generate, the assessment may no longer demonstrate the competence it claims to measure. BestAI therefore recommends shifting emphasis towards the process: learners should be able to explain how they defined the task, which tools they selected, how they prompted them, what they verified, what they rejected and how they arrived at their final decision.

Preventing an AI divide

One of the most important risks identified through the consultation is an emerging **AI Divide**.

This divide is broader than traditional digital access. A provider may technically be able to access an AI platform but still lack reliable connectivity, suitable devices, appropriate licences, educator competence, institutional support or the resources required to make meaningful use of it.

Without targeted measures, AI could contribute to a two-speed VET system in which well-resourced organisations continuously strengthen their capacity while rural, smaller or under-resourced institutions struggle to participate.

The response should therefore move from an **access-first** approach to an **access + capacity** approach. This means combining accessible technology with educator development, affordable or open tools, mobile-friendly and low-bandwidth resources, shared infrastructure, institutional support and appropriate funding.

Regional innovation hubs and shared infrastructures can be particularly valuable. By pooling expertise, tools, training and support, several institutions can gain access to capacities that would be unrealistic for each to develop independently.

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Cooperation is part of the solution

AI technologies and skills evolve too rapidly for VET providers to respond in isolation. BestAI therefore recommends moving from occasional consultation towards continuous cooperation between VET providers, technology companies, social enterprises, employers, public authorities and research or higher-education actors.

Technology companies can help VET providers understand emerging tools and labour-market needs. Social enterprises can provide authentic social challenges and contexts in which learners can apply AI. Employers can contribute information on changing occupational requirements. Public authorities can provide enabling frameworks and funding. VET organisations bring pedagogical expertise and understanding of learners.

The Blueprint identifies several useful cooperation mechanisms: curriculum co-design, industry advisory structures, teacher placements in companies, mentorship, work-based learning, joint innovation projects, regional skills partnerships and shared innovation hubs. The objective is not cooperation for its own sake, but a continuous feedback loop through which labour-market change, technological developments and social needs inform education and training.

Priority actions

The evidence generated through BestAI points to a small number of actions with particularly high potential:

1. **Put educators first**. Invest in continuous, practical professional development combining AI literacy, pedagogy, critical evaluation and responsible use.
2. **Create clear institutional AI governance**. VET providers should define permitted and restricted uses, establish approved-tool registers, clarify data-protection requirements and assign responsibility for AI-related questions.
3. **Design curricula around transferable competences**. Learning outcomes should focus on what learners can do and judge with AI rather than on mastery of particular applications.
4. **Use practical, challenge-based learning**. AI should be connected to authentic social and professional problems through structured approaches such as WebQuests and CBL.
5. **Modernise assessment**. Evaluate the learner's process, evidence, judgement and verification rather than the final product alone.
6. **Prevent the AI Divide by combining access and capacity**. Affordable tools, accessible design, connectivity, shared infrastructure, educator development and targeted financial support need to advance together.
7. **Build permanent VET–technology–social economy partnerships**. Cooperation should evolve from isolated projects towards continuous co-design, skills intelligence and shared learning.
8. **Use public funding for capacity, not only technology**. The consultation identified Erasmus+ and ESF+ as particularly relevant instruments, complemented by regional, national, ERDF and private mechanisms according to the type of need.

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Implications for policymakers and ecosystem actors

European policymakers have a role in providing clearer operational guidance for educational institutions using AI, strengthening alignment between AI competences and European frameworks, and ensuring that successful pilots can move towards sustained implementation. The Blueprint particularly highlights the need to connect responsible AI literacy with frameworks such as DigCompEdu and the European Qualifications Framework and to use funding instruments to support infrastructure, skills and institutional capacity.

National and regional authorities should give priority to practical professional development for VET educators, equitable baseline infrastructure and more agile mechanisms for updating curricula and qualifications. The consultation indicates that educator preparation represents one of the most immediate levers for accelerating responsible AI adoption.

VET providers should combine pedagogical innovation with institutional governance. Challenge-Based Learning and WebQuests can offer structured environments for AI-supported learning, but institutions also need clear policies on data, assessment, appropriate tool use and human accountability.

Technology companies can support implementation by providing secure and education-appropriate environments, transparent information about their systems and sustained cooperation with VET providers.

Social economy organisations, finally, should not be regarded only as recipients of AI-related innovation. They can contribute authentic challenges, knowledge of community needs and contexts in which learners can explore how AI can support socially and environmentally meaningful solutions.

The BestAI message

BestAI does not conclude that vocational education needs **more AI at any cost**.

Its conclusion is that VET needs the **capacity to make informed choices about AI**.

Specific platforms and applications will continue to change. The most sustainable response is therefore to invest in people, pedagogy and institutions: educators capable of guiding AI-supported learning; learners capable of questioning and verifying AI outputs; organisations capable of governing technology responsibly; and ecosystems capable of sharing knowledge, infrastructure and emerging skills needs.

For social entrepreneurship, this is particularly important. Technology should strengthen the capacity to respond to social and environmental challenges without displacing the values on which the social economy is built.

The future of AI-enabled VET should therefore be **human-centred, practical, inclusive and responsible**. AI should augment rather than replace judgement; innovation should be connected to genuine social needs; access should be accompanied by the capacity to participate; and technological adoption should strengthen, rather than weaken, the role of educators and learners.

The contribution of BestAI is to demonstrate how this can begin in practice: through accessible resources, structured learning, empowered educators, cooperation across

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sectors and institutional conditions that allow innovation to move from isolated experimentation towards sustainable educational practice.

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1. Introduction

1.1. About the BestAI Project

Artificial Intelligence is rapidly changing the way people work, learn, communicate and develop solutions to economic and social challenges. For Vocational Education and Training (VET), this transformation creates both an opportunity and a responsibility: learners and professionals increasingly need the competences to work with AI, while educators and training institutions need practical ways to integrate these technologies into teaching without losing sight of human judgement, inclusion, ethics and the needs of the labour market.

BestAI was developed in response to this challenge, with a particular focus on the potential of Artificial Intelligence to support social entrepreneurship. The project brings together VET, technological expertise and social innovation to explore how AI can be used not simply as a productivity tool, but as an instrument for identifying social needs, designing solutions, developing sustainable business models, measuring impact and engaging communities.

At the centre of the BestAI approach is Challenge-Based Learning. Instead of teaching AI as an isolated technical subject, learners are invited to work on authentic social and entrepreneurial challenges, using AI tools while researching, questioning information, making decisions and reflecting on the ethical and social consequences of their choices. In this way, the project combines AI literacy with critical thinking, problem-solving, entrepreneurial competence, collaboration and responsible decision-making.

BestAI has developed an interconnected ecosystem of resources. The **BestAI Empowerment Toolkit** provides 20 WebQuests organised around key stages and dimensions of social entrepreneurship. The **Guidelines for VET Providers** support educators in integrating AI and challenge-based methodologies into their teaching practice. The **BestAI Digital Incubator** brings the project resources together within an open, multilingual and accessible learning environment. The present **Blueprint** completes this ecosystem by translating the project experience, pilot activities and stakeholder consultation into practical guidance and recommendations for the wider adoption of responsible AI in VET.

The project has been developed through a collaborative and participatory approach. Educators, learners, social entrepreneurs, technology experts, public authorities and other stakeholders have contributed through testing, validation and consultation activities across different European contexts. Their involvement has allowed BestAI to move beyond the development of educational resources and examine a broader question: **what conditions need to be in place for AI to become a meaningful, responsible and inclusive part of vocational education?**

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1.2. Why AI Matters for Social Entrepreneurship

AI is becoming increasingly relevant to the social economy because it can support organisations in analysing information, identifying needs, improving services, developing new products, communicating with stakeholders and measuring social and environmental impact. For social entrepreneurs, these possibilities can strengthen the capacity to respond to complex challenges and make better use of limited resources.

However, the value of AI does not come automatically from access to technology. Social entrepreneurship is fundamentally human-centred. It deals with communities, social needs, vulnerable groups and decisions that can directly affect people's lives. AI therefore needs to support — rather than replace — human judgement, creativity, empathy, accountability and ethical decision-making.

This distinction is particularly important for VET. Preparing learners for an AI-influenced labour market cannot be reduced to teaching them how to operate particular tools. Technologies change rapidly, while competences such as critical evaluation, problem-solving, responsible decision-making, data literacy and human–AI collaboration remain transferable. VET therefore has an important role in helping learners understand both what AI can do and where its limits lie.

The same applies to the green and digital transitions. AI can contribute to more efficient use of resources, circular business models, environmental analysis and socially innovative services, while its own environmental and social impacts also need to be considered. Responsible AI education should consequently connect technological competence with social purpose and sustainability.

BestAI approaches this challenge from a practical perspective: learners should experience AI through meaningful tasks and real-world problems, educators should have the confidence and methodologies to guide this process, and institutions should create the organisational and governance conditions required for responsible use.

1.3. Purpose of the Empowerment Blueprint

The BestAI Empowerment Blueprint translates the experience and evidence generated by the project into guidance for organisations and stakeholders seeking to integrate AI into VET for social entrepreneurship.

It is intended primarily for **VET managers, educators and trainers**, while also addressing policymakers, national and regional authorities, technology companies, social economy organisations and other actors involved in skills development and educational innovation.

The Blueprint does not promote AI adoption as an objective in itself. Its purpose is to identify the conditions under which AI can add genuine educational and social value. It therefore combines the practical lessons generated through BestAI with evidence from stakeholder consultations, examining emerging competence needs, barriers to adoption, responsible AI governance, cooperation models, accessibility and the risk of an emerging AI Divide.

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The following sections place these findings within the wider European context, present the BestAI experience and its main lessons, analyse stakeholder evidence, and translate these results into practical guidance on responsible AI integration, curriculum design, competence development, teaching, assessment and institutional readiness. The final section develops recommendations for European and national policymakers, VET providers, technology companies and social economy organisations.

The central message running throughout the Blueprint is straightforward: **successful AI integration in VET is not primarily about introducing more technology. It is about building the human, pedagogical, organisational and institutional capacity to use technology purposefully, critically, responsibly and inclusively**.

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2. European Context

AI technology has gone through remarkable advancements in the past few decades. From early AI programs such as the Logic Theorist in 1956 and ELIZA in 1966, to expert systems developed in the 1970s such as MYCIN, AI has advanced and widely used today. Modern technologies like Siri and IBM Watson have brought AI to everyday life, while the launch of ChatGPT in 2022 was a milestone for making generative AI accessible to everyone. With the improvement of AI technologies, companies are coming up with new applications of AI to enhance their performance.

2.1. AI and the Future of Work

Artificial intelligence (AI) has become part of our everyday lives and is having a strong impact on many areas, especially the world of work. It has already changed the way tasks are performed, the tools employees use and the skills that employers value, and it is expected to continue shaping the way we work in the future. As AI becomes more common in the workplace, both organisations and employees need to adapt to new ways of working.

However, the growing use of AI does not necessarily mean that entire jobs will disappear. In many cases, AI affects specific tasks within a job rather than replacing the occupation itself. According to the International Labour Organization, generative AI is more likely to transform jobs and support workers in carrying out certain tasks than to fully replace entire occupations (ILO Working Paper 140).

According to research presented at the World Economic Forum's Annual Meeting of the New Champions, held in Dalian, China, from 23 to 25 June 2026, AI and other intelligent technologies are jobs, tasks and skills. The analysis shows that 40% of future industrial skills are considered new or emerging. New roles are also appearing, while many existing roles are expanding or moving towards higher-value activities.

These changes show that the impact of AI is broader than job replacement. AI is reshaping what people do at work and the skills they need, making continuous learning and skills development increasingly important. Cedefop's research on AI and the future of work shows that AI is changing skill demands across European labour markets and creating new challenges around skills development and skills mismatches (Cedefop - AI Futures of Work).

This has direct implications for VET. If jobs and tasks continue to evolve, training cannot focus only on the skills required for today's occupations. VET also needs to help learners strengthen their digital skills, understand and work with emerging technologies and continue adapting their skills throughout their careers. Cedefop highlights the need for a renewed focus on digital skills in VET so that learners and workers are better prepared for an increasingly digital labour market. (Cedefop, 2025 - VET needs to go digital)

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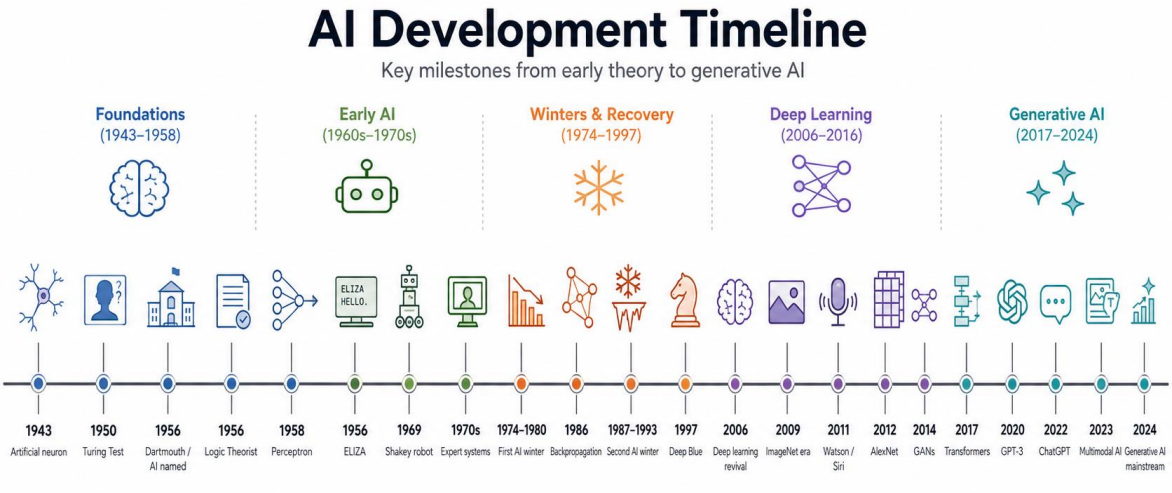
2.2. The Social Economy and the AI Revolution

Globally, the social economy accounts for nearly 7% of the world's gross domestic product (GDP), according to estimates first highlighted by the United Nations and later referenced by organisations such as Social Economy Europe. Artificial intelligence is now starting to play a more visible role in this part of the economy. A 2024 World Economic Forum report on AI and social innovation examined 300 examples of AI being used by social enterprises and social innovators and estimated that generative AI could add between $182 billion and $308 billion in value to the social economy each year. (weforum.org).

In Europe, the social economy includes a wide range of organisations, such as cooperatives, mutual benefit societies, associations, foundations and social enterprises. Like other parts of the economy, these organisations are being affected by the wider digital transformation. The European Commission now specifically identifies digitalisation and artificial intelligence as important developments for the social economy, with implications both for organisations and for their workforce (European Commission - EU Social Economy Gateway, 2026).

One of the clearest effects of this transformation is the changing demand for skills. Recent European evidence shows that social economy organisations face digital skills gaps, organisational challenges and growing needs for training and upskilling (European Commission - Pact for Skills, 2024). As AI becomes more widely used, these organisations increasingly need people who can work with new technologies while also maintaining the human, social and organisational skills that are central to their activities.

The impact of AI is therefore not only about introducing new tools. It also influences how social economy organisations are managed, how they provide services and products and how work is organised. These changes are now being studied across all 27 EU Member States through Eurofound's EU-wide study on digitalisation in the social economy.



AI can therefore be seen as part of a wider transformation of the social economy, influencing how organisations work, the skills they need and how they continue to deliver their social mission in a more digital environment.

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2.3. AI in the Twin Transition

Europe is going through two major transitions at the same time: green and digital. They are strongly connected and commonly described as the **Twin Transition**. AI is becoming an important part of this connection, as AI and other digital technologies can support environmental goals but can also create new environmental pressures. (European Environment Agency, 2026).

AI can support the green transition in practical ways. It can help organisations use energy and resources more efficiently, reduce waste, improve transport and logistics. It also helps in the analysis of environmental data and supports the management of renewable energy systems. In simple terms, AI can help organisations make better decisions and use fewer resources. Digital technologies can also support smarter manufacturing, more flexible energy systems and more circular and resource-efficient value chains. (European Environment Agency, 2026).

On the other hand, AI also has its own environmental cost. Training and running AI systems require computing power, electricity, water for cooling and specialised hardware. Also, the growth of digital technologies contributes to electronic waste and the use of raw materials.

These conclude that AI is not automatically positive or negative for the environment. The environmental impact depends on what AI is used for, how it is designed and how efficiently it is used (European Commission - Joint Research Centre, 2024).

The twin transition is also changing the skills people need. Cedefop describes VET as an important driver of Europe's twin transition and highlights the need for VET systems to respond to growing digital skills demands. At the same time, the green transition is creating the need for new skills and changing existing occupations, which means that digital and green skills need to develop together (Cedefop, 2025 - VET needs to go digital).

Therefore, for VET, the twin transition goes beyond teaching people how to use new technologies. Learners need to understand how these technologies can be used responsibly and how their use connects with wider environmental goals. For BestAI, this connection between **AI competence, green skills and responsible use** is particularly important in preparing learners for a labour market where digital and sustainability needs are increasingly connected.

2.4. European Policy Landscape

Europe's approach to artificial intelligence is part of a broader set of policies that link technology with education, jobs, skills, sustainability, and social inclusion. Below there are European frameworks that are important because they guide how AI should be used, what skills people need, and how education and training systems should change.

- The EU Artificial Intelligence Act. The AI Act provides the main European legal framework for AI and follows a risk-based approach. It aims to support innovation while ensuring that AI is used safely and in a way that protects fundamental rights.

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- DigComp 3.0. The updated European Digital Competence Framework reflects how digital competence is changing in the age of AI. The 2025 version integrates AI throughout the framework and gives greater attention to sustainability, cybersecurity, digital rights and wellbeing.
- Guidelines on the Ethical Use of AI and Data in Teaching and Learning. The European Commission updated its guidelines for educators in 2026 to provide practical support for the responsible use of AI and data in education.
- DigCompEdu. The European Framework for the Digital Competence of Educators focuses specifically on educators. It covers areas such as the use of digital resources, teaching and learning, assessment, empowering learners and supporting learners' digital competence.
- The Digital Education Action Plan. The Digital Education Action Plan 2021-2027 sets out a European vision for high-quality, inclusive and accessible digital education and aims to help education and training systems adapt to the digital age. Its actions also support the development of digital skills and the digital transformation of education and training institutions, including VET.
- The Social Economy Action Plan. The Social Economy Action Plan aims to create better conditions for social economy organisations to develop, innovate and create jobs, while improving access to opportunities and capacity building. Its implementation runs until 2030 and a mid-term review was completed in March 2026 to assess progress and identify remaining challenges.
- The Transition Pathway for Proximity and Social Economy. This Transition Pathway brings the social economy directly into Europe's twin transition. It is designed to help the ecosystem contribute to both the green and digital transitions and identifies areas such as skills, technology, sustainable business models and capacity building as part of that process.
- GreenComp. The European Sustainability Competence Framework provides a common reference for the knowledge, skills and attitudes people need to think and act more sustainably. It can be used to support curriculum and learning design and provides an important link between education and the green side of the twin transition.

Europe is asking organisations to adopt AI responsibly, workers to continually develop their skills, education and training systems to respond to technological change, and the green and digital transitions to move forward together.

2.5. BestAI within the European AI and VET Ecosystem

The BestAI project brings together several priorities that are connected at European level: AI literacy and responsible use, educator competence, digital and green skills, VET that responds to labour-market needs, social innovation and cooperation between education, technology and social economy actors. As an Erasmus+ Cooperation Partnership in Vocational Education and Training, BestAI focuses on helping social

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entrepreneurs, learners and educators develop the skills needed to use AI ethically and sustainably for social good.

European skills policy increasingly emphasises upskilling, reskilling and stronger links between education, training and changing labour-market needs. BestAI puts this into practice through challenge-based learning that goes beyond learning how AI tools work. Its WebQuests use real-world challenges to help learners explore the use of AI in social entrepreneurship while developing digital, green, entrepreneurial and transversal skills. The project also supports VET educators in integrating AI into teaching in a structured, ethical and practical way.

BestAI is also closely connected to the twin transition. For social economy organisations, the challenge is not simply to become more digital, but to develop the skills and capacity to take part in both the green and digital transitions. The European Transition Pathway for Proximity and Social Economy specifically aims to strengthen the contribution of social economy organisations to these two transitions. BestAI reflects this connection by combining AI learning with green skills and sustainable and ethical uses of technology, particularly in the context of social entrepreneurship.

Another important part of BestAI is the connection it creates between different actors. The rapid development of AI means that VET providers cannot respond to emerging skills needs in isolation from the organisations, professionals and technologies that are changing the labour market. European cooperation policy similarly encourages stronger links between VET and other stakeholders so that training remains relevant to economic and social change. BestAI contributes to this by bringing together VET providers, technology expertise and social innovation actors and creating opportunities for knowledge exchange between these different areas.

BestAI therefore occupies a useful space within the European AI and VET ecosystem. It connects technological knowledge with vocational learning and social entrepreneurship, rather than approaching AI as a purely technical competence. It also responds to the need for closer cooperation between education and the labour market by bringing together partners with different areas of expertise across five EU countries. In this way, BestAI provides a practical example of how AI skills can be developed within VET while keeping ethical use, sustainability, social impact and changing labour-market needs at the centre of the learning process.

3. The BestAI Experience

3.1. Development of the BestAI Ecosystem

3.1.1. The partnership model

The BestAI ecosystem was structured around a collaborative model bringing together complementary expertise in Vocational Education and Training (VET), social

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entrepreneurship, artificial intelligence, digital innovation, communication and policy development. From the outset, the consortium recognised that integrating AI into VET is not solely a technological challenge, but also an educational and organisational one, requiring a multidisciplinary approach and close cooperation across sectors. The project therefore adopted a co-creation approach, whereby all partners contributed to the design, development, testing, validation and refinement of the project outputs.

This model enabled the development of an integrated ecosystem of interconnected resources — the BestAI Digital Incubator, the Empowerment Toolkit, the Guidelines for VET Providers, and the Empowerment Blueprint — which complement one another and address the needs of different target groups. This architecture strengthened the coherence, usefulness and applicability of the project results, while also enabling tailored learning pathways for educators, learners, social entrepreneurs and policymakers.

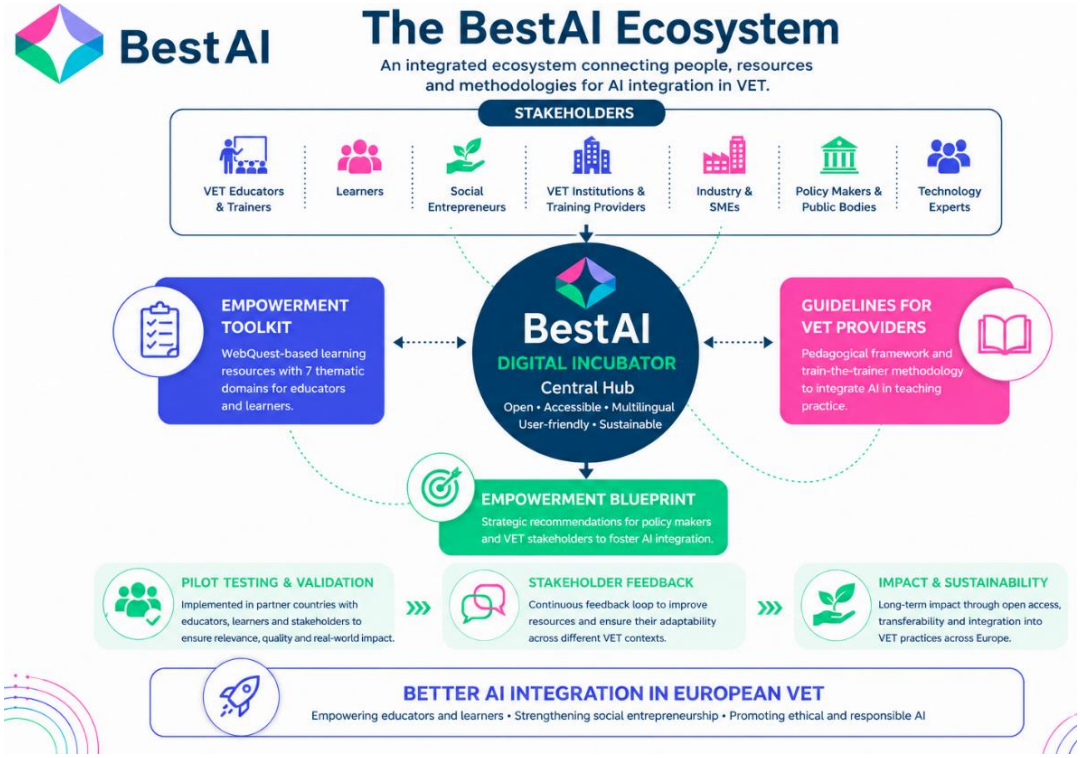
The BestAI experience further underscored the value of combining pedagogical expertise, technological knowledge and communication capacity within partnerships focused on AI integration in VET. Peer review helped ensure the coherence and quality of the outputs, while transnational collaboration made it possible to identify common challenges across different VET systems and adapt the resources to diverse national contexts.

Building on this experience, the project points to the need for broader and more sustained collaboration models, in which VET providers, technology organisations, social economy actors and policymakers work together throughout the innovation process. Such interdisciplinary ecosystems will be essential to ensuring that AI integration in VET remains pedagogically relevant, socially responsible and aligned with the evolving needs of the labour market.

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3.1.2. Stakeholder engagement process

Stakeholder engagement was a cross-cutting principle throughout BestAI, embedded across the entire project lifecycle. Rather than confining consultation to a final validation phase, the consortium adopted a continuous engagement approach that allowed the experiences, needs and expectations of those who would implement and use the project results to be incorporated throughout the process. This approach rested on a key premise: the effective integration of Artificial Intelligence into VET requires not only technological solutions, but also responses adapted to the real capacities and contexts of its users.

The process involved a broad range of stakeholders, including VET educators and trainers, learners, social entrepreneurs, SMEs, technology experts, public authorities and social economy organisations. Their participation spanned needs analysis, consultations, pilot testing, output validation, dissemination activities and discussions throughout the project. This ongoing interaction made it possible to challenge initial assumptions, identify emerging challenges and progressively adapt the resources based on users' experiences.

The evidence collected across participating countries revealed common patterns. Stakeholders recognised the potential of AI to enhance entrepreneurship education, increase organisational efficiency and drive innovation in the social economy. Educators, however, repeatedly expressed uncertainty about how to translate these technologies into their teaching practice, underscoring the need for practical guidance rather than purely theoretical approaches. Ethical considerations, the critical evaluation of AI-generated

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content, and the reliable and responsible use of these technologies also emerged as cross-cutting priorities. Participants consistently called for ready-to-use resources, practical examples and methodologies that could be applied without requiring advanced technical knowledge.

These findings suggest that one of the main challenges to AI adoption in VET lies not only in understanding the technology, but also in having pedagogically sound, accessible and reliable implementation models. The BestAI experience demonstrates that educators' willingness to adopt these tools increases when they are actively involved in the design and validation of resources, and when innovation is approached through practical, learner-centred methodologies.

Beyond the project itself, BestAI underscores the need to make stakeholder engagement a permanent component of AI integration strategies in VET. Educational institutions should establish long-term collaboration mechanisms with employers, technology providers, social economy organisations and policymakers, enabling training programmes to evolve in line with technological developments and labour-market needs. In this process, educators should be regarded not merely as end users, but as co-designers of educational change. Their continuous involvement in the development, testing and evaluation of AI-supported resources contributes to improving their quality, relevance and sustainability, laying stronger foundations for the integration of Artificial Intelligence into European VET systems.

3.2. BestAI Digital Incubator

The BestAI Digital Incubator was conceived as the digital backbone of the BestAI ecosystem, integrating the project's main outputs within a single open-access environment designed to facilitate the responsible adoption of Artificial Intelligence in Vocational Education and Training (VET). From the outset, the consortium recognised that developing innovative resources alone would not guarantee meaningful AI adoption; to generate sustainable impact, these resources needed to be embedded within an accessible, interconnected digital environment capable of supporting educators, learners and aspiring social entrepreneurs beyond the project's implementation period.

Unlike a conventional repository, the Digital Incubator was designed as an integrated learning environment combining educational resources, pedagogical guidance and strategic recommendations within a coherent user experience. The connection between the BestAI Empowerment Toolkit, the Guidelines for VET Providers and the Empowerment Blueprint enables users to move between learning, teaching and strategic reflection according to their needs and level of experience — reflecting an understanding of AI

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learning as a continuous process combining knowledge acquisition, practical experimentation, critical reflection and professional development.

Openness and knowledge transfer are central to the platform. The resources are available as Open Educational Resources (OER), allowing educators, training providers and organisations across Europe to access, adapt and reuse them within their own contexts. Their availability in the consortium's languages further facilitates transfer across different linguistic and institutional settings while removing financial and geographical barriers, thereby maximising the sustainability of the project results and strengthening the exchange of knowledge generated through publicly funded educational innovation.

Accessibility was addressed as a design principle rather than merely a technical requirement. In line with the principles of Universal Design for Learning (UDL), the Digital Incubator incorporates intuitive navigation, progressive learning pathways and a gradual introduction to AI concepts through practical, challenge-based activities, enabling users with different levels of digital competence to build their skills and confidence over time.

The platform was also designed to help reduce the AI divide. Its mobile-friendly design facilitates access for users in rural areas, remote regions and resource-constrained environments, where smartphones may represent the primary means of accessing digital resources, while also optimising performance in low-connectivity settings and incorporating accessibility features such as screen-reader compatibility and high-contrast options. In this way, the project places inclusion and equal opportunities at the heart of the digital transformation of VET.

Implementation of the Digital Incubator confirmed the value of integrating educational resources and pedagogical support within a single environment. During dissemination, piloting and validation activities, participants particularly valued being able to access the different resources through one platform, highlighting its ease of use and the coherence between learning materials and methodological guidance. For educators, having ready-to-use activities combined with pedagogical support facilitated experimentation with new teaching practices — suggesting that a significant barrier to AI adoption lies not only in access to technology, but in the fragmentation of resources and the lack of pedagogical support.

The BestAI experience thus confirms that sustainable AI integration depends as much on pedagogical design as on the technology itself. In a context of rapid technological change, educators need environments that support not only access to content, but also continuous learning, resource adaptation and the exchange of good practices. By remaining available beyond the project's duration, the Digital Incubator strengthens the sustainability, transferability and scalability of the BestAI results.

Looking ahead, the Digital Incubator offers a transferable model for European initiatives seeking to accelerate AI integration in VET. Rather than developing isolated resources, future projects should invest in open, multilingual, inclusive and interoperable digital

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ecosystems that connect educational content, pedagogical support, professional development and strategic guidance — helping to establish knowledge infrastructures that extend beyond individual project lifecycles and foster AI adoption that is equitable, sustainable and aligned with the evolving needs of learners, educators and the labour market.

