CirCLER

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BLUEPRINT FOR THE ADOPTION OF CirCLER TRAINING ACROSS THE EU

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Executive Summary

Europe's transition towards a circular economy requires not only technological innovation and new business models, but also a workforce equipped with the competences needed to translate circular economy principles into industrial practice. This challenge is particularly relevant for traditional manufacturing sectors such as furniture, where the predominance of SMEs, evolving regulatory requirements and increasingly complex value chains create a growing need for professionals capable of connecting sustainability, product development, manufacturing, business strategy and organisational change.

The CirCLER project addresses this challenge through the development of an **integrated training ecosystem centred on the Circular Economy Transition Manager (CETM)**. The ecosystem connects an occupational profile and competence framework with a modular Joint Curriculum, multilingual learning resources and digital tools, a Skills Self-Assessment Tool, an Interactive Tool, guidance for trainers, and mechanisms supporting the recognition of learning achievements. Together, these resources provide a flexible framework for developing circular economy competences across vocational education and training (VET), higher education, company training and lifelong learning contexts.

The CirCLER approach has also been tested in practice. Between January and April 2026, the pilot implementation reached **856 registered learners across seven language versions and 14 countries**. The evaluation collected feedback from **236 learners and 20 mentors and tutors**, providing valuable evidence on the perceived quality, relevance and usability of the training approach while also identifying areas for further improvement. The pilot therefore served not only to validate the training ecosystem, but also to refine its resources and generate practical lessons for its future adoption.

This Blueprint translates the experience gained throughout the project into **practical guidance for organisations interested in adopting, adapting or building upon the CirCLER approach**. It recognises that **adoption does not require implementation of the complete CETM training programme**. Depending on their objectives and capacities, organisations may use a full Junior, Intermediate or Advanced learning pathway, integrate selected modules or individual learning pills into existing programmes, or make independent use of specific learning resources and tools. The modular structure, digital delivery and availability of the learning resources in **seven languages** facilitate their use across different educational, organisational and national contexts.

The Blueprint provides tailored implementation guidance for **VET and higher education institutions, companies, sectoral organisations and clusters, employment and career guidance services, Research and Technology Organisations, and public authorities**. It also proposes a step-by-step adoption pathway, from identifying organisational needs and selecting appropriate CirCLER resources to piloting, evaluating, embedding and scaling up their use. An Adoption Checklist is included to help organisations assess their readiness and plan implementation.

Building on the lessons learned during the design, validation and pilot implementation of CirCLER, the Blueprint also identifies **eight policy action areas**: integrating circular economy competences into education and workforce development strategies; promoting flexible, modular and stackable learning; strengthening cooperation between VET, higher education and industry, including dual and work-based learning; supporting micro-credentials for green occupations; encouraging sector-specific circular economy training; strengthening skills intelligence; improving SMEs' access to specialised training; and promoting the reuse and transferability of publicly funded training resources across Europe.

Ultimately, the Blueprint seeks to ensure that the knowledge, resources and methodologies developed through CirCLER **continue generating value beyond the project's lifetime**. By facilitating their reuse and adaptation, strengthening cooperation between education and industry, and supporting their integration into broader skills ecosystems, CirCLER provides a practical foundation for developing the workforce capabilities required for the circular transition of the European furniture sector, with potential for transfer to other traditional manufacturing industries.

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1. Introduction

Europe's transition towards a circular economy requires not only technological innovation and new business models, but also a workforce equipped with the knowledge, competences and skills needed to implement circular practices across industrial value chains. While significant progress has been made in developing policies and regulatory frameworks supporting sustainability, many traditional manufacturing sectors continue to face substantial skills gaps that hinder the effective implementation of circular economy principles.

The furniture sector illustrates this challenge particularly well. Composed predominantly of SMEs, it must simultaneously respond to increasing environmental requirements, changing market expectations and evolving European legislation while maintaining its competitiveness. Achieving this transition requires professionals capable of integrating circular thinking into business strategy, product development, manufacturing processes and value chain collaboration.

The CirCLER project was developed to address this need by creating an integrated training ecosystem centred on the Circular Economy Transition Manager (CETM). Rather than producing isolated educational resources, the project developed a coherent set of interconnected outputs, including an occupational profile, a joint curriculum, training resources, self-assessment tools and guidance for the recognition of competences, that collectively support the development and implementation of circular economy skills.

This Blueprint translates that experience into practical guidance for organisations interested in adopting and building upon the CirCLER training ecosystem. Rather than providing a technical description of the project results, it explains how the different components of the ecosystem can be integrated, adapted and implemented by different stakeholder groups. It also offers practical guidance for organisations taking their first steps towards adoption, together with direct access to the project resources that support implementation.

It identifies opportunities for a wide range of organisations, presents practical adoption pathways and provides strategic recommendations to facilitate the integration of CirCLER training into education, training and innovation ecosystems across Europe. The Blueprint is intended for vocational education and training providers, higher education institutions, companies, research and technology organisations, sectoral associations, employment services, public authorities and policymakers seeking to strengthen skills for the green transition.

Ultimately, this Blueprint aims to facilitate the widespread adoption and long-term sustainability of the CirCLER training ecosystem across Europe by helping organisations maximise the value of the project's results beyond its lifetime. It also formulates a set of recommendations for European and national policymakers, drawing on the lessons learned throughout the project to identify actions that can strengthen circular skills ecosystems in the furniture and wood sector while providing an approach that can be transferred to other traditional manufacturing industries undergoing the green and digital transition.

About the CirCLER Project

CirCLER (Circular Economy Transition Manager: guiding companies of the furniture value chain to deploy their transition strategy for a more circular economy is a three-year Erasmus+ Alliance for Education and Enterprises project bringing together education providers, research organisations, industry representatives and public bodies from across Europe.

The project was established to address one of the main barriers to the circular transition of the furniture sector: the shortage of professionals equipped with the knowledge and competences required to guide companies through the implementation of circular business models, sustainable product development and resource-efficient manufacturing practices.

To respond to this challenge, the consortium developed the Circular Economy Transition Manager (CETM) professional profile together with a structured training ecosystem, including a competence framework, modular curriculum, multilingual training materials and learning platform, micro-credentials and recognition mechanisms designed to facilitate their adoption across different education and training systems. Through the collaboration of partners from nine European countries, CirCLER has validated its training approach in diverse educational, industrial and policy contexts, demonstrating its potential for replication across Europe.

Beyond these tangible outputs, CirCLER has fostered a European community of stakeholders committed to strengthening circular skills and promoting cooperation between vocational education and training, higher education, research organisations, industry and public authorities. This Blueprint builds upon that collective experience to support organisations interested in adopting, adapting and extending the project's results beyond its lifetime.

2. Circular Transformation and Skills Challenges in Traditional Manufacturing Sectors

The transition towards a circular economy is redefining the competitiveness of European industry. Driven by increasingly ambitious environmental policies, evolving market expectations and technological innovation, companies are being required to rethink not only the way products are designed and manufactured, but also the knowledge and competences needed to support this transformation. While these changes affect virtually all industrial ecosystems, their implications are particularly significant for traditional manufacturing sectors, where long-established production models must evolve towards more circular, resource-efficient and resilient approaches.

This chapter provides the policy and industrial context that underpins the development of the CirCLER training ecosystem. It first reviews the main European policy initiatives driving the circular transition and their implications for manufacturing industries. It then analyses the specific challenges faced by traditional sectors, with particular attention to the furniture industry, before examining the evidence of existing skills gaps and the need for new professional profiles. Finally, it highlights the strategic role of vocational education and training, higher education and lifelong learning in supporting the development of the competences required for the transition towards a circular economy.

2.1 European Policy Context for the Circular Transition

The transition towards a climate-neutral and resource-efficient economy has become one of the European Union's main strategic priorities. Over the past decade, the EU has progressively developed a comprehensive policy framework that combines environmental objectives, industrial competitiveness and skills development, recognising that achieving the green transition depends not only on technological innovation but also on equipping the workforce with the competences required to implement new circular practices across economic sectors.

The **European Green Deal** established the overarching vision of transforming Europe into the first climate-neutral continent by 2050 while promoting sustainable economic growth and resource efficiency (European Commission, 2019). Within this framework, the transition to a circular economy is recognised as a fundamental pillar for reducing environmental impacts, strengthening industrial resilience and decreasing dependence on virgin raw materials.

Building upon this vision, the **Circular Economy Action Plan (CEAP)** identifies sustainable products, circular business models and resource efficiency as essential drivers of Europe's future competitiveness (European Commission, 2020a). The Action Plan places particular emphasis on sectors with high resource consumption and significant circularity potential, including furniture, textiles, electronics and construction. It highlights the importance of extending product lifetime, increasing repairability and recyclability, promoting the use of secondary raw materials and supporting innovative circular value chains.

These policy ambitions are being translated into concrete regulatory requirements through the **Ecodesign for Sustainable Products Regulation (ESPR)**, which significantly expands the scope of

ecodesign beyond energy-related products to encompass a much wider range of goods placed on the European market (European Parliament and Council, 2024). The ESPR introduces new sustainability requirements related to product durability, repairability, recyclability, material efficiency and the use of recycled content. It also lays the foundation for the progressive deployment of the **Digital Product Passport (DPP)**, a digital system that will provide reliable and standardised product information throughout the entire life cycle, supporting transparency, traceability and informed decision-making across value chains.

These regulatory developments are expected to have a profound impact on the furniture sector. Manufacturers will increasingly need to integrate circular design principles, material traceability, lifecycle thinking and environmental performance assessment into product development and manufacturing processes. Consequently, companies require professionals capable of understanding not only technical production processes but also evolving regulatory requirements and their practical implementation within business operations.

In parallel, the European Union has recognised that industrial transformation cannot be achieved without a corresponding transformation of workforce skills. The **European Skills Agenda** (European Commission, 2020b), reinforced through the **European Year of Skills 2023** and the recently launched **Union of Skills initiative**, places skills development at the centre of Europe's competitiveness agenda. These initiatives promote lifelong learning, upskilling and reskilling, greater responsiveness of education and training systems to labour market needs, and stronger cooperation between education providers, industry and public authorities.

Complementing this approach, the **New Industrial Strategy for Europe** identifies skills as a key enabler of industrial resilience and competitiveness, particularly for SMEs facing the dual green and digital transition (European Commission, 2020c). The strategy acknowledges that traditional manufacturing industries require targeted support to adapt their production systems, integrate digital and circular technologies, and develop the human capital necessary to remain competitive in rapidly evolving markets.

Within this broader policy landscape, the furniture sector has emerged as one of the manufacturing ecosystems where circular transformation offers significant environmental, economic and social opportunities. The sector's high material intensity, predominance of SMEs and increasing exposure to sustainability-related legislation make it particularly relevant for the development of specialised circular economy competences. At the same time, the diversity of actors involved throughout the furniture value chain - from designers and manufacturers to suppliers, retailers, repair services and recyclers - requires multidisciplinary professionals capable of coordinating circular strategies across organisational boundaries.

The policy framework developed by the European Union therefore extends beyond environmental regulation. It increasingly recognises that achieving the objectives of the Green Deal and the Circular Economy Action Plan depends on strengthening Europe's skills ecosystem through more responsive education and training systems, closer collaboration between industry and education, and the

emergence of new professional profiles capable of leading organisational change. It is precisely within this policy context that the CirCLER project was conceived, seeking to contribute to these objectives through the development of the Circular Economy Transition Manager profile and a comprehensive training ecosystem tailored to the needs of the furniture sector.

2.2 Why Traditional Manufacturing Sectors Require a New Generation of Circular Skills

The transition towards a circular economy is fundamentally reshaping the way products are conceived, manufactured, marketed, used and recovered throughout their life cycle. Rather than focusing solely on improving waste management or increasing recycling rates, circularity requires companies to redesign products, optimise resource use, rethink supply chains and adopt innovative business models capable of maintaining the value of products, components and materials for as long as possible (European Commission, 2020a).

For traditional manufacturing sectors, this transition represents far more than the adoption of new environmental practices. It requires a **profound organisational transformation** affecting business strategy, product development, production systems, procurement, logistics, customer relations and end-of-life management. Companies are increasingly expected to integrate sustainability considerations into everyday decision-making while simultaneously responding to digitalisation, changing consumer expectations and an evolving regulatory landscape.

Unlike emerging industries, traditional manufacturing sectors such as furniture, footwear, and textiles have evolved around mature production systems and well-established value chains. Although these sectors possess extensive technical expertise, many of their processes, organisational structures and professional profiles were developed within predominantly linear production models. Moving towards circularity therefore requires not only technological innovation but also the development of new organisational capabilities and interdisciplinary competences that enable companies to manage this transformation effectively (European Environment Agency, 2024; OECD, 2024).

