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COVE REMODE

Unlocking Circular Fashion Design Excellence

RE MODE
UNLOCKING CIRCULAR FASHION DESIGN EXCELLENCE

LEARNING METHODOLOGY AND PEDAGOGICAL APPROACH COMPREHENSIVE REPORT

Co-funded by the European Union

REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Learning Methodology and Pedagogical Approach Comprehensive Report

VETs & HEIs & SMEs in the Fashion and Textile Sector Circular Economy Readiness

Pedagogical framework grounded in the five-country Circular Economy Readiness survey of VET providers, HEIs and SMEs (Finland, Germany, Greece, Italy, Türkiye), with the consolidated skills-ecosystem analysis, the 2026 regional mapping update and all country reports recomputed on the final dataset

Project: COVE REMODE - Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Learning Methodology and Pedagogical Approach Comprehensive Report	**WP2 Task: T2.3**
Lead Partner: BUU (task lead); AUEB-RC (WP2 lead)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0 (revised after the EACEA RP1 review)**
Authors: Bursa Uludağ University (BUU) and Athens University of Economics and Business (AUEB-RC): Prof. George Lekakos, Dr Fiori Zafeiropoulou, Ass. Prof. Dr Elena Chatzopoulou	**Date: 21/11/2026 (v1.0: 25/12/2025)**

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Consent & GDPR
All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

Revision note — version 2.0 (21 November 2026)

This version responds to the EACEA request for additional information on the RP1 periodic report (Ares(2026)10534180, 11/11/2026), which found that D2.3 did not contain the full analysis for Finland because the SME analysis was missing. Version 2.0 is a complete re-issue:

- All ten national reports (SMEs and VET/HEI educators for Finland, Germany, Greece, Italy and Türkiye; Annexes C and D) have been recomputed on the final consolidated dataset closed on 29 January 2026 (107 SMEs: Italy 29, Greece 23, Türkiye 20, Finland 18, Germany 17; 78 educators). Version 1.0 contained national snapshots prepared in December 2025 while data collection was still open, no Finnish SME report and no Greek SME report (the Greek SME annex cover was present but the report was missing).
- The consolidated five-country research report on system mapping and skills ecosystem analysis (previously circulated within the consortium as D2.6, AUEB-RC, April 2026) is integrated as Part B (Sections 4–12); its survey figures have been recomputed on the final dataset with harmonised option labels (Sections 7 and 8), and a new Section 12 adds the 2026 evidence of the ReMODE regional mapping survey (WP3 T3.1, 408 registrations, July–October 2026).
- The learning methodology and pedagogical framework (Sections 1.2–1.5 and 3.7) incorporate the material developed by BUU in May 2026 and the consortium review comments of June 2026; the country summaries in Section 3 have been aligned with the final figures.
- Dissemination level set to Public in line with the Grant Agreement; the deliverable is issued on the project's public template with the EU emblem, funding statement and disclaimer throughout.

Structure of this deliverable

Part A — Learning methodology and pedagogical approach (Sections 1–3)	Section 1 Introduction, theoretical and pedagogical framework, survey methodology, data and samples · Section 2 Survey analysis by thematic area · Section 3 Conclusions: cross-country pedagogical synthesis, country summaries, proposed pedagogical approach and theoretical framework for WP3 · References
Part B — Research report for WP2 system mapping and skills ecosystem analysis (Sections 4–12)	Section 4 Introduction · Section 5 Research methodology · Section 6 Initial ecosystem mapping · Section 7 Consolidated survey results: SMEs (107) · Section 8 Consolidated survey results: VET and HEI educators (78) · Section 9 Country-level SWOT results · Section 10 Aggregated and comparative SWOT · Section 11 Findings, discussion and conclusions · Section 12 Update with 2026 evidence (regional mapping survey) · References

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Part C — SME country reports (Annex C)	C1 Finland (n=18) · C2 Germany (n=17) · C3 Greece (n=23) · C4 Italy (n=29) · C5 Türkiye (n=20)
Part D — VET and HEI country reports (Annex D)	D1 Finland (n=12) · D2 Germany (n=13) · D3 Greece (n=12) · D4 Italy (n=19) · D5 Türkiye (n=20)

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PART A - Learning Methodology and Pedagogical Approach

Section 1: Introduction

1.1 Pedagogical and Methodological Positioning of D2.3

Deliverable D2.3, “Learning Methodology and Pedagogical Approach Comprehensive Report”, presents the learning methodology and pedagogical approach developed within the Erasmus+ COVE REMODE project. The project aims to strengthen vocational excellence and capacity building within the fashion and textile ecosystem, with a particular focus on facilitating the transition to the circular economy across five partner countries: Finland, Germany, Greece, Italy, and Türkiye. The deliverable further contributes to the development of resilient, innovation-oriented, and sustainability-driven vocational ecosystems by connecting circular economy transition needs with learner-centred, practice-oriented, and policy-aligned pedagogical strategies.

This report is grounded in a multifaceted pedagogical framework drawing upon four established theoretical traditions: Constructivist Learning Theory, Experiential Learning Theory, Problem-Based Learning, and Transformative Learning Theory. The integration of these pedagogical approaches strengthens learners’ capacity to engage critically with the challenges of the circular economy and sustainability transitions in the fashion and textile sector. This report focuses its theoretical contribution on two primary pedagogical frameworks: Constructivist Learning Theory and Experiential Learning Theory (ELT). This decision aligns with the recommendation in Deliverable D2.6, which proposes constructivism as the central theoretical anchor, supplemented by ELT to address the experiential and practice-based dimensions of circular fashion education. Problem-Based Learning (PBL) and Transformative Learning Theory are retained as complementary approaches that strengthen specific aspects of the REMODE methodology, particularly in relation to challenge-based activities and epistemic reorientation among professionals trained in linear production paradigms. The integration of these frameworks is made explicit through a coherent analytical structure in which each theory is positioned according to its evidential grounding in the multi-country survey data.

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The methodology therefore moves beyond a conventional survey report and positions D2.3 as a strategic bridge between WP2 system mapping activities and the future curriculum development, training implementation, and pilot activities foreseen under WP3-WP5. Accordingly, survey findings are translated into actionable pedagogical principles, competence frameworks, curriculum-development guidelines, and assessment orientations aligned with Erasmus+ sustainability and transferability priorities. The framework additionally promotes learner autonomy, systems thinking, and interdisciplinary collaboration, which are essential competencies for circular fashion transitions.

The Circular Economy Readiness Survey for VET providers, HEIs, and SMEs operating within the fashion and textile sector was conducted to map current pedagogical practices, sustainability-related competences, collaboration patterns, and readiness gaps across participating countries. The survey serves not only a descriptive function, but also a developmental and strategic one, enabling evidence-based curriculum innovation and the design of responsive training pathways aligned with labour market transformation.

This report analyses survey data from VET, HEI, and SME respondents across Finland, Germany, Greece, Italy, and Türkiye. The analysis focuses on readiness for circular economy principles through pedagogical practices, sustainability integration, digital engagement, regulatory awareness, curriculum responsiveness, and industry-education collaboration.

The report is structured into the specified eight subsections.

- Demographics
- Teaching Approaches and Pedagogical Experience
- Perceptions of Creative and Experiential Methods
- Impact on Learning and Motivation
- Gamified and Innovative Learning Activities
- Technology and Digital Engagement
- Policy Awareness and Regulatory Alignment
- Curriculum Responsiveness and Skills for the Circular Transition

For each subsection, the report presents key findings supported by descriptive statistics, including frequencies, percentages, and Likert-scale averages where applicable. Qualitative responses are interpreted thematically in order to identify recurring needs, barriers and opportunities for curriculum innovation.

The evidence generated by the survey provides a foundation for the design of training programmes, micro-credentials, curricula, pilot activities, and policy recommendations under the COVE REMODE project. It also supports alignment with key EU strategic frameworks, including the European Green Deal, the EU Strategy for Sustainable and Circular Textiles, the Circular Economy Action Plan, the European Skills Agenda, and emerging instruments such as ESPR, DPP, EPR, CSRD, ESRS, and GRI-related reporting expectations.

It is methodologically important to acknowledge that the survey findings presented herein should be interpreted as an evidence-based exploratory baseline rather than as definitive or fully representative national portraits. The sample sizes, whilst purposively selected to reflect

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strategic relevance, vary across countries and institutional categories, thereby necessitating measured interpretation. Nonetheless, these findings constitute a significant empirical point of departure for subsequent stages of verification, co-design, and in-depth study to consolidate the intervention strategy at the national and transnational scales.

1.2 Theoretical and Pedagogical Framework

The following section has been added to strengthen the theoretical grounding of this report in accordance with contemporary pedagogical scholarship and EU project standards for academic rigour.

A theoretical approach to circular fashion education can be productively rethought through the lenses of interdependence, ethics of care, attunement, affect theory, posthumanism, and ecological pedagogies, positioning circularity not simply as a technical sustainability framework, but as a relational and more-than-human pedagogical project.

Interdependence is a core ontological and pedagogical principle: it shifts teaching from transactional knowledge delivery to a relational practice grounded in shared vulnerability, holistic well-being, and collective flourishing. It is closely connected to caring practices understood as the “tangible manifestation of interdependence and nature connectedness through everyday doings in particular places” (Moriggi et al., 2020; Puig de la Bellacasa, 2010; Tschakert & St. Clair, 2013). The ethics of care framework (Noddings, 1984) reframes circular fashion education as an obligation to sustain and repair relationships with garments, workers, communities, and ecosystems. Curriculum design informed by care pedagogy prioritizes learning activities such as repair, mending, upcycling, and local material engagement not only as technical practices, but as ethical acts of responsibility and maintenance, thereby challenging fast-fashion logics of disposability.

From a posthumanist perspective (Braidotti, 2013; Barad, 2007), circular fashion curricula move beyond human-centred notions of design competence to emphasize the entanglement of materials, labour, waste, energy systems, and ecological processes. In curriculum terms, these shifts learning outcomes from isolated skills (e.g., garment construction or trend forecasting) toward systems thinking, where students map circular flows of fibres, production cycles, and post-consumer material transformations as dynamic intra-actions rather than linear supply chains.

Within this context, attunement and environmental attunement (Welch et al., 2021) become key pedagogical principles for curriculum design. Students are encouraged to develop sensitivity to the material agency of textiles, the temporalities of wear and decay, and the sensory dimensions of fibre transformation. Studio-based modules may therefore include embodied material explorations, where learners work closely with waste streams, deadstock fabrics, or biodegradable materials to cultivate an attuned awareness of circular processes as lived, affective experiences rather than abstract models.

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Affect theory (Ahmed, 2004) further deepens this curriculum orientation by recognising that engagement with circular fashion is shaped by emotional and pre-cognitive intensities, such as discomfort with waste, attachment to garments, or collective excitement in collaborative redesign practices. Curriculum design can therefore intentionally incorporate reflective and participatory methods (e.g., critical wardrobe studies, collective mapping of consumption habits, speculative design futures) that activate affective engagement as a driver of learning.

In this integrated framework, circular fashion education becomes a transformative curriculum ecology in which learners develop the capacity to think, feel, and act within complex socio-material systems of fashion. Learning outcomes extend beyond technical proficiency to include ecological literacy, ethical responsiveness, and relational accountability toward human and nonhuman actors across the fashion system.

1.2.1 Relational Pedagogy and the Role of Emotions in Circular Fashion Education

A circularity curriculum for continuous professional development in the textile and fashion industry must take relational pedagogy and the role of emotions seriously, because change in such a complex, value-laden field depends fundamentally on how people feel in and through their learning relationships, not merely on what they know. Relational pedagogy centres the evolving interface between teacher, learner, and knowledge, treating the pedagogical encounter as situated, informal, and participatory so that learners can renegotiate their associations with work and learning itself (Hickey & Riddle, 2023; Hickey & Riddle, 2021).

In fashion and textile contexts, dialogic and community-based pedagogies - such as collaborations with women's cooperatives, place-based textile learning, and community-driven, planet-centred curricula - show that close bonds, co-creation, and local involvement shift learners' attitudes toward materials, circular practices, and social responsibility (Sebele et al., 2024; Lettmann et al., 2023; Saiki & Adomaitis, 2017). Posthuman 'pedagogies of mattering' further highlight that curricula must attend to which bodies and materials are allowed to matter, inviting students to co-design content and reflect on how their choices affect human and more-than-human worlds (Gravett et al., 2021; Lettmann et al., 2023).

At the same time, workplace and industry-oriented studies demonstrate that sustained emotional and relational support, affective commitment, and hope are crucial for long-term engagement, performance, and agency among textile workers and learners (Fenwick, 2007; Adula et al., 2023). Work on sustainable enclothed cognition in fashion further shows that aligning rational reasons, values, and emotions around sustainable clothing choices is key to building enduring, sustainability-oriented relationships between brands and people (Cegarra-Navarro et al., 2025).

Together, this research indicates that a circularity curriculum grounded in relational pedagogy must be designed for affective engagement, co-constructed knowledge, and care-oriented practice as fundamental learning outcomes. The REMODE methodology, therefore, intentionally incorporates relational dimensions across all five partner countries, acknowledging that the transition to circular fashion requires not only technical competence but also emotional readiness, ethical responsibility, and community-based solidarity.

1.3 Rationale for a Theoretically Grounded Approach

Effective education for circular economy transitions in the fashion and textile sector demands a departure from transmission-based instructional models towards learner-centred, practice-oriented, and critically reflective pedagogical paradigms. The complexity of circular economy concepts-encompassing lifecycle thinking, systems design, regulatory literacy, and socioeconomic transformation-necessitates pedagogical approaches that foster deep, transferable understanding rather than surface-level knowledge acquisition.

The following theoretical frameworks collectively constitute the pedagogical foundation of the REMODE Learning Methodology, as evidenced and validated through the multi-country survey data presented in this report.

1.4 Core Pedagogical Theories

1.4.1 Constructivist Learning Theory

Drawing on the seminal contributions of Vygotsky (1978) and Piaget (1952), Constructivism posits that learners do not passively receive knowledge but actively construct it through engagement with their environment and social interaction. In the context of circular fashion education, this translates into pedagogical designs that situate learners within authentic problem contexts, encourage collaborative knowledge-building, and progressively scaffold complexity. The survey data corroborate this orientation: across all five partner countries, educators consistently report the effectiveness of project-based modules, co-creation activities, and collaborative design challenges-all quintessentially constructivist approaches.

1.4.2 Experiential Learning Theory (ELT)

David Kolb's Experiential Learning Theory (1984) conceptualises learning as a cyclical, four-stage process: Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualisation (AC), and Active Experimentation (AE). This cycle is particularly well-suited to circular fashion education, where learners must engage physically with materials, reflect on their ecological and social dimensions, develop conceptual frameworks for systemic change, and apply these to real design challenges. Kolb's model has been empirically validated in textile sustainability education contexts: Rissanen and McQuillan (2016) demonstrated that hands-on zero-waste pattern-cutting workshops embodied all four stages of the ELT cycle, leading to a deeper understanding of material flow and waste reduction. Becker-Leifhold (2022) further confirmed that physical activities grounded in concrete experience open pathways to meaningful inquiry into alternative materials and circular practices in fashion curricula. More recently, integrating circular supply chain simulations into the ELT cycle has been demonstrated to enable higher education learners to develop both analytical and applied circular economy competencies simultaneously (Integrating Circular Supply Chains into Experiential Learning, MDPI Sustainability, 2024). Sustainable fashion studies in Central Asia similarly demonstrate that experiential learning enhanced students' ecological and cultural awareness, social responsibility, and respect for traditional craft practices (Sustainable Fashion and Traditional Craft, Wiley, 2025). The survey data from five REMODE partner countries strongly corroborate ELT's relevance: across Finland, Germany, Greece, Italy, and Türkiye, respondents consistently identify studio-based workshops, material laboratories,

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fieldwork, and real-world case studies as the most impactful methods for developing circular economy competencies. This convergent evidence positions ELT as an empirically grounded, pedagogically transferable framework for the REMODE Learning Methodology, providing a dynamic learning architecture in which experience, reflection, conceptualisation, and experimentation are aligned with the specific demands of circular fashion transitions across five distinct national contexts.

1.4.3 Problem-Based Learning (PBL)

Developed by Barrows and Tamblyn (1980) in medical education and subsequently adapted across disciplinary contexts, Problem-Based Learning organises instruction around complex, ill-structured real-world problems. Learners work in collaborative teams to define the problem, identify knowledge gaps, gather relevant information, and formulate solutions. In the COVE REMODE context, PBL manifests as sustainability challenge workshops, circular design briefs, lifecycle assessment simulations, and regulatory compliance scenarios. The survey evidence from five countries is particularly supportive of PBL's role in bridging the perceived gap between regulatory knowledge and pedagogical practice.

1.4.4 Transformative Learning Theory

Mezirow's (1991) Transformative Learning Theory centres on the capacity of education to challenge and restructure 'meaning perspectives' as it frames how individuals interpret their experiences. This is especially pertinent in circular economy education, where professionals trained in linear production paradigms must undergo not only skill acquisition but also an epistemic reorientation. Transformative learning is facilitated through critical reflection, dialogue, and exposure to disorienting dilemmas-for instance, confronting the environmental and social externalities of current fashion industry practices. The COVE REMODE programme is deliberately designed to create such reflective spaces, particularly through cross-sectoral collaboration and regulatory horizon-scanning activities.

1.4.5 The Five Creative Pillars Framework

Informed by Chatzopoulou's (2020) empirical study of creative learning techniques in fashion education, the Five Creative Pillars Framework provides a practice-oriented complement to the theoretical models described above. The five pillars-**Games and Emotions, Rewards, Music, Colour, and Technology**- are operationalised through pedagogical activities designed to foster emotion-driven engagement, reduce affective barriers to learning, and promote active participation. This framework is particularly well-evidenced in the survey findings related to gamification, sensory-based learning, and motivational incentive structures, which consistently emerge as high-impact strategies across all partner countries.

1.5 Methodological Approach of the Survey

The survey employed a sequential exploratory mixed-method research design (Kerkhoff, 2017), integrating qualitative and quantitative data collection instruments. Quantitative data were collected through structured Likert-scale questionnaires (1 = Strongly Disagree; 5 = Strongly Agree) and analysed using descriptive statistics, including frequency distributions, percentage calculations, and mean score comparisons. Qualitative data were obtained through open-ended survey questions and subjected to thematic analysis, with recurring conceptual patterns identified and illustrated through representative respondent excerpts. This

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mixed-methods approach enables a nuanced and comprehensive understanding of both the prevalence and the underlying experiential dimensions of specific pedagogical practices across institutional and national contexts.

In alignment with partner feedback received during the project consortium review, the methodological approach of this deliverable merits elaboration as a substantive analytical chapter. The survey employed a sequential exploratory mixed-methods research design (Kerkhoff, 2017), integrating quantitative and qualitative data-collection instruments designed to capture both the prevalence and experiential dimensions of specific pedagogical practices across national and institutional contexts. Quantitative data were collected through structured Likert-scale questionnaires (1 = Strongly Disagree; 5 = Strongly Agree) and analysed using descriptive statistics - frequency distributions, percentage calculations, and mean score comparisons - enabling systematic cross-country benchmarking. Qualitative data were obtained through open-ended survey questions and subjected to inductive thematic analysis (Braun & Clarke, 2006), with recurring conceptual patterns identified and illustrated through representative respondent excerpts to ensure interpretive richness. The triangulation of quantitative and qualitative findings strengthens both the internal validity and transferability of the analysis. Ethical compliance was maintained through informed GDPR consent from all participants, with full anonymity guaranteed throughout data processing and reporting. The sample was purposively selected to represent three institutional actor categories - HEIs, VET providers, and SMEs - across five REMODE partner countries, reflecting the multi-actor architecture of the CoVE REMODE ecosystem. Whilst sample sizes vary across countries and categories, the convergence of findings across contexts strengthens their strategic relevance for curriculum design under WP3-WP5. Future project stages will build upon this baseline through participatory co-design, pilot implementation, and stakeholder feedback loops that will validate and contextualise the pedagogical framework presented herein.

The survey was administered to three primary respondent groups: (A) Higher Education Institution (HEI) educators and trainers; (B) Vocational Education and Training (VET) educators; and (C) Small and Medium-sized Enterprises (SMEs) operating in the fashion and textile sector. This tripartite structure reflects the multi-actor nature of the CoVE REMODE ecosystem and ensures that the pedagogical framework developed under WP2 is grounded in the convergent and divergent perspectives of those who design curricula, those who deliver training, and those who represent the labour market demand for circular economy competencies.

1.6 Data and samples used in this deliverable

Two online questionnaires were administered through Google Forms between 6 December 2025 and 29 January 2026: the SME questionnaire (INS-01; 33 content items on profile, lifecycle and circular practices, barriers and support, skills and roles, workforce development, governance, regulation and training) and the VET/HEI educator questionnaire (INS-02; 21 Likert items, two multi-select and open items on teaching approaches, creative and experiential methods, learning and motivation, gamification, digital engagement, policy awareness and curriculum responsiveness). The final consolidated dataset holds 107 SME responses and 78 valid educator responses (79 submissions). All results in this deliverable —

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Part B, Annexes C and D and the country summaries below — are computed on this final dataset; the national snapshots of December 2025 that formed version 1.0 are superseded.

Respondent group	Finland	Germany	Greece	Italy	Türkiye	Total
SMEs (location of office)	18	17	23	29	20	107
VET and HEI educators (nationality; 2 not stated)	12	13	12	19	20	78

Section 2: Survey Analysis

The COVE REMODE pedagogical framework should be understood as an input-process-output-impact model for circular fashion learning. Inputs include learner profiles, institutional resources, labour-market needs, regulatory requirements, and existing VET/HEI curricula. The learning process combines creative methods, problem-based challenges, collaborative inquiry, digital experimentation, and work-based learning. Outputs include competence development, validated learning artifacts, micro-credential evidence, curriculum prototypes, and stakeholder feedback. The expected impact is deeper student learning, stronger employability, SME readiness, and improved alignment with EU sustainability objectives.

Constructivist learning: learners build knowledge through co-creation, peer exchange, reflection, and material experimentation.

Experiential learning: studio work, field visits, teaching-factory models, material labs, and real-world design briefs connect theory with practice.

Problem-based and challenge-based learning: students work on authentic circular fashion problems such as waste reduction, traceability, repairability, lifecycle thinking, and sustainable material selection.

Transformative learning: learners critically examine fast-fashion assumptions, production ethics, consumption cultures, and regulatory responsibilities, leading to changes in professional identity and behaviour.

Humanistic and creative pedagogy: emotions, creativity, safety to participate, inclusivity, and learner agency are central to meaningful engagement.

Work-based learning and Teaching Factory logic: VET/HEI learning should be connected to real companies, workshops, artisans, industrial districts, recycling actors, and sustainability professionals.

Digital and blended pedagogy: 3D design, virtual prototyping, digital product passport simulations, PLM tools, digital LCA applications, and collaborative platforms should be linked explicitly to sustainability learning outcomes. These tools should be explicitly linked to

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sustainability-oriented learning outcomes, reflective practice, and future-ready digital competences.

Assessment for learning: rubrics should evaluate circular design reasoning, systems thinking, collaboration, regulatory literacy, material choices, lifecycle awareness, and reflective practice. Assessment approaches should additionally incorporate formative feedback, peer evaluation, and reflective portfolio-based methodologies.

The pedagogical frameworks outlined in this section will be operationalised in WP4 through the development of modular training materials, case studies, assessment rubrics, and digital learning resources that embed relational and emotional dimensions at their core. Specifically, relational pedagogy (Hickey & Riddle, 2023) will inform the design of collaborative learning activities, community-based partnerships with SMEs and artisanal enterprises, and studio environments that prioritise affective safety, co-creation, and learner agency. The role of emotions (Ahmed, 2004; Fenwick, 2007) will be acknowledged through reflective practice modules, critical wardrobe studies, and participatory consumption-mapping exercises that activate affective engagement as a driver of sustainable behaviour change. Assessment frameworks will incorporate portfolio-based methodologies capturing learners' relational and emotional growth alongside their technical competence development.

2.1 Demographics

This subsection presents the demographic profile of the respondents from Finland, Germany, Greece, Italy, and Türkiye, covering key characteristics such as organizational affiliation, academic or professional discipline, gender, age, and nationality. The survey was designed and implemented with particular attention to gender equality, ensuring a balanced representation of female and male participants across the countries involved. All demographic data were collected through a structured questionnaire, allowing for a systematic and comparable analysis of respondent profiles across different national contexts.

2.2 Teaching Approaches and Pedagogical Experience

This subsection examines respondents' teaching approaches and pedagogical experience, focusing on the use of diverse teaching methods, the perceived effectiveness of creative and sustainability-oriented approaches, and participants' confidence in applying sustainability-related pedagogies in their educational practices. It also explores the perceived importance of institutional and professional support, as well as the types of support respondents consider most necessary for enhancing their teaching practices.

Quantitative analysis is conducted using descriptive statistics, including frequencies, percentages, and mean Likert-scale scores, to provide an overall picture of teaching practices and attitudes. In parallel, qualitative responses obtained from open-ended survey questions are analysed thematically, with recurring concepts identified and illustrated through representative excerpts. This mixed-methods approach enables a comprehensive understanding of both the prevalence of specific pedagogical practices and the respondents' underlying experiences and perspectives.

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2.3 Perceptions of Creative and Experiential Methods

This subsection explores respondents' perceptions of creative and experiential teaching methods, with a particular focus on the extent to which such approaches are used in practice and their perceived contribution to student engagement. Special attention is given to the role of project-based modules in fostering active learning, collaboration, and real-world problem-solving skills.

In addition, the subsection examines how sensory and visual materials-such as hands-on activities, visual aids, and interactive resources-are perceived to enhance understanding, motivation, and overall learning outcomes. By analysing these dimensions, this section provides insight into how creative and experiential methods are viewed as tools for enriching teaching and learning processes.

2.4 Impact on Learning and Motivation

This subsection examines the impact of experiential learning activities on student learning outcomes and motivation within the context of circular fashion and textile education. Respondents were asked about their use of, or observations related to, hands-on activities such as workshops, studio-based learning, fieldwork, and real-life case applications. Particular attention is given to how these experiential approaches contribute to a deeper understanding of circularity principles, systems thinking, and sustainability challenges.

In addition, the role of mechanisms-including feedback, recognition, and achievement-based incentives-is explored in relation to learner motivation. Within the framework of the COVE REMODE project surveys, these findings provide insight into how experiential and motivational strategies can enhance engagement and persistence in learning pathways aimed at developing excellence in circular fashion and textile design.

2.5 Gamified and Innovative Learning Activities

This subsection focuses on the use of gamified and innovative learning activities, such as challenge-based tasks, simulations, and scenario-driven exercises, to support the understanding of sustainability and circular economy concepts. Respondents' experiences with gamification are analysed in terms of their effectiveness in simplifying complex sustainability issues, encouraging active participation, and fostering problem-solving skills.

Within the scope of the COVE REMODE project surveys, gamified approaches are particularly relevant for translating abstract concepts-such as lifecycle thinking, resource efficiency, and circular value chains-into engaging and accessible learning experiences. The subsection highlights how innovative learning formats can contribute to the development of creative and entrepreneurial mindsets essential for future professionals in the fashion and textile sectors.

2.6 Technology and Digital Engagement

This subsection addresses the role of digital tools and technologies in enhancing learner engagement, sustainability awareness, and confidence in integrating digital solutions into teaching practices. It explores the use of digital platforms, interactive tools, and online

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resources to support learning about circular design, sustainable materials, and innovative production processes.

Respondents' confidence in adopting and integrating digital technologies is analysed, particularly in relation to their potential to support blended and experiential learning models. In alignment with the COVE REMODE project surveys, this subsection underlines the importance of digital engagement in building future-ready skills and enabling scalable, inclusive, and innovative education in a circular fashion and textile design.

2.7 Policy Awareness and Regulatory Alignment

This subsection focuses on respondents' awareness of EU-level regulations, strategies, and policy frameworks relevant to sustainability, circular economy, and the fashion and textile sectors. It examines the extent to which educators, institutions, and enterprises anticipate regulatory developments and reflect these expectations within their curricula.

In the context of the COVE REMODE, policy awareness is a key component of design excellence, as future professionals must be equipped to navigate evolving regulatory landscapes. The subsection therefore explores how curriculum content aligns with, or prepares learners for, current and emerging EU policies on circularity, sustainability reporting, and responsible production.

2.8 Curriculum Responsiveness and Skills for the Circular Transition

To strengthen the pedagogical value of this subsection, curriculum responsiveness should be interpreted through three competence layers: (i) foundational circular economy literacy; (ii) applied circular fashion design and production skills; and (iii) regulatory, reporting, and transition-management competences. This three-layer structure connects education, labour-market expectations, and EU policy requirements.

Foundational competences: circular economy principles, systems thinking, material awareness, sustainability ethics, and lifecycle thinking.

Applied competences: repairability, modularity, upcycling, sustainable sourcing, textile waste reduction, digital prototyping, and circular design strategy.

Regulatory competences: ESPR, DPP, EPR, CSRD, ESRS, GRI, traceability, compliance documentation, and sustainability reporting.

Transversal competences: collaboration, communication, problem-solving, entrepreneurship, critical reflection, and adaptability.

This subsection examines the responsiveness of curricula to the skills required for the circular transition in the fashion and textile sectors. It covers support for module design, perceived areas for improvement, and the incorporation of relevant reporting frameworks and standards into teaching content.

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Furthermore, the subsection explores how curricula prepare learners to become future experts in circular fashion and textiles by fostering key competencies such as systems thinking, circular design skills, collaboration, and innovation. The role of cross-sectoral collaborations, industry-academia partnerships, and effective pedagogical approaches is also considered. Within the COVE REMODE surveys framework, these insights contribute to identifying pathways to strengthen educational excellence and ensure that curricula remain adaptive, forward-looking, and aligned with the needs of a circular economy.

Section 3: Conclusions

3.1 Cross-Country Pedagogical Synthesis and WP3-WP5 Implications

Across all countries, the results reveal a consistent pattern: educators and SMEs demonstrate strong motivation toward sustainability and creative learning, but require more systematic institutional support, regulatory literacy, digital capacity, and curriculum-level integration. This confirms the need for D2.3 to function as a pedagogical bridge between skills mapping and future training implementation.

The findings justify a modular learning methodology built around circular design, sustainability reporting, digital traceability, work-based learning, industry collaboration, and learner-centred creative engagement. These elements are essential for ensuring that the COVE REMODE project outputs are not only informative but also transferable, inclusive, measurable, and aligned with EU quality expectations.

For WP3, translate the identified competence gaps into modular curricula and micro-credential learning outcomes.

For WP4, develop training materials, case studies, rubrics, and digital learning resources aligned with the pedagogical framework.

For WP5, validate the methodology through pilot delivery, stakeholder feedback, and measurable learner/SME satisfaction indicators.

3.2 Summary of Findings - Finland

Higher Education Institutions (HEIs)

Both HEI and VET providers in Finland demonstrate strong practical teaching capacities, high digital confidence, and active engagement with industry, providing a solid foundation for sustainability-oriented education within the fashion and textile sector.

Among HEI educators, there is strong confidence in digital tools and applied pedagogical approaches, coupled with close collaboration with industry partners. However, the findings reveal notable gaps in policy awareness and regulatory alignment, particularly in relation to EU sustainability requirements. Educators' strong agreement that sustainability-focused pedagogical activities require further refinement indicates a perceived need for more advanced and structured instructional design. Consistent with the literature review and Deliverables D2.1 and D2.2, the results highlight weak alignment between HEI curricula and

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regulatory skill demands, underscoring the need to integrate sustainability reporting and circular design competencies more systematically into academic programmes.

Vocational Education and Training (VET)

The VET survey results similarly show strong emphasis on practical teaching approaches and industry engagement, alongside a higher level of awareness of regulatory developments than in HEIs. Nevertheless, gaps in effective regulatory alignment persist, suggesting that system-level changes are required to operationalise sustainability objectives consistently across VET programmes. As with HEIs, the findings align with earlier deliverables and literature, indicating insufficient curricular alignment with evolving regulatory and policy-driven skill needs.

Overall, the Finnish findings demonstrate that while the educational ecosystem is well-positioned in terms of practical expertise and digital readiness, curricular integration of regulatory, reporting, and circular-economy competencies remains insufficient. Addressing these gaps through targeted curriculum development, improved instructional design, and stronger alignment with EU sustainability frameworks will be essential for enabling Finnish HEI and VET programmes to effectively support the circular transition in the fashion and textile sector.

Small and Medium-sized Enterprises

The SME survey indicates that Finnish fashion and textile SMEs are generally well aware of circular economy principles and are already taking steps toward implementation. Most respondents demonstrate a solid understanding of circular economy practices and are actively preparing for upcoming sustainability requirements. However, despite this strong baseline awareness, implementation remains uneven, particularly in areas that require advanced data management, traceability systems, and specialised expertise. SMEs appear ready to move beyond awareness and planning, but they require practical support to translate circular economy ambitions into fully operational business practices. The full Finnish SME analysis (18 responses) is provided in Annex C1 and the Finnish educator report (12 responses) in Annex D1.

Key needs identified include practical support for regulatory compliance, particularly regarding the Digital Product Passport (DPP), Corporate Sustainability Reporting Directive (CSRD), and broader EU textile sustainability requirements. SMEs report significant skills shortages in sustainability and regulatory expertise, digital traceability and reporting capabilities, life-cycle assessment (LCA), and cross-functional sustainability roles. There is also a clear need for improved data collection and interoperable traceability systems, as most organisations currently rely on partial lifecycle data collection, internal documentation, supplier declarations, and certifications rather than integrated digital solutions. Strong interest in DPP-focused micro-credentials, with 89% of respondents expressing willingness or potential willingness to participate, highlights demand for targeted, practice-oriented training.

Taken together, the findings suggest that Finland's fashion and textile sector has a strong foundation for circular transformation. SMEs demonstrate high levels of circular economy awareness, are already engaging with suppliers on sustainability topics, and generally view new regulations as drivers of change rather than barriers. Nevertheless, circularity efforts

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remain focused primarily on product design aspects such as durability, material efficiency, and recyclability, while more systemic circular business models, including take-back schemes, repair services, and resale platforms, are less common. Progress is further constrained by limited digital traceability infrastructure, shortages of qualified sustainability professionals, administrative burden associated with regulatory compliance, and a lack of practical implementation know-how. Bridging these gaps will require accessible training, strengthened digital capabilities, clearer implementation guidance, and greater collaboration across value chains.

These findings provide a strong rationale for developing short, targeted micro-credentials, particularly in Digital Product Passport implementation, regulatory compliance, digital traceability, and sustainability data management. The results also highlight the value of practical compliance toolkits, sector-wide support mechanisms, and collaborative learning ecosystems that connect SMEs, education providers, and industry stakeholders. By focusing on implementation-oriented capacity building rather than basic awareness raising, the Finnish textile and fashion sector can strengthen its readiness for regulatory compliance while accelerating the transition toward a competitive, resilient, and circular economy.

3.3 Summary of Findings - Germany

The Germany Country Report highlights a fashion and textile ecosystem with strong practical capabilities, advanced digital confidence, and close industry engagement, alongside persistent challenges related to policy awareness, regulatory alignment, and structured sustainability implementation.

VET and Higher Education Institutions (HEIs)

Survey results indicate that German VET and HEI educators demonstrate high confidence in digital technologies and a strong adoption of experiential and practice-based teaching methods, with 77% confident in integrating digital technologies and 85% using experiential or creative methods (final dataset, 13 educators). Collaboration with industry partners is a defining characteristic of the German education landscape, reinforcing applied learning and employability.

Despite these strengths, awareness of EU sustainability policies and regulations remains limited, with 55% of educators reporting familiarity with EU textile regulation; the integration of sustainability reporting frameworks into curricula is comparatively advanced (64% agree, the highest in the consortium), although only 38% consider that module design in their institution supports sustainable and creative fashion education. This gap limits the ability of education programmes to fully prepare learners for compliance-driven and policy-informed sustainability transitions.

Small and Medium-sized Enterprises (SMEs)

The SME survey shows that German fashion and textile SMEs are motivated to transition toward circular economy models but remain under-resourced to do so effectively. While awareness and intent are increasing, implementation is constrained by skills shortages, financial barriers, and regulatory complexity. SMEs express a strong need for practical,

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accessible support mechanisms that translate policy requirements into operational solutions. See Annex C2 (17 SMEs) and Annex D2 (13 educators).

Key needs identified include financial support mechanisms to overcome economic barriers (76% of SMEs), clear and simplified regulatory guidance on EU sustainability requirements (53%, the highest share in the consortium), and hands-on support for Digital Product Passport (DPP) implementation, with 41% willing and a further 47% possibly willing to enrol staff in a DPP micro-credential. Additional priorities include role- specific skills development in the circular economy and technical specialisation, SME networking to address supply chain barriers, and the provision of sustainability reporting templates, particularly for the 53% of SMEs that do not yet publish a sustainability report.

Taken together, the findings suggest that Germany's fashion and textile sector has a solid foundation for circular transformation, particularly through practical know-how, emerging digital engagement, and applied learning capacities. However, this potential is not yet fully translated into systematic circular economy implementation. SMEs remain constrained by financial barriers, shortages of specialised circular economy and technical skills, uncertainty around EU regulatory requirements, and limited internal sustainability structures. Bridging this gap requires targeted regulatory guidance, role-specific upskilling, hands-on support for tools such as the Digital Product Passport, and stronger cooperation between education providers, SMEs, and industry stakeholders to align practical capabilities with the policy-driven requirements of the circular transition.

Within the COVE REMODE project, these findings provide a strong rationale for developing regulatory guidance packages, practice-oriented training pathways, micro-credentials, and collaborative innovation ecosystems. By aligning Germany's practical strengths with improved policy literacy and sustainability framework adoption, the sector can accelerate its transition toward a resilient, compliant, and fully circular fashion and textile economy.

3.4 Summary of Findings - Greece

VET and Higher Education Institutions (HEIs)

The Greece Country Report indicates that VET and HEI educators strongly support creative, experiential, and digitally enabled teaching approaches for sustainable fashion and textile education. Respondents demonstrate a clear recognition of the value of project-based learning, real-world challenges, and digital tools in enhancing student engagement and supporting the development of sustainability-related competencies.

Despite this positive pedagogical orientation, the findings highlight consistent development needs related to curriculum responsiveness to regulatory developments, particularly EU-level textile and sustainability policies. The integration of sustainability reporting frameworks and regulatory perspectives into curricula remains limited, suggesting a gap between innovative teaching practices and policy-aligned skill development.

Overall, the results suggest that Greece's VET and HEI systems are well prepared pedagogically for circular fashion education but require greater structural and curricular alignment with evolving regulatory and reporting requirements. Strengthening educator

capacity through targeted professional development, enhancing shared teaching resources aligned with circular economy competencies, and embedding systematic regulatory and horizon-scanning mechanisms into curriculum governance processes will be essential. Additionally, expanding the use of digital tools-such as 3D design and virtual prototyping- while explicitly linking them to sustainability learning outcomes will further support the effective implementation of circular and future-oriented fashion education.

Small and Medium-sized Enterprises (SMEs)

This report presents the findings of the Greece SME survey within the COVE REMODE project and highlights a sector that is positively oriented toward sustainability and circular economy principles, yet still in a developmental phase in terms of structured implementation. Greek fashion and textile SMEs demonstrate openness to creative, experiential, and digitally supported practices, but face clear challenges related to regulatory awareness, sustainability reporting, and the systematic integration of circular frameworks into daily operations. The findings indicate that while motivation and willingness to adapt are present, limited access to targeted guidance, practical tools, and aligned support mechanisms constrains progress. Overall, the report underscores the need for focused capacity-building actions, clearer regulatory orientation, and practice-oriented support to enable Greek SMEs to translate sustainability ambitions into operational, scalable, and compliant circular business models. The full Greek SME analysis (23 responses) is provided in Annex C3 and the Greek educator report (12 responses) in Annex D3.

3.5 Summary of Findings - Italy

Higher Education Institutions (HEIs)

The Italy Country Report highlights a fashion and textile education and innovation ecosystem with strong pedagogical foundations, deep creative traditions, and high engagement with sustainability principles, yet faces structural and systemic challenges that limit full alignment with circular-economy requirements.

Higher Education Institutions (HEIs) in Italy demonstrate advanced pedagogical innovation, with widespread use of experiential, project-based, and sensory teaching methods that effectively foster creativity and critical thinking. These approaches are deeply rooted in Italy's design-driven and craftsmanship-oriented educational culture. However, moderate awareness of EU sustainability regulations, limited integration of sustainability reporting frameworks, and uneven confidence in advanced digital technologies reveal gaps in regulatory preparedness and digital transformation. Strengthening institutional strategies, regulatory literacy, and targeted educator training emerges as essential for positioning Italian HEIs as leaders in circular fashion education.

Vocational Education and Training (VET)

The Vocational Education and Training (VET) sector shows strong readiness for sustainability integration, supported by extensive industry collaboration, hands-on learning traditions, and high confidence in creative and experiential pedagogies. Despite these strengths, inconsistencies persist in adapting the curriculum to future legislation, integrating reporting

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frameworks, and developing digital literacy for emerging technologies. These gaps underscore the need for harmonised frameworks, targeted capacity-building, and systemic support to fully align VET provision with European sustainability objectives.

Small and Medium-sized Enterprises (SMEs)

Small and medium-sized Enterprises (SMEs) display strong creative capacities, artisanal expertise, and a natural alignment with circular principles such as durability and waste reduction. However, circularity remains fragmented and implicit rather than embedded as a comprehensive business strategy. Structural constraints–including limited financial resources, insufficient digitalisation and traceability, skills shortages, fragmented regulatory understanding, and weak internal sustainability governance–significantly hinder transformation. These challenges indicate that Italian SMEs are willing but under-equipped to lead the circular transition independently. See Annex C4 (29 SMEs) and Annex D4 (19 educators).

Overall, the findings establish a realistic baseline for Italy within the COVE REMODE project. While resistance to circularity is minimal, organisational, financial, and technical barriers persist across sectors. Addressing these through coordinated training pathways, curriculum development, digital and regulatory capacity-building, and innovation ecosystems will be critical to enabling Italy's fashion and textile sector to achieve scalable, operational, and future-proof circular transformation.

3.6 Summary of Findings - Türkiye

The Türkiye Country Report reveals a fashion and textile education and industry ecosystem that is highly motivated and positively oriented toward sustainability and innovation, yet constrained by gaps in institutional support, regulatory awareness, and structural capacity that limit large-scale and consistent implementation.

Higher Education Institutions (HEIs)

Findings from the HEI survey indicate a strong awareness and positive attitude toward experiential, creative, and project-based pedagogical approaches. Experiential learning activities are widely integrated into teaching practices, and participants highlight the effectiveness of small rewards, recognition mechanisms, and gamified or challenge-based tasks in increasing student motivation and supporting the understanding of sustainability concepts. Educators also report high confidence in the use of digital tools, recognising their contribution to student engagement and sustainability awareness.

Despite these strengths, the results point to a need for holistic institutional, pedagogical, and structural support mechanisms. Awareness of upcoming EU regulations in the textile and apparel sector remains limited, and the integration of regulatory and policy perspectives into curricula is insufficient. Furthermore, programmes and curricula are not widely perceived as fully adequate in supporting sustainable and creative fashion education, highlighting the need for further development in areas such as sustainability-focused activity design, reporting frameworks, and circular economy competencies.