3.3. BestAI Empowerment Toolkit

The BestAI Empowerment Toolkit constitutes the project's main educational output and the practical foundation of its learning ecosystem. Its development responded to a growing need in Vocational Education and Training (VET): to equip future social entrepreneurs not only with an understanding of Artificial Intelligence, but also with the ability to apply it responsibly, ethically and strategically to complex social challenges. To this end, the Toolkit integrates digital competence, entrepreneurial thinking, critical reflection and social innovation, combining Challenge-Based Learning (CBL), AI literacy and entrepreneurship education within authentic learning contexts.

Building on the CBL methodology, the BestAI Empowerment Toolkit (R1) was structured as a collection of 20 interactive WebQuests aimed at progressively developing AI-related competences. The activities are organised into seven thematic areas covering the main stages of social entrepreneurship: introduction to social entrepreneurship and AI for social good; trustworthy AI and ethical, sustainable prompt design; defining the social cause, mission and vision with AI; AI-driven business models; development of social products and services; social impact measurement; and stakeholder engagement and social marketing with AI. This structure provides a coherent learning pathway for exploring the potential of AI across different stages of entrepreneurship, while maintaining ethics, sustainability and responsible decision-making as cross-cutting principles.

The robustness of the WebQuests was strengthened through the systematic selection and evaluation of digital resources and AI tools: the consortium identified and integrated more than 200 sources and tools, well above the initial target of 100, expanding the diversity and usefulness of the activities. The Toolkit was also translated and adapted into six languages — English, Spanish, Italian, Bulgarian, Greek and Estonian — facilitating its use across different educational contexts and its transfer beyond the partner organisations.

Rather than presenting AI as an isolated technological subject, the Toolkit treats it as a tool for addressing real social and business challenges. Its activities require research, experimentation, collaboration and problem-solving, promoting active and contextualised learning. Implementation experience showed a positive response from both educators and learners to this practical approach, reinforcing the value of Challenge-Based Learning for developing AI competences in VET.

The WebQuest methodology constitutes the pedagogical core of the Toolkit. Rather than positioning learners as passive recipients of information, it turns them into researchers and

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active participants in the learning process. Each activity presents challenges requiring learners to analyse information, cross-check sources, collaborate with others and use AI tools to develop well-founded solutions, while also assessing the quality, reliability and ethical implications of AI-generated content — incorporating the principles of trustworthy AI that underpin the project.

The implementation and validation of the Toolkit highlighted several relevant lessons for AI integration in VET. First, participants showed a clear preference for practical and experiential learning activities, which foster engagement and confidence in using these technologies. Second, AI literacy should be developed alongside critical thinking, ethical awareness and responsible decision-making, with competences such as prompt design, source verification and critical evaluation of AI-generated content integrated transversally into future VET programmes.

Another strength of the Toolkit lies in its focus on transferable competences. Although AI tools and applications are evolving rapidly, the capabilities developed through the WebQuests — critical research, creativity, collaboration, entrepreneurial thinking and responsible problem-solving — retain their value regardless of the specific technologies used, strengthening the sustainability of the resource and reducing its dependence on particular applications.

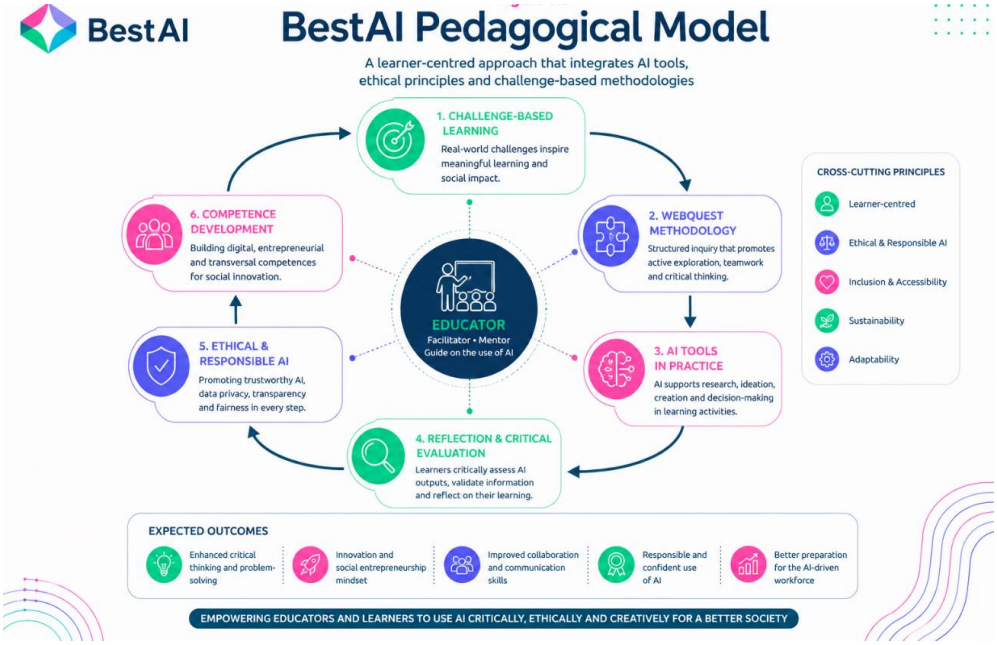
3.4. BestAI Guidelines for VET Providers

The rapid emergence of Artificial Intelligence is transforming not only the competences learners need to acquire, but also the role of educators within Vocational Education and Training (VET). Throughout the implementation of BestAI, it became increasingly evident that one of the main barriers to effective AI adoption was not the availability of digital technologies, but educators' limited pedagogical confidence in integrating these tools into meaningful teaching and learning experiences. Although many educators recognised the potential of AI to enhance learning, they also expressed uncertainty regarding its ethical use, its application in the classroom and its alignment with existing curricula. In response to these challenges, the consortium developed the BestAI Guidelines for VET Providers as a practical framework designed to support educators in adopting AI in a responsible, learner-centred and pedagogically sound manner.

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The Guidelines are not intended as a technical manual of tools, but as a pedagogical resource demonstrating how AI can enrich teaching practice without displacing the central role of the educator. The framework combines Challenge-Based Learning (CBL), experiential learning and WebQuest methodologies with the principles of trustworthy AI, promoting learning experiences that foster critical thinking, collaboration, creativity and social innovation. From this perspective, AI is understood as a means of enhancing learning and supporting learners in addressing real-world challenges in an informed and responsible manner.

A key element is the train-the-trainer approach, based on the premise that sustainable innovation requires empowering educators to design, implement and evaluate their own AI-supported learning experiences. For this reason, the Guidelines prioritise transferable pedagogical competences over training focused on specific tools, while providing the flexibility to adapt methodologies to different institutional contexts, learner profiles and disciplines — fostering a culture of experimentation and continuous professional learning.

The implementation and validation of the Guidelines helped identify common professional development needs. Educators showed a high level of interest in integrating AI into their practice, while also raising concerns related to ethical use, assessment, prompt design, classroom management and the reliability of AI-generated content. Practical work with the BestAI methodology helped strengthen their confidence, particularly by translating abstract concepts into applicable strategies linked to real-world situations. Participants particularly valued the emphasis on responsible and transparent use of AI, the critical evaluation of its outputs, and its integration into existing pedagogical methodologies rather than treating AI as a separate discipline.

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The experience also confirmed that teacher training should be conceived as a continuous process rather than a one-off activity. Educators showed a clear preference for practical methodologies, applicable examples and opportunities for experimentation in real-world contexts over exclusively theoretical approaches. This reinforces the need to accompany investment in infrastructure and technologies with the parallel development of the pedagogical capacities required to use them effectively.

Based on this evidence, BestAI identifies several priorities for future strategies aimed at integrating AI into VET. Professional development should incorporate, alongside digital competences, pedagogical design, critical AI literacy, ethical decision-making and collaborative methodologies. Train-the-trainer models can play a particularly important role by turning more experienced educators into multipliers capable of supporting institutional change and contributing to the development of communities of practice.

3.5. Pilot Testing and Validation

Piloting and validation constituted a key phase of the BestAI project, enabling the assessment not only of the quality and usability of the resources developed, but also of their relevance, applicability and transferability in real Vocational Education and Training (VET) contexts. Rather than treating validation as a final quality-control stage, the consortium integrated it into the design and continuous improvement of the project outputs. The feedback collected made it possible to refine the resources and generate evidence on the conditions required for the effective and responsible integration of Artificial Intelligence into VET.

Validation activities were carried out across all partner countries, testing the BestAI methodology in different educational, cultural and institutional contexts. This transnational dimension made it possible to identify both elements common to European VET systems and context-specific factors, strengthening the robustness and transferability of the project's findings.

The pilot phase achieved 100% of the quantitative participation targets set out in the project proposal. A total of 60 participants — including social entrepreneurs, aspiring social entrepreneurs and VET learners — took part in the implementation of the BestAI Empowerment Toolkit, with 12 participants per partner country. In parallel, 25 VET educators and experts validated the pedagogical framework through the international Learning, Teaching and Training Activity (LTTA) Train-the-Trainer held in Spain, together with complementary national sessions. This dual participation made it possible to assess the project outputs from both the perspective of end users and that of the professionals responsible for implementing them in the classroom.

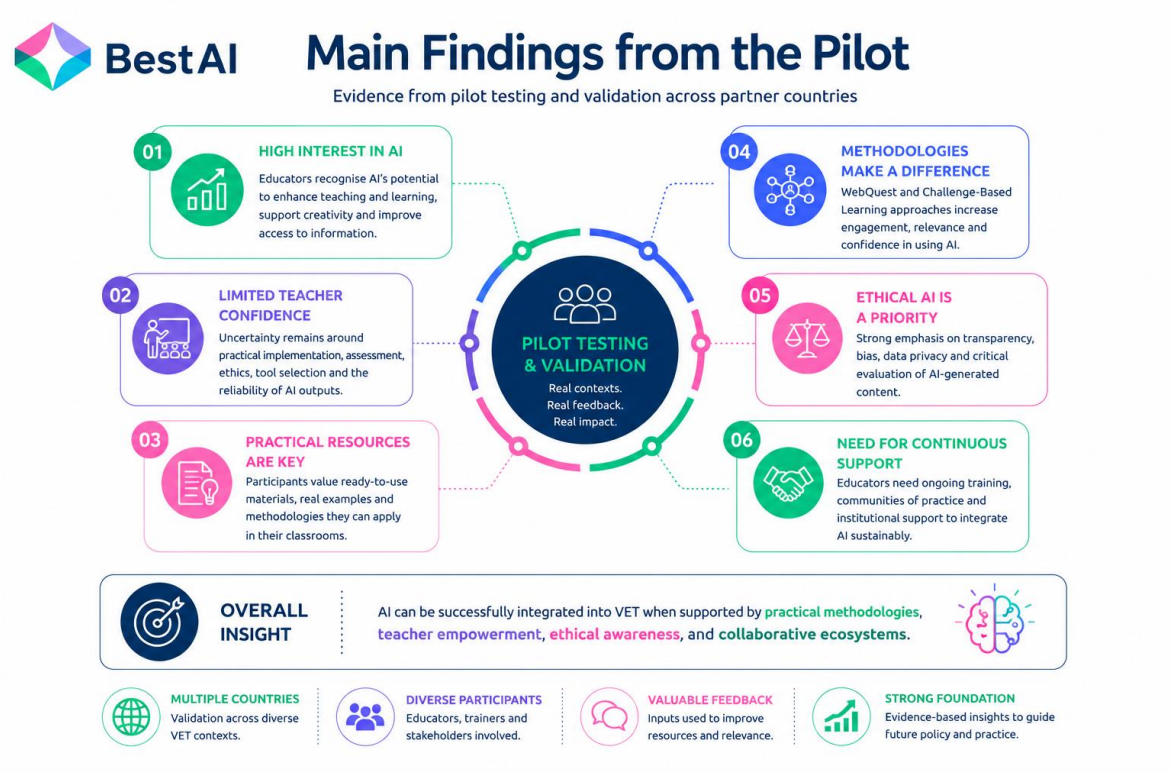
The validation process addressed the BestAI ecosystem as a whole. Participants used the Empowerment Toolkit, reviewed the Guidelines for VET Providers, interacted with the

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Digital Incubator, and completed structured evaluation questionnaires. Beyond assessing individual resources, these activities helped identify pedagogical, organisational and technological needs and conditions relevant to AI integration in VET.



To strengthen the reliability and consistency of the results, the consortium carried out a cross-partner review, comparing outcomes across countries to ensure a consistent interpretation of the evidence. While each partner worked with stakeholder profiles adapted to their national context, the use of common evaluation tools and criteria facilitated the identification of shared patterns across VET contexts, while preserving the specific characteristics of each national experience.

The pilot activities generated notably consistent evidence across the consortium. Participants showed strong interest in the educational potential of AI, recognising its capacity to enrich learning, stimulate creativity, foster entrepreneurial thinking and improve access to knowledge. However, this positive attitude was often accompanied by uncertainty regarding practical implementation: educators consistently identified challenges in selecting appropriate AI tools, designing AI-supported activities, assessing AI-assisted work, and addressing ethical issues such as transparency, bias, data protection and the reliability of AI-generated content. These findings indicate that the main barriers to AI integration are pedagogical rather than technological, reinforcing the need for structured support and practical implementation frameworks.

The validation process also confirmed the effectiveness of BestAI's learner-centred model. Across all participating countries, educators and learners identified the WebQuest

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methodology, Challenge-Based Learning and the Toolkit's practical orientation as among the project's most valuable elements. By applying AI to authentic social and entrepreneurial contexts, rather than treating it as an isolated technological discipline, these methodologies strengthened critical thinking, collaboration and responsible decision-making alongside digital competence — reducing resistance to AI adoption and increasing participants' confidence in experimenting with new practices.

Another key finding concerns the evolving role of educators. The pilot phase showed that teachers need more than access to AI technologies: they require pedagogically grounded guidance, opportunities to experiment, and adaptable resources that integrate into existing curricula. Materials combining methodological support with ready-to-use activities were consistently valued more highly than those focused solely on technological functionality, reinforcing the importance of placing educator empowerment alongside technological infrastructure at the centre of AI integration.

Finally, the process highlighted the cross-cutting importance of ethical and trustworthy AI. Stakeholders across all countries stressed the need to equip learners with the ability to critically evaluate AI-generated outputs, recognise the limitations of automated systems, and make informed, responsible decisions in professional contexts. This confirms that AI literacy should be understood as a multidimensional competence — combining technical understanding, ethical awareness, critical thinking and responsible innovation — rather than merely a set of operational digital skills.

3.6. Lessons learned

The implementation of BestAI generated relevant evidence on the opportunities, challenges and conditions required to effectively integrate Artificial Intelligence into Vocational Education and Training (VET). Beyond the development of innovative resources, the project provided insights into how educators, learners and other stakeholders interact with AI when it is introduced through structured pedagogical methodologies. The experience confirms that sustainable adoption depends not only on access to digital tools, but also on supportive educational ecosystems that combine educator empowerment, learner-centred methodologies, stakeholder engagement and a strong commitment to ethical, inclusive and responsible innovation.

One of the main success factors was the project's holistic approach. Rather than developing isolated outputs, BestAI created an integrated ecosystem comprising the Digital Incubator, the Empowerment Toolkit, the Guidelines for VET Providers and the Empowerment Blueprint, together providing complementary learning pathways for learners, educators and policymakers. The experience demonstrated that combining Challenge-Based Learning, WebQuest methodologies and authentic AI-supported activities encourages learner engagement by connecting technology with real social and entrepreneurial challenges.

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The project also confirmed the central role of educators as agents of digital transformation. Teachers showed greater willingness to adopt AI when given access to practical methodologies, opportunities for experimentation and guidance adapted to their professional contexts — confidence being built through practice and experience rather than technical training alone. Professional development should therefore integrate pedagogical competences, critical AI literacy and ethical decision-making alongside digital skills.

At the same time, BestAI identified barriers that continue to limit AI adoption in VET, including the selection of appropriate tools, the assessment of AI-supported learning, the management of ethical risks and the verification of AI-generated content. The rapid pace of technological development further complicates the continuous updating of resources and competences, with these challenges compounded by differences in digital maturity, organisational readiness and infrastructure — particularly relevant for institutions with limited resources.

These findings show that technological innovation alone does not transform educational practice. Sustainable AI integration requires institutional leadership, organisational commitment, continuous professional development and collaboration among education providers, employers, technology organisations, social economy actors and policymakers. AI should therefore be understood as part of a broader organisational transformation process, rather than simply the introduction of new tools into the classroom.

BestAI also highlighted the relationship between AI and the European Twin Transition. AI literacy can contribute both to digital transformation and to more sustainable innovation practices; in particular, more precise and responsible use of AI tools — including more efficient prompt design — can avoid unnecessary interactions and encourage more conscious use of computational resources. In this sense, AI responsibility should also be addressed from an environmental perspective, aligning digital innovation with European sustainability objectives.

Looking ahead, stakeholders highlighted the need to expand sector-specific practical cases, ready-to-use learning scenarios and examples of AI applications across different professional disciplines, along with strengthened guidance on prompt design, assessment, trustworthy AI, output verification and ethical governance. Communities of practice can also play a key role in facilitating the exchange of experiences and keeping educators' competences up to date in the face of rapid technological change.

One of the main conclusions of BestAI is that AI literacy extends beyond digital competence. Meaningful integration requires the simultaneous development of critical thinking, ethical awareness, creativity, collaboration, an entrepreneurial mindset and problem-solving skills — competences that enable learners not only to use AI tools, but also to evaluate their outputs, recognise their limitations and apply them responsibly in professional and social contexts. Preparing learners for a labour market increasingly shaped

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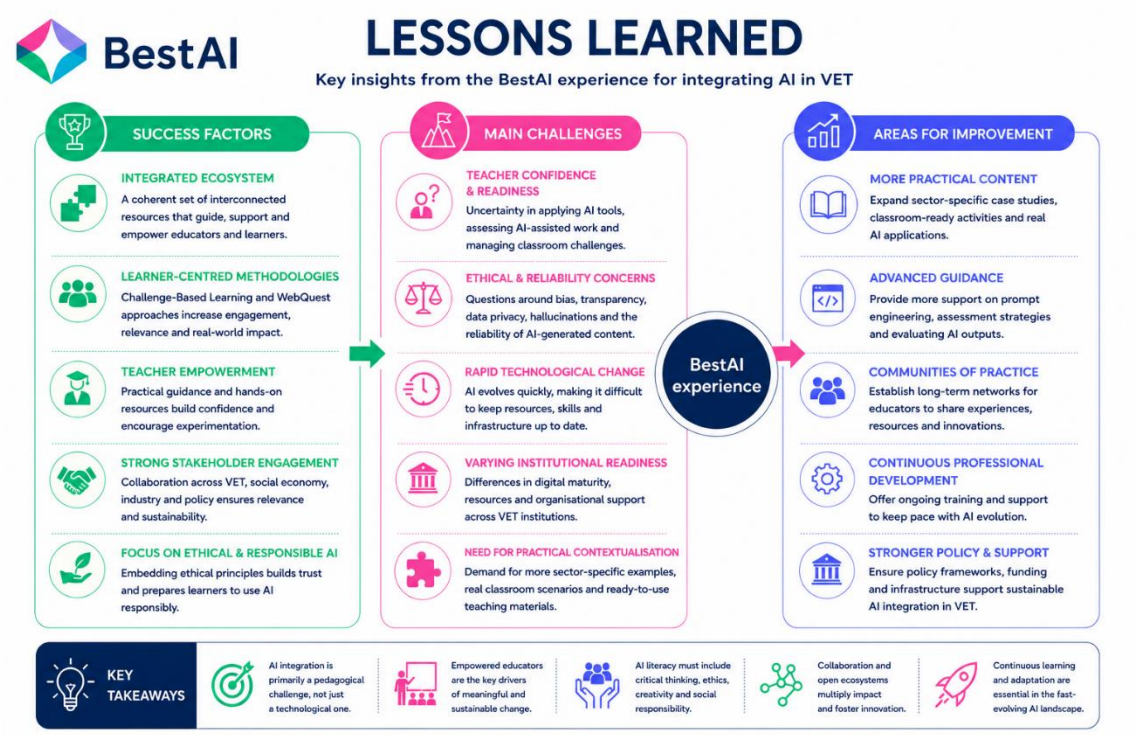
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by AI therefore requires human judgement, responsibility, sustainability and lifelong learning to remain at the centre of the digital transformation.

Key Conclusions

BestAI's experience highlights five strategic lessons for the future integration of AI into European VET:

- AI integration is primarily a pedagogical challenge rather than a technological one.
- Empowered educators are the main enablers of sustainable AI adoption.
- Open, multilingual and interconnected digital ecosystems maximise the impact, sustainability and transferability of educational innovation.
- Continuous stakeholder engagement strengthens the relevance, quality and scalability of AI-related learning solutions.
- Responsible and trustworthy AI should be embedded transversally across VET through learner-centred methodologies that simultaneously contribute to Europe's digital and green transitions.



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4. Stakeholder Consultation Findings

4.1. Consultation Methodology

The development of the BestAI Empowerment Blueprint (R3) is based on a stakeholder consultation designed to gather evidence on the relevance, usefulness and transferability of BestAI resources, while also exploring the broader conditions required for the meaningful, responsible and sustainable adoption of Artificial Intelligence (AI) in Vocational Education and Training (VET) and social entrepreneurship.

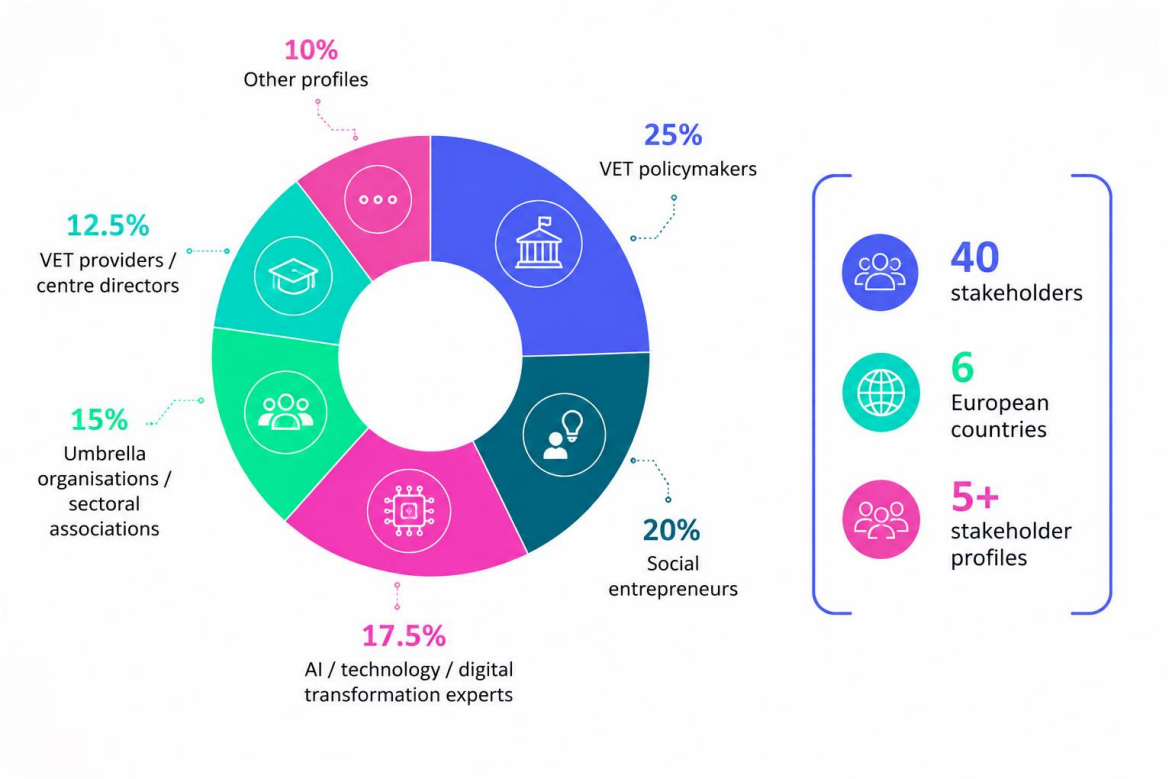
Rather than functioning as a satisfaction survey, the consultation explored stakeholders' perceptions of AI opportunities and challenges, future competences, barriers to adoption, cooperation models, funding mechanisms, responsible AI governance, accessibility and the conditions required to scale AI-related practices in VET. This broader approach reflects the premise that the effectiveness of AI-related educational resources cannot be assessed independently of the institutional, financial, technological and human environment in which they are implemented.

The consultation involved 40 stakeholders from six European countries — Italy (40%), Spain (25%), Bulgaria (15%), Cyprus (15%), Estonia (2.5%) and Belgium (2.5%) — covering a diverse range of professional profiles: VET policymakers (25%), social entrepreneurs (20%), AI, technology and digital transformation experts (17.5%), representatives of umbrella organisations or sectoral associations (15%), VET providers and centre directors (12.5%), and other education- and project-related profiles. This geographical and professional diversity provides a valuable ecosystem perspective, bringing together policy, education, technology and entrepreneurship viewpoints, and capturing not only the needs of VET practitioners but also the wider institutional conditions influencing responsible AI adoption.

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The consultation was conducted through a structured stakeholder questionnaire combining quantitative and qualitative approaches, using three complementary types of questions. Rating-scale questions (predominantly 1–5) assessed the clarity, relevance, accessibility and usefulness of the BestAI resources — including the Digital Incubator, Challenge-Based Learning methodology, WebQuest structure, Empowerment Toolkit and Guidelines for VET Providers — yielding predominantly positive results: 90% of respondents rated the Digital Incubator's accessibility features at 4 or 5, 80% gave the Challenge-Based Learning methodology a rating of 4 or 5, and 92.5% rated the clarity of the WebQuest structure at 4 or 5. Multiple-choice and selection-based questions explored stakeholder priorities regarding AI-related and transversal competences, areas of AI application, cooperation ecosystems, funding instruments, European frameworks, target audiences and preferred content and formats for the Blueprint, allowing convergence across stakeholder profiles to be identified. Open-ended questions allowed stakeholders to elaborate on barriers to AI adoption, AI governance, the AI Divide, VET–industry cooperation, the Dual Transition, and actions considered most effective for accelerating AI adoption — complementing the quantitative results with practical and contextual insight into why certain priorities matter.

The consultation indicates a clear preference for a practical, implementation-oriented Blueprint. Good practices were identified by 82.5% of respondents as a preferred component, followed by policy recommendations (65%), partnership models (57.5%), AI governance guidelines (55%) and implementation roadmaps (50%). In terms of target audiences, VET managers were identified by 92.5% of respondents and trainers by 85%,

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clearly positioning these groups at the centre of the future resource. These findings provide a methodological bridge to the Blueprint itself: rather than being treated as descriptive survey results, they are used to identify stakeholder-informed priorities that subsequently inform the recommendations and cooperation models developed in the Blueprint.

The value of the consultation lies primarily in identifying transferable stakeholder insights and priorities rather than statistically representative estimates of the wider European VET population. With 40 respondents across six countries and varying levels of experience with AI and VET, the sample should be interpreted as an indicative picture of stakeholder perceptions. Accordingly, the Blueprint's recommendations are grounded in empirical stakeholder evidence but are intended as practical, transferable directions for different VET contexts, rather than universal statistical conclusions — with their main value lying in the recurring perceptions, needs and implementation challenges they surface to inform practical measures and recommendations.

4.2. Perceptions of AI in VET

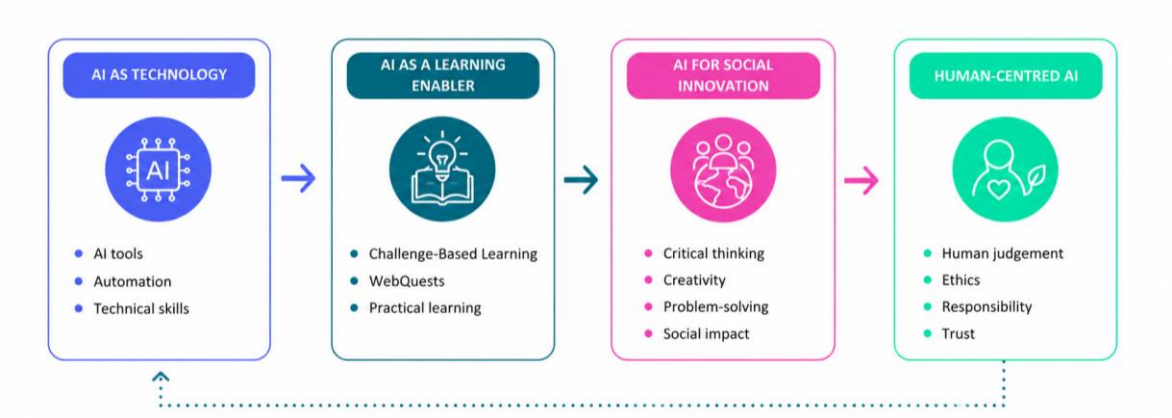
The stakeholder consultation reveals a predominantly positive but pragmatic perception of Artificial Intelligence (AI) in Vocational Education and Training (VET). Stakeholders recognise the potential of AI to enhance learning, support innovation and address real-world social and economic challenges, while showing strong awareness of the limitations, risks and responsibilities associated with its use.

A central message is that stakeholders do not perceive AI simply as a new technological tool to be introduced into VET, but as a potential enabler of social innovation — valued for its capacity to address concrete educational, social, economic and environmental challenges rather than for its own sake. Stakeholders favour a human-centred approach in which AI supports professional judgement, critical thinking, creativity and problem-solving rather than replacing them. This perspective is highly consistent with the BestAI methodology, which connects AI-supported learning with Challenge-Based Learning, WebQuests and authentic social challenges, and is reflected in the positive assessment of the BestAI resources themselves: 92.5% of respondents rated the clarity of the WebQuest structure at 4 or 5, and 80% gave the Challenge-Based Learning methodology a rating of 4 or 5. These results suggest that stakeholders particularly value approaches that move AI away from being an abstract or purely technical subject and place it instead within structured, applicable learning experiences.

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This is particularly relevant to the social entrepreneurship dimension of BestAI. Stakeholders identify education, employment and social inclusion — alongside areas such as healthcare and disability inclusion — as fields where AI can help address social and economic challenges. The implication extends beyond simply increasing AI literacy: AI can act as an enabler of social innovation when learners are equipped to identify problems, evaluate solutions and use technology responsibly to create value for communities.

Stakeholders do not expect VET learners and professionals to become highly specialised AI developers. Instead, they favour a broader competence model combining practical AI use, human and transversal competences, and responsible AI governance, as reflected in the priorities identified for future AI competences: ethical AI governance (70%), prompt engineering (62.5%), human–AI collaboration (62.5%), data literacy (35%) and AI-assisted decision-making (32.5%). AI competence is thus understood as considerably more than the ability to operate a tool: stakeholders associate effective AI use with understanding its limitations, assessing its outputs, maintaining human judgement, and addressing issues such as transparency, accountability, bias, privacy, data protection and intellectual property — competences that remain relevant as AI tools continue to evolve.

The consultation points to several interconnected opportunities for AI in VET and social entrepreneurship: supporting more practical and engaging learning experiences by helping learners explore problems, generate ideas and develop solutions, and addressing concrete social, economic and environmental challenges — reinforcing BestAI's approach of using real-world challenges as the starting point for AI-supported learning. Rather than replacing human competences, stakeholders expect AI to contribute to critical thinking, complex problem-solving and ethical decision-making (each cited by 27.5% of respondents, together accounting for 82.5%), indicating a clear preference for a model in which AI strengthens human capabilities. The consultation also recognises the potential of AI-related resources to support educators and institutions, provided that appropriate training, guidance and implementation support are available — a distinction that matters, since positive perceptions of AI resources do not automatically imply institutional capacity to integrate them sustainably.

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This positive perception is accompanied by significant concerns regarding responsible implementation. Qualitative responses identify algorithmic bias, misinformation, over-reliance on AI and lack of transparency as the most prominent concerns, alongside recurring governance issues such as privacy, intellectual property and accountability. Algorithmic bias is particularly relevant in VET and social entrepreneurship, as AI-supported decisions can affect learners, employment opportunities and socially vulnerable groups — stakeholders therefore expect users to recognise potential biases and critically assess AI-generated outputs rather than treating them as neutral or objective. Misinformation and reliability concerns underline the importance of teaching learners not only how to generate AI outputs, but how to question, verify and contextualise them, while concerns over over-reliance support a human-in-the-loop approach, in which AI assists with tasks and analysis while responsibility for interpretation and decision-making remains with people. Together, concerns over transparency, privacy, intellectual property and accountability show that AI adoption carries implications extending beyond technical competence, requiring users to understand the conditions for safe and responsible use.

Taken together, these findings show that stakeholders see AI as an enabler of social innovation when combined with critical thinking, problem-solving and ethical decision-making, and that BestAI's strongest perceived value lies in connecting AI with structured learning, human competences and authentic social challenges rather than promoting technology for its own sake. These findings provide the direct evidence base for the recommendations developed in Section 6, particularly those concerning competence development, responsible AI governance, institutional capacity-building and cooperation between VET, social enterprises, technology providers and public authorities.

4.3. Main Barriers to Adoption

The stakeholder consultation confirms that the adoption of Artificial Intelligence (AI) in Vocational Education and Training (VET) is not primarily a question of technological availability, but of institutional capacity to integrate AI effectively, responsibly and sustainably into existing educational systems.

Across the consultation, stakeholders identify a combination of financial, skills-related, technological, organisational and regulatory barriers. These barriers are interconnected: limited funding restricts access to infrastructure and training; insufficient staff competences prevent institutions from making effective use of available technologies; and organisational and regulatory uncertainty discourage experimentation even where the necessary technology is already accessible. This points to a central finding: AI adoption in VET should be understood as an institutional change process, not simply the introduction of a new digital tool.

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Financial barriers

Insufficient funding is consistently identified as one of the main constraints on AI adoption and scaling, particularly among NGOs, smaller VET providers and institutions in rural or under-resourced environments. The financial challenge extends well beyond purchasing AI software, encompassing licences, hardware, connectivity, staff training, technical support and the time required for educators to integrate AI into teaching practice. This is especially evident among social organisations, where 60% of respondents rated financial constraints as relevant or highly relevant (4 or 5).

The financial barrier is therefore not simply a question of affordability at the point of purchase: an institution may access an AI platform yet still lack the resources to train staff, maintain infrastructure or dedicate time to implementation. Stakeholders point to a diversified funding approach, identifying Erasmus+ (75%) and ESF+ (65%) as the most

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relevant instruments, alongside ERDF, regional and national funding, private/CSR mechanisms, and targeted grants for rural and low-resource institutions. Funding mechanisms should therefore support not only the acquisition of AI tools, but the wider costs of institutional adoption — staff development, infrastructure, technical support and implementation time.

Skills barriers

The most prominent barrier identified is the capacity of teachers and trainers to use AI effectively. Rather than a lack of available technology, stakeholders highlight whether educators feel prepared to select appropriate tools, understand their limitations, design meaningful AI-supported activities, evaluate AI-generated outputs, and use AI safely in real classroom situations — since access to technology does not automatically translate into adoption without educator confidence and practical knowledge.

The consultation therefore calls for practice-oriented professional development rather than one-off theoretical training: short, hands-on sessions combined with opportunities to experiment in real classrooms, supported by ready-to-use resources and sector-specific approaches connected to real teaching and occupational contexts. This is particularly relevant to BestAI, whose WebQuests, Challenge-Based Learning activities and Guidelines already provide many of the resources stakeholders are asking for — the key challenge being to embed them within a broader capacity-building model. Teacher and trainer capacity-building is thus a central enabling condition: without sufficient human capability, investment in technology or infrastructure is unlikely to translate into sustained practice.

Organisational barriers

Even where funding, infrastructure and AI access are available, organisational conditions can prevent effective integration. Stakeholders point to rigid curricula, limited institutional AI strategies, insufficient leadership support, slow decision-making and difficulty adapting institutional processes to technological change. Curricular rigidity is particularly significant, since AI technologies and workplace practices evolve far faster than traditional curriculum revision cycles — risking learners being trained on tools or practices that are already outdated by graduation.

Stakeholders propose stronger cooperation between VET providers, technology companies, employers and public authorities — through regional skills partnerships, curriculum boards and joint innovation hubs — to keep provision aligned with emerging needs. In practical terms, this points towards more agile models: modular learning units, continuous skills monitoring, and mechanisms for incorporating emerging AI competences without waiting for full curriculum revisions.

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Technological barriers

The consultation also highlights inequalities in the technological conditions required for effective AI adoption. While BestAI's own resources are rated positively on accessibility, stakeholders distinguish between technical accessibility and actual capacity to use AI — a resource can be freely available online and still be difficult to use without reliable connectivity, suitable devices, appropriate software or sufficient digital competences. This is particularly relevant for rural and low-resource institutions, and supports measures such as mobile-friendly and low-bandwidth resources, affordable or open-access tools, shared digital infrastructures, targeted investment in connectivity and equipment, and regional AI sandboxes offering pre-vetted tools. The relevant question is therefore not whether an institution "has AI," but whether it has the infrastructure and technical capacity to use it consistently and meaningfully — a distinction closely tied to the AI Divide discussed in Section 4.6, where technological inclusion requires not only availability but the connectivity, devices, support and competences needed to benefit from it.

Regulatory and ethical barriers

The final barrier group concerns legal, regulatory and ethical uncertainty — around what AI applications are permitted, what data can be processed, how it should be protected, who is responsible for AI-generated outputs, and how risks should be managed. This uncertainty often leads institutions towards a cautious approach, particularly where staff lack knowledge of relevant requirements. The consultation therefore supports practical AI governance guidance rather than reliance on high-level regulatory information alone, with stakeholders identifying the EU AI Act, the European Qualifications Framework (EQF) and DigCompEdu as key reference frameworks. For the Blueprint, this means translating regulatory principles into practical procedures VET managers and educators can apply day to day — treating responsible AI governance not only as a compliance requirement, but as an institutional competence.

Interconnected barriers and institutional readiness

A key conclusion is that these barriers should not be addressed independently: funding without skills does not guarantee adoption; technology without infrastructure does not guarantee access; training without institutional support does not guarantee implementation; and innovation without governance does not guarantee responsible adoption. The barriers form a mutually reinforcing system — an institution may have tools but lack trained staff, trained staff but insufficient time or funding, or adequate resources but remain reluctant to act due to regulatory uncertainty. This is why teacher and trainer capacity-building emerges as the strongest short-term lever for AI adoption: the priority is not simply increasing the availability of technology, but empowering the professionals who determine how, where and why it is used.

These findings point to a shift from a technology-procurement approach towards an institutional readiness approach, spanning five dimensions: financial readiness (sufficient,

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sustainable resources for tools, infrastructure, training and implementation); human readiness (educators with the practical competences and confidence to use AI); organisational readiness (institutional strategies, leadership support and flexible processes); technological readiness (appropriate infrastructure, connectivity and access to suitable tools); and regulatory readiness (clear governance procedures and understanding of responsible, compliant AI use).

This five-dimensional readiness model provides the evidence base for Section 6, translating the barriers identified here into recommendations for policy, institutional practice, professional development, cooperation and inclusive AI adoption. The strategic implication for BestAI is clear: the objective is not to encourage VET institutions simply to use more AI, but to create the conditions in which they can adopt it effectively, responsibly and sustainably.

4.4. Future Skills for Social Entrepreneurs

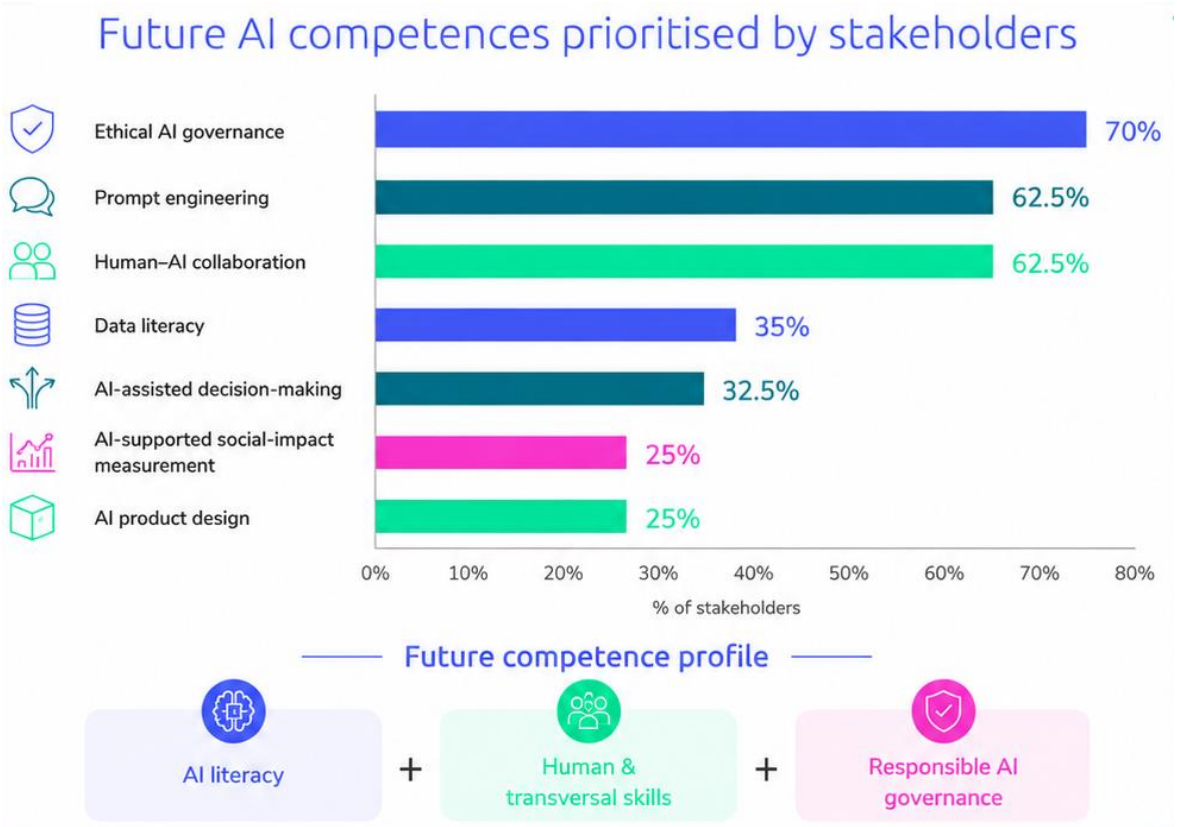
The stakeholder consultation indicates that the future competence profile of social entrepreneurs cannot be reduced to the ability to operate AI tools. As AI becomes increasingly integrated into professional, entrepreneurial and educational activities, social entrepreneurs will require a broader and more balanced set of digital, AI-related, green and transversal competences.

The central message is that future-proof AI competence is fundamentally human-centred. Rather than prioritising technical specialisation, stakeholders emphasise the ability to use AI effectively, collaborate with it, critically evaluate its outputs, govern its use responsibly, and apply it to meaningful social and environmental challenges. AI competence is thus understood as a combination of technological capability, human judgement and social purpose, spanning three complementary dimensions: AI literacy and practical operation (understanding and using AI tools, prompting and data); human and transversal capabilities (critical thinking, complex problem-solving, ethical decision-making and human–AI collaboration); and responsible AI governance (bias, transparency, privacy, intellectual property, accountability and regulatory requirements). This framework provides a strong basis for defining the future skills profile of social entrepreneurs within the BestAI model.

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When asked which emerging AI competences should receive greater attention in future VET programmes, stakeholders ranked ethical AI governance first (70%), followed by prompt engineering and human–AI collaboration (62.5% each), data literacy (35%), AI-assisted decision-making (32.5%), and AI-supported social-impact measurement and AI product design (25% each). These results suggest that future AI competence is understood as a capability for responsible and purposeful use rather than mastery of specific technologies — particularly relevant to social entrepreneurship, where AI's value depends on how effectively it supports identifying needs, exploring solutions and creating social value.

The prominence of ethical AI governance reflects the fact that social enterprises frequently work with vulnerable groups and sensitive information, meaning responsible AI use requires more than technical knowledge — including the ability to manage algorithmic bias, transparency, privacy, intellectual property, accountability, misinformation and the appropriate role of human judgement. Stakeholders clearly regard these governance competences as central to future AI adoption, not an optional addition to technical training, reinforcing the case for embedding responsible AI across learning activities rather than treating ethics as a separate module.

Prompt engineering (62.5%) should not be understood as a narrow technical technique; its value lies in enabling learners to communicate effectively with AI systems, structure tasks and critically assess outputs. For future social entrepreneurs, this can support generating

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and comparing business ideas, analysing social challenges, exploring solutions and structuring social-impact projects. Since an effective prompt does not guarantee a correct or unbiased answer, prompt engineering should be taught alongside verification and critical evaluation, as part of a broader AI literacy framework rather than an isolated skill.

Human–AI collaboration, also selected by 62.5% of respondents, reflects a core principle of the BestAI competence model: AI should augment human capabilities rather than replace judgement. Future social entrepreneurs will need to determine which tasks are appropriate for AI, when human expertise should take precedence, how AI-generated information should be verified, and how responsibility should be maintained in AI-supported decisions — a human-in-the-loop perspective especially relevant where decisions directly affect people and communities.

Stakeholders also placed considerable value on transversal competences: ethical decision-making, critical thinking and complex problem-solving each received 27.5% of responses (82.5% combined), showing that AI is expected to strengthen human capabilities rather than simply improve digital literacy or productivity. Critical thinking enables learners to question the reliability of AI-generated information — particularly relevant given risks of misinformation, bias and fabricated content — and should accompany every practical AI activity. Complex problem-solving connects closely with BestAI's Challenge-Based Learning approach: AI can support analysis and idea generation, but defining the problem and judging solutions remain human tasks, especially as social challenges typically involve multiple stakeholders and contextual factors that technology alone cannot resolve. Ethical decision-making ties AI competence to the purpose of social entrepreneurship itself — entrepreneurs must assess not only whether an AI-supported solution is technically feasible, but whether it is fair, inclusive, transparent and aligned with the needs of the communities affected.

The consultation also situates AI competence within the Dual Transition, linking digital transformation with environmental sustainability. Stakeholders identify areas such as circular economy models, energy communities, resource optimisation and sustainable entrepreneurship where AI and digital tools can support the Green Transition. However, this connection is not yet sufficiently visible across the wider stakeholder group: of the small subset (9 respondents) who answered the specific question on digitalisation and environmental sustainability, 77.7% rated the contribution at 4 or 5, but around a third of the broader sample were unsure or unable to assess it elsewhere in the survey. This points to a communication and competence-development gap rather than any rejection of AI's environmental relevance — green skills need not be framed as a separate technical competence, but can instead be integrated through practical applications such as resource optimisation, circular business models and environmental problem-solving, consistent with BestAI's Challenge-Based Learning approach. For the Blueprint, this translates into a concrete recommendation: make AI's contribution to the Green Transition more visible, for instance by having relevant WebQuests and case studies explicitly identify their sustainability contribution — without overstating specific claims, such as suggesting that expert prompting alone reduces energy consumption.

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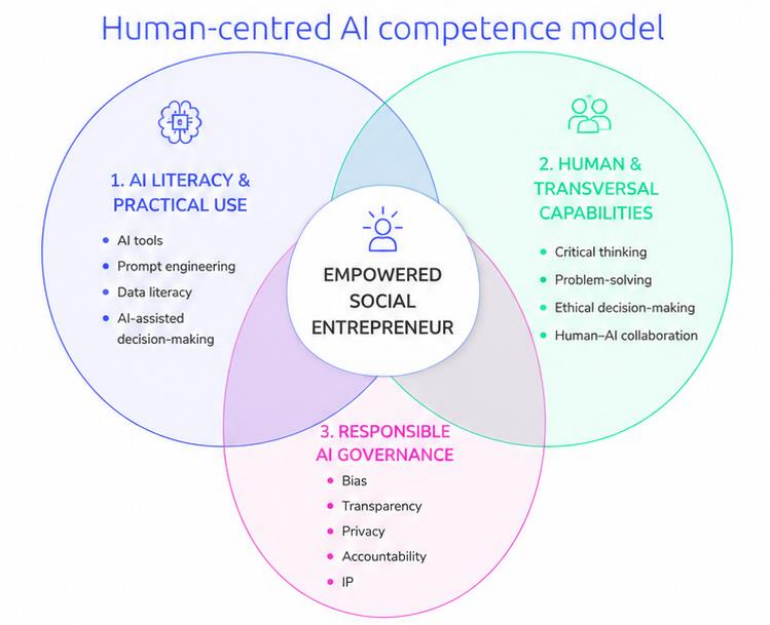
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Beyond specific competences, the future skills agenda carries an important dimension of empowerment and employability. For social entrepreneurs and VET learners, the strategic objective is not simply to know how to use AI tools, but to use them intentionally, critically and professionally to identify opportunities and create social value — a distinction particularly relevant for learners with varying levels of prior digital experience. A human-centred AI competence model can help transform informal digital familiarity into recognised professional competence, strengthening the connection between AI literacy, social inclusion and the AI Divide addressed in Section 4.6.

Taken together, these findings point to a balanced competence profile for the future social entrepreneur, combining: AI literacy and practical use (tools, prompt engineering, data literacy, AI-assisted decision-making); human–AI capabilities (collaboration, critical thinking, problem-solving); responsible AI (ethical decision-making, bias awareness, transparency, privacy, accountability); social entrepreneurship competences (impact measurement, AI-supported product design, challenge identification); and green transition skills (sustainable entrepreneurship, resource optimisation, circular economy, environmental problem-solving). This profile should be treated as an adaptable framework rather than a fixed skill list: as AI technologies evolve, VET provision should prioritise competences that remain transferable across tools and contexts — critical evaluation, human–AI collaboration, ethical judgement, problem-solving, responsible governance, and the ability to apply AI to authentic social and environmental challenges.

Overall, these priorities — a human-centred AI competence framework, practical skills such as prompt engineering and human–AI collaboration, core transversal competences, and a more visible Digital–Green connection — represent Blueprint-level recommendations derived directly from the stakeholder evidence, providing a bridge to the cooperation models in Section 4.5, the measures to prevent the AI Divide in Section 4.6, and the broader policy recommendations in Section 6.



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4.5. Future-proof Cooperation Models

The stakeholder consultation confirms that effective AI integration in Vocational Education and Training (VET) cannot be achieved by VET providers acting in isolation. The rapid evolution of AI technologies, changing labour-market requirements and the complexity of social challenges require continuous interaction between education providers, technology companies, social enterprises, employers, public authorities and other ecosystem actors.

Cooperation already exists across the BestAI ecosystem, particularly between VET providers, social enterprises and public authorities. The comparatively lower level of interaction with technology providers, however, highlights an important opportunity to strengthen ties with actors able to supply up-to-date technological knowledge and labour-market intelligence.

The central message is that AI adoption in VET requires a shift from occasional stakeholder engagement towards structured, continuous and co-creative cooperation. Future-proof cooperation should not simply bring more actors into existing activities; it should establish mechanisms through which stakeholders jointly identify emerging needs, co-design learning provision, share resources, recognise competences and continuously adapt VET to technological and labour-market change — creating a feedback loop between education, technology, the labour market and social needs that traditional curriculum-development processes struggle to sustain on their own.

VET–Technology Partnerships: From Consultation to Co-Design

Stronger cooperation between VET providers and technology companies is identified as an important opportunity for keeping training aligned with technological and workplace developments. Technology companies bring knowledge of rapidly evolving tools and labour-market needs; VET providers contribute pedagogical expertise and an understanding of learner profiles.

Rather than limiting this relationship to occasional guest lectures or equipment donations, stakeholders point towards more structured mechanisms: co-designed curricula, industry-led advisory structures, shared trainers, teacher industry placements, internships, apprenticeships and work-based learning. For BestAI, this means moving from a model in which technology companies are external contributors to one in which they become active partners — jointly identifying emerging skills, developing authentic AI challenges, reviewing learning materials and supporting teacher upskilling. Teacher industry placements are a particularly relevant mechanism, since continuous exposure to industry helps educators keep pace with tools that would otherwise render one-off training quickly obsolete. The evidence therefore supports a model of continuous professional exchange, rather than isolated training events.

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VET–Social Enterprise Partnerships: Connecting Learning with Real-World Challenges

While technology companies provide technological knowledge, social enterprises and NGOs contribute something equally important: the real-world social problems that give AI learning its purpose. Stakeholders identify education (80%), employment (50%) and social inclusion (42.5%) as the leading areas for AI-driven social entrepreneurship, followed by healthcare, disability inclusion and sustainability — reinforcing the value of connecting AI education with authentic community challenges.

Social enterprises can contribute real challenges, case studies and, where ethically justified, relevant datasets, while also mentoring learners, providing feedback and assessing whether proposed solutions genuinely meet community needs. This strengthens the BestAI methodology directly: WebQuests and Challenge-Based Learning can function as an interface between VET institutions and the social economy, following a cycle from real social challenge → learner investigation → AI-supported solution development → stakeholder feedback → refinement → potential social impact. Importantly, this positions social enterprises not as beneficiaries of innovation but as co-creators of learning — helping learners understand that technological solutions should respond to clearly identified human and community needs.

Innovation Hubs and Shared Infrastructure

A third cooperation model is the creation or strengthening of regional innovation hubs and shared infrastructures — mechanisms that reduce the resources required for individual institutions, particularly smaller VET providers, to engage with AI. A regional hub could bring together VET providers, technology companies, social enterprises, universities, employers and public authorities, functioning not as a physical technology centre but as a shared cooperation platform supporting teacher training, experimentation, curriculum development, labour-market intelligence and new partnerships.

By pooling expertise, hardware, software and support rather than requiring every institution to acquire these independently, shared infrastructures can also help reduce inequalities between institutions — directly connecting to the AI Divide addressed in Section 4.6, since ecosystem-based resource sharing helps ensure access to AI expertise is not determined solely by an institution's individual capacity.

Regional Ecosystems: From Partnerships to Continuous Cooperation

The consultation ultimately points towards a broader regional ecosystem model, in which cooperation does not depend on a single relationship between one VET provider and one technology company, but on a network of actors continuously exchanging knowledge, challenges, resources and expertise. Such an ecosystem could operate through a recurring cycle: labour-market intelligence → identification of emerging skills → curriculum co-design

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→ teacher upskilling → authentic learner challenges → work-based learning → competence recognition → employer feedback → curriculum adaptation.

This continuous loop matters especially for AI, since the cooperation mechanism itself must adapt as technologies and social challenges evolve. Each actor's contribution is complementary rather than interchangeable: VET providers bring pedagogical knowledge, technology companies technological expertise, social enterprises authentic social challenges, employers labour-market intelligence, universities research and knowledge transfer, and public authorities enabling frameworks and funding.

Competence Recognition and Microcredentials

For these cooperation models to be sustainable, competences developed through partnerships must be recognised and transferable. Stakeholders identify microcredentials as a mechanism particularly suited to AI, where emerging competences develop faster than traditional qualification systems can adapt. European reference frameworks can support this: the EU AI Act provides the responsible-AI and governance dimension, the European Qualifications Framework (EQF) offers a reference for qualifications and learning outcomes, and DigCompEdu supports the development of educators' digital competences. For the Blueprint, this means cooperation models should not only create learning opportunities but also establish mechanisms for describing, assessing and recognising the competences acquired — increasing their visibility and value for learners and employers.

The Enabling Role of Public Authorities

Public authorities are essential to future-proof cooperation, but the evidence suggests their role is best understood as enabling and coordinating rather than driving cooperation directly. They can provide policy frameworks, appropriate regulation, funding and support for regional partnerships — a role particularly important for smaller VET providers, rural institutions or resource-limited social enterprises. Stakeholders identify Erasmus+ (75%) and ESF+ (65%) as the most relevant European funding instruments for future scaling, with ERDF, regional/national funding and private or CSR funding addressing complementary needs. The Blueprint should therefore position public authorities as ecosystem facilitators — creating the conditions for long-term cooperation, supporting shared infrastructures and aligning local initiatives with European policy and competence frameworks.

From Isolated Projects to Future-Proof Ecosystems

The consultation suggests that future-proof cooperation evolves through three progressive stages: first, from contact to structured partnership, where occasional meetings and isolated projects evolve into formal, continuous cooperation agreements; second, from partnership to co-creation, where partners move beyond contributing resources to jointly designing curricula, challenges and competence pathways; and third, from co-creation to continuous ecosystem learning, where feedback mechanisms allow labour-market developments, technological innovation and social challenges to continuously inform VET provision. This progression shifts cooperation from a transactional

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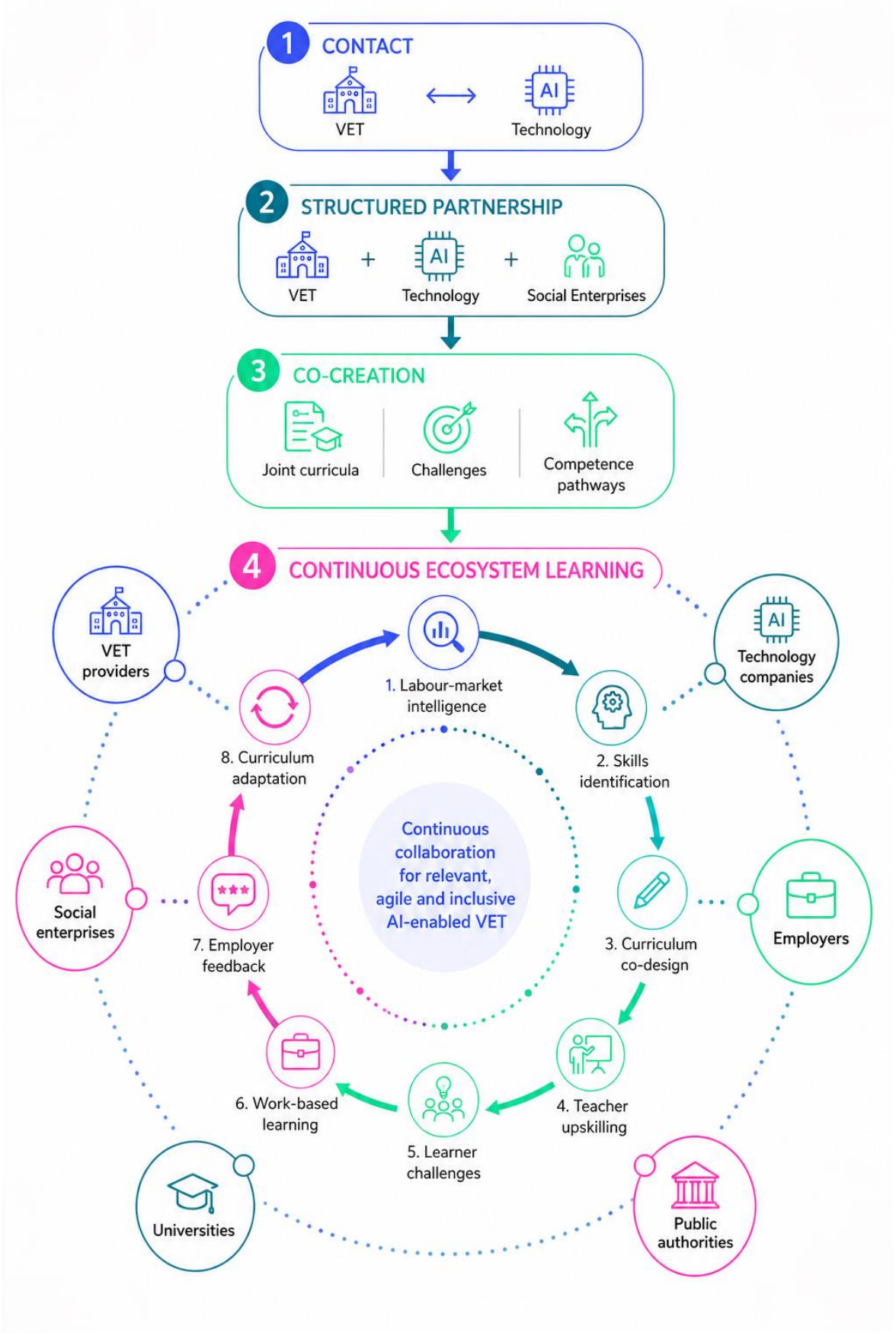
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model — where organisations contribute to individual activities — towards a systemic one, in which partners jointly shape how VET responds to technological and social change, providing a direct bridge to the measures against the AI Divide in Section 4.6 and the policy recommendations in Section 6.