The furniture sector provides a particularly relevant example of these challenges. Predominantly composed of SMEs, it operates through highly interconnected value chains involving raw material suppliers, component manufacturers, furniture producers, distributors, retailers, repair services and recyclers. Recent European legislation, including the ESPR, the future implementation of DPP, and increasing requirements related to product durability, reparability and material traceability, is expected to substantially transform the way furniture is designed, manufactured and managed throughout its life cycle.

However, the transition towards circularity cannot be achieved through technological innovation or regulatory compliance alone. The needs assessment carried out within the CirCLER project highlighted that companies increasingly require **professionals capable of understanding the interactions between sustainability, business strategy, product design, manufacturing, digital technologies and organisational change**. Stakeholders consistently emphasised that circular economy implementation demands multidisciplinary competences extending well beyond traditional technical specialisation,

requiring professionals able to connect different organisational functions and facilitate collaboration across the value chain (CirCLER Consortium, 2024).

The CirCLER analysis also revealed that many organisations continue to approach circular economy initiatives through isolated actions rather than integrated transition strategies. Sustainability responsibilities are frequently dispersed across different departments, while decision-making remains fragmented between technical, environmental and commercial functions. This fragmentation limits organisations' capacity to implement coherent circular strategies and reduces their ability to respond effectively to emerging regulatory and market requirements.

These findings reinforce broader European evidence indicating that the **green transition is primarily a skills challenge rather than simply a technological one**. Cedefop has consistently highlighted that achieving Europe's environmental objectives depends largely on transforming existing occupations through continuous upskilling and reskilling, rather than creating entirely new jobs (Cedefop, 2021). Similarly, the European Skills Agenda recognises that strengthening industrial competitiveness requires education and training systems capable of providing professionals with the interdisciplinary competences needed to support both the green and digital transitions (European Commission, 2020b).

Consequently, the challenge facing traditional manufacturing sectors is not only to adopt new technologies or comply with new regulations, but to build organisational capacity capable of embedding circular thinking into strategic and operational decision-making. This requires professionals who can combine technical expertise with systems thinking, innovation, sustainability management, business strategy and stakeholder engagement, enabling companies to translate circular economy principles into practical industrial solutions.

These emerging competence requirements demonstrate that **existing education and training provision must evolve alongside industrial transformation**. Rather than focusing on isolated technical skills, future learning pathways need to equip professionals with integrated competences that enable them to lead organisational change, facilitate cross-functional collaboration and support the implementation of circular business models.

2.3 Evidence of Skills Gaps in the Furniture Ecosystem

The policy and industrial trends described in the previous sections are increasingly reflected in the competence needs of the European furniture sector. While awareness of circular economy principles has grown considerably in recent years, **companies continue to experience significant difficulties in translating these concepts into day-to-day business practice**. The challenge is therefore no longer understanding *why* circularity is important, but ensuring that organisations possess the knowledge, skills and organisational capacity required to implement it effectively.

This situation is consistent with broader European evidence. According to Cedefop, the green transition will primarily transform existing occupations rather than create entirely new ones, requiring continuous upskilling and reskilling across virtually all sectors of the economy. Professionals are increasingly expected to combine technical expertise with transversal competences such as systems

thinking, innovation, collaboration and problem solving, while organisations need education and training systems capable of responding rapidly to evolving labour market demands (Cedefop, 2021; European Commission, 2020b).

Sector-specific evidence confirms these trends. The **FurnCIRCLE Circular Economy Skills, Knowledge and Competences Report**, based on contributions from professionals representing different segments of the European furniture value chain, reveals a high level of awareness regarding the importance of circular economy principles but also identifies significant gaps in both knowledge and implementation capacity. Although many organisations have already introduced individual circular practices, these initiatives frequently remain fragmented and are not yet embedded within broader organisational strategies (FurnCIRCLE Consortium, 2025).

One of the most significant findings concerns the widespread demand for additional competence development. The FurnCIRCLE study reports that **98%** of respondents consider further education and training necessary to support the transition towards circular business models. Training priorities extend beyond technical aspects, covering circular economy fundamentals (95%), research, eco-design and innovation (86%), business strategy (68%), supply chain management (61%), leadership (55%) and production management (55%). These results demonstrate that companies increasingly perceive circular economy as a strategic organisational issue rather than solely an environmental or technical one.

The study further highlights that competence needs are becoming increasingly interdisciplinary. Participants identified **eco-design, circular business models, life-cycle assessment, material selection, reverse logistics and sustainability management among the most critical knowledge areas, complemented by transversal competences** such as systems thinking, future-oriented thinking, innovation, collaboration and values-based decision-making. At the operational level, professionals emphasised the importance of practical capabilities related to design for disassembly, product lifetime extension, circularity assessment and resource efficiency.

Beyond these quantitative findings, the **CirCLER Needs Assessment** provides additional insights into the structural challenges faced by the sector. Interviews and consultations conducted during the project revealed that many organisations continue to approach circularity through isolated initiatives rather than integrated transition strategies. Stakeholders consistently reported that sustainability responsibilities are often fragmented across different departments, making it difficult to coordinate decision-making and implement coherent circular business models. This **organisational fragmentation** is particularly evident within SMEs, where limited human resources frequently require employees to combine multiple responsibilities without receiving specialised training in circular economy principles (CirCLER Consortium, 2024).

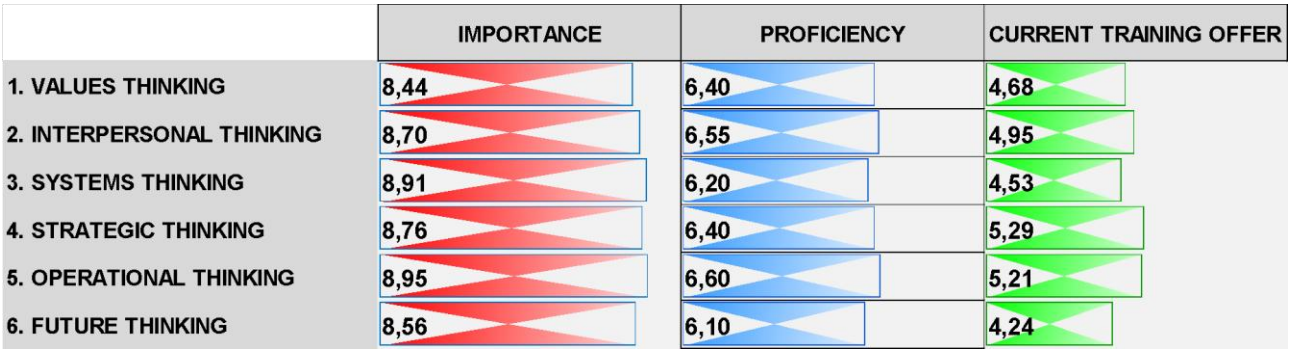


Figure 1. Results for the six CirCLER competences areas (CirCLER Consortium, 2024)

The CirCLER analysis also identified a mismatch between existing education provision and industry expectations. While numerous programmes address specific topics such as environmental management, product design or manufacturing technologies, few provide the integrated perspective required to connect sustainability, business strategy, digitalisation, regulatory compliance and operational implementation. Employers therefore highlighted the need for multidisciplinary learning pathways capable of preparing professionals to manage circular transformation across the entire value chain rather than within isolated technical domains.

Table 1. Main Skills Gaps and Competence Needs Identified in the European Furniture Sector

DIMENSION	MAIN FINDINGS	SOURCE
Adoption of circular practices	78% of organisations apply the 9R Framework; 80% integrate eco-design principles	FurnCIRCLE
Main implementation barriers	Cultural resistance, lack of strategy and leadership, shortage of qualified staff, fragmented regulation, limited stakeholder collaboration and financial constraints	FurnCIRCLE / CirCLER
Priority knowledge areas	Circular economy principles, circular impact assessment, eco-design, circular business models, sustainability management, logistics and regulatory compliance	FurnCIRCLE / CirCLER
Key transversal competences	Interpersonal thinking, Strategic thinking, systems thinking, future-oriented thinking, innovation, collaboration and values-based decision-making	CirCLER / GreenComp
Demand for additional training	98% of respondents require further competence development	FurnCIRCLE
Needs identified	Need for integrated competences combining sustainability, manufacturing, digitalisation, business strategy and organisational change; lack of professionals capable of coordinating the circular transition	CirCLER
Implications for education	Need for modular, multidisciplinary and lifelong learning pathways closely aligned with industry needs	CirCLER / European Skills Agenda

These findings reinforce one another and point towards a common conclusion. The furniture sector does not simply require more training; it requires **a different approach to competence development**. Future education and training initiatives must **move beyond isolated technical courses towards integrated learning ecosystems that combine technical, managerial and transversal competences while supporting continuous upskilling throughout professional careers.**

This evidence also highlights the growing need for professionals capable of coordinating organisational change and connecting different business functions throughout the circular transition. Rather than relying on fragmented expertise distributed across multiple departments, companies increasingly **require individuals able to integrate sustainability, innovation, product development, manufacturing, digital technologies and business strategy into coherent transition processes.**

2.4 The Emergence of the Circular Economy Transition Manager

The evidence presented in the previous sections demonstrates that the circular transition is not only creating demand for new technical competences but also transforming the way organisations manage innovation, sustainability and business development. Circular economy principles increasingly influence strategic planning, product design, manufacturing processes, procurement, logistics, regulatory compliance and customer engagement, **requiring companies to adopt a far more integrated approach to decision-making** than that traditionally found in manufacturing organisations.

Despite this transformation, existing occupational structures have evolved largely within a linear production paradigm. In many companies, responsibilities related to sustainability remain fragmented across different departments, with environmental managers focusing on regulatory compliance, product designers addressing eco-design requirements, production managers pursuing operational efficiency and innovation teams exploring new business opportunities. While each of these functions contributes to the circular transition, none has been specifically designed to coordinate it across the organisation.

The analyses carried out during the CirCLER project confirmed this fragmentation as one of the principal barriers to a successful transition . Stakeholders from industry, education and research consistently highlighted that companies, particularly SMEs, require professionals capable of connecting sustainability objectives with operational decision-making, facilitating collaboration between departments and translating complex regulatory and market requirements into practical business actions. Rather than identifying the need for a completely new occupation, the study revealed the **need for an integrative professional role capable of coordinating the transition process across the entire organisation.**

This finding is fully aligned with broader European developments. The **European Skills Agenda** emphasises that the green transition will require both the transformation of existing occupations and the acquisition of new interdisciplinary competences through continuous upskilling and reskilling (European Commission, 2020). Likewise, **GreenComp**, the European Sustainability Competence Framework, highlights that sustainability depends on combining knowledge, systems thinking, critical thinking, collaboration, futures literacy and action-oriented competences rather than isolated technical

expertise (Bianchi et al., 2022). These frameworks reinforce the idea that managing circular transformation requires professionals able to integrate technical, environmental, organisational and strategic perspectives.

At the same time, the **European Skills, Competences, Qualifications and Occupations (ESCO)** classification provides a common European framework for describing occupations and competences, facilitating labour mobility and transparency across Member States. Although ESCO includes occupations related to environmental management, quality management, product development and sustainability consultancy, it does not currently define a professional profile specifically dedicated to coordinating the circular transformation of manufacturing companies. This gap further supports the need for a role capable of bringing together competences that are currently dispersed across multiple occupational domains.

In response to these findings, the CirCLER consortium developed the concept of the **Circular Economy Transition Manager (CETM)**. Rather than representing a completely new profession, the CETM is conceived as an interdisciplinary role that integrates knowledge and competences from engineering, sustainability, manufacturing, innovation, business strategy and organisational change. Its primary purpose is to support companies in planning, coordinating and monitoring their transition towards more circular products, processes and business models (CirCLER Consortium, 2025).