Vocational Education and Training (VET)

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The VET survey results show a mixed level of confidence among educators in integrating digital tools and experiential learning methods. While some educators remain undecided about adopting experiential and creative approaches, there is strong agreement that gamified, innovative, interactive, and project-based modules effectively enhance student motivation and support learning in complex areas such as sustainability, ethics, and innovation. Sensory and visual teaching materials are widely recognised for increasing creativity, emotional engagement, and overall learning effectiveness.

Educators emphasise the importance of institutional support from vocational training centres, as well as national and EU-level frameworks to enable the implementation of sustainability-focused pedagogies. Key needs identified include increased professional development opportunities, greater curricular emphasis on sustainability topics, expanded field visits, and enhanced practical learning opportunities.

Small and Medium-sized Enterprises (SMEs)
Survey findings from SMEs indicate that Türkiye's fashion and textile sector is at a transitional stage. While there is strong motivation to advance circular economy objectives, progress is constrained by financial constraints, insufficient digital and data systems, skills gaps, and limited human resource capacity. Circular practices are currently fragmented rather than systematic, and workforce upskilling is an urgent priority. See Annex C5 (20 SMEs) and Annex D5 (20 educators).

Within this context, the COVE REMODE project is identified as a strategic enabler, with the potential to support SMEs through targeted training and micro-credential programmes, strengthen institutional and workforce capacity, and facilitate alignment with EU sustainability and regulatory frameworks. The findings provide a robust evidence base to inform the design of future REMODE outputs, including curricula, training modules, pilot actions, and policy recommendations, ensuring an implementation approach that is both demand-driven and impact-oriented.

Within this context, the COVE REMODE project is identified as a strategic enabler, with the potential to support SMEs through targeted training and micro-credential programmes, strengthen institutional and workforce capacity, and facilitate alignment with EU sustainability and regulatory frameworks. The findings provide a robust evidence base to inform the design of future COVE REMODE project outputs, including curricula, training modules, pilot actions, and policy recommendations, ensuring an implementation approach that is both demand-driven and impact-oriented.

3.7 Proposed Pedagogical Approach and Theoretical Framework for WP3

In direct response to partner feedback, this section presents the proposed pedagogical approach and theoretical framework that will guide the REMODE project's transition from WP2 system mapping and needs analysis to WP3 curriculum and training design. The framework is explicitly intended to be tested, validated, and refined through the data collection activities planned under WP3, thereby evolving from an evidence-informed proposal to an empirically grounded methodology.

The REMODE Pedagogical Framework is anchored in the dual integration of Constructivist Learning Theory and Experiential Learning Theory (ELT) as its primary theoretical pillars, complemented by Problem-Based Learning (PBL), Transformative Learning, and Relational Pedagogy as enriching dimensions. This integrated approach constructs a multi-dimensional learning architecture in which:
Constructivism ensures that learners actively build circular economy knowledge through peer collaboration, zone of proximal development scaffolding (Vygotsky, 1978), and authentic problem contexts, as evidenced across all five REMODE partner countries;

ELT (Kolb, 1984) structures learning through four stages - Concrete Experience, Reflective Observation, Abstract Conceptualisation, and Active Experimentation - grounding sustainability learning in lived practice through studio work, material laboratories, and field visits;

PBL organises instruction around real-world circular challenges - waste reduction, traceability, DPP compliance, lifecycle thinking - requiring learners to define problems, gather evidence, and formulate solutions collaboratively;

Transformative Learning (Mezirow, 1991) creates reflective spaces in which professionals trained in linear production paradigms can undergo epistemic reorientation toward circular systems thinking;

and Relational Pedagogy (Hickey & Riddle, 2023; Gravett et al., 2021) places affective engagement, care-oriented practice, and community-based solidarity at the centre of the curriculum, recognising that circular fashion transitions are as much relational and emotional endeavours as technical ones.

This framework directly links WP2 evidence to WP3 curriculum design by translating identified competence gaps, pedagogical readiness levels, and regulatory alignment needs into modular learning outcomes, assessment rubrics, and training pathway architectures. The testing of this framework through WP3 pilot activities will generate feedback data enabling iterative refinement, ensuring that the final REMODE curriculum remains adaptive, context-responsive, and aligned with both EU sustainability objectives and learner-centred quality standards.

PART B — Research report for WP2 system mapping and skills ecosystem analysis

Consolidated five-country analysis of the Stage-2 surveys (107 SMEs, 78 VET and HEI educators), country SWOTs updated with survey data, and an update with the 2026 regional mapping survey. Prepared by AUEB-RC as WP2 lead; first circulated within the consortium as research report D2.6 (25 April 2026), revised and integrated into D2.3 version 2.0 (November 2026) with all survey figures recomputed on the final dataset. Section numbering continues from Part A.

Section 4: Introduction

4.1 The REMODE COVE Vision

The REMODE Centre of Vocational Excellence (COVE) project aims to foster a transition in Europe's textile and clothing industry towards a circular, digital, and green model. The textile industry significantly contributes to Europe's economy, culture, and society, but it faces considerable challenges such as environmental sustainability, rapid technological advancements, and shifting consumer behaviors. To address these challenges, REMODE aligns closely with the European Green Deal, emphasizing sustainability, circular economy principles, and digital transformation. Additionally, REMODE supports the European Pact for Skills, which seeks to equip workers with essential skills for sustainable and future-proof employment.

REMODE focuses on developing three interrelated skill sets: circular skills to improve resource efficiency, digital skills for advanced technological integration, and green skills to minimize environmental impact. The project's goal is to bridge existing skill gaps by fostering collaboration among vocational education providers, higher education institutions, industry representatives, policymakers, and civil society. Through the establishment of knowledge and innovation hubs across Europe, REMODE will facilitate effective training, best-practice exchanges, and unified strategies to enable the industry's sustainable transition.

The multi-level conceptual model adopted by REMODE ensures a comprehensive approach to analyze and address the industry's skill demands. This model comprises three interconnected levels-macro (policy and governance), meso (organizations and ecosystems), and micro (individual skills and competences). This approach enables REMODE to consider multiple factors simultaneously, from overarching policies and market demands to specific organizational capacities and individual competencies.

4.2 Rationale for the research report (circulated as D2.6)

Data collection from SMEs for mapping purposes began during WP2. The survey, which was run and analysed during the last months of WP2 (M10-M13), included questions for mapping purposes as we proactively linked WP2 with WP3. On top, following the SBP network mapping tool, we have structured the mapping questionnaire for SMEs, aiming to develop it further during WP3. D2.6 functions as a critical transition deliverable, bridging WP2 analytical outputs with WP3 curriculum design requirements, as it sets the ground for mapping and the pedagogical approach among educators, learners, and SMEs.

Section 5: Research Methodology

The methodology adopted in D2.6 follows a mixed-methods design combining structured desk research, cross-country SWOT analysis, and survey-based empirical data collection to ensure both analytical depth and practical relevance. However, the relatively limited sample size at the country level constrains the generalisability of the findings and should be interpreted as indicative rather than statistically representative.

During stage 1, partners conducted comprehensive desk research to establish a foundational understanding of current circular, digital, and green skills. This research included reviewing

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peer-reviewed scientific papers, industry reports, statistical databases, and policy documents to build a robust knowledge base. Following the completion of desk research and SWOT analysis by each CoE, an expert focus group comprising representatives from each partner country convened to validate and expand the findings. This collaborative session helped confirm the relevance of identified issues, prioritize critical skill gaps, and integrate expert insights into the final analysis.

Stage 2 followed, where a quantitative approach was applied. The Stage 2 survey (107 SMEs and 79 VETs/HEIs) indicated a strong pedagogical uptake of experiential and sensory methods but uneven curriculum alignment with regulatory and reporting frameworks; this pattern mirrors broader findings that circular economy adoption requires both business-model innovation and targeted capability building (Bocken, Short, Rana, & Evans, 2014). SMEs' resource constraints and uncertainty about compliance costs echo documented barriers to circular implementation (Kirchherr, Reike, & Hekkert, 2018), while educators' emphasis on hands-on learning resonates with competency frameworks that foreground transdisciplinary, systems-thinking skills for sustainability (Wiek, Withycombe, & Redman, 2011). As such, the results support framing skills interventions as part of integrated socio-technical change: curricula should combine practical micro-credentials (e.g. DPP, traceability) with pedagogies that cultivate circular design literacies and business-model experimentation (Geissdoerfer, Savaget, Bocken, & Hultink, 2017). Methodologically, descriptive statistics provided a defensible baseline but the small country subsamples caution against overgeneralisation; qualitative responses therefore serve as hypothesis-generating evidence for targeted interventions. In sum, policy and training responses must bridge economic enablers (funding, regulatory clarity) and educational enablers (role-specific micro-credentials, experiential modules) to translate awareness into operational circular capability (Bocken et al., 2014; Kirchherr et al., 2018; Wiek et al., 2011; Geissdoerfer et al., 2017). Both SMEs and VETs/HEIs data were analysed with descriptive statistics and frequencies so as to provide the pedagogical approach for the curricula structure as the outcome of the project. On top, cluster analysis offered a comprehensive analysis concerning the training formats and content which are currently offered vs. which are needed for the future.

From a quantitative standpoint, D2.6 employs descriptive statistics (frequencies, percentages, means, medians, standard deviations) to analyse sectoral distribution (via NACE classification), regional clustering, skills shortages, and training preferences. This aligns with survey-based empirical traditions in management research, where structured instruments facilitate generalisable insights into organisational populations (Saunders et al., 2019). The use of NACE codes enhances construct validity and comparability, consistent with best practices in industrial and innovation studies (Laursen & Salter, 2006). Qualitatively, the methodology incorporates interpretive analysis of open-ended responses and pedagogical perspectives, particularly in identifying constructivist learning approaches and ecosystem gaps. This reflects a pragmatic mixed-methods logic, combining numerical patterns with contextual interpretation (Johnson et al., 2007). The integration of SME needs with curriculum design further suggests an engaged, practice-oriented research design, akin to collaborative or stakeholder-informed inquiry (Van de Ven, 2007). Additionally, D2.6 is a network-mapping orientation (SBP tool), indicating elements of ecosystem analysis, where actors, roles, and

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capability gaps are systematically identified; consistent with innovation systems literature (Adner, 2017).

Section 6: Ecosystem Analysis

Section 6a: Initial mapping during WP2

Data collection from SMEs for mapping purposes began during WP2. The survey, which was run and analysed during the last months of WP2 (M10-M13), included questions for mapping purposes as we proactively linked WP2 with WP3. On top, following the SBP network mapping tool, we have structured the mapping questionnaire for SMEs.

As seen in Table 1, survey results indicate that the ecosystem is predominantly composed of design-oriented and manufacturing SMEs, accounting for 59.8% of respondents, suggesting a production-centric ecosystem structure. Circular actors (repair, resale, recycling) are only 5.6% of the ecosystem possibly highlighting the need for training on sustainable fashion aspects. While there also may be a need for training on new production technologies as there seems to be limited digital transformation maturity and a weak presence of enabling technologies (AI, IoT, platforms): Digital & Technology Services (J62–J63) (5.6%).
This structural imbalance highlights a systemic underrepresentation of circular actors, indicating a critical bottleneck in closing material loops within the European fashion ecosystem.
Please note that:
NACE stands for "Nomenclature of Economic Activities", which is the European statistical classification system for economic activities. It is used by the EU and other countries to categorize businesses and industries for statistical, regulatory, and economic analysis purposes.

Each NACE code corresponds to a specific sector or activity. For example,
Manufacturing & Craft
Apparel, footwear, accessories — NACE C14–C15
C14 = Manufacture of wearing apparel
C15 = Manufacture of leather and related products
&
Brands, Designers & Creative Services
Fashion brands, creative studios — NACE M73–M74
M73 = Advertising and market research
M74 = Other professional, scientific, and technical activities

What type of organization do you represent?	Frequency (n)	Percentage (%)
Brands, Designers & Creative Services (M73–M74)	34	37
Manufacturing & Craft (C14–C15)	28	30.4
Raw Materials & Early Processing (A / C13)	16	17.4
Circular & Repair Services (E38 / S95)	6	6.5
Digital & Technology Services (J62–J63)	5	5.4

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Wholesale & Retail (G46–G47)	3	3.3
Other / Hybrid / Unclear	3	3.3
Institutions / Public / Research	2	2.2

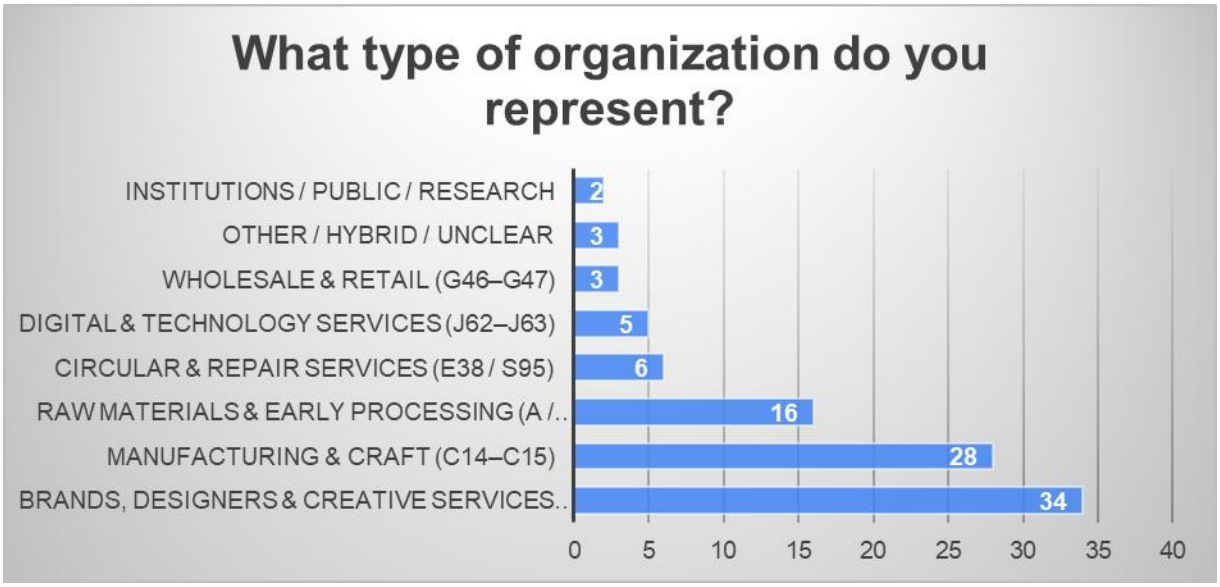

Table 1: Organization Profiling

Mainly we have collected data from the European Union whereas, the sample is dominated by Southern Europe and particularly Italy (27%) and Greece (21%). Those two countries together, they account for 49% of all responses, indicating a Mediterranean cluster. It seems that overall Southern Europe is the biggest cluster (67%) whereas, Central/North Europe counts for 33% of the data.

Country	Frequency (n)
Italy	28
Germany	18
Greece	24
Finland	16
Türkiye	20

Table 2: SME's country location

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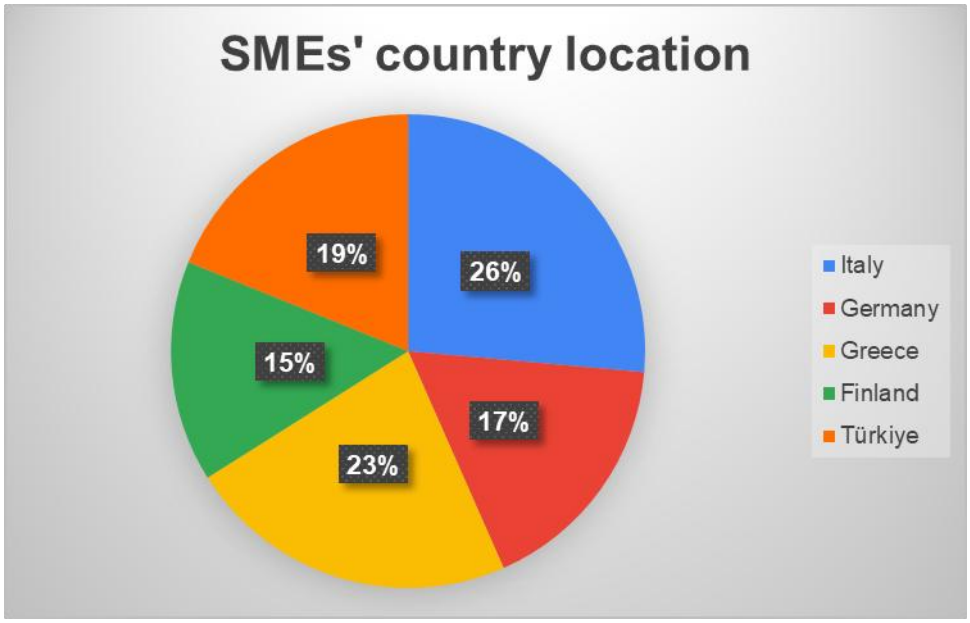

Region	Countries	%
Southern Europe	Italy, Greece, Türkiye	**68%**
Northern/Central Europe	Germany, Finland	**32%**

Table 3: SME's country location clustering

Based on the survey data (WP2), Italy and Greece seem to be strong in design and craftmanship, Türkiye is positioned as a manufacturing hub, while Germany and Finland are experts in technological aspects, sustainability innovation and governance structures.

The survey further explores skills shortages, revealing that craftsmanship (51.0%) is the most difficult skill to find, followed by sustainability management (36.5%), technical specialisation (51.9%) and circular economy skills (32.7%). Notably, nearly 70% of responses relate to sustainability-oriented competencies, indicating both high demand and scarcity. Digital and automation skills (19.4%) and soft skills (22.3%) are also relevant but less critical.

In terms of training formats, SMEs strongly prefer practice-oriented and experiential learning, with hands-on laboratories (43.6%), mentoring/workshops (48.6%), and collaborative workshops (43.2%) being the most effective. These are often combined with case-based learning, microlearning, and simulations, suggesting a preference for blended learning ecosystems that integrate technical application, collaboration, and real-world problem-solving.

Looking forward, SMEs identify green skills (61.4%) and digitalisation (58.4%) as top training priorities, followed by technical skills and project management. This reflects a shift toward integrated capability development, where sustainability, digitalisation, and operational skills are interdependent. Similarly, future job demand is expected to focus on digital fashion specialists (43.3%), textile innovation experts (40.4%), and artisan roles (42.3%), alongside emerging needs for compliance experts and interdisciplinary professionals.

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The findings reveal a structurally fragmented yet transitional ecosystem, characterised by strong design and production capabilities but insufficient integration of circularity, digitalisation, and regulatory readiness. SMEs' short-term workforce needs are primarily operational and capability-driven, focusing on immediate skill shortages. The data indicate strong demand for craftsmanship, technical specialisation, and sustainability management, alongside circular economy skills. These reflect the need to maintain production quality while beginning to integrate sustainable practices. Additionally, SMEs emphasise hands-on, practice-based competences, supported by demand for training formats such as laboratories and workshops, suggesting that workers must be able to apply knowledge directly in production and design contexts. Basic digital and automation skills are also required, though still secondary.

In the long term, SMEs shift toward strategic and hybrid skill profiles, combining sustainability, digitalisation, and innovation. The most demanded professions include digital fashion specialists/3D designers, textile innovation experts (biomaterials), and artisan–craft professionals, indicating a blend of tradition and technology. Emerging roles such as ESG/compliance experts, eco-designers, and fashion data analysts highlight the transition toward regulatory alignment and data-driven decision-making. Overall, SMEs increasingly require multidisciplinary professionals capable of integrating circularity, digital tools, and creative design within evolving business models.

Section 7: Consolidated survey results — SMEs (107 responses, five countries)

This section reports every item of the SME questionnaire (INS-01) on the final consolidated dataset (107 responses: Italy 29, Greece 23, Türkiye 20, Finland 18, Germany 17; December 2025 – January 2026). Percentages are of respondents answering each item; multi-select items sum to more than 100%. Country columns reproduce the figures of the country reports in Annex C. Variant option labels introduced by partner translations (for example “technical expertise” and “technical specialisation”, “social skills” and “soft skills”) have been merged, which is why some figures differ slightly from the research report circulated internally in April 2026.

7.1 Profile of the responding SMEs

The sample is production- and design-centred: manufacturing and craft (31%) and brands, designers and creative services (29%) make up 60% of respondents, raw-material and early-processing companies 17% (almost all in Türkiye), circular and repair services and digital/technology providers 6% each. More than half of the firms are micro-enterprises and a further third small; the Turkish sample is the most industrial (75% small and medium), the Greek the most micro (91%). Half of the respondents are founders or owners.

Organisation type (All n=107)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Manufacturing & craft	31% (33)	22%	24%	22%	55%	20%
Brands/designers/creative services	29% (31)	22%	29%	56%	28%	5%
Raw materials & early processing	17% (18)	6%	6%	0%	10%	65%
Other	8% (8)	22%	6%	0%	3%	10%
Digital & technology	6% (6)	11%	12%	9%	0%	0%
Circular & repair services	6% (6)	17%	0%	13%	0%	0%
Wholesale & retail	3% (3)	0%	12%	0%	3%	0%
Institutions/education/research	1% (1)	0%	6%	0%	0%	0%
Public/non-profit/financial	1% (1)	0%	6%	0%	0%	0%

Company size (All n=107)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
<10 micro	55% (59)	50%	53%	91%	59%	15%
10-49 small	32% (34)	44%	35%	9%	34%	40%
50-249 medium	8% (9)	6%	6%	0%	0%	35%
>=250 large	5% (5)	0%	6%	0%	7%	10%

Respondent position (All n=102)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**

(Co)Founder/owner	49% (50)	50%	38%	78%	64%	5%
Manager / senior executive	22% (22)	17%	19%	13%	8%	55%
Head designer / creative director	15% (15)	6%	25%	9%	20%	15%
Other	15% (15)	28%	19%	0%	8%	25%

7.2 Lifecycle data, traceability and supplier engagement

Only 22% of SMEs collect product lifecycle data across all stages and 53% partially; a quarter collect none. Third-party certifications (37%) and supplier audits (30%) are the dominant verification mechanisms, 26% use none and only 11% have started with a Digital Product Passport. Supplier engagement averages 3.36 on a five-point scale, highest in Germany (3.62) and lowest in Greece (3.13). The upstream data gap — rather than unwillingness — is the binding constraint for DPP readiness in every country.

Lifecycle data collection (All n=107)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Partially	53% (57)	61%	29%	56%	59%	55%
No	24% (26)	33%	41%	0%	21%	35%
Yes	22% (24)	6%	29%	44%	21%	10%

Traceability mechanisms (All n=105)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Third-party certifications/eco-labels	37% (39)	18%	29%	30%	43%	60%
Supplier audits	30% (31)	35%	12%	30%	11%	65%
None	26% (27)	41%	24%	13%	36%	15%
Chain-of-custody tracking	12% (13)	12%	12%	17%	4%	20%
Digital Product Passport	10% (11)	6%	24%	9%	7%	10%

Scale item (1–5)	**All mean**	**FI**	**DE**	**GR**	**IT**	**TR**
Supplier engagement (1 not engaged – 5 fully aligned)	3.36 (n=104)	3.50	3.62	3.13	3.33	3.30
Readiness to adopt circular business models (1–5)	3.41 (n=103)	3.94	3.29	3.61	3.60	2.55
Self-assessed knowledge of circular economy practices (1–5)	3.30 (n=104)	3.78	3.50	3.57	3.33	2.35

7.3 Circular design, circular activities and innovation

Durability and timeless design (57%) and recycled or certified materials (49%) are the most common design strategies; design for recycling is widespread in Greece (70%) and Türkiye (40%) but rare in Finland (22%). Recycling and upcycling (54%), on-demand production (46%)

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and waste management (37%) lead the circular activities; resale models are a Finnish specificity (44%) and rental or product-as-a-service a Greek one (35%). 59% of SMEs are developing a specific circular innovation, with a wide spread from 25% in Türkiye to 87% in Greece.

Design-for-circularity approach (All n=106)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Durability / timeless style	57% (60)	56%	71%	70%	68%	15%
Recycled/certified sustainable materials	49% (52)	44%	35%	52%	39%	75%
Designed for recycling	39% (41)	22%	29%	70%	29%	40%
Repair/disassembly/modular	34% (36)	44%	47%	44%	36%	0%
Minimise resource use	27% (29)	28%	41%	39%	25%	5%
Not currently designed for circularity	8% (9)	17%	6%	0%	4%	20%

Circular activity (All n=103)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Recycling & upcycling of materials	54% (56)	67%	41%	70%	59%	28%
On-demand production	46% (47)	50%	29%	44%	52%	50%
Waste management	37% (38)	28%	6%	65%	30%	50%
Design for circularity	36% (37)	50%	35%	30%	52%	6%
Repair & refurbishment services	32% (33)	39%	29%	52%	33%	0%
Upcycling	28% (29)	39%	35%	30%	33%	0%
Repairing services	27% (28)	44%	35%	30%	26%	0%
Recycling and regeneration	22% (23)	28%	18%	35%	26%	0%
Resale/second-hand marketplaces	18% (19)	44%	24%	22%	7%	0%
Co-creation	15% (15)	11%	35%	17%	11%	0%
Green logistics	14% (14)	28%	0%	22%	11%	6%
Re-commerce	14% (14)	11%	18%	13%	18%	6%
Rental/product-as-a-service	13% (13)	17%	12%	35%	0%	0%
Circular inputs	13% (13)	11%	24%	13%	15%	0%

Circular innovation under development (All n=106)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Yes	59% (63)	39%	82%	87%	61%	25%
No	41% (43)	61%	18%	13%	39%	75%

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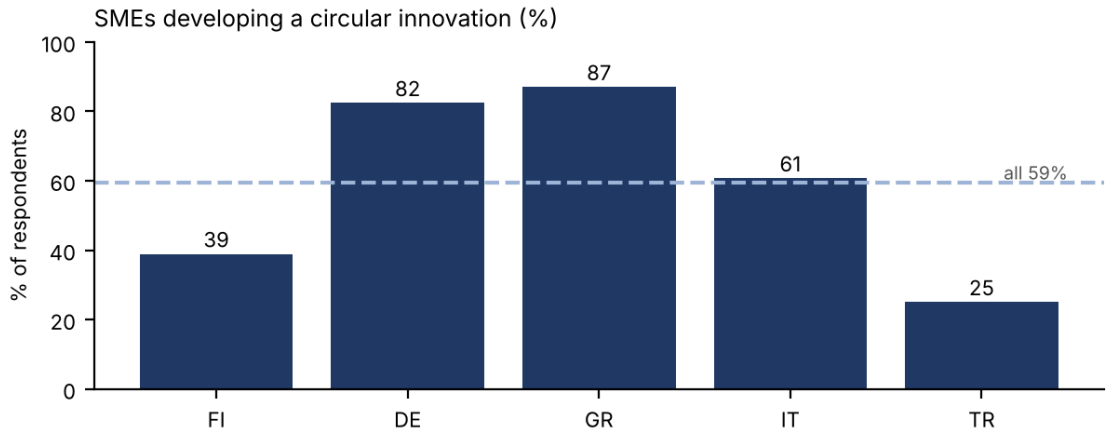
Phase of the innovation (All n=68)	All %	FI	DE	GR	IT	TR
Stage 2	41% (28)	33%	20%	43%	65%	33%
Stage 3	31% (21)	22%	40%	33%	29%	17%
Stage 1	26% (18)	33%	40%	24%	6%	50%
Other	2% (1)	11%	0%	0%	0%	0%



7.4 Barriers and support needed

Economic barriers are cited by 81% of SMEs (100% in Türkiye). The second-ranked barrier differs by country — supply chain and operations in Germany, spatial and systemic conditions in Italy and Türkiye, culture in Greece, policy and regulation in Finland — which argues for regionally differentiated CoVE strategies on a common skills core. Financial incentives (81%) and networking or partnerships (55%) are the most valued forms of support; regulatory guidance is requested most in Germany (53%) and least in Finland (19%).

Barrier (All n=102)	All %	FI	DE	GR	IT	TR
Economic	81% (83)	78%	56%	87%	80%	100%
Supply chain & operational	40% (41)	33%	62%	52%	36%	20%
Policy & regulatory	37% (38)	39%	50%	39%	36%	25%
Spatial & systemic	37% (38)	17%	12%	39%	60%	45%
Cultural	34% (35)	22%	19%	65%	44%	10%
Skills & education	32% (33)	33%	31%	30%	32%	35%
R&D	22% (22)	22%	25%	30%	12%	20%

Support needed (All n=104)	All %	FI	DE	GR	IT	TR
Financial incentives	81% (84)	75%	76%	87%	79%	85%

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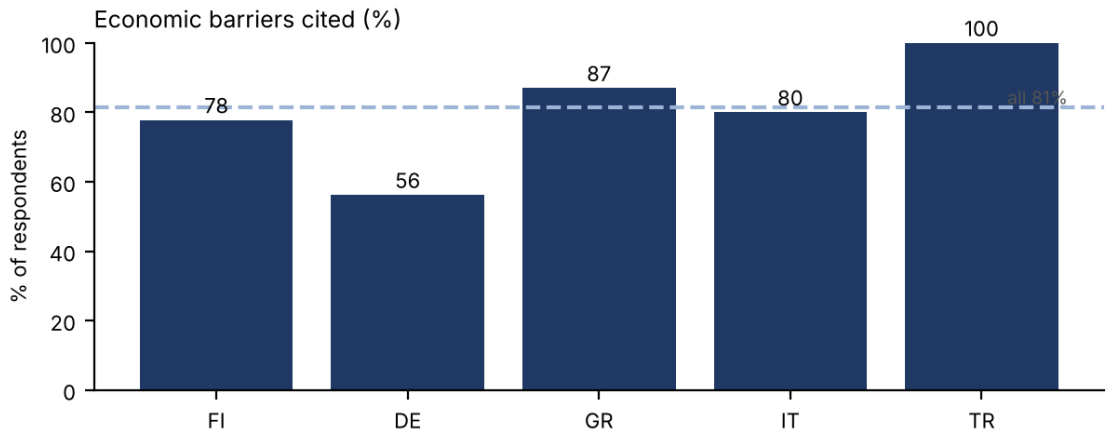
Networking/partnerships	55% (57)	56%	47%	78%	46%	45%
Training and certification	38% (40)	38%	41%	44%	29%	45%
Regulatory guidance	34% (35)	19%	53%	26%	32%	40%



7.5 Skills, roles and recruitment

Technical specialisation (52%) and craftsmanship (51%) are the hardest skills to find, followed by sustainability management (37%), circular economy and recycling skills (33%) and soft skills (32%); digital and automation skills are scarce for 19%. Craft dominates in Italy (82%), technical specialisation in Türkiye (85%) and Germany (62%), sustainability management in Greece (52%). Budget constraints (66%) are the main recruitment obstacle, followed by a lack of qualified candidates (41%, up to 74% in Türkiye). The eco-designer (40%) and the circularity and sustainability manager (33%) are the roles most often judged relevant; the roles most often reported as missing are the eco-design specialist (41%), the ESG data analyst (40%) and the circularity manager (38%). Digital fashion and 3D specialists (43%) and textile-innovation and biomaterials experts (40%) are the professions expected to be most in demand.

Hardest-to-find skill (All n=104)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Technical specialisation	52% (54)	35%	62%	48%	36%	85%
Craftsmanship	51% (53)	47%	31%	44%	82%	35%
Sustainability management	36% (38)	12%	50%	52%	21%	50%
Circular economy/recycling skills	33% (34)	35%	44%	35%	21%	35%
Soft skills	32% (33)	24%	12%	39%	29%	50%
Digital/automation skills	19% (20)	6%	19%	39%	11%	20%

Recruitment challenge (All n=104)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Budget constraints	66% (69)	78%	65%	83%	52%	58%

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Lack of qualified candidates	41% (43)	22%	35%	56%	22%	74%
Lack of awareness about roles	31% (32)	28%	18%	30%	22%	58%
Limited internal training	16% (17)	6%	24%	9%	26%	16%
No need for these roles	16% (17)	33%	12%	0%	30%	5%

Role judged relevant (All n=103)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Eco-Designer/Sustainable Product Designer	40% (41)	28%	47%	52%	42%	26%
Circularity & Sustainability Manager	33% (34)	39%	41%	30%	23%	37%
Ethical Trade & Supply Chain Auditor	21% (22)	17%	18%	17%	15%	42%
Trend Forecasting Analyst	20% (21)	11%	12%	26%	12%	42%
DPP & Traceability Specialist	19% (20)	33%	35%	17%	8%	10%
Digital Product Designer/3D	19% (20)	17%	12%	44%	12%	10%
Inventory & Demand Optimisation Mgr	18% (19)	28%	0%	39%	12%	10%
Circular Supply Chain & Reverse Logistics Mgr	18% (18)	11%	24%	30%	12%	10%
Sustainability Educator & Trainer	16% (17)	11%	24%	17%	12%	21%
ESG & Sustainability Data Analyst	16% (16)	33%	18%	22%	4%	5%
None of the above	16% (16)	22%	0%	4%	31%	16%
AI Personalisation & Customer Insights Mgr	14% (14)	11%	24%	13%	12%	10%

Role reported as missing (All n=99)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Eco-design specialist	41% (41)	50%	41%	65%	29%	21%
ESG data analyst	40% (40)	62%	47%	35%	33%	32%
Circularity manager	38% (38)	31%	59%	30%	38%	37%
Sustainability trainer/educator	35% (35)	44%	35%	35%	17%	53%
Supply chain traceability expert	34% (34)	44%	47%	30%	33%	21%
Human rights/ethical sourcing	33% (33)	44%	29%	35%	38%	21%

Profession expected to be in demand (All n=104)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Digital fashion specialist/3D designer	43% (45)	28%	41%	70%	19%	60%
Textile innovation expert/biomaterials	40% (42)	33%	41%	35%	42%	50%

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Artisan/craftsperson	35% (36)	28%	18%	26%	54%	40%
Legal compliance (EPR, DPP)	30% (31)	50%	18%	26%	12%	50%
Eco-designer	25% (26)	17%	35%	39%	19%	15%
Multidisciplinary creative	23% (24)	33%	12%	26%	19%	25%
Fashion data analyst	21% (22)	17%	24%	30%	19%	15%

7.6 Digitalisation, governance and reporting

Half of the SMEs report better tracking of materials and shipments through digitalisation (90% in Türkiye), 41% decisions supported by digital data, 38% more automated tasks and 35% AI tools in design (75% in Germany); 23% report no major change (48% in Italy). Sustainability governance is thin: 39% have an informal sustainability team and 14% a structured one, 10% publish a sustainability report (none in Greece, 5% in Türkiye) and 12% have sustainability-linked bonuses or KPIs.

Effect of digitalisation (All n=106)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Better tracking materials/shipments	49% (52)	33%	56%	39%	34%	90%
Decisions supported by digital data	41% (43)	50%	38%	44%	31%	45%
More automated tasks	38% (40)	39%	50%	52%	24%	30%
AI tools in design/product dev	35% (37)	28%	75%	48%	14%	25%
No major change	23% (24)	33%	0%	17%	48%	0%
PLM/digital product systems	13% (14)	22%	31%	9%	7%	5%

Sustainability team (All n=105)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Yes, informal	39% (41)	44%	35%	44%	41%	30%
No, but planning	29% (30)	22%	35%	48%	22%	15%
No, no plans	18% (19)	22%	12%	0%	22%	35%
Yes, structured	14% (15)	11%	18%	9%	15%	20%

Sustainability report (All n=105)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
No	62% (65)	44%	53%	52%	63%	95%
Planning to	29% (30)	33%	29%	48%	26%	5%
Yes	10% (10)	22%	18%	0%	11%	0%

Sustainability-linked incentives (All n=105)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**

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No	62% (65)	67%	59%	44%	74%	65%
Under development	26% (27)	17%	24%	48%	15%	25%
Yes	12% (13)	17%	18%	9%	11%	10%

7.7 Regulation: awareness, impact, burden and cost

38% of SMEs are aware of the relevant EU regulations (ESPR, DPP, EPR, CSRD), 41% somewhat aware and 22% unaware; awareness ranges from 67% in Finland to 15% in Türkiye, where 55% are unaware. Regulation has already affected the operations of 13% (28% in Finland). Half of the respondents cannot estimate the administrative burden or the investment that compliance will require; the Greek firms are the only group with a clear (and low) cost expectation. 42% would take compliance training and 49% might.

Awareness of EU regulations (All n=106)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Somewhat	41% (43)	28%	59%	48%	39%	30%
Yes	38% (40)	67%	24%	44%	39%	15%
No	22% (23)	6%	18%	9%	21%	55%

Operations already affected (All n=106)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
No	87% (92)	72%	82%	91%	89%	95%
Yes	13% (14)	28%	18%	9%	11%	5%

Expected administrative burden (All n=103)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Don't know	41% (42)	28%	35%	30%	52%	55%
Moderate (5-20h/month)	31% (32)	33%	53%	35%	24%	15%
Minimal (<5h/month)	15% (15)	33%	6%	17%	16%	0%
High (>20h/month)	14% (14)	6%	6%	17%	8%	30%

Expected compliance investment (All n=103)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Don't know	52% (53)	39%	71%	17%	68%	65%
EUR 5-50k	20% (21)	22%	12%	35%	24%	5%
EUR 0-5k	19% (20)	28%	6%	48%	8%	5%
EUR >50k	9% (9)	11%	12%	0%	0%	25%

Would take compliance training (All n=103)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**

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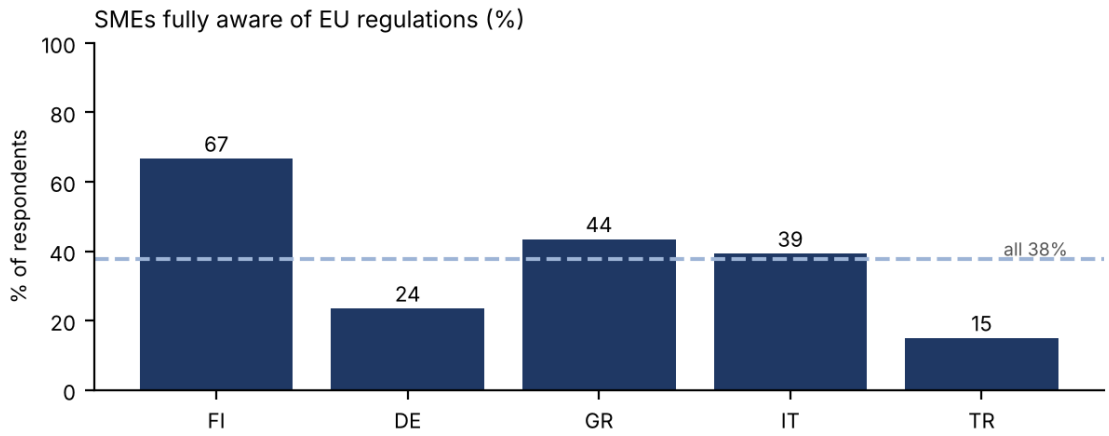
Maybe	48% (50)	44%	47%	30%	44%	80%
Yes	42% (43)	39%	41%	70%	40%	15%
No	10% (10)	17%	12%	0%	16%	5%



7.8 Training demand

Green skills and sustainability (55%), digitalisation and Industry 4.0 (52%), project management and communication (50%) and technical and artisanal skills (48%) are the training priorities for the next two years — a four-way tie that confirms the integrated "twin plus craft" skills profile the ReMODE curricula must serve. Case-study learning (45%), hands-on labs (44%), internal mentoring and workshops (42%) and design sprints (40%) are the preferred formats; online micro-credentials as a format are chosen by only 15%, although 39% would and 47% might enrol staff in a short DPP micro-credential (61% yes in Greece, 15% in Türkiye). 28% of firms already offer sustainability training and 34% plan to.

Training priority (All n=104)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Green skills/sustainability	55% (57)	50%	76%	48%	36%	75%
Digitalisation/Industry 4.0	52% (54)	56%	65%	61%	21%	70%
Project mgmt/communication	50% (52)	38%	59%	56%	61%	30%
Technical & artisanal skills	48% (50)	31%	35%	39%	64%	60%
Distribution & logistics	25% (26)	25%	29%	35%	25%	10%

Preferred training format (All n=101)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Case-study learning	45% (45)	56%	50%	44%	38%	40%
Hands-on practical labs	44% (44)	38%	62%	39%	35%	50%
Internal mentoring/workshops	42% (42)	38%	38%	52%	42%	35%
Workshops & design sprints	40% (40)	31%	50%	52%	38%	25%

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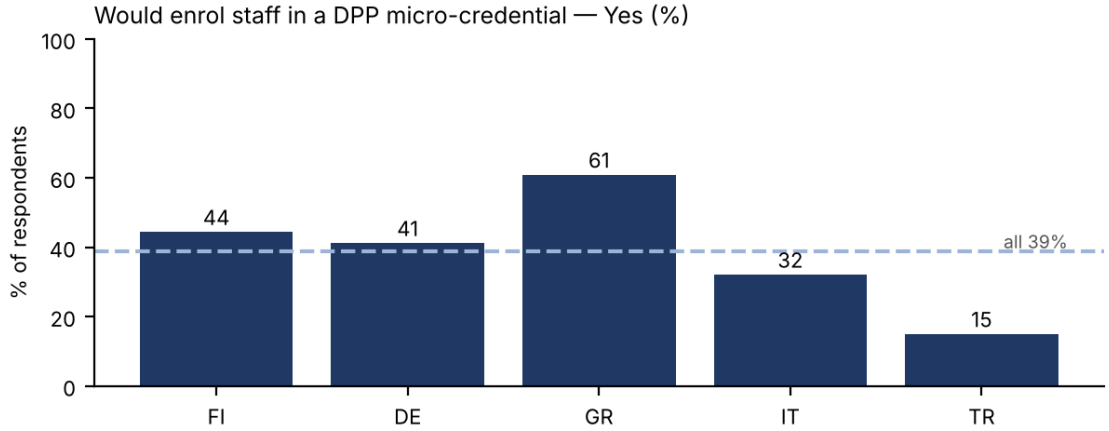
Partnerships with universities	33% (33)	25%	31%	48%	31%	25%
On-site bootcamps	29% (29)	19%	44%	17%	8%	65%
Peer-to-peer/team-based	25% (25)	38%	19%	30%	23%	15%
Live expert-led webinars	25% (25)	25%	19%	30%	27%	20%
Micro-learning modules	25% (25)	25%	31%	26%	19%	25%
Self-paced e-learning	20% (20)	19%	6%	30%	12%	30%
Virtual/3D environment training	17% (17)	12%	0%	44%	12%	10%
Scenario-based simulations	15% (15)	12%	6%	17%	8%	30%
Micro-credentials (online)	15% (15)	6%	31%	22%	15%	0%
Role-play exercises	11% (11)	0%	6%	13%	12%	20%

Offers sustainability training (All n=106)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
No	38% (40)	39%	35%	17%	39%	60%
Planned	34% (36)	28%	41%	56%	21%	25%
Yes	28% (30)	33%	24%	26%	39%	15%

Interest in a DPP micro-credential (All n=106)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Maybe	47% (50)	50%	47%	39%	46%	55%
Yes	39% (41)	44%	41%	61%	32%	15%
No	14% (15)	6%	12%	0%	21%	30%



Section 8: Consolidated survey results — VET and HEI educators (78 responses, five countries)

This section reports the educator questionnaire (INS-02) on the final consolidated dataset (78 valid responses; nationality Türkiye 20, Italy 19, Germany 13, Finland 12, Greece 12, not stated 2). Items are scored 1 (strongly disagree) to 5 (strongly agree); the table gives the consortium mean and share agreeing (4–5) and the mean per country. Country reports with full tables are in Annex D.

8.1 Respondent profile

Respondents are 72% female; the largest age band is 35–44 (42%), followed by 55–64 (20%). 35% work in universities and 26% in VET schools (23% did not state the institution type). Disciplines are education and curriculum development (31%), fashion design and product development (32%), textile engineering and materials science (18%) and sustainability and circular-economy strategies (5%).

8.2 Teaching approaches, creative and experiential methods

Educators report high pedagogical variety (mean 4.27; 85% agree) and strong belief in creative and sustainability-oriented approaches (4.10) and in their own confidence to apply them (4.08). Interactive, project-based modules (4.10) and sensory, material-based materials (4.49 and 4.41, around 90% agreement in every country) are the most strongly endorsed items in the whole questionnaire. Actual use of experiential methods (3.63) lags behind belief, most in Finland (3.42) and Italy (3.58). Institutional and EU support is rated as important in Germany (4.45), Greece (4.33) and Türkiye (4.10) but not in Italy (2.95) or Finland (3.17).

Item	All mean / agree	FI	DE	GR	IT	TR
1.1 I regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning	4.27 / 85%	4.08	4.15	4.50	4.47	4.55
1.3 Creative or sustainability-oriented approaches are more effective than traditional methods	4.10 / 81%	4.08	4.23	4.67	4.00	4.20
1.4 I am confident applying sustainability-focused pedagogies	4.08 / 80%	4.33	4.46	3.67	4.00	4.40
1.5 Support from my VET centre / national or EU frameworks is important for implementing these methods	3.64 / 54%	3.17	4.45	4.33	2.95	4.10
2.1 I use experiential or creative methods (studio, workshops, fieldwork)	3.63 / 63%	3.42	4.00	3.92	3.58	3.75
2.2 Interactive, project-based modules engage students	4.10 / 78%	3.75	4.31	4.83	4.11	4.15
3.1 Sensory, visual or material-based teaching materials enhance creativity and emotional engagement	4.49 / 90%	4.92	4.46	4.83	4.32	4.65

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3.2 Sensory and material-based approaches enhance the overall learning experience	4.41 / 90%	4.83	4.15	4.75	4.32	4.65

8.3 Motivation, gamification and digital engagement

Small rewards and recognition (4.25) and gamified tasks (3.88) are endorsed everywhere except that gamification scores lower in Italy (3.53) and Finland (3.40). Digital tools are seen to enhance engagement (3.88) more than sustainability awareness (3.46), and confidence in integrating digital technologies (3.51) is sharply divided: high in Germany (4.23), Türkiye (4.15) and Greece (3.67, with only 50% agreeing), low in Finland (3.40) and Italy (2.68). The digital-for-sustainability link is therefore the first educator-training priority for the ReMODE methodology.

Item	All mean / agree	FI	DE	GR	IT	TR
4.1 I have used or observed experiential learning activities in fashion education	3.91 / 68%	4.20	4.27	3.58	4.16	3.90
4.2 Small rewards or recognition increase student motivation	4.25 / 84%	3.90	4.38	4.75	3.95	4.75
4.3 Gamified or challenge-based tasks help students understand sustainability concepts	3.88 / 66%	3.40	4.08	4.75	3.53	4.20
5.1 Digital tools enhance student engagement	3.88 / 70%	3.70	4.00	4.75	3.32	4.30
5.2 Digital tools raise sustainability awareness	3.46 / 51%	2.70	3.54	4.50	2.63	4.30
5.3 I am confident integrating digital technologies into my teaching	3.51 / 50%	3.40	4.23	3.67	2.68	4.15

8.4 Policy awareness and curriculum responsiveness

Awareness of upcoming EU textile regulation averages 3.54 (51% agree), from 4.40 in Finland to 3.33 in Greece, and curricula anticipating legislation 3.21 (46%). The weakest items in the survey are curricular: only 32% agree that curricula incorporate sustainability reporting frameworks (GRI/ESRS; mean 2.67, 1.76 in Italy) and 38% that programmes prepare students for regulation (3.06). Curricula are judged to support circular-economy skills by 63% (3.60), from 4.40 in Finland to 3.25 in Türkiye, and 74% see room for improvement in the design of sustainability-focused activities. Professionals (78%) and companies (66%) are the external actors most often involved in courses; artisans (45%) and industrial districts (27%) are an Italian strength, research centres (33%) a German one.

Item	All mean / agree	FI	DE	GR	IT	TR
6.1 I am aware of upcoming EU textile and sustainability regulations	3.54 / 51%	4.40	3.55	3.33	3.41	3.70
6.2 Our curriculum anticipates future legislation and policy directions	3.21 / 46%	3.90	3.55	3.42	2.41	3.55

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7.1 Our curricula incorporate sustainability reporting frameworks (GRI, ESRS)	2.67 / 32%	2.90	3.73	3.42	1.76	2.55
7.2 Our programmes prepare students for current and emerging regulation	3.06 / 38%	3.30	4.00	3.33	2.59	2.95
7.3 Our curriculum supports the skills needed for circular-economy transitions in fashion	3.60 / 62%	4.40	3.91	3.75	3.65	3.25
8.1 Module design in my institution supports sustainable and creative fashion education	3.51 / 51%	3.90	3.38	3.58	3.84	3.40
8.4 There is room for improvement in the design of sustainability-focused activities	3.89 / 74%	4.40	4.15	4.92	3.42	3.70

External actors in course activities (n=64)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Professionals	78%	60%	82%	92%	90%	58%
Companies	66%	100%	73%	42%	68%	50%
Artisans	45%	40%	36%	17%	79%	33%
Research centres	33%	30%	82%	8%	32%	17%
Industrial districts	27%	20%	9%	8%	68%	0%

8.5 What the two surveys say together

Read side by side, the SME and educator results describe a consistent mismatch. Firms ask for craftsmanship and technical specialisation, sustainability management, traceability and compliance expertise, delivered through hands-on, case-based and mentoring formats; educators are strong exactly where firms want delivery to happen — experiential, sensory, project-based pedagogy — but weak where firms' needs are growing: regulatory content, reporting frameworks and the use of digital tools for sustainability. Country patterns reinforce each other: Finnish firms and educators are the most regulation-literate and the least digital-for-sustainability; Italian firms and educators are the most craft-anchored and the least prepared for reporting; Greek firms and educators are the most eager for partnerships, training and gamified or digital formats; German firms and educators are the most digitally fluent; Turkish firms and educators show the largest gap between pedagogical motivation and circular-economy content. The ReMODE learning methodology in Part A (Section 3.7) and the WP3–WP5 curricula should therefore pair a common core — circular design, DPP and traceability, regulatory literacy, sustainability reporting — with regionally weighted entry points.

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Section 9: Country-Level SWOT Results (updated with survey data analysis)

9.1 Finland

Country Context and Introduction

Finland's textile sector is characterized by innovation and a robust research landscape, emphasizing ecological solutions and digital transformation. Despite this, Finland faces specific challenges related to slow legislative processes and fragmented implementation of sustainability policies.

SWOT Analysis (Finland)

Strengths	**Weaknesses**
1. Advanced ecological textile fiber innovations and pilot projects.2. Well-established higher education programs in sustainability and circular textiles. 3. Educators have consistent company partnerships and sensory approaches which support applied circular skills.	1. Slow legislative implementation hinders rapid transition.2. Limited integration of sustainable and digital skills in current vocational education and training programs.
Opportunities	**Threats**
1. Legislative developments under Circular Economy Act 2024-2026.2. Potential leadership role in sustainable textile innovation at the EU level. 3. Develop digital labs and guided modules to convey regulatory awareness through practical soft skills.	1. Increasing competition from international low-cost manufacturers.2. Regulatory uncertainty complicates long-term investment planning for SMEs.

On a **macro-policy level**, Finland demonstrates significant strengths with its pioneering ecological textile innovations. The Circular Economy Act provides an upcoming regulatory opportunity, although historically, Finland's slow policy adaptation has been a key weakness, delaying effective industry-wide transitions.

In the **educational sphere**, Finland boasts diverse and comprehensive higher education programs related to sustainability. Yet, vocational training institutions need enhanced curricular integration, specifically focusing on practical applications of circular economy and digital skills.

Socially and culturally, Finnish consumers strongly support sustainable initiatives. This cultural support aligns with national sustainability goals, facilitating broader acceptance of ecological and circular economy practices. However, consumer awareness must deepen beyond superficial ecological claims to foster genuinely sustainable consumption.

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Regarding the **occupational landscape**, Finland sees emerging opportunities in specialized job roles, particularly related to circular design and digital traceability. Nonetheless, vocational training systems require adjustments to match industry needs more closely, addressing the evident skills gap.

At the **micro-level**, practical skills related to sustainable materials, circular design, and digital traceability are crucial yet insufficiently developed within Finnish industry workplaces. Targeted industry-educational collaborations and hands-on training could effectively mitigate these gaps.

Resources Used by Finland

- Finnish Government Circular Economy Strategy (2024-2026), Finnish Parliament documents, Finnish Textile Association reports.

9.2 Germany

Country Context and Introduction

Germany is recognized for its sophisticated and high-tech textile and clothing sector, historically known for quality engineering, innovative product development, and global competitiveness. The German textile industry, while economically robust, faces transformative pressures from sustainability imperatives, digitalization, and evolving regulatory frameworks within the European Union.

SWOT Analysis (Germany)

Strengths

1. Green Button Certification promoting sustainable practices (OECD, 2022).2. German Act on Corporate Due Diligence to ensure environmental compliance (BMAS, 2023).3. Implementation of Extended Producer Responsibility (EPR) schemes (BMUV, 2021). 4. German educators report strong confidence with emerging technologies and frequent use of experiential, project-based methods, enabling digital circular-skills teaching.

Weaknesses

1. Slow adoption of sustainability practices due to cost and complexity (DIHK, 2024). Teaching curricula rarely incorporate sustainability reporting frameworks. 2. Voluntary participation limits the scope of impact (Federal Ministry for Economic Cooperation and Development, 2023).3. SMEs face significant challenges with regulatory compliance costs.

Opportunities

1. Increasing demand for sustainable and eco-friendly textiles.2. EU's regulatory push for circular economy practices incentivizes innovation.3. Growing consumer awareness supports premium pricing for sustainability-certified products. 4. Industry-academia pilots to integrate sustainability reporting

Threats

1. High global competition from low-cost producers.2. Frequent and unpredictable changes in sustainability-related regulations. These sudden enforcement of EU rules without educators upskilling risks compliance. 3. Potential labor shortages and skill gaps in new digital and circular economy roles.

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frameworks into assessments, aiming to create advanced sustainability knowledge and relevant professions (e.g. ESG data analysts).

At the **macro-policy level**, Germany's textile and clothing sector benefits significantly from clear regulatory frameworks promoting sustainability, particularly the Green Button Certification and Corporate Due Diligence Act. These policies reinforce sustainable manufacturing and corporate responsibility, establishing Germany as a leader in regulatory-driven innovation. However, the voluntary nature of some programs and slow implementation rates hinder comprehensive adoption.

Within the **educational system**, German universities and vocational training institutions offer extensive programs related to sustainability and digitalization. Despite this, there remains a clear need to increase accessibility to applied training, especially for SMEs. Current educational programs often fall short in fully preparing the workforce for rapidly evolving digital and circular economy requirements.

On a **social and cultural level**, consumer awareness and preference for sustainable products are rising rapidly, creating a supportive environment for sustainable practices. Yet, a significant consumer segment remains price-sensitive, potentially limiting widespread adoption of higher-priced sustainable products.

In terms of the **occupational system**, Germany is witnessing the emergence of new job profiles focused on sustainability and digitalization, such as sustainability analysts and digital product passport specialists. However, there is a notable shortage of adequately trained professionals to fill these roles, compounded by insufficient targeted training in existing vocational programs.

At the **micro-level (on-the-job skills)**, while Germany excels in precision engineering and high-quality manufacturing, significant gaps remain regarding specific circular economy skills such as zero-waste design, sustainable materials handling, and digital traceability systems. Bridging these gaps requires targeted, practical training interventions at the workplace level.

Resources Used by Germany

- OECD (2022), BMAS (2023), BMUV (2021), DIHK (2024), Federal Ministry for Economic Cooperation and Development (2023).

9.3 Greece

Country context & introduction

From its 1970-1990 manufacturing hey-day to today's network of agile micro-firms, Greece's textile-and-clothing (T&C) chain has pivoted from volume production to design, sourcing and brand management centred in Athens-Attica. COVID-19-era supply-chain shocks, the EU Strategy for Sustainable & Circular Textiles (2022) and Greece's own forthcoming Extended-Producer-Responsibility (EPR) scheme have revived debate on "Made-in-Greece" near-

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shoring and circular manufacturing. Yet spatial bottlenecks (workshops priced out of Kerameikos/Metaxourgio) and a still-emerging regulatory infrastructure continue to hamper scale-up.

SWOT analysis (Greece)

Strengths	Weaknesses
• SMEs and educators show a growing awareness around sustainability topics. • Some firms adopt early innovation pilots	• Fragmented, still-evolving regulations; small ateliers are classed as *heavy industry*, making permitting and finance costly. • Many SMEs collect product lifecycle data only partially or informally, undermining skills in data management.
• Legal timetable for separate textile-waste collection & EPR gives clear policy signal .	• Dedicated sorting/recycling capacity remains limited; national EPR system not yet operational .
• Dense Attica network of 90+ reuse/vintage outlets and charities extends product life and normalises second-hand culture .	• Digital-traceability, DPP and advanced-recycling skills largely absent from mainstream VET & HEI curricula.
Opportunities	**Threats**
• EU & Greek EPR deadlines create demand for compliance services, eco-design and local recycling technology .	• Fast-fashion imports have rebounded since 2015, squeezing margins for domestic circular brands.
• Near-shoring trend post-COVID enables selective reshoring under “Made-in-Greece” circular credentials.	• Golden-Visa real-estate speculation is displacing affordable workshop space in core artisan districts.
• Proposed public-bank-university *Circular Hub* and “living” data infrastructure could anchor skills & pilot plants.	• Uncertain rollout dates for DPP, Ecodesign & full EPR compliance create planning risk for SMEs.
• Clustered supplier engagement programs to strengthen upstream alignment and create shared training economies of scale.	• Lack of bargaining power with suppliers

At the **macro-policy level**, Greece has already transposed the EU Waste-Framework-Directive amendment that obliges separate collection of textiles by 2023, and a draft ministerial decision now sketches the forthcoming Extended-Producer-Responsibility (EPR) fee scheme

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for apparel and footwear producers. While these signals confirm the country's circular-economy direction, the secondary legislation that will determine fee levels, IT reporting architecture and enforcement timetables is still under consultation, leaving would-be investors in sorting plants and Digital-Product-Passport (DPP) software in limbo.

Within the **educational system**, a handful of universities have embedded sustainability modules, yet most vocational colleges still treat eco-design, life-cycle analysis or DPP topics as optional extras. The REMODE desk research highlights that SMEs' ability to exploit new circular opportunities "depends heavily on upskilling the existing workforce and integrating digital and sustainability training within VET and higher-education curricula" . Unless curricula are rapidly updated—and delivered in hands-on formats—Greece will struggle to supply the technicians needed for EPR logistics, recycling lines and data-driven compliance.

From a **social-and-cultural perspective**, Athens–Attica has witnessed an explosion of reuse and vintage activity: Netrino's 2024 mapping lists more than ninety second-hand boutiques, charity outlets and kilo shops across the region . This visible reuse infrastructure is normalising circular consumption and offers fertile ground for repair cafés and up-cycling brands. Yet the same report notes that policy-funded facilitation portals tend to vanish once grants expire, undercutting ecosystem continuity.

At the **occupational level**, interviews for the Athens Ecosystem Report confirm that roles such as *Textile-Waste Auditor*, *Circular-Hub Manager* and *DPP Specialist* are already appearing inside forward-looking SMEs, but none of these profiles are yet encoded in the national qualifications framework. Without official profile codes employers cannot advertise, certify or subsidise these jobs, stalling labour-market uptake and making EU funding harder to access.

Finally, on the **micro (shop-floor) level**, two frontline skill gaps dominate: (i) zero-waste or modular pattern-making—the design logic that eliminates off-cuts before production begins—and (ii) accurate fibre identification and sorting for recycling streams. Both competencies are prerequisites for meeting upcoming EPR and DPP obligations, yet they are rarely taught in practical workshops. Unless SMEs and training centres co-develop short, tool-based modules that tackle these gaps, Greece's ambitious circular ambitions risk stalling at the implementation phase.

Resources used by Greece

- Zafeiropoulou, F. A., (2025). Toward a Quantum-Holistic Framework for Circular Fashion: Integrating Systems Theory, Embeddedness, and Quantum Perspectives in Sustainable Supply Chains. In: **Proceedings of the 2025 European Academy of Management Conference - Managing With Purpose**, 22-25 June 2025. Italy: University of Florence.
-Zafeiropoulou, F. A. et al (2024). Shifting to Urban Human-Based Circular Manufacturing; A Structural and Relational Mapping of Supply Chains in the Textile and Clothing Sector in Athens and Rotterdam. In Proceeedings of the **1st International Green Innovation & Circular Economy Conference,** 20-23 October 2024, UNESCO Chair on Green Innovation & Circular Economy National Technical University of Athens. Athens: University of Athens.
-Netrino Chamber of Athens (2025).

9.4 Italy

Country Context and Introduction

Italy's textile sector, renowned globally for its high-quality fashion and craftsmanship, faces increasing pressures from sustainability regulations, digital transformation, and changing consumer preferences toward more sustainable products.

SWOT Analysis (Italy)

Strengths

1. Legislative framework supportive of sustainable textile practices. 2. Italian VETs/HEIs have deep artisan networks that sustain craft skills within an authentic training context.

Weaknesses

1. Insufficient investment in sustainability and digital transformation. 2. Fragmented policy implementation across different regions. 3. Lack of advanced knowledge on digitalization and 3D/AI knowledge and of relevant sustainability regulations, whereas a lack of ESG data analyst/impact strategist is often reported (D2.2). 4. Lack of official sustainability teams within SMEs making SMEs readiness questionable (D2.2 & D2.4).

Opportunities

1. Growing consumer demand for sustainable fashion products. 2. Potential leverage of Italy's premium brand heritage for sustainable innovation. 3. A need for new professions emerges and relevant training: sustainability/CSR management, textile innovation expertise and eco-designing (D2.2).

Threats

1. Intensified competition from fast-fashion markets. 2. High cost of transitioning to sustainable production practices.

Italy's **macro-policy framework** offers robust legislative support for sustainability but suffers from inconsistent implementation and insufficient financial support mechanisms. Strengthening regional coordination could amplify policy effectiveness.

The **educational system** provides comprehensive curricula on circular and sustainable fashion across multiple levels. However, practical training opportunities and industry collaborations must be expanded significantly to meet emerging occupational demands effectively.

Socially and culturally, Italy's reputation in high-quality fashion presents substantial opportunities for branding sustainable initiatives. Consumers increasingly prioritize sustainability, creating strong market incentives for innovation.

The **occupational and job-related skills landscape** highlights emerging profiles, notably sustainability and digital product passport specialists. Nonetheless, Italy's vocational and

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educational training systems need enhanced focus on these new skill areas to close existing gaps.

At the **micro-level**, practical workplace skills in circular design, sustainable material handling, and digital traceability require targeted interventions and closer alignment with industrial practices.

Resources Used by Italy

- Legislative Decree n. 116 (2020), Veneto Region GPP guidelines, European Environment Agency reports.

9.5 Türkiye

Country Context and Introduction

Türkiye is one of Europe's largest producers of textiles and apparel. Industrial clusters around Bursa, Istanbul and the Aegean region give the country a deep manufacturing base and direct logistical links to EU markets via the EU-Türkiye Customs Union. However, the same export orientation now exposes Turkish firms to fast-moving EU sustainability rules (e.g., Digital Product Passports, Ecodesign, CSRD), while domestic VET provision and consumer awareness are still catching up.

SWOT Analysis (Türkiye)

Strengths	**Weaknesses**
1. Robust, export-oriented production infrastructure clustered in Bursa and other organised industrial zones, offering a solid platform for circular upgrades	1. Slow and uneven translation of new sustainability and digital regulations into VET curricula, leaving many technicians under-prepared
2. Increasing policy alignment with the EU Green Deal stimulates awareness of traceability and carbon-footprint requirements	2. Limited access to advanced digital-transformation technologies (IoT, PLM, blockchain) for VET colleges and SMEs
3. Growing design and branding capability supported by industry-integrated training models such as BUTGEM 4. A motivated fashion and textile education and industry ecosystem that embraces experiential, project-based and digital teaching where frequent collaborations also exist among companies, artisans and industrial partners (D2.3).	3. Low consumer sustainability literacy and entrenched fast-fashion habits curb domestic demand for circular products 4. Lack of awareness of upcoming regulations is often reported (D2.3)

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Opportunities	Threats
1. EU Customs-Union status unlocks funding and market incentives for rapid compliance with DPP, EPR and carbon rules	1. Tightening EU due-diligence and traceability requirements could exclude non-compliant exporters
2. Rapid adoption of RFID/QR traceability, 3-D digital design and smart-manufacturing tools is creating demand for new hybrid “eco-digital” roles	2. Regional gaps in digital infrastructure mean suppliers in rural areas risk falling behind, widening workforce inequalities
3. Rising climate-action activism among youth offers a receptive home market for ethical and circular Turkish brands 4. Co-develop short, hands-on modules (like internships, design sprints, supplier visits) that address skills gaps and employer needs.	3. Dominance of cheap fast-fashion and cultural stigma toward second-hand clothing inhibit scalable circular business models

Macro-policy level – Türkiye’s Customs-Union link to the EU brings both opportunity and pressure. Alignment with the Green Deal provides access to project finance, yet SMEs and VET providers struggle to keep pace with mandatory Digital Product Passports, carbon-footprint disclosure and lifecycle analysis requirements.

Educational system – Bursa Uludağ University now embeds sustainability in core courses such as *Finishing Technology*, while BUTGEM’s flexible, industry-embedded modules ensure quick updates. Still, key gaps persist: life-cycle analysis, blockchain traceability and AI-supported production are covered only theoretically, and practical digital-skills modules are scarce, especially at VET level.

Social & cultural system – Traditional craftsmanship and organic-cotton narratives resonate with international buyers, but domestic consumers often equate “sustainability” with a simple organic label; second-hand or minimalist consumption remains culturally stigmatized . Youth-led climate movements nonetheless signal growing grassroots support for ethical fashion.

Occupational level – New roles (Digital Product Passport Specialist, Circular-Production Operator, AI-Assisted Planning Technician) are emerging inside export-oriented mills, yet are not recognised in the national qualifications framework, complicating recruitment and certification. BUTGEM is piloting short modular courses, but employer awareness of these novel profiles is still limited.
Micro (on-the-job) level – Two frontline skill gaps stand out: (i) zero-waste pattern-making and modular design, and (ii) precise material sorting/identification for recycling streams . Shop-floor digital literacy is also uneven; without hands-on exposure to IoT dashboards or RFID scanners, workers cannot operationalise traceability mandates.

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Resources Used by Türkiye

Platform24 (2025); IMARC Group (2024); Göçer & Atılgan (2020); Başaran (2024); Ekin (2024); Turkish Ministry of Trade reports; Bursa Uludağ University curriculum materials; BUTGEM internal training documents.

Section 10: Aggregated & Comparative SWOT Analysis (updated)

This chapter processes the five country-level SWOTs into a single analytical lens. It does so in three steps. *Section 5.1* clusters the individual statements recorded in the national templates into a set of **convergent** strengths, weaknesses, opportunities and threats, weighted by the frequency with which partners flagged each item. *Section 5.2* then highlights **divergent or unique factors** that shape national pathways and therefore demand country-tailored interventions. *Section 5.3* surfaces **cross-cutting themes** that cut across borders and levels (macro, meso, micro) and will inform REMODE's forthcoming curriculum design (WP 3) and pilot actions (WP 4–5).

10.1 Convergent Strengths, Weaknesses, Opportunities and Threats

Methodological note. Partners coded up to twelve items per SWOT quadrant using a harmonised template and the multi-level lens described in Paragraph 2.2–2.3. Items were then clustered into thematic families; the number of times a theme appeared across countries was taken as a proxy for *perceived importance*.

10.1.1 Shared strengths

- **Design excellence and brand heritage.** All five ecosystems (whether engineering-driven Finland or luxury-centred Italy) stress a capacity to convert cultural narratives into market value. This ranges from Prato's "Made in Italy" craft-plus-technology mix to Athens' zero-waste couture micro-labels, and underpins international competitiveness even in price-pressured segments.
- There are indications of strong experiential/sensory pedagogy and industry collaboration across countries, which may provide a robust foundation for circular skills.
- **Concentrated innovation clusters.** Each country reports at least one world-class R&D hub—VTT Espoo for cellulose fibres, RWTH Aachen for technical textiles, Prato for mechanical recycling, Bursa for smart manufacturing, Athens for circular design studios—which serve as living laboratories for SMEs and VET providers.
- **Pilot-scale digital traceability.** Proof-of-concept projects in PLM, blockchain or Digital Product Passports (DPPs) are under way in every partner region, demonstrating both technological feasibility and an emerging talent pool.
- **Regulatory tail-winds.** Far from being perceived as a burden, the European Green Deal, ESPR and upcoming textile-specific EPR rules are framed as market-making devices that reward proactive firms and learning ecosystems.

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10.1.2 Common weaknesses

- **Dependency on imported inputs.** Europe still sources most cotton, man-made cellulosics and recycled feedstock from outside the bloc, exposing all five countries to cost shocks and supply volatility.
- **Scarcity of low-impact material options at scale.** Even Italy's premium mills struggle to secure large, consistent streams of recycled or bio-based fibres.
- **Fragmented SME skills and ageing workforce.** High initial investment, limited digital literacy and demographic churn slow the diffusion of CDG (circular-digital-green) know-how.
- **Patchy end-of-life infrastructure.** Separate textile collection becomes mandatory EU-wide in 2025, yet chemical or high-purity mechanical recycling capacity remains embryonic in most partner regions.
- Inconsistent **integration of sustainability frameworks** and variable digital traceability skills (e.g. ESG data) within European curricula. Preparedness differs by national context (e.g., higher awareness in Finland; stronger operational practices in Greece and Italy, larger gaps in Türkiye) (D2.4).

10.1.3 Shared opportunity space

- **Regulatory pull.** Binding EPR and DPP obligations create new markets for compliance software, eco-design and reverse-logistics services.
- **Consumer appetite for circular offers.** The mainstreaming of thrift, rental and repair hints at revenue pools that reward durability and transparency.
- **EU / national funding for Industry 4.0 retrofits.** Recovery and Resilience plans earmark billions for smart machinery, data infrastructure and reskilling.
- Industry-education apprenticeships
- Targeted funding for sustainable-friendly SMEs.

10.1.4 Common threats

- **Relentless cost competition.** Fast-fashion imports and near-shored basic goods erode price margins, discouraging local capital expenditure on circular assets.
- **Regulatory mix and escalating audit costs.** SMEs fear being locked into continually shifting ESG standards (German Due-Diligence Act, CSRD, ESPR delegated acts) and so, without coordinated educator upskilling and SME support, compliance and competitiveness risks will rise.
- **Exogenous shocks.** COVID-19, energy-price spikes and geo-political tensions underscore the fragility of globalised supply chains and inflate working-capital needs.
- **SMEs face dual pressures:** environmental performance requirements and digital infrastructure adaptation (D2.4).

Section 11: Findings, discussion and conclusions

Note on figures: percentages in this section have been aligned with the final consolidated dataset reported in Sections 7 and 8 (merged option labels; 107 SMEs, 78 educators). Open-ended answers coded in April 2026 (55 educator comments) are reported as coded then.

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11.1 Findings

A cross-country expert focus-group was convened on **4 June 2025** (online, 120 min) to stress-test the aggregated SWOT, rank urgent circular-digital-green (CDG) skill gaps and gather case material for WP 3–WP 5. The session followed the **WP2 Focus-Group Guidelines**: one moderator from the Greek university, a note-taker and a technical host managed a room of **seventeen (17) specialists** (industry managers, VET lecturers, university researchers, cluster coaches and NGO advocates) representing **Finland, Germany, Greece, Italy and Türkiye**. Ground-rules covered consent, equal voice, evidence-based statements and confidentiality; only professional roles and countries are used below.

The agenda blended plenary walk-throughs with structured probes drawn from an **Indicative Question Guide**. Participants first exchanged a single "take-away" from their national SWOTs, then moved through five system layers—macro-policy, educational, socio-cultural, occupational and micro shop-floor—before voting on priority skill gaps and opportunities. A core question set circulated in advance ensured comparability and encouraged the citing of concrete evidence rather than opinion.

Stage 2 survey also provided insightful data concerning the updated SWOT analysis, pedagogy and skills within the sustainable fashion sector, as these are seen in section 4. The survey data reveal a clear alignment between SME skill demands and evolving pedagogical approaches, highlighting a transition toward practice-oriented, interdisciplinary learning in sustainable fashion education. At the core, SMEs report acute shortages in craftsmanship (51.0%), sustainability management (36.5%), technical specialisation (51.9%), and circular economy skills (32.7%), indicating that nearly 70% of critical gaps relate to sustainability-oriented competencies. While digital and automation skills (19.2%) are less prominent, their importance is increasing as part of broader digital transformation. Pedagogically, both SMEs and educators converge on the importance of experiential and constructivist learning models. The most effective formats are hands-on laboratories (43.6%), mentoring and workshops (41.6%), and collaborative problem-solving environments (39.6%), often combined with case-based learning, simulations, and microlearning. This demonstrates a strong preference for applied, practice-based education, where learners actively engage in real-world problem solving rather than passive knowledge acquisition. From the educators' perspective, there is moderate confidence in supporting circular economy skills (mean = 3.60), but a notable gap in embedding sustainability reporting frameworks (mean = 2.78), suggesting uneven curricular integration of regulatory and governance knowledge. Additionally, while collaborations with industry professionals (78.1%) and companies (65.6%) are common, weaker links with research centres (32.8%) indicate limited integration of research-led teaching.

In the short term, pedagogy should prioritise operational, immediately deployable skills, particularly craftsmanship and applied sustainability practices. In the long term, the emphasis shifts toward hybrid and interdisciplinary skill formation, combining sustainability, digitalisation, and governance. Emerging roles (such as digital fashion specialists, textile innovation experts, and ESG/compliance professionals) underscore the need for system-based curricula that integrate technical, creative, and regulatory competencies. The survey which was conducted during WP2 and it can be seen in Table 3 (2.3), indicated that SMEs top training priorities for the next 2 years are mainly the green skills / sustainability (54.8%), secondly comes the

digitalization (51.9%) followed by technical skills (48.1%), project management /communication (50.0%) and finally, distribution and logistics (25.0%). Therefore, it seems that SMEs are willing to transform towards a green and sustainable perspective aiming to remain competitive in the future. Therefore, a more holistic process of adaptation and evolvement is noticed as it seems that SMEs are moving towards a systematic understanding of green/sustainable and digital transformation where both technical skills and soft skills are required.

Aiming to structure the pedagogical perspective, we set as a base the required skills identified by SMEs in the WP2 survey. As seen in Table 5, craftsmanship is the rarest skill to be found across Europe and the second hardest skill to find seems to be sustainability management, followed by technical specialization. With a small difference is the fourth hardest skill to be found and which is the circular economy/recycling skills. Soft skills such as communication and teamwork follow (31.7%) and digital/automation skills close the list (19.2%). In total, it seems that almost 70% of the answers concern sustainability skills (sustainability management and Circular economy/recycling skills), highlighting the high need to develop these skills, but also the perceived scarcity of craftsmanship skills across the European region. Overall, the findings point to a required shift from fragmented instruction toward holistic, ecosystem-oriented learning architectures that support both immediate workforce needs and long-term sectoral transformation.

11.2 Discussion

D2.6 demonstrates a comprehensive exploratory analysis of the sustainable fashion ecosystem of SMEs and educators, primarily focused on mapping the ecosystem and identifying skill and pedagogical gaps through a cross-national survey. D2.6 effectively integrates quantitative profiling of SMEs (via NACE classifications and regional clustering) with insights into skills shortages and training preferences, offering a structured overview of current labour market dynamics.

Importantly, it advances beyond descriptive mapping by linking findings to a pedagogical perspective, highlighting the dominance of experiential and constructivist learning approaches and the need for practice-based curricula. The inclusion of both SMEs and educators strengthens the multi-level analytical lens, capturing demand-supply interactions.

However, the work remains largely diagnostic and static, with limited evidence of dynamic matching mechanisms or longitudinal tracking, indicating the next phase should focus on implementation and system integration. Future research within REMODE should prioritise the systematic alignment of skills demand (SMEs) and skills supply (learners and educators) through a more structured and iterative data collection framework. While WP2 provides a robust baseline via cross-sectional survey data, a key gap remains in dynamically capturing mismatches between “needs” and “offers” across the ecosystem.

Structuring a dedicated SBP (Skills Balance Platform) questionnaire around this needs-offers interface would generate significant value. For SMEs, it would more precisely identify granular skill shortages, particularly in hybrid domains combining sustainability, digitalisation, and craftsmanship. For learners and individuals, it would capture competence profiles, training

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preferences, and career aspirations, enabling a clearer mapping of available capabilities. This dual-sided data architecture would support gap analysis at multiple levels (micro, meso, macro) and allow longitudinal tracking of skill evolution.

Methodologically, such a tool would move REMODE toward a matching and intelligence system, rather than a static diagnostic exercise. This enhances evidence-based curriculum design, enabling VETs and HEIs to calibrate content toward real-time labour market signals. Additionally, it would strengthen network coordination, facilitating targeted interventions, partnerships, and resource allocation within the ecosystem. Ultimately, the SBP questionnaire would function as a feedback loop mechanism, accelerating REMODE's transition from mapping to implementation and impact-driven skills development.

11.3 Conclusions

Deliverable D 2.6 aims to provide ReMODE a solid launchpad by answering two main questions: *How do we approach the mapping tasks scientifically? How do we structure the REMODE curricula based on market vs. learners' needs?*

Building on these conclusions, the alignment between educators' perceptions and SMEs' expectations further reinforces the urgency of reconfiguring curricula toward skills-based, practice-oriented learning ecosystems. While D2.6 highlights the need to embed circular design and traceability, the survey data suggest that current educational provision remains uneven, particularly in the integration of formal sustainability frameworks and analytical competencies. This inconsistency risks producing graduates who are conceptually aware but insufficiently equipped to operationalize sustainability in real-world contexts. To address this, curricula must not only adopt spiral and modular structures but also systematically integrate experiential components (such as labs, simulations, and industry collaborations) that mirror SMEs' preferred training formats. These approaches are critical for developing complex, combined skill sets, including sustainability management, digital traceability, and technical craftsmanship. Furthermore, the limited incorporation of systems thinking and quantitative tools points to a need for stronger emphasis on evidence-based decision-making skills, which are essential for navigating regulatory and operational challenges. Therefore, bridging these gaps requires deeper, institutionalized collaboration between academia, industry and research actors/actants to ensure that curriculum innovation remains responsive, scalable and aligned with evolving ecosystem demands.

Section 12: Update with 2026 evidence — the ReMODE regional mapping survey (WP3 T3.1, July–October 2026)

After the WP2 surveys closed in January 2026, the consortium opened the ReMODE platform questionnaire (WP3 T3.1, INS-04) to map regional CoVE stakeholders. By the export of 22 October 2026 it had collected 408 registrations through three routes: 76 businesses and

ecosystem organisations, 91 education and training providers and 241 individuals and learners, mainly from Italy, Türkiye, Greece, Finland and Germany. The instrument differs from the WP2 questionnaires, so figures are not directly comparable, but it provides the most recent evidence on the same questions — skills in demand, barriers, training formats and readiness to engage — and is summarised here as an update to the WP2 baseline. Full indicators are held in the WP2/WP3 research data hub (AUEB-RC).

12.1 Businesses and ecosystem organisations (n = 76)

Business respondents confirm the WP2 skills signal with a 2026 emphasis on the Digital Product Passport: DPP and traceability (33%) is the area of expertise most often expected to be needed, ahead of marketing and storytelling (27%), AI, automation and data management (26%) and textile and materials innovation (26%). Only 16% collect product lifecycle data and 30% have no traceability mechanism yet. Readiness to adopt or scale circular business models averages 3.11 on a five-point scale. 41% would offer internships or work-based learning, and skills development (72%), sustainable textile and fashion (56%) and work-based learning (49%) are the priorities respondents set for a regional CoVE. The main local challenges named are the lack of a skilled workforce (48%), textile waste and the absence of collection (45%) and limited funding (44%); more work-based learning (51%) and better matchmaking (47%) are what would most strengthen the regional ecosystem.

Skills or expertise expected to be needed (n=70)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Digital Product Passport and traceability specialist	33%	44%	50%	40%	19%	33%
Marketing, storytelling and communication	27%	33%	33%	60%	19%	–
AI, automation or data management	26%	33%	17%	30%	19%	20%
Textile and materials innovation	26%	33%	33%	–	27%	40%
Eco-design or sustainable product development	23%	22%	33%	10%	31%	13%
Circularity / sustainability coordinator	23%	33%	33%	–	31%	13%

Collects product lifecycle data (n=69)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
No	45%	56%	50%	50%	36%	60%
Maybe / not sure	39%	44%	33%	20%	56%	20%
Yes	16%	–	17%	30%	8%	20%

Traceability mechanisms (n=70)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Not applicable	33%	44%	50%	50%	35%	7%
No formal mechanism yet	30%	22%	17%	30%	31%	27%
Third-party certifications or eco-labels	17%	11%	17%	30%	12%	27%

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Other	16%	–	–	–	27%	27%
Supplier audits	13%	11%	17%	20%	12%	13%
Chain-of-custody tracking	9%	11%	17%	10%	–	13%

Main local challenges (n=75)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Lack of skilled workforce	48%	67%	17%	69%	50%	29%
Textile waste / lack of collection or sorting	45%	11%	67%	54%	42%	53%
Limited funding or investment	44%	44%	50%	54%	38%	41%
Weak cooperation between education and industry	40%	33%	50%	23%	46%	41%
Low public awareness	35%	22%	50%	38%	50%	12%
Lack of repair or reuse services	32%	33%	–	62%	31%	24%

What would strengthen the regional ecosystem (n=75)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
More work-based learning and internships	51%	89%	17%	62%	54%	29%
Better matchmaking between learners and organisations	47%	44%	33%	46%	46%	53%
Funding or innovation support	43%	56%	67%	38%	38%	35%
More training and micro-credentials	40%	56%	17%	54%	38%	35%
Circular textile collection and sorting infrastructure	40%	33%	67%	69%	27%	29%
Shared facilities or labs	33%	22%	17%	38%	35%	35%

Priorities for a regional CoVE (n=75)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Skills development	72%	89%	50%	69%	73%	76%
Sustainable textile and fashion practices	56%	44%	50%	69%	50%	59%
Work-based learning	49%	67%	17%	54%	50%	53%
Youth employment	41%	44%	33%	54%	42%	35%
International cooperation	40%	33%	50%	54%	27%	47%
Circular economy transition	39%	33%	67%	46%	38%	18%

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12.2 Education and training providers (n = 91)

Education providers — half of them higher-education institutions and a third VET providers — report that hands-on workshops and labs (78%) and work-based learning (58%) are the methods they use or want to use, that textile and sewing labs (74%) are the most available facilities and that textile and materials innovation (52%), circularity and sustainability competences (46%), eco-design (40%) and DPP and traceability (33%) are the skills future learners should develop. 42% are interested in co-designing micro-credentials and 53% in hosting or joining work-based learning; sustainable textile and fashion (74%), skills development (62%) and training of trainers (55%) are their priorities for a regional CoVE. Mean self-reported integration of sustainability into programmes is 3.32 and of digital tools 2.57; awareness of upcoming EU textile and circularity regulation averages 2.62.

Skills future learners should develop (n=90)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Textile and materials innovation	52%	47%	29%	–	60%	60%
Circularity / sustainability coordinator	46%	33%	14%	33%	20%	60%
Eco-design or sustainable product development	40%	40%	29%	–	40%	45%
Digital Product Passport and traceability specialist	33%	33%	29%	33%	20%	38%
AI, automation or data management	29%	33%	29%	–	–	34%
Garment technologist / production specialist	26%	27%	14%	33%	20%	28%

Teaching and learning methods used or wanted (n=91)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Hands-on workshops or labs	78%	80%	57%	67%	80%	83%
Work-based learning / internships	58%	73%	43%	33%	60%	59%
Problem-based or project-based learning	34%	73%	29%	67%	40%	22%
Field visits to companies, recycling facilities or makerspaces	33%	67%	29%	–	60%	22%
Co-creation with companies or communities	26%	60%	14%	33%	40%	17%
Case studies and best practices	23%	40%	14%	33%	40%	17%

Interest in co-designing micro-credentials (n=91)	**All %**	**FI**	**DE**	**GR**	**IT**	**TR**
Maybe / not sure	53%	60%	57%	33%	60%	50%
Yes	42%	33%	43%	67%	30%	44%
No	6%	7%	–	–	10%	6%

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Priorities for a regional CoVE (n=91)	All %	FI	DE	GR	IT	TR
Sustainable textile and fashion practices	74%	67%	86%	33%	40%	83%
Skills development	62%	73%	71%	67%	40%	63%
Training of trainers	55%	47%	71%	33%	10%	67%
Youth employment	50%	33%	29%	67%	30%	63%
International cooperation	48%	73%	71%	33%	30%	44%
Work-based learning	47%	40%	71%	67%	20%	52%

12.3 Individuals and learners (n = 241)

Learners — mostly bachelor applicants and students, secondary-school and VET applicants — want to develop creative design (50%), textile and materials knowledge (48%), craftsmanship (45%) and sustainability and circular-economy skills (40%); the topics they want first are sustainable materials and fibres (40%) and circular design, repair and reuse (37%). Hands-on workshops and labs (65%) and internships (53%) are by far the preferred formats, and time (60%), cost (56%) and transport (46%) are what might prevent participation. Sustainability and circular-economy skills are rated 4.51 and digital skills 4.46 out of 5 for their future, and 56% would like to be matched with training or work-based learning opportunities.