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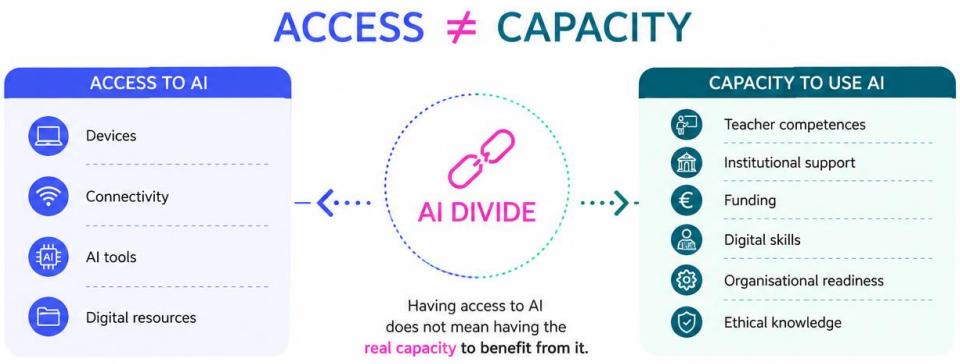
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4.6. Preventing the AI Divide

The stakeholder consultation identifies the emergence of an AI Divide as an important risk for the future adoption of Artificial Intelligence (AI) in Vocational Education and Training (VET).

The concept goes beyond the traditional question of whether individuals or institutions have access to digital technologies. The consultation highlights a broader distinction between having access to AI resources and having the real capacity to use them effectively, responsibly and sustainably — a capacity that depends on connectivity, devices, affordability, institutional resources, staff competences, funding and organisational support. Because VET institutions operate under very different financial, technological and organisational conditions, AI adoption could, without targeted measures, reinforce existing inequalities — a risk the consultation identifies as particularly acute for rural and low-resource VET environments, underscoring the need for inclusive implementation models rather than a one-size-fits-all approach.

This reinforces one of the Blueprint's central messages: AI adoption in VET is fundamentally a capacity-building and ecosystem challenge, not merely a technology-acquisition one. Technical accessibility, while necessary, is not sufficient for inclusion. The BestAI resources themselves receive strong accessibility ratings — 90% of respondents rated the Digital Incubator's accessibility features at 4 or 5 — but good digital resources alone cannot eliminate the AI Divide if learners or institutions lack reliable connectivity, appropriate devices, sufficient digital competences, financial resources, teacher support or institutional capacity to integrate AI meaningfully. The strategic implication is a shift from an "access-first" approach to an "access + capacity" approach: inclusion policies should ask not merely whether a VET provider can reach an AI platform, but whether teachers and learners have the conditions, skills and support needed to benefit from it.



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This risk is particularly pronounced in rural and less-resourced environments, where inequalities in connectivity, devices, affordability and staff capacity can create a reinforcing cycle — limited resources leading to lower access, fewer opportunities to experiment, weaker competences and, ultimately, greater difficulty adopting AI. Breaking this cycle requires targeted rather than generic support, and connects directly to the cooperation models discussed in Section 4.5: regional innovation hubs, shared infrastructures and technology partnerships can give institutions access to resources and expertise that would otherwise remain concentrated among better-resourced providers.

Inclusion-by-design principles should therefore be embedded from the development stage rather than added afterwards. This includes prioritising mobile-friendly, low-bandwidth resources so that limited connectivity or hardware does not become an educational barrier — designing AI learning so that technological limitations do not automatically translate into learning limitations, without lowering the ambition of AI education itself. This principle should be maintained throughout the transfer and exploitation of BestAI's resources, preserving the practical and accessible character of the Digital Incubator, WebQuests and Challenge-Based Learning approach across institutions with different levels of digital maturity.

Financial accessibility represents a further dimension of the AI Divide. Financial constraints are a significant barrier particularly for NGOs, smaller VET providers and rural institutions — 60% of NGO and social-enterprise respondents rated financial constraints as relevant or highly relevant. In response, the Blueprint should encourage free or low-cost AI tools, open educational resources, shared institutional or regional access to premium technologies, innovation hubs, public funding for equipment and connectivity, and targeted micro-grants for rural and low-resource organisations. These should be understood as policy responses informed by the stakeholder evidence, rather than as findings the consultation measured directly.

The AI Divide is not only a matter of infrastructure or individual digital skills — teacher and trainer capacity is equally central. An institution may have adequate devices and connectivity but still fail to deliver meaningful AI learning if educators lack the confidence and competence to use the technology. Infrastructure and professional capacity should therefore be treated as complementary dimensions of inclusion: providing hardware without strengthening educators' ability to use it may close the access gap without closing the actual capability gap — a concern especially relevant in rural and low-resource institutions, where staff often have fewer opportunities for specialised training or experimentation.

From the learner's perspective, inclusive AI education should ensure that differences in socioeconomic, geographical or institutional circumstances do not determine who develops meaningful AI competences. This requires learning environments where learners can engage through different devices and levels of connectivity, receive appropriate guidance, and develop critical rather than purely operational AI competences — connecting the AI Divide directly to the future skills framework in Section 4.4, since inclusion should

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not be reduced to tool access but should also build the critical thinking, problem-solving and governance competences needed to participate responsibly in the AI transition. This is especially relevant to social entrepreneurship, where AI should reduce rather than reproduce social inequalities.

An important contribution of the consultation is framing the AI Divide as an institutional, not only an individual, capacity problem. The gap between well-resourced and low-resource VET institutions may span specialised staff, high-performance equipment, paid AI tools, technical support and funding for experimentation. Left unaddressed, this could produce a two-speed VET system, in which some institutions continuously innovate while others struggle to access basic AI resources. The policy challenge, therefore, is not to make every institution identical, but to ensure that differences in institutional resources do not translate into fundamentally different opportunities to participate in the AI transition — reinforcing the ecosystem approach of Section 4.5, where cooperation functions as a mechanism for inclusion as much as for innovation.

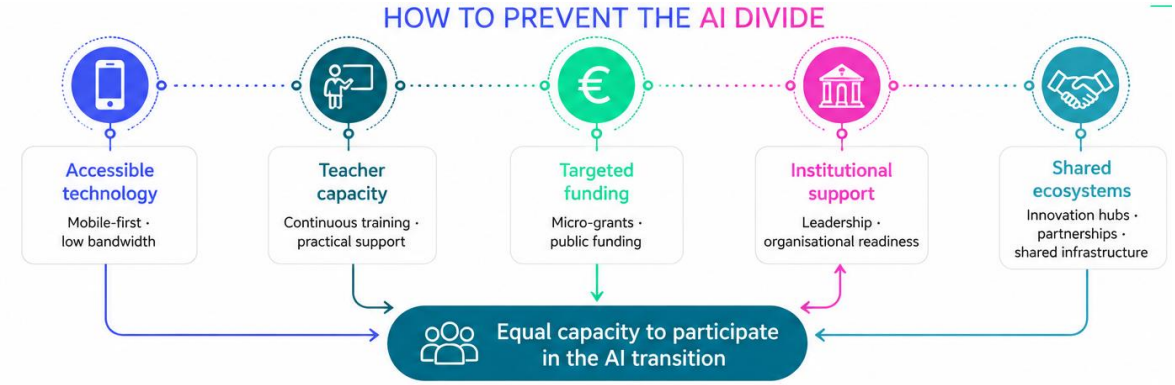
Funding should accordingly be treated as an instrument for preventing inequality, not merely an implementation requirement. Stakeholders identify Erasmus+ (75%) and ESF+ (65%) as the most relevant instruments for future scaling, with ERDF and regional or national funds seen as relevant for infrastructure and connectivity. A differentiated funding model could allocate Erasmus+ and ESF+ to teacher and trainer skills and transnational cooperation, ESF+ to employability and inclusion, ERDF and regional funds to equipment and connectivity, private or CSR funding to company partnerships, and targeted public funding or micro-grants to rural and low-resource institutions — helping ensure that AI investment does not disproportionately benefit institutions that are already well equipped to innovate.

Ultimately, preventing the AI Divide should go beyond compensating for disadvantage. The goal is to shift from a deficit-based approach ("supporting those who are behind") to a participation-based approach ("building the capacity of all actors to participate"). For BestAI, this means combining accessible resources with practical teacher training, institutional support, appropriate funding and opportunities for cooperation — building on the strong stakeholder assessment of the Digital Incubator, WebQuests and Challenge-Based Learning as a foundation for scaling this approach across institutions with different levels of digital maturity.

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These findings point to four complementary priorities for preventing the AI Divide: (1) accessible technology and infrastructure, including inclusion-by-design and mobile-friendly, low-bandwidth solutions; (2) human and institutional capacity, through continuous teacher and trainer development and shared regional infrastructures; (3) financial and ecosystem support, through differentiated funding and targeted micro-grants; and (4) inclusive and responsible learning environments, ensuring AI is applied to genuine social needs rather than reinforcing existing inequalities. The greatest risk is not that some VET institutions will choose not to use AI, but that institutions and learners will enter the AI transition with radically different levels of capacity. Preventing the AI Divide should therefore be understood as a cross-cutting principle linking the findings on skills, cooperation, funding and governance developed throughout this chapter — providing a direct bridge to the policy recommendations in Section 6, which should focus on creating the financial, institutional, technological and cooperation conditions needed to make the benefits of AI-enabled VET accessible across different geographical, institutional and socioeconomic contexts.

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5. Infrastructure and Organisational Readiness for AI Adoption in Social Economy VET

The aim of this section is to turn the evidence of the earlier sections into practical guidance. The consultation was clear about what people wanted from the Blueprint. Good practices came first, chosen by 82.5% of respondents, followed by policy recommendations (65%), partnership models (57.5%), AI governance guidelines (55%) and implementation roadmaps (50%). The audiences are VET managers, named by 92.5%, and trainers, named by 85%. The section follows that order: governance rules, curriculum, competences, teaching and assessment, the training educators need, the organisational conditions, and finally what happened when the BestAI materials were tested with real learners in five countries.

Two main principles run through everything below. First, adopting AI is a change process for the whole organisation, not a purchase, which is why Section 4.3 describes readiness in five dimensions. And second, the social economy VET works under serious limits: small budgets, small teams, work with vulnerable groups, and accountability to communities rather than shareholders. Responsible and low-cost approaches are therefore the only workable option. Everything proposed here can start at a low level of digital maturity and grow with capacity, in line with the Social Economy Action Plan.

5.1. Principles for Responsible AI Integration

Ethical AI governance was the competence stakeholders most wanted attention paid to, chosen by 70% of respondents, ahead of every technical skill. Their main worries were algorithmic bias, misinformation, over-reliance on AI and lack of transparency. In this sector these are not abstract risks, because social enterprises work with vulnerable groups and sensitive information every day, and a decision supported by AI can affect someone's learning path, job prospects or access to a service. **Seven rules follow, and they apply across curriculum design, teaching, assessment and management**.

1. Human agency	2. Purpose before tool
People define the problem and take the decision; AI assists. In every AI-supported task there is a clear moment when a person reviews the result and accepts, changes or rejects it, and a named person who answers for it.	AI answers an identified educational or social need. Where a simpler method works equally well, it is preferred.

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3. Transparency

State when AI was used, for what purpose and with what limitations, to learners, staff and beneficiaries.

4. Data protection

If personal or beneficiary data must be processed at all, use a tool with a documented legal basis, a data processing agreement and a set retention period, as the General Data Protection Regulation requires.

5. Fairness and bias

Treat outputs as fallible; ask who may be misrepresented or excluded, and verify against primary sources.

6. Inclusion by design

Build resources that work on modest devices and slow connections, in plain language and accessible formats, so that taking part does not depend on how well funded an organisation is. This is the practical form of the AI Divide in Section 4.6.

7. Environmental proportionality

Acknowledge the computational cost of AI use and weigh it against the benefit obtained.

These rules line up with the European reference points stakeholders named themselves. Article 4 of the EU Artificial Intelligence Act has applied since 2 February 2025 and was amended in July 2026 by the Digital Omnibus on AI (Regulation (EU) 2026/1744). It now asks providers and deployers to take measures that support the development of AI literacy among the staff who use their systems, without guaranteeing a set level for any individual. Educator capacity is therefore a compliance question as well as a teaching one. Annex III(3) of the same Regulation treats four uses as high risk: deciding access or admission to education and training, evaluating learning outcomes, judging the level of education a person will be able to reach, and monitoring behaviour during tests. These are the four places where social economy VET providers should be most careful, and in most cases should not let AI decide anything on its own. The Commission's 2026 Guidelines on the ethical use of artificial intelligence and data in teaching and learning for educators give the practical companion to these duties, with guiding questions and scenarios that an organisation can adopt as they are.

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5.2. Curriculum Design Principles

Rigid curricula were named in the consultation as one of the biggest organisational barriers. AI tools and workplace practice change far faster than a curriculum can be revised, so learners risk being trained on tools that are out of date by the time they finish. Revising more often is not the answer, because most social economy providers cannot resource it. Design the curriculum so that it absorbs change instead.

- **Design for what transfers, not for tools** - write outcomes around what the learner can do with AI: evaluate a result, structure a task, spot a risk, justify a decision. An outcome like "critically evaluates AI-generated information against primary sources" survives every change of tool. One that names a particular assistant does not.
- **Work in short, bite-sized modules** - short units of 4 to 12 hours each, with its own outcomes and assessment, let you replace one module instead of reopening a qualification. They are also easier to recognise. For example, the Council Recommendation of 16 June 2022 on micro-credentials sets out the standard elements that make a unit portable, namely the identified learner, the outcomes, the workload, the level and the quality assurance.
- **Teach responsible AI inside every activity** - every AI-supported activity should carry its own governance step, where the learner chooses a tool, uses it, checks how reliable and how biased the result is, considers who could be harmed and explains the final decision. This is the design choice the consultation supports most consistently.
- **Start from a real social problem** - in line with the Challenge-Based Learning method validated in the BestAI project pilots, a unit should begin with a problem offered by a social enterprise, a community organisation or a public service. Respondents saw the greatest potential in education (80%), employment (50%) and social inclusion (42.5%), and those are the fields where real problems are easiest to find.
- **Map to EU frameworks at the design stage from the beginning** - it is strongly recommended to link the learning outcomes to the European Qualifications Framework and to DigComp 3.0 while designing them than to do it afterwards. DigComp 3.0 is the fifth edition of the European Digital Competence Framework and treats AI as a thread running through all 21 competences rather than as a separate area. For staff training, the reference is DigCompEdu. This mapping is also what makes a course transferable between the different national VET systems that social economy organisations work in. Where entrepreneurship outcomes are involved, EntreComp provides the reference through its three areas of ideas and opportunities, resources and into action. Where sustainability outcomes are involved, GreenComp provides twelve competences in four areas.

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5.3. AI Competency Framework for Social Entrepreneurs

Stakeholders do not expect VET learners to become AI developers. **They expect them to use AI with a purpose, judge it critically, govern it responsibly and apply it to social problems**. Section 4.4 above presents this as a human-centred competence model with three connected dimensions. Figure below turns it into the reference a provider needs in order to design and assess a course, pairing each competence with the outcome you should be able to observe in a learner.

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Dimension 1 AI literacy and practical use	Dimension 2 Human and transversal capabilities	Dimension 3 Responsible AI governance
Highest rated: Prompt engineering (62.5%): structures a task, states it precisely, refines it. Data literacy (35%): identifies the source, quality and limits of the data. AI-assisted decision-making (32.5%): uses AI output as one input in a documented decision. AI product and project management (12.5%): plans and runs a piece of work that uses AI, with roles and checkpoints. ***Additional competences recommended:*** Capabilities and limitations: explains what a system can and cannot reliably do. Tool selection: picks a tool for a defined task and justifies it.	***Highest rated:*** Human and AI collaboration (62.5%): decides which parts of a task may be handed over. Critical thinking (27.5%): questions a result and checks it against sources. Complex problem-solving (27.5%): frames the problem and judges the solution. Ethical decision-making (27.5%): asks whether a solution is fair and inclusive. ***Additional competences recommended:*** Communicating AI-supported results: explains an AI-supported result to non-experts.	***Highest rated:*** Ethical AI governance (70%): applies the rules on permitted and prohibited use. *AI auditing (10%):* checks an AI-supported process against the rules and records the result. ***Additional competences recommended:*** Bias and transparency: spots who may be misrepresented, discloses AI use. Privacy and data protection: knows what data may lawfully be processed. Intellectual property: establishes ownership and permitted reuse. Accountability and compliance: names who are answerable under the AI Act and GDPR.