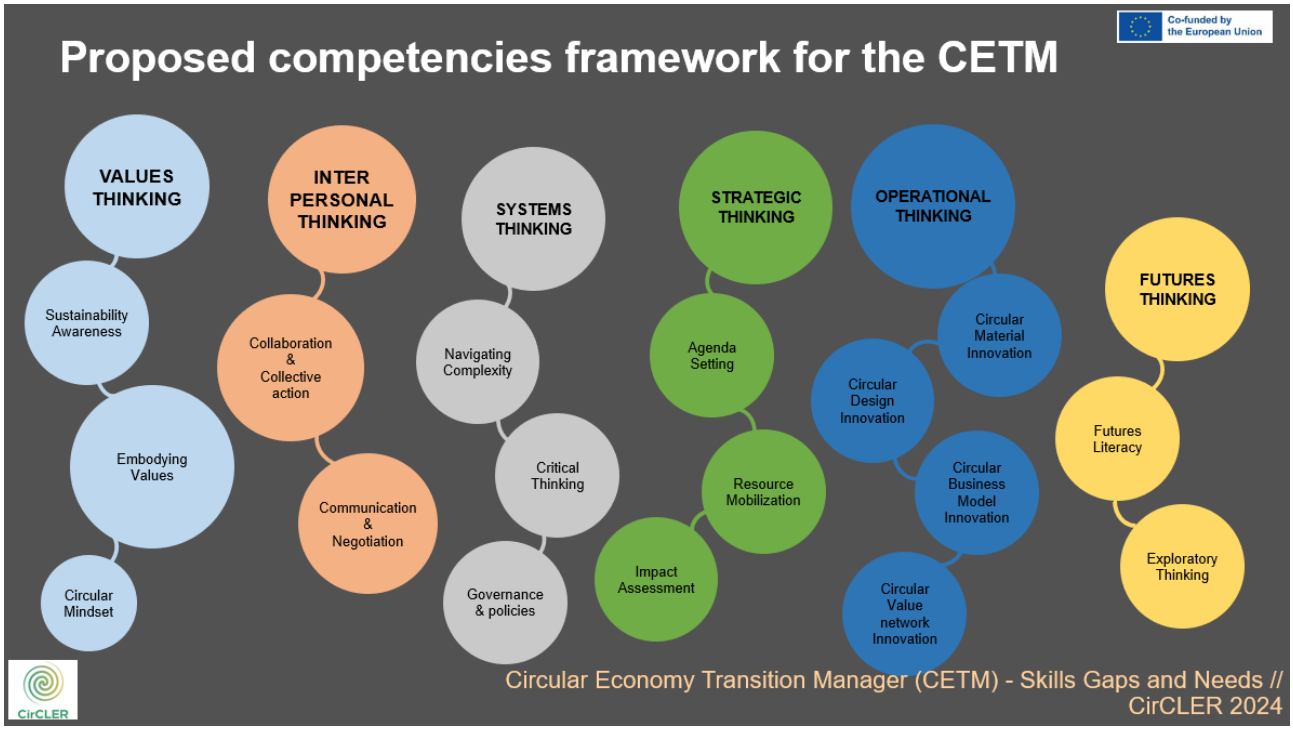


Figure 2. Full scheme of the CirCLER Competencies framework for the CETM (CirCLER Consortium, 2024).

The CETM is therefore intended to act as a **facilitator of organisational transformation** rather than as a technical specialist in a single discipline. Depending on the characteristics of each organisation, this role may be performed by professionals with backgrounds in product development, production engineering, innovation management, sustainability, quality management or other related fields who progressively acquire the additional competences required to lead circular transition initiatives. This

flexible approach reflects the reality of European SMEs, where organisational structures are often lean and responsibilities are shared across multifunctional teams.

The Needs Assessment also highlighted that the effectiveness of such a role depends not only on technical knowledge but equally on transversal competences such as communication, leadership, systems thinking, problem solving, stakeholder engagement and change management. Consequently, the CETM was conceived as a competence-based profile that combines technical expertise with strategic and interpersonal capabilities, enabling professionals to bridge the gap between sustainability ambitions and industrial implementation.

Ultimately, the CETM should be understood as a response to an emerging industrial need rather than the creation of an isolated occupational category. It reflects the growing recognition that the success of the circular transition will depend not only on new technologies and regulatory compliance, but also on professionals capable of integrating knowledge across disciplines, coordinating organisational change and fostering collaboration throughout increasingly complex value chains.

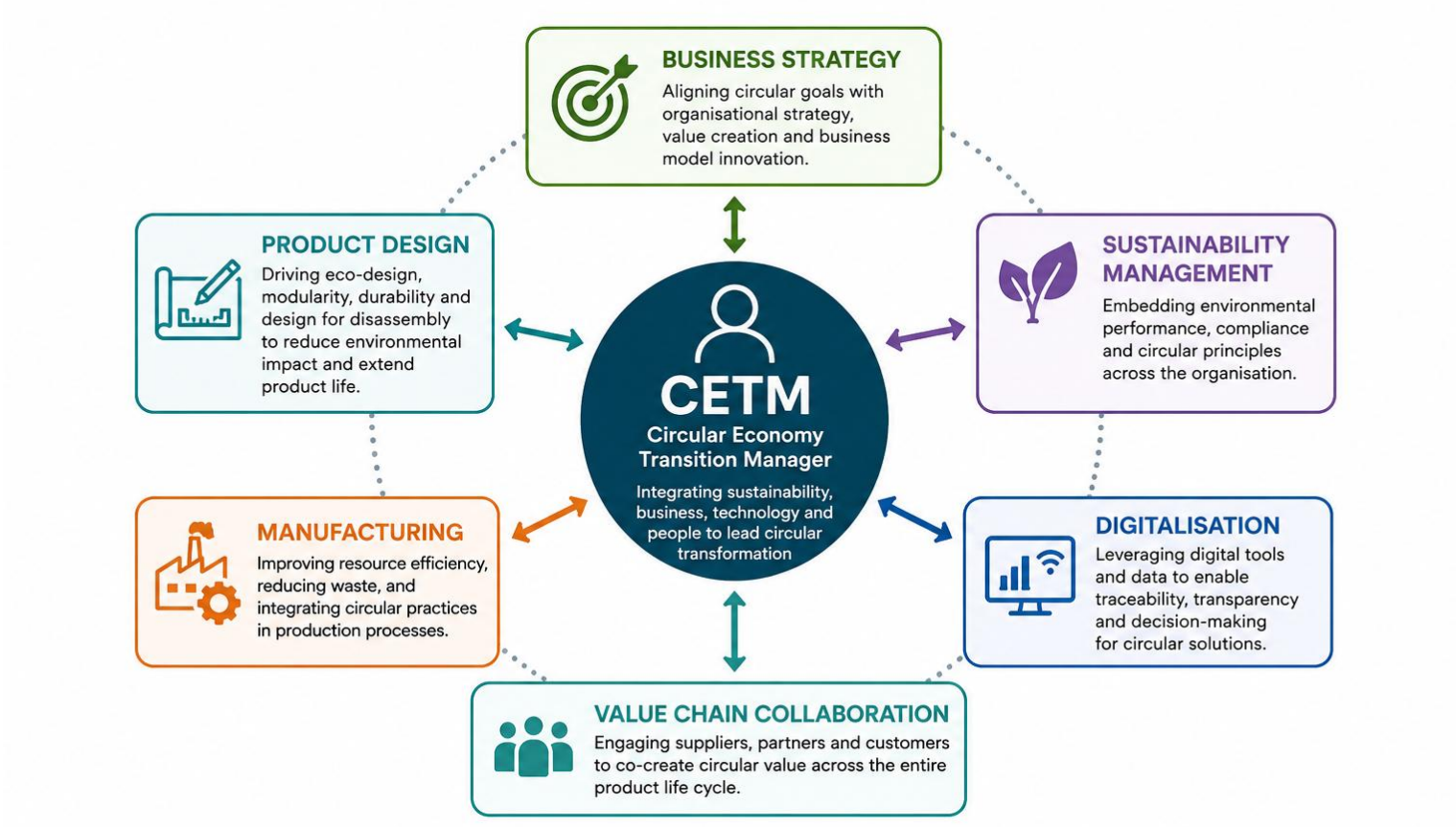


Figure 3. The CETM acts as an integrative professional profile

2.5 Education and Lifelong Learning as Enablers of the Circular Transition

Developing the competences required for the circular economy cannot rely solely on the emergence of new occupational profiles. It also requires **education and training systems capable of anticipating labour market needs**, responding to rapidly evolving industrial requirements and supporting continuous competence development throughout individuals' professional careers.

The European Union increasingly recognises education and skills as strategic enablers of the green transition. The **European Skills Agenda** identifies lifelong learning, upskilling and reskilling as essential instruments for achieving sustainable competitiveness, social resilience and industrial transformation (European Commission, 2020). More recently, the **Union of Skills** initiative reinforces this vision by promoting more agile education systems, stronger links between education providers and industry, and greater investment in skills intelligence to anticipate emerging competence needs (European Commission, 2025).

Within this context, **Vocational Education and Training (VET)** plays a central role in preparing both new entrants to the labour market and existing workers for the transition towards more sustainable production systems. The **Council Recommendation on Vocational Education and Training for Sustainable Competitiveness, Social Fairness and Resilience** highlights the need for VET systems to become more flexible, learner-centred and responsive to labour market developments, while strengthening work-based learning and cooperation with industry (Council of the European Union, 2020).

Higher Education Institutions also have an essential role to play. Beyond educating future professionals, universities are increasingly expected to contribute to regional innovation ecosystems, foster interdisciplinary learning and strengthen collaboration with businesses and public authorities. Circular economy challenges require graduates capable of integrating engineering, environmental sciences, business management, digital technologies and social innovation, making interdisciplinary education a key component of future curricula.

At the same time, the pace of technological, regulatory and market change means that initial education alone is no longer sufficient. Professionals already active in the labour market must continuously update their competences throughout their careers. **Lifelong learning therefore becomes a strategic necessity** rather than an optional complement, particularly in sectors undergoing profound structural transformation such as furniture manufacturing.

Recent European initiatives have consequently promoted more flexible learning models capable of responding to diverse learner needs. The **Council Recommendation on a European approach to micro-credentials for lifelong learning and employability** encourages the development of short, targeted and quality-assured learning experiences that can be accumulated over time and recognised across different educational and professional contexts (Council of the European Union, 2022). Combined with modular curricula, blended learning and competence-based assessment, these approaches enable professionals to progressively acquire new skills without interrupting their employment.

Equally important is the need to strengthen collaboration between education providers, research organisations, industry and public authorities. The **Pact for Skills** emphasises that successful upskilling and reskilling initiatives require coordinated action among all actors involved in industrial ecosystems, ensuring that training provision reflects real labour market needs while supporting regional and sectoral competitiveness (European Commission, 2020d).

The evidence presented throughout this chapter demonstrates that developing circular competences is not simply a matter of creating additional training courses. It requires integrated learning ecosystems capable of connecting occupational profiles, competence frameworks, modular curricula, flexible learning opportunities and recognition mechanisms within a coherent lifelong learning strategy.

It is precisely within this context that the CirCLER project has developed its training ecosystem. By combining an occupational profile, a competence framework, modular learning resources, digital training tools and recognition mechanisms, CirCLER seeks to provide a practical response to the skills challenges identified throughout this chapter.

3. The CirCLER Legacy

The analysis presented in the previous chapter demonstrates that the transition towards a circular economy requires more than isolated training initiatives or the adaptation of existing educational programmes. **It calls for an integrated approach capable of connecting labour market needs, professional competences, education and training provision, and lifelong learning opportunities.**

To respond to these challenges, the CirCLER project developed a comprehensive training ecosystem centred on the **Circular Economy Transition Manager (CETM)**. Rather than producing standalone educational resources, the project created a coherent set of interconnected outputs designed to support the identification, development, delivery and recognition of circular economy competences across different educational and industrial contexts.

Although each CirCLER result can be used independently, the project has been designed as an **integrated training ecosystem** in which each output complements the others. From the identification of emerging skills needs to the implementation of learning programmes and the recognition of competences, the various project outcomes form a consistent framework that assists organisations in developing circular economy skills .

Together, these results provide a practical framework that can be adopted and adapted by vocational education and training providers, higher education institutions, companies, sectoral organisations and public authorities seeking to strengthen circular skills within the furniture sector and, potentially, other traditional manufacturing industries.

