The Business Pathway to Circular Economy: Global Insights and Regional Dynamics

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GUIDANCE

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Key takeaways

- With the support of appropriate policies and enabling frameworks, circular economy activities have the potential to deliver economic, environmental, and social benefits by reducing resource use and emissions, advancing sustainability, and generating jobs.
- The global circularity rate is declining, with the rate dropping to 6.9% in 2024, reflecting continued reliance on virgin resources despite growing CE ambitions and policies.
- CE can lead to net job creation, especially in repair, reuse, and recycling, but requires significant reskilling efforts and measures as well as redeployment to offset losses.
- With more than half of the global workforce in the informal economy, integrating these activities into CE systems is vital for maximising benefits and scaling implementation.
- Tailored training, vocational education and lifelong learning are essential to meet evolving CE demands, particularly in lower-income regions.
- SMEs face greater CE challenges, including limited access to funding and institutional support, while larger firms struggle with transition costs and workforce upskilling.
- EBMOs play a key role by guiding businesses, advocating for supportive policies and facilitating access to training, tools, and finance.
- A successful CE transition requires policy harmonisation, cross-sector collaboration and engagement in regional and global CE platforms.

Introduction

Since the start of the 20th century, the combination of labour market development, technological innovation and economic growth have produced unprecedented progress in terms of standards of living, wealth and job creation as well as population growth. While materials and natural resources form the foundation of economies and human development, the **growing demand for their use is becoming one of the most pressing sustainable development challenges[1].**

> The circular economy (CE) is a system of production and consumption that focuses on reducing waste, reusing products, and recycling materials to extend their lifespan.

These **trends are driving impacts on business models, labour markets, and regulatory frameworks.** Employers increasingly require innovation, capacity and expertise to successfully balance social, economic and environmental objectives, solve supply chain complexities, and navigate geopolitical risks, all while increasing resilience and staying competitive.

The circular economy (CE) is a **system of production and consumption that focuses on reducing waste, reusing products, and recycling materials to extend their lifespan.** By keeping resources in use for as long as possible, it can help, if properly managed, reduce the need for raw material extraction, minimises environmental impact, and creates additional value throughout the economy. Practical measures such as better waste management, more sustainable product design, and efficient use of resources—including in sectors like agriculture, construction, and manufacturing—can support sustainable development, improve productivity, and generate employment.

CE also can play a **vital role in tackling climate change.** While around 55% of global greenhouse gas emissions are linked to energy systems—such as the production and use of fossil fuels—the remaining 45% are associated with the way materials and goods are produced and consumed. This highlights the importance of circular strategies in addressing nearly half of global emissions. For example, applying circular approaches to just four key materials—cement, steel, plastic, and aluminium—could reduce emissions from these sectors by up to 40% by 2050[2].

Beyond its environmental benefits, CE supports **Sustainable Development Goal 12** which promotes responsible consumption and production. Additionally, the transition to a CE can offer significant **job creation potential,** with an estimated **7 to 8 million new jobs** that could be created in the CE, where all forms of waste, such as clothes, scrap metal and obsolete electronics are reused, recycled and refurbished[3]. With appropriate policies and supportive frameworks, jobs in the circular economy can provide high-quality employment with many socio-economic

1 According to the **Circularity Gap Report 2024**, in just six years, over 500 billion tonnes of materials have been consumed globally - nearly equivalent to the total used during the entire 20th century. Plastics production alone is projected to rise by 70% by 2040, according to the **OECD**, while demand continues to grow across sectors such as construction, mobility, food and energy, which together drive around 90% of global material use. If current trends continue, annual resource extraction could increase by nearly 60%, from 100 to 160 billion tonnes by 2060.

2 Ellen MacArthur Foundation, '**Completing the picture: How the circular economy tackles climate** change', (2023).

3 International Labour Organization, **Decent work in the circular economy** (2023).

benefits, such as higher productivity, a more skilled workforce and tackling informality, as well as helping to meet environmental objectives and diversifying economies.

Despite its potential, the **global circularity rate** - the share of secondary materials out of total material consumption - continues to decline and **has reached 6.9% in 2024[4],** down from 9.1% in 2018. This is mainly due to rising overall consumption and continued dependence on virgin raw materials, as secondary material use grows more slowly.

For the purpose of this report, **CE is understood as an economy that minimises waste and preserves value by reducing, reusing, recycling, and recovering materials across the supply chain[5].** This transformation, supported by collaboration among industry, consumers, policymakers, and innovators, has the potential to drive sustainable development.

While technological, regulatory, financial, and infrastructural barriers exist, one of the challenges is the **needed employment and workforce transformation.** CE requires new skills, job creation, and organisational restructuring, with significant geographic disparities and differences depending on company size. Addressing these workforce issues is critical to unlocking the full potential of the CE. To support this shift effectively, close collaboration between governments and the private sector is also essential. Public policies must be aligned with economic realities to create the enabling conditions needed for circular activities to scale, ensuring the workforce is supported and businesses can adapt and thrive in the transition.

As governments develop policies to foster CE, support economic growth, and enable sustainable job creation, evidence-based recommendations and practical support for circular business models are vital. Facing multiple challenges and limited resources, **businesses can benefit from guidance, incentives, and awareness-raising provided by** employer and business membership organisations **(EBMOs).** This report provides a comprehensive overview of the CE and its integration into business models across all sectors and enterprise types. It is structured around four main areas:

- **Current circular practices and policies:** An overview of circular business models and strategies, plus a review of CE policies across four global regions.
- **The role of EBMOs:** How EBMOs support members in building awareness, capacity, and promoting a just and inclusive transition.
- **Impacts on labour markets:** Analysis of employment effects, skills needs, workforce planning, and tackling informality.
- **A practical toolkit for action:** Tools and recommendations to help EBMOs and governments shape policies, foster collaboration, scale up circular practices, and adapt to evolving work environments.

The methodology combines literature review, expert interviews, surveys among EