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DesignSmart

DesignSmart

Empowering VET and Women Entrepreneurs for Sustainable Fashion Innovation

WP2 - Sustainable Fashion and AI Curriculum

T2.1 - Research Framework & Needs Assessment

T2.2 - Desk & Field Research Analysis

NATIONAL REPORT TEMPLATE

Prepared by Politecnico Calzaturiero

March 2026

Country: Greece

Organization(s): EUROTraining Educational Organization, PlanB Research & Consulting

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Project Number: 2025-ES01-KA220-VET-000358027

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Consortium

P1	Leather Cluster Barcelona (LCB), Spain - Coordinator
P2	Eurotraining, Greece
P3	People Forward (PF), Cyprus
P4	BASE3 Società Cooperativa (Base3), Italy
P5	Cámera de Comercio Italiana – Barcelona (CCIB), Spain
P6	PlanB, Greece
P7	Politecnico Calzaturiero (PC), Italy

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General Instructions for Partners

Key Requirements:

- **Total length:** 10-15 pages (Arial 11pt, 1.15 line spacing, margins 2.5cm)
- **Sources priority:** Recent national data, EU frameworks (GreenComp, DigComp, EQAVET, ECVET), questionnaire/focus group quantitative results, National Committee validation
- **Visuals:** Include 3-5 charts/tables summarizing survey data (e.g., skills gap percentages, barrier rankings)
- **Language:** English
- **Deadline:** 15 March 2026 - Submit via shared drive
- **Purpose:** Identify VET training gaps, SME/women entrepreneur needs, AI adoption barriers to directly inform SO2.2 curriculum development

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Introduction

The DesignSmart project tackles the pressing need to modernise Vocational Education and Training (VET) in the fashion and footwear sectors by weaving together sustainability, circular economy principles, and Artificial Intelligence (AI). Perfectly aligned with the European Union's priorities for green and digital transitions, such as the European Green Deal and Digital Decade, it builds VET providers' capacity to empower small and medium-sized enterprises (SMEs), especially those led by women entrepreneurs, through innovative, sustainable, and digitally driven business models.

Within Work Package 2 (WP2), the focus is on creating an evidence-based Sustainable Fashion & AI Curriculum (covering specific objectives SO2.1 to SO2.3). This National Report brings together key insights across three core areas: sustainable fashion, with emphasis on low-impact materials, circular models, and supply chain traceability; AI-driven eco-design, featuring AI tools for design, prototyping, and environmental impact assessment; and VET digitalization, which covers digital skills development alongside strengthened collaboration between VET providers and SMEs.

To develop these insights, we applied a robust methodology: desk research drawing on standardized T2.1 templates to analyze policies, initiatives, and market data; distribution of 20 structured questionnaires per partner country to gauge training gaps and AI adoption barriers; focus groups engaging 5-10 participants from VET providers, SMEs, and sustainability experts; and validation through National Advisory Committees comprising 5-10 key stakeholders.

Ultimately, this report delivers comparable, national-level analysis of critical skills gaps, training needs, and implementation barriers. These findings will directly shape curriculum development under SO2.2 and VET capacity building via SO2.3, while ensuring full alignment with established EU frameworks including GreenComp, DigComp, EQAVET, and ECVET.

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1. Sustainable Fashion

1.1 National Context and Relevance of the Sector

The fashion sector in Greece (apparel, textiles, retail) in 2024–2025 presents a dual picture: steady growth in domestic sales but pressure on exports, with retail sales reaching €2.68 billion in 2025 while garment exports remained at €590 million; imports rose by 6.5% to €1.98 billion (ΣΕΠΠΕ, 2025). The apparel–textile value chain remains a key economic pillar, combining strong retail chains, developing luxury concepts in tourist destinations, and a growing share of e-commerce.

Structurally, the sector is heavily fragmented and is primarily divided into woven and knitted garment production. Despite Greece being a producer of high-quality cotton, the industry relies heavily on imported ready-made fabrics, mainly from Asia (Λαμπρινίδης, 2023). The economic crisis also led to a significant concentration of capital; while the total number of businesses shrank dramatically, the surviving landscape is overwhelmingly dominated by very small enterprises. The sector is almost entirely composed of SMEs (99.8%), predominantly very small enterprises with up to 9 employees; 11% employ 10–249 people and only 0.2% are large firms (>250).

Technologically, the Greek clothing industry lags behind the broader manufacturing average in terms of innovation (Λαμπρινίδης, 2023). Most reported innovations are related to marketing and organization rather than actual product or production processes. The fundamental dividing line within the sector today is the degree of digitalization and vertical integration. On one side are fully integrated, modernized companies utilizing CAD software, ERP systems, and e-commerce to reach international markets. On the other side are traditional, low-tech subcontracting units (fason) that remain highly vulnerable to economic fluctuations and face significant challenges in adapting to modern Industry 4.0 business models.

A revival of domestic production is evident through Slow Fashion and a focus on quality, while sustainable fashion is shifting from a niche to a central market element driven by European circular economy directives and changing behaviors among younger generations; dozens of businesses are adopting organic and recycled fabrics and Zero Waste practices, alongside a flourishing resale market. By 2025, systems for separate collection of textile products will be required to increase supply-chain transparency and reduce the environmental footprint (ΣΕΠΠΕ, 2025). Nevertheless, the sector remains among the most polluting: 20% of industrial wastewater pollution originates from dyeing/finishing processes and the greenhouse gas footprint is estimated at 10%, with 5.8 million tonnes of waste generated annually and only 22% of post-consumer textile waste collected separately for

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reuse or recycling and just 1% of clothing material recycled (ΕΣΕΕ, Annual Report on Greek Trade 2023).

1.2 National Policies and Regulations

In 2026, the Greek policy framework for sustainable fashion is shaped less by a single sector-specific "fashion law" and more by a combination of national circular-economy and waste-prevention policy plus EU rules that directly affect textile producers, importers, retailers, and training providers. Greece's circular economy strategy/action plan explicitly combines regulatory reform, financing, know-how, and governance, while the national waste-prevention framework includes textile-specific measures such as extending the life of textiles, improving their environmental quality, encouraging collection for reuse, supporting repair and creative reuse centres, producing design guidance for clothing producers, and using eco-design, ecolabelling, EMAS and ISO 14001-type tools to improve business practice. The Hellenic Recycling Agency (EOAN) has a central role in implementing waste-prevention and EPR-related programmes.

For Greece in 2026, the most important regulatory developments are also EU-level rules that now apply or are moving into application nationally. Separate collection of textiles has applied across the EU since 1 January 2025. The revised Waste Framework Directive entered effect on 16 October 2025 and introduced common rules for textile extended producer responsibility (EPR), which means Greek stakeholders should now prepare for more structured producer obligations. The Ecodesign for Sustainable Products Regulation (ESPR) entered into force in July 2024, creating the legal basis for future product-specific ecodesign and information requirements that are highly relevant to fashion and textiles. In parallel, the Right to Repair Directive must be applied by Member States from 31 July 2026, while textile fibre labelling continues to be governed by EU Regulation 1007/2011. For larger firms and supply-chain leaders, sustainability reporting is also becoming more important in Greece under the CSRD-related reporting and assurance landscape overseen by the Hellenic Accounting and Auditing Standards Oversight.

1.3 Existing Initiatives and Projects (3-5 examples required)

Title: VETRINE
Organization: EUROTraining Educational Organization

Description : VETRINE is a European project (Vocational Education and Training to Reinvent Innovative Manufacturing) that focuses on vocational education and training for sustainability and entrepreneurship in the fashion industry. Its goal is to implement "green" initiatives in clothing production and connect students with the job market. The project

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specifically targets the modernization of vocational education to support the transition of Small and Medium-sized Enterprises (SMEs).
Status: Ongoing | Scale: National/European| Link: https://vetrine.eu/

Title: FABRIX
Organization: Delft University of Technology (coordinator) & Athens University of Economics and Business (Greek partner)
Description : FABRIX is a Horizon Europe. FABRIX refers to "Fostering local, beautiful, and sustainably designed regenerative textile and clothing. It targets actors that can turn T&C waste into resources and foster local production, with a strong emphasis on empowering small-scale player ecosystems". Objectives, target groups (SME/VET focus), key activities, relevance to sustainable fashion training/circularity/traceability.
Status: Ongoing| Scale: National/European| Link: https://www.fabrixproject.eu/

Title: Research Centre for Sustainable, Ethical & Circular Fashion and Textiles (FRFashtech)
Organization: Athens University of Economics and Business (AUEB)
Description : The Research Centre for Sustainable, Ethical & Circular Fashion and Textiles is situated within the Management Science Lab (MSL) at the Department of Management Science and Technology in Athens University of Economics and Business (AUEB). Since 2015 the Centre for Sustainable Fashion is running a number of projects working on the transformation of the industry, the promotion of new supply chain and production models, new educational programs, especially for the development of green, ethical and sustainable supply chains, production processes, technological platforms and logistics.

Status: Ongoing| Scale: National| Link: https://www.dept.aueb.gr/en/msl/content/research-centre-sustainable-ethical-circular-fashion-and-textiles-frfashtech-0

1.4 Required Competences in the Sector

Key competences demanded by SMEs, professionals, VET trainers, learners:

Competences in demand for SMEs and professionals

- **Strategic & Operational Implementation Skills:** SMEs struggle to effectively translate general sustainability awareness into practical, day-to-day business operations and performance, indicating a gap in internal expertise and specialized staff necessary for adopting sustainable practices and integrating new procedures.

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- **Digital and AI Capabilities for Sustainability:** There is a significant lack of technical know-how, familiarity, and critical thinking regarding environmental-impact digital tools and AI, coupled with an inability to effectively collect, structure, and manage production and supply-chain data essential for digital sustainability and data-informed decision-making (e.g., for traceability, environmental-impact assessment, and inventory planning).
- **Circular Economy & Eco-Design Expertise:** SMEs demonstrate insufficient skills in eco-design principles, understanding sustainable materials (including their recycling and overall product life cycle management), and developing products that fit into a circular economy, including practical application methods for repair and reuse.
- **Sustainable Supply Chain Management & Transparency:** There's a notable deficiency in practical skills for navigating and sourcing sustainable materials, ensuring supply chain transparency, and establishing fair and socially responsible production practices, including understanding relevant labor legislation and ethical considerations.
- **Market Adaptation & Value Communication:** SMEs lack skills to effectively navigate market uncertainties, manage information gaps related to sustainable networks, and clearly communicate the added value of sustainable products to consumers.
- **Collaborative Innovation & Business Integration:** Deficiencies exist in fostering strategic collaboration with relevant external bodies, recycling organizations, and networks, as well as integrating sustainability strategically with entrepreneurship, branding, and problem-solving to drive innovation.

Competences in demand for VET providers and trainers

- **Trainer Competence in Sustainability & Digitalization**: A significant gap exists in VET educators' and trainers' own preparation and specialized expertise in both sustainability and the application of digital/AI technologies, which hinders their ability to effectively teach and integrate these topics.
- **Curriculum Development & Content Expertise**: There is a notable absence of comprehensive study programs focused on sustainable fashion, and trainers lack sufficient knowledge in critical sustainability aspects such as eco-design, circular production methods, fair and sustainable supply chains, transparency (including labeling), and social sustainability (e.g., labor legislation and safety).
- **Digital Pedagogy & Tool Integration**: Trainers demonstrate a lack of specific skills and readiness to integrate digital learning tools and apply AI technologies effectively for instructional purposes within sustainability education, including continuous training in advanced digital tools.

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- **Practical & Experiential Teaching Methods**: There is a recognized need for VET trainers to enhance their practical skills and pedagogical approaches to bridge the gap between theoretical knowledge and hands-on implementation of sustainable practices and circular economy methods.
- **Industry Collaboration & Partnership Building**: Minimal current collaboration between VET providers and fashion companies on curriculum design, work-based learning, and innovation projects indicates a lack of skills or established processes for effective industry engagement among trainers and institutions.

1.5 Barriers and Opportunities

Primary Barriers (ranked by questionnaire response):

- **High Cost and Price Pressure of Sustainable Materials** (Mean 3.58; 66.7% of SMEs rated as high obstacle): This is consistently highlighted as the dominant barrier. Sustainable materials often come at a higher price, and SMEs operate with tighter margins or face strong price competition, making it difficult to justify the increased cost.
- **Lack of Internal Expertise and Specialized Staff / Skills Gap**: SMEs lack the internal know-how, specialized personnel, and digital skills among their staff to effectively adopt and implement new sustainable materials and procedures. This includes insufficient knowledge of eco-design, product life cycle, and circular economy methods.
- **Data Readiness Challenges** (Mean 3.00; 33.3% of SMEs rated as low): This is identified as the weakest capability area for SMEs. They struggle with collecting, structuring, and managing production and supply-chain data, which is fundamental for implementing digital sustainability and AI solutions.
- **AI/Digital Technology Adoption Barriers** (Mean 3.33; 33.3% of SMEs rated as high obstacle): Major obstacles include the high costs of procuring and implementing new digital equipment and software, inadequate hardware and software infrastructure, limited staff digital skills, and lack of technical support.
- **Limited Availability and Supply Chain Constraints for Sustainable Materials:** SMEs face restricted access to sustainable fabrics, limited year-round supply, and high minimum order quantities from suppliers. Local sourcing options for sustainable materials are particularly limited.
- **Market Uncertainty and Difficulty in Communicating Value:** There is uncertainty regarding consumer demand for sustainable products, as customers often prioritize price over sustainability. SMEs also struggle to effectively communicate the added value of sustainable products to consumers.

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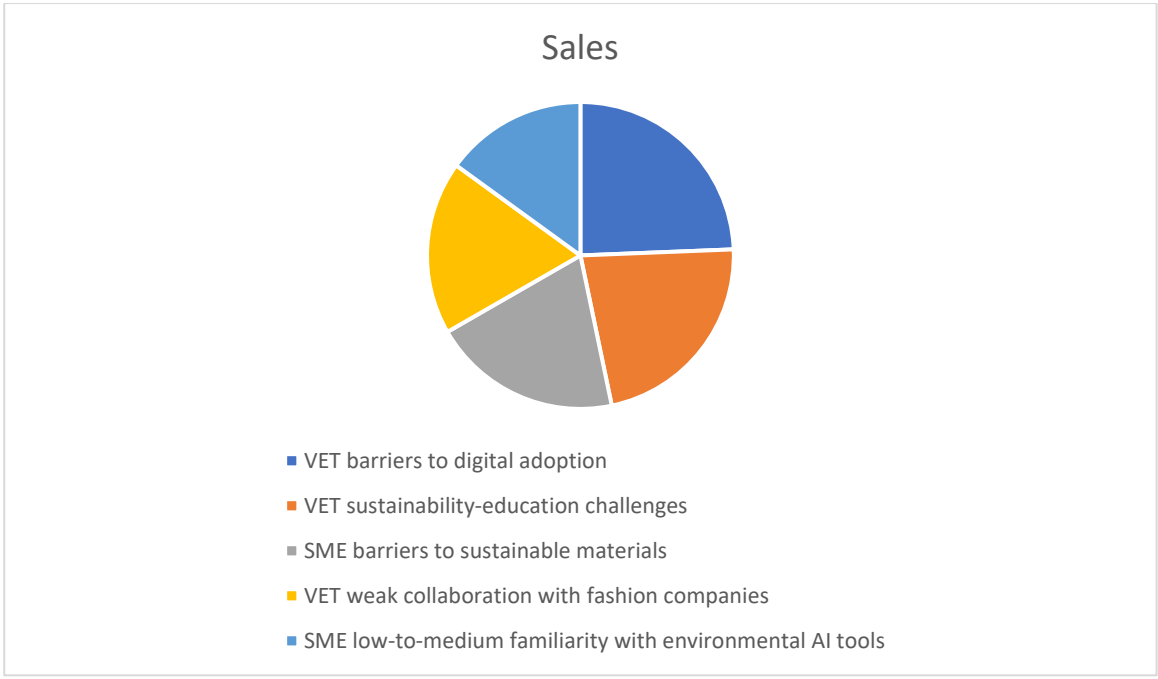
- **Integration Challenges and Limited Time/Personnel:** SMEs find it difficult to integrate new sustainable procedures and technologies into their existing production processes due to limited time and personnel.
- **Lack of External Support and Funding/Financing**: SMEs often lack adequate external support from advisors or agencies, and face difficulties in accessing necessary capital and financing for investments and restructuring required for sustainable upgrades.
- **Technological Lag and Inadequate Infrastructure**: The Greek fashion sector generally exhibits a technological lag compared to broader manufacturing and other European countries, including a slower adoption of data and knowledge management technologies.



Emerging Opportunities

- **High Demand for New Sustainability Skills** (Mean 3.83; 66.7% of SMEs rated 4 or 5): There is a strong and unanimous recognition among SMEs of the importance of acquiring new sustainability-related skills, indicating a significant latent demand for upskilling and training.
- **Strong Interest in VET Collaboration** (Mean 3.67; 75.0% of SMEs rated 4 or 5): SMEs see great value in collaborating with Vocational Education and Training providers to develop workforce skills, presenting a clear opportunity for co-designed curricula, work-based learning, and innovation projects.

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- **Existing Foundation in Sustainable Practices**: Many SMEs have already started adopting sustainable materials (Mean 3.50) and production practices (Mean 3.50) to some extent, and show moderate readiness for circular economy approaches (Mean 3.50). This indicates a willingness and a starting point for further development.
- **Moderate Use of Digital Tools in Sustainable Design** (Mean 3.50; 33.3% of SMEs rated 4 or 5): There is a foundational level of digital tool usage for sustainable design and decision-making, which can be built upon.
- **Value in Skills Development Initiatives**: Both SMEs and VET providers recognize the value of skills development, creating a strong rationale for modular learning, targeted workshops, case-based learning, and collaborative pilots.

1.6 National Best Practice

Title: SOFFA

Organization: The Nest Social Fashion Factory

Description : it is a dynamic tailoring production studio and social cooperative comprised of dedicated fashion designers and professionals committed to crafting sustainable fashion garments with profound social and environmental impact. Its core mission is to support the work integration of women who have been victims of violence and individuals at risk of exploitation within the realm of sustainable fashion tailoring.

Status: ongoing www.soffa.gr

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2. AI-Driven Eco-Design

2.1 Context and Level of Digital Maturity

The IME ΓΣΕΒΕΕ (Λαμπρινίδης, 2023) interesting insights about the digital maturity of SMEs in the fashion industry

- **Overall AI/Industry 4.0 Integration:** The integration of AI and Industry 4.0 technologies in the Greek fashion ecosystem is generally low, despite recognition of its importance. This is largely due to high initial investment costs, lack of financing, and scarcity of skilled personnel.
- **Industrial Robotics:** Only 3% of Greek businesses used industrial robots in 2018, compared to the EU average of 5%.
- **Additive Manufacturing/3D Printing:** Adoption levels are low, with only 924 jobs (0.03% of the workforce) reported in 2015 and a low share of patents (1.07% of Greek patents, the lowest in the EU).
- **Digital Tools in Design/Production:** While some parts of the clothing sector have adopted digital tools for product design (CAD systems) and enterprise resource planning (ERP), making them relatively digitized in these specific areas, the overall emphasis on manual design processes remains significant, particularly for capturing nuanced textile properties. The practical application of Industry 4.0 concepts like "smart factories" is not yet widely realized.
- **Sustainability Processes:** AI integration directly within sustainability processes (e.g., for material selection, traceability, environmental-impact assessment) is not explicitly quantified as "mature" but is implied to be limited by the general low digital readiness and the fact that most innovation in the clothing sector is marketing-focused (46%) rather than process or product-oriented.

2.2 National Policies on AI and Digital Innovation

Greece’s 2026 AI and digital-innovation framework is built around a mix of national strategy work, horizontal digital-governance legislation, and EU regulation. The strongest strategic reference is “A Blueprint for Greece’s AI Transformation”, prepared by the High-Level Advisory Committee on AI under the Prime Minister and coordinated by the Special Secretariat of Foresight. In parallel, the Greek National Digital Decade Roadmap describes a national AI strategy as a framework for coordinated action on skills, trust, data policy and ethics, while also pointing to Law 4961/2022 as the institutional background for the legitimate and safe exploitation of AI by public and private actors. At EU level, the AI Act is already part of the compliance environment: it entered into force on 1 August 2024, AI literacy obligations started

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applying from 2 February 2025, and the main framework becomes fully applicable on 2 August 2026.

For SMEs, the most relevant national enablers are funding and digitalisation schemes rather than sector-specific AI subsidies. Greece's digital roadmap and annual progress reporting identify Digital Tools for SMEs, Digital Transactions, and the broader Digital Transformation of SMEs Programme as core instruments. The roadmap assigns substantial budgets to these measures and explicitly states that the programme is meant to help firms integrate technologies such as big data, artificial intelligence and cloud computing. The 2025 Digital Decade reporting also notes that Greece is progressing in the digitalisation of SMEs and that AI uptake by enterprises rose from 4.0% in 2023 to 9.8% in 2024, although the overall level remains modest. For a fashion report, the policy implication is clear: Greece has built the horizontal policy and financing environment for adoption, but sector uptake is still uneven and requires targeted capability-building.

2.3 Applications of AI in Fashion Eco-Design (2-3 national examples)

A first application area is digital pattern-making and 3D garment simulation. PANSiK advertises both a Digital Pattern Seminar and a CLO 3D Design Seminar, while Greek market providers such as Computer Life / Intergrup promote 3D garment modelling on digital avatars and stress that this reduces physical prototyping, speeds development, and improves workflow. For eco-design, this matters because fewer physical samples mean lower material waste and faster iteration.

Another application area is digital co-creation and tool-supported circular business modelling. The Athens DigiFashTech hackathon in 2025 combined policy labs, stakeholder mapping, FABRIX self-assessment, mentoring, startup showcases and digital tool integration. This is not yet factory-scale AI, but it is a strong example of how Greek actors are learning to merge sustainability, digital methods, and fashion entrepreneurship in practice.

2.4 Required Competences

Digital-technical competences for AI-driven eco-design in Greek fashion SMEs should be prioritised in the following order:

- Data literacy and data-driven design thinking, so that companies can structure product, sourcing, production, and supply-chain information for decision-making.
- Entry-level AI platforms and environmental-impact tools proficiency, especially for research, material comparison, traceability, forecasting, and basic decision support.
- CAD/3D modelling, digital simulation, and virtual prototyping competences that reduce physical sampling and support faster eco-design iteration.

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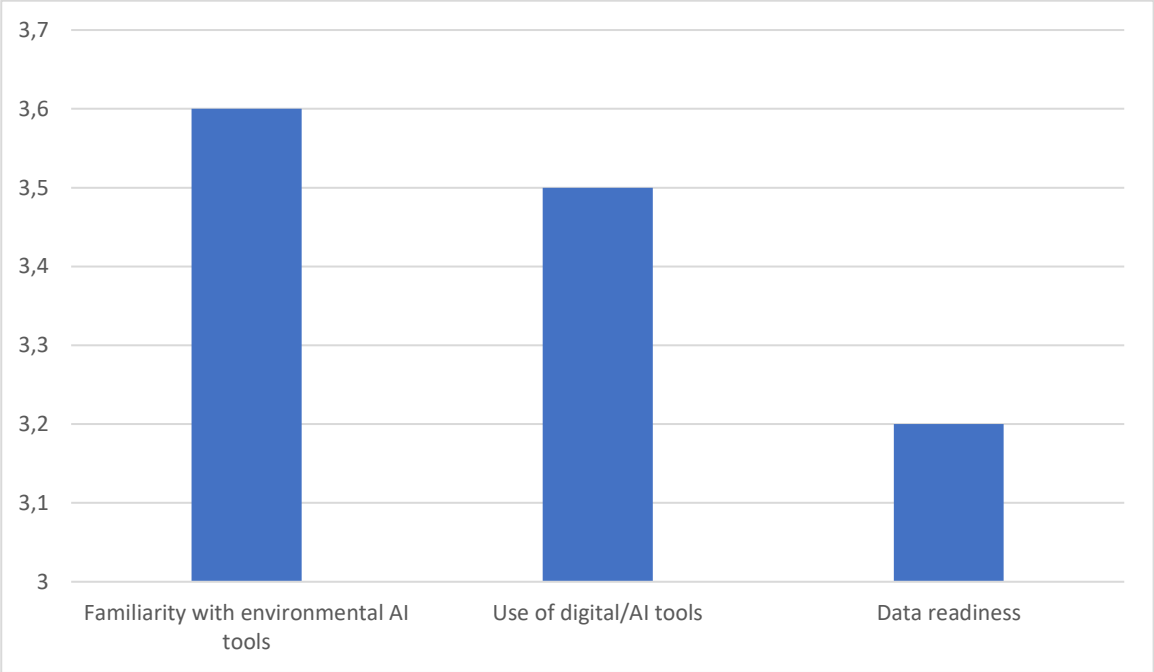
- AI-supported sustainability metrics interpretation, including the use of impact indicators, material data, traceability information, and product passport logic.
- Workflow-integration competences that connect design, sustainability, and business feasibility rather than treating digital tools as stand-alone technology.



46.2% of Greek SMEs reported only low-to-medium familiarity (1-3) with environmental digital/AI tools, while 57.7% did not report high readiness for data collection and analysis. This confirms a clear need for practical AI-tool training, introductory data literacy, and use-case-based support in eco-design.

2.5 Challenges and Barriers to Adoption

The Greek evidence shows that AI-driven eco-design is perceived as strategically relevant, but adoption is still constrained by a combination of investment barriers, organisational readiness gaps, and insufficient targeted training provision.

Investment costs (software, hardware, infrastructure): Both questionnaire reports and the focus group identify technology cost as a central obstacle, including software licences, subscriptions to AI platforms, equipment upgrades, and the broader cost of digital transition for small firms and providers.

Digital culture and organisational readiness: The qualitative evidence suggests that many SMEs still work with traditional processes and incomplete datasets, which makes it harder to integrate AI tools into everyday decision-making. The issue is therefore less ideological resistance and more limited organisational readiness.

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Shortage of hybrid design-digital-sustainability profiles: Greek SMEs need people who can connect creativity, pattern-making, sustainability principles, data interpretation, and digital tools. The focus group repeatedly stressed that technology must support - not replace - craft knowledge and sector-specific expertise.

Limited targeted VET training availability: The focus group and interviews point to a lack of systematic programmes, especially outside major urban centres, and to insufficient trainer preparation in sustainability, AI, and advanced digital tools.

"The use of AI is considered a 'one-way street' for the modernisation of the sector, provided it functions as a tool and not as a substitute for human creativity."

"If a trainee uses AI for pattern-making without knowing the manual process, they will fail to manage errors. AI should follow on from basic studies."

"Digital skills, so that technology supports - rather than replaces - creativity."

2.6 National Best Practice

Title: DigiFashTech Athens / PANSiK–SOFFA collaboration Organization: PANSiK Fashion School, SOFFA, DigiFashTech consortium
Description: A strong Greek best practice for AI-driven eco-design is the Athens DigiFashTech model, not because it proves that AI is already mainstream in the Greek fashion industry, but because it shows how the ecosystem can be prepared for it. The Athens activities in November 2025 linked an educator handbook, e-learning platform development, curriculum work, policy exploration, hackathon-based problem solving, mentoring, and exposure to digital tools. This is highly transferable for DesignSmart because it combines four things that are often separated: policy literacy, sustainability literacy, digital experimentation, and industry-facing collaboration. The model is also inclusive: it brings together educators, designers, researchers, entrepreneurs and policy actors rather than treating digital transformation as a software-only issue. A particularly useful element is the challenge-based format, where teams identify circularity problems, map stakeholders, prototype responses, and test them using shared tools and expert feedback. For DesignSmart, this suggests that AI eco-design training in Greece should be delivered through guided projects, digital tool use, cross-disciplinary mentoring, and real problem-solving scenarios, not only lectures.

Link: https://digifashtech.pages.dev/

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3. VET Digitalization

3.1 State of the Art of VET Digitalization

The current digital maturity of the Greek VET system can be described as progressing, but uneven. The combined national questionnaire results show positive readiness to integrate digital learning tools (mean 3.94/5) and relatively strong teaching-staff digital competences (mean 4.12/5), yet they also reveal persistent structural constraints, especially around cost, software access, equipment, and collaboration with enterprises.

LMS platforms and blended/hybrid learning: These are increasingly present in Greek VET, particularly after the pandemic and the broader shift toward digital delivery. The focus group and interviews also emphasise the value of hybrid models for remote areas, women entrepreneurs, and more flexible participation.

Digital pedagogy integration in fashion/footwear curricula: The evidence suggests that digitalisation in fashion-related provision is still more uneven than strategic discourse might imply. Providers show strong openness to sustainability and AI-related content, but practical integration of digital pedagogy, simulation, CAD/3D, and AI-supported activities remains inconsistent and highly dependent on resources and trainer expertise.

VET-industry digital collaboration: This is currently the weakest dimension of the Greek data. The combined mean for collaboration with fashion companies is only 3.00/5, and 56.3% of respondents rated it only 1-3. This indicates that virtual apprenticeships, shared digital platforms, co-designed assignments, and innovation-linked collaboration remain underdeveloped and should become a DesignSmart priority.

3.2 National Policies for Digital Education

The most important national reference for VET in 2026 is the Greek Strategy for Vocational Education, Training and Lifelong Learning 2025-2027. The strategy explicitly continues the 2022-2024 reform cycle, builds on recent legal reforms including Law 5082/2024, and reinforces the national VET system through stronger links between vocational education and vocational training and a stronger labour-market orientation. This is the main policy anchor for any discussion of digitalisation in Greek VET.

Digitalisation is also being driven through Recovery and Resilience Facility investments. Greece's RRF support for education includes both Upgrading Vocational Education and Training and laboratory equipment for VET centres, with significant budgets attached. Official progress reporting states that the VET platform is being implemented, digitisation of EOPPEP is underway, and educational materials and training for EPAL and IEK are ongoing. The 2025-2027 strategy also explicitly refers to e-learning and digitisation of educational content for vocational training structures, alongside the integration of learning platforms and digitised material for both learners and educators.

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At the horizontal level, the Digital Transformation Bible and the Digital Decade roadmap remain the broader national framework, while the 2025 Digital Decade report shows that Greece is still dealing with a digital-skills gap despite progress in infrastructure and SME digitalisation. For VET providers, this means that digitalisation policy is not only about equipment; it is also about curriculum renewal, staff skills, and the ability to connect digital tools with employability.

3.3 Initiatives and Projects

A first major initiative is the RRF-backed VET modernisation package under Greece 2.0, which has made VET digitalisation in Greece more systemic rather than pilot-based. It includes the development of new training programmes, the conversion of learning material into e-learning formats, the digitisation of EOPPEP, the creation of a dedicated VET Platform, and the upgrading of VET laboratories for SAEK, EPAL and apprenticeship structures. This is important for the report because it shows that digitalisation is being supported through coordinated reform, infrastructure investment and stronger links between training and labour-market needs.

3.4 Required Competences for Teachers and Learners

For teachers

General digital literacy for all VET staff, including confident use of LMS environments, communication tools, digital resources, and basic learner-support functions.

Digital pedagogy competences, especially the ability to design blended, project-based, and work-based learning activities rather than simply uploading content online.

Specialised tool competences, including CAD, 3D garment design, digital simulation, AI basics, environmental-impact tools, and introductory data-analysis tools relevant to fashion.

LMS and digital-content management skills, including module structuring, online assessment, feedback, learner tracking, and the creation of accessible educational materials.

Digital collaboration skills for working with enterprises, mentors, and external experts in co-designed curricula, innovation projects, and practice-based activities.

For learners

General digital confidence in navigating learning platforms, producing and sharing digital work, and participating in hybrid learning environments.

Sector-relevant digital production skills, especially CAD/3D, digital pattern or prototype development, and digital visualisation.

Introductory AI and data literacy, sufficient to understand when a tool is useful, interpret basic outputs, and use data in design and production decisions.

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Sustainability-data interpretation, including material information, traceability, product-impact indicators, and circularity-related choices.

Digital collaboration, content creation, and communication skills, including portfolio presentation, digital storytelling, and engagement with customers, peers, and companies through shared platforms.

These competence needs are strongly consistent across the focus group and the two questionnaire reports. The Greek evidence suggests that VET providers need to upskill both teachers and learners not only in tool use, but also in the pedagogical and collaborative capacities needed to connect digitalization with sustainability and real business workflows.

3.5 Gaps and Emerging Needs

- VET providers are not starting from zero, but their digital capacity is constrained by the cost of adoption and weak industry linkage. The national consolidated data show positive readiness for digital-tool integration (mean 3.94/5) and AI-topic introduction (4.19/5), together with relatively strong staff digital competences (4.12/5). However, barriers to digital adoption remain high (mean 4.19/5), and collaboration with fashion companies is the weakest area (mean 3.00/5; 56.3% rated collaboration only 1-3/5).
- **Trainer upskilling opportunities:** providers need continuous professional development in digital pedagogy, AI basics, and sector-relevant tools such as CAD/3D, simulation, and sustainability software.
- **Digital pedagogy adoption:** platforms and tools are increasingly available, but practical methodologies for blended, experiential, and industry-linked learning remain unevenly adopted.
- **VET-industry digital collaboration platforms:** the weakest point in the Greek data concerns structured collaboration with fashion companies, including shared platforms, co-designed assignments, virtual apprenticeships, and innovation projects.
- **Emerging technology integration:** AI, VR/AR, simulation tools, digital twins, and traceability technologies are recognised as relevant, but are not yet systematically embedded in provision.

Indicator	Greece mean (1-5)	Key percentage	Interpretation
Readiness to integrate digital learning tools (Q7)	3.94	68.8% rated 4-5	There is a solid base for digital delivery, but implementation quality still varies.
Barriers to adopting digital technologies (Q8)	4.19	75.0% rated 4-5	Cost, infrastructure, licences, and staff preparation remain major constraints.
Overall digital competences of teaching staff (Q9)	4.12	81.2% rated 4-5	The baseline is relatively positive, but specialised sector-specific competences still need reinforcement.

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Readiness to introduce AI-related topics (Q10)	4.19	75.0% rated 4-5	Providers appear open to AI content, especially when linked to concrete use cases.
Collaboration with fashion companies (Q11)	3.00	56.3% rated only 1-3	This is the clearest structural gap and a priority area for DesignSmart intervention.

3.6 National Best Practice

Title: VET Platform (Greece 2.0) and the digitalisation of EOPPEP

Organization: Ministry of Education, Religious Affairs and Sports; EOPPEP; Recovery and Resilience Facility (Greece 2.0)

Description: A strong Greek best practice for VET digitalisation is the RRF-backed development of the VET Platform together with the digitalisation of EOPPEP services. This initiative is important because it treats digital transformation as a systemic reform rather than an isolated equipment purchase. According to the 2025-2027 national strategy and Cedefop monitoring, the VET Platform combines a governance subsystem with a digital learning subsystem, while the broader reform includes digitised educational materials, upgraded laboratory infrastructure, modernisation of laboratory centres, and support for more flexible delivery. Its transformation impact lies in improved access, stronger system transparency, better support for learners and providers, and greater capacity for blended and distance learning. For DesignSmart, the transferable lesson is that digital transformation works best when platforms, content, trainer support, and labour-market relevance are developed together. This model can inform the partnership's approach to LMS-based delivery, hybrid learning, digital assessment, shared resources, and structured collaboration between VET institutions and SMEs (Cedefop, 2023, 2024; Hellenic Republic Ministry of Education, Religious Affairs and Sports, 2025).

Link: https://www.cedefop.europa.eu/en/tools/timeline-vet-policies-europe/search/44220

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Conclusions

This national analysis for Greece shows that sustainability is already recognized as a strategic priority in fashion-related VET and is increasingly acknowledged by SMEs, but practical implementation remains uneven. The combined evidence from the focus group and the two questionnaire reports indicates that the main challenge is not awareness itself, but the operational capacity to turn awareness into consistent business and training practice.

The most pressing barriers concern the cost of sustainable materials and digital adoption, limited availability of sustainable inputs, weak SME data readiness, insufficient in-house expertise, and the shortage of hybrid sustainability-digital-design profiles. On the VET side, the strongest constraints are trainer preparation, equipment and software costs, and weak structured collaboration with fashion enterprises.

The Greek fashion ecosystem is highly fragmented and dominated by SMEs operating under price pressure, which makes sustainability investments harder to absorb. The focus group also highlighted the importance of local production, social responsibility, and women entrepreneurs' need for flexible, accessible, and confidence-building learning pathways due to time constraints, funding barriers, and weaker access to networks.

The highest-priority areas for DesignSmart are sustainable materials and circular product development, supply-chain transparency and responsibility, data literacy for design and production decisions, AI-supported eco-design use cases, CAD/3D and digital simulation, sustainability metrics interpretation, digital pedagogy for VET staff, and practical entrepreneurship and branding skills linked to sustainable fashion business models.

The Greek data show strong potential for co-designed curricula, short applied training modules, shared pilots, virtual or hybrid work-based learning activities, and challenge-based projects that connect traditional craftsmanship with digital tools. SMEs report high interest in collaboration with VET providers, while VET institutions are generally open to integrating AI- and sustainability-related content when concrete use cases and practical support are available.

The DesignSmart curriculum in Greece should be modular, bilingual where useful, and practice-oriented. It should combine train-the-trainer support, experiential learning, low-threshold digital tools, case studies, templates and checklists, and targeted support for women entrepreneurs. Delivery should progressively bridge manual and digital methods, ensuring that AI strengthens rather than replaces technical understanding, creativity, and sector-specific know-how.

Quantitative indicators achieved:

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84.6% of Greek SME respondents rated the acquisition of new sustainability-related skills as highly important (4-5/5).

84.6% of Greek SME respondents rated collaboration with VET providers as highly important (4-5/5).

75.0% of Greek VET respondents rated barriers to digital adoption as high (4-5/5), while 56.3% rated collaboration with fashion companies only 1-3/5.

Focus group findings validated the priority need to bridge traditional craftsmanship with digital efficiency, strengthen trainer preparation, and connect sustainability, entrepreneurship, and AI through experiential learning.

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Project Number: 2025-ES01-KA220-VET-000358027

Bibliography

References / Bibliography

Athens University of Economics and Business, Management Science Lab. (n.d.). Research Centre for Sustainable, Ethical & Circular Fashion and Textiles (FRFashtech). Retrieved April 2, 2026, from https://www.dept.aueb.gr/en/msl/content/research-centre-sustainable-ethical-circular-fashion-and-textiles-frfashtech

Cedefop. (2023). The digital transformation of VET and lifelong learning in Greece. Retrieved April 2, 2026, from https://www.cedefop.europa.eu/en/tools/timeline-vet-policies-europe/search/44220

Cedefop. (2024). Vocational education and training in Europe: Greece. Retrieved April 2, 2026, from https://www.cedefop.europa.eu/en/tools/vet-in-europe/systems/greece-u3

DigiFashTech. (2025a, November 10). DigiFashTech consortium meeting in Athens. Retrieved April 2, 2026, from https://digifashtech.pages.dev/news/tpm-athens

DigiFashTech. (2025b, November 11). Visiting PANSiK Fashion School in Athens. Retrieved April 2, 2026, from https://digifashtech.pages.dev/news/visiting-pansik/

European Circular Economy Stakeholder Platform. (2018). Greece's action plan on circular economy. Retrieved April 2, 2026, from https://circulareconomy.europa.eu/platform/en/strategies/greeces-action-plan-circular-economy

European Commission. (2025, June 18). Greece 2025 Digital Decade country report. Retrieved April 2, 2026, from https://digital-strategy.ec.europa.eu/en/factpages/greece-2025-digital-decade-country-report

European Commission. (2025, October 16). Revised Waste Framework Directive enters into force. Retrieved April 2, 2026, from https://environment.ec.europa.eu/news/revised-waste-framework-directive-enters-force-2025-10-16_en

European Commission. (n.d.). National strategic roadmaps. Retrieved April 2, 2026, from https://digital-strategy.ec.europa.eu/en/policies/national-strategic-roadmaps

European Environment Agency. (2023). Waste prevention country profile - Greece. Retrieved April 2, 2026, from https://www.eea.europa.eu/en/topics/in-depth/waste-and-recycling/country-profiles-on-waste-prevention-2023/gr-waste-prevention-factsheet-2023

European Environment Agency. (2024). Management of used and waste textiles in Europe's circular economy. Retrieved April 2, 2026, from https://www.eea.europa.eu/en/analysis/publications/management-of-used-and-waste-textiles-in-europes-circular-economy

European Parliament and Council of the European Union. (2011). Regulation (EU) No 1007/2011 of the European Parliament and of the Council of 27 September 2011 on textile fibre names and related labelling and marking of the fibre composition of textile products. EUR-Lex. https://eur-lex.europa.eu/eli/reg/2011/1007/oj/eng

European Parliament and Council of the European Union. (2024a). Directive (EU) 2024/1799 of the European Parliament and of the Council of 13 June 2024 on common rules promoting the repair of goods. EUR-Lex. https://eur-lex.europa.eu/eli/dir/2024/1799/oj/eng

European Parliament and Council of the European Union. (2024b). Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 establishing a framework for the setting of ecodesign requirements for sustainable products. EUR-Lex. https://eur-lex.europa.eu/eli/reg/2024/1781/oj/eng

Eurotraining Educational Organization. (2026). Design-Smart questionnaire analysis report [Project report].

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Project Number: 2025-ES01-KA220-VET-000358027

Eurotraining Educational Organization, & PlanB Research & Consulting. (2026). Summary report of focus group discussions and interviews for the Design-Smart project [Project report].

FABRIX. (n.d.). About FABRIX. Retrieved April 2, 2026, from https://www.fabrixproject.eu/about

Hellenic Fashion Industry Association (SEPEE). (2025, December 1). Η πορεία του κλάδου ένδυσης - κλωστοϋφαντουργίας το α' εννεάμηνο του 2025 [The performance of the clothing-textile sector in the first nine months of 2025]. Retrieved April 2, 2026, from https://www.greekfashion.gr/el/news-trends/h-poreia-toy-kladoy-endyshs-klwstoyfantoyrgias-enneamhno-toy.630.html

Hellenic Recycling Agency. (n.d.). Hellenic Recycling Agency. Retrieved April 2, 2026, from https://www.gov.gr/en/sdg/goods/recycling-and-waste-management/general/hellenic-recycling-agency-hra-eoan

Hellenic Republic. (2022). Law 4961/2022: Emerging information and communication technologies, enhancement of digital governance and other provisions. Government Gazette. Retrieved April 2, 2026, from https://www.mindigital.gr/wp-content/uploads/2024/02/%CE%9D-4961-%CE%91%CE%BD%CE%B1%CE%B4%CF%85%CE%BF%CC%81%CE%BC%CE%B5%CE%BD%CE%B5%CF%82-%CF%84%CE%B5%CF%87%CE%BD%CE%BF%CE%BB%CE%BF%CE%B3%CE%B9%CC%81%CE%B5%CF%82-%CF%80%CE%BB%CE%B7%CF%81%CE%BF%CF%86%CE%BF%CF%81%CE%B9%CE%BA%CE%B7%CC%81%CF%82.pdf

Hellenic Republic Ministry of Digital Governance. (2024). The Greek national digital decade strategic roadmap. Retrieved April 2, 2026, from https://digitalstrategy.gov.gr/website/static/website/assets/uploads/digital_decade_national_roadmap.pdf

Hellenic Republic Ministry of Education, Religious Affairs and Sports. (2025). Strategic plan for vocational education, training and lifelong learning 2025-2027. Retrieved April 2, 2026, from https://www.minedu.gov.gr/publications/docs2023/2025_%CE%A3%CE%A4%CE%A1%CE%91%CE%A4%CE%97%CE%93%CE%99%CE%9A%CE%9F_%CE%A3%CE%A7%CE%95%CE%94%CE%99%CE%9F_%CE%95%CE%95%CE%9A%CE%94%CE%92%CE%9C_2025_2027_20_6_2025.pdf

Institute of Commerce and Services of the Hellenic Confederation of Commerce and Entrepreneurship (INEMY-ESEE). (2024). Annual report on Greek trade 2023. Retrieved April 2, 2026, from https://inemy.gr/wp-content/uploads/2024/02/%CE%95tisia_ekthesi_2023_cover.pdf

INTERgrup. (n.d.). 3D CAD for fashion modelling. Retrieved April 2, 2026, from https://www.intergrup.gr/en/3d-%CE%B1%CF%80%CE%B5%CE%B9%CE%BA%CF%8C%CE%BD%CE%B9%CF%83%CE%B7-%CE%BA%CE%B1%CE%B9-%CE%B4%CE%B5%CE%B9%CE%B3%CE%BC%CE%B1%CF%84%CE%B9%CF%83%CE%BC%CF%8C%CF%82/

Lamprinidis, G. (2023). Ψηφιακός μετασχηματισμός στις μικρές επιχειρήσεις στον κλάδο ειδών ένδυσης: Προοπτική διερεύνηση δεξιοτήτων (skills foresight) [Digital transformation in small businesses in the apparel sector: Skills foresight]. IME GSEVEE. https://imegsevee.gr/wp-content/uploads/2023/04/dexiotites_lamprinidis.pdf

PANSiK Fashion School. (n.d.). CLO 3D design seminar. Retrieved April 2, 2026, from https://pansik.gr/en/courses/clo-3d-design-seminar

PlanB Research & Consulting. (2026). Design-Smart questionnaire analysis PlanB - report [Project report].

SOFFA. (n.d.). About Social Fashion Factory. Retrieved April 2, 2026, from https://soffa.gr/about/

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Project Number: 2025-ES01-KA220-VET-000358027

Special Secretariat of Foresight, Presidency of the Government. (2024). A Blueprint for Greece's AI Transformation. Retrieved April 2, 2026, from https://foresight.gov.gr/wp-content/uploads/2024/11/Blueprint_GREECES_AI_TRANSFORMATION.pdf

VETRINE. (n.d.). Project website. Retrieved April 2, 2026, from https://vetrine.eu/

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Annexes

Annex 1 – Questionnaires results

EUROtraining Analysis Report

Total responses	SMEs	VET providers
22	12	10

Executive Summary

The dataset includes 22 valid responses: 12 SMEs active in the fashion ecosystem and 10 VET providers. One respondent did not explicitly tick a category, but was classified as an SME because only the SME section was completed.

SMEs show moderate progress in sustainability implementation rather than full maturity. Average scores for sustainable materials, sustainable production, transparency, responsible supply chains and circular-economy readiness range from 3.4 to 3.8 out of 5.

The strongest SME needs concern implementation capacity: barriers to sustainable materials remain substantial (mean 3.58), data readiness is modest (mean 3.00), and familiarity with environmental-impact digital or AI tools is only moderate (mean 3.25).

VET providers report strong strategic commitment to sustainability: integration of sustainability in programmes scores 4.5, while transparency, responsibility, circular economy and curriculum alignment each score around 4.3. At the same time, providers report equally strong delivery challenges (mean 4.5).

Digitalisation is the main bottleneck for VET providers. Readiness to integrate digital learning tools is lower (3.7) than sustainability-oriented scores, while barriers to adopting digital technologies are very high (4.5).

Across both groups, the key message is consistent: awareness is already present, but operational capability, staff upskilling, equipment, affordable tools, and closer SME-VET collaboration are needed to move from intention to scaled implementation.

1. Method and Sample

This report synthesises the answers contained in the uploaded Excel workbook. Responses were self-reported and were analysed separately for SMEs and VET providers because the two questionnaires use different question sets. Open-ended answers were translated and consolidated into themes. Given the small sample size, findings should be treated as directional evidence for programme design rather than as statistically representative results for the whole sector.

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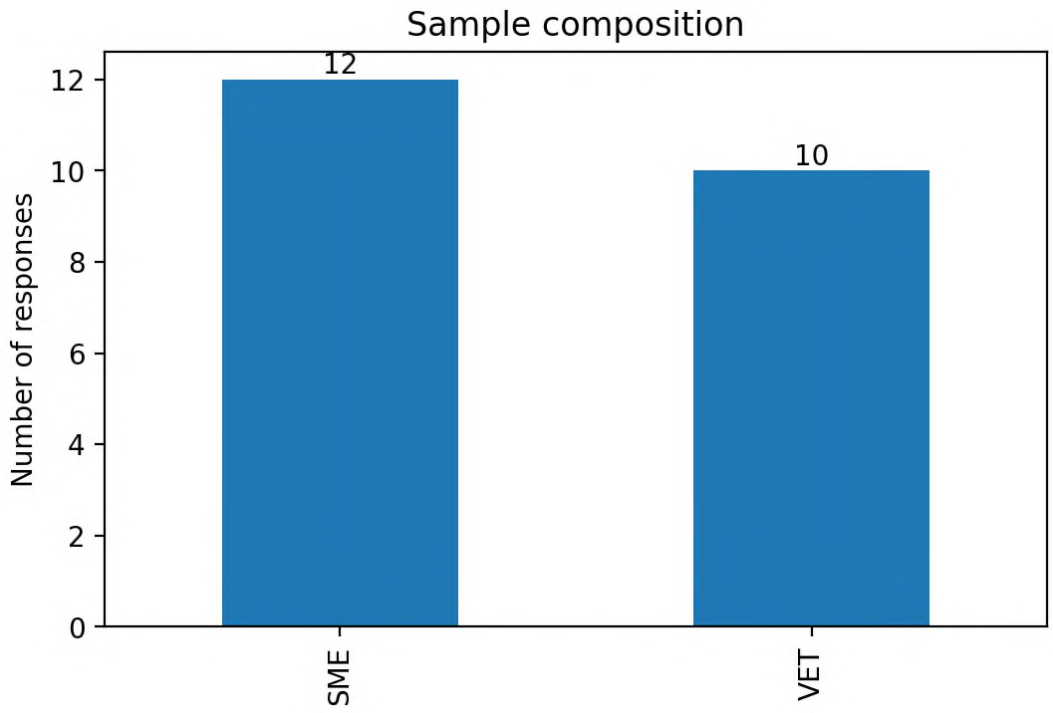

Figure 1. Composition of the sample.

The respondents represent a mix of production-oriented businesses, retail and e-commerce actors, custom-made ateliers, sustainability-oriented initiatives, and vocational or lifelong learning providers active in fashion-related education.

2. Findings from SMEs

Overall, SMEs appear to be in a transition phase: sustainability is recognised as important, but implementation remains uneven and often dependent on cost, scale and practical capability.

2.1 Quantitative overview

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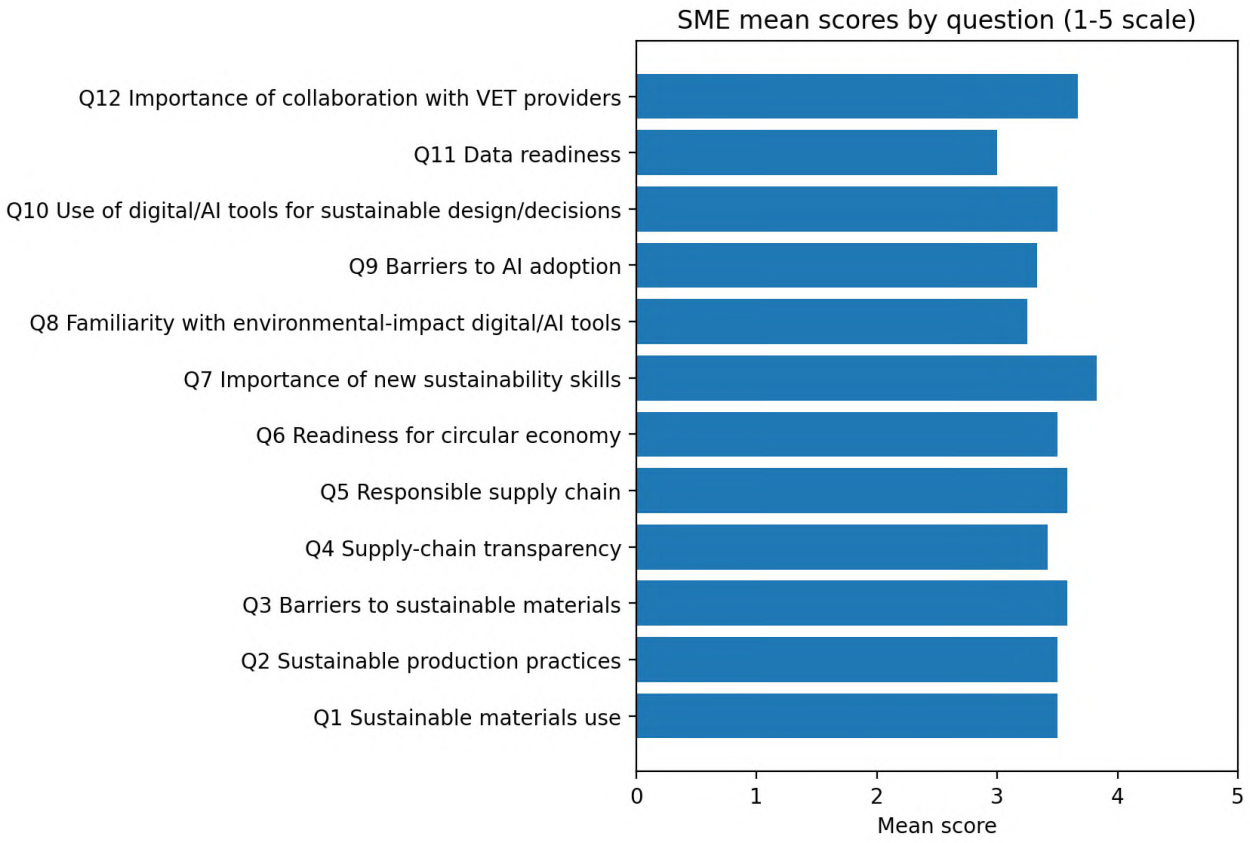

Figure 2. SME mean scores by question.

Key interpretation points:

Sustainable materials use and sustainable production practices both average 3.50, suggesting that many SMEs have started to adopt sustainable practices, but not yet at an advanced level.

Supply-chain transparency scores 3.42 and responsible supply-chain practices 3.58, indicating moderate progress with room for stronger traceability and social/environmental governance.

Circular-economy readiness also averages 3.50. SMEs are not resistant to circular practices, but they are not fully operationalised yet.

The highest positive score in the SME questionnaire is the importance of acquiring new sustainability-related skills (3.83), showing strong latent demand for upskilling.

The weakest capability area is data readiness (3.00). This is important because digital sustainability and AI adoption depend on the ability to collect and manage production and supply-chain data.

Collaboration with VET providers is rated as important (3.67), with three quarters of SME respondents selecting 4 or 5.

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2.2 Qualitative insights: sustainability and circularity barriers

The open-ended answers make the quantitative results more concrete. The dominant barrier to the use of sustainable materials is cost. In the majority of meaningful answers, respondents referred to higher prices, tighter margins, or strong price competition in the Greek market. Several SMEs also linked the problem to weak demand or limited willingness to pay among customers and brands. A second recurring issue is supply-side availability, especially limited local sourcing options, difficulty finding appropriate fabrics, and high minimum order quantities.

High cost / price pressure was the most frequent theme in material-related barriers.

Market demand uncertainty also matters: some firms reported that customers still prioritise price over sustainability.

Availability constraints include restricted access to sustainable fabrics, limited year-round supply, and high minimum order quantities.

A smaller but important issue is the challenge of communicating the added value of sustainable products to consumers.

2.3 Qualitative insights: AI, innovation and skills

AI-related answers show a different pattern. SMEs do not primarily reject digital tools; rather, they lack the conditions for effective adoption. The main themes are limited know-how, absence of structured data, insufficient technical support, and restricted budgets for advanced tools. Some respondents also questioned the immediate business need for AI, which suggests that adoption strategies should be closely tied to concrete use cases rather than generic technology promotion.

Familiarity with environmental-impact digital or AI tools is only moderate (mean 3.25).

Use of digital or AI tools for sustainable design and decision-making averages 3.50, but this appears uneven across firms.

The main qualitative barriers are lack of AI-related knowledge, limited data availability, insufficient infrastructure or support, and budget constraints.

These findings point to a need for practical, low-threshold tools and training focused on immediate business value.

3. Findings from VET Providers

VET providers present a more mature strategic profile than SMEs. Sustainability is already strongly embedded in their educational offer, but the delivery system is under strain because providers face significant cost, equipment and staff-capacity barriers.

3.1 Quantitative overview

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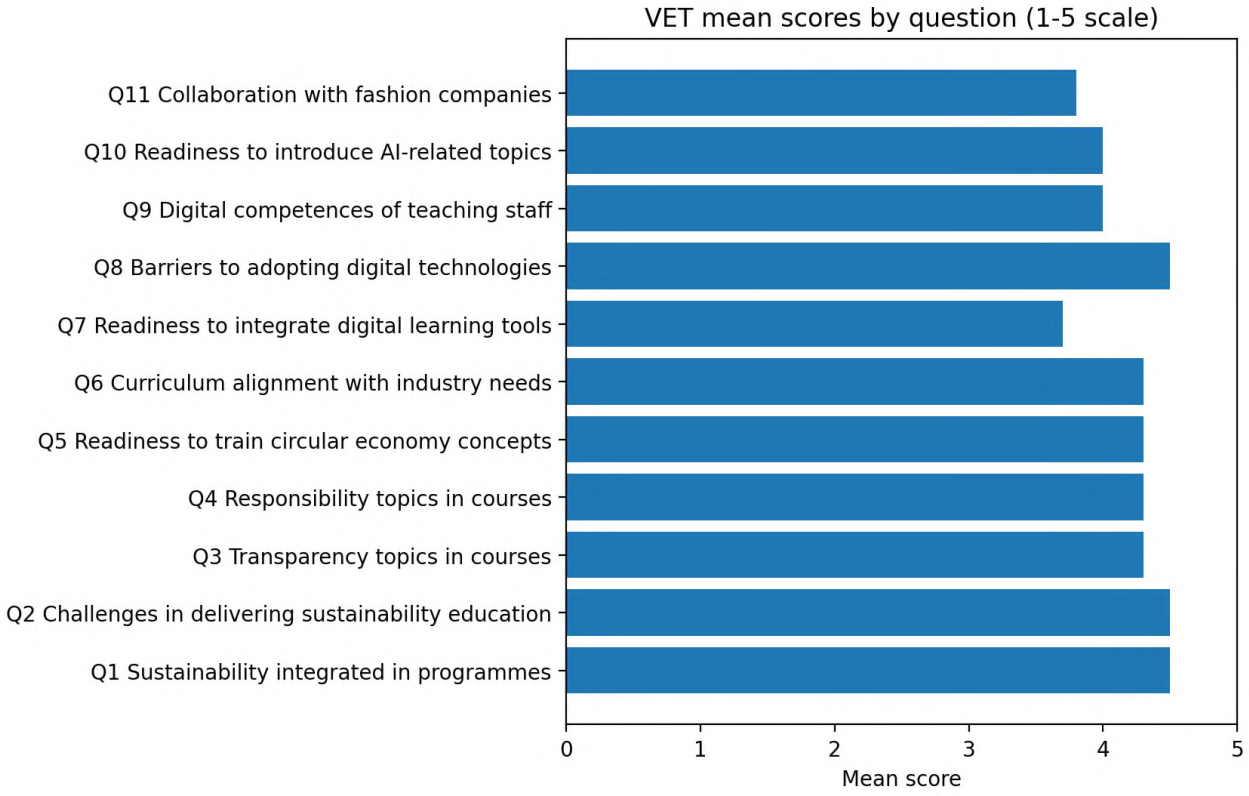

Figure 3. VET provider mean scores by question.

Integration of sustainability in programmes scores 4.5, showing that sustainability is already a core educational priority.

Transparency topics, responsibility topics, circular-economy training readiness, and curriculum alignment each score around 4.3, indicating a broadly strong sustainability orientation.

At the same time, the challenge score for delivering sustainability education is also 4.5. This means ambition is high, but so are the constraints.

Readiness to integrate digital learning tools is lower at 3.7, while staff digital competences and readiness to introduce AI-related topics both score 4.0.

Collaboration with fashion companies scores 3.8, suggesting a generally positive but still improvable relationship with industry.

The most critical digital bottleneck is the barrier score for adopting digital technologies, which reaches 4.5.

3.2 Qualitative insights: sustainability education challenges

The open responses reveal four recurring issues. First, several providers emphasise gaps in educator preparation and the need for more specialised expertise in sustainability and digital topics. Second, outdated equipment and limited resources constrain practical teaching.

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Third, some answers point to a gap between theoretical instruction and hands-on implementation. Finally, a smaller group mentions weak demand or low public awareness regarding specialised sustainability programmes.

Staff expertise and trainer preparedness emerged as a central challenge.

Resource limitations include outdated laboratories, insufficient equipment, and restricted access to modern sustainable technologies.

Some respondents explicitly noted that sustainability is taught more theoretically than practically.

A few providers also see low demand or low public awareness as a constraint on programme development.

3.3 Qualitative insights: digitalisation and AI barriers

Digitalisation barriers are especially clear. Providers mention the cost of digital equipment and software, insufficient technical infrastructure, weak readiness of staff to integrate tools into teaching, and the need for continuous training in AI, 3D tools and other emerging technologies. One response also highlights procurement delays in public institutions, while another points to uneven digital skills among learners.

The strongest qualitative theme is staff readiness and the need for training-of-trainers.

A second major theme is infrastructure: modern computer labs, software licences, and technical support are not always available.

Cost and funding limitations remain a direct obstacle for investment in digital teaching environments.

This confirms that VET providers need both pedagogical support and infrastructure support, not only curriculum content.

4. Cross-Cutting Findings and Implications for Design-Smart

Taken together, the SME and VET responses show a sector that is ready in principle, but not yet fully equipped in practice. Sustainability is already recognised as strategically important by both groups. The common challenge is not basic awareness, but implementation capacity.

SMEs need affordable pathways to adopt sustainable materials, improve data readiness, and use digital tools in ways that clearly support business performance.

VET providers need train-the-trainer support, updated teaching infrastructure, and practical pedagogies that connect sustainability and AI with real industry workflows.

Both groups see value in skills development, which creates a strong rationale for modular learning offers, targeted workshops, case-based learning, and collaborative pilots.

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The importance attributed by SMEs to collaboration with VET providers suggests there is space to strengthen co-design of curricula, work-based learning, short applied courses, and innovation projects.

Because both groups identify barriers around data, AI, and implementation, Design-Smart should prioritise simple tools, demonstrators, templates and use cases rather than abstract theory alone.

Recommended programme directions

Practical SME training on sustainable materials sourcing, circular product development, and communicating sustainability value to customers.

Short AI-for-fashion modules focused on concrete use cases such as material selection, traceability, environmental-impact assessment, inventory planning, and data-informed decision-making.

Train-the-trainer packages for VET staff combining digital pedagogy, AI basics, eco-design applications, and applied lab scenarios.

Joint SME-VET pilot activities to test curricula, micro-credentials, or real-world assignments.

Support materials that are feasible for small organisations with limited budgets, data maturity and infrastructure.

5. Limitations

The findings should be interpreted with caution. The sample is relatively small and self-selected, and all scores are based on self-assessment. In addition, some open-text responses are very brief, while a small number of VET responses appear highly optimistic across all numerical items. Even so, the dataset is sufficiently consistent to identify clear directional needs for future training and support actions.

Appendix A. Summary Tables

SME results summary

Question	Mean	Top 2 Box	Low
Q1 Materials use	3.50	50.0%	8.3%
Q2 Production practices	3.50	66.7%	16.7%
Q3 Sustainable-material barriers	3.58	66.7%	8.3%
Q4 Transparency	3.42	58.3%	16.7%
Q5 Responsible supply chain	3.58	58.3%	25.0%
Q6 Circular-economy readiness	3.50	58.3%	16.7%
Q7 Need for sustainability skills	3.83	66.7%	0.0%
Q8 Familiarity with env. digital/AI tools	3.25	41.7%	16.7%
Q9 AI-adoption barriers	3.33	33.3%	8.3%
Q10 Use of digital/AI tools	3.50	33.3%	0.0%

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Q11 Data readiness	3.00	25.0%	33.3%
Q12 Importance of VET collaboration	3.67	75.0%	8.3%

VET provider results summary

Question	Mean	Top 2 Box	Low
Q1 Sustainability in programmes	4.50	90.0%	0.0%
Q2 Sustainability-education challenges	4.50	90.0%	0.0%
Q3 Transparency in courses	4.30	80.0%	0.0%
Q4 Responsibility in courses	4.30	80.0%	0.0%
Q5 Circular-economy training readiness	4.30	80.0%	0.0%
Q6 Curriculum alignment	4.30	70.0%	0.0%
Q7 Digital-tool readiness	3.70	50.0%	10.0%
Q8 Digital-adoption barriers	4.50	90.0%	0.0%
Q9 Staff digital competences	4.00	70.0%	0.0%
Q10 AI-topic readiness	4.00	60.0%	0.0%
Q11 Collaboration with fashion companies	3.80	70.0%	20.0%

PlanB Analysis Report

Total responses	SMEs	VET providers
20	**14**	**6**

1. Method and Sample

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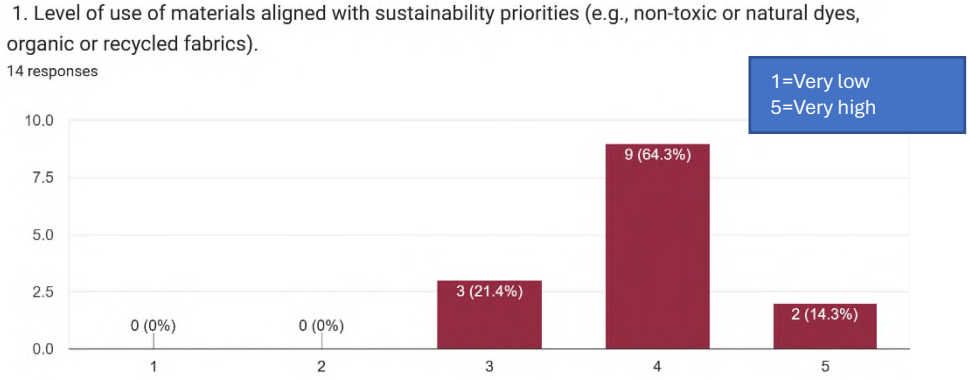
This report synthesizes the answers to the survey retrieved from both SMEs in fashion industry and VET providers. The data collected were analyzed separately for SMEs and VET providers. Open-ended answers were translated and consolidated into themes. Given the small sample size, findings should be treated as directional evidence for programme design rather than as statistically representative results for the whole sector.

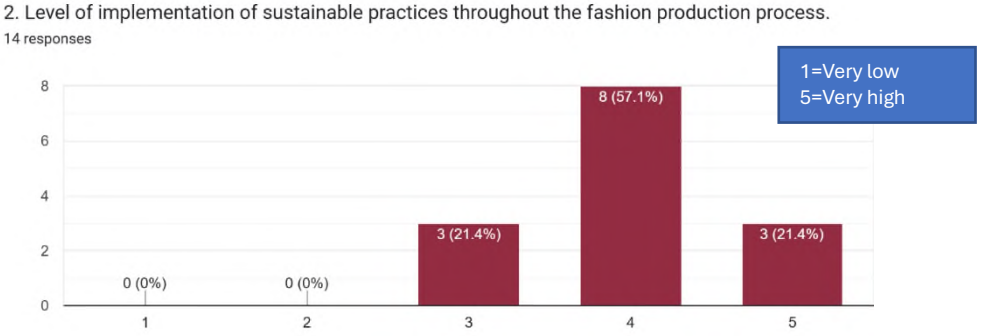
2. Results from the survey in SMEs

The SMEs participating in the survey are active in clothing manufacturing and production, fashion design, and fashion retail.

As shown in the Figure 1 most participants indicate a considerable to strong use of sustainable materials (i.e. nontoxic or natural dyes, organic or recycled fabrics etc.).



Similarly, respondents indicate strong implementation of sustainable practices in the fashion production process, as shown in Figure 2.