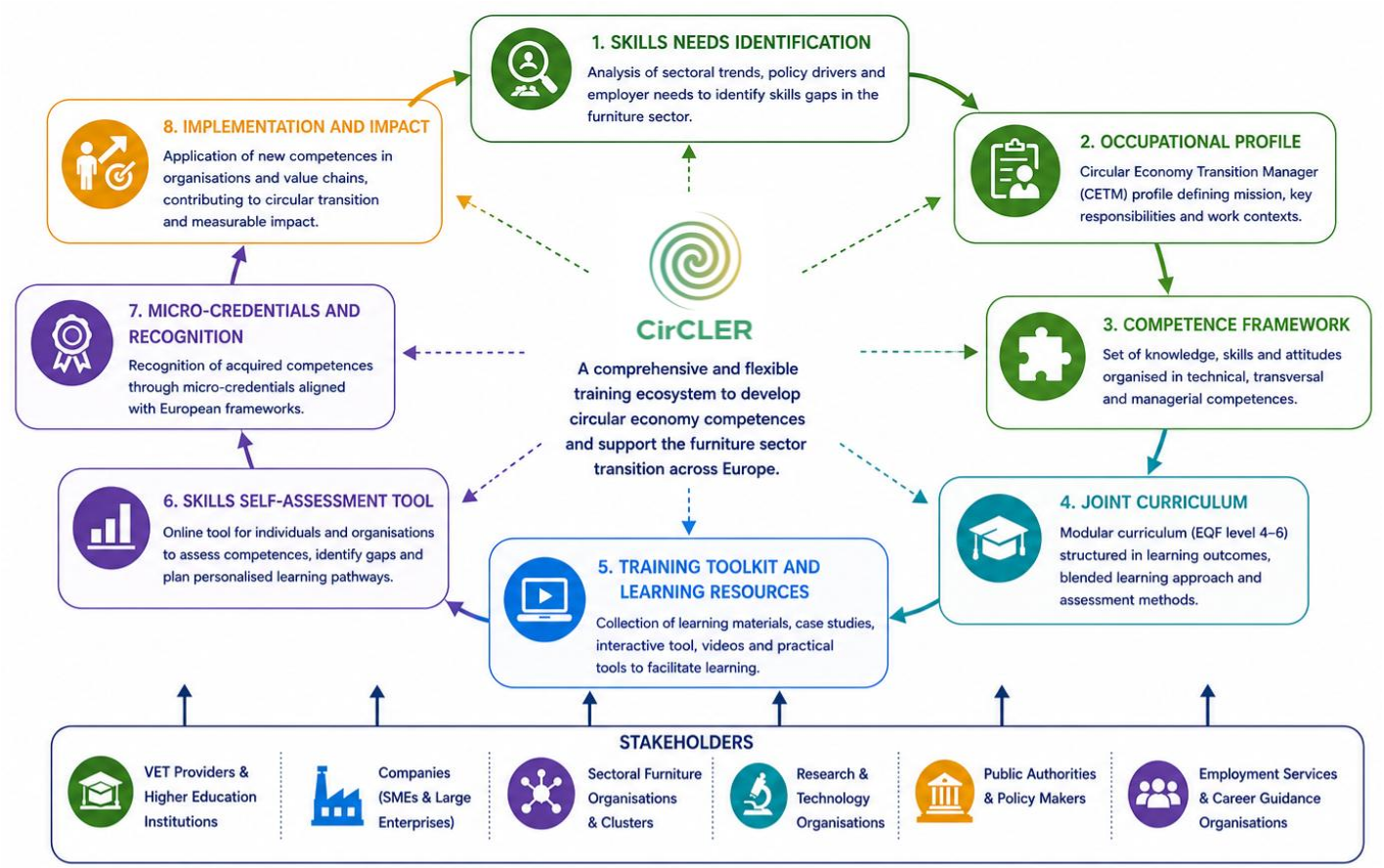


Figure 4. The CirCLER Training Ecosystem

Figure 4 illustrates how the different CirCLER outputs are interconnected, forming a coherent training ecosystem that supports organisations throughout the entire competence development journey—from identifying emerging skills needs to implementing training programmes and recognising acquired competences. While the ecosystem should be understood as an integrated framework, each component has a specific purpose and can also be adopted independently according to the needs and priorities of different organisations.

The following sections briefly present each of the main project outputs and their contribution to the overall CirCLER approach.

3.1 Circular Economy Transition Manager Occupational Profile

The development of the CirCLER Joint Curriculum was grounded on the definition of a new occupational profile: the **Circular Economy Transition Manager (CETM)**. This profile responds to an emerging need within the European furniture value chain for professionals capable of leading and coordinating companies' transition towards circular business models, ensuring compliance with evolving environmental requirements while creating long-term business value. The profile was designed following the structure and principles of the European Skills, Competences, Qualifications and Occupations (ESCO) framework, with the long-term objective of supporting its future recognition within the European skills ecosystem.

Unlike traditional environmental or sustainability managers, the CETM adopts a cross-functional role that integrates strategic planning, product development, manufacturing, supply chain management, business innovation and organisational change. The profile is intended to support companies throughout the entire transition process, from identifying opportunities and assessing environmental impacts to implementing circular strategies, monitoring progress and promoting continuous improvement.

The proposed occupational profile identifies the CETM as a professional responsible for:

- leading the transition of furniture companies towards circular economy practices and business models;
- supporting the design and implementation of company-wide transition strategies;
- ensuring compliance with current and forthcoming environmental legislation and voluntary sustainability schemes;
- promoting circular product design, sustainable materials and innovative manufacturing solutions;
- facilitating the adoption of circular business models and value network innovations;
- coordinating internal stakeholders and fostering organisational change;
- monitoring environmental performance through appropriate indicators and reporting mechanisms;
- promoting employee awareness, competence development and sustainability culture within the organisation.

Competence Framework

To define the occupational profile in a structured manner, the consortium developed a competence framework organised into six complementary competence areas. Together, these domains provide a holistic representation of the capabilities required by professionals leading circular transformation processes within furniture companies. The framework was initially developed by the consortium and subsequently validated through a large-scale survey and an international expert workshop involving representatives from industry, higher education, vocational education and circular economy specialists. The six competence areas are:

Table 2. CETM Competence Framework

COMPETENCE AREA	PURPOSE
Values Thinking	Builds sustainability awareness, circular mindset and ethical decision-making.
Interpersonal Thinking	Develops collaboration, communication, negotiation and stakeholder engagement capabilities.
Systems Thinking	Enables understanding of complex systems, governance frameworks and critical analysis of interconnected value chains.
Strategic Thinking	Supports agenda setting, resource mobilisation and circular impact assessment for organisational transformation.
Operational Thinking	Covers circular product design, sustainable materials, manufacturing innovation, business models and value network innovation.
Future Thinking	Encourages anticipation of future trends, scenario analysis and long-term strategic vision.

These six competence domains constitute the backbone of the CirCLER curriculum and were subsequently translated into learning outcomes, training modules and assessment activities throughout the project. The competence framework also ensured coherence between the occupational profile, the identified skills needs and the educational resources developed within the project, creating a clear progression from labour market requirements to curriculum design.

3.2 CETM Joint Curriculum

The CirCLER Joint Curriculum[1] was designed as a modular and competence-based learning programme to provide maximum flexibility for education providers, companies and learners. Rather than following a fixed linear course, the curriculum is organised into independent yet interconnected learning modules that can be delivered individually or combined into complete learning pathways according to the needs of different target groups. The modular approach facilitates adaptation to national education systems, institutional constraints and lifelong learning contexts while maintaining a coherent competence development framework. The curriculum design follows the methodology established during WP4, where the curriculum evolved through four successive phases: initial curriculum development, stakeholder validation, pilot implementation and final refinement.

The curriculum has been structured around three progressive qualification levels aligned with the European Qualifications Framework (EQF), enabling learners to acquire competences gradually while supporting both initial education and continuous professional development. These learning pathways correspond to:

- **Junior CETM (EQF Level 4)**, introducing the fundamental concepts and principles required to understand the circular economy transition within the furniture sector.

[1] CETM Joint Curricula. Available at: https://circler-furniture.eu/en/docs/routedownload/technical-materials/en-d4-1-cetm-joint-curricula

- **Intermediate CETM (EQF Level 5)**, developing the operational and managerial competences needed to support and coordinate circular transition activities.
- **Advanced CETM (EQF Level 6)**, focusing on strategic decision-making, innovation and organisational leadership for implementing circular economy transformation.

Across these three pathways, the curriculum is organised into ten thematic modules that collectively address the complete transition process within furniture companies:

1. Circular Economy Introduction
2. Legislative Instruments
3. Voluntary Instruments
4. Circular Business Models
5. Circular Design
6. New and Sustainable Materials
7. Key Enabling Technologies
8. Manufacturing Processes
9. Circular Economy Transition Strategy
10. Closing

Each module has been developed following a common instructional structure to ensure consistency throughout the programme. Every module includes clearly defined learning outcomes aligned with the targeted EQF level, a sequence of short learning units ("training pills"), estimated learning time, associated competences from the CETM competence framework, prerequisite relationships where appropriate, and corresponding micro-credentials that recognise the successful completion of specific learning achievements. This common structure allows individual modules to function both as standalone learning experiences and as components of a broader qualification pathway.

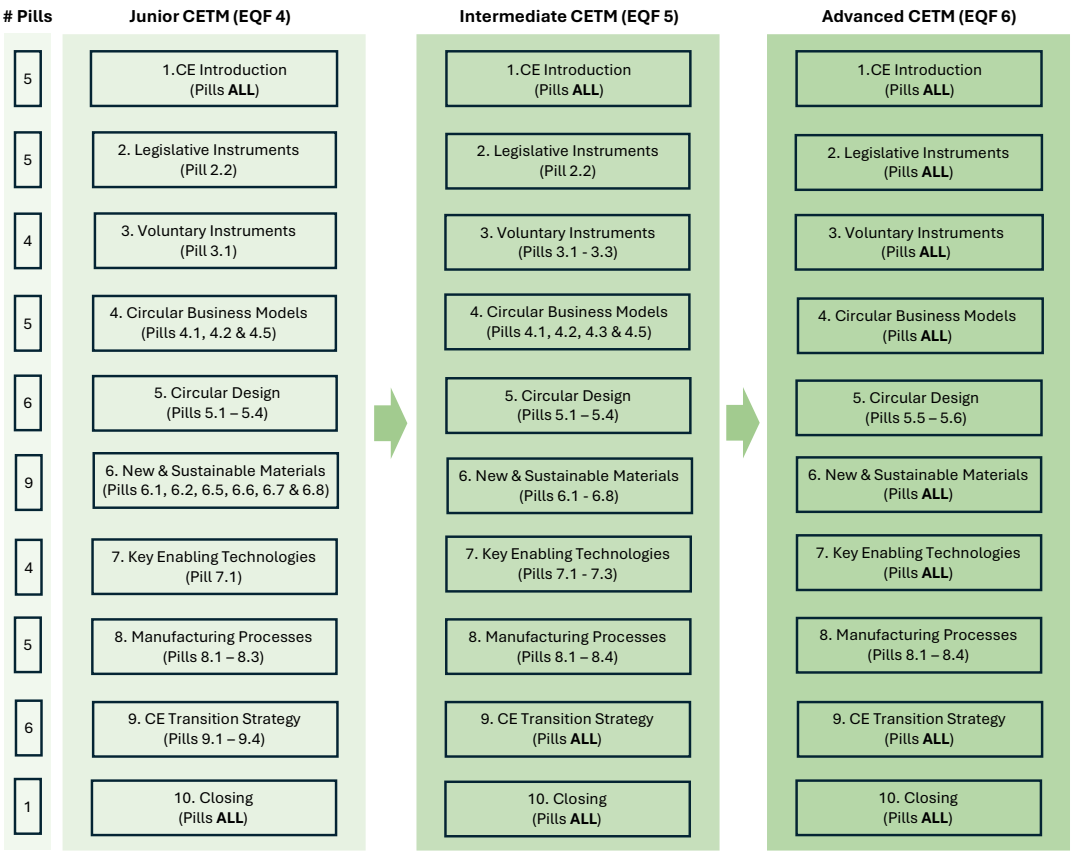


Figure 5. Final CETM curricula

From an implementation perspective, training providers may adopt the curriculum in different ways depending on their educational context. The complete programme can be integrated into formal VET or higher education courses, while individual modules or groups of modules may be incorporated into continuing professional development programmes, specialised short courses, company training initiatives or future micro-credential schemes. This flexibility was one of the main design principles of the curriculum and contributes significantly to its transferability and long-term sustainability across different European education systems.

Recognition through micro-credentials

To enhance the flexibility, recognition and transferability of learning, the CirCLER Joint Curriculum incorporates a micro-credential system aligned with recent European recommendations on lifelong learning and employability. Rather than recognising learning exclusively through the completion of a full programme, the system enables learners to obtain formal recognition for the successful completion of individual learning units, curriculum modules and qualification pathways.

This approach responds to the increasing demand for short, flexible and competence-based learning opportunities that can be progressively accumulated throughout an individual's professional career. It is fully consistent with the Council Recommendation on a European approach to micro-credentials for lifelong learning and employability (Council of the European Union, 2022), which promotes the recognition of smaller learning experiences that are transparent, quality-assured and portable across different educational and professional contexts.

Within the CirCLER ecosystem, micro-credentials are directly linked to the modular curriculum and the CETM Competence Framework. Each learning module includes clearly defined learning outcomes, associated competences and assessment activities, allowing learners to demonstrate the acquisition of specific knowledge, skills and competences before progressing to subsequent modules.