Skills learners want to develop (n=240)	All %	FI	DE	GR	IT	TR
Creative design skills	50%	10%	50%	28%	51%	70%
Textile and materials knowledge	48%	40%	38%	28%	61%	39%
Craftsmanship: sewing, pattern making, tailoring	45%	50%	25%	30%	54%	42%
Sustainability and circular economy	40%	40%	38%	35%	44%	38%
Digital skills: 3D, CAD, AI tools	32%	30%	12%	25%	29%	44%
Repair, mending and clothing care	30%	40%	25%	20%	33%	28%

Topics to learn first (n=240)	All %	FI	DE	GR	IT	TR
Sustainable materials and fibres	40%	40%	25%	22%	40%	53%
Circular design, repair and recycling	37%	40%	25%	32%	39%	38%
Sustainable production and quality	36%	60%	38%	22%	35%	42%
Fashion/textile business and entrepreneurship	30%	20%	25%	28%	25%	47%
Digital design, 3D and virtual prototyping	30%	20%	12%	15%	35%	31%
AI, data and Digital Product Passport	26%	20%	25%	25%	18%	41%

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Preferred learning formats (n=240)	All %	FI	DE	GR	IT	TR
Hands-on workshop / lab	65%	40%	38%	42%	74%	72%
Internship / industry placement	53%	50%	12%	35%	60%	59%
Online learning	25%	20%	50%	30%	18%	30%
Group project	24%	50%	–	18%	18%	36%
Blended learning	23%	40%	12%	20%	25%	20%
Mentoring / coaching	22%	10%	38%	25%	18%	28%

What might prevent participation (n=240)	All %	FI	DE	GR	IT	TR
Time	60%	20%	62%	30%	66%	75%
Cost	56%	50%	50%	38%	61%	59%
Transport	46%	10%	12%	35%	50%	56%
Lack of information	22%	20%	38%	28%	17%	28%
Language	16%	10%	38%	5%	9%	34%
Confidence / feeling I do not belong yet	13%	10%	12%	2%	10%	23%

12.4 What the 2026 evidence adds to the WP2 baseline

- The DPP has moved from a compliance topic to the single most expected area of expertise among businesses (33%), confirming the WP2 priority of DPP and traceability micro-credentials.
- Hands-on, work-based and lab-based formats are the dominant preference of every group — businesses, educators and learners — exactly as the WP2 SMEs and educators indicated.
- The skilled-workforce shortage (48% of businesses) and textile-waste collection gaps (45–56% across routes) are the most cited regional challenges; better matchmaking between learners, educators and firms (47–56%) and more work-based learning are the most requested remedies, which maps directly onto the CoVE functions planned in WP3–WP5.
- Learners' demand for craftsmanship and materials knowledge mirrors the firms' hardest-to-find skills, so the pipeline problem is one of pathways and matching rather than of interest.
- Time, cost and transport are the practical barriers to participation for learners, which argues for hybrid, modular delivery through the ReMODE learning portal alongside in-person labs.

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PART C — SME country reports (Annex C)

C1 Finland (n=18) · C2 Germany (n=17) · C3 Greece (n=23) · C4 Italy (n=29) · C5 Türkiye (n=20). All reports computed on the final consolidated dataset (survey closed 29 January 2026).

Annex C1 — Finland: SME country report

REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Finland Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Finland Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector	**WP2 Task**: T2.3
Lead Partner: KAMK University of Applied Sciences (KAMK)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: KAMK University of Applied Sciences (KAMK)	**Date: 21/11/2026**

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Consent & GDPR
All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

Section 1: Introduction

This country report presents the readiness, challenges and needs of Finnish small and medium-sized enterprises (SMEs) in the fashion and textile sector with respect to circular economy practices, skills and the forthcoming EU regulatory framework. It is the Finnish SME component of D2.3 and complements the Finnish VET and HEI reports (Annex D1) and the consolidated five-country analysis (Part B). It replaces the interim Finnish SME analysis circulated in November 2026 (n = 9 and n = 12 drafts), which was based on a partial extract; the figures below are drawn from the complete consortium dataset so that they reconcile with D2.1 v2 and Part B.

Data source and sample. The analysis uses the Finland responses to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness of SMEs in the Fashion and Textile Sector” (INS-01, 39 items including consent), administered online between December 2025 and January 2026. 18 organisations located in Finland responded (final consortium dataset: 107 SMEs across Finland, Germany, Greece, Italy and Türkiye). All respondents confirmed the GDPR and consent statement. One Finnish company submitted two responses; both are retained, as in the consolidated dataset. The respondents include established brands and manufacturers (workwear, knitwear, home textiles, outdoor and streetwear), repair and mending services, resale and remake initiatives and small studios. Percentages are computed on respondents answering each item; multi-select items sum to more than 100%. Given the sample size, findings are indicative and should be read together with the consolidated five-country analysis in Part B of this deliverable and with D2.1 v2.

Section 2: Survey Analysis

2.1 General information on the responding SMEs

2.1.1 Company size

The Finnish sample is evenly split between micro-enterprises (fewer than 10 employees) and small enterprises (10–49), with one medium-sized company. Compared with the consortium average, Finland has a markedly higher share of small (as opposed to micro) firms, reflecting the presence of established brands and manufacturers alongside start-ups and repair services.

Company size	Finland n	Finland %	All countries %
<10 micro	9/18	50%	55%
10-49 small	8/18	44%	32%
50-249 medium	1/18	6%	8%

2.1.2 Organisation type and value-chain position

Respondents are spread across brands and creative services, manufacturing and craft, circular and repair services, and digital/technology providers; Finland has the highest share of circular and repair service providers of all five countries (17% versus 6% across the consortium), which shapes many of the answers below.

Organisation type (NACE-based groups)	Finland n	Finland %	All countries %
Brands/designers/creative services	4/18	22%	29%
Other	4/18	22%	8%
Manufacturing & craft	4/18	22%	31%
Circular & repair services	3/18	17%	6%
Digital & technology	2/18	11%	6%
Raw materials & early processing	1/18	6%	17%

2.1.3 Respondent roles

Half of the respondents are founders or owners and a further quarter hold managerial, creative-director or specialist positions, so the answers reflect strategic rather than operational perspectives.

Job position	Finland n	Finland %	All countries %
(Co)Founder/owner	9/18	50%	49%
Other	5/18	28%	15%
Manager / senior executive	3/18	17%	22%
Head designer / creative director	1/18	6%	15%

2.2 Product lifecycle and circular practices

2.2.1 Product lifecycle data collection

Lifecycle data collection is mostly partial: 61% collect data for some stages (typically materials and production), one third collect none, and only one company covers the full lifecycle. Use-phase and end-of-life data are rarely captured, which is the main gap for Digital Product Passport (DPP) readiness.

Collects lifecycle data	Finland n	Finland %	All countries %
Partially	11/18	61%	53%
No	6/18	33%	24%
Yes	1/18	6%	22%

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2.2.2 Traceability mechanisms used

Traceability relies on supplier audits and, to a lesser degree, third-party certifications and chain-of-custody documentation. 41% of Finnish respondents use no formal traceability mechanism, well above the consortium average (26%), and only one company has started with a DPP. Interoperable digital traceability is therefore the single most important infrastructure gap.

Traceability / verification mechanism	Finland n	Finland %	All countries %
None	7/17	41%	26%
Supplier audits	6/17	35%	30%
Third-party certifications/eco-labels	3/17	18%	37%
Chain-of-custody tracking	2/17	12%	12%
Digital Product Passport	1/17	6%	10%

2.2.3 Supplier engagement

Supplier engagement (1 = not engaged … 5 = fully aligned)	1	2	3	4	5
n = 18; mean 3.50	1	1	7	6	3

Supplier engagement is moderate: the Finnish mean is 3.50 on a five-point scale (consortium mean 3.36), with half of the respondents at level 4 or 5 and three reporting fully aligned suppliers. Engagement exists but is not yet systematic or contract-based.

2.2.4 Design for circularity

Durability and timeless design (56%), recycled or certified materials (44%) and repair, disassembly or modular design (44%) are the dominant design strategies; only 22% design explicitly for recycling and 17% do not yet design for circularity. This is a design-led rather than system-level approach to circularity.

Design approach	Finland n	Finland %	All countries %
Durability / timeless style	10/18	56%	57%
Recycled/certified sustainable materials	8/18	44%	49%
Repair/disassembly/modular	8/18	44%	34%
Minimise resource use	5/18	28%	27%
Designed for recycling	4/18	22%	39%
Not currently designed for circularity	3/18	17%	8%

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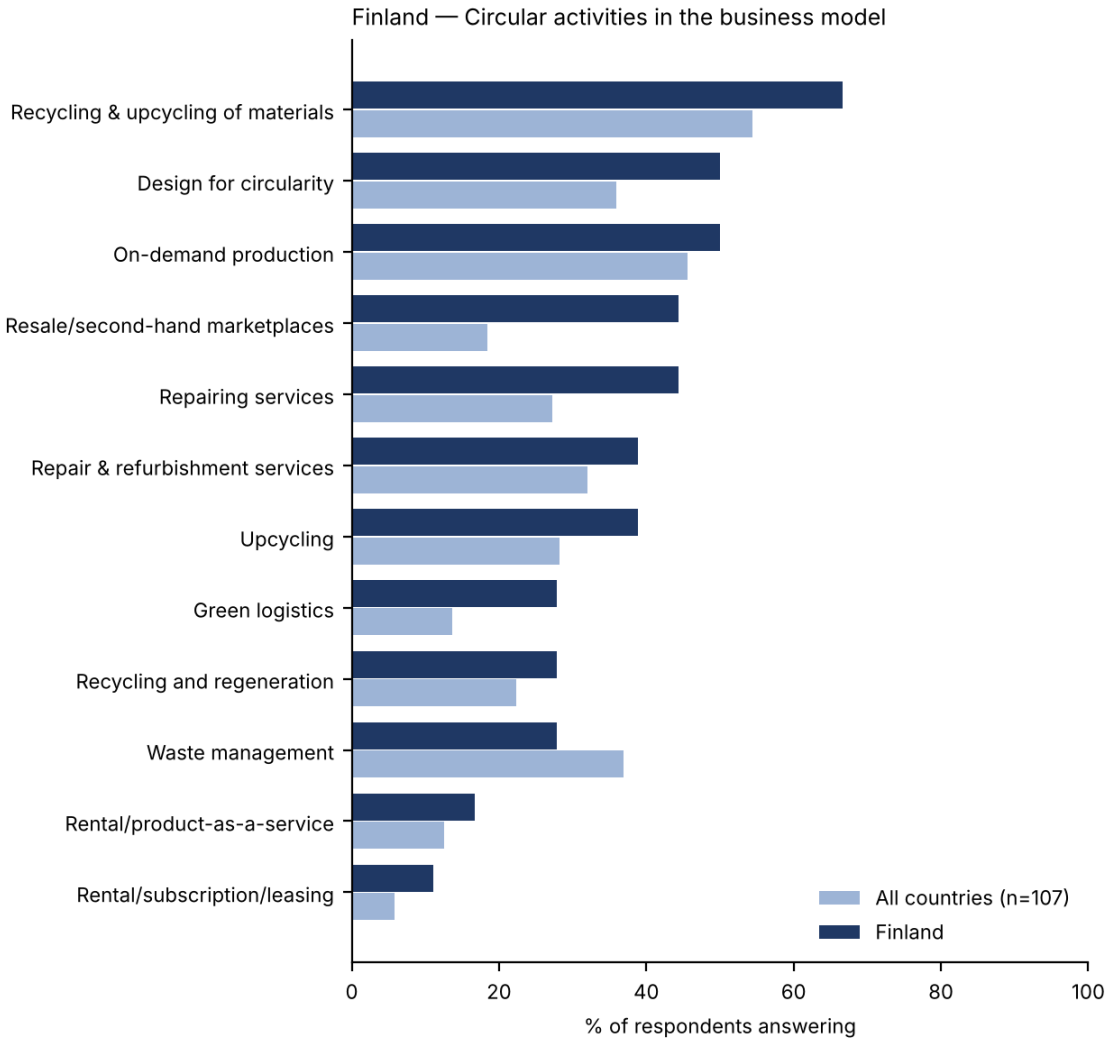
2.2.5 Circular activities in the business model

Recycling and upcycling (67%) lead the circular activities, followed by design for circularity and on-demand production (50% each), repair services and resale (44% each). Resale and second-hand models are more than twice as common in Finland as in the consortium as a whole (44% versus 18%), while rental and product-as-a-service remain marginal.



2.2.6 Circular innovation under development

Only 39% of Finnish SMEs report a specific circular innovation under development, the second-lowest share among the five countries after Türkiye (consortium 59%); those that do are evenly distributed between idea, start-up and growth stages. Circularity in Finland is thus embedded in day-to-day business models rather than pursued as discrete innovation projects.

Developing a circular innovation	**Finland n**	**Finland %**	**All countries %**
No	11/18	61%	41%
Yes	7/18	39%	59%

Phase (Stage 1 idea, 2 start-up, 3 growth)	**Finland n**	**Finland %**	**All countries %**

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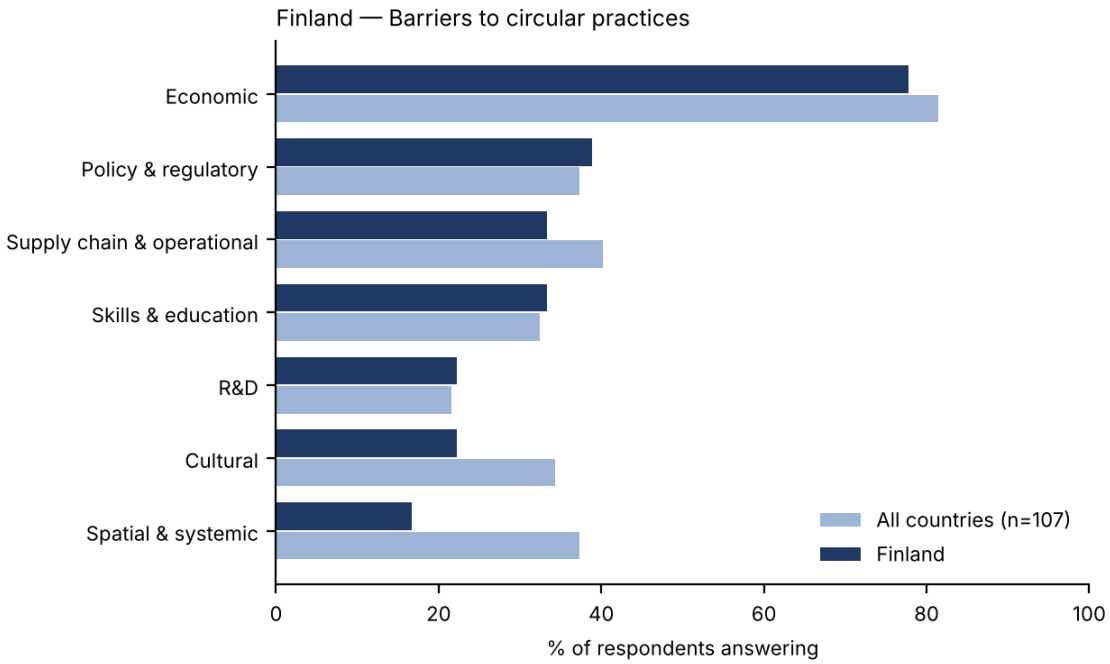
Stage 2	3/9	33%	41%
Stage 1	3/9	33%	26%
Stage 3	2/9	22%	31%
Other	1/9	11%	2%

2.3 Barriers and enablers

2.3.1 Key barriers to circularity

Economic barriers dominate (78%), in line with the consortium (81%). Policy and regulatory barriers (39%) come second, followed by supply-chain/operational and skills barriers (33% each). Cultural and spatial barriers are cited far less often than in Greece or Italy, confirming a mature market in which cost, not awareness, is the binding constraint.



2.3.2 Most valued external support

Financial incentives (75%) and networking or partnerships (56%) are the most valued forms of support, with training and certification at 38%. Regulatory guidance is requested by fewer Finnish SMEs (19%) than elsewhere (34%), consistent with their comparatively high regulatory awareness.

Support needed	**Finland n**	**Finland %**	**All countries %**
Financial incentives	12/16	75%	81%
Networking/partnerships	9/16	56%	55%
Training and certification	6/16	38%	38%
Regulatory guidance	3/16	19%	34%

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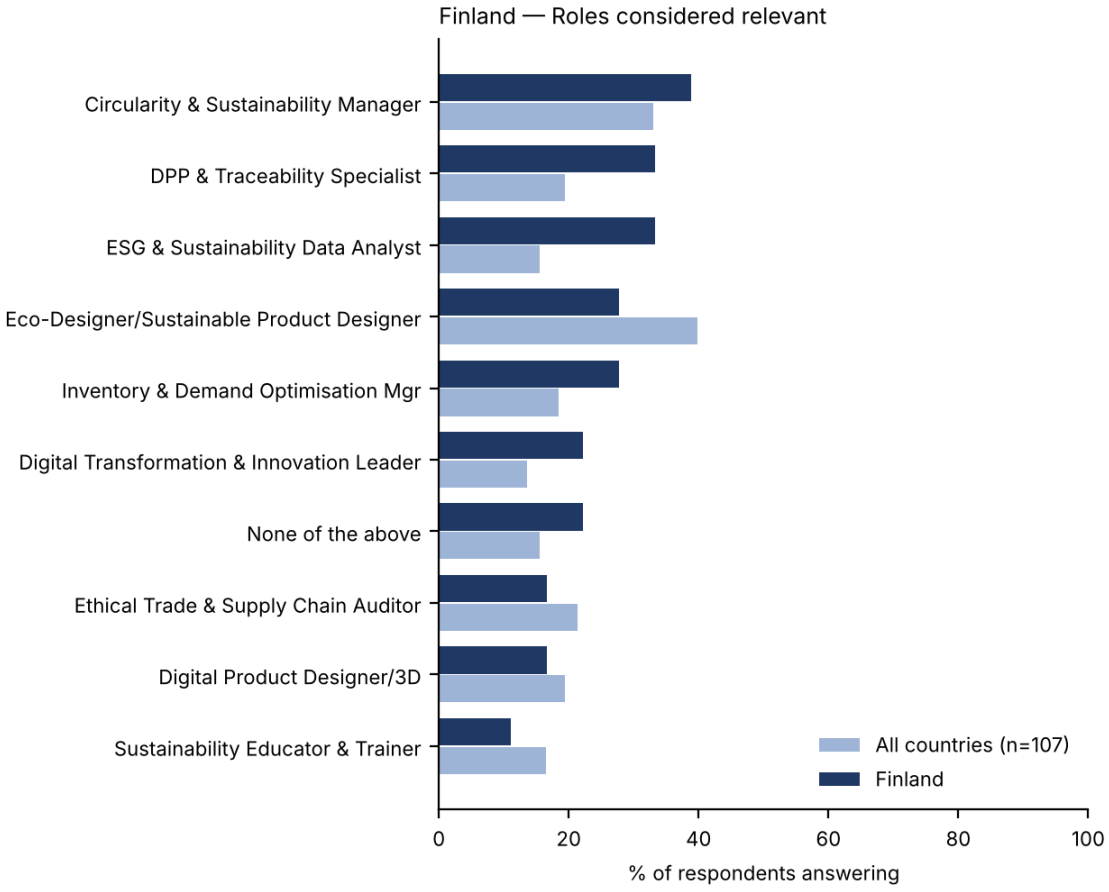
2.4 Skills and roles

2.4.1 Most relevant sustainability roles

The Circularity and Sustainability Manager (39%), the DPP and Traceability Specialist (33%) and the ESG and Sustainability Data Analyst (33%) are the roles most often judged relevant; the two data-oriented profiles score well above the consortium average (19% and 16%), whereas the Eco-Designer, so prominent in Greece and Italy, is cited by only 28%. 22% see none of the listed roles as relevant.



2.4.2 Recruitment challenges

Budget constraints (78%) are the main recruitment obstacle. One third state that they have no need for such roles — the highest share in the consortium — and 28% cite a lack of awareness about the roles; only 22% report a lack of qualified candidates, far below Greece (57%).

Hiring challenge	Finland n	Finland %	All countries %
Budget constraints	14/18	78%	66%
No need for these roles	6/18	33%	16%
Lack of awareness about roles	5/18	28%	31%
Lack of qualified candidates	4/18	22%	41%

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Limited internal training	1/18	6%	16%

2.4.3 Hardest-to-find skills

Craftsmanship (47%) is the hardest skill to find, followed by technical specialisation and circular economy/recycling skills (35% each). Sustainability management and digital/automation skills are rarely cited as scarce (12% and 6%), suggesting these competences are available in the Finnish labour market or already in-house.

Skill cluster	Finland n	Finland %	All countries %
Craftsmanship	8/17	47%	51%
Technical specialisation	6/17	35%	52%
Circular economy/recycling skills	6/17	35%	33%
Soft skills	4/17	24%	32%
Sustainability management	2/17	12%	36%
Digital/automation skills	1/17	6%	19%

2.4.4 Professions expected to be in demand

Legal compliance expertise (EPR, DPP) is the profession Finnish SMEs expect to be most in demand (50%, against 30% consortium-wide), followed by textile innovation and biomaterials experts and multidisciplinary creatives (33% each). Digital fashion and 3D design specialists are cited by 28%, far less than in Greece (70%).

Profession	Finland n	Finland %	All countries %
Legal compliance (EPR, DPP)	9/18	50%	30%
Textile innovation expert/biomaterials	6/18	33%	40%
Multidisciplinary creative	6/18	33%	23%
Artisan/craftsperson	5/18	28%	35%
Digital fashion specialist/3D designer	5/18	28%	43%
Eco-designer	3/18	17%	25%
Fashion data analyst	3/18	17%	21%

2.5 Digitalisation and readiness for circular models

2.5.1 Effect of digitalisation on operations

Half of the respondents say decisions are now supported by digital data and 39% report more automated tasks; one third report better tracking of materials and shipments, while one third report no major change. PLM or digital product systems are in place in 22% of firms, above the consortium average (13%).

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Digitalisation effect	Finland n	Finland %	All countries %
Decisions supported by digital data	9/18	50%	41%
More automated tasks	7/18	39%	38%
Better tracking materials/shipments	6/18	33%	49%
No major change	6/18	33%	23%
AI tools in design/product dev	5/18	28%	35%
PLM/digital product systems	4/18	22%	13%

2.5.2 Self-assessed readiness to adopt circular business models

Readiness (1 = not ready … 5 = fully ready)	1	2	3	4	5
n = 18; mean 3.94	0	2	4	5	7

Self-assessed readiness to adopt circular business models is high: mean 3.94 (consortium 3.41), with two thirds of respondents at level 4 or 5. Finland reports the highest readiness of the five countries.

2.6 Sustainability, ethics and governance

2.6.1 Sustainability team

44% have an informal sustainability team and 11% a structured one; 22% are planning one and 22% have no plans. Structured governance of sustainability therefore remains the exception even where practice is advanced.

Sustainability team	Finland n	Finland %	All countries %
Yes, informal	8/18	44%	39%
No, but planning	4/18	22%	29%
No, no plans	4/18	22%	18%
Yes, structured	2/18	11%	14%

2.6.2 Sustainability reporting

22% already publish a sustainability report (consortium 10%), one third are planning to, and 44% do not report. Reporting readiness is comparatively high but still a minority practice.

Publishes a sustainability report	Finland n	Finland %	All countries %
No	8/18	44%	62%
Planning to	6/18	33%	29%
Yes	4/18	22%	10%

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2.6.3 Missing or under-represented roles

The roles most often reported as missing are the ESG data analyst (63%, the highest in the consortium), the eco-design specialist (50%), and, at 44% each, the human-rights/ethical-sourcing specialist, the sustainability trainer and the supply-chain traceability expert.

Missing role	Finland n	Finland %	All countries %
ESG data analyst	10/16	62%	40%
Eco-design specialist	8/16	50%	41%
Human rights/ethical sourcing	7/16	44%	33%
Sustainability trainer/educator	7/16	44%	35%
Supply chain traceability expert	7/16	44%	34%
Circularity manager	5/16	31%	38%

2.6.4 Sustainability-linked incentives

Two thirds have no sustainability-linked bonuses or KPIs, 17% have them and 17% are developing them.

Bonus / KPI linked to sustainability	Finland n	Finland %	All countries %
No	12/18	67%	62%
Under development	3/18	17%	26%
Yes	3/18	17%	12%

2.7 Regulatory and policy framework

2.7.1 Awareness of EU regulations

Regulatory awareness is the highest in the consortium: 67% are aware of the relevant EU regulations (ESPR, DPP, EPR, CSRD) and 28% somewhat aware; only one respondent is unaware (consortium: 38% aware, 22% unaware).

Aware of EU regulations (ESPR, DPP, EPR, CSRD)	Finland n	Finland %	All countries %
Yes	12/18	67%	38%
Somewhat	5/18	28%	41%
No	1/18	6%	22%

2.7.2 Regulatory impact on operations to date

28% report that regulation has already affected their operations — twice the consortium average (13%) — mainly through additional reporting, restructured data flows and early investment in compliance systems.

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Operations already affected	Finland n	Finland %	All countries %
No	13/18	72%	87%
Yes	5/18	28%	13%

2.7.3 Expected administrative burden

Expectations of the administrative burden are split between moderate (5–20 hours per month, 33%) and minimal (33%); 28% cannot yet estimate it and only one respondent expects a high burden.

Expected administrative burden	Finland n	Finland %	All countries %
Moderate (5-20h/month)	6/18	33%	31%
Minimal (<5h/month)	6/18	33%	15%
Don't know	5/18	28%	41%
High (>20h/month)	1/18	6%	14%

2.7.4 Expected compliance investment (CAPEX)

39% cannot yet estimate the compliance investment; 28% expect up to EUR 5 000, 22% between EUR 5 000 and 50 000 and 11% above EUR 50 000 — a wider range than elsewhere, reflecting the presence of small manufacturers with their own systems.

Expected investment	Finland n	Finland %	All countries %
Don't know	7/18	39%	52%
EUR 0-5k	5/18	28%	19%
EUR 5-50k	4/18	22%	20%
EUR >50k	2/18	11%	9%

2.7.5 Interest in compliance training

39% would take compliance training and a further 44% might; 17% would not.

Would take compliance training	Finland n	Finland %	All countries %
Maybe	8/18	44%	48%
Yes	7/18	39%	42%
No	3/18	17%	10%

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2.8 Training and capacity building

2.8.1 Training priority areas

Digitalisation and Industry 4.0 (56%) and green skills/sustainability (50%) are the top training priorities, followed by project management and communication (38%) and technical/artisanal skills (31%).

Training priority	Finland n	Finland %	All countries %
Digitalisation/Industry 4.0	9/16	56%	52%
Green skills/sustainability	8/16	50%	55%
Project mgmt/communication	6/16	38%	50%
Technical & artisanal skills	5/16	31%	48%
Distribution & logistics	4/16	25%	25%

2.8.2 Preferred training formats

Case-study learning is the preferred format (56%), followed by internal mentoring and workshops, hands-on practical labs and peer-to-peer learning (38% each). Online micro-credentials as a format are cited by only one respondent, and virtual or 3D environments by two — the demand is for applied, workplace-anchored formats, with digital delivery as a vehicle rather than a goal.

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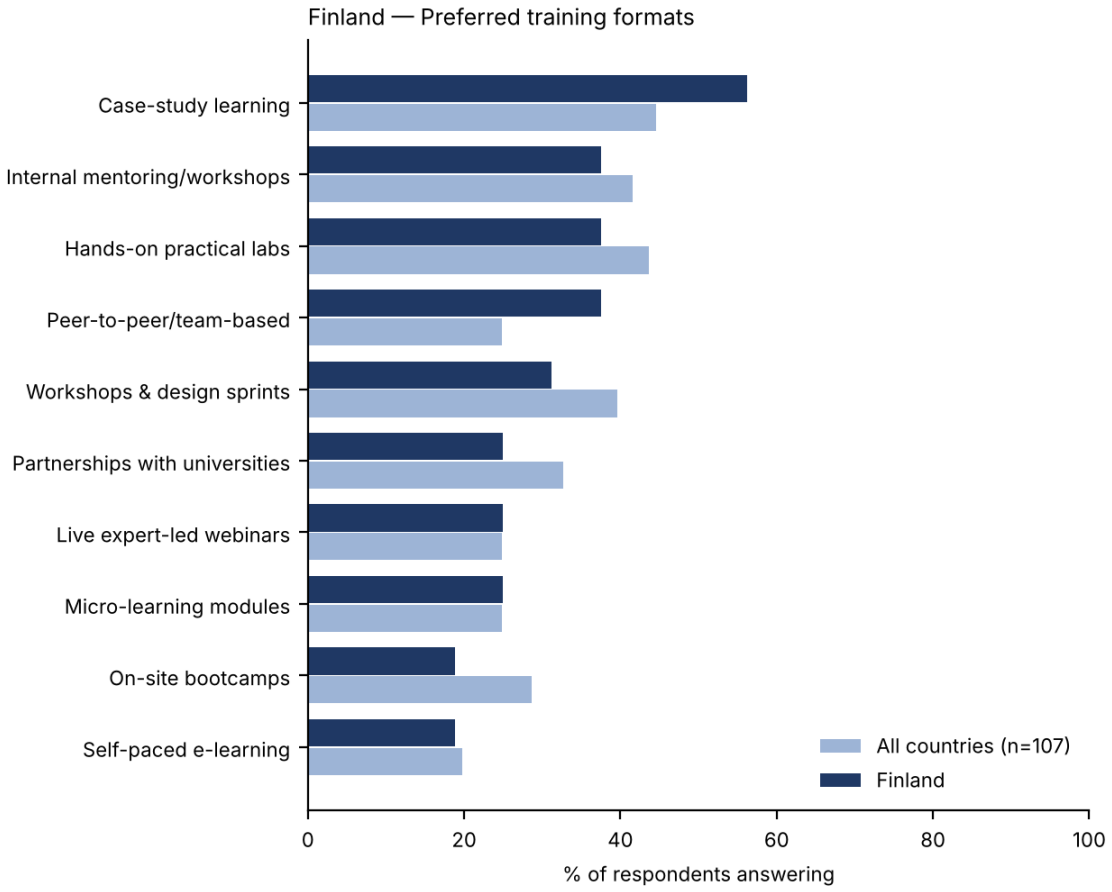

2.8.3 Current training offer

One third already offer sustainability or circularity training to staff, 28% plan to and 39% do not.

Offers training on sustainability/circularity	Finland n	Finland %	All countries %
No	7/18	39%	38%
Yes	6/18	33%	28%
Planned	5/18	28%	34%

2.8.4 Interest in a Digital Product Passport micro-credential

Interest in a short DPP micro-credential is strong: 44% would enrol staff and 50% might; only one respondent declines (94% yes or maybe, against 86% consortium-wide).

Would enrol staff in a DPP micro-credential	Finland n	Finland %	All countries %
Maybe	9/18	50%	47%
Yes	8/18	44%	39%
No	1/18	6%	14%

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2.8.5 Self-assessed knowledge of circular economy practices

Knowledge (1 = very low … 5 = very high)	1	2	3	4	5
n = 18; mean 3.78	0	1	5	9	3

Self-assessed knowledge of circular economy practices is the highest of the five countries: mean 3.78 (consortium 3.30), with two thirds at level 4 or 5 and no respondent below level 2.

Section 3: Conclusions and implications for the ReMODE CoVE

Finnish fashion and textile SMEs are past the awareness stage. They report the highest regulatory awareness, the highest self-assessed circular-economy knowledge and the highest readiness to adopt circular business models in the consortium, and repair, resale and remake models are already part of the business landscape. Their constraints are operational rather than conceptual: cost, the absence of interoperable traceability and data systems, and the administrative capacity to absorb CSRD, ESPR and DPP requirements.

The skills signal is distinctive. Finnish SMEs are not short of sustainability managers or digital skills in general; what they lack are data-oriented sustainability profiles (ESG data analyst, DPP and traceability specialist) and legal-compliance expertise, together with craftsmanship and technical specialisation on the production side. Many micro-enterprises cannot justify dedicated roles at all, which points to shared services, sector-level support and short, role-specific upskilling of existing staff rather than new hires.

For the ReMODE CoVE this translates into a clear demand: short, practice-oriented micro-credentials on the Digital Product Passport and regulatory compliance (94% interested), delivered through case-study and workplace-anchored formats, and training that bridges craft and production skills with data and traceability competences. Finland can also act as a source of transferable practice for the other regional CoVEs in repair, resale and reporting.

Recommendations

- Prioritise a DPP and regulatory-compliance micro-credential for Finnish SMEs (44% would enrol staff, 50% might) using case-study and hands-on formats.
- Develop shared or sector-level traceability and data services for micro-enterprises that cannot staff ESG data or DPP roles themselves.
- Pair craft and technical-production training with data and traceability modules, reflecting the two skill clusters reported as scarce.
- Use Finnish repair, resale and remake practice as reference cases in the ReMODE learning materials and in the regional CoVE exchanges.
- Channel financial incentives and partnership brokering, the two forms of support most requested (75% and 56%), through the regional CoVE.

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REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Germany Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Germany Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector	**WP2 Task**: T2.3
Lead Partner: Life Learning Development e.V. (LLD)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: Life Learning Development e.V. (LLD)	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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Section 1: Introduction

This country report presents the readiness, challenges and needs of German small and medium-sized enterprises (SMEs) in the fashion and textile sector with respect to circular economy practices, skills and the forthcoming EU regulatory framework. It is the German SME component of D2.3 and complements the German VET and HEI report (Annex D2) and the consolidated five-country analysis (Part B). It supersedes the national report of December 2025 (11 responses), which was prepared before data collection closed; all figures below are computed on the final consortium dataset.

Data source and sample. The analysis uses the Germany responses to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness of SMEs in the Fashion and Textile Sector” (INS-01, 39 items including consent), administered online between December 2025 and January 2026. 17 organisations located in Germany responded (final consortium dataset: 107 SMEs across Finland, Germany, Greece, Italy and Türkiye). All respondents confirmed the GDPR and consent statement. The respondents are mostly micro and small brands, designers, manufacturers and digital/technology providers based in Berlin and other German cities, with one medium-sized and one large company; several respondents are active in resale, repair or co-creation models. Percentages are computed on respondents answering each item; multi-select items sum to more than 100%. Given the sample size, findings are indicative and should be read together with the consolidated five-country analysis in Part B of this deliverable and with D2.1 v2.

German SMEs stand out in the consortium for digital intensity and innovation activity: three quarters use AI tools in design or product development, almost a third run PLM or digital product systems, and 82% report a circular innovation under development. Regulatory awareness is, however, only partial (24% fully aware, 59% somewhat) and the cost of compliance is largely unknown (71% cannot estimate the investment), which shapes a strong demand for regulatory guidance alongside financial incentives.

Skills needs are concentrated in technical specialisation, sustainability management and circular economy competences, and the roles most often reported as missing are the circularity manager, the supply-chain traceability expert and the ESG data analyst. Training preferences are decidedly practical: hands-on labs, case studies, design sprints and on-site bootcamps.

Section 2: Survey Analysis

2.1 General information on the responding SMEs

2.1.1 Company size

Company size of the responding organisations: <10 micro (53%; consortium 55%); 10-49 small (35%; consortium 32%); 50-249 medium (6%; consortium 8%).

Company size	Germany n	Germany %	All countries %
<10 micro	9/17	53%	55%
10-49 small	6/17	35%	32%
50-249 medium	1/17	6%	8%

>=250 large	1/17	6%	5%

2.1.2 Organisation type and value-chain position

Organisation types represented: Brands/designers/creative services (29%; consortium 29%); Manufacturing & craft (24%; consortium 31%); Digital & technology (12%; consortium 6%).

Organisation type (NACE-based groups)	Germany n	Germany %	All countries %
Brands/designers/creative services	5/17	29%	29%
Manufacturing & craft	4/17	24%	31%
Digital & technology	2/17	12%	6%
Wholesale & retail	2/17	12%	3%
Institutions/education/research	1/17	6%	1%
Public/non-profit/financial	1/17	6%	1%
Other	1/17	6%	8%
Raw materials & early processing	1/17	6%	17%

2.1.3 Respondent roles

Respondent positions: (Co)Founder/owner (38%; consortium 49%); Head designer / creative director (25%; consortium 15%); Manager / senior executive (19%; consortium 22%).

Job position	Germany n	Germany %	All countries %
(Co)Founder/owner	6/16	38%	49%
Head designer / creative director	4/16	25%	15%
Manager / senior executive	3/16	19%	22%
Other	3/16	19%	15%

2.2 Product lifecycle and circular practices

2.2.1 Product lifecycle data collection

Collection of product lifecycle data: No (41%; consortium 24%); Yes (29%; consortium 22%); Partially (29%; consortium 53%).

Collects lifecycle data	Germany n	Germany %	All countries %
No	7/17	41%	24%
Yes	5/17	29%	22%
Partially	5/17	29%	53%

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2.2.2 Traceability mechanisms used

Traceability and verification mechanisms in use: Third-party certifications/eco-labels (29%; consortium 37%); None (24%; consortium 26%); Digital Product Passport (24%; consortium 10%).

Traceability / verification mechanism	Germany n	Germany %	All countries %
Third-party certifications/eco-labels	5/17	29%	37%
None	4/17	24%	26%
Digital Product Passport	4/17	24%	10%
Chain-of-custody tracking	2/17	12%	12%
Supplier audits	2/17	12%	30%

2.2.3 Supplier engagement

Supplier engagement (1 = not engaged … 5 = fully aligned)	1	2	3	4	5
n = 16; mean 3.62	0	1	7	5	3

Supplier engagement is the highest in the consortium: mean 3.62 on a five-point scale (consortium 3.36).

2.2.4 Design for circularity

Design-for-circularity approaches applied: Durability / timeless style (71%; consortium 57%); Repair/disassembly/modular (47%; consortium 34%); Minimise resource use (41%; consortium 27%).

Design approach	Germany n	Germany %	All countries %
Durability / timeless style	12/17	71%	57%
Repair/disassembly/modular	8/17	47%	34%
Minimise resource use	7/17	41%	27%
Recycled/certified sustainable materials	6/17	35%	49%
Designed for recycling	5/17	29%	39%
Not currently designed for circularity	1/17	6%	8%

2.2.5 Circular activities in the business model

Circular activities present in the business model: Recycling & upcycling of materials (41%; consortium 54%); Design for circularity (35%; consortium 36%); Co-creation (35%; consortium 15%).

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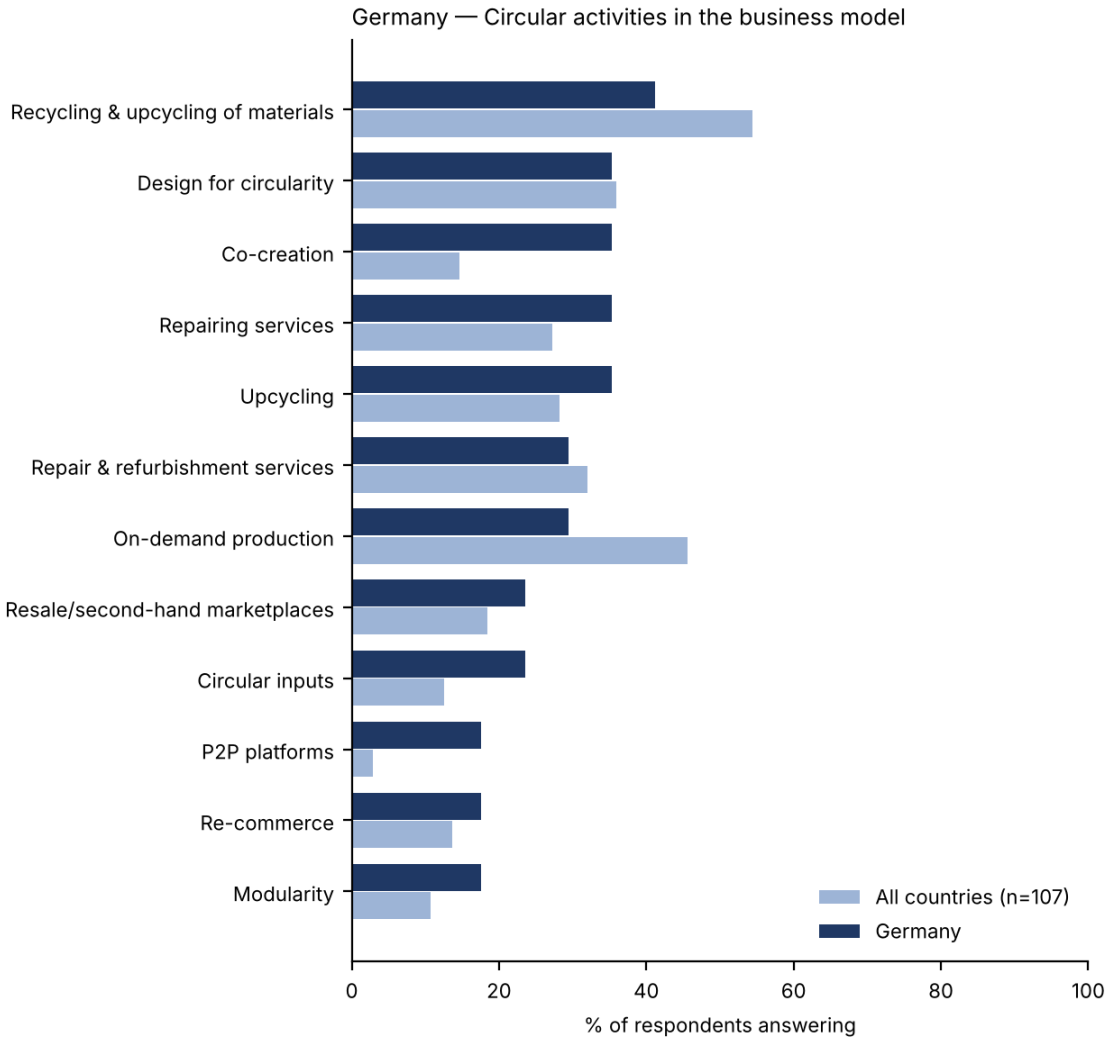

2.2.6 Circular innovation under development

Circular innovation under development: Yes (82%; consortium 59%); No (18%; consortium 41%).

Developing a circular innovation	Germany n	Germany %	All countries %
Yes	14/17	82%	59%
No	3/17	18%	41%

Phase (Stage 1 idea, 2 start-up, 3 growth)	Germany n	Germany %	All countries %
Stage 1	6/15	40%	26%
Stage 3	6/15	40%	31%
Stage 2	3/15	20%	41%

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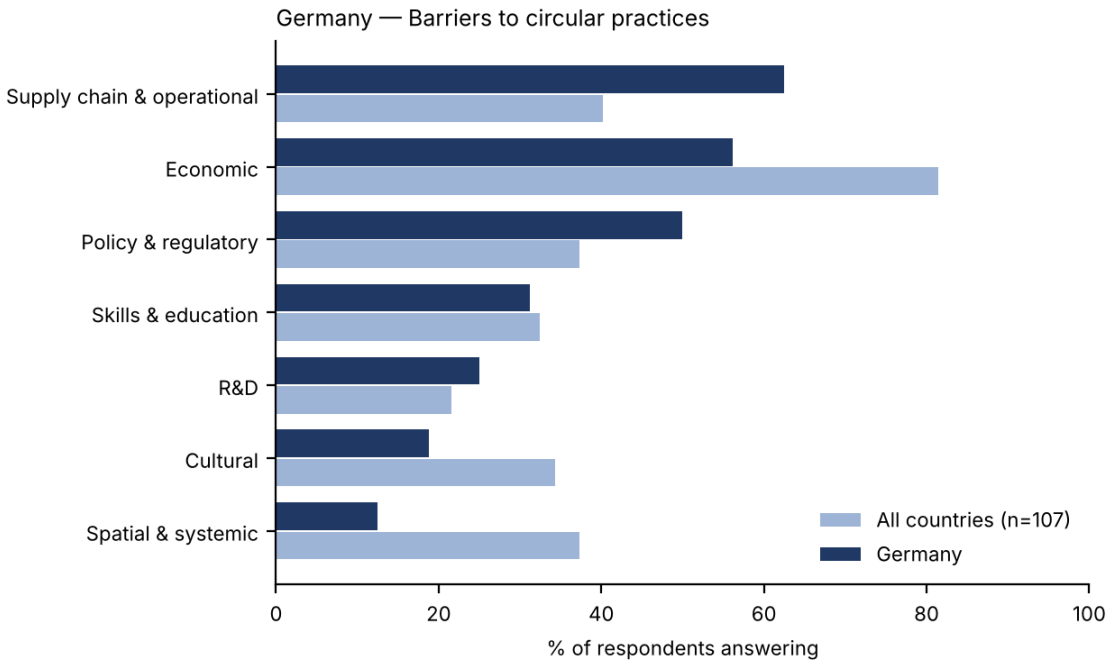
2.3 Barriers and enablers

2.3.1 Key barriers to circularity

Main barriers to circular practices: Supply chain & operational (62%; consortium 40%); Economic (56%; consortium 81%); Policy & regulatory (50%; consortium 37%).



2.3.2 Most valued external support

Most valued external support: Financial incentives (76%; consortium 81%); Regulatory guidance (53%; consortium 34%); Networking/partnerships (47%; consortium 55%).

Support needed	Germany n	Germany %	All countries %
Financial incentives	13/17	76%	81%
Regulatory guidance	9/17	53%	34%
Networking/partnerships	8/17	47%	55%
Training and certification	7/17	41%	38%

2.4 Skills and roles

2.4.1 Most relevant sustainability roles

Sustainability roles judged most relevant: Eco-Designer/Sustainable Product Designer (47%; consortium 40%); Circularity & Sustainability Manager (41%; consortium 33%); DPP & Traceability Specialist (35%; consortium 19%).

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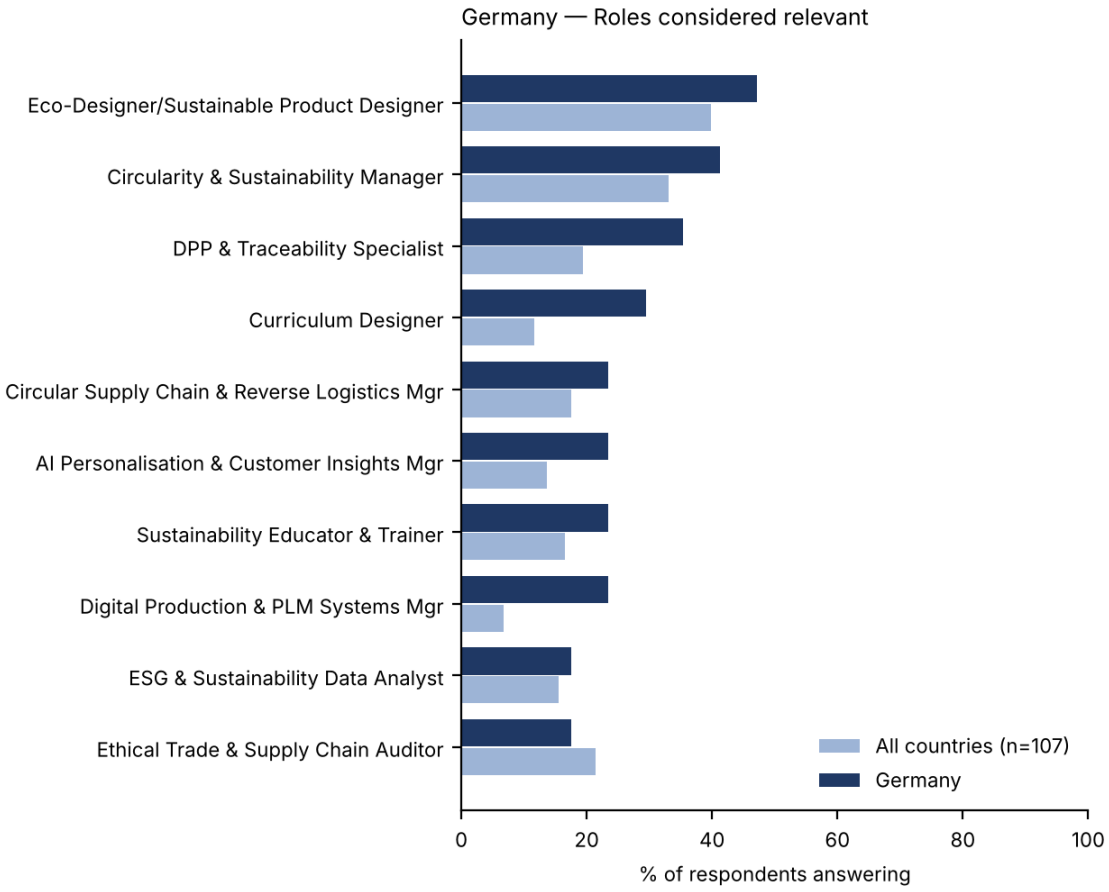

2.4.2 Recruitment challenges

Recruitment challenges: Budget constraints (65%; consortium 66%); Lack of qualified candidates (35%; consortium 41%); Limited internal training (24%; consortium 16%).

Hiring challenge	Germany n	Germany %	All countries %
Budget constraints	11/17	65%	66%
Lack of qualified candidates	6/17	35%	41%
Limited internal training	4/17	24%	16%
Lack of awareness about roles	3/17	18%	31%
No need for these roles	2/17	12%	16%

2.4.3 Hardest-to-find skills

Hardest-to-find skills: Technical specialisation (62%; consortium 52%); Sustainability management (50%; consortium 36%); Circular economy/recycling skills (44%; consortium 33%).

Skill cluster	Germany n	Germany %	All countries %
Technical specialisation	10/16	62%	52%

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Sustainability management	8/16	50%	36%
Circular economy/recycling skills	7/16	44%	33%
Craftsmanship	5/16	31%	51%
Digital/automation skills	3/16	19%	19%
Soft skills	2/16	12%	32%

2.4.4 Professions expected to be in demand

Professions expected to be in demand: Digital fashion specialist/3D designer (41%; consortium 43%); Textile innovation expert/biomaterials (41%; consortium 40%); Eco-designer (35%; consortium 25%).

Profession	**Germany n**	**Germany %**	**All countries %**
Digital fashion specialist/3D designer	7/17	41%	43%
Textile innovation expert/biomaterials	7/17	41%	40%
Eco-designer	6/17	35%	25%
Fashion data analyst	4/17	24%	21%
Artisan/craftsperson	3/17	18%	35%
Legal compliance (EPR, DPP)	3/17	18%	30%
Multidisciplinary creative	2/17	12%	23%

2.5 Digitalisation and readiness for circular models

2.5.1 Effect of digitalisation on operations

Effects of digitalisation reported: AI tools in design/product dev (75%; consortium 35%); Better tracking materials/shipments (56%; consortium 49%); More automated tasks (50%; consortium 38%).

Digitalisation effect	**Germany n**	**Germany %**	**All countries %**
AI tools in design/product dev	12/16	75%	35%
Better tracking materials/shipments	9/16	56%	49%
More automated tasks	8/16	50%	38%
Decisions supported by digital data	6/16	38%	41%
PLM/digital product systems	5/16	31%	13%

2.5.2 Self-assessed readiness to adopt circular business models

Readiness (1 = not ready … 5 = fully ready)	1	2	3	4	5

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n = 17; mean 3.29	0	3	7	6	1

Self-assessed readiness to adopt circular business models is below the consortium average: mean 3.29 (consortium 3.41), despite high innovation activity — readiness is judged against the full business model, not single initiatives.

2.6 Sustainability, ethics and governance

2.6.1 Sustainability team

Sustainability team: No, but planning (35%; consortium 29%); Yes, informal (35%; consortium 39%); Yes, structured (18%; consortium 14%).

Sustainability team	**Germany n**	**Germany %**	**All countries %**
No, but planning	6/17	35%	29%
Yes, informal	6/17	35%	39%
Yes, structured	3/17	18%	14%
No, no plans	2/17	12%	18%

2.6.2 Sustainability reporting

Sustainability reporting: No (53%; consortium 62%); Planning to (29%; consortium 29%); Yes (18%; consortium 10%).

Publishes a sustainability report	**Germany n**	**Germany %**	**All countries %**
No	9/17	53%	62%
Planning to	5/17	29%	29%
Yes	3/17	18%	10%

2.6.3 Missing or under-represented roles

Roles reported as missing: Circularity manager (59%; consortium 38%); Supply chain traceability expert (47%; consortium 34%); ESG data analyst (47%; consortium 40%).

Missing role	**Germany n**	**Germany %**	**All countries %**
Circularity manager	10/17	59%	38%
Supply chain traceability expert	8/17	47%	34%
ESG data analyst	8/17	47%	40%
Eco-design specialist	7/17	41%	41%
Sustainability trainer/educator	6/17	35%	35%
Human rights/ethical sourcing	5/17	29%	33%

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2.6.4 Sustainability-linked incentives

Sustainability-linked incentives: No (59%; consortium 62%); Under development (24%; consortium 26%); Yes (18%; consortium 12%).

Bonus / KPI linked to sustainability	Germany n	Germany %	All countries %
No	10/17	59%	62%
Under development	4/17	24%	26%
Yes	3/17	18%	12%

2.7 Regulatory and policy framework

2.7.1 Awareness of EU regulations

Awareness of EU regulations: Somewhat (59%; consortium 41%); Yes (24%; consortium 38%); No (18%; consortium 22%).

Aware of EU regulations (ESPR, DPP, EPR, CSRD)	Germany n	Germany %	All countries %
Somewhat	10/17	59%	41%
Yes	4/17	24%	38%
No	3/17	18%	22%

2.7.2 Regulatory impact on operations to date

Operations already affected by regulation: No (82%; consortium 87%); Yes (18%; consortium 13%).

Operations already affected	Germany n	Germany %	All countries %
No	14/17	82%	87%
Yes	3/17	18%	13%

2.7.3 Expected administrative burden

Expected administrative burden: Moderate (5-20h/month) (53%; consortium 31%); Don't know (35%; consortium 41%); Minimal (<5h/month) (6%; consortium 15%).

Expected administrative burden	Germany n	Germany %	All countries %
Moderate (5-20h/month)	9/17	53%	31%
Don't know	6/17	35%	41%
Minimal (<5h/month)	1/17	6%	15%
High (>20h/month)	1/17	6%	14%

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2.7.4 Expected compliance investment (CAPEX)

Expected compliance investment: Don't know (71%; consortium 52%); EUR >50k (12%; consortium 9%); EUR 5-50k (12%; consortium 20%).

Expected investment	Germany n	Germany %	All countries %
Don't know	12/17	71%	52%
EUR >50k	2/17	12%	9%
EUR 5-50k	2/17	12%	20%
EUR 0-5k	1/17	6%	19%

2.7.5 Interest in compliance training

Interest in compliance training: Maybe (47%; consortium 48%); Yes (41%; consortium 42%); No (12%; consortium 10%).

Would take compliance training	Germany n	Germany %	All countries %
Maybe	8/17	47%	48%
Yes	7/17	41%	42%
No	2/17	12%	10%

2.8 Training and capacity building

2.8.1 Training priority areas

Training priorities: Green skills/sustainability (76%; consortium 55%); Digitalisation/Industry 4.0 (65%; consortium 52%); Project mgmt/communication (59%; consortium 50%).

Training priority	Germany n	Germany %	All countries %
Green skills/sustainability	13/17	76%	55%
Digitalisation/Industry 4.0	11/17	65%	52%
Project mgmt/communication	10/17	59%	50%
Technical & artisanal skills	6/17	35%	48%
Distribution & logistics	5/17	29%	25%

2.8.2 Preferred training formats

Preferred training formats: Hands-on practical labs (62%; consortium 44%); Case-study learning (50%; consortium 45%); Workshops & design sprints (50%; consortium 40%).

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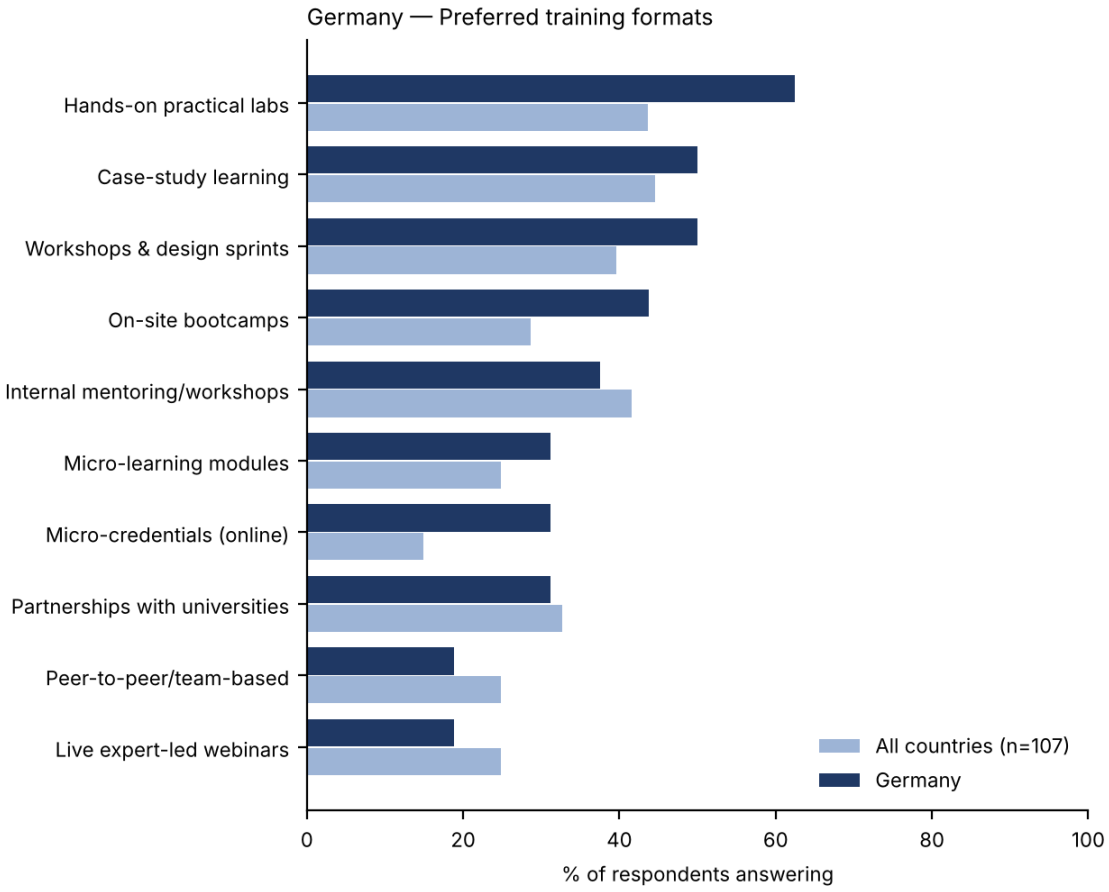

2.8.3 Current training offer

Current training offer: Planned (41%; consortium 34%); No (35%; consortium 38%); Yes (24%; consortium 28%).

Offers training on sustainability/circularity	Germany n	Germany %	All countries %
Planned	7/17	41%	34%
No	6/17	35%	38%
Yes	4/17	24%	28%

2.8.4 Interest in a Digital Product Passport micro-credential

Interest in a DPP micro-credential: Maybe (47%; consortium 47%); Yes (41%; consortium 39%); No (12%; consortium 14%).

Would enrol staff in a DPP micro-credential	Germany n	Germany %	All countries %
Maybe	8/17	47%	47%
Yes	7/17	41%	39%
No	2/17	12%	14%

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2.8.5 Self-assessed knowledge of circular economy practices

Knowledge (1 = very low … 5 = very high)	1	2	3	4	5
n = 16; mean 3.50	0	0	9	6	1

Self-assessed knowledge of circular economy practices: mean 3.50 (consortium 3.30).

Section 3: Conclusions and implications for the ReMODE CoVE

German fashion and textile SMEs combine strong digital and innovation capacity with incomplete regulatory and compliance readiness. Supply-chain and operational barriers are reported more often than in any other country (62%), economic barriers follow (56%) and policy and regulatory barriers come third (50%); the request for regulatory guidance (53%) is correspondingly the highest in the consortium.

The sector is well placed on the digital side of the twin transition but needs structured help to turn awareness into compliant practice: only 29% collect full lifecycle data, 41% none; 53% do not report on sustainability; and 71% cannot estimate what compliance will cost. The circularity manager, traceability expert and ESG data analyst are the missing profiles, and technical specialisation remains the hardest skill to recruit.

For the ReMODE CoVE this translates into practice-based training on regulatory implementation (DPP, ESPR, CSRD) and traceability, delivered through labs, case studies and bootcamps, and into green-skills and digitalisation modules that build on the sector's existing digital fluency.

Recommendations

- Offer a regulatory-implementation and DPP pathway (micro-credential plus hands-on lab), answering the 53% who ask for regulatory guidance and the 88% who would or might enrol in a DPP micro-credential.
- Develop role-specific upskilling for circularity managers, traceability experts and ESG data analysts — the three roles most often reported as missing.
- Prioritise hands-on labs, case studies, design sprints and bootcamps as delivery formats.
- Support lifecycle data collection and sustainability reporting in micro and small firms through templates and shared tools.
- Use the German digital and AI practice as a reference for the other regional CoVEs within the learning materials.

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REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Greece Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Greece Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector	**WP2 Task**: T2.3
Lead Partner: Athens University of Economics and Business (AUEB-RC)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: Athens University of Economics and Business (AUEB-RC)	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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Section 1: Introduction

This country report presents the readiness, challenges and needs of Greek small and medium-sized enterprises (SMEs) in the fashion and textile sector with respect to circular economy practices, skills and the forthcoming EU regulatory framework. It is the Greek SME component of D2.3 and complements the Greek VET and HEI report (Annex D3) and the consolidated five-country analysis (Part B). In the first version of D2.3 the Greek SME report was listed in the contents and summarised in the conclusions but the annex itself was not included; this version corrects the omission.

Data source and sample. The analysis uses the Greece responses to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness of SMEs in the Fashion and Textile Sector” (INS-01, 39 items including consent), administered online between December 2025 and January 2026. 23 organisations located in Greece responded (final consortium dataset: 107 SMEs across Finland, Germany, Greece, Italy and Türkiye). All respondents confirmed the GDPR and consent statement. The respondents are predominantly Athens-based micro-enterprises: designer brands, small manufacturers and workshops, upcycling and repair initiatives, resale platforms and technology providers, including two organisations linked to the project consortium. Percentages are computed on respondents answering each item; multi-select items sum to more than 100%. Given the sample size, findings are indicative and should be read together with the consolidated five-country analysis in Part B of this deliverable and with D2.1 v2.

Section 2: Survey Analysis

2.1 General information on the responding SMEs

2.1.1 Company size

The Greek sample is overwhelmingly micro: 91% of respondents employ fewer than ten people and the remaining 9% between 10 and 49; no medium-sized company responded. This is the most micro-dominated sample of the five countries (consortium average 55% micro) and frames every result that follows.

Company size	Greece n	Greece %	All countries %
<10 micro	21/23	91%	55%
10-49 small	2/23	9%	32%

2.1.2 Organisation type and value-chain position

More than half of the respondents are brands, designers or creative-service firms (57%, nearly double the consortium share), with manufacturing and craft at 22%, circular and repair services at 13% and digital/technology providers at 9%. No raw-material or early-processing company took part, mirroring the absence of such capacity in Attica.

Organisation type (NACE-based groups)	Greece n	Greece %	All countries %
Brands/designers/creative services	13/23	56%	29%
Manufacturing & craft	5/23	22%	31%

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Circular & repair services	3/23	13%	6%
Digital & technology	2/23	9%	6%

2.1.3 Respondent roles

78% of respondents are founders or owners and the remainder managers or creative directors; the answers therefore express the views of the people who take the strategic decisions in these firms.

Job position	Greece n	Greece %	All countries %
(Co)Founder/owner	18/23	78%	49%
Manager / senior executive	3/23	13%	22%
Head designer / creative director	2/23	9%	15%

2.2 Product lifecycle and circular practices

2.2.1 Product lifecycle data collection

43% of Greek SMEs state that they collect product lifecycle data and 57% collect it partially — no respondent reports collecting none, which is the most positive distribution in the consortium (22% yes overall). Given the size of the firms, this reflects close personal control of sourcing and production rather than digital systems.

Collects lifecycle data	Greece n	Greece %	All countries %
Partially	13/23	56%	53%
Yes	10/23	44%	22%

2.2.2 Traceability mechanisms used

Supplier audits and third-party certifications or eco-labels (30% each) are the main traceability mechanisms, with chain-of-custody tracking at 17% and a first DPP use at 9%; 13% use no mechanism, half the consortium rate. Verification is thus largely document- and certificate-based.

Traceability / verification mechanism	Greece n	Greece %	All countries %
Supplier audits	7/23	30%	30%
Third-party certifications/eco-labels	7/23	30%	37%
Chain-of-custody tracking	4/23	17%	12%
None	3/23	13%	26%
Digital Product Passport	2/23	9%	10%

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2.2.3 Supplier engagement

Supplier engagement (1 = not engaged … 5 = fully aligned)	1	2	3	4	5
n = 23; mean 3.13	0	6	8	9	0

Supplier engagement is the weakest of the five countries: mean 3.13 (consortium 3.36), with 26% of respondents rating their suppliers as weakly engaged (level 2) and none as fully aligned. Greek micro-brands depend on imported fabrics and distant suppliers over whom they have little leverage.

2.2.4 Design for circularity

Durability and timeless style and design for recycling are each practised by 70% of respondents — the latter far above the consortium (39%) — followed by recycled or certified materials (52%), repair, disassembly or modular design (43%) and minimised resource use (39%). Every respondent applies at least one circular design strategy.

Design approach	**Greece n**	**Greece %**	**All countries %**
Durability / timeless style	16/23	70%	57%
Designed for recycling	16/23	70%	39%
Recycled/certified sustainable materials	12/23	52%	49%
Repair/disassembly/modular	10/23	44%	34%
Minimise resource use	9/23	39%	27%

2.2.5 Circular activities in the business model

Recycling and upcycling (70%) and waste management (65%, nearly double the consortium rate) lead, followed by repair and refurbishment (52%) and on-demand production (43%). Rental and product-as-a-service models are more frequent than elsewhere (35% versus 13%), while resale and second-hand marketplaces (22%) are close to the average.

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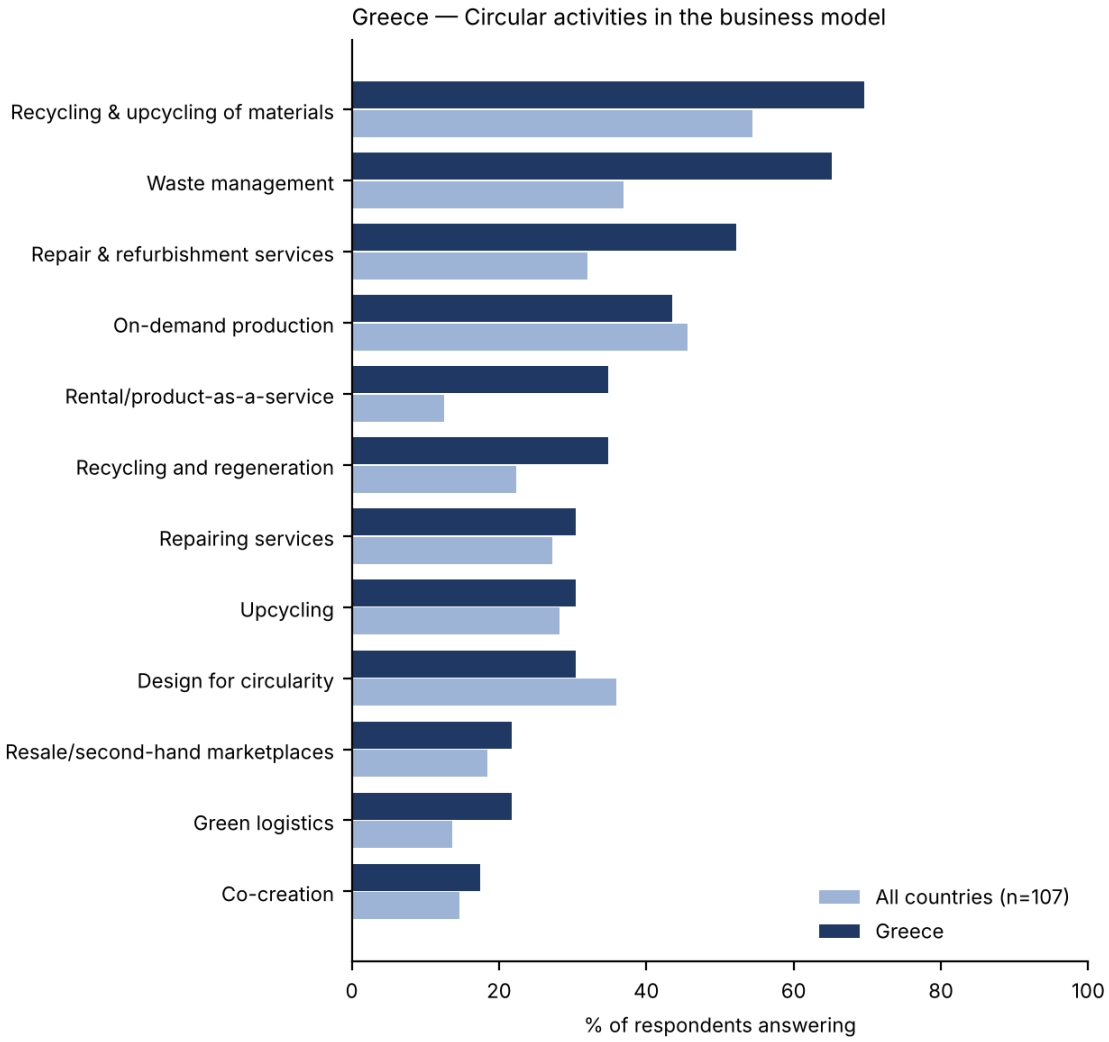

2.2.6 Circular innovation under development

87% of Greek SMEs report a specific circular innovation under development — the highest share in the consortium (59%) — most often at start-up stage (43%), with one third already in growth and one quarter at idea stage. The Greek sample is innovation-rich; the question is how these innovations scale.

Developing a circular innovation	Greece n	Greece %	All countries %
Yes	20/23	87%	59%
No	3/23	13%	41%

Phase (Stage 1 idea, 2 start-up, 3 growth)	Greece n	Greece %	All countries %
Stage 2	9/21	43%	41%
Stage 3	7/21	33%	31%
Stage 1	5/21	24%	26%

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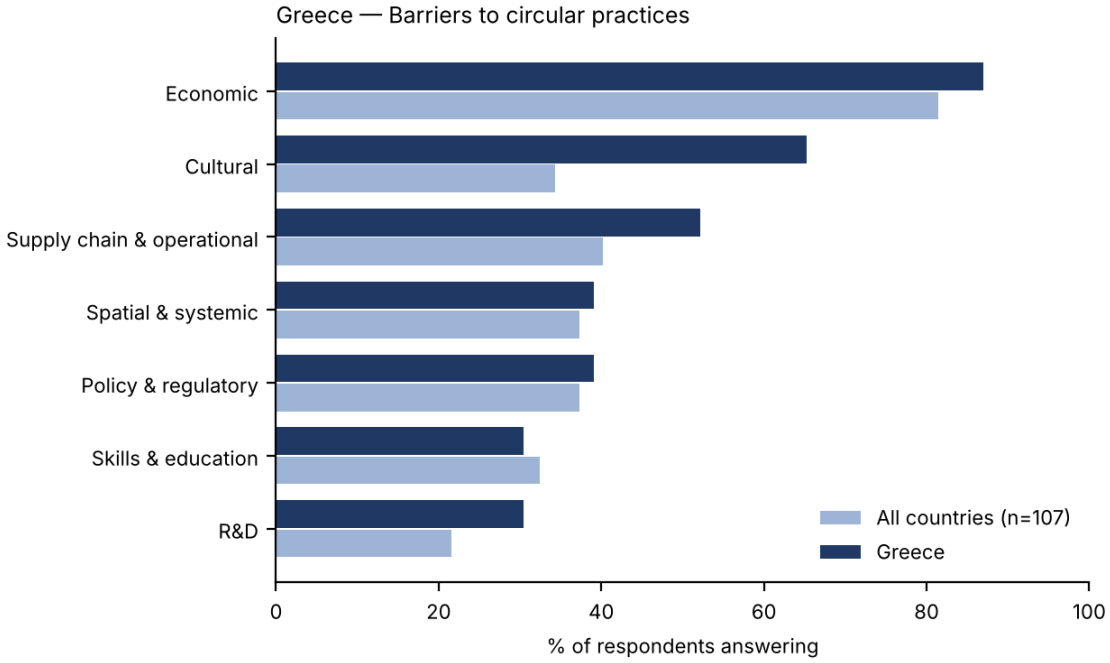
2.3 Barriers and enablers

2.3.1 Key barriers to circularity

Economic barriers are near-universal (87%). Greece stands out for cultural barriers (65%, almost double the consortium rate), supply-chain and operational barriers (52%) and spatial and systemic barriers (39%): consumer attitudes, the absence of local processing capacity and the lack of affordable space weigh as heavily as cost. Skills (30%) and R&D (30%) barriers are close to the average.



2.3.2 Most valued external support

Financial incentives (87%) and networking or partnerships (78%, the highest in the consortium) are the most valued forms of support, followed by training and certification (43%) and regulatory guidance (26%). The strength of the partnership signal is consistent with the ecosystem findings of the Greek FABRIX interviews and the June 2025 co-creation workshop.

Support needed	Greece n	Greece %	All countries %
Financial incentives	20/23	87%	81%
Networking/partnerships	18/23	78%	55%
Training and certification	10/23	44%	38%
Regulatory guidance	6/23	26%	34%

2.4 Skills and roles

2.4.1 Most relevant sustainability roles

The Eco-Designer or Sustainable Product Designer is the role most often judged relevant (52%), followed by the Digital Product Designer/3D specialist (43%) and the Inventory and Demand Optimisation Manager (39%); the Circularity and Sustainability Manager (30%) and

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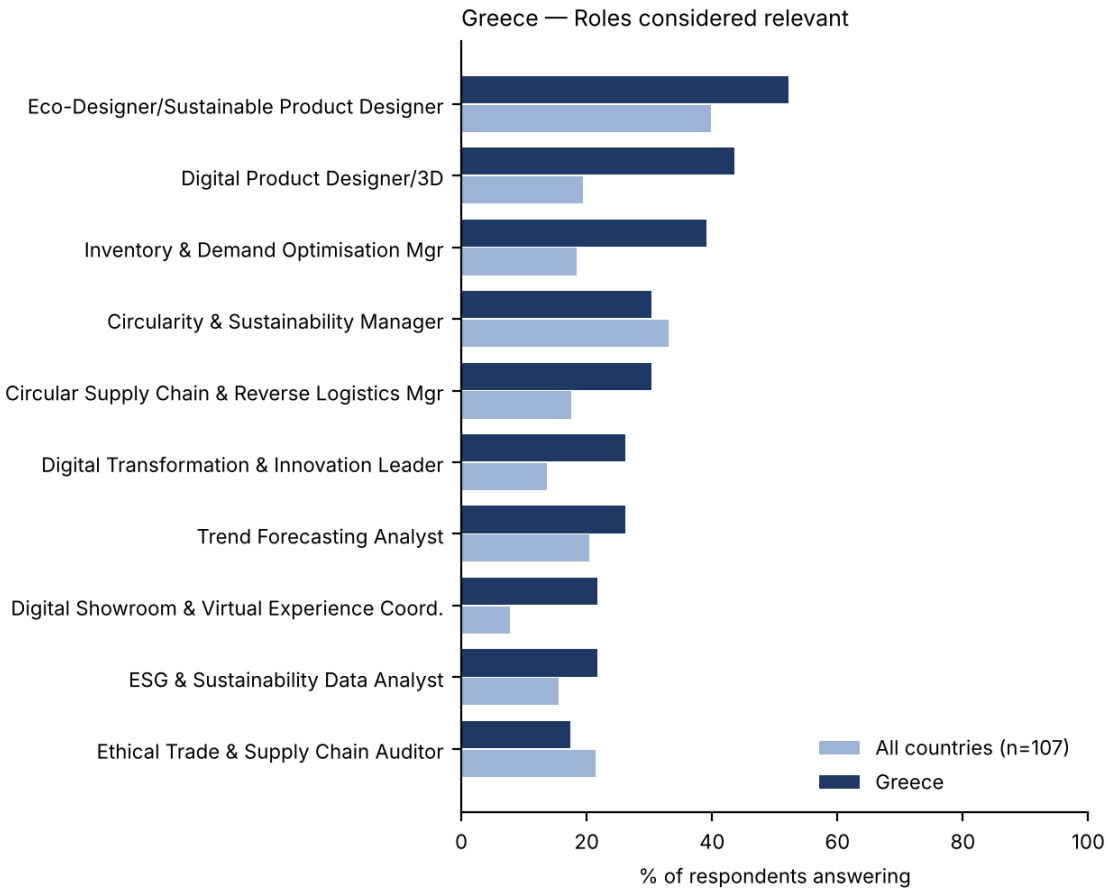
the Circular Supply Chain and Reverse Logistics Manager (30%) follow. Only one respondent sees none of the listed roles as relevant.



2.4.2 Recruitment challenges

Budget constraints (83%) are compounded by a lack of qualified candidates (57%, second only to Türkiye and more than double Finland) and a lack of awareness about the roles (30%). No Greek respondent states that the roles are not needed.

Hiring challenge	Greece n	Greece %	All countries %
Budget constraints	19/23	83%	66%
Lack of qualified candidates	13/23	56%	41%
Lack of awareness about roles	7/23	30%	31%
Limited internal training	2/23	9%	16%

2.4.3 Hardest-to-find skills

Sustainability management (52%), technical specialisation (48%) and craftsmanship (43%) are the hardest skills to find, followed by soft skills and digital/automation skills (39% each) and circular economy/recycling skills (35%). Greece reports scarcity across the whole spectrum — managerial, technical, craft and digital — rather than in one cluster.

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Skill cluster	Greece n	Greece %	All countries %
Sustainability management	12/23	52%	36%
Technical specialisation	11/23	48%	52%
Craftsmanship	10/23	44%	51%
Digital/automation skills	9/23	39%	19%
Soft skills	9/23	39%	32%
Circular economy/recycling skills	8/23	35%	33%

2.4.4 Professions expected to be in demand

Digital fashion specialists and 3D designers are expected to be the most in-demand profession (70%, far above the consortium 43%), followed by eco-designers (39%), textile innovation and biomaterials experts (35%) and fashion data analysts (30%). The profile of demand is digital-creative first, compliance second (26%).

Profession	Greece n	Greece %	All countries %
Digital fashion specialist/3D designer	16/23	70%	43%
Eco-designer	9/23	39%	25%
Textile innovation expert/biomaterials	8/23	35%	40%
Fashion data analyst	7/23	30%	21%
Artisan/craftsperson	6/23	26%	35%
Legal compliance (EPR, DPP)	6/23	26%	30%
Multidisciplinary creative	6/23	26%	23%

2.5 Digitalisation and readiness for circular models

2.5.1 Effect of digitalisation on operations

Digitalisation has already changed operations: 52% report more automated tasks, 48% use AI tools in design or product development (consortium 35%), 43% take decisions supported by digital data and 39% track materials and shipments better; only 17% report no major change. PLM or digital product systems remain rare (9%).

Digitalisation effect	Greece n	Greece %	All countries %
More automated tasks	12/23	52%	38%
AI tools in design/product dev	11/23	48%	35%
Decisions supported by digital data	10/23	44%	41%
Better tracking materials/shipments	9/23	39%	49%

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No major change	4/23	17%	23%
PLM/digital product systems	2/23	9%	13%

2.5.2 Self-assessed readiness to adopt circular business models

Readiness (1 = not ready … 5 = fully ready)	1	2	3	4	5
n = 23; mean 3.61	0	4	5	10	4

Self-assessed readiness to adopt circular business models is above the consortium average: mean 3.61 (consortium 3.41), with 61% of respondents at level 4 or 5 and no respondent at level 1.

2.6 Sustainability, ethics and governance

2.6.1 Sustainability team

43% have an informal sustainability team and 9% a structured one; 48% are planning one — the highest “planning” share in the consortium — and no respondent rules it out.

Sustainability team	**Greece n**	**Greece %**	**All countries %**
No, but planning	11/23	48%	29%
Yes, informal	10/23	44%	39%
Yes, structured	2/23	9%	14%

2.6.2 Sustainability reporting

No Greek SME currently publishes a sustainability report, but 48% plan to; 52% do not report. Reporting is therefore an intention rather than a practice, and the first area where structured support is needed before CSRD-type requirements reach the value chain.

Publishes a sustainability report	**Greece n**	**Greece %**	**All countries %**
No	12/23	52%	62%
Planning to	11/23	48%	29%

2.6.3 Missing or under-represented roles

The eco-design specialist is the role most often reported as missing (65%, the highest in the consortium), followed by the ESG data analyst, the human-rights/ethical-sourcing specialist and the sustainability trainer (35% each), and the circularity manager and traceability expert (30% each).

Missing role	**Greece n**	**Greece %**	**All countries %**
Eco-design specialist	15/23	65%	41%
Human rights/ethical sourcing	8/23	35%	33%

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Sustainability trainer/educator	8/23	35%	35%
ESG data analyst	8/23	35%	40%
Supply chain traceability expert	7/23	30%	34%
Circularity manager	7/23	30%	38%

2.6.4 Sustainability-linked incentives

43% have no sustainability-linked bonuses or KPIs, but 48% are developing them — again the highest "under development" share in the consortium — and 9% already apply them.

Bonus / KPI linked to sustainability	**Greece n**	**Greece %**	**All countries %**
Under development	11/23	48%	26%
No	10/23	44%	62%
Yes	2/23	9%	12%

2.7 Regulatory and policy framework

2.7.1 Awareness of EU regulations

43% are aware of the relevant EU regulations (ESPR, DPP, EPR, CSRD), 48% somewhat aware and 9% unaware — above the consortium average (38% aware) but well below Finland (67%).

Aware of EU regulations (ESPR, DPP, EPR, CSRD)	**Greece n**	**Greece %**	**All countries %**
Somewhat	11/23	48%	41%
Yes	10/23	44%	38%
No	2/23	9%	22%

2.7.2 Regulatory impact on operations to date

Only 9% report that regulation has already affected their operations (consortium 13%); 91% have not yet felt an effect, which is consistent with Greece's late transposition of textile EPR and the micro size of the firms.

Operations already affected	**Greece n**	**Greece %**	**All countries %**
No	21/23	91%	87%
Yes	2/23	9%	13%

2.7.3 Expected administrative burden

35% expect a moderate administrative burden (5–20 hours per month), 17% a minimal one and 17% a high one; 30% cannot yet estimate it.

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Expected administrative burden	Greece n	Greece %	All countries %
Moderate (5-20h/month)	8/23	35%	31%
Don't know	7/23	30%	41%
Minimal (<5h/month)	4/23	17%	15%
High (>20h/month)	4/23	17%	14%

2.7.4 Expected compliance investment (CAPEX)

Greek SMEs expect modest compliance investment: 48% up to EUR 5 000 and 35% between EUR 5 000 and 50 000; none expects more than EUR 50 000 and only 17% cannot estimate (consortium 52%). The expectation is realistic for micro-firms but may underestimate traceability and reporting costs.

Expected investment	Greece n	Greece %	All countries %
EUR 0-5k	11/23	48%	19%
EUR 5-50k	8/23	35%	20%
Don't know	4/23	17%	52%

2.7.5 Interest in compliance training

70% would take compliance training and 30% might; no Greek respondent declines — the strongest demand for compliance training in the consortium.

Would take compliance training	Greece n	Greece %	All countries %
Yes	16/23	70%	42%
Maybe	7/23	30%	48%

2.8 Training and capacity building

2.8.1 Training priority areas

Digitalisation and Industry 4.0 (61%) and project management and communication (57%) are the top training priorities, followed by green skills/sustainability (48%), technical and artisanal skills (39%) and distribution and logistics (35%).

Training priority	Greece n	Greece %	All countries %
Digitalisation/Industry 4.0	14/23	61%	52%
Project mgmt/communication	13/23	56%	50%
Green skills/sustainability	11/23	48%	55%
Technical & artisanal skills	9/23	39%	48%
Distribution & logistics	8/23	35%	25%

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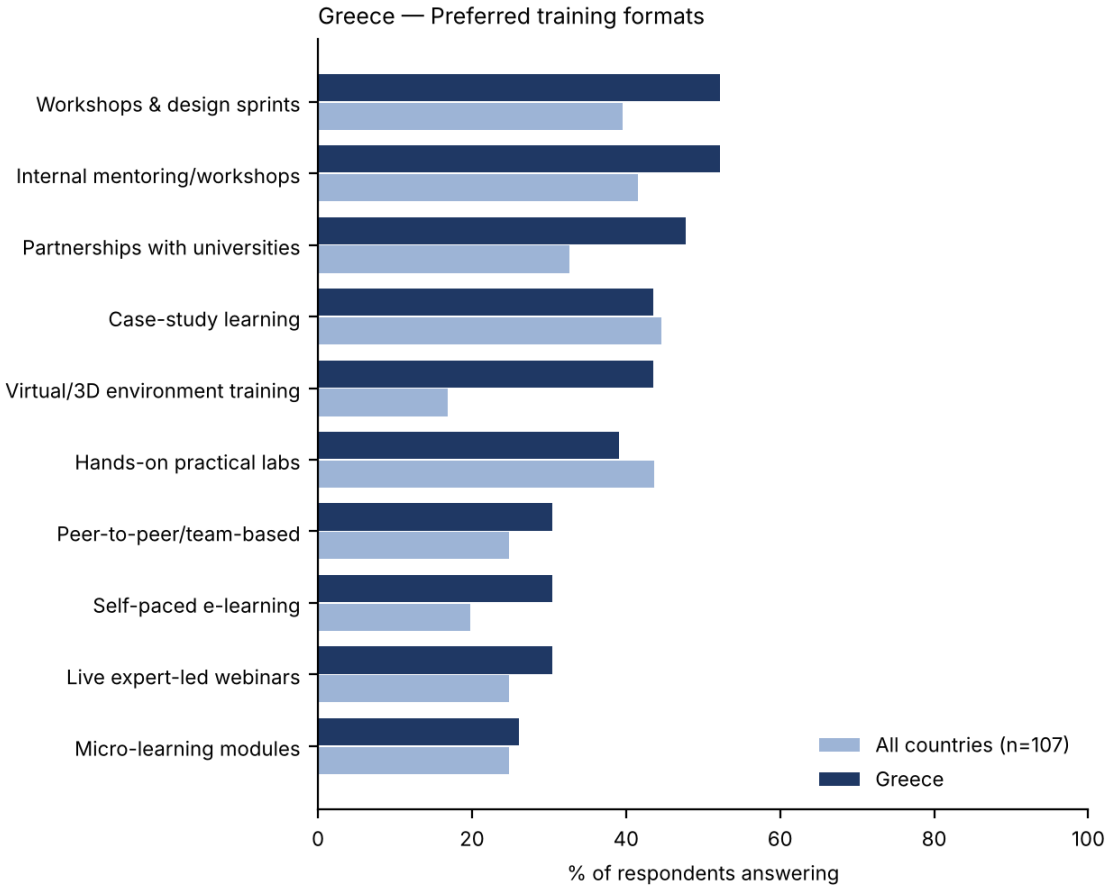
2.8.2 Preferred training formats

Internal mentoring and workshops and workshops/design sprints (52% each) lead, followed by partnerships with universities (48%, the highest in the consortium), case-study learning and virtual or 3D environment training (43% each) and hands-on labs (39%). Greek SMEs are the most open to university partnerships and to 3D/virtual formats, both relevant to the ReMODE learning portal.