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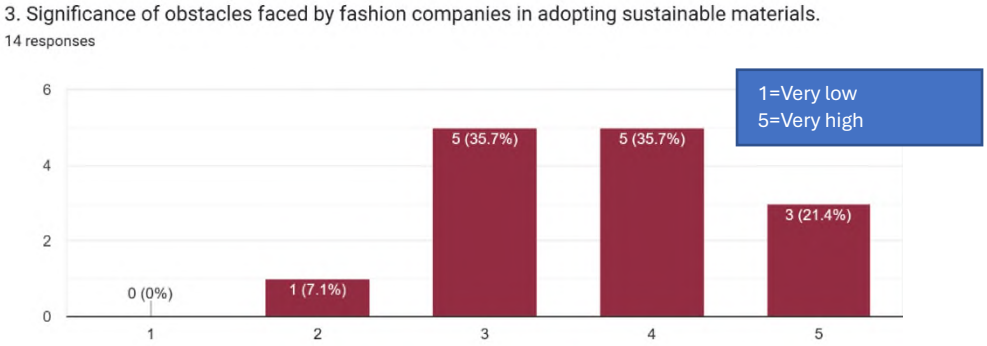
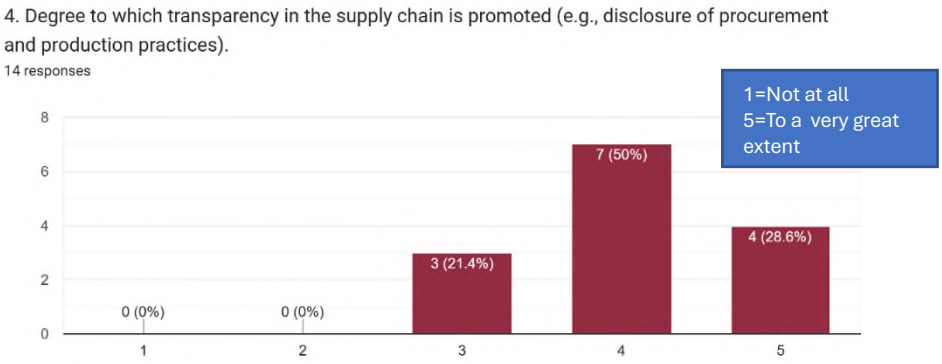
The respondents (Figure 3) view obstacles to adopting sustainable materials as generally moderate to high: 0 rated 1, 1 (7.1%) rated 2, 5 (35.7%) rated 3, 5 (35.7%) rated 4, and 3 (21.4%) rated 5. Overall, most respondents consider these obstacles to be significant.



The main obstacles are cost and availability, sustainable materials often come at a higher price and suppliers or options can be limited. Fashion SMEs also face capacity and know-how constraints, including a lack of internal expertise or specialized staff and difficulty in integrating these materials into existing production processes. Market uncertainty and information gaps add further challenges, with doubts about consumer acceptance and a lack of clear, reliable information. Overall, cost and supplier limitations remain central barriers.

As shown in Figure 4, particiapting SMEs report a generally strong promotion of supply chain transparency: no one rated 1 or 2, 3 respondents (21.4%) rated 3, 7 (50%) rated 4, and 4 (28.6%) rated 5. Most indicate that transparency is promoted to a considerable or great extent.



Similarly, as highlighted in Figure 5, the participants report a high degree of steps taken to ensure supply chain accountability: no one rated 1 or 2, 1 respondent (7.1%) rated 3, 11 (78.6%) rated 4, and 2 (14.3%) rated 5. Overall, most indicate substantial action on labor and environmental accountability.

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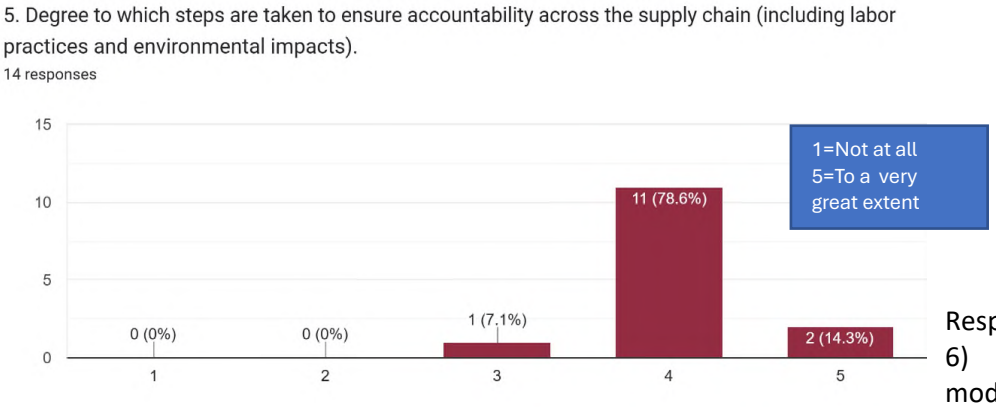
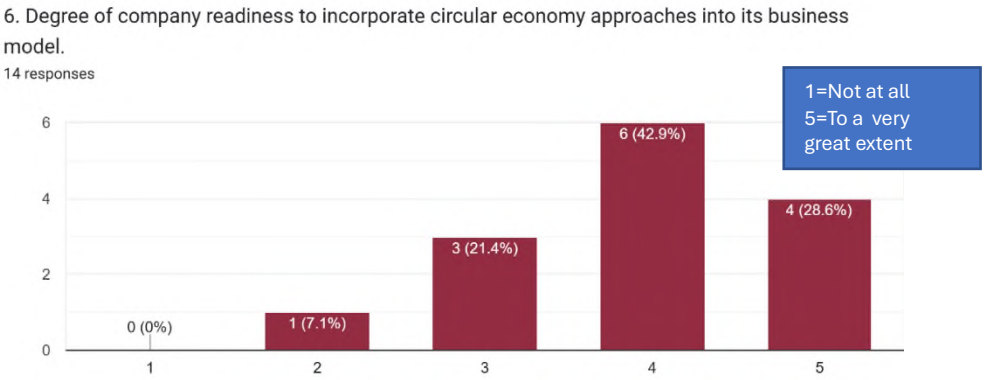


ure Respondents (Figure 6) indicate moderate to high readiness to incorporate circular economy approaches: 0 rated 1, 1 (7.1%) rated 2, 3 (21.4%) rated 3, 6 (42.9%) rated 4, and 4 (28.6%) rated 5.



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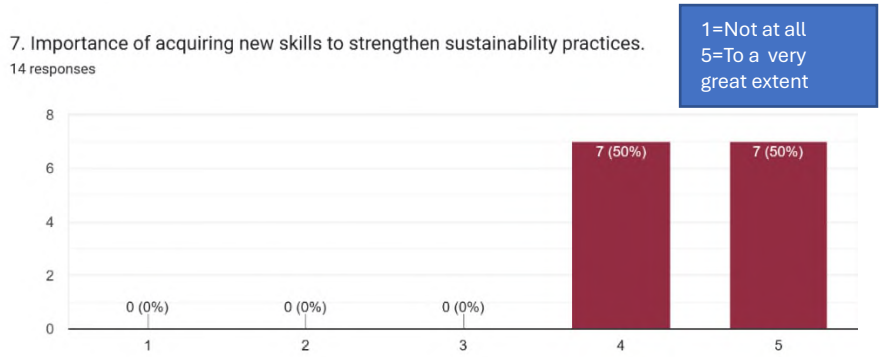
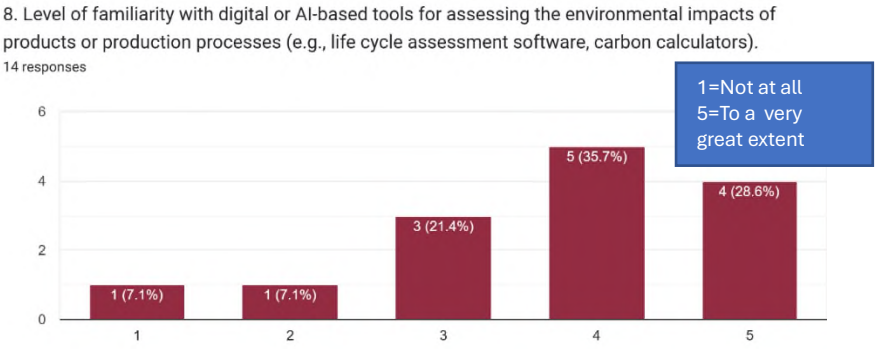
As shown in Figure 7, all respondents rated the importance of acquiring new skills to strengthen sustainability practices highly: 7 (50%) chose 4 and 7 (50%) chose 5. This indicates unanimous recognition of the importance of acquiring new skills, with half viewing it as to a very great extent.



Respondents show moderate to high familiarity with digital/AI tools for assessing environmental impacts (Figure 8)



The respondents, as shown in Figure 9, view barriers to adopting AI solutions as mostly moderate: 1 (7.1%) rated 1, 4 (28.6%) rated 2, 5 (35.7%) rated 3, none rated 4, and 4 (28.6%) rated 5. Overall, perceptions cluster around moderate significance, with a notable minority rating the barriers as extremely considerable.

Major barriers include high costs of procuring or implementing new technologies and materials, and inadequate hardware and software infrastructure. Fashion SMEs also lack digital skills among staff, have limited time or personnel to implement new processes, face difficulties integrating new procedures into existing production, and often lack external support from advisors or agencies.

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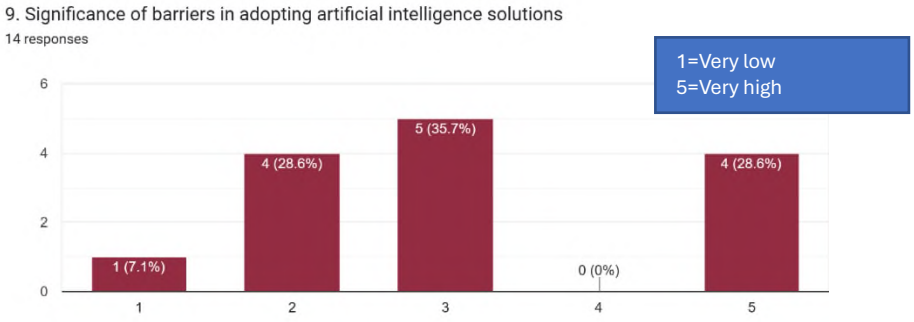

Respondents, as highlighted in Figure 10, report moderate to strong use of digital tools for sustainable design and decision-making: 1 (7.1%) rated 1, 1 (7.1%) rated 2, 3 (21.4%) rated 3, 7 (50%) rated 4, and 2 (14.3%) rated 5. Overall, most indicate these tools are used to a considerable extent.

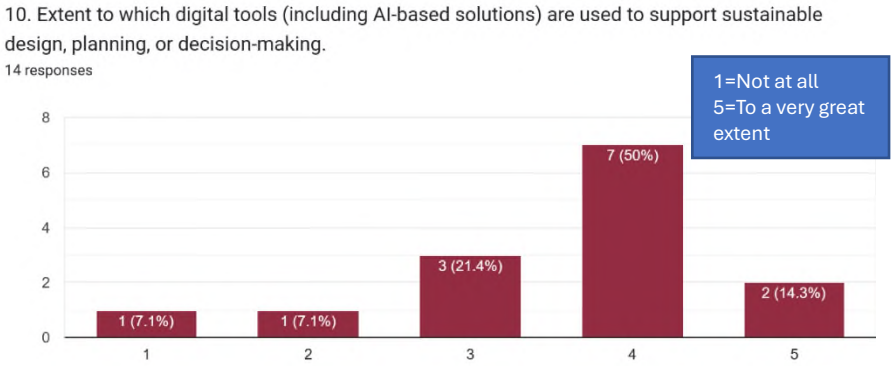

Figure 11 illustrates the level of preparedness among respondents to collect, manage, and analyze data related to manufacturing and supply chain activities. Out of 14 responses, the majority of participants, 7 individuals (50%), rated their preparedness at level 4, indicating they feel well-prepared. Meanwhile, 5 respondents (35.7%) rated their preparedness at level 3, suggesting a moderate level of readiness. Only 1 respondent (7.1%) rated themselves at level 1 and level 5 each, implying that very few feel entirely unprepared or fully prepared. Overall, the respondents predominantly demonstrate a moderate to high level of preparedness.

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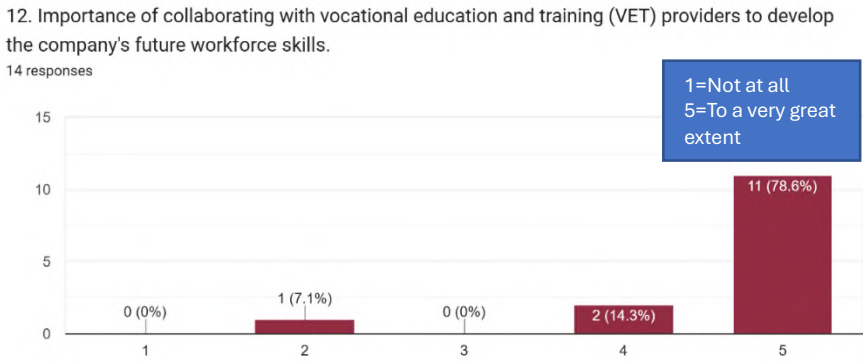
The Figure 12 showcases the perceived importance of collaborating with vocational education and training (VET) providers to develop the company's future workforce skills. Among the 14 responses, a significant majority of 11 participants (78.6%) rated the importance at level 5, indicating they see great value in such collaboration. There is a clear consensus on the crucial role VET providers play in shaping future skills within the company.



3.Results from the VET providers

Figure 1 reveals the extent to which sustainability principles are integrated into VET. The majority of respondents indicated a high incorporation of sustainability principles within the VET curriculum.