The certification framework operates at different levels, enabling progressive recognition of learning achievements:

- Learning pill completion, recognising the successful completion of individual learning units.
- Module certificates, awarded after completing all learning activities and assessments within a curriculum module.
- Qualification pathway certificates, recognising the completion of the Junior (EQF 4), Intermediate (EQF 5) or Advanced (EQF 6) CETM learning pathways.

This progressive certification model offers several advantages for both learners and education providers. Learners can build their competences incrementally, following personalised learning pathways that respond to their professional needs without necessarily committing to a complete programme from the outset. At the same time, education providers can integrate individual modules into existing courses, continuing professional development programmes or company training initiatives while still offering recognised learning achievements.

The use of micro-credentials also facilitates the long-term adoption of the CirCLER curriculum beyond the lifetime of the project. As organisations increasingly move towards modular and lifelong learning models, competence-based certification provides a practical mechanism for recognising continuous professional development and supporting workforce upskilling in response to evolving industrial and regulatory requirements.

Alignment with the ESCO Framework

To maximise the relevance and transferability of the CirCLER curriculum, the consortium carried out a dedicated analysis of the **European Skills, Competences, Qualifications and Occupations (ESCO)** framework[2]. The objective was to identify existing occupations within the furniture value chain that are expected to be affected by the transition towards a circular economy and to determine how the competences developed through CirCLER could support their professional development.

Rather than proposing the CETM as an entirely new standalone occupation, the analysis recognised that circular economy competences will increasingly become relevant across a wide range of existing professional profiles. Consequently, the CirCLER curriculum was designed to complement

[2] ESCO Furniture Sector Occupations Affected by Sector CE Transition. Available at: https://circler-furniture.eu/en/docs/routedownload/technical-materials/d3-2/en-d3-2-esco-occupations-de

and strengthen current occupations by providing the additional knowledge, skills and competences required to support the circular transition of furniture companies.

The consortium systematically reviewed the complete ESCO occupation database and identified **60 occupations related to the furniture sector** that are expected to be affected, to different degrees, by the transition towards circular business models. Each occupation was classified according to its expected level of impact (**least affected, somewhat affected or most affected**) and analysed to identify the competence gaps that could be addressed through the CirCLER training programme.

The analysis shows that circular economy competences are not limited to environmental or sustainability specialists. Significant impacts were identified across management, engineering, product development, manufacturing, procurement, research and development, environmental management and production-related occupations. Profiles such as **Industrial Designer**, **Sustainability Manager**, **Environmental Engineer**, **Manufacturing Manager**, **Product Manager**, **Chief Executive Officer** and **Project Manager** were identified among those expected to require substantial competence updates to successfully lead or support circular transformation processes.

This mapping exercise served two complementary purposes. First, it ensured that the learning outcomes defined within the CirCLER curriculum remained closely aligned with recognised European occupational standards. Second, it facilitates the future adoption of the training programme by education providers, employers and learners, as the curriculum can be directly linked to existing professional profiles rather than being perceived as training for a completely new occupation.

3.3 Training Toolkit and Learning Resources

The CirCLER Training Toolkit translates the Joint Curriculum into a practical digital learning ecosystem designed to support learners, trainers and organisations throughout the implementation of circular economy training. Rather than providing a static collection of educational materials, the toolkit combines complementary digital resources that facilitate learning, self-assessment and practical application of circular economy principles.

The toolkit has been designed following the principles of flexibility, accessibility and learner-centred education. All resources are aligned with the CirCLER Competence Framework and Modular Curriculum, allowing users to build personalised learning pathways according to their professional profile, previous experience and learning objectives.

Three complementary components constitute the core of the CirCLER Training Toolkit:

- **The CirCLER Learning Resources**, accessible through the CirCLER Learning Platform.
- **The CirCLER Interactive Tool**, supporting the practical application of circular economy concepts through an interactive learning environment.

- **The CirCLER Skills Self-Assessment Tool**, enabling learners to identify competence gaps and select the most appropriate learning pathway.

Together, these resources create an integrated digital ecosystem that supports both formal education and lifelong learning while facilitating the adoption of CirCLER across different educational and industrial contexts.

Learning Resources

The core component of the CirCLER Training Toolkit is the comprehensive collection of learning resources developed to support the implementation of the Joint Curriculum. These materials transform the competence framework and learning outcomes into practical educational content that can be delivered in vocational education and training, higher education, company training programmes and lifelong learning initiatives.

Following the modular structure of the curriculum, the consortium developed a complete set of educational resources covering all ten curriculum modules and the three qualification levels (Junior, Intermediate and Advanced). The materials were designed to support different learning contexts and delivery methods, enabling trainers to combine individual resources according to the characteristics of their learners and the objectives of each course.

The learning resources include a wide variety of educational formats, such as:

- structured learning units organised according to the curriculum modules;
- reading materials in pdf format;
- good practices and case studies illustrating the implementation of circular economy strategies in furniture companies;
- practical exercises and reflection activities;
- explanatory videos introducing key concepts and practical applications;
- podcasts featuring discussions on circular economy topics;
- glossary of keywords
- downloadable reference materials and complementary resources for further learning.

In line with the project's commitment to openness, accessibility and transferability, the CirCLER learning resources have been developed as **Open Educational Resources (OERs)** and made available in seven languages: English, German, Italian, Slovenian, Spanish, Romanian and Ukrainian. This **multilingual approach** reduces language barriers and facilitates the uptake, adaptation and reuse of the materials by education and training providers across different national contexts. It also supports the wider dissemination, transferability and long-term sustainability of the CirCLER training ecosystem beyond the original partnership.

The CirCLER Learning Platform

The CirCLER Learning Platform provides the digital environment through which these multilingual resources can be accessed and used. By bringing together the different language versions within a common learning environment, the platform enables learners, trainers and organisations to

navigate the course and access the training materials in the language most appropriate to their context. This strengthens the accessibility and usability of the CirCLER training offer and facilitates its adoption by education and training providers across Europe.

All learning materials have been integrated into the **CirCLER Learning Platform**, where they are organised according to the curriculum structure and can be accessed through an intuitive digital environment. The platform acts as a central repository for the educational resources, allowing learners to navigate the different modules, access multimedia content, complete learning activities and follow their own learning pathway. By combining multilingual access with flexible online delivery, the platform facilitates the adoption of CirCLER training by education providers, companies and individual learners across different national contexts.

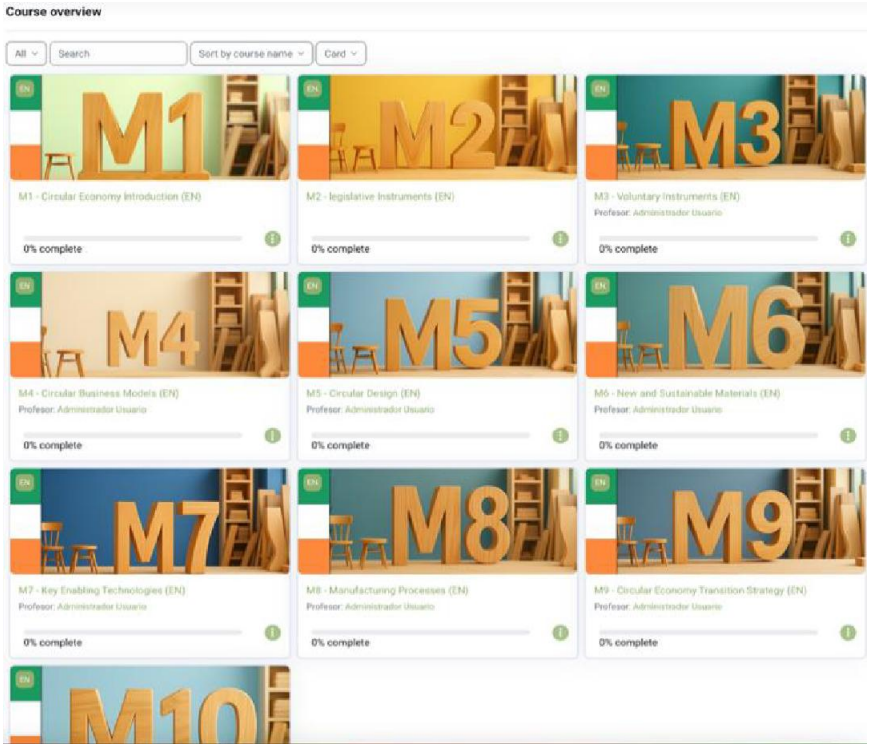


Figure 6. CirCLER Learning Platform

The complete collection of learning resources can be accessed through the CirCLER Learning Platform: https://circlercourse.eu

The CirCLER Interactive Tool

The **CirCLER Interactive Tool** complements the learning materials by offering an immersive activity designed to reinforce both circular economy knowledge and English-language listening skills. Its purpose is not to introduce new theoretical content, but to help learners practise the terminology, concepts and situations addressed in the different training pills through a more engaging and applied learning experience.

The activity is built around a podcast-style dialogue connected to the content of the CirCLER curriculum. Learners enter a virtual scenario in which they listen to a conversation between different characters discussing issues related to circular economy and the furniture sector. By presenting

the content in a realistic conversational format, the tool helps users become familiar with professional vocabulary, improve their understanding of spoken English and recognise how the concepts studied in the course may appear in workplace-related discussions.

After listening to the dialogue, learners complete a short quiz based on what they have heard. The quiz serves as an immediate comprehension check and encourages users to identify key information, relevant terminology and the main ideas discussed during the conversation. This combination of listening and assessment provides a simple way to reinforce learning without duplicating the more detailed quizzes and activities already included in the training modules.

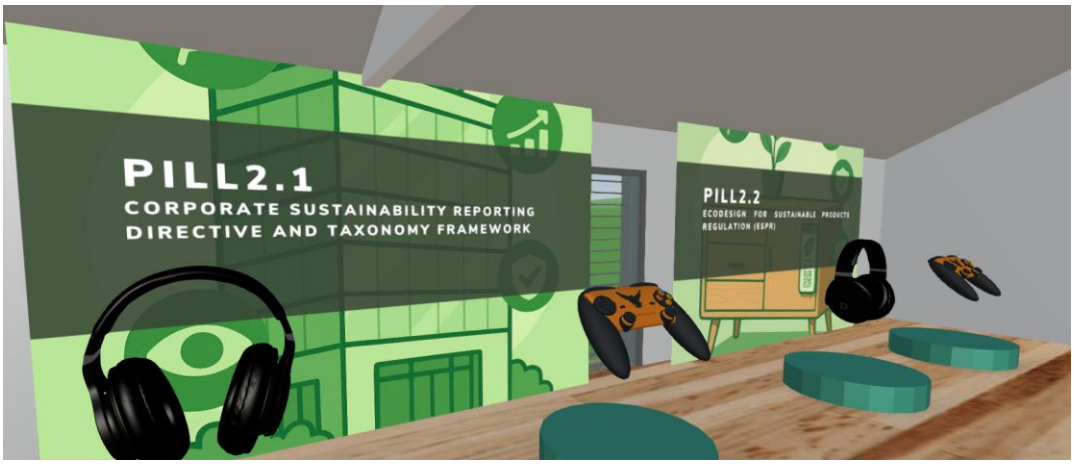


Figure 7. Image of the immersive CirCLER interactive tool

The tool can be used independently by learners or incorporated into guided training sessions. In VET and higher education contexts, trainers may use the activity as a complement to a specific learning pill, as a listening exercise before a group discussion or as a short consolidation task at the end of a module. Companies and lifelong learning providers may also use it to support professionals who need to become familiar with circular economy terminology in English.

CirCLER Skills Self-Assessment Tool

To maximise the flexibility of the modular curriculum, CirCLER developed an online **Skills Self-Assessment Tool** that enables learners to evaluate their current level of competence before starting their learning journey.

The tool is based on the CirCLER Competence Framework and allows users to self-assess their knowledge, skills and competences across the different thematic areas addressed by the project. Upon completion of the assessment, users receive a personalised competence profile together with recommendations on the most suitable learning pathway, qualification level (Junior, Intermediate or Advanced CETM) and training modules to address identified competence gaps.

Unlike traditional placement tests, the assessment is intended as a guidance mechanism rather than an examination. It supports informed learning decisions, helping learners avoid unnecessary training while focusing on those areas where further competence development is needed. This personalised approach also facilitates upskilling and reskilling processes for professionals with different backgrounds and levels of prior experience.

For education and training providers, the tool represents an additional implementation resource that can be used before the start of a course to identify the initial competence profile of participants, support the formation of homogeneous learning groups where appropriate, and adapt training delivery according to learners' needs.