Cross-cutting competences for the social economy: measuring social impact with AI (25%), designing products and services with AI (25%), and AI and sustainability (2.5%), which works best built into the challenges rather than taught on its own.

Operational AI competency reference* for social entrepreneurs

**Every competence carrying a percentage was an option in the consultation's questions on emerging AI competences and on the competences AI should strengthen, and the figure shows the share of the 40*

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stakeholders who chose it. The items under "Additional competences recommended" come from the open answers.

Read the framework as a profile that can be adapted, not as a fixed list. The competences with the strongest support, such as critical evaluation, ethical judgement, working with AI and problem-solving, are exactly the ones that stay valid when tools change. For each programme, decide which competences every learner needs and which are for specialists, and express both at a defined EQF level so that they can be recognised and carried elsewhere. The one balance worth protecting is between the three dimensions: a course that develops only Dimension 1 produces learners who can operate a tool without judging it, which is exactly the outcome stakeholders said they wanted to avoid.

5.4. Teaching and learning approaches

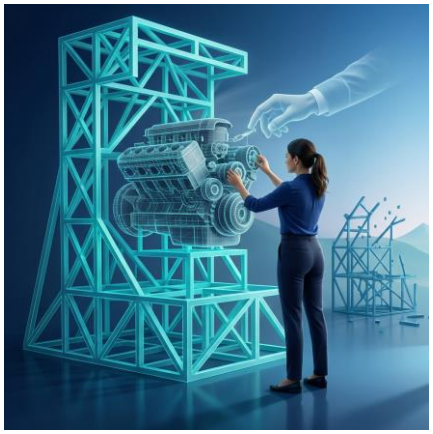
The national pilots of the BestAI main results and the Blueprint consultationc held in all 6 partner countries point to the same conclusion - **learners respond best to practical, structured, hands-on work, and they value resources that put AI inside a concrete task**. The WebQuest structure received the highest rating of any BestAI resource, with 92.5% rating the clarity of its six building blocks at 4 or 5, and Challenge-Based Learning was rated 4 or 5 by 80% of respondents.

Both should stay at the centre, with the additions below.

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Give the challenge a real owner	Engagement rises when the problem belongs to someone. If a social enterprise, a municipality or a community organisation presents it at the start and receives the learners' proposals at the end, the work carries a responsibility no invented brief can create.	
Keep the inquiry structured	The WebQuest sequence of introduction, task, selected resources, process, evaluation criteria and conclusion works as a safe learning approach, because learners use AI inside a defined task and against defined criteria instead of in open-ended conversation.	
Move from guided to independent use	Learners should first watch a task being done, then do one with a template, then design their own approach. This lets mixed groups take part without the most digitally confident learners setting the pace, which matters in social economy VET where groups are usually mixed.	

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Let learners explain to each other	Asking learners to explain their prompting choices and their judgement of a result to their peers brings out misunderstandings that private work hides, and it reduces the amount of trainer support a small organisation has to provide.	

In addition, strong engagement also depends on practical accessibility. Following the Universal Design for Learning Guidelines, an activity should offer more than one way in and more than one way out. A written brief can be paired with an audio or visual alternative, and learners can hand in a document, a recording or a presentation. Together with mobile-friendly, low-bandwidth resources and free or low-cost tools, this addresses the gap in participation described in Section 4.6 above and keeps learners in rural and less well funded settings inside the activities that build the most valuable skills.

5.5. Assessment Approaches

The main challenge the consultation identified here is over-reliance on AI, named by respondents among their most prominent concerns. At root this is a challenge about assessment rather than about learners. Assessment based on a finished product cannot tell competent AI-supported work from work that was simply handed over, because if the thing being marked is a text, and a text can be generated, the assessment no longer proves the competence it claims to measure. This is why assessment should move away from the product and towards the process and the judgement behind it.

- **Assess how the learner worked**. Ask for the task they set themselves, the tools they chose and why, the prompts and revisions, what they accepted, what they rejected and on what grounds. A short process log handed in with the product is enough and needs no special software.
- **Ask for justification and checking**. Every AI-supported claim should be traceable to a source the learner has checked, and the criteria should give credit for spotting an error, a bias or a limitation. That reverses the incentive which otherwise rewards uncritical use.
- **Set the task in a real situation**. Assessment built around a real challenge with a real audience is harder to substitute.
- **Keep an oral or practical part**. A short conversation in which the learner explains and defends their decisions is the cheapest safeguard a small provider has, needs no technology, and assesses the human and governance dimensions at once.

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- **Cover all three dimensions**, since a mark that reflects only the product measures Dimension 1 alone.

There is no need to build the criteria from nothing. DigCompEdu covers assessment in its fourth area, through three competences: assessment strategies, analysing evidence, and feedback and planning. It gives a shared vocabulary for describing what a provider already does and what it wants to add. The Commission's 2026 guidelines for educators offer scenarios and guiding questions that a team can use as they are in a staff meeting. The BestAI WebQuest structure already contains an evaluation step, so a provider adapting a WebQuest inherits assessment criteria rather than writing them from scratch.

Below is a short Checklist template for assessing an AI-supported task that you can directly use alongside a short oral check. This template turns the points above into six questions that apply to any AI-supported task.

Check	Yes	Notes
The learner stated the task and why each tool was chosen		
The prompts and revisions are visible in the process log		
Every AI-supported claim is traced to a checked source		
The learner identified at least one error, bias or limitation		
The learner explained the final decision in their own words		
The criteria cover human judgement and responsible use, not only the product		

Template 1. Checklist for assessing an AI-supported task

One serious warning should be taken into consideration at organisation level - if an AI tool supports the assessment decision itself, whether marking, progression or admission, the organisation is in the high-risk area defined by Annex III(3) of the AI Act. Any such use should stay advisory, a qualified person should take and explain the decision, and learners should be told. Publishing a short plain-language statement of what AI use is allowed in each

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assessment also helps, because uncertainty about the rules stops learners from acting at all.

5.6. Infrastructure and Organisational Readiness

The barriers analysed in Section 4.3 of the current document reinforce each other rather than standing alone. Funding without skills does not produce adoption. Technology without infrastructure does not produce access. Training without institutional support does not produce practice. Innovation without governance does not produce responsible use. Readiness therefore has to be looked at across all five dimensions at once, because the weakest one decides what an organisation can sustain. Figure below shows what each looks like at three stages of maturity and can be used directly as a self-assessment tool.

Dimension	Stage 1: Emerging	Stage 2: Developing	Stage 3: Embedded
Human (Skills)	Individual staff experiment informally	A trained core group delivers AI-supported activities	AI capacity is part of induction and annual development
Organisational	No institutional position; case-by-case decisions	AI statement, named lead and tool register in place	AI use built into curriculum, quality assurance and strategy
Technological	Ad hoc use of free tools on personal devices	Vetted tool set, adequate connectivity, mobile fallbacks	Shared or pooled infrastructure with defined support
Regulatory	Uncertainty about what is permitted deters action	Documented rules on data, disclosure and high-risk uses	Governance reviewed periodically; learners informed
Financial	No dedicated budget; costs absorbed informally	Project or grant funding covers tools and training	Blended funding covers licences, staff time and support

Institutional readiness for AI adoption: five dimensions across three stages of maturity

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Technological readiness is judged by whether it is enough, not by how advanced it is. The working baseline is a reliable connection, devices good enough for browser-based tools, a small set of checked free or low-cost applications, and a mobile-friendly version of every core resource. Adoption does not have to mean significant purchasing: shared regional infrastructure, pooled licences and pre-checked, GDPR-compliant tool environments were proposed repeatedly in the consultation, and they are also the most effective structural answer to the AI Divide.

Organisational readiness rests on four short documents that even a small organisation can produce in a few weeks: a one-page statement of what AI use is allowed, restricted and forbidden; a named person responsible for AI questions, with time allocated rather than a title added; a register of approved tools recording the purpose, the data allowed and the review date; and the inclusion of AI use in the induction and quality processes that already exist.

Templates for these are provided below.

Question	Our answer	Reviewed on
Why we use AI		
What staff and learners may use it for		
What it may not be used for		
What data may never be entered into a tool		
How we tell learners that AI was used		
Who answers questions about AI here		

Template 2. One-page institutional AI statement

Tool	What we use it for	Data allowed	Cost	Review date

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Template 3. Register of approved AI tools

Regulatory readiness follows from the same documents, because a written internal position settles more uncertainty than external guidance does.
Financial readiness means budgeting for the full cost, which includes licences, connectivity, devices, staff time, training and support, and points to a blend of Erasmus+ (75%) and ESF+ (65%) with regional, national and private sources.
Human readiness has the strongest short-term effect.

6. Policy Recommendations

The findings from the transnational stakeholder consultations, incorporating empirical evidence from partner regions across Italy, Spain, Bulgaria, Cyprus and Estonia, demonstrate that the successful adoption of Artificial Intelligence in Vocational Education and Training (VET) requires a systemic transition from localized pedagogical experimentation to structured governance. Stakeholders across all participating countries consistently highlight that the primary barriers to adoption are organizational, legal, and educational rather than purely technological. To ensure that AI technologies enhance social entrepreneurship, support the twin digital and green transition, and promote social inclusion without exacerbating digital inequalities, the following strategic recommendations are proposed for key institutional actors across the European educational ecosystem.

6.1. Recommendations for European Policymakers

European educational authorities should clarify operational guidelines under the European Union AI Act, specifically addressing the intersection of Annex III and Article 4 within educational contexts. Because systems evaluating learning outcomes or determining educational access carry high-risk classifications, clear regulatory frameworks must define the boundaries for deployers of AI tools. Crucially, operationalizing the AI literacy mandate established in Article 4 represents the vital prerequisite for safe adoption, ensuring that educators understand their legal responsibilities regarding data privacy, transparency, and algorithmic bias when facilitating AI-supported learning activities.

To build long-term institutional coherence, European frameworks must align vocational AI competencies with established benchmarks, specifically the European Digital

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Competence Framework for Educators (DigCompEdu) and the European Qualifications Framework. Establishing recognized European micro-credentials for ethical AI facilitation and prompt logic will provide VET trainers with validated professional pathways transferable across Member States. Furthermore, priority must be given to aligning AI literacy with European governance frameworks to prevent fragmented national standards.

European funding mechanisms should establish dedicated bridging instruments to transition proven pilot initiatives into permanent educational policies. While programs such as Erasmus+ provide essential capital for design and initial validation, long-term sustainability requires leveraging the European Social Fund Plus (ESF+), the Recovery and Resilience Facility, and Regional Operational Funds. These financial mechanisms should prioritize securing public, open-access digital infrastructure and subsidized licensing models, ensuring that under-resourced and rural training centers can maintain continuous access to state-of-the-art AI tools without imposing costs on learners.

6.2. Recommendations for National and Regional Authorities

National and regional educational authorities should prioritize the immediate implementation of certified, practical AI professional development programs for VET educators. Stakeholders across surveyed regions identify the lack of practical teacher training as the single most critical bottleneck impeding adoption. Over the next twelve months, public authorities should integrate hands-on AI pedagogy modules into national Continuous Professional Development registries, granting teachers formal professional credits and equipping them to shift from traditional subject-matter instructors to critical, ethical learning facilitators.

To prevent the emergence of an AI Divide between elite urban academies and under-resourced, rural, or mobile-only educational centers, public administrations must guarantee equal access to baseline digital infrastructure. Policy interventions should incentivize the adoption of low-bandwidth, open-access, and mobile-optimized educational frameworks. Educational authorities should actively distribute pre-vetted, open educational resources that function effectively on basic devices, ensuring that geographic location and institutional budget limitations do not dictate a learner's digital opportunity.

Regional authorities should modernize national qualification standards through interprofessional work networks that bring together VET providers, technology enterprises, social economy actors, and public administrators. Curricula should be updated to formally recognize transversal digital competencies, including prompt engineering logic, empirical fact-checking, algorithmic verification, and human-in-the-loop auditing. Establishing stable interinstitutional consultation spaces ensures that vocational training standards continuously adapt to real-time labor market demands.

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6.3. Recommendations for VET Providers

VET institutions should implement structured pedagogical models, such as Challenge-Based WebQuests, to serve as safe container environments for classroom AI utilization. Guided inquiry frameworks constrain student interactions within pre-vetted research parameters and defined task boundaries, preventing unguided internet exposure, reducing data privacy vulnerabilities, and upholding compliance with European General Data Protection Regulation (GDPR) standards.

Institutional leaders should mandate process-based assessment methodologies that evaluate how students interact with digital tools rather than judging final outputs alone. The adoption of mandatory AI Use Logs requires learners to document their prompt sequences, justify accepted or rejected AI suggestions, and cite independent non-AI primary sources. This approach reinforces critical evaluation, protects academic integrity, and places human judgment at the center of the learning process.

VET providers must establish clear institutional data governance protocols protecting student privacy and enterprise ideas. Institutions should formulate explicit guidelines prohibiting staff and learners from inputting personal information or proprietary data into unvetted commercial models. Concurrently, institutional management must support interdisciplinary teaching teams, fostering collaborative environments where technical specialists and vocational trainers can jointly design ethically sound learning activities.

6.4. Recommendations for Technology Companies

Technology enterprises should provide public VET institutions with dedicated non-profit access tiers, enterprise APIs, and GDPR-compliant sandbox environments. Guaranteed zero-data-retention agreements and robust privacy safeguards are necessary to enable educational institutions to legally and safely integrate modern large language models into daily instruction without violating student data sovereignty.

Tech providers should actively participate in dual-VET public-private partnerships, co-designing domain-specific prompt libraries, practical sandboxes, and modular specialization pathways tailored to core vocational disciplines. By collaborating directly with VET providers to align digital applications with trade-specific needs, such as green logistics, sustainable manufacturing, and social services, technology companies can ensure a workforce equipped with relevant, market-ready digital skills.

Commercial technology developers must maintain algorithmic transparency and provide advance notification regarding model updates and system revisions. Sudden changes to underlying model architectures can render pre-designed lesson plans, custom prompts, and evaluation rubrics obsolete. Establishing transparent versioning schedules and long-term stability for educational APIs enables training providers to build durable, multi-year vocational curricula.

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6.5. Recommendations for Social Economy Organisations

Social economy organizations should utilize AI applications as cognitive amplifiers to expand local social entrepreneurship initiatives. Integrating low-threshold digital tools into vocational education enables aspiring entrepreneurs to model social enterprises, conduct community needs assessments, and optimize operational efficiency, thereby accelerating the delivery of innovative solutions for social inclusion and regional development.

Social enterprise networks should leverage digital literacy to drive the green and digital twin transition. Combining digital problem-solving with environmental stewardship allows VET learners to apply AI data analytics toward designing circular economy business models, reducing resource waste, and measuring social and environmental impact. This dual focus ensures that technological adoption directly contributes to broader European sustainability goals.

Social economy actors should deploy intuitive AI workflows to re-engage vulnerable demographics and young people not in employment, education, or training (NEETs). Practical, challenge-based digital activities build self-efficacy and foundational digital confidence, providing accessible entry points back into formal education and enhancing labor market integration for underrepresented communities.

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