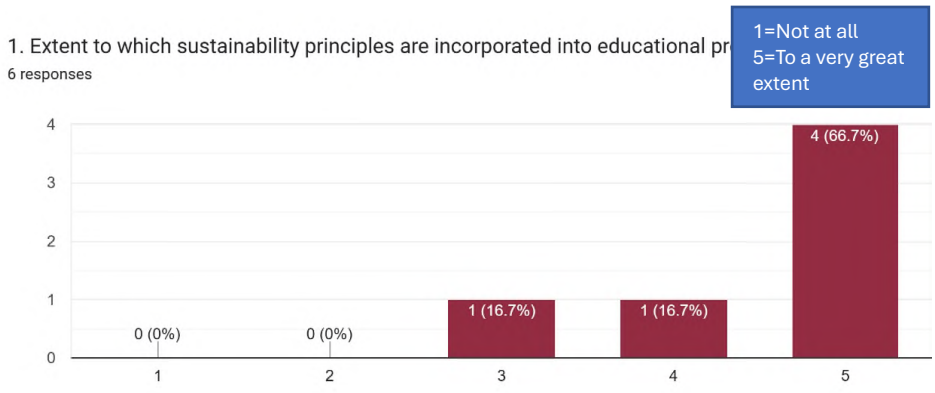


Figure 2 illustrates the significance of the primary challenges encountered in delivering education on sustainability. There is a balanced distribution of responses, with 2 participants rating the challenges at level 3, indicating a moderate significance. Similarly, another 2 respondents rated the challenges at level 4, reflecting a recognition of considerable

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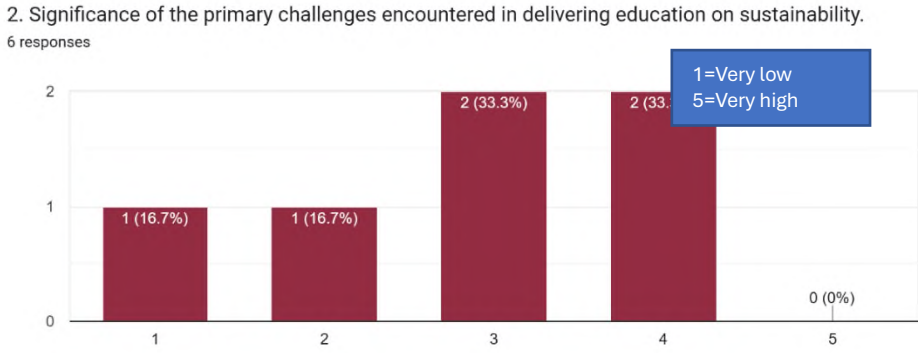
importance. Overall, the findings suggest a recognition of moderate to significant impact of challenges in delivering sustainability education.



The main challenges in delivering vocational education and training on sustainability revolve primarily around the availability of resources and access to specialized staff. A recurring issue is the lack of equipment and overall resource shortages, including limited financial liquidity, which consistently emerges as the most critical barrier. At the same time, the need for qualified and specialized educational personnel remains essential for effective training delivery.

Figure 3 displays the extent to which VET courses cover topics related to transparency in the fashion supply chain. A notable 3 respondents (50%) rated the coverage at level 1, indicating that these courses do not address transparency in the supply chain. Additionally, 2 respondents (33.3%) rated it at level 3, suggesting a moderate coverage of the topic. Only 1 participant (16.7%) rated the courses at level 2, reflecting a minimal degree of attention toward transparency. Importantly, no responses were recorded at levels 4 or 5, indicating that none of the participants perceive a substantial focus on this critical issue within the courses. Overall, the results highlight a significant gap in addressing transparency in the fashion supply chain within the educational curriculum.

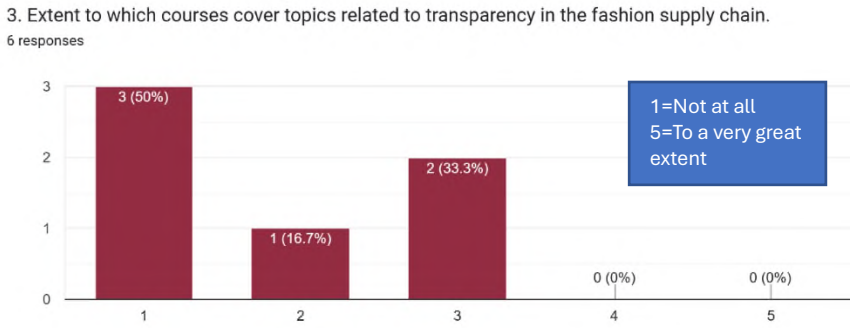


Figure 4 illustrates the extent to which courses cover topics related to responsibility in the fashion supply chain. A significant portion of respondents, 3 individuals (50%), rated the coverage at level 1, indicating that responsibility is not addressed in these courses. Meanwhile,

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2 respondents (33.3%) rated it at level 3, suggesting some moderate attention to the topic. Only 1 participant (16.7%) chose level 2, reflecting minimal coverage. Notably, there were no ratings given at levels 4 or 5, which points to a lack of substantial focus on this important aspect of the fashion supply chain in the curriculum. Overall, the findings reveal a considerable gap in addressing responsibility within the educational programs offered.

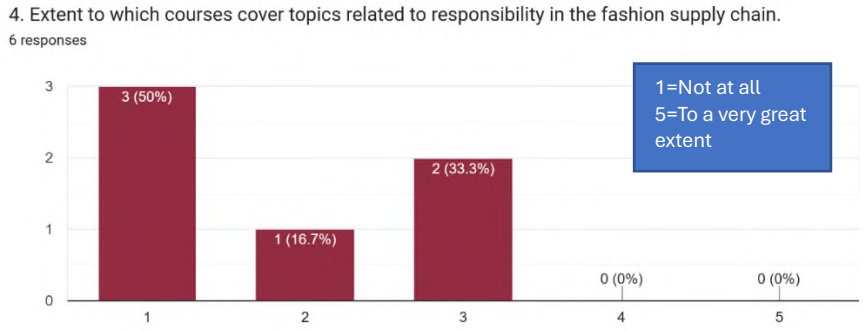

Figure 5 represents the level of institutional preparedness to deliver education on circular economy concepts within fashion-related programs, rated from 1 (not at all) to 5 (to a great extent) based on 6 responses. The findings indicate a generally positive sentiment towards institutional readiness to educate on circular economy concepts

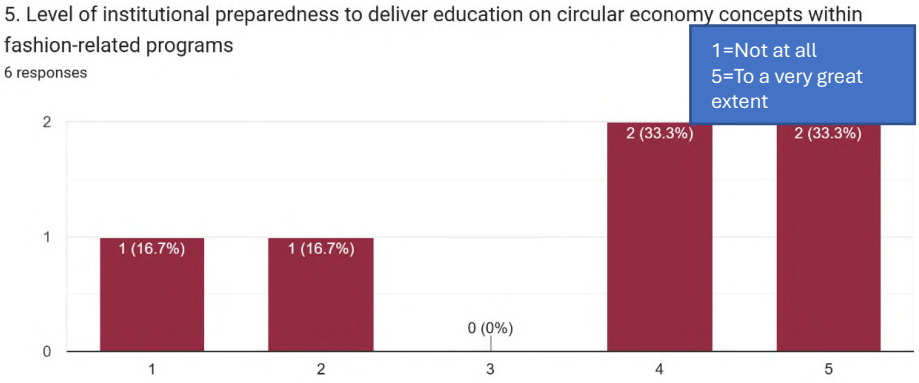

Figure 6 illustrates the extent to which current curricula align with industry needs regarding sustainability and circular business models. A significant portion of respondents, 3 individuals (50%), rated the alignment at level 5, indicating a high connection between the curricula and industry needs. Meanwhile, 2 respondents (33.3%) rated it at level 3. Overall, the findings suggest a general acknowledgment in aligning educational programs with the sustainability and circular business models sought by the industry.

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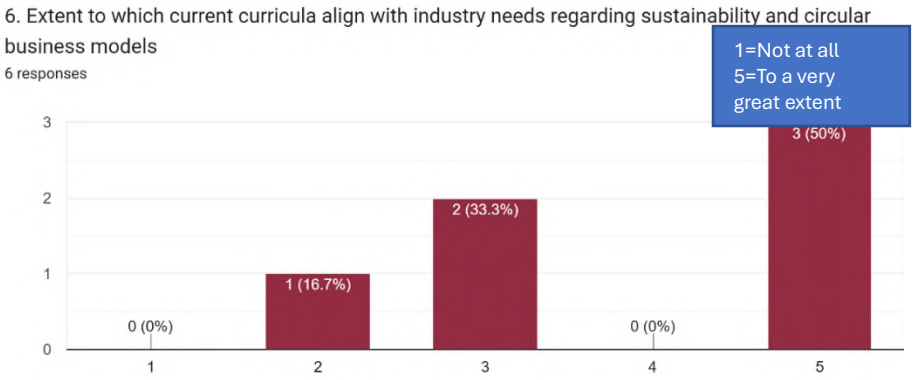

Figure 7 depicts the level of preparedness to integrate digital learning tools into educational activities. The results reflect a positive outlook on the ability to incorporate digital learning tools into educational activities, highlighting a strong emphasis on modernizing teaching approaches.

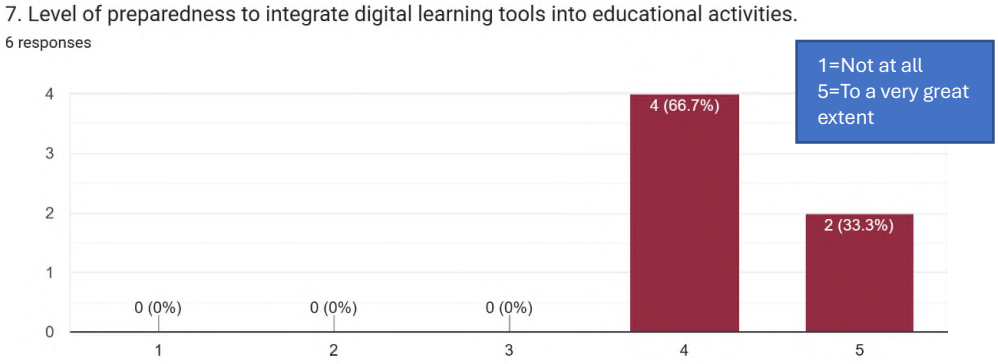

Figure 8 illustrates the significance of the impact of barriers to adopting digital technologies in teaching, A notable portion, 3 respondents (50%), rated the significance at level 3, indicating a moderate acknowledgment of the barriers' impact. Additionally, 2 respondents (33.3%) rated it at level 4, suggesting they perceive these barriers as significantly important to the adoption process. Only 1 participant (16.7%) rated the impact at level 5, reflecting a strong view of its relevance. Importantly, no respondents rated it at levels 1 or 2, indicating a consensus that the barriers to adopting digital technologies in teaching are indeed meaningful. Overall, the findings highlight a general recognition of challenges in integrating digital tools in educational practices.

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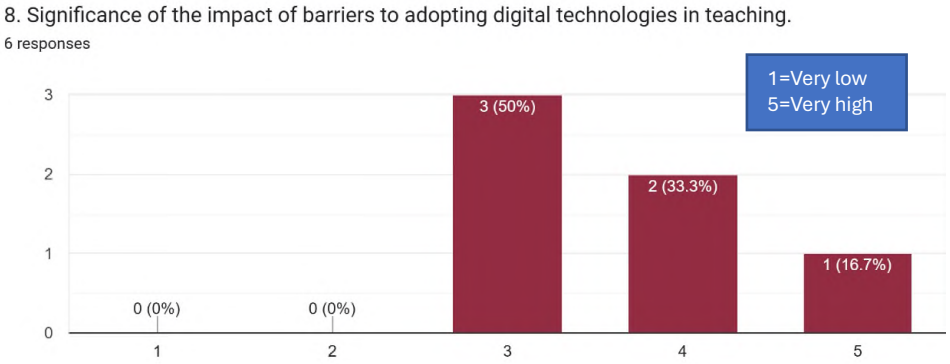
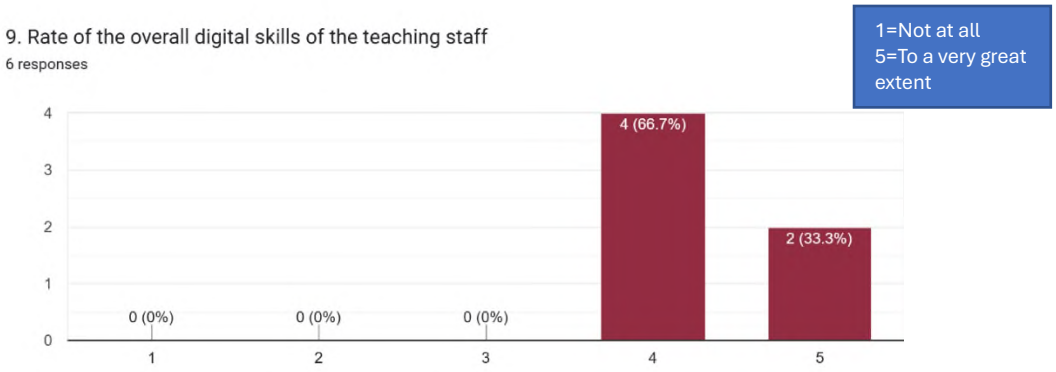


The main factors limiting the adoption of digital technologies in teaching include the high cost of equipment and subscriptions to artificial intelligence platforms, as well as the familiarity of the teaching staff with these tools.

The results in Figure 9 indicate that the overall digital skills of the teaching staff are perceived to be relatively high. The majority of responses (66.7%) rated digital skills at level 4, suggesting a strong level of competence, while the remaining 33.3% rated them at the highest level (5), indicating very high proficiency. Overall, this distribution shows that the teaching staff are generally well-equipped with digital skills, with no indication of significant gaps at the lower end of the scale.



The results in Figure 10 show a very high level of preparedness of VET providers to integrate artificial intelligence topics into VET programs. This distribution suggests strong overall confidence among respondents, with all participants feeling well-equipped to incorporate AI topics into their programs.

1=Not at all
5=To a very great extent

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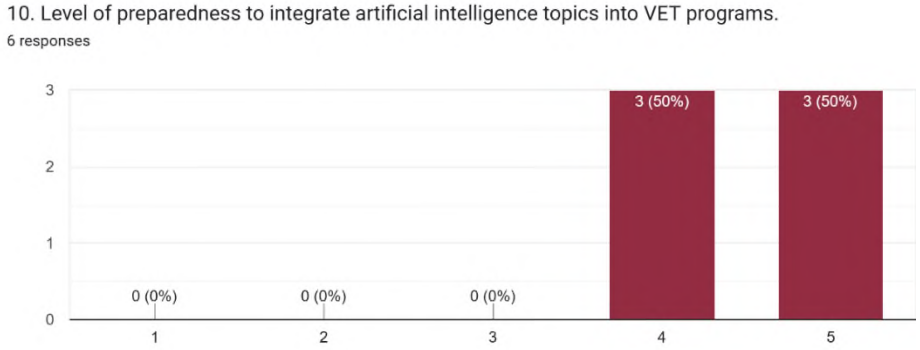
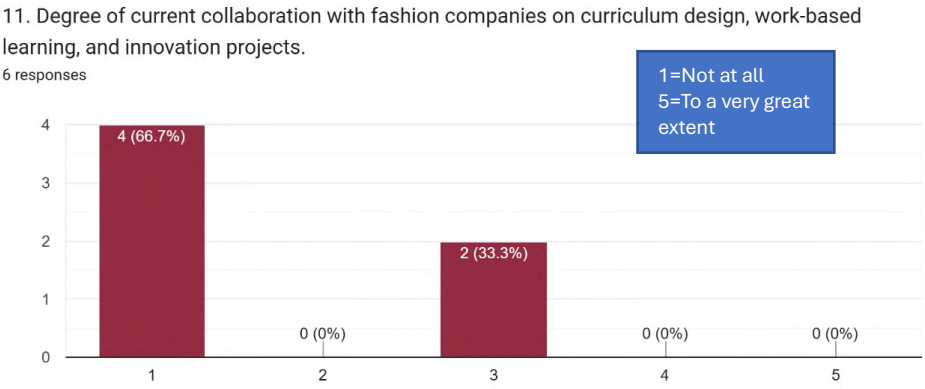


The results in Figure 11 indicate a generally low level of current collaboration with fashion companies on curriculum design, work-based learning, and innovation projects. The majority of respondents (66.7%) rated collaboration at level 1, meaning not at all, while the remaining 33.3% selected level 3, indicating only a moderate degree of collaboration. Notably, no respondents rated collaboration at higher levels (4 or 5), suggesting that strong partnerships with fashion companies are largely absent. Overall, the findings highlight a significant gap and suggest considerable room for improvement in building industry collaboration.



4. Conclusion

Both SMEs and VET providers, participated in the survey, viewed sustainability and digital/AI technologies as crucial for the fashion sector.

In more detail SMEs reported:

- Strong use of sustainable materials and sustainable production practices; while supply-chain transparency and accountability are actively promoted.
- Moderate to high readiness for circular economy approaches and use of digital tools for sustainable design.
- High demand for new skills to strengthen sustainability

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- Main barriers for the adoption of sustainable practices are the costs, limited availability of sustainable materials, limited internal capacity/expertise and market/information uncertainty.
- AI/digital adoption barriers are costs, inadequate infrastructure, limited staff digital skills, time availability and weak external support
- High interest in collaborating with VET providers to develop workforce skills.

VET providers reported

- Sustainability principles are largely incorporated in VET overall, and many feel prepared to teach circular economy and AI topics.
- Major limitations are the access to specialized training staff, high costs in the adoption of digital technologies and tools familiarity.
- VET courses largely lack substantive coverage of supply-chain transparency and responsibility
- Teaching staff have relatively high digital skills; the institutional readiness for AI integration is high.
- Current collaboration with fashion companies on curriculum, WBL, and innovation is minimal.

For the purposes of the DesignSmart curriculum development and other supporting practices the following are considered as important

- Strengthen industry–VET collaboration: co-develop modules, work-based learning practice-based learning and project-based learning to translate SMEs' needs into VET curricula.
- Curriculum gaps: supply-chain transparency, responsibility (labor/environment), and practical circular economy methods.
- Needs for capacity building: short courses for SME on sustainability practices, circular design, digital tools/AI and upskilling for VET trainers on industry-relevant tools and equipment.
- Address cost and resource barriers: pilot shared resources (equipment, material sourcing consortia), access to open source digital/AI platforms, and fostering collaborations with supplier networks for sustainable materials.
- Technical support and integration: provide practical toolkits, implementation guidance, and advisory support to help SMEs integrate digital/AI and circular practices into existing workflows.

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Annex 2 – Focus Group Report

1. Background and Context of the Discussion

This report is the result of a qualitative analysis of the focus group discussion held on Wednesday 17 March 2026, as part of the Design-Smart project, and the individual interviews that followed. The discussion focused on identifying the training needs and strategic barriers faced by women entrepreneurs and VET (Vocational Education and Training) when transitioning to sustainable fashion and adopting Artificial Intelligence (AI) tools. The findings will directly inform the design of the curriculum.

Project Component	Description
Project Title	Empowering VET and Women Entrepreneurs for Sustainable Fashion Innovation
Acronym	Design-Smart
Project Number	2025-1-ES01-KA220-VET-000358027
Coordinator	Leather Cluster Barcelona (LCB)
Implementation Framework	Needs Analysis (WP2)

2. Participant Profiles

Focus group participants

The session was attended by three experts with complementary backgrounds, ensuring a holistic approach to the value chain:

- **Electra Papadopoulou**: Chemist, representative of **Himar Lab** and bioeconomy expert. Her specialisation lies in the utilisation of recycled materials for the production of polymers used as adhesives in the wood industry, directly linking chemistry with circular fashion.
- **Christina Stamataki**: Project coordinator for **"Vetrine"**. She has significant experience in bridging theoretical training with production, having successfully guided trainee designers from learning to the actual manufacture of sustainable products.
- **Niko Morres**: Fashion designer with a focus on **Zero Wasting**. He represents the new generation of professionals, focusing on the practical application of sustainable pattern-making techniques and the adoption of digital tools.

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- **Moderator**: Project manager at the EUROTraining Educational Organisation, member of the Design-Smart team.

Participants in individual interviews

- **Despoina Zachariou**: Costume Designer at the National Theatre. She studied at the PANSIK Fashion School, specialising in costume design and construction. She has attended numerous seminars on costume design and fashion styling.
- **Eleni Kontonasiou**: Head of the Directorate of Social and Solidarity Economy at the Ministry of Social Cohesion and Family. She studied Social Work, Psychology and European Studies, with postgraduate studies in Social Economy. She sits on committees dealing with equality issues
- **Dr Alexandra Fountouki**: adult educator in the fields of marketing, digital transformation, use of AI and sustainability. She is a researcher at the Laboratory of Social Entrepreneurship and Social Innovation at the University of Patras and at the Laboratory of Sports Entrepreneurship and Innovation at the University of Thessaloniki.

3. Theme 1: Sustainable Fashion and the Circular Economy

Definitions and Conceptual Framework

The discussion highlighted sustainability as the quality of **'that which endures over time'**, emphasising longevity. A clear distinction was made between:

- **Bioeconomy**: The use of renewable raw materials from nature.
- **Circular Economy**: Keeping products in use through recycling and reuse (multiple 'lives').

The individual interviews provided further insights such as

- **Sustainable fashion:** reuse and extension of the life cycle of clothing**,** responsible use of resources, fashion that utilises resources with minimal environmental impact. It also means local and socially just production, decent work, waste reduction, and collaborations between businesses in the value chain
- **Circular economy in fashion:** giving new life to garments through upcycling, resizing, alterations, adding decorative elements or resale (vintage markets)

Main Obstacles and Strategic Challenges

- **Economic Cost**: The critical cost difference between bio-based materials and petroleum-based materials was highlighted, which acts as a barrier for SMEs.

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- **Lack of Availability**: Sustainable raw materials are often not available throughout the year, and generally, the new materials that have flooded the market make recycling difficult
- **Greenwashing**: Misleading communication of 'green' practices creates mistrust among consumers and businesses.
- **Interdisciplinarity**: The need for collaboration between designers and scientists (e.g. chemists) is essential for understanding the recyclability of materials.
- **Skills gap:** businesses lack the necessary skills and strategic knowledge, particularly regarding sustainability and the use of new technologies. **Skills are:**
  - Critical skills such as: eco-design, knowledge of sustainable materials, recycling of all materials, understanding of the product life cycle, techniques for repairing and reusing materials, environmental awareness, collaboration with relevant bodies and recycling organisations
  - Digital skills, so that technology supports — rather than replaces — creativity.
  - Core skills relating to collaboration and networking (clusters, social production networks), problem-solving with limited resources
- **Lack of educational provision:** There are no study programmes at either vocational training or higher education level, particularly in rural areas. Concepts such as sustainability, circularity, cooperation and ethical trade have not been systematically integrated into fashion education. Many trainers have not themselves undergone training in sustainability and the use of technologies such as AI, with the result that they find it difficult to incorporate these into their teaching
- **Insufficient support:** businesses lack adequate support at a time when the cost of transition is high and there is a lack of expertise. Access to funding and innovation is limited, particularly for small businesses
- **Lack** of **demand** for second-hand clothing due to consumer ignorance or price

4. Theme 2: Artificial Intelligence (AI) and Digitalisation in Fashion

The use of AI is considered a 'one-way street' for the modernisation of the sector, provided it functions as a tool and not as a substitute for human creativity.

Applications and Tools

- **Virtual Fittings & Digital Twins**: Virtual fittings and digital prototypes that contribute significantly to reducing material waste (material optimisation).
- **Specialised Software**: The tools **Cloth 3D** (simulation of elasticity/texture) and **Yoco styles** (automated pattern creation) were specifically mentioned.
- ChatGDP: using it for research into new techniques and tools

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- Design support tools
- Demand forecasting, data analytics tools
- Blockchain, RFID (Radio-Frequency Identification) and QR codes for traceability and transparency in the supply chain
- Digital platforms for communication with suppliers
- Digital product passport

Advantages and Strategic Risks

- **Advantages**: Personalised customer service, trend forecasting to avoid overproduction and faster market research.
- **Disadvantages**: Cost of accessing the technology, particularly for small businesses; lack of knowledge and digital skills; fear of job loss
- **Risks**: The risk of losing basic technical skills was highlighted. **Strategic recommendation**: If a trainee uses AI for pattern-making without knowing the manual process, they will fail to manage errors. AI should follow on from basic studies.
- **Ethical Issues**: The designer's 'soul' and personal identity constitute the comparative advantage of SMEs over mass, digitised production.

Shortcomings in digital skills

- Basic digital literacy and critical thinking: students need to know when a tool is useful and when it is not.
- Social media marketing
- Content creation
- Digital content visualisation

5. Theme 3: VET Educational Gaps and Challenges for Women Entrepreneurs

Shortcomings in Curricula

A lack of knowledge was identified in the areas **of entrepreneurship (Business/Branding), innovation, practical sustainability, circular production, the use of digital tools and AI, partnership development**, **fair and sustainable supply chains**, and **transparency (Labelling)**. Particular emphasis was placed on 'Social Sustainability', with participants

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requesting sessions on **legislation regarding staff**, labour rights and safety in production facilities.

The Stereotype Trap for Women Entrepreneurs

- **Digital Stereotype**: Whilst manufacturing is traditionally considered a 'female' sector, AI technology is still viewed as a 'male-dominated' field.
- **Multiple Roles**: A lack of time due to family commitments makes flexible learning essential.
- **Difficulty in accessing networks and funding;** targeted, flexible and accessible programmes are needed
- **Boosting Self-Confidence**: Specific confidence-building modules are required for the transition from the traditional model (sewing workshops) to digital innovation.

6. Recommendations for the Curriculum and Tools

1. **Content**
    - **Sustainability & Entrepreneurship**: Linking ecology with profit, branding, and the history of clothing (labelling).
    - **Social Responsibility**: Labour legislation and production safety.
    - **AI Practice**: Using tools for specific purposes (e.g. research, sampling) after mastering the fundamentals.
    - **Developing partnerships** for sustainability and innovation, **collaboration** and **co-creation, sharing (open business, open innovation)**
    - **Professional and entrepreneurial readiness**
2. **Methodology**
    - **Train-the-Trainer Certification**: An urgent necessity due to instances where public sector trainers were opposed to the circular economy due to a lack of knowledge.
    - **Experiential Learning**: Hands-on workshops and direct collaboration with businesses to connect with the 'business world'.
    - **Training Methods**: simulations, case studies
3. **Tools and Accessibility**
    - **Practical Resources**: Sustainability checklists, templates and demonstrations of AI tools, good practices, workshops, projects
    - **Inclusion**: Bilingual manuals (Greek/English) and plain language.

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- **Special Needs**: Provision for people with **dyslexia**, **visual impairments** and physical disabilities via online platforms for remote areas.
- **Hybrid learning models**
- **Targeted support for women,** empowerment, and encouragement

7. Conclusions and Next Steps

- **Bridge Strategy**: The educational material must bridge 'Traditional Craftsmanship' with 'Digital Efficiency'.
- **Human Factor**: The "human spirit" in the design must be framed as a competitive advantage for SMEs over mass production.
- **Holistic Sustainability**: Education must cover the three pillars: Environment (materials, transformation), Society (labour, ethics, justice, transparency) and Economy (sustainable business models).
- **Ecosystemic approach**: Education should encourage the development of partnerships for sustainability and innovation

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