2.8.3 Current training offer

26% already offer sustainability or circularity training to staff and 57% plan to; only 17% have no such offer.

Offers training on sustainability/circularity	Greece n	Greece %	All countries %
Planned	13/23	56%	34%
Yes	6/23	26%	28%
No	4/23	17%	38%

2.8.4 Interest in a Digital Product Passport micro-credential

Interest in a short DPP micro-credential is the strongest in the consortium: 61% would enrol staff and 39% might; no respondent declines.

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Would enrol staff in a DPP micro-credential	Greece n	Greece %	All countries %
Yes	14/23	61%	39%
Maybe	9/23	39%	47%

2.8.5 Self-assessed knowledge of circular economy practices

Knowledge (1 = very low … 5 = very high)	1	2	3	4	5
n = 23; mean 3.57	0	2	9	9	3

Self-assessed knowledge of circular economy practices is above average: mean 3.57 (consortium 3.30), with 52% at level 4 or 5 and 9% at level 2.

Section 3: Conclusions and implications for the ReMODE CoVE

Greek fashion and textile SMEs are small, founder-led, creative and unusually innovation-active: almost nine in ten are developing a circular innovation, all apply at least one circular design strategy, and interest in training, compliance support and a DPP micro-credential is the highest in the consortium. Their readiness is therefore attitudinal and design-led; what is missing is the structure around it — reporting, supplier leverage, local processing capacity and, above all, people.

The barriers profile is distinctive. Beyond cost, Greek SMEs face cultural, supply-chain and spatial barriers at rates well above the consortium, and they report a scarcity of qualified candidates across managerial, technical, craft and digital skills simultaneously. The role they most want and most lack is the eco-designer; the profession they expect to grow fastest is the digital fashion/3D specialist. Partnerships and networking are valued almost as much as money, which confirms the brokerage gap identified in the Greek ecosystem interviews.

For the ReMODE CoVE in Greece this points to a programme built on eco-design and digital/3D design competences, DPP and compliance micro-credentials delivered through mentoring, design sprints and university partnerships, and a regional ecosystem function that connects micro-firms to suppliers, processors and each other. Because no respondent yet publishes a sustainability report, reporting and traceability literacy should precede the arrival of CSRD-type obligations in the value chain.

Recommendations

- Launch an eco-design and digital/3D design pathway (micro-credential and WBL) answering the roles reported as most relevant and most missing.
- Offer a DPP and regulatory-compliance micro-credential (100% interested) with mentoring, design-sprint and hands-on formats.
- Introduce sustainability-reporting and traceability literacy modules for micro-firms before CSRD-type requirements cascade to them.
- Use the regional CoVE as a broker: partnership matching, shared traceability tools and access to processing capacity, answering the 78% who ask for networking support.

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- Build the Greek offer with HEI partnerships and 3D/virtual formats, the two delivery modes Greek SMEs favour more than any other country.

REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Italy Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Italy Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector	**WP2 Task**: T2.3
Lead Partner: Università Iuav di Venezia (IUAV)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: Università Iuav di Venezia (IUAV)	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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Section 1: Introduction

This country report presents the readiness, challenges and needs of Italian small and medium-sized enterprises (SMEs) in the fashion and textile sector with respect to circular economy practices, skills and the forthcoming EU regulatory framework. It is the Italian SME component of D2.3 and complements the Italian VET and HEI reports (Annex D4) and the consolidated five-country analysis (Part B). It supersedes the national report of December 2025, which was prepared before data collection closed; all figures below are computed on the final consortium dataset, in which Italy is the largest national sample.

Data source and sample. The analysis uses the Italy responses to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness of SMEs in the Fashion and Textile Sector” (INS-01, 39 items including consent), administered online between December 2025 and January 2026. 29 organisations located in Italy responded (final consortium dataset: 107 SMEs across Finland, Germany, Greece, Italy and Türkiye). All respondents confirmed the GDPR and consent statement. The respondents are predominantly manufacturing and craft firms (55%) and brands or designers (28%) from several Italian regions, including industrial districts; most are micro or small enterprises, with two large companies. Percentages are computed on respondents answering each item; multi-select items sum to more than 100%. Given the sample size, findings are indicative and should be read together with the consolidated five-country analysis in Part B of this deliverable and with D2.1 v2.

The Italian sample is production-centred and craft-based. Craftsmanship is by far the hardest skill to find (82%, the highest value for any skill in any country), the artisan is the profession expected to be most in demand (54%), and technical and artisanal skills top the training priorities together with project management and communication. Circularity is practised mainly through durability, recycled or certified materials and on-demand production.

Digitalisation has had less effect than elsewhere: almost half report no major change and only 14% use AI tools. Barriers are economic (80%) but also spatial and systemic (60%, the highest in the consortium) and cultural (44%). Regulatory awareness is moderate and the cost of compliance largely unknown; interest in a DPP micro-credential is the lowest in the consortium after Türkiye, although three quarters would or might enrol.

Section 2: Survey Analysis

2.1 General information on the responding SMEs

2.1.1 Company size

Company size of the responding organisations: <10 micro (59%; consortium 55%); 10-49 small (34%; consortium 32%); >=250 large (7%; consortium 5%).

Company size	Italy n	Italy %	All countries %
<10 micro	17/29	59%	55%
10-49 small	10/29	34%	32%
>=250 large	2/29	7%	5%

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2.1.2 Organisation type and value-chain position

Organisation types represented: Manufacturing & craft (55%; consortium 31%); Brands/designers/creative services (28%; consortium 29%); Raw materials & early processing (10%; consortium 17%).

Organisation type (NACE-based groups)	Italy n	Italy %	All countries %
Manufacturing & craft	16/29	55%	31%
Brands/designers/creative services	8/29	28%	29%
Raw materials & early processing	3/29	10%	17%
Wholesale & retail	1/29	3%	3%
Other	1/29	3%	8%

2.1.3 Respondent roles

Respondent positions: (Co)Founder/owner (64%; consortium 49%); Head designer / creative director (20%; consortium 15%); Manager / senior executive (8%; consortium 22%).

Job position	Italy n	Italy %	All countries %
(Co)Founder/owner	16/25	64%	49%
Head designer / creative director	5/25	20%	15%
Manager / senior executive	2/25	8%	22%
Other	2/25	8%	15%

2.2 Product lifecycle and circular practices

2.2.1 Product lifecycle data collection

Collection of product lifecycle data: Partially (59%; consortium 53%); No (21%; consortium 24%); Yes (21%; consortium 22%).

Collects lifecycle data	Italy n	Italy %	All countries %
Partially	17/29	59%	53%
No	6/29	21%	24%
Yes	6/29	21%	22%

2.2.2 Traceability mechanisms used

Traceability and verification mechanisms in use: Third-party certifications/eco-labels (43%; consortium 37%); None (36%; consortium 26%); Supplier audits (11%; consortium 30%).

Traceability / verification mechanism	Italy n	Italy %	All countries %
Third-party certifications/eco-labels	12/28	43%	37%

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None	10/28	36%	26%
Supplier audits	3/28	11%	30%
Digital Product Passport	2/28	7%	10%
Chain-of-custody tracking	1/28	4%	12%

2.2.3 Supplier engagement

Supplier engagement (1 = not engaged … 5 = fully aligned)	1	2	3	4	5
n = 27; mean 3.33	2	4	9	7	5

Supplier engagement: mean 3.33 on a five-point scale (consortium 3.36).

2.2.4 Design for circularity

Design-for-circularity approaches applied: Durability / timeless style (68%; consortium 57%); Recycled/certified sustainable materials (39%; consortium 49%); Repair/disassembly/modular (36%; consortium 34%).

Design approach	**Italy n**	**Italy %**	**All countries %**
Durability / timeless style	19/28	68%	57%
Recycled/certified sustainable materials	11/28	39%	49%
Repair/disassembly/modular	10/28	36%	34%
Designed for recycling	8/28	29%	39%
Minimise resource use	7/28	25%	27%
Not currently designed for circularity	1/28	4%	8%

2.2.5 Circular activities in the business model

Circular activities present in the business model: Recycling & upcycling of materials (59%; consortium 54%); Design for circularity (52%; consortium 36%); On-demand production (52%; consortium 46%).

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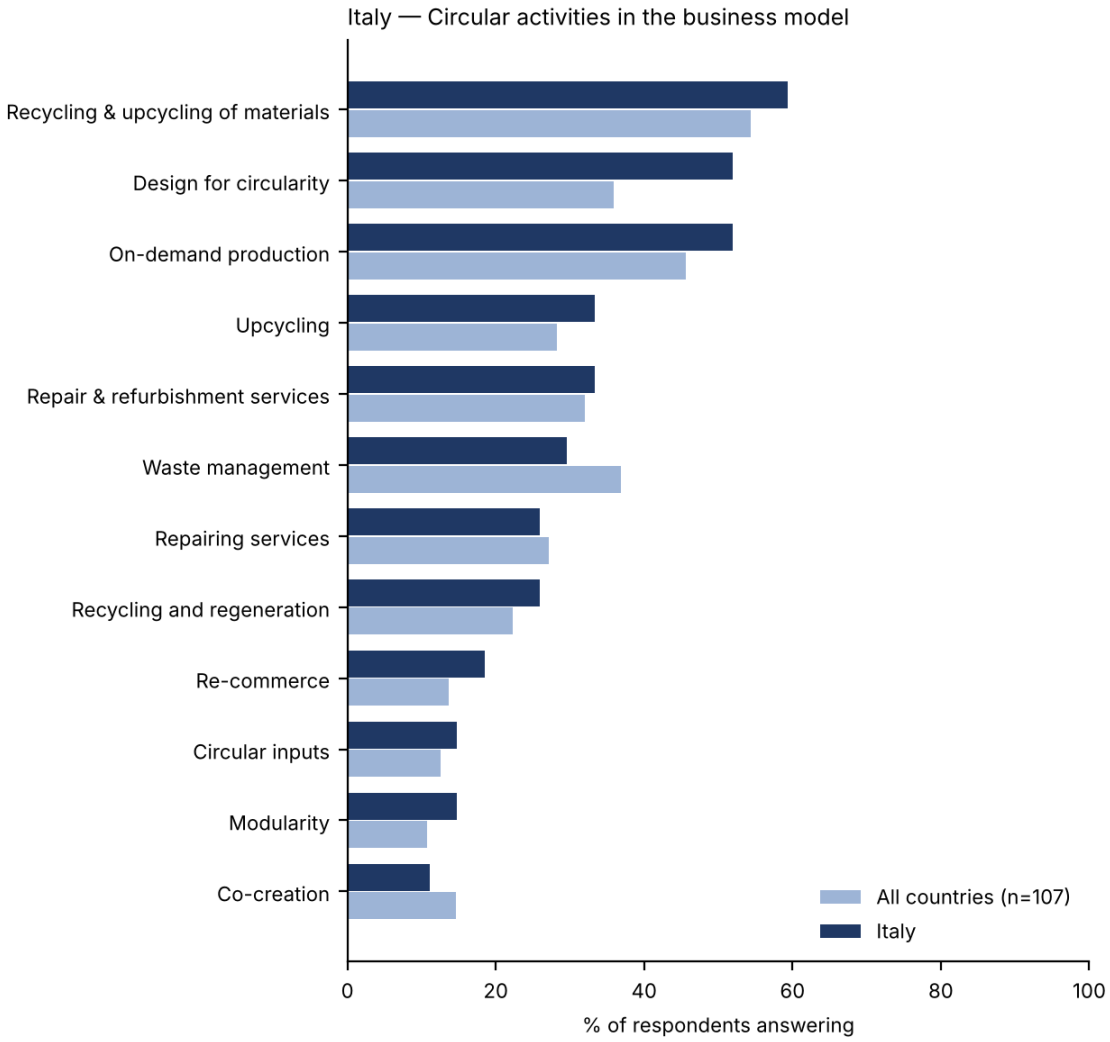

2.2.6 Circular innovation under development

Circular innovation under development: Yes (61%; consortium 59%); No (39%; consortium 41%).

Developing a circular innovation	Italy n	Italy %	All countries %
Yes	17/28	61%	59%
No	11/28	39%	41%

Phase (Stage 1 idea, 2 start-up, 3 growth)	Italy n	Italy %	All countries %
Stage 2	11/17	65%	41%
Stage 3	5/17	29%	31%
Stage 1	1/17	6%	26%

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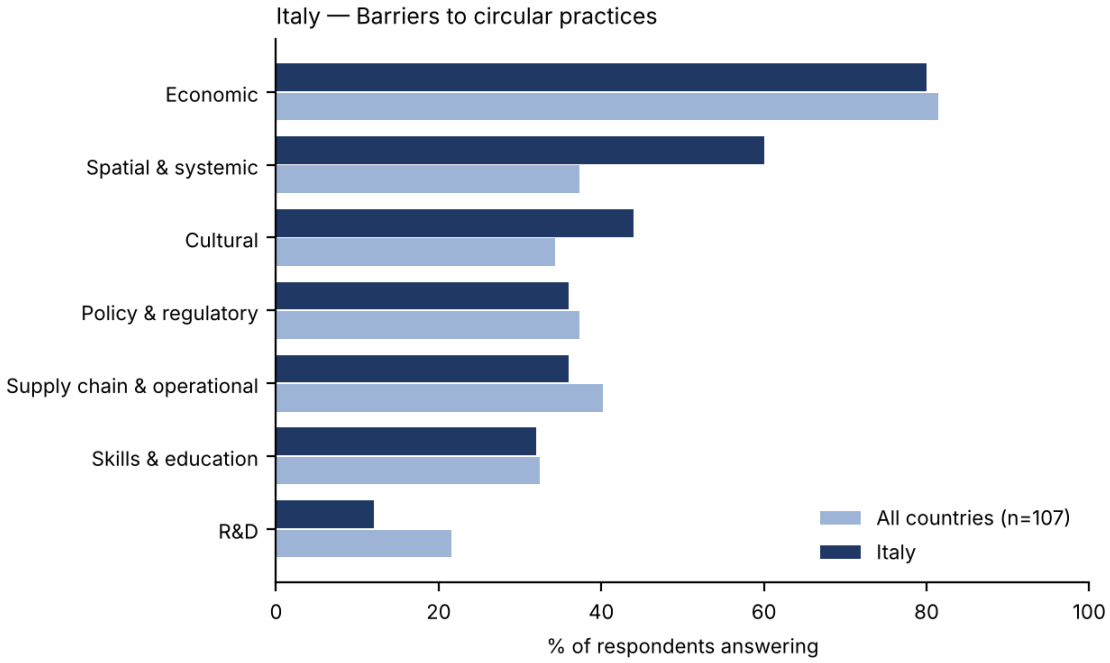
2.3 Barriers and enablers

2.3.1 Key barriers to circularity

Main barriers to circular practices: Economic (80%; consortium 81%); Spatial & systemic (60%; consortium 37%); Cultural (44%; consortium 34%).



2.3.2 Most valued external support

Most valued external support: Financial incentives (79%; consortium 81%); Networking/partnerships (46%; consortium 55%); Regulatory guidance (32%; consortium 34%).

Support needed	Italy n	Italy %	All countries %
Financial incentives	22/28	79%	81%
Networking/partnerships	13/28	46%	55%
Regulatory guidance	9/28	32%	34%
Training and certification	8/28	29%	38%

2.4 Skills and roles

2.4.1 Most relevant sustainability roles

Sustainability roles judged most relevant: Eco-Designer/Sustainable Product Designer (42%; consortium 40%); None of the above (31%; consortium 16%); Circularity & Sustainability Manager (23%; consortium 33%).

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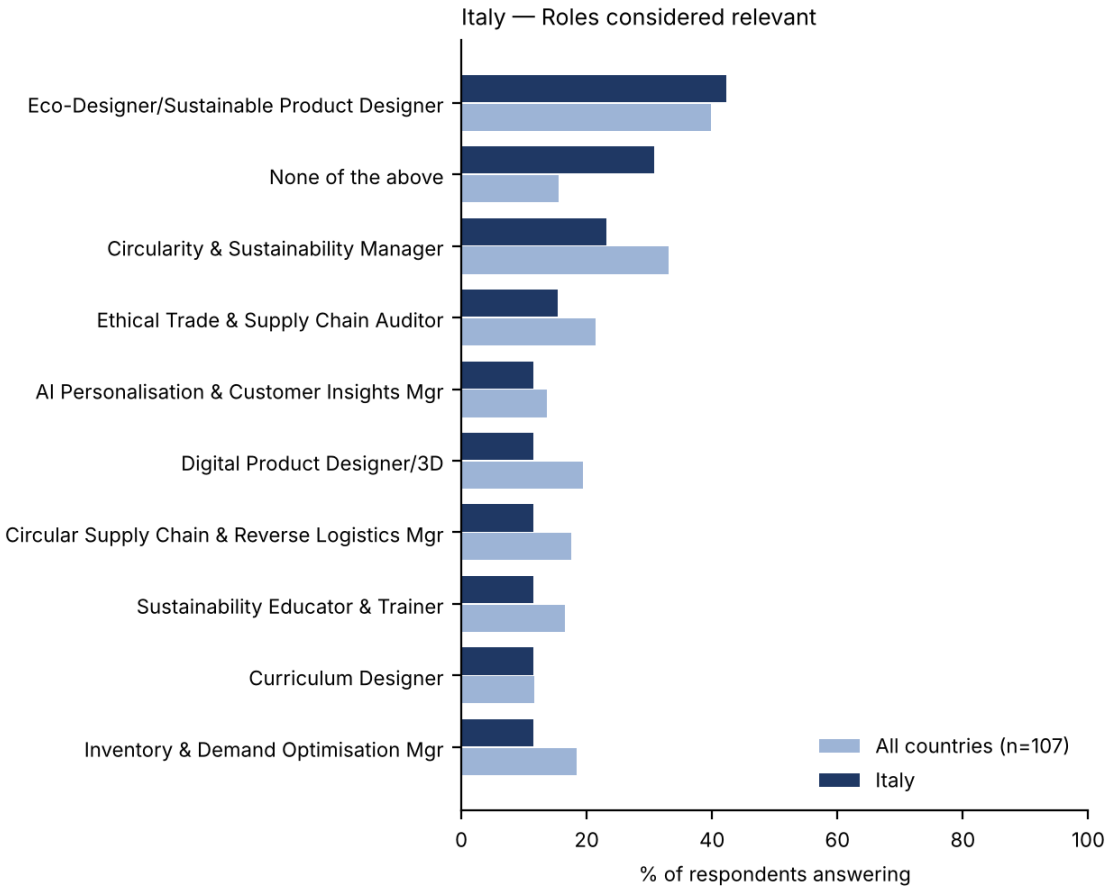

2.4.2 Recruitment challenges

Recruitment challenges: Budget constraints (52%; consortium 66%); No need for these roles (30%; consortium 16%); Limited internal training (26%; consortium 16%).

Hiring challenge	Italy n	Italy %	All countries %
Budget constraints	14/27	52%	66%
No need for these roles	8/27	30%	16%
Limited internal training	7/27	26%	16%
Lack of qualified candidates	6/27	22%	41%
Lack of awareness about roles	6/27	22%	31%

2.4.3 Hardest-to-find skills

Hardest-to-find skills: Craftsmanship (82%; consortium 51%); Technical specialisation (36%; consortium 52%); Soft skills (29%; consortium 32%).

Skill cluster	Italy n	Italy %	All countries %
Craftsmanship	23/28	82%	51%
Technical specialisation	10/28	36%	52%

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Soft skills	8/28	29%	32%
Sustainability management	6/28	21%	36%
Circular economy/recycling skills	6/28	21%	33%
Digital/automation skills	3/28	11%	19%

2.4.4 Professions expected to be in demand

Professions expected to be in demand: Artisan/craftsperson (54%; consortium 35%); Textile innovation expert/biomaterials (42%; consortium 40%); Digital fashion specialist/3D designer (19%; consortium 43%).

Profession	**Italy n**	**Italy %**	**All countries %**
Artisan/craftsperson	14/26	54%	35%
Textile innovation expert/biomaterials	11/26	42%	40%
Digital fashion specialist/3D designer	5/26	19%	43%
Multidisciplinary creative	5/26	19%	23%
Eco-designer	5/26	19%	25%
Fashion data analyst	5/26	19%	21%
Legal compliance (EPR, DPP)	3/26	12%	30%

2.5 Digitalisation and readiness for circular models

2.5.1 Effect of digitalisation on operations

Effects of digitalisation reported: No major change (48%; consortium 23%); Better tracking materials/shipments (34%; consortium 49%); Decisions supported by digital data (31%; consortium 41%).

Digitalisation effect	**Italy n**	**Italy %**	**All countries %**
No major change	14/29	48%	23%
Better tracking materials/shipments	10/29	34%	49%
Decisions supported by digital data	9/29	31%	41%
More automated tasks	7/29	24%	38%
AI tools in design/product dev	4/29	14%	35%
PLM/digital product systems	2/29	7%	13%

2.5.2 Self-assessed readiness to adopt circular business models

Readiness (1 = not ready … 5 = fully ready)	1	2	3	4	5

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n = 25; mean 3.60	0	8	2	7	8

Self-assessed readiness to adopt circular business models is above the consortium average: mean 3.60 (consortium 3.41), but polarised — a third of respondents rate themselves fully ready (5) and almost a third only at level 2.

2.6 Sustainability, ethics and governance

2.6.1 Sustainability team

Sustainability team: Yes, informal (41%; consortium 39%); No, but planning (22%; consortium 29%); No, no plans (22%; consortium 18%).

Sustainability team	Italy n	Italy %	All countries %
Yes, informal	11/27	41%	39%
No, but planning	6/27	22%	29%
No, no plans	6/27	22%	18%
Yes, structured	4/27	15%	14%

2.6.2 Sustainability reporting

Sustainability reporting: No (63%; consortium 62%); Planning to (26%; consortium 29%); Yes (11%; consortium 10%).

Publishes a sustainability report	Italy n	Italy %	All countries %
No	17/27	63%	62%
Planning to	7/27	26%	29%
Yes	3/27	11%	10%

2.6.3 Missing or under-represented roles

Roles reported as missing: Circularity manager (38%; consortium 38%); Human rights/ethical sourcing (38%; consortium 33%); Supply chain traceability expert (33%; consortium 34%).

Missing role	Italy n	Italy %	All countries %
Circularity manager	9/24	38%	38%
Human rights/ethical sourcing	9/24	38%	33%
Supply chain traceability expert	8/24	33%	34%
ESG data analyst	8/24	33%	40%
Eco-design specialist	7/24	29%	41%
Sustainability trainer/educator	4/24	17%	35%

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2.6.4 Sustainability-linked incentives

Sustainability-linked incentives: No (74%; consortium 62%); Under development (15%; consortium 26%); Yes (11%; consortium 12%).

Bonus / KPI linked to sustainability	Italy n	Italy %	All countries %
No	20/27	74%	62%
Under development	4/27	15%	26%
Yes	3/27	11%	12%

2.7 Regulatory and policy framework

2.7.1 Awareness of EU regulations

Awareness of EU regulations: Yes (39%; consortium 38%); Somewhat (39%; consortium 41%); No (21%; consortium 22%).

Aware of EU regulations (ESPR, DPP, EPR, CSRD)	Italy n	Italy %	All countries %
Yes	11/28	39%	38%
Somewhat	11/28	39%	41%
No	6/28	21%	22%

2.7.2 Regulatory impact on operations to date

Operations already affected by regulation: No (89%; consortium 87%); Yes (11%; consortium 13%).

Operations already affected	Italy n	Italy %	All countries %
No	25/28	89%	87%
Yes	3/28	11%	13%

2.7.3 Expected administrative burden

Expected administrative burden: Don't know (52%; consortium 41%); Moderate (5-20h/month) (24%; consortium 31%); Minimal (<5h/month) (16%; consortium 15%).

Expected administrative burden	Italy n	Italy %	All countries %
Don't know	13/25	52%	41%
Moderate (5-20h/month)	6/25	24%	31%
Minimal (<5h/month)	4/25	16%	15%
High (>20h/month)	2/25	8%	14%

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2.7.4 Expected compliance investment (CAPEX)

Expected compliance investment: Don't know (68%; consortium 52%); EUR 5-50k (24%; consortium 20%); EUR 0-5k (8%; consortium 19%).

Expected investment	Italy n	Italy %	All countries %
Don't know	17/25	68%	52%
EUR 5-50k	6/25	24%	20%
EUR 0-5k	2/25	8%	19%

2.7.5 Interest in compliance training

Interest in compliance training: Maybe (44%; consortium 48%); Yes (40%; consortium 42%); No (16%; consortium 10%).

Would take compliance training	Italy n	Italy %	All countries %
Maybe	11/25	44%	48%
Yes	10/25	40%	42%
No	4/25	16%	10%

2.8 Training and capacity building

2.8.1 Training priority areas

Training priorities: Technical & artisanal skills (64%; consortium 48%); Project mgmt/communication (61%; consortium 50%); Green skills/sustainability (36%; consortium 55%).

Training priority	Italy n	Italy %	All countries %
Technical & artisanal skills	18/28	64%	48%
Project mgmt/communication	17/28	61%	50%
Green skills/sustainability	10/28	36%	55%
Distribution & logistics	7/28	25%	25%
Digitalisation/Industry 4.0	6/28	21%	52%

2.8.2 Preferred training formats

Preferred training formats: Internal mentoring/workshops (42%; consortium 42%); Workshops & design sprints (38%; consortium 40%); Case-study learning (38%; consortium 45%).

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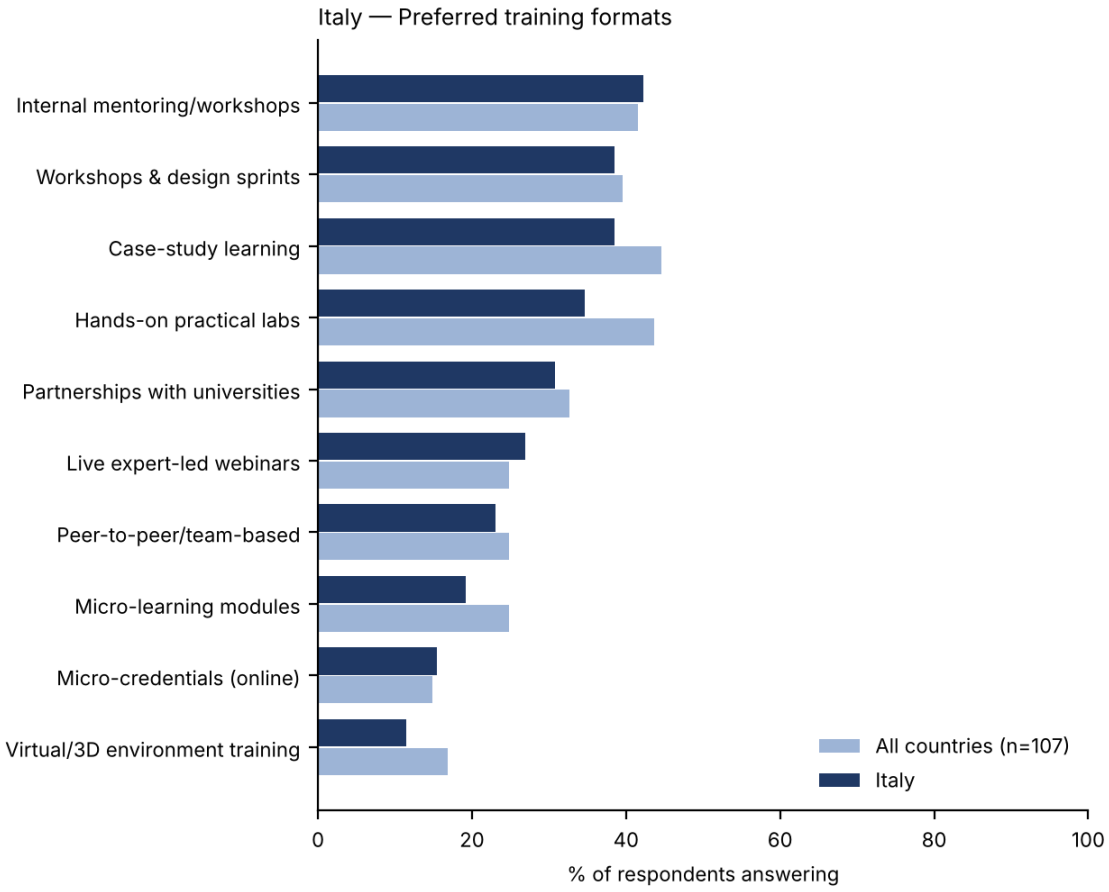

2.8.3 Current training offer

Current training offer: Yes (39%; consortium 28%); No (39%; consortium 38%); Planned (21%; consortium 34%).

Offers training on sustainability/circularity	Italy n	Italy %	All countries %
Yes	11/28	39%	28%
No	11/28	39%	38%
Planned	6/28	21%	34%

2.8.4 Interest in a Digital Product Passport micro-credential

Interest in a DPP micro-credential: Maybe (46%; consortium 47%); Yes (32%; consortium 39%); No (21%; consortium 14%).

Would enrol staff in a DPP micro-credential	Italy n	Italy %	All countries %
Maybe	13/28	46%	47%
Yes	9/28	32%	39%
No	6/28	21%	14%

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2.8.5 Self-assessed knowledge of circular economy practices

Knowledge (1 = very low … 5 = very high)	1	2	3	4	5
n = 27; mean 3.33	0	9	6	6	6

Self-assessed knowledge of circular economy practices: mean 3.33 (consortium 3.30).

Section 3: Conclusions and implications for the ReMODE CoVE

Italian fashion and textile SMEs bring deep manufacturing and craft capability and a natural alignment with durability, but circularity remains implicit rather than organised: 63% do not report on sustainability, 74% have no sustainability-linked incentives, a third see none of the proposed sustainability roles as relevant and 30% say they have no need for such roles. The transition is constrained less by awareness than by space, systems, cost and the scarcity of skilled artisans.

The skills agenda is therefore double: safeguard and renew craftsmanship and technical specialisation, which the market cannot find, while introducing sustainability management, traceability and digital competences that most firms have not yet integrated. Training should be delivered through internal mentoring, workshops and design sprints and through partnerships with universities, the formats Italian SMEs prefer.

For the ReMODE CoVE in Italy the priority is a craft-plus-circularity pathway anchored in the industrial districts, combined with practical regulatory and DPP preparation for firms that are only moderately aware of the coming obligations.

Recommendations

- Build a craftsmanship and technical-specialisation renewal pathway (apprenticeship and WBL) with the industrial districts, answering the 82% who cannot find craft skills.
- Introduce sustainability-management and traceability modules for firms where circularity is practised but not organised (no reporting, no KPIs, no dedicated roles).
- Deliver through mentoring, workshops, design sprints and university partnerships.
- Prepare firms for DPP and ESPR with short, applied compliance training; 84% would or might take compliance training.
- Address spatial and systemic barriers through the regional CoVE's ecosystem function (shared facilities, district-level cooperation).

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REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Türkiye Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Türkiye Country Report on SMEs Readiness for Circular Economy in the Sustainable Textile and Fashion Sector	**WP2 Task**: T2.3
Lead Partner: BUTGEM	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: BUTGEM	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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

Section 1: Introduction

This country report presents the readiness, challenges and needs of Turkish small and medium-sized enterprises (SMEs) in the fashion and textile sector with respect to circular economy practices, skills and the forthcoming EU regulatory framework. It is the Turkish SME component of D2.3 and complements the Turkish HEI and VET reports (Annex D5) and the consolidated five-country analysis (Part B). It supersedes the national report of December 2025, which was prepared before data collection closed; all figures below are computed on the final consortium dataset.

Data source and sample. The analysis uses the Türkiye responses to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness of SMEs in the Fashion and Textile Sector” (INS-01, 39 items including consent), administered online between December 2025 and January 2026. 20 organisations located in Türkiye responded (final consortium dataset: 107 SMEs across Finland, Germany, Greece, Italy and Türkiye). All respondents confirmed the GDPR and consent statement. The respondents are mainly textile manufacturers and raw-material or early-processing companies located in Bursa and its region (65% raw materials and early processing, 20% manufacturing), predominantly small and medium-sized enterprises — the most industrial sample of the five countries. Percentages are computed on respondents answering each item; multi-select items sum to more than 100%. Given the sample size, findings are indicative and should be read together with the consolidated five-country analysis in Part B of this deliverable and with D2.1 v2.

The Turkish sample represents the upstream, industrial end of the value chain. Readiness is accordingly different in kind: traceability through supplier audits (65%) and certifications (60%) is well established and 90% report better tracking of materials and shipments through digitalisation, yet self-assessed knowledge of circular economy practices (mean 2.35) and readiness for circular business models (2.55) are the lowest in the consortium, 55% are unaware of the relevant EU regulations and 95% do not publish a sustainability report.

Economic barriers are reported by every respondent (100%). Recruitment is blocked by a lack of qualified candidates (74%, the highest in the consortium) as much as by budgets; technical specialisation is the hardest skill to find (85%). Training demand is strong for green skills, digitalisation and technical skills, delivered through on-site bootcamps and hands-on labs.

Section 2: Survey Analysis

2.1 General information on the responding SMEs

2.1.1 Company size

Company size of the responding organisations: 10-49 small (40%; consortium 32%); 50-249 medium (35%; consortium 8%); <10 micro (15%; consortium 55%).

Company size	Türkiye n	Türkiye %	All countries %
10-49 small	8/20	40%	32%
50-249 medium	7/20	35%	8%
<10 micro	3/20	15%	55%

>=250 large	2/20	10%	5%

2.1.2 Organisation type and value-chain position

Organisation types represented: Raw materials & early processing (65%; consortium 17%); Manufacturing & craft (20%; consortium 31%); Other (10%; consortium 8%).

Organisation type (NACE-based groups)	Türkiye n	Türkiye %	All countries %
Raw materials & early processing	13/20	65%	17%
Manufacturing & craft	4/20	20%	31%
Other	2/20	10%	8%
Brands/designers/creative services	1/20	5%	29%

2.1.3 Respondent roles

Respondent positions: Manager / senior executive (55%; consortium 22%); Other (25%; consortium 15%); Head designer / creative director (15%; consortium 15%).

Job position	Türkiye n	Türkiye %	All countries %
Manager / senior executive	11/20	55%	22%
Other	5/20	25%	15%
Head designer / creative director	3/20	15%	15%
(Co)Founder/owner	1/20	5%	49%

2.2 Product lifecycle and circular practices

2.2.1 Product lifecycle data collection

Collection of product lifecycle data: Partially (55%; consortium 53%); No (35%; consortium 24%); Yes (10%; consortium 22%).

Collects lifecycle data	Türkiye n	Türkiye %	All countries %
Partially	11/20	55%	53%
No	7/20	35%	24%
Yes	2/20	10%	22%

2.2.2 Traceability mechanisms used

Traceability and verification mechanisms in use: Supplier audits (65%; consortium 30%); Third-party certifications/eco-labels (60%; consortium 37%); Chain-of-custody tracking (20%; consortium 12%).

Traceability / verification mechanism	Türkiye n	Türkiye %	All countries %

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Supplier audits	13/20	65%	30%
Third-party certifications/eco-labels	12/20	60%	37%
Chain-of-custody tracking	4/20	20%	12%
None	3/20	15%	26%
Digital Product Passport	2/20	10%	10%

2.2.3 Supplier engagement

Supplier engagement (1 = not engaged … 5 = fully aligned)	1	2	3	4	5
n = 20; mean 3.30	2	0	10	6	2

Supplier engagement: mean 3.30 on a five-point scale (consortium 3.36).

2.2.4 Design for circularity

Design-for-circularity approaches applied: Recycled/certified sustainable materials (75%; consortium 49%); Designed for recycling (40%; consortium 39%); Not currently designed for circularity (20%; consortium 8%).

Design approach	**Türkiye n**	**Türkiye %**	**All countries %**
Recycled/certified sustainable materials	15/20	75%	49%
Designed for recycling	8/20	40%	39%
Not currently designed for circularity	4/20	20%	8%
Durability / timeless style	3/20	15%	57%
Minimise resource use	1/20	5%	27%

2.2.5 Circular activities in the business model

Circular activities present in the business model: On-demand production (50%; consortium 46%); Waste management (50%; consortium 37%); Recycling & upcycling of materials (28%; consortium 54%).

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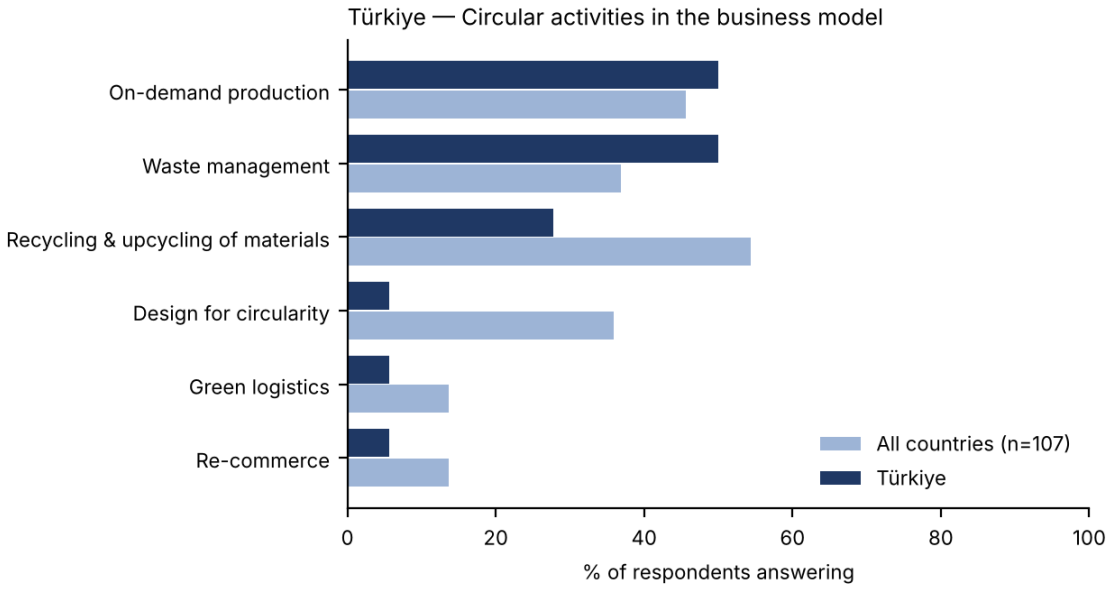

2.2.6 Circular innovation under development

Circular innovation under development: No (75%; consortium 41%); Yes (25%; consortium 59%).

Developing a circular innovation	Türkiye n	Türkiye %	All countries %
No	15/20	75%	41%
Yes	5/20	25%	59%

Phase (Stage 1 idea, 2 start-up, 3 growth)	Türkiye n	Türkiye %	All countries %
Stage 1	3/6	50%	26%
Stage 2	2/6	33%	41%
Stage 3	1/6	17%	31%

2.3 Barriers and enablers

2.3.1 Key barriers to circularity

Main barriers to circular practices: Economic (100%; consortium 81%); Spatial & systemic (45%; consortium 37%); Skills & education (35%; consortium 32%).

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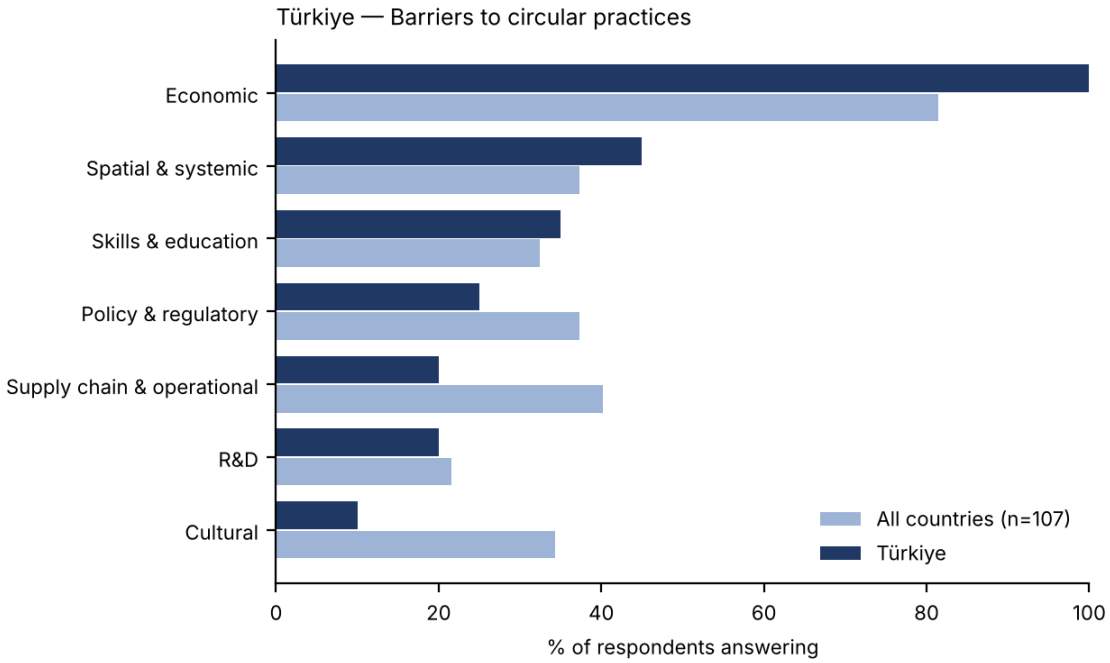

2.3.2 Most valued external support

Most valued external support: Financial incentives (85%; consortium 81%); Networking/partnerships (45%; consortium 55%); Training and certification (45%; consortium 38%).

Support needed	Türkiye n	Türkiye %	All countries %
Financial incentives	17/20	85%	81%
Networking/partnerships	9/20	45%	55%
Training and certification	9/20	45%	38%
Regulatory guidance	8/20	40%	34%

2.4 Skills and roles

2.4.1 Most relevant sustainability roles

Sustainability roles judged most relevant: Trend Forecasting Analyst (42%; consortium 20%); Ethical Trade & Supply Chain Auditor (42%; consortium 21%); Circularity & Sustainability Manager (37%; consortium 33%).

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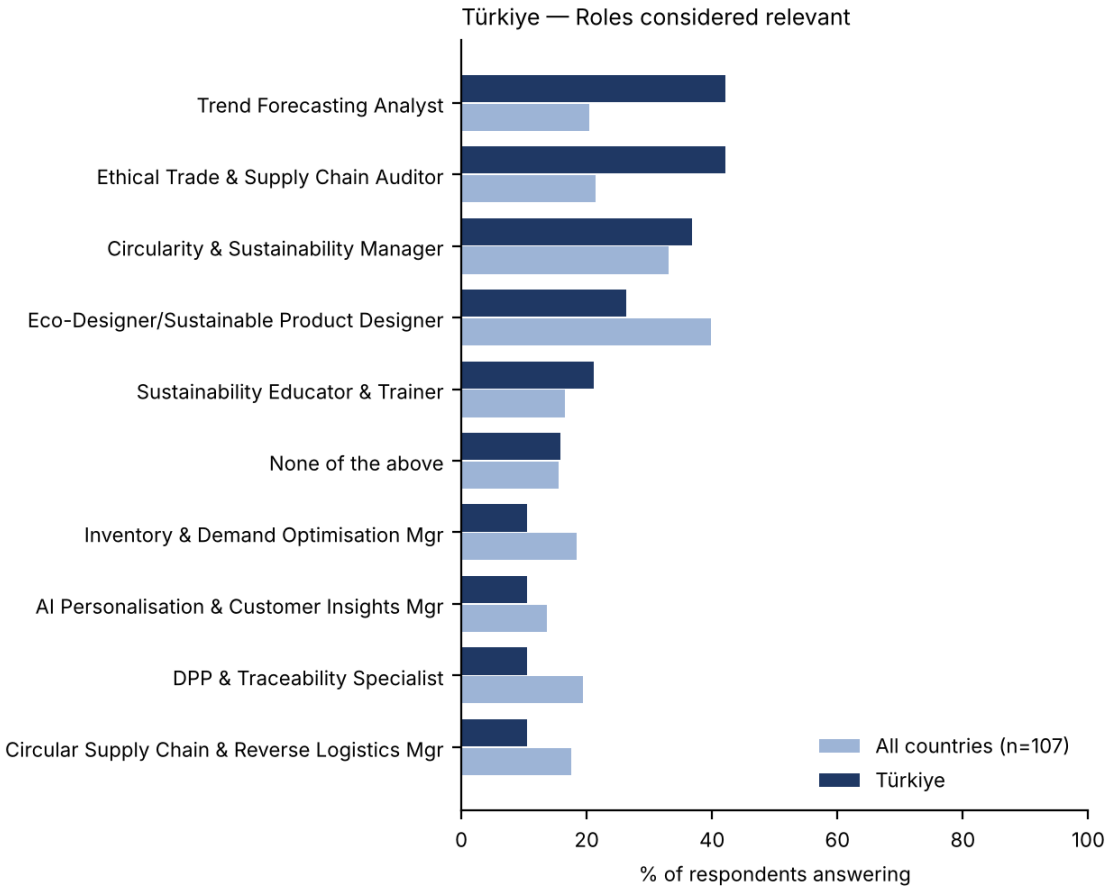

2.4.2 Recruitment challenges

Recruitment challenges: Lack of qualified candidates (74%; consortium 41%); Budget constraints (58%; consortium 66%); Lack of awareness about roles (58%; consortium 31%).

Hiring challenge	Türkiye n	Türkiye %	All countries %
Lack of qualified candidates	14/19	74%	41%
Budget constraints	11/19	58%	66%
Lack of awareness about roles	11/19	58%	31%
Limited internal training	3/19	16%	16%
No need for these roles	1/19	5%	16%

2.4.3 Hardest-to-find skills

Hardest-to-find skills: Technical specialisation (85%; consortium 52%); Soft skills (50%; consortium 32%); Sustainability management (50%; consortium 36%).

Skill cluster	Türkiye n	Türkiye %	All countries %
Technical specialisation	17/20	85%	52%
Soft skills	10/20	50%	32%

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Sustainability management	10/20	50%	36%
Circular economy/recycling skills	7/20	35%	33%
Craftsmanship	7/20	35%	51%
Digital/automation skills	4/20	20%	19%

2.4.4 Professions expected to be in demand

Professions expected to be in demand: Digital fashion specialist/3D designer (60%; consortium 43%); Legal compliance (EPR, DPP) (50%; consortium 30%); Textile innovation expert/biomaterials (50%; consortium 40%).

Profession	**Türkiye n**	**Türkiye %**	**All countries %**
Digital fashion specialist/3D designer	12/20	60%	43%
Legal compliance (EPR, DPP)	10/20	50%	30%
Textile innovation expert/biomaterials	10/20	50%	40%
Artisan/craftsperson	8/20	40%	35%
Multidisciplinary creative	5/20	25%	23%
Eco-designer	3/20	15%	25%
Fashion data analyst	3/20	15%	21%

2.5 Digitalisation and readiness for circular models

2.5.1 Effect of digitalisation on operations

Effects of digitalisation reported: Better tracking materials/shipments (90%; consortium 49%); Decisions supported by digital data (45%; consortium 41%); More automated tasks (30%; consortium 38%).

Digitalisation effect	**Türkiye n**	**Türkiye %**	**All countries %**
Better tracking materials/shipments	18/20	90%	49%
Decisions supported by digital data	9/20	45%	41%
More automated tasks	6/20	30%	38%
AI tools in design/product dev	5/20	25%	35%
PLM/digital product systems	1/20	5%	13%

2.5.2 Self-assessed readiness to adopt circular business models

Readiness (1 = not ready … 5 = fully ready)	1	2	3	4	5
n = 20; mean 2.55	3	5	10	2	0

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Self-assessed readiness to adopt circular business models is the lowest in the consortium: mean 2.55 (consortium 3.41); half of the respondents place themselves at the midpoint and 40% below it.

2.6 Sustainability, ethics and governance

2.6.1 Sustainability team

Sustainability team: No, no plans (35%; consortium 18%); Yes, informal (30%; consortium 39%); Yes, structured (20%; consortium 14%).

Sustainability team	Türkiye n	Türkiye %	All countries %
No, no plans	7/20	35%	18%
Yes, informal	6/20	30%	39%
Yes, structured	4/20	20%	14%
No, but planning	3/20	15%	29%

2.6.2 Sustainability reporting

Sustainability reporting: No (95%; consortium 62%); Planning to (5%; consortium 29%).

Publishes a sustainability report	Türkiye n	Türkiye %	All countries %
No	19/20	95%	62%
Planning to	1/20	5%	29%

2.6.3 Missing or under-represented roles

Roles reported as missing: Sustainability trainer/educator (53%; consortium 35%); Circularity manager (37%; consortium 38%); ESG data analyst (32%; consortium 40%).

Missing role	Türkiye n	Türkiye %	All countries %
Sustainability trainer/educator	10/19	53%	35%
Circularity manager	7/19	37%	38%
ESG data analyst	6/19	32%	40%
Eco-design specialist	4/19	21%	41%
Human rights/ethical sourcing	4/19	21%	33%
Supply chain traceability expert	4/19	21%	34%

2.6.4 Sustainability-linked incentives

Sustainability-linked incentives: No (65%; consortium 62%); Under development (25%; consortium 26%); Yes (10%; consortium 12%).

Bonus / KPI linked to sustainability	Türkiye n	Türkiye %	All countries %

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No	13/20	65%	62%
Under development	5/20	25%	26%
Yes	2/20	10%	12%

2.7 Regulatory and policy framework

2.7.1 Awareness of EU regulations

Awareness of EU regulations: No (55%; consortium 22%); Somewhat (30%; consortium 41%); Yes (15%; consortium 38%).

Aware of EU regulations (ESPR, DPP, EPR, CSRD)	**Türkiye n**	**Türkiye %**	**All countries %**
No	11/20	55%	22%
Somewhat	6/20	30%	41%
Yes	3/20	15%	38%

2.7.2 Regulatory impact on operations to date

Operations already affected by regulation: No (95%; consortium 87%); Yes (5%; consortium 13%).

Operations already affected	**Türkiye n**	**Türkiye %**	**All countries %**
No	19/20	95%	87%
Yes	1/20	5%	13%

2.7.3 Expected administrative burden

Expected administrative burden: Don't know (55%; consortium 41%); High (>20h/month) (30%; consortium 14%); Moderate (5-20h/month) (15%; consortium 31%).

Expected administrative burden	**Türkiye n**	**Türkiye %**	**All countries %**
Don't know	11/20	55%	41%
High (>20h/month)	6/20	30%	14%
Moderate (5-20h/month)	3/20	15%	31%

2.7.4 Expected compliance investment (CAPEX)

Expected compliance investment: Don't know (65%; consortium 52%); EUR >50k (25%; consortium 9%); EUR 5-50k (5%; consortium 20%).

Expected investment	**Türkiye n**	**Türkiye %**	**All countries %**
Don't know	13/20	65%	52%

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EUR >50k	5/20	25%	9%
EUR 5-50k	1/20	5%	20%
EUR 0-5k	1/20	5%	19%

2.7.5 Interest in compliance training

Interest in compliance training: Maybe (80%; consortium 48%); Yes (15%; consortium 42%); No (5%; consortium 10%).

Would take compliance training	**Türkiye n**	**Türkiye %**	**All countries %**
Maybe	16/20	80%	48%
Yes	3/20	15%	42%
No	1/20	5%	10%

2.8 Training and capacity building

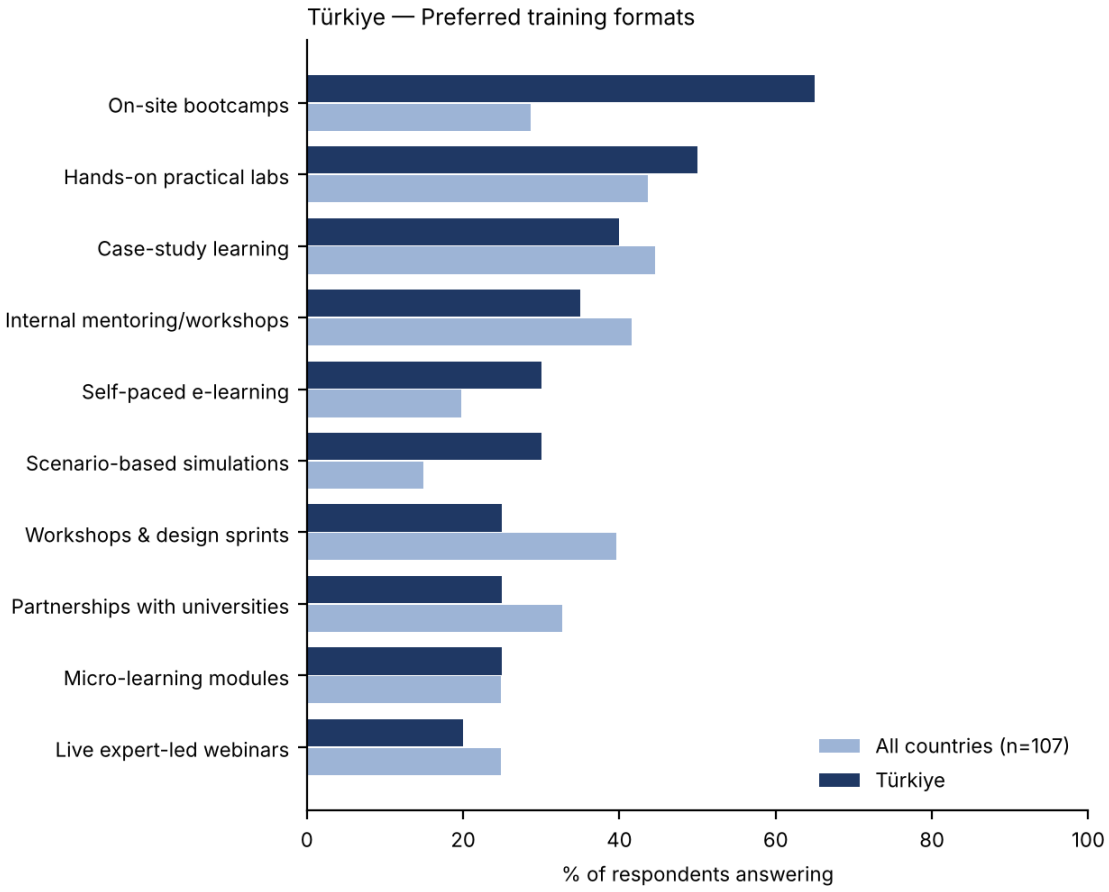
2.8.1 Training priority areas

Training priorities: Green skills/sustainability (75%; consortium 55%); Digitalisation/Industry 4.0 (70%; consortium 52%); Technical & artisanal skills (60%; consortium 48%).

Training priority	**Türkiye n**	**Türkiye %**	**All countries %**
Green skills/sustainability	15/20	75%	55%
Digitalisation/Industry 4.0	14/20	70%	52%
Technical & artisanal skills	12/20	60%	48%
Project mgmt/communication	6/20	30%	50%
Distribution & logistics	2/20	10%	25%

2.8.2 Preferred training formats

Preferred training formats: On-site bootcamps (65%; consortium 29%); Hands-on practical labs (50%; consortium 44%); Case-study learning (40%; consortium 45%).



2.8.3 Current training offer

Current training offer: No (60%; consortium 38%); Planned (25%; consortium 34%); Yes (15%; consortium 28%).

Offers training on sustainability/circularity	Türkiye n	Türkiye %	All countries %
No	12/20	60%	38%
Planned	5/20	25%	34%
Yes	3/20	15%	28%

2.8.4 Interest in a Digital Product Passport micro-credential

Interest in a DPP micro-credential: Maybe (55%; consortium 47%); No (30%; consortium 14%); Yes (15%; consortium 39%).

Would enrol staff in a DPP micro-credential	Türkiye n	Türkiye %	All countries %
Maybe	11/20	55%	47%
No	6/20	30%	14%
Yes	3/20	15%	39%

2.8.5 Self-assessed knowledge of circular economy practices

Knowledge (1 = very low … 5 = very high)	1	2	3	4	5
n = 20; mean 2.35	4	7	7	2	0

Self-assessed knowledge of circular economy practices is the lowest in the consortium: mean 2.35 (consortium 3.30).

Section 3: Conclusions and implications for the ReMODE CoVE

Turkish textile SMEs are export-oriented industrial suppliers for whom circularity arrives as a customer and regulatory requirement rather than as a business-model choice. They already operate the verification mechanisms that EU buyers demand, but knowledge of circular economy practices, awareness of ESPR, DPP, EPR and CSRD, and sustainability governance are the weakest in the consortium, and the expected compliance burden and cost are high or unknown.

The skills gap is technical and sustainability-related at once: technical specialisation, soft skills and sustainability management are the hardest to find, qualified candidates are scarce, and the sustainability trainer or educator is the role most often reported as missing (53%) — a clear signal that in-company capacity building, not only recruitment, is required. Interest in a DPP micro-credential is cautious (15% yes, 55% maybe), which calls for awareness-raising before enrolment.

For the ReMODE CoVE in Türkiye the priority is a regulatory-awareness and compliance programme for upstream suppliers (ESPR, DPP, EPR, CSRD), combined with green-skills and digital training in bootcamp and lab formats and with the development of in-company sustainability trainers.

Recommendations

- Launch an EU-regulation awareness and compliance programme for textile suppliers (55% unaware; 95% without sustainability reporting), before DPP micro-credentials are offered.
- Train in-company sustainability trainers and educators, the role most often reported as missing (53%).
- Combine green-skills, digitalisation and technical modules in on-site bootcamps and hands-on labs, the formats preferred by 65% and 50% of firms.
- Address the lack of qualified candidates (74%) through VET–industry pathways and apprenticeships in Bursa.
- Channel financial incentives (85%) and training/certification support (45%) through the regional CoVE.

PART D — VET and HEI country reports (Annex D)

D1 Finland (n=12) · D2 Germany (n=13) · D3 Greece (n=12) · D4 Italy (n=19) · D5 Türkiye (n=20). All reports computed on the final consolidated educator dataset (78 valid responses).

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REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Finland Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Finland Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector	**WP2 Task: T2.3**
Lead Partner: KAMK University of Applied Sciences (KAMK)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: KAMK; data consolidation AUEB-RC	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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Section 1: Introduction

This report presents the readiness of Finnish vocational (VET) and higher-education (HEI) educators to deliver circular fashion and textile education, as captured by the ReMODE Stage-2 educator survey. It supersedes the two Finnish educator reports of December 2025 (6 VET and HEI responses), which were prepared before data collection closed.

Data source and sample. The analysis uses the 12 responses of educators of Finnish nationality to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness in VETs and HEIs in the Fashion and Textile Sector” (INS-02; 21 Likert items, two multi-select items and open questions), administered online in December 2025 (final consortium dataset: 78 educators — Türkiye 20, Italy 19, Germany 13, Finland 12, Greece 12, nationality not stated 2). The questionnaire did not ask for the country of the institution, so nationality is used as the country proxy. Likert items are scored 1 (strongly disagree) to 5 (strongly agree); “agree” means a score of 4 or 5. Given the sample size, findings are indicative and should be read with the consolidated analysis in Part B.

Finnish educators are experienced (58% aged 55–64), overwhelmingly female (92%) and confident: they report the highest regulatory awareness in the consortium (100% agree they are aware of upcoming EU textile regulation) and unanimous agreement that their curricula support circular-economy skills. Sensory and material-based pedagogy is near-universal (means 4.9 and 4.8). The weak points are digital: no Finnish respondent agrees that digital tools raise sustainability awareness, and only 40% feel confident integrating digital technologies. Institutional support from national or EU frameworks is rated as less important than elsewhere (33% agree), and reporting frameworks (GRI/ESRS) are only partly embedded (40%).

Section 2: Survey Analysis

2.1 Respondent profile

Respondent profile by organisation type, discipline, gender and age band.

Organisation type	**n**	**%**
other / unspecified	5	42%
HEI / university	4	33%
VET / school	3	25%

Discipline	**n**	**%**
Education & Curriculum Development (VET/HEI)	4	33%
Fashion Design & Product Development	4	33%
Textile Engineering & Materials Science	2	17%
Sustainability & Circular Economy Strategies	1	8%
SME Management in Fashion/Textiles	1	8%

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Gender	n	%
Female	11	92%
Prefer not to say	1	8%

Age band	n	%
55-64	7	58%
45-54	4	33%
35-44	1	8%

2.2 Teaching approaches and pedagogical experience

On this block, item 1.1 (i regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning) scores 4.08 with 75% agreement, close to the consortium mean of 4.27; item 1.3 (creative or sustainability-oriented approaches are more effective than traditional methods) scores 4.08 with 92% agreement, close to the consortium mean of 4.10; item 1.4 (i am confident applying sustainability-focused pedagogies) scores 4.33 with 92% agreement, close to the consortium mean of 4.08; item 1.5 (support from my vet centre / national or eu frameworks is important for implementing these methods) scores 3.17 with 33% agreement, below the consortium mean of 3.64.

Item (1 = strongly disagree … 5 = strongly agree)	n	Finland mean	Finland agree (4–5)	All mean	All agree
1.1 I regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning	12	4.08	75%	4.27	85%
1.3 Creative or sustainability-oriented approaches are more effective than traditional methods	12	4.08	92%	4.10	81%
1.4 I am confident applying sustainability-focused pedagogies	12	4.33	92%	4.08	80%
1.5 Support from my VET centre / national or EU frameworks is important for implementing these methods	12	3.17	33%	3.64	54%

2.3 Creative and experiential methods

On this block, item 2.1 (i use experiential or creative methods (studio, workshops, fieldwork)) scores 3.42 with 67% agreement, close to the consortium mean of 3.63; item 2.2 (interactive, project-based modules engage students) scores 3.75 with 75% agreement, below the consortium mean of 4.10.

Item (1 = strongly disagree … 5 = strongly agree)	n	Finland mean	Finland agree (4–5)	All mean	All agree

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2.1 I use experiential or creative methods (studio, workshops, fieldwork)	12	3.42	67%	3.63	63%
2.2 Interactive, project-based modules engage students	12	3.75	75%	4.10	78%

2.4 Sensory and material-based learning

On this block, item 3.1 (sensory, visual or material-based teaching materials enhance creativity and emotional engagement) scores 4.92 with 100% agreement, above the consortium mean of 4.49; item 3.2 (sensory and material-based approaches enhance the overall learning experience) scores 4.83 with 100% agreement, above the consortium mean of 4.41.

Item (1 = strongly disagree … 5 = strongly agree)	n	Finland mean	Finland agree (4–5)	All mean	All agree
3.1 Sensory, visual or material-based teaching materials enhance creativity and emotional engagement	12	4.92	100%	4.49	90%
3.2 Sensory and material-based approaches enhance the overall learning experience	12	4.83	100%	4.41	90%

How sensory or material-based activities improve learning (multi-select): Focused/engaging (70%); Easier to understand/remember (70%); Yes esp. visual/tactile learners (60%); Depends on activity/alignment (60%); Yes only when structured and supported (40%).

2.5 Learning, motivation and gamified activities

On this block, item 4.1 (i have used or observed experiential learning activities in fashion education) scores 4.20 with 70% agreement, close to the consortium mean of 3.91; item 4.2 (small rewards or recognition increase student motivation) scores 3.90 with 50% agreement, below the consortium mean of 4.25; item 4.3 (gamified or challenge-based tasks help students understand sustainability concepts) scores 3.40 with 40% agreement, below the consortium mean of 3.88.

Item (1 = strongly disagree … 5 = strongly agree)	n	Finland mean	Finland agree (4–5)	All mean	All agree
4.1 I have used or observed experiential learning activities in fashion education	10	4.20	70%	3.91	68%
4.2 Small rewards or recognition increase student motivation	10	3.90	50%	4.25	84%
4.3 Gamified or challenge-based tasks help students understand sustainability concepts	10	3.40	40%	3.88	66%

2.6 Technology and digital engagement

On this block, item 5.1 (digital tools enhance student engagement) scores 3.70 with 70% agreement, close to the consortium mean of 3.88; item 5.2 (digital tools raise sustainability

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awareness) scores 2.70 with 0% agreement, below the consortium mean of 3.46; item 5.3 (i am confident integrating digital technologies into my teaching) scores 3.40 with 40% agreement, close to the consortium mean of 3.51.

Item (1 = strongly disagree … 5 = strongly agree)	n	Finland mean	Finland agree (4–5)	All mean	All agree
5.1 Digital tools enhance student engagement	10	3.70	70%	3.88	70%
5.2 Digital tools raise sustainability awareness	10	2.70	0%	3.46	51%
5.3 I am confident integrating digital technologies into my teaching	10	3.40	40%	3.51	50%

2.7 Policy awareness and regulatory alignment

On this block, item 6.1 (i am aware of upcoming eu textile and sustainability regulations) scores 4.40 with 100% agreement, above the consortium mean of 3.54; item 6.2 (our curriculum anticipates future legislation and policy directions) scores 3.90 with 70% agreement, above the consortium mean of 3.21.

Item (1 = strongly disagree … 5 = strongly agree)	n	Finland mean	Finland agree (4–5)	All mean	All agree
6.1 I am aware of upcoming EU textile and sustainability regulations	10	4.40	100%	3.54	51%
6.2 Our curriculum anticipates future legislation and policy directions	10	3.90	70%	3.21	46%

2.8 Curriculum responsiveness and skills for the circular transition

On this block, item 7.3 (our curriculum supports the skills needed for circular-economy transitions in fashion) scores 4.40 with 100% agreement, above the consortium mean of 3.60; item 7.2 (our programmes prepare students for current and emerging regulation) scores 3.30 with 50% agreement, close to the consortium mean of 3.06; item 7.1 (our curricula incorporate sustainability reporting frameworks (gri, esrs)) scores 2.90 with 40% agreement, close to the consortium mean of 2.67; item 8.1 (module design in my institution supports sustainable and creative fashion education) scores 3.90 with 70% agreement, above the consortium mean of 3.51; item 8.4 (there is room for improvement in the design of sustainability-focused activities) scores 4.40 with 90% agreement, above the consortium mean of 3.89.

Item (1 = strongly disagree … 5 = strongly agree)	n	Finland mean	Finland agree (4–5)	All mean	All agree
7.3 Our curriculum supports the skills needed for circular-economy transitions in fashion	10	4.40	100%	3.60	62%
7.2 Our programmes prepare students for current and emerging regulation	10	3.30	50%	3.06	38%

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7.1 Our curricula incorporate sustainability reporting frameworks (GRI, ESRS)	10	2.90	40%	2.67	32%
8.1 Module design in my institution supports sustainable and creative fashion education	10	3.90	70%	3.51	51%
8.4 There is room for improvement in the design of sustainability-focused activities	10	4.40	90%	3.89	74%

External actors included in course activities (multi-select): Companies (100%); Professionals (60%); Artisans (40%); Research centres (30%); Industrial districts (20%).

External actor	**Finland n**	**Finland %**	**All countries %**
Companies	10/10	100%	66%
Professionals	6/10	60%	78%
Artisans	4/10	40%	45%
Research centres	3/10	30%	33%
Industrial districts	2/10	20%	27%

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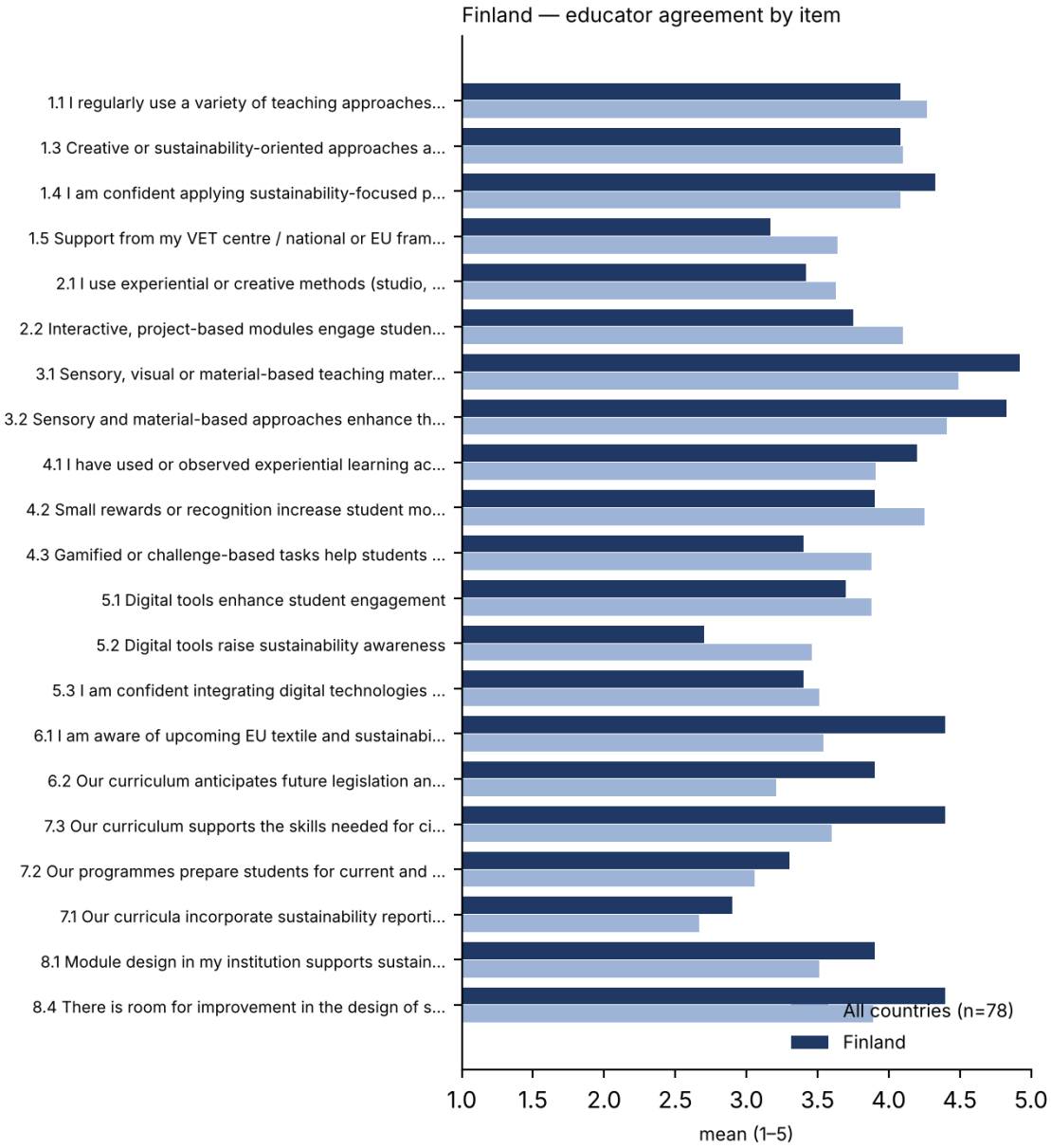

Section 3: Conclusions and implications for the ReMODE CoVE

Finnish VET and HEI educators combine strong hands-on, material-based pedagogy with the highest regulatory literacy in the consortium; every respondent reports company collaboration in course activities. The gap is not pedagogical readiness but the digital layer: digital tools are used for engagement but not yet linked to sustainability learning outcomes, and confidence in integrating digital technologies is limited.

For the ReMODE CoVE this points to educator upskilling on digital-for-sustainability (DPP, traceability, 3D and virtual prototyping as circularity tools), to sharing Finnish practice on regulatory literacy and company collaboration with the other regions, and to embedding sustainability-reporting frameworks where they are still absent.

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Recommendations

- Educator module on digital tools as circularity enablers (DPP, traceability, 3D prototyping), addressing the lowest-scoring items.
- Document and transfer Finnish practice on EU-regulation literacy and systematic company collaboration to the other regional CoVEs.
- Embed GRI/ESRS reporting literacy in curricula (currently 40% agreement).
- Keep sensory and material-based learning at the core of the ReMODE methodology, where Finland scores highest.
- Use the ReMODE learning portal to support the asynchronous elements educators ask for.

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REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Germany Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Germany Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector	**WP2 Task: T2.3**
Lead Partner: Life Learning Development e.V. (LLD)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: LLD; data consolidation AUEB-RC	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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Section 1: Introduction

This report presents the readiness of German vocational (VET) and higher-education (HEI) educators to deliver circular fashion and textile education, as captured by the ReMODE Stage-2 educator survey. It supersedes the national educator report of December 2025 (5 responses), which was prepared before data collection closed.

Data source and sample. The analysis uses the 13 responses of educators of German nationality to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness in VETs and HEIs in the Fashion and Textile Sector” (INS-02; 21 Likert items, two multi-select items and open questions), administered online in December 2025 (final consortium dataset: 78 educators — Türkiye 20, Italy 19, Germany 13, Finland 12, Greece 12, nationality not stated 2). The questionnaire did not ask for the country of the institution, so nationality is used as the country proxy. Likert items are scored 1 (strongly disagree) to 5 (strongly agree); “agree” means a score of 4 or 5. Given the sample size, findings are indicative and should be read with the consolidated analysis in Part B.

German educators are the most digitally confident group in the consortium (77% confident integrating digital technologies; 62% agree digital tools raise sustainability awareness) and the most positive on curriculum alignment with regulation: 73% agree their programmes prepare students for regulation and 64% that curricula incorporate GRI/ESRS, against 38% and 32% consortium-wide. Research centres are involved in course activities by 82% of respondents, far above the other countries. Institutional and EU-level support is rated as very important (91%). Awareness of EU textile regulation itself is moderate (55%).

Section 2: Survey Analysis

2.1 Respondent profile

Respondent profile by organisation type, discipline, gender and age band.

Organisation type	**n**	**%**
not stated	5	38%
other / unspecified	5	38%
HEI / university	2	15%
VET / school	1	8%

Discipline	**n**	**%**
Education & Curriculum Development (VET/HEI)	7	54%
Fashion Design & Product Development	4	31%
Sustainability & Circular Economy Strategies	2	15%

Gender	**n**	**%**
Female	7	54%

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Male	5	38%
Prefer not to say	1	8%

Age band	**n**	**%**
35-44	9	69%
55-64	2	15%
25-34	2	15%

2.2 Teaching approaches and pedagogical experience

On this block, item 1.1 (i regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning) scores 4.15 with 77% agreement, close to the consortium mean of 4.27; item 1.3 (creative or sustainability-oriented approaches are more effective than traditional methods) scores 4.23 with 92% agreement, close to the consortium mean of 4.10; item 1.4 (i am confident applying sustainability-focused pedagogies) scores 4.46 with 100% agreement, above the consortium mean of 4.08; item 1.5 (support from my vet centre / national or eu frameworks is important for implementing these methods) scores 4.45 with 91% agreement, above the consortium mean of 3.64.

Item (1 = strongly disagree … 5 = strongly agree)	**n**	**Germany mean**	**Germany agree (4–5)**	**All mean**	**All agree**
1.1 I regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning	13	4.15	77%	4.27	85%
1.3 Creative or sustainability-oriented approaches are more effective than traditional methods	13	4.23	92%	4.10	81%
1.4 I am confident applying sustainability-focused pedagogies	13	4.46	100%	4.08	80%
1.5 Support from my VET centre / national or EU frameworks is important for implementing these methods	11	4.45	91%	3.64	54%

2.3 Creative and experiential methods

On this block, item 2.1 (i use experiential or creative methods (studio, workshops, fieldwork)) scores 4.00 with 85% agreement, above the consortium mean of 3.63; item 2.2 (interactive, project-based modules engage students) scores 4.31 with 85% agreement, close to the consortium mean of 4.10.

Item (1 = strongly disagree … 5 = strongly agree)	**n**	**Germany mean**	**Germany agree (4–5)**	**All mean**	**All agree**
2.1 I use experiential or creative methods (studio, workshops, fieldwork)	13	4.00	85%	3.63	63%

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2.2 Interactive, project-based modules engage students	13	4.31	85%	4.10	78%

2.4 Sensory and material-based learning

On this block, item 3.1 (sensory, visual or material-based teaching materials enhance creativity and emotional engagement) scores 4.46 with 100% agreement, close to the consortium mean of 4.49; item 3.2 (sensory and material-based approaches enhance the overall learning experience) scores 4.15 with 85% agreement, close to the consortium mean of 4.41.

Item (1 = strongly disagree … 5 = strongly agree)	n	Germany mean	Germany agree (4–5)	All mean	All agree
3.1 Sensory, visual or material-based teaching materials enhance creativity and emotional engagement	13	4.46	100%	4.49	90%
3.2 Sensory and material-based approaches enhance the overall learning experience	13	4.15	85%	4.41	90%

How sensory or material-based activities improve learning (multi-select): Focused/engaging (62%); Easier to understand/remember (54%); Yes esp. visual/tactile learners (46%); Yes only when structured and supported (38%); Depends on activity/alignment (31%).

2.5 Learning, motivation and gamified activities

On this block, item 4.1 (i have used or observed experiential learning activities in fashion education) scores 4.27 with 82% agreement, above the consortium mean of 3.91; item 4.2 (small rewards or recognition increase student motivation) scores 4.38 with 92% agreement, close to the consortium mean of 4.25; item 4.3 (gamified or challenge-based tasks help students understand sustainability concepts) scores 4.08 with 77% agreement, close to the consortium mean of 3.88.

Item (1 = strongly disagree … 5 = strongly agree)	n	Germany mean	Germany agree (4–5)	All mean	All agree
4.1 I have used or observed experiential learning activities in fashion education	11	4.27	82%	3.91	68%
4.2 Small rewards or recognition increase student motivation	13	4.38	92%	4.25	84%
4.3 Gamified or challenge-based tasks help students understand sustainability concepts	13	4.08	77%	3.88	66%

2.6 Technology and digital engagement

On this block, item 5.1 (digital tools enhance student engagement) scores 4.00 with 77% agreement, close to the consortium mean of 3.88; item 5.2 (digital tools raise sustainability awareness) scores 3.54 with 62% agreement, close to the consortium mean of 3.46; item 5.3 (i am confident integrating digital technologies into my teaching) scores 4.23 with 77% agreement, above the consortium mean of 3.51.

Item (1 = strongly disagree … 5 = strongly agree)	n	Germany mean	Germany agree (4–5)	All mean	All agree
5.1 Digital tools enhance student engagement	13	4.00	77%	3.88	70%
5.2 Digital tools raise sustainability awareness	13	3.54	62%	3.46	51%
5.3 I am confident integrating digital technologies into my teaching	13	4.23	77%	3.51	50%

2.7 Policy awareness and regulatory alignment

On this block, item 6.1 (i am aware of upcoming eu textile and sustainability regulations) scores 3.55 with 54% agreement, close to the consortium mean of 3.54; item 6.2 (our curriculum anticipates future legislation and policy directions) scores 3.55 with 54% agreement, above the consortium mean of 3.21.

Item (1 = strongly disagree … 5 = strongly agree)	n	Germany mean	Germany agree (4–5)	All mean	All agree
6.1 I am aware of upcoming EU textile and sustainability regulations	11	3.55	54%	3.54	51%
6.2 Our curriculum anticipates future legislation and policy directions	11	3.55	54%	3.21	46%

2.8 Curriculum responsiveness and skills for the circular transition

On this block, item 7.3 (our curriculum supports the skills needed for circular-economy transitions in fashion) scores 3.91 with 64% agreement, above the consortium mean of 3.60; item 7.2 (our programmes prepare students for current and emerging regulation) scores 4.00 with 73% agreement, above the consortium mean of 3.06; item 7.1 (our curricula incorporate sustainability reporting frameworks (gri, esrs)) scores 3.73 with 64% agreement, above the consortium mean of 2.67; item 8.1 (module design in my institution supports sustainable and creative fashion education) scores 3.38 with 38% agreement, close to the consortium mean of 3.51; item 8.4 (there is room for improvement in the design of sustainability-focused activities) scores 4.15 with 85% agreement, close to the consortium mean of 3.89.

Item (1 = strongly disagree … 5 = strongly agree)	n	Germany mean	Germany agree (4–5)	All mean	All agree
7.3 Our curriculum supports the skills needed for circular-economy transitions in fashion	11	3.91	64%	3.60	62%
7.2 Our programmes prepare students for current and emerging regulation	11	4.00	73%	3.06	38%
7.1 Our curricula incorporate sustainability reporting frameworks (GRI, ESRS)	11	3.73	64%	2.67	32%
8.1 Module design in my institution supports sustainable and creative fashion education	13	3.38	38%	3.51	51%

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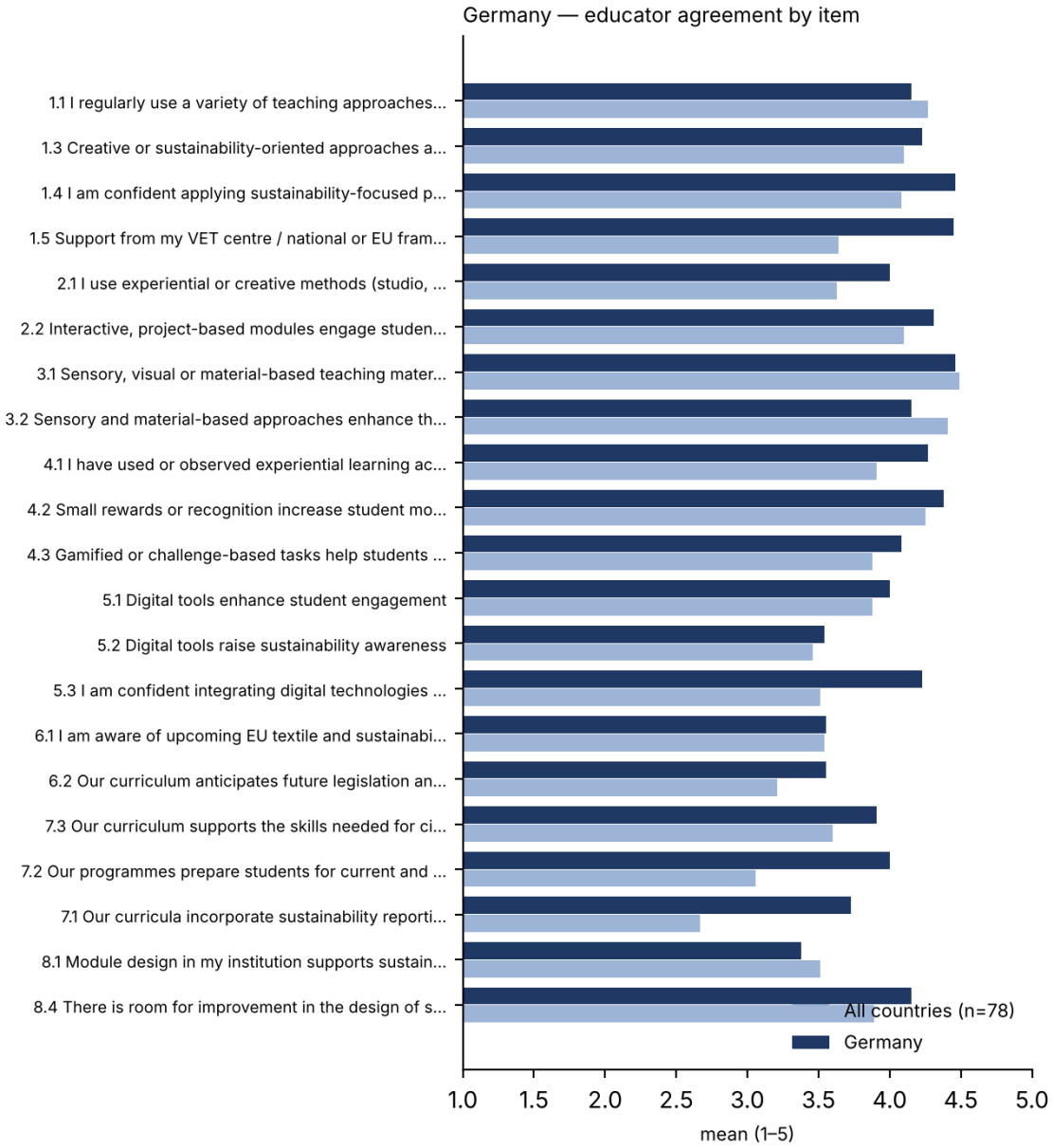
8.4 There is room for improvement in the design of sustainability-focused activities	13	4.15	85%	3.89	74%

External actors included in course activities (multi-select): Professionals (82%); Research centres (82%); Companies (73%); Artisans (36%); Industrial districts (9%).

External actor	Germany n	Germany %	All countries %
Professionals	9/11	82%	78%
Research centres	9/11	82%	33%
Companies	8/11	73%	66%
Artisans	4/11	36%	45%
Industrial districts	1/11	9%	27%



Section 3: Conclusions and implications for the ReMODE CoVE

German VET and HEI educators report a mature combination of experiential pedagogy, digital confidence and regulatory embedding, with strong links to professionals and research centres. The remaining gaps are moderate regulatory awareness and module design (only 38% agree that module design in their institution supports sustainable and creative fashion education, while 85% see room for improvement in activity design).

For the ReMODE CoVE, Germany can anchor the digital and reporting components of the learning methodology, while benefiting from targeted updates on the EU textile regulatory calendar and from shared activity design for sustainability-focused modules.