The Skills Self-Assessment Tool is publicly available through the CirCLER platform at: https://assessment.circler-furniture.eu/

The recommended implementation workflow is therefore:

1. Learner completes the Skills Self-Assessment Tool.
2. The tool identifies the learner's competence profile and potential gaps.
3. Appropriate EQF level and learning pathway are recommended.
4. Relevant curriculum modules are selected.
5. The learner completes the corresponding training programme and obtains the associated micro-credentials.

This assessment-first approach ensures that the modular curriculum remains learner-centred, flexible and adaptable to different educational, vocational and professional contexts, reinforcing one of the core principles of the CirCLER training methodology.

Trainer's Handbook

Recognising that the successful implementation of the CirCLER training programme depends not only on the quality of its learning resources but also on the capacity of educators to use them effectively, the project developed a dedicated **Trainer's Handbook**[3] to support teachers, trainers and facilitators throughout the delivery of the curriculum.

The handbook serves as a practical guide for Vocational Education and Training (VET) providers, Higher Education institutions and professional trainers delivering the CirCLER course. Rather than focusing exclusively on the learning content, it provides a comprehensive pedagogical framework explaining how to plan, facilitate and assess training activities while ensuring a consistent learning experience across different countries and educational contexts.

The handbook introduces the overall structure of the CirCLER programme, including the three qualification pathways (EQF 4, EQF 5 and EQF 6), the modular organisation of the curriculum, prerequisite learning paths and guidance for helping learners select the most appropriate training route according to their previous knowledge and professional objectives. It also explains the role of the trainer as a facilitator and mentor, supporting learners through blended and online learning environments rather than relying on traditional lecture-based teaching.

[3] Trainers' handbook. Available at: https://circler-furniture.eu/en/docs/routedownload/technical-materials/t5-5/en-trainers-handbook

In addition, the handbook provides detailed guidance on assessment and certification. It describes the evaluation strategy based on self-reflection questions, multiple-choice quizzes and work-based projects, together with the certification framework that enables learners to obtain micro-credentials for individual learning pills, certificates for completed modules and a final course certificate aligned with the European Qualifications Framework (EQF).

The document also familiarises trainers with the CirCLER learning platform, explaining learner registration, course navigation, multilingual access, forum moderation and the integration of the Skills Self-Assessment Tool to support personalised learning pathways. Furthermore, it includes guidance for tutors involved in the pilot implementation, ensuring a harmonised delivery methodology across all participating countries.

3.4 Validation and pilot experiences

The CirCLER training ecosystem was not developed solely as a theoretical framework. Its learning resources, digital tools and training methodology were tested through a dedicated pilot phase designed to assess the coherence, usability, relevance and overall effectiveness of the training programme in practice.

The pilot was implemented between January and April 2026 through the CirCLER Learning Platform, reaching **856 registered learners across the seven language versions of the course**. Participation extended beyond the countries represented in the consortium, with learners from **14 countries**, demonstrating the potential of the multilingual and online approach to reach different national and educational contexts. Participants were able to select among the Junior, Intermediate and Advanced CETM learning pathways according to their needs and intended EQF level, with the Advanced pathway attracting the largest number of registrations.

The pilot evaluation combined feedback from learners with the perspectives of mentors and tutors involved in course delivery. A total of **236 learners from at least 10 countries** completed the evaluation survey, complemented by feedback from **20 mentors and tutors** representing VET centres, universities, clusters and research organisations across nine European countries.

Overall, the results provide strong evidence of the quality and relevance of the CirCLER training approach (table 3). Learners reported a high level of satisfaction with both the overall training experience and the educational content, while mentors gave particularly strong ratings to the clarity and quality of the course materials, their alignment with the intended learning objectives and the structure of the modules and learning pills. Significantly, all mentors participating in the evaluation stated that they would recommend the platform and course for wider adoption in VET centres and training organisations.

Table 3. CirCLER pilot at a glance

INDICATOR	PILOT RESULT
Registered learners	856
Course languages	7
Countries represented	14
Learner survey responses	236
Mentors/tutors surveyed	20
Overall learner experience	4.01 / 5
Educational content evaluation	3.98 / 5
Mentor rating - quality and clarity of course materials	4.70 / 5
Mentor rating - alignment with learning objectives	4.65 / 5
Mentor rating - structure of modules and learning pills	4.60 / 5

The pilot also served as a mechanism for continuous improvement. Feedback from learners and mentors identified opportunities to strengthen the practical dimension of the training, improve learner engagement and navigation, refine the self-assessment and interactive tools, and further integrate real-life cases and applied activities. Some improvements were already introduced during the pilot itself, including corrections to learning materials and greater flexibility for learners to modify their selected learning pathway. Other recommendations have been incorporated into the project's roadmap for the final project phase or identified as priorities for the future evolution of the training ecosystem.

The experience gained through the pilot provides an important evidence base for this Blueprint. It demonstrates the value of an iterative adoption process in which training resources are **implemented, evaluated, refined and progressively adapted** to learner and organisational needs.

4. Opportunities and Guidelines for Different Stakeholders

The CirCLER training ecosystem has been designed as an open, flexible and modular solution that can be adopted by a wide range of organisations involved in education, skills development, innovation and industrial transformation. Although all stakeholders share the common objective of strengthening circular economy competences, the way in which they can benefit from the project varies according to their roles, responsibilities and organisational context.

Rather than promoting a single implementation model, CirCLER encourages organisations to adopt those components of the training ecosystem that best match their needs. Some organisations may integrate the complete curriculum into existing programmes, while others may use individual modules, learning resources, assessment tools or the competence framework to complement their own activities.

The following sections provide practical guidance for the main stakeholder groups, identifying the potential benefits of adopting CirCLER together with recommended implementation approaches and priority actions.

Vocational Education and Training Providers and Higher Education Institutions

Why adopt CirCLER?

Vocational Education and Training (VET) providers and Higher Education Institutions play a central role in preparing the current and future workforce for the transition towards a circular economy. As labour market demands evolve, education providers are increasingly expected to update their programmes, incorporate interdisciplinary competences and respond more rapidly to emerging industrial needs.

The CirCLER training ecosystem offers a practical solution for modernising existing educational programmes without requiring institutions to develop new curricula from scratch. By combining an occupational profile, a competence framework, a modular curriculum and a comprehensive set of multilingual learning resources, CirCLER provides a structured foundation for integrating circular economy competences into formal education, continuing education and lifelong learning initiatives.

How can CirCLER be integrated?

The multilingual modular design of the CirCLER curriculum allows education providers to adopt the complete training programme or integrate individual modules into existing qualifications, degree programmes or professional development courses. Institutions may use the learning resources to enrich subjects related to sustainability, product design, manufacturing, engineering or business management, while also supporting dual and work-based learning through company-based assignments, practical challenges and projects addressing real circular economy needs. The Skills Self-Assessment Tool can further support learner guidance and personalised training pathways.

The curriculum is equally suitable for short courses, elective modules, continuing professional development programmes and future micro-credential initiatives. Its alignment with the European Qualifications Framework (EQF) and the ESCO framework further facilitates integration into different national education systems while maintaining consistency with European skills policies.

Suggested roadmap for adoption

- Review the Joint Curriculum and identify the modules that complement existing programmes.
- Pilot one or more curriculum modules within an existing course or lifelong learning programme.
- Use the Skills Self-Assessment Tool to guide learners towards appropriate learning pathways.
- Explore opportunities to award micro-credentials or certificates for completed modules.
- Establish collaboration with local companies to incorporate practical case studies and work-based learning activities.

Companies

Why adopt CirCLER?

Companies are at the forefront of the circular transition and increasingly need professionals capable of translating sustainability objectives into practical business solutions. The introduction of new European legislation, together with growing customer expectations and resource efficiency challenges, requires organisations to strengthen their internal competences and develop a workforce capable of leading organisational change.

The CirCLER training ecosystem enables companies to build these capabilities through a structured and flexible learning programme tailored to the needs of the furniture sector. Rather than focusing exclusively on technical knowledge, the curriculum develops the strategic, operational and transversal competences required to plan, implement and monitor circular economy initiatives across different business functions.

How can CirCLER be integrated?

Companies may integrate CirCLER into their internal training strategies, onboarding programmes, management development initiatives or continuous professional development activities. Depending on organisational needs, the complete curriculum may be delivered to employees responsible for sustainability or innovation, while individual modules can be used to strengthen specific competences in areas such as circular design, legislation, sustainable materials or circular business models.

The Skills Self-Assessment Tool provides a simple mechanism for identifying competence gaps and creating personalised learning pathways. CirCLER can also support dual and work-based learning arrangements developed jointly with VET providers or Higher Education Institutions, combining learning resources with company-based assignments and real projects that allow employees and learners to apply acquired competences directly to workplace challenges.

Suggested roadmap for adoption

- Identify employees who could lead or support the company's circular transition.
- Encourage participants to complete the Skills Self-Assessment Tool before starting training.
- Select curriculum modules that address the organisation's most immediate competence needs.
- Integrate CirCLER learning activities into existing professional development programmes.
- Combine training with practical improvement projects that allow learners to apply circular economy concepts within their own organisation.

Sectoral Furniture Organisations and Clusters

Why adopt CirCLER?

Sectoral furniture organisations and business clusters play a strategic role in supporting the competitiveness, innovation capacity and sustainability of SMEs. As intermediaries between companies, education providers and policymakers, they are ideally positioned to identify emerging skills needs, promote lifelong learning and facilitate the transfer of knowledge across the sector.

The CirCLER training ecosystem provides these organisations with a ready-to-use set of resources that can complement their existing services and help accelerate the uptake of circular economy practices among their members. By adopting CirCLER, clusters can strengthen their role as facilitators of the green transition while expanding their portfolio of training and innovation support activities.

How can CirCLER be integrated?

CirCLER can be incorporated into existing cluster activities in multiple ways. The Joint Curriculum and Learning Resources can support the organisation of sector-specific workshops, professional development programmes and awareness-raising events. The Skills Self-Assessment Tool can help member companies identify competence gaps before selecting appropriate training pathways, while the CETM profile provides a common reference for discussing the new skills required by the furniture industry.

Clusters may also integrate CirCLER into innovation projects, networking activities, business advisory services and collaborative initiatives involving companies, VET providers and Higher Education Institutions, thereby creating stronger links between skills development and industrial innovation.

Suggested roadmap for adoption

- Review the Joint Curriculum and identify the modules most relevant to member companies.
- Organise an introductory workshop presenting the CETM profile and the CirCLER training ecosystem.
- Encourage companies to complete the Skills Self-Assessment Tool before selecting training pathways.
- Establish partnerships with education providers to deliver joint training programmes.
- Disseminate the CirCLER resources through existing cluster communication channels and sectoral events.

Employment Services and Career Guidance Organisations

Why adopt CirCLER?

Employment services and career guidance organisations play a fundamental role in supporting individuals throughout their professional careers, particularly during periods of labour market transformation. As the demand for circular economy competences continues to grow, these organisations require reliable tools to identify emerging occupations, guide career transitions and connect job seekers with new employment opportunities.

The CirCLER project offers a structured framework that helps career advisors and employment professionals understand the competences associated with circular economy occupations in the manufacturing sector. By providing competence profiles, learning pathways and assessment tools, CirCLER facilitates informed career guidance and supports both upskilling and reskilling processes.

How can CirCLER be integrated?

The Occupational Profile and Competence Framework can be incorporated into career guidance services to help individuals identify the knowledge and competences required for emerging circular occupations. The Skills Self-Assessment Tool can support personalised guidance processes by enabling users to identify their current competence level and define appropriate learning pathways.

Employment services can also recommend specific CirCLER training modules to job seekers, employees seeking career progression or workers affected by industrial transformation, thereby facilitating access to relevant lifelong learning opportunities.

Suggested roadmap for adoption

- Introduce circular economy career opportunities within guidance and employment services.
- Use the Occupational Profile to explain emerging professional roles.
- Apply the Skills Self-Assessment Tool during career guidance and counselling sessions.
- Recommend appropriate CirCLER learning modules based on individual competence needs.
- Collaborate with education providers and employers to facilitate transitions into circular economy occupations.

Research and Technology Organisations

Why adopt CirCLER?

Research and Technology Organisations (RTOs) play a key role in accelerating the transition towards a circular economy by bridging research, innovation and industrial implementation. As organisations supporting companies in the development, validation and deployment of new technologies, they require methodologies and educational resources that complement technological innovation with the development of human capital and organisational capabilities.

The CirCLER framework provides RTOs with a practical reference to integrate circular economy competences into innovation projects, demonstration activities and technology transfer initiatives. By combining technical knowledge with structured training resources, RTOs can strengthen the adoption of circular solutions while supporting companies, educators and public authorities throughout the innovation process.

How can CirCLER be integrated?

CirCLER resources can be built upon and integrated into new European and regional innovation projects, Living Labs, pilot demonstrations and technology validation activities. The Competence Framework and Occupational Profile can help identify the knowledge and skills required by different stakeholders, while the Joint Curriculum and learning resources can be used to train researchers, technicians, industrial partners and other participants involved in collaborative innovation projects.

The project also offers practical tools, such as the Skills Self-Assessment Tool and Interactive Tool, that can support competence mapping, capacity-building programmes and stakeholder engagement activities. These resources facilitate the integration of skills development into innovation ecosystems, ensuring that technological advances are accompanied by the competences needed for successful implementation.

Suggested roadmap for adoption

- Review the CirCLER Competence Framework and Occupational Profile to identify relevant skills for innovation activities.
- Build upon CirCLER learning resources in research, demonstration and technology transfer projects.
- Use the Skills Self-Assessment Tool to identify competence gaps among project participants.
- Incorporate training activities into Living Labs, pilot demonstrations and stakeholder engagement events.
- Establish collaborations with VET providers, universities and companies to strengthen regional innovation ecosystems.

Public Authorities and Policy Makers

Why adopt CirCLER?

Public authorities play a strategic role in creating the conditions that enable the transition towards a circular economy. Regional, national and European policies increasingly recognise that achieving circularity requires not only technological innovation but also a workforce equipped with the appropriate knowledge and competences. Skills development therefore becomes an essential component of industrial, environmental and employment policies.

The CirCLER project provides a practical framework that can support policy development by offering validated competence profiles, educational resources and implementation methodologies aligned with European priorities such as the European Green Deal, the Circular Economy Action Plan, the Pact for Skills and the Union of Skills initiative. These resources can help public authorities promote coherent skills ecosystems and encourage collaboration between education providers, industry and innovation actors.

How can CirCLER be integrated?

Public authorities can use CirCLER as a reference when designing regional or national strategies for green skills, vocational education, industrial transition and lifelong learning. The project's resources can support funding programmes, pilot initiatives, Smart Specialisation Strategies (S3), regional skills partnerships and policies aimed at strengthening the competitiveness of manufacturing industries.

Furthermore, CirCLER can contribute to the promotion of micro-credentials, competence-based learning and stronger cooperation between education and industry, supporting the implementation of evidence-based policies for the green and digital transitions

Suggested roadmap for adoption

- Review existing regional or national skills strategies to identify opportunities for integrating circular economy competences.
- Promote partnerships between education providers, research organisations and industry.
- Encourage the adoption of modular learning pathways and micro-credentials.
- Support pilot implementations of the CirCLER curriculum through regional or national funding schemes.
- Use CirCLER as a reference framework when designing policies related to green skills and industrial transition.

4.1 Getting Started with CirCLER

CirCLER has been designed as a flexible training ecosystem that can be adopted progressively according to the needs, capacities and objectives of each organisation. It is not necessary to implement all project results simultaneously. Organisations may begin with a single resource, such as the Occupational Profile, the Competence Framework or the Skills Self-Assessment Tool, and gradually incorporate additional elements as their training or organisational strategy develops.

The following pathway provides a practical starting point for organisations interested in adopting, adapting or transferring the CirCLER approach.

Step 1. Identify your organisational needs

Begin by defining the challenge that your organisation seeks to address. This may include updating an existing training programme, developing a new circular economy course, identifying competence gaps, supporting company transformation, guiding learners towards emerging occupations or strengthening regional skills strategies.

At this stage, organisations should identify their main target groups, the expected learning or organisational outcomes and the resources available for implementation.

Step 2. Explore the CirCLER ecosystem

Review the main CirCLER results to understand how each resource can support your objectives. The Occupational Profile and Competence Framework provide the foundations for defining skills requirements, while the Joint Curriculum, Training Toolkit and learning resources support training design and delivery.

The Skills Self-Assessment Tool can be used to identify competence gaps and personalise learning pathways, while the micro-credential approach provides guidance for recognising acquired learning outcomes.

Step 3. Select the most relevant resources

Organisations should select the CirCLER components that best respond to their needs. A VET provider may focus on the Joint Curriculum and training materials, while a company may initially use the Self-Assessment Tool to identify workforce development priorities.

Public authorities, clusters and employment services may instead use the Occupational Profile and Competence Framework to support skills planning, career guidance or regional strategies.

Step 4. Adapt the resources to your context

CirCLER resources can be adapted to different institutional, sectoral and national contexts. This may involve selecting specific learning modules, adjusting examples and case studies, translating materials, aligning learning outcomes with national qualification frameworks or integrating the content into existing courses and professional development programmes.

Step 5. Plan a pilot implementation

Before introducing the CirCLER approach on a larger scale, organisations are encouraged to conduct a small pilot. The pilot may involve a selected group of learners, employees, trainers or career guidance professionals.

A pilot implementation allows the organisation to test the relevance of the selected materials, assess their suitability for the target group and identify possible improvements before broader deployment.

Step 6. Assess learning and collect feedback

Learners, trainers and participating organisations should be invited to evaluate the content, learning methodology, usability and practical relevance of the CirCLER resources.

The assessment methods included in the curriculum can support the monitoring of learning progress. Feedback should be used to adapt the training pathway and improve future implementation cycles.

Step 7. Recognise and embed the learning

Where possible, organisations should link the acquired competences to existing certification, qualification or micro-credential systems. CirCLER learning outcomes can also be incorporated into internal professional development systems, continuing education programmes or institutional training offers.

Embedding CirCLER within regular organisational activities will contribute to the continuity and sustainability of the training offer.

Step 8. Scale up and build partnerships

Following a successful pilot, the organisation can extend the training to additional learners, departments, companies or territories. Cooperation with education providers, companies, research organisations, clusters and public authorities can facilitate joint delivery, recognition and long-term uptake.

The CirCLER approach is particularly suitable for collaborative implementation within regional skills ecosystems and sectoral partnerships.

Organisations wishing to assess their readiness to adopt the CirCLER ecosystem may use the Adoption Checklist provided in Annex I.

4.2 Use, Adaptation and Transferability of CirCLER Training

The CirCLER training ecosystem has been designed to support different forms and levels of adoption. Organisations are not required to implement one of the three complete CETM learning pathways - Junior (EQF 4), Intermediate (EQF 5) or Advanced (EQF 6) - in order to benefit from the project results. Depending on their objectives, target groups and available resources, they may use the complete curriculum, selected modules, individual learning pills or specific tools and learning resources.

This flexibility enables CirCLER to be incorporated into a wide range of education and training activities. VET providers and Higher Education Institutions may integrate selected modules or learning pills into existing programmes or use them as complementary teaching materials. Companies may select specific content for internal upskilling or work-based training, while individual learners can access particular resources for self-directed learning according to their professional interests and competence needs.

Several characteristics of the CirCLER ecosystem facilitate this flexible use and its transfer to different contexts. Its **modular structure** allows organisations to select the learning units most relevant to their needs; **open access** facilitates reuse beyond the original partnership; **digital delivery** enables flexible and self-paced learning; and the availability of the learning platform and resources in **seven languages** (English, German, Italian, Slovenian, Spanish, Romanian and Ukrainian) reduces linguistic barriers and supports adoption across different European contexts.

In practice, this flexibility allows organisations and individual learners to engage with the CirCLER training ecosystem at different levels, ranging from the implementation of a complete CETM learning pathway to the use of individual learning resources. Table 4 summarises the main adoption options.

Table 4. Flexible adoption options for the CirCLER training ecosystem

ADOPTION OPTION	HOW CIRCLER CAN BE USED
Full CETM learning pathway	Implementation of the Junior (EQF 4), Intermediate (EQF 5) or Advanced (EQF 6) learning pathway.
Selected modules	Integration of one or more modules into existing VET, HE, continuing professional development or company training programmes.
Individual learning pills	Use of specific learning units to address particular circular economy knowledge or competence needs.
Specific learning resources and tools	Independent use of case studies, videos, practical resources, the Skills Self-Assessment Tool or the Interactive Tool.

Adaptation may involve selecting or combining learning pills, incorporating CirCLER resources into existing courses, complementing them with sector- or company-specific examples, or embedding them within broader training initiatives. Where appropriate, organisations may also adapt the

delivery methodology, learning activities or level of support to the characteristics of their learners, while maintaining the learning objectives and competence areas addressed by the original resources.

This flexible architecture increases the potential for CirCLER to remain relevant beyond the lifetime of the project and supports its transfer not only across different education and training systems, but also, where appropriate, to other traditional manufacturing industries facing similar circular transition challenges.

4.3 Access the CirCLER Resources

All CirCLER results have been developed to facilitate their reuse, adaptation and integration by organisations across Europe. The resources are available digitally and can be consulted individually or used as part of the complete CirCLER Training Ecosystem.

The following overview provides direct access to the principal project results.

CirCLER Project Website

Purpose: Provides general information about the project, its objectives, activities, partners, news and it makes fully available all its public results.

Recommended for: All stakeholders seeking an initial overview of CirCLER.

Access: www.circler-furniture.eu

CirCLER E-learning Platform

Purpose: Central access point for the CirCLER online course, learning modules, multimedia resources and interactive tool.

Recommended for: Learners, workers, trainers, VET providers, higher education institutions and companies.

Access: https:/circlercourse.eu

CirCLER Competence Framework

Purpose: Describes the knowledge, skills and attitudes required to guide the circular transition of companies across the furniture value chain.

Recommended for: Curriculum developers, trainers, companies, RTOs, skills authorities and employment services.

Access: https://circler-furniture.eu/en/docs/routedownload/technical-materials/d3-1/d3-1-ce-transition-manager-ksc-needs

CirCLER Joint Curriculum

Purpose: Provides the structure of the CirCLER training offer at EQF levels 4, 5 and 6, including learning outcomes, modules, teaching approaches and assessment methods.

Recommended for: VET providers, higher education institutions, trainers and curriculum developers.

Access: https://circler-furniture.eu/en/docs/routedownload/technical-materials/en-d4-1-cetm-joint-curricula

Skills Self-Assessment Tool

Purpose: Enables individuals and organisations to assess current competence levels, identify skills gaps and define personalised learning pathways.

Recommended for: Learners, employees, companies, employment services, career guidance professionals and education providers.

Access: https://assessment.circler-furniture.eu/

CirCLER Trainer's Handbook

Purpose: Provides practical guidance for planning, adapting and delivering the CirCLER training programme in different educational and professional contexts.

Recommended for: Teachers, trainers, tutors and training managers.

Access: https://circler-furniture.eu/en/docs/routedownload/technical-materials/t5-5/en-trainers-handbook

5. Policy Recommendations: Lessons Learned from the CirCLER Project

The experience gained throughout the CirCLER project demonstrates that developing circular economy skills requires more than the creation of new training materials. Building an effective skills ecosystem depends on coordinated action involving education providers, industry, research organisations and public authorities, supported by policies that facilitate collaboration, innovation and lifelong learning.

The recommendations presented in this chapter build upon the lessons learned during the design, validation and pilot implementation of the CirCLER training ecosystem. Although they have been developed in the context of the furniture sector, they address challenges that are common to many traditional manufacturing industries undergoing the green and digital transition. As such, they may inform future European, national and regional policies aiming to strengthen industrial competitiveness through skills development.

Rather than proposing new regulatory measures, these recommendations identify practical actions that can support the wider deployment of circular economy training, facilitate cooperation between stakeholders and maximise the long-term impact of publicly funded education and innovation initiatives.

Integrate circular economy competences into education and workforce development strategies

European and national education, training and workforce development strategies should systematically incorporate circular economy competences, particularly in traditional manufacturing industries undergoing significant transformation. Rather than treating circularity as a standalone or optional topic, competence development should be embedded across VET, higher education, continuing professional development and workforce upskilling initiatives.

The CirCLER experience shows the value of combining sector-specific technical knowledge with transversal, managerial and strategic competences. Public authorities, education providers and industry organisations should therefore work together to ensure that circular economy competences are reflected in curricula, professional development programmes and workforce transition strategies, with particular attention to sectors dominated by SMEs.

Promote flexible, modular and stackable learning

The rapid evolution of environmental legislation, technologies and business models requires education systems capable of adapting more quickly than traditional qualification structures often allow.

The CirCLER experience demonstrates that modular curricula, combined with micro-credentials and competence-based assessment, provide greater flexibility for both learners and education providers. European and national policies should continue supporting modular learning

architectures that allow professionals to progressively acquire new competences throughout their careers while facilitating recognition across education and employment systems.

Foster cooperation between VET, higher education and industry

One of the main lessons emerging from CirCLER is that effective circular economy education cannot be developed in isolation.