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Recommendations

- Position German educators as lead contributors to the digital and sustainability-reporting modules of the ReMODE methodology.
- Provide a concise EU textile regulation update (ESPR, DPP, EPR, CSRD) for educators (55% aware).
- Co-design sustainability-focused activity templates, answering the 85% who see room for improvement.
- Keep the research-centre and professional collaboration model as a reference for other regions.
- Maintain gamified and reward-based motivation elements, which score highly in Germany.

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REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Greece Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Greece Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector	**WP2 Task: T2.3**
Lead Partner: PANSiK, AUEB-RC, SOFFA	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: PANSiK, AUEB-RC, SOFFA	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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

Section 1: Introduction

This report presents the readiness of Greek vocational (VET) and higher-education (HEI) educators to deliver circular fashion and textile education, as captured by the ReMODE Stage-2 educator survey. It supersedes the national educator report of December 2025 (6 responses), which was prepared before data collection closed.

Data source and sample. The analysis uses the 12 responses of educators of Greek nationality to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness in VETs and HEIs in the Fashion and Textile Sector” (INS-02; 21 Likert items, two multi-select items and open questions), administered online in December 2025 (final consortium dataset: 78 educators — Türkiye 20, Italy 19, Germany 13, Finland 12, Greece 12, nationality not stated 2). The questionnaire did not ask for the country of the institution, so nationality is used as the country proxy. Likert items are scored 1 (strongly disagree) to 5 (strongly agree); “agree” means a score of 4 or 5. Given the sample size, findings are indicative and should be read with the consolidated analysis in Part B.

Greek educators are the most enthusiastic adopters of interactive, gamified and digital methods in the consortium: 100% agree that interactive project-based modules engage students, that small rewards and gamified tasks help, and that digital tools enhance engagement; 92% agree digital tools raise sustainability awareness. Confidence is lower than enthusiasm — 58% feel confident applying sustainability pedagogies and 50% integrating digital technologies — and institutional or EU support is rated as very important (83%). Regulatory awareness (42%) and curriculum anticipation of legislation (50%) are moderate, and every respondent sees room for improvement in sustainability-focused activity design. Professionals are the dominant external partner (92%); companies (42%) and research centres (8%) are rarely involved.

Section 2: Survey Analysis

2.1 Respondent profile

Respondent profile by organisation type, discipline, gender and age band.

Organisation type	**n**	**%**
HEI / university	5	42%
VET / school	4	33%
not stated	3	25%

Discipline	**n**	**%**
Education & Curriculum Development (VET/HEI)	9	75%
Fashion Design & Product Development	2	17%
Textile Engineering & Materials Science	1	8%

Gender	**n**	**%**

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Female	8	67%
Male	2	17%
Prefer not to say	2	17%

Age band	**n**	**%**
35-44	6	50%
45-54	4	33%
55-64	1	8%
25-34	1	8%

2.2 Teaching approaches and pedagogical experience

On this block, item 1.1 (i regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning) scores 4.50 with 92% agreement, close to the consortium mean of 4.27; item 1.3 (creative or sustainability-oriented approaches are more effective than traditional methods) scores 4.67 with 92% agreement, above the consortium mean of 4.10; item 1.4 (i am confident applying sustainability-focused pedagogies) scores 3.67 with 58% agreement, below the consortium mean of 4.08; item 1.5 (support from my vet centre / national or eu frameworks is important for implementing these methods) scores 4.33 with 83% agreement, above the consortium mean of 3.64.

Item (1 = strongly disagree … 5 = strongly agree)	**n**	**Greece mean**	**Greece agree (4–5)**	**All mean**	**All agree**
1.1 I regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning	12	4.50	92%	4.27	85%
1.3 Creative or sustainability-oriented approaches are more effective than traditional methods	12	4.67	92%	4.10	81%
1.4 I am confident applying sustainability-focused pedagogies	12	3.67	58%	4.08	80%
1.5 Support from my VET centre / national or EU frameworks is important for implementing these methods	12	4.33	83%	3.64	54%

2.3 Creative and experiential methods

On this block, item 2.1 (i use experiential or creative methods (studio, workshops, fieldwork)) scores 3.92 with 75% agreement, close to the consortium mean of 3.63; item 2.2 (interactive, project-based modules engage students) scores 4.83 with 100% agreement, above the consortium mean of 4.10.

Item (1 = strongly disagree … 5 = strongly agree)	**n**	**Greece mean**	**Greece agree (4–5)**	**All mean**	**All agree**

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2.1 I use experiential or creative methods (studio, workshops, fieldwork)	12	3.92	75%	3.63	63%
2.2 Interactive, project-based modules engage students	12	4.83	100%	4.10	78%

2.4 Sensory and material-based learning

On this block, item 3.1 (sensory, visual or material-based teaching materials enhance creativity and emotional engagement) scores 4.83 with 92% agreement, above the consortium mean of 4.49; item 3.2 (sensory and material-based approaches enhance the overall learning experience) scores 4.75 with 92% agreement, above the consortium mean of 4.41.

Item (1 = strongly disagree … 5 = strongly agree)	n	Greece mean	Greece agree (4–5)	All mean	All agree
3.1 Sensory, visual or material-based teaching materials enhance creativity and emotional engagement	12	4.83	92%	4.49	90%
3.2 Sensory and material-based approaches enhance the overall learning experience	12	4.75	92%	4.41	90%

How sensory or material-based activities improve learning (multi-select): Focused/engaging (33%); Yes esp. visual/tactile learners (33%); Yes only when structured and supported (25%); Easier to understand/remember (25%); Depends on activity/alignment (25%).

2.5 Learning, motivation and gamified activities

On this block, item 4.1 (i have used or observed experiential learning activities in fashion education) scores 3.58 with 50% agreement, below the consortium mean of 3.91; item 4.2 (small rewards or recognition increase student motivation) scores 4.75 with 100% agreement, above the consortium mean of 4.25; item 4.3 (gamified or challenge-based tasks help students understand sustainability concepts) scores 4.75 with 100% agreement, above the consortium mean of 3.88.

Item (1 = strongly disagree … 5 = strongly agree)	n	Greece mean	Greece agree (4–5)	All mean	All agree
4.1 I have used or observed experiential learning activities in fashion education	12	3.58	50%	3.91	68%
4.2 Small rewards or recognition increase student motivation	12	4.75	100%	4.25	84%
4.3 Gamified or challenge-based tasks help students understand sustainability concepts	12	4.75	100%	3.88	66%

2.6 Technology and digital engagement

On this block, item 5.1 (digital tools enhance student engagement) scores 4.75 with 100% agreement, above the consortium mean of 3.88; item 5.2 (digital tools raise sustainability awareness) scores 4.50 with 92% agreement, above the consortium mean of 3.46; item 5.3 (i

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am confident integrating digital technologies into my teaching) scores 3.67 with 50% agreement, close to the consortium mean of 3.51.

Item (1 = strongly disagree … 5 = strongly agree)	n	Greece mean	Greece agree (4–5)	All mean	All agree
5.1 Digital tools enhance student engagement	12	4.75	100%	3.88	70%
5.2 Digital tools raise sustainability awareness	12	4.50	92%	3.46	51%
5.3 I am confident integrating digital technologies into my teaching	12	3.67	50%	3.51	50%

2.7 Policy awareness and regulatory alignment

On this block, item 6.1 (i am aware of upcoming eu textile and sustainability regulations) scores 3.33 with 42% agreement, close to the consortium mean of 3.54; item 6.2 (our curriculum anticipates future legislation and policy directions) scores 3.42 with 50% agreement, close to the consortium mean of 3.21.

Item (1 = strongly disagree … 5 = strongly agree)	n	Greece mean	Greece agree (4–5)	All mean	All agree
6.1 I am aware of upcoming EU textile and sustainability regulations	12	3.33	42%	3.54	51%
6.2 Our curriculum anticipates future legislation and policy directions	12	3.42	50%	3.21	46%

2.8 Curriculum responsiveness and skills for the circular transition

On this block, item 7.3 (our curriculum supports the skills needed for circular-economy transitions in fashion) scores 3.75 with 75% agreement, close to the consortium mean of 3.60; item 7.2 (our programmes prepare students for current and emerging regulation) scores 3.33 with 50% agreement, close to the consortium mean of 3.06; item 7.1 (our curricula incorporate sustainability reporting frameworks (gri, esrs)) scores 3.42 with 50% agreement, above the consortium mean of 2.67; item 8.1 (module design in my institution supports sustainable and creative fashion education) scores 3.58 with 58% agreement, close to the consortium mean of 3.51; item 8.4 (there is room for improvement in the design of sustainability-focused activities) scores 4.92 with 100% agreement, above the consortium mean of 3.89.

Item (1 = strongly disagree … 5 = strongly agree)	n	Greece mean	Greece agree (4–5)	All mean	All agree
7.3 Our curriculum supports the skills needed for circular-economy transitions in fashion	12	3.75	75%	3.60	62%
7.2 Our programmes prepare students for current and emerging regulation	12	3.33	50%	3.06	38%
7.1 Our curricula incorporate sustainability reporting frameworks (GRI, ESRS)	12	3.42	50%	2.67	32%

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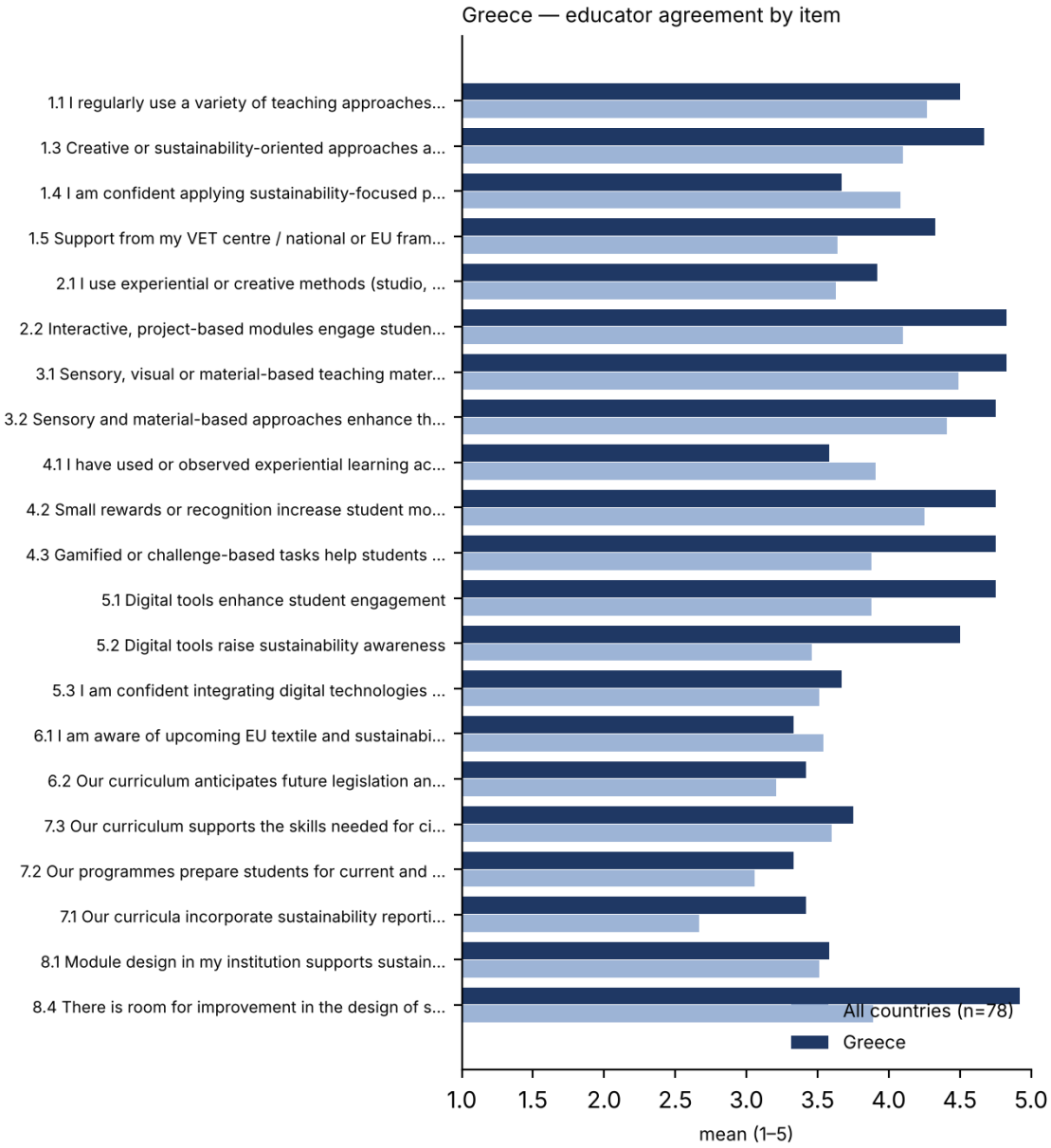
8.1 Module design in my institution supports sustainable and creative fashion education	12	3.58	58%	3.51	51%
8.4 There is room for improvement in the design of sustainability-focused activities	12	4.92	100%	3.89	74%

External actors included in course activities (multi-select): Professionals (92%); Companies (42%); Artisans (17%); Industrial districts (8%); Research centres (8%).

External actor	**Greece n**	**Greece %**	**All countries %**
Professionals	11/12	92%	78%
Companies	5/12	42%	66%
Artisans	2/12	17%	45%
Industrial districts	1/12	8%	27%
Research centres	1/12	8%	33%



Section 3: Conclusions and implications for the ReMODE CoVE

Greek VET and HEI educators are pedagogically ready and digitally enthusiastic but under-supported: they want frameworks, training and structured resources, and their collaboration with companies and research is thin compared with the other countries. This matches the Greek SME findings, where firms ask for university partnerships and brokers.

For the ReMODE CoVE in Greece the priorities are educator training on sustainability pedagogies and regulatory content, structured company and research partnerships in course design, and shared activity templates, so that strong motivation becomes consistent practice.

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Recommendations

- Educator professional development on sustainability pedagogies and the EU regulatory calendar (confidence 58%, awareness 42%).
- Structured company and research-centre involvement in courses, mirroring the SME demand for university partnerships.
- Shared, ready-to-use sustainability activity templates (100% see room for improvement).
- Use the Greek enthusiasm for gamified and digital methods to pilot the ReMODE digital learning formats.
- Embed reporting frameworks and regulatory horizon-scanning in curriculum governance.

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REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Italy Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Italy Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector	**WP2 Task: T2.3**
Lead Partner: Università Iuav di Venezia (IUAV)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: IUAV; data consolidation AUEB-RC	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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Section 1: Introduction

This report presents the readiness of Italian vocational (VET) and higher-education (HEI) educators to deliver circular fashion and textile education, as captured by the ReMODE Stage-2 educator survey. It supersedes the Italian VET and HEI educator reports of December 2025 (5 responses each), which were prepared before data collection closed; Italy is the second-largest national sample.

Data source and sample. The analysis uses the 19 responses of educators of Italian nationality to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness in VETs and HEIs in the Fashion and Textile Sector” (INS-02; 21 Likert items, two multi-select items and open questions), administered online in December 2025 (final consortium dataset: 78 educators — Türkiye 20, Italy 19, Germany 13, Finland 12, Greece 12, nationality not stated 2). The questionnaire did not ask for the country of the institution, so nationality is used as the country proxy. Likert items are scored 1 (strongly disagree) to 5 (strongly agree); “agree” means a score of 4 or 5. Given the sample size, findings are indicative and should be read with the consolidated analysis in Part B.

Italian educators report the strongest craft-and-territory anchoring in the consortium: artisans (79%) and industrial districts (68%) are involved in course activities far more often than elsewhere, alongside professionals (89%) and companies (68%). Pedagogical variety (89%) and sensory, material-based learning (84%) are high. The gaps are regulatory and digital: curricula rarely incorporate GRI/ESRS (12% agree, mean 1.76, the lowest in the consortium), only 12% agree programmes prepare students for regulation and 18% that curricula anticipate legislation; confidence in digital technologies (21%) and the view that digital tools raise sustainability awareness (26%) are also the lowest. Institutional or EU support is rated as important by only 16%.

Section 2: Survey Analysis

2.1 Respondent profile

Respondent profile by organisation type, discipline, gender and age band.

Organisation type	**n**	**%**
HEI / university	7	37%
not stated	6	32%
VET / school	4	21%
other / unspecified	2	11%

Discipline	**n**	**%**
Fashion Design & Product Development	6	35%
Textile Engineering & Materials Science	6	35%
Education & Curriculum Development (VET/HEI)	3	18%

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SME Management in Fashion/Textiles	1	6%
Sustainability & Circular Economy Strategies	1	6%

Gender	**n**	**%**
Female	12	63%
Male	7	37%

Age band	**n**	**%**
35-44	6	32%
25-34	6	32%
55-64	5	26%
45-54	2	11%

2.2 Teaching approaches and pedagogical experience

On this block, item 1.1 (i regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning) scores 4.47 with 90% agreement, close to the consortium mean of 4.27; item 1.3 (creative or sustainability-oriented approaches are more effective than traditional methods) scores 4.00 with 68% agreement, close to the consortium mean of 4.10; item 1.4 (i am confident applying sustainability-focused pedagogies) scores 4.00 with 68% agreement, close to the consortium mean of 4.08; item 1.5 (support from my vet centre / national or eu frameworks is important for implementing these methods) scores 2.95 with 16% agreement, below the consortium mean of 3.64.

Item (1 = strongly disagree … 5 = strongly agree)	**n**	**Italy mean**	**Italy agree (4–5)**	**All mean**	**All agree**
1.1 I regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning	19	4.47	90%	4.27	85%
1.3 Creative or sustainability-oriented approaches are more effective than traditional methods	19	4.00	68%	4.10	81%
1.4 I am confident applying sustainability-focused pedagogies	19	4.00	68%	4.08	80%
1.5 Support from my VET centre / national or EU frameworks is important for implementing these methods	19	2.95	16%	3.64	54%

2.3 Creative and experiential methods

On this block, item 2.1 (i use experiential or creative methods (studio, workshops, fieldwork)) scores 3.58 with 58% agreement, close to the consortium mean of 3.63; item 2.2 (interactive,

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project-based modules engage students) scores 4.11 with 74% agreement, close to the consortium mean of 4.10.

Item (1 = strongly disagree … 5 = strongly agree)	n	Italy mean	Italy agree (4–5)	All mean	All agree
2.1 I use experiential or creative methods (studio, workshops, fieldwork)	19	3.58	58%	3.63	63%
2.2 Interactive, project-based modules engage students	19	4.11	74%	4.10	78%

2.4 Sensory and material-based learning

On this block, item 3.1 (sensory, visual or material-based teaching materials enhance creativity and emotional engagement) scores 4.32 with 74% agreement, close to the consortium mean of 4.49; item 3.2 (sensory and material-based approaches enhance the overall learning experience) scores 4.32 with 84% agreement, close to the consortium mean of 4.41.

Item (1 = strongly disagree … 5 = strongly agree)	n	Italy mean	Italy agree (4–5)	All mean	All agree
3.1 Sensory, visual or material-based teaching materials enhance creativity and emotional engagement	19	4.32	74%	4.49	90%
3.2 Sensory and material-based approaches enhance the overall learning experience	19	4.32	84%	4.41	90%

How sensory or material-based activities improve learning (multi-select): Easier to understand/remember (79%); Yes esp. visual/tactile learners (63%); Focused/engaging (58%); Yes only when structured and supported (26%).

2.5 Learning, motivation and gamified activities

On this block, item 4.1 (i have used or observed experiential learning activities in fashion education) scores 4.16 with 74% agreement, close to the consortium mean of 3.91; item 4.2 (small rewards or recognition increase student motivation) scores 3.95 with 79% agreement, close to the consortium mean of 4.25; item 4.3 (gamified or challenge-based tasks help students understand sustainability concepts) scores 3.53 with 37% agreement, below the consortium mean of 3.88.

Item (1 = strongly disagree … 5 = strongly agree)	n	Italy mean	Italy agree (4–5)	All mean	All agree
4.1 I have used or observed experiential learning activities in fashion education	19	4.16	74%	3.91	68%
4.2 Small rewards or recognition increase student motivation	19	3.95	79%	4.25	84%
4.3 Gamified or challenge-based tasks help students understand sustainability concepts	19	3.53	37%	3.88	66%

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2.6 Technology and digital engagement

On this block, item 5.1 (digital tools enhance student engagement) scores 3.32 with 42% agreement, below the consortium mean of 3.88; item 5.2 (digital tools raise sustainability awareness) scores 2.63 with 26% agreement, below the consortium mean of 3.46; item 5.3 (i am confident integrating digital technologies into my teaching) scores 2.68 with 21% agreement, below the consortium mean of 3.51.

Item (1 = strongly disagree … 5 = strongly agree)	n	Italy mean	Italy agree (4–5)	All mean	All agree
5.1 Digital tools enhance student engagement	19	3.32	42%	3.88	70%
5.2 Digital tools raise sustainability awareness	19	2.63	26%	3.46	51%
5.3 I am confident integrating digital technologies into my teaching	19	2.68	21%	3.51	50%

2.7 Policy awareness and regulatory alignment

On this block, item 6.1 (i am aware of upcoming eu textile and sustainability regulations) scores 3.41 with 35% agreement, close to the consortium mean of 3.54; item 6.2 (our curriculum anticipates future legislation and policy directions) scores 2.41 with 18% agreement, below the consortium mean of 3.21.

Item (1 = strongly disagree … 5 = strongly agree)	n	Italy mean	Italy agree (4–5)	All mean	All agree
6.1 I am aware of upcoming EU textile and sustainability regulations	17	3.41	35%	3.54	51%
6.2 Our curriculum anticipates future legislation and policy directions	17	2.41	18%	3.21	46%

2.8 Curriculum responsiveness and skills for the circular transition

On this block, item 7.3 (our curriculum supports the skills needed for circular-economy transitions in fashion) scores 3.65 with 65% agreement, close to the consortium mean of 3.60; item 7.2 (our programmes prepare students for current and emerging regulation) scores 2.59 with 12% agreement, below the consortium mean of 3.06; item 7.1 (our curricula incorporate sustainability reporting frameworks (gri, esrs)) scores 1.76 with 12% agreement, below the consortium mean of 2.67; item 8.1 (module design in my institution supports sustainable and creative fashion education) scores 3.84 with 53% agreement, above the consortium mean of 3.51; item 8.4 (there is room for improvement in the design of sustainability-focused activities) scores 3.42 with 58% agreement, below the consortium mean of 3.89.

Item (1 = strongly disagree … 5 = strongly agree)	n	Italy mean	Italy agree (4–5)	All mean	All agree

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7.3 Our curriculum supports the skills needed for circular-economy transitions in fashion	17	3.65	65%	3.60	62%
7.2 Our programmes prepare students for current and emerging regulation	17	2.59	12%	3.06	38%
7.1 Our curricula incorporate sustainability reporting frameworks (GRI, ESRS)	17	1.76	12%	2.67	32%
8.1 Module design in my institution supports sustainable and creative fashion education	19	3.84	53%	3.51	51%
8.4 There is room for improvement in the design of sustainability-focused activities	19	3.42	58%	3.89	74%

External actors included in course activities (multi-select): Professionals (90%); Artisans (79%); Industrial districts (68%); Companies (68%); Research centres (32%).

External actor	**Italy n**	**Italy %**	**All countries %**
Professionals	17/19	90%	78%
Artisans	15/19	79%	45%
Industrial districts	13/19	68%	27%
Companies	13/19	68%	66%
Research centres	6/19	32%	33%

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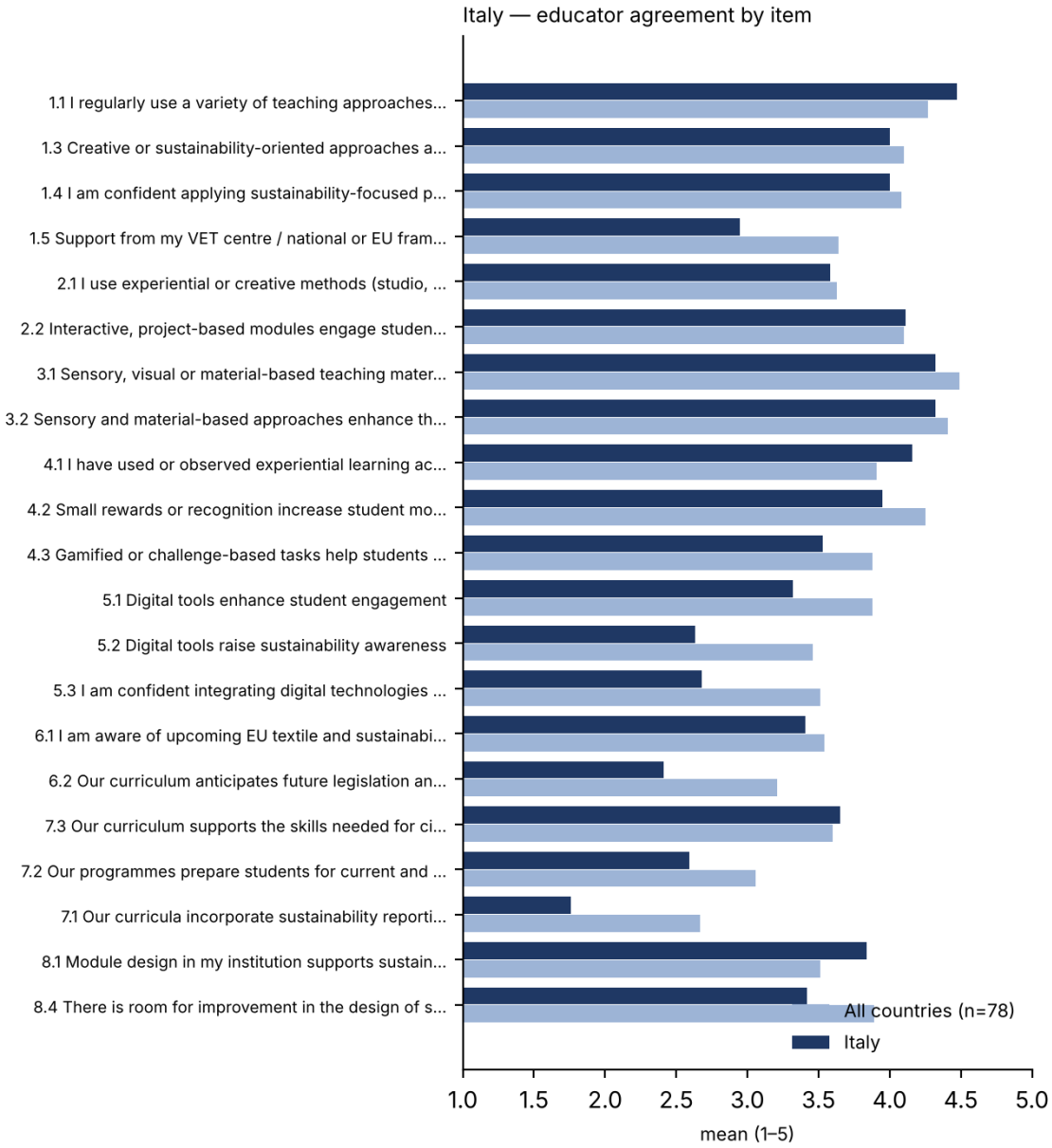

Section 3: Conclusions and implications for the ReMODE CoVE

Italian VET and HEI educators embody the design-and-craft tradition that the Italian SMEs also describe, with deep links to artisans and districts. They are, however, the least prepared group on the regulatory and reporting side and the least confident digitally, which mirrors the moderate regulatory awareness of Italian firms.

For the ReMODE CoVE in Italy the priority is to add a regulatory and reporting layer (ESPR, DPP, EPR, CSRD, GRI/ESRS) and digital-for-sustainability competences to a pedagogy that is already experiential and territory-based, and to use the district links as the setting for work-based learning.

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Recommendations

- Educator training on EU textile regulation and reporting frameworks (GRI/ESRS currently 12% embedded).
- Digital-for-sustainability upskilling (DPP, traceability, 3D) for educators with low digital confidence (21%).
- Formalise artisan and district collaboration as work-based learning within the ReMODE methodology.
- Co-design gamified and challenge-based sustainability tasks, which Italian educators rate lower than peers (37%).
- Keep sensory and material-based pedagogy as the Italian strength in the shared methodology.

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REMODE

Unlocking Circular Fashion Design Excellence

ERASMUS-EDU-2024-PEX-COVE

Grant Agreement number: 101194072

D2.3 - Türkiye Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector

Project: COVE REMODE – Unlocking Circular Fashion Design Excellence	**Deliverable Number**: D2.3
Deliverable Title: Türkiye Country Report on VETs & HEIs Readiness for Circular Economy in the Fashion and Textile Sector	**WP2 Task: T2.3**
Lead Partner: Bursa Uludağ University (BUU)	**Due Date**: Month 11
Dissemination Level: Public	**Version: 2.0**
Authors: BUU; data consolidation AUEB-RC	**Date: 21/11/2026**

Consent & GDPR

All respondents confirmed or mostly confirmed GDPR consent, allowing compliant analysis for the COVE REMODE project.

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Section 1: Introduction

This report presents the readiness of Turkish vocational (VET) and higher-education (HEI) educators to deliver circular fashion and textile education, as captured by the ReMODE Stage-2 educator survey. It supersedes the Turkish HEI (9 responses) and VET (8 responses) reports of December 2025; Türkiye is the largest national sample in the final dataset.

Data source and sample. The analysis uses the 20 responses of educators of Turkish nationality to the consortium-wide ReMODE Stage-2 survey “Circular Economy Readiness in VETs and HEIs in the Fashion and Textile Sector” (INS-02; 21 Likert items, two multi-select items and open questions), administered online in December 2025 (final consortium dataset: 78 educators — Türkiye 20, Italy 19, Germany 13, Finland 12, Greece 12, nationality not stated 2). The questionnaire did not ask for the country of the institution, so nationality is used as the country proxy. Likert items are scored 1 (strongly disagree) to 5 (strongly agree); “agree” means a score of 4 or 5. Given the sample size, findings are indicative and should be read with the consolidated analysis in Part B.

Turkish educators — HEI textile and fashion departments and vocational high schools in roughly equal measure — report high pedagogical variety (95%), unanimous support for sensory and material-based methods and for reward-based motivation, strong endorsement of gamified tasks (85%) and digital tools (80% engagement, 75% sustainability awareness, 70% confidence). Institutional and EU support is rated as important by 70%. Regulatory awareness is moderate (50%) and the curriculum side is the weakest: only 20% agree curricula incorporate GRI/ESRS, 30% that programmes prepare students for regulation and 40% that curricula support circular-economy skills — the lowest value for that item in the consortium.

Section 2: Survey Analysis

2.1 Respondent profile

Respondent profile by organisation type, discipline, gender and age band.

Organisation type	**n**	**%**
HEI / university	9	45%
VET / school	8	40%
not stated	2	10%
other / unspecified	1	5%

Discipline	**n**	**%**
Fashion Design & Product Development	8	40%
Textile Engineering & Materials Science	4	20%
Education & Curriculum Development (VET - Vocational Education & Training / HEI - Higher Education Institution)	2	10%

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Head of Fashion Design Technologies Department	1	5%
Fashion Design Technology Teacher	1	5%
Vocational Education & Training (Secondary Education Institution)	1	5%
Fashion Design Teacher	1	5%
Clothing Production Technologies / Fashion Design Technologies	1	5%
Teacher	1	5%

Gender	**n**	**%**
Female	17	85%
Male	3	15%

Age band	**n**	**%**
35-44	10	50%
45-54	6	30%
25-34	2	10%
55-64	2	10%

2.2 Teaching approaches and pedagogical experience

On this block, item 1.1 (i regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning) scores 4.55 with 95% agreement, close to the consortium mean of 4.27; item 1.3 (creative or sustainability-oriented approaches are more effective than traditional methods) scores 4.20 with 80% agreement, close to the consortium mean of 4.10; item 1.4 (i am confident applying sustainability-focused pedagogies) scores 4.40 with 90% agreement, above the consortium mean of 4.08; item 1.5 (support from my vet centre / national or eu frameworks is important for implementing these methods) scores 4.10 with 70% agreement, above the consortium mean of 3.64.

Item (1 = strongly disagree … 5 = strongly agree)	**n**	**Türkiye mean**	**Türkiye agree (4–5)**	**All mean**	**All agree**
1.1 I regularly use a variety of teaching approaches that foster creativity, critical thinking and active learning	20	4.55	95%	4.27	85%
1.3 Creative or sustainability-oriented approaches are more effective than traditional methods	20	4.20	80%	4.10	81%

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1.4 I am confident applying sustainability-focused pedagogies	20	4.40	90%	4.08	80%
1.5 Support from my VET centre / national or EU frameworks is important for implementing these methods	20	4.10	70%	3.64	54%

2.3 Creative and experiential methods

On this block, item 2.1 (i use experiential or creative methods (studio, workshops, fieldwork)) scores 3.75 with 50% agreement, close to the consortium mean of 3.63; item 2.2 (interactive, project-based modules engage students) scores 4.15 with 75% agreement, close to the consortium mean of 4.10.

Item (1 = strongly disagree … 5 = strongly agree)	n	Türkiye mean	Türkiye agree (4–5)	All mean	All agree
2.1 I use experiential or creative methods (studio, workshops, fieldwork)	20	3.75	50%	3.63	63%
2.2 Interactive, project-based modules engage students	20	4.15	75%	4.10	78%

2.4 Sensory and material-based learning

On this block, item 3.1 (sensory, visual or material-based teaching materials enhance creativity and emotional engagement) scores 4.65 with 100% agreement, close to the consortium mean of 4.49; item 3.2 (sensory and material-based approaches enhance the overall learning experience) scores 4.65 with 100% agreement, close to the consortium mean of 4.41.

Item (1 = strongly disagree … 5 = strongly agree)	n	Türkiye mean	Türkiye agree (4–5)	All mean	All agree
3.1 Sensory, visual or material-based teaching materials enhance creativity and emotional engagement	20	4.65	100%	4.49	90%
3.2 Sensory and material-based approaches enhance the overall learning experience	20	4.65	100%	4.41	90%

How sensory or material-based activities improve learning (multi-select): Yes esp. visual/tactile learners (69%); Yes only when structured and supported (62%); Depends on activity/alignment (25%); Focused/engaging (12%).

2.5 Learning, motivation and gamified activities

On this block, item 4.1 (i have used or observed experiential learning activities in fashion education) scores 3.90 with 70% agreement, close to the consortium mean of 3.91; item 4.2 (small rewards or recognition increase student motivation) scores 4.75 with 100% agreement, above the consortium mean of 4.25; item 4.3 (gamified or challenge-based tasks help students understand sustainability concepts) scores 4.20 with 85% agreement, above the consortium mean of 3.88.

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Item (1 = strongly disagree … 5 = strongly agree)	n	Türkiye mean	Türkiye agree (4–5)	All mean	All agree
4.1 I have used or observed experiential learning activities in fashion education	20	3.90	70%	3.91	68%
4.2 Small rewards or recognition increase student motivation	20	4.75	100%	4.25	84%
4.3 Gamified or challenge-based tasks help students understand sustainability concepts	20	4.20	85%	3.88	66%

2.6 Technology and digital engagement

On this block, item 5.1 (digital tools enhance student engagement) scores 4.30 with 80% agreement, above the consortium mean of 3.88; item 5.2 (digital tools raise sustainability awareness) scores 4.30 with 75% agreement, above the consortium mean of 3.46; item 5.3 (i am confident integrating digital technologies into my teaching) scores 4.15 with 70% agreement, above the consortium mean of 3.51.

Item (1 = strongly disagree … 5 = strongly agree)	n	Türkiye mean	Türkiye agree (4–5)	All mean	All agree
5.1 Digital tools enhance student engagement	20	4.30	80%	3.88	70%
5.2 Digital tools raise sustainability awareness	20	4.30	75%	3.46	51%
5.3 I am confident integrating digital technologies into my teaching	20	4.15	70%	3.51	50%

2.7 Policy awareness and regulatory alignment

On this block, item 6.1 (i am aware of upcoming eu textile and sustainability regulations) scores 3.70 with 50% agreement, close to the consortium mean of 3.54; item 6.2 (our curriculum anticipates future legislation and policy directions) scores 3.55 with 55% agreement, above the consortium mean of 3.21.

Item (1 = strongly disagree … 5 = strongly agree)	n	Türkiye mean	Türkiye agree (4–5)	All mean	All agree
6.1 I am aware of upcoming EU textile and sustainability regulations	20	3.70	50%	3.54	51%
6.2 Our curriculum anticipates future legislation and policy directions	20	3.55	55%	3.21	46%

2.8 Curriculum responsiveness and skills for the circular transition

On this block, item 7.3 (our curriculum supports the skills needed for circular-economy transitions in fashion) scores 3.25 with 40% agreement, below the consortium mean of 3.60; item 7.2 (our programmes prepare students for current and emerging regulation) scores 2.95 with 30% agreement, close to the consortium mean of 3.06; item 7.1 (our curricula incorporate

sustainability reporting frameworks (gri, esrs)) scores 2.55 with 20% agreement, close to the consortium mean of 2.67; item 8.1 (module design in my institution supports sustainable and creative fashion education) scores 3.40 with 50% agreement, close to the consortium mean of 3.51; item 8.4 (there is room for improvement in the design of sustainability-focused activities) scores 3.70 with 65% agreement, close to the consortium mean of 3.89.

Item (1 = strongly disagree … 5 = strongly agree)	n	Türkiye mean	Türkiye agree (4–5)	All mean	All agree
7.3 Our curriculum supports the skills needed for circular-economy transitions in fashion	20	3.25	40%	3.60	62%
7.2 Our programmes prepare students for current and emerging regulation	20	2.95	30%	3.06	38%
7.1 Our curricula incorporate sustainability reporting frameworks (GRI, ESRS)	20	2.55	20%	2.67	32%
8.1 Module design in my institution supports sustainable and creative fashion education	20	3.40	50%	3.51	51%
8.4 There is room for improvement in the design of sustainability-focused activities	20	3.70	65%	3.89	74%

External actors included in course activities (multi-select): Professionals (58%); Companies (50%); Artisans (33%); Research centres (17%).

External actor	Türkiye n	Türkiye %	All countries %
Professionals	7/12	58%	78%
Companies	6/12	50%	66%
Artisans	4/12	33%	45%
Research centres	2/12	17%	33%

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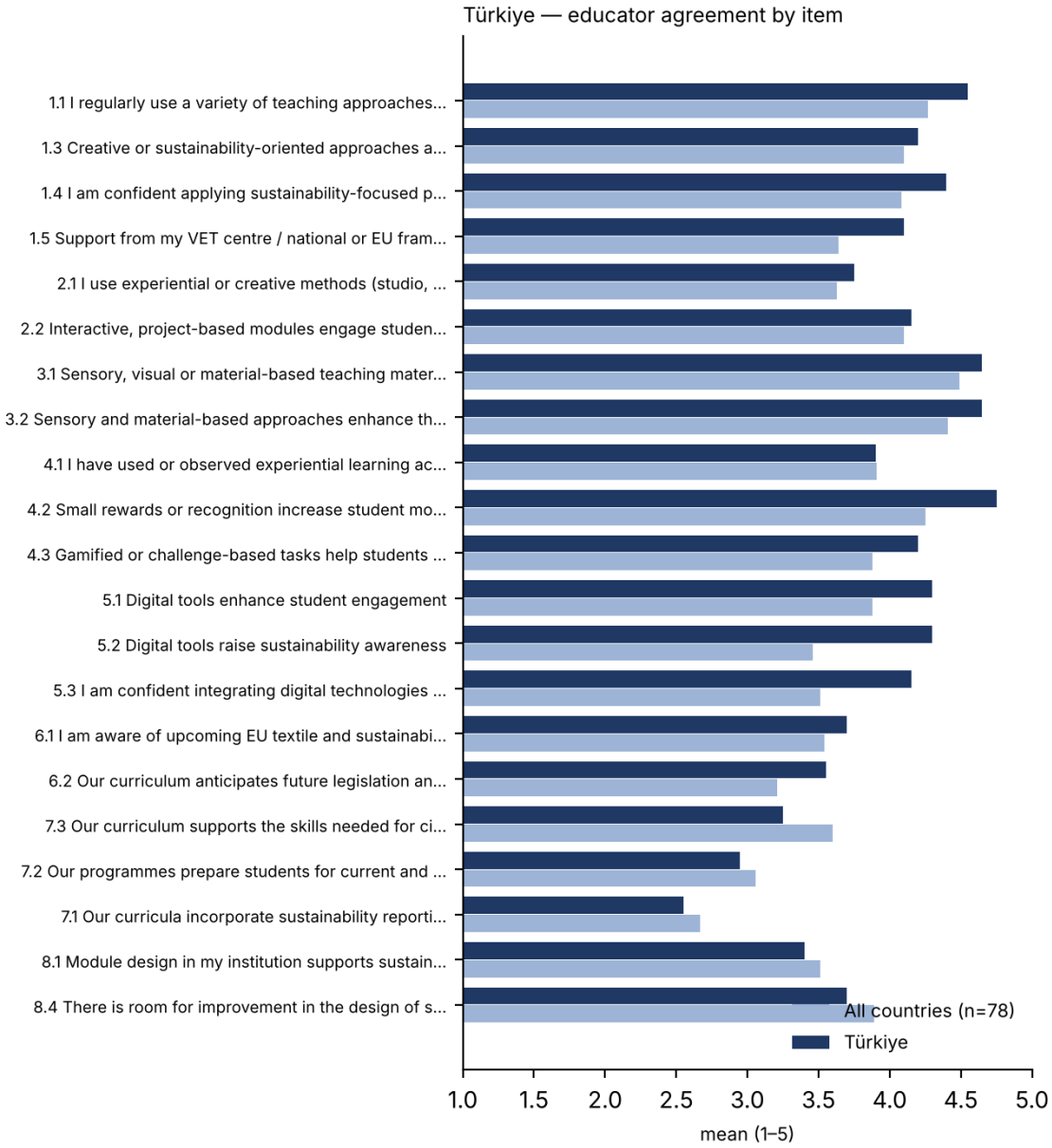

Section 3: Conclusions and implications for the ReMODE CoVE

Turkish VET and HEI educators are motivated, digitally confident and open to innovative formats, but their curricula lag behind on circularity and regulation. This mirrors the Turkish SME findings, where firms show the lowest circular-economy knowledge and regulatory awareness: the education system is not yet supplying the competences the regulation will require of the industry.

For the ReMODE CoVE in Türkiye the priority is curriculum development — circular-economy skills, EU regulatory content and reporting frameworks — delivered through the experiential and digital formats educators already favour, together with closer links between vocational schools, universities and the Bursa textile industry.

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Recommendations

- Curriculum development on circular-economy skills and EU regulation for HEI and vocational programmes (40% and 30% agreement today).
- Educator training on reporting frameworks (GRI/ESRS) and DPP.
- Build VET–HEI–industry course collaborations in Bursa (companies involved by 50% of respondents, research centres by 17%).
- Leverage the high acceptance of gamified and digital formats for the ReMODE digital learning materials.
- Share Turkish experience on reward-based motivation and sensory pedagogy within the consortium.

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RE MODE

UNLOCKING CIRCULAR FASHION DESIGN EXCELLENCE

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