The occupational profile, competence framework and curriculum benefited significantly from the continuous participation of companies, universities, vocational education providers and research organisations. Future funding programmes should therefore continue promoting multi-stakeholder partnerships capable of co-designing education programmes that respond to evolving industrial needs.

Greater collaboration should also extend to curriculum validation, internships, Living Labs, pilot implementations and other forms of practice-oriented learning, ensuring continuous feedback between education providers and employers.

The CirCLER experience also highlights the value of dual and work-based learning approaches in strengthening the connection between education and industrial practice. The modular curriculum, practical activities, case studies and company-oriented learning resources can support training models in which theoretical learning is combined with activities carried out in real or simulated workplace contexts. Policymakers and education authorities should therefore encourage stronger cooperation between VET and HE providers and companies to facilitate dual learning arrangements, work-based assignments, mentoring and company-based projects linked to circular economy challenges.

Support micro-credentials for green occupations

As industrial transformation accelerates, professionals increasingly require short and targeted learning opportunities rather than complete qualification programmes.

Micro-credentials provide an effective mechanism for recognising incremental competence development while supporting lifelong learning and workforce adaptability. Policymakers should continue encouraging the development of quality-assured micro-credentials that are aligned with European frameworks, recognised by employers and transferable across Member States.

Encourage sector-specific circular economy training

Although many circular economy concepts are applicable across industries, their practical implementation varies considerably depending on products, manufacturing processes, materials and value chains.

The CirCLER experience highlights the importance of developing sector-specific educational resources that combine generic sustainability principles with practical industrial applications. European funding programmes should therefore continue supporting training initiatives tailored to specific industrial ecosystems rather than relying exclusively on generic sustainability education.

Strengthen skills intelligence for the green transition

The pace of technological and regulatory change requires continuous monitoring of emerging competence needs.

Skills intelligence mechanisms should be strengthened to anticipate emerging competence needs associated with the green transition. This requires continuous monitoring of labour-market developments, regulatory changes, technological evolution and employer demand, combined with regular consultation of sector stakeholders.

The CirCLER experience demonstrates the value of linking desk research, sector analysis and direct stakeholder consultation when defining new occupational profiles and training needs. Similar mechanisms should be embedded more systematically in education and industrial policy to ensure that curricula and training provision evolve in line with changing labour-market requirements.

Support SMEs in accessing specialised circular training

Micro, small and medium-sized enterprises represent the majority of companies within the European furniture sector (around 99%), yet they often face the greatest barriers to competence development due to limited financial, organisational and human resources.

Public support mechanisms should facilitate SME participation in specialised training programmes through flexible delivery models, financial incentives and regional cooperation initiatives. Digital learning platforms, modular curricula and blended learning approaches can significantly reduce access barriers while allowing employees to combine training with their professional responsibilities.

Encourage the reuse and transferability of publicly funded training resources across Europe

European programmes generate a considerable volume of high-quality educational resources that frequently remain underused once projects are completed.

The CirCLER project demonstrates the value of developing open, modular and transferable training ecosystems that can be reused, adapted and expanded by organisations beyond the original consortium. Future programmes should further encourage the publication of educational resources as Open Educational Resources (OER), promote interoperability between learning platforms and facilitate the integration of project results into national and regional education systems.

Greater emphasis should also be placed on connecting the outcomes of different European projects working on related themes, allowing competence frameworks, curricula and learning resources to evolve collectively rather than being developed independently.

The CirCLER experience also highlights the importance of multilingual accessibility for effective European transferability. Making the learning platform and resources available in seven languages (English, German, Italian, Slovenian, Spanish, Romanian and Ukrainian) reduces linguistic barriers and creates more favourable conditions for their uptake in different national education and training

contexts. Future European initiatives should therefore consider multilingual delivery not merely as a dissemination activity, but as an integral element of the accessibility, reuse, transferability and long-term exploitation of publicly funded educational resources.

Collectively, these recommendations illustrate that developing circular economy skills is not solely an educational challenge but a systemic one, requiring coordinated action across policy, industry, education and research. The experience gained through CirCLER demonstrates that when competence frameworks, modular curricula, digital learning resources and stakeholder collaboration are brought together within a coherent ecosystem, they can deliver qualitative outputs and significantly accelerate the adoption of circular practices by industry. Building upon these lessons will help ensure that Europe develops not only the technologies needed for the circular transition, but also the skilled workforce capable of using them in practice.

Figure 8 summarises the main policy action areas emerging from the CirCLER experience, highlighting the priorities identified to strengthen circular skills development and support the wider transition towards a circular economy across the European furniture industry.

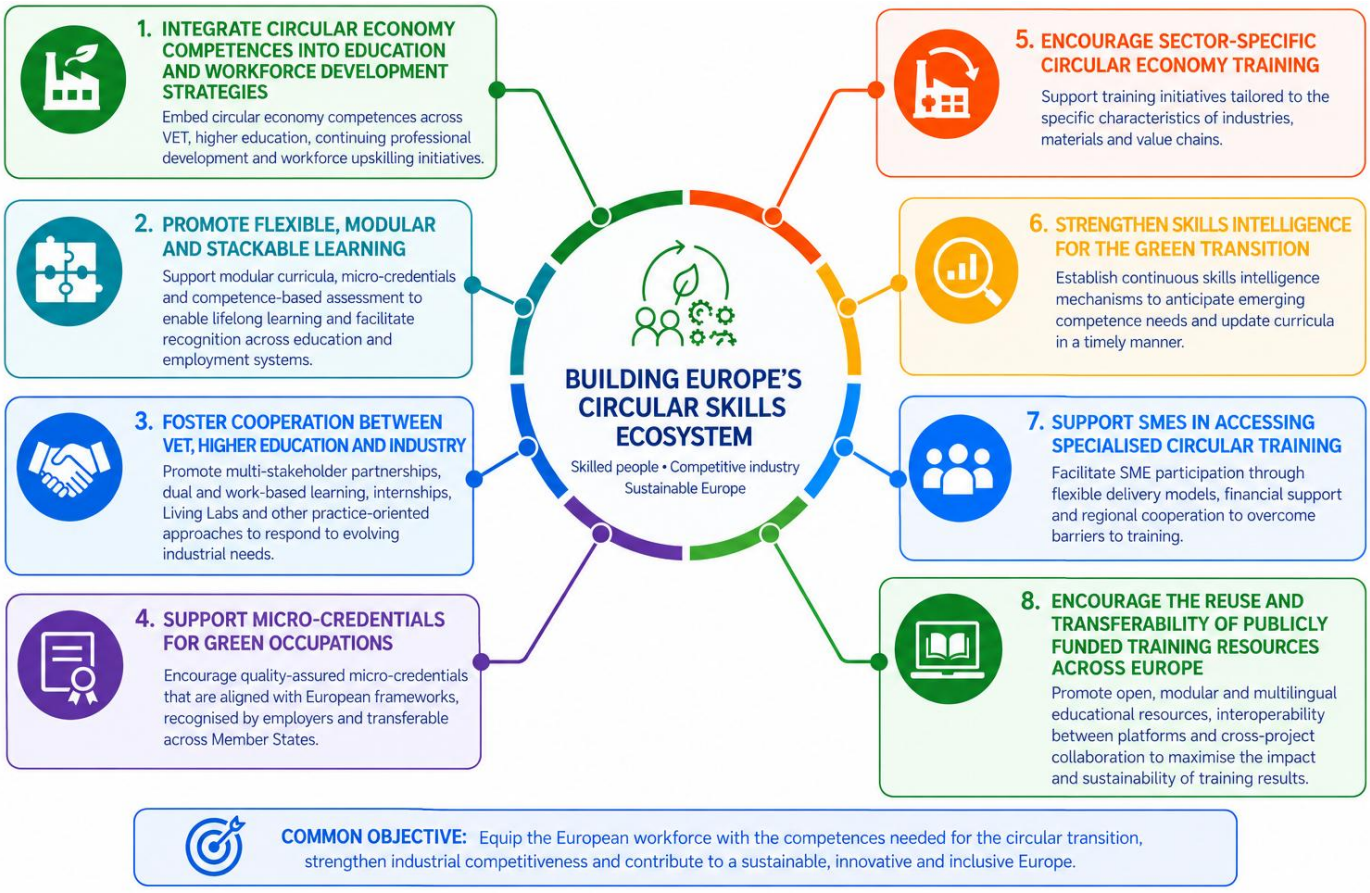


Figure 8. Policy Action Areas: lessons learned from the CirCLER project

6. Conclusions

The transition towards a circular economy represents one of the most significant transformations currently facing European industry. Achieving this transition requires not only the adoption of innovative technologies and sustainable business models, but also the development of a workforce equipped with the knowledge, competences and mindset needed to operate successfully within circular value chains. In this context, education and training become strategic enablers of industrial competitiveness, environmental sustainability and social resilience.

The CirCLER project has demonstrated that the skills required for circularity can be effectively addressed through a collaborative approach that brings together education providers, research organisations, companies, industry representatives, and policy stakeholders. Rather than developing isolated training materials, the project has created an integrated training ecosystem composed of complementary educational resources, digital tools and methodological guidance that can be adapted to different learning environments and organisational contexts across Europe.

This Blueprint has been developed to encourage the adoption of that ecosystem. It provides practical guidance for a wide range of stakeholders, illustrating how the different CirCLER resources can be integrated into vocational education and training, higher education, industrial upskilling programmes, research and innovation activities, cluster initiatives and public policies. Through the adoption pathways, implementation guidance and access to project resources presented throughout the document, organisations are encouraged to progressively incorporate the CirCLER approach according to their own priorities and capacities.

The long-term value of CirCLER will ultimately depend on the willingness of organisations to build upon its results. By embedding circular economy competences into curricula, supporting lifelong learning, promoting dual and work-based learning approaches, fostering collaboration between education, research and industry, and promoting coherent policy frameworks, stakeholders can ensure that the project's outcomes continue to generate impact well beyond its lifetime. In particular, stronger cooperation between education providers and companies can help connect theoretical learning with real industrial challenges, facilitating the practical application of circular economy competences in the workplace. Equally important will be the continued reuse, adaptation and transfer of the project's openly available multilingual resources, enabling new organisations and sectors to benefit from the knowledge generated .

Ultimately, CirCLER should be regarded not as a completed initiative, but as a foundation for the continued development of circular skills ecosystems across Europe. The resources, methodologies, partnerships and practical guidance presented in this Blueprint provide a solid basis for future cooperation, innovation and capacity building, contributing to a more competitive, sustainable and resilient European manufacturing sector. By supporting the adoption of the CirCLER ecosystem across different educational, industrial and policy contexts, the project lays the groundwork for a lasting legacy that extends beyond the furniture sector and can inspire similar transitions across other traditional manufacturing industries.

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ANNEX I. CirCLER adoption checklist

Purpose

This checklist is intended to help organisations assess their level of preparedness to adopt the CirCLER ecosystem. It can be used before implementation, during pilot activities or as part of a continuous improvement process.

The checklist does not represent mandatory requirements. Instead, it provides a practical framework to support planning, implementation and long-term integration of the CirCLER approach.

Organisational Readiness	Yes	Partly	No
We have identified why we want to adopt CirCLER.	□	□	□
We have identified our target learners or beneficiaries.	□	□	□
The implementation is aligned with our organisational strategy.	□	□	□
Management supports the implementation process.	□	□	□

Understanding the CirCLER Ecosystem	Yes	Partly	No
We are familiar with the CETM Occupational Profile.	□	□	□
We have explored the Joint Curriculum.	□	□	□
We know which learning resources are most relevant for our organisation.	□	□	□

Training Preparation	Yes	Partly	No
Trainers or facilitators have been identified.	□	□	□
Appropriate learning modules have been selected.	□	□	□
A pilot implementation has been planned.	□	□	□

Assessment and Recognition	Yes	Partly	No
We intend to use the Skills Self-Assessment Tool.	□	□	□
Learning outcomes will be assessed.	□	□	□
We have considered recognising learning through certificates or micro-credentials.	□	□	□

Sustainability	Yes	Partly	No
We plan to continue using CirCLER beyond the pilot phase.	□	□	□
We have identified potential partners for collaboration.	□	□	□
We intend to adapt the materials to our organisational context where appropriate.	□	□	□

Final reflection

How prepared is your organisation to adopt CirCLER?

- ☐ Ready to implement
- ☐ Ready for a pilot
- ☐ Further preparation is needed
- ☐ We require additional guidance before implementation

Suggested Next Step

If your organisation answered "Yes" to most questions, you are ready to begin implementing the CirCLER approach.

If several responses were marked "Partly" or "No", we recommend starting with the roadmap presented in Section 4.1 – Getting Started with CirCLER, reviewing the project resources in Section 4.3, and seeking support from the CirCLER partnership where appropriate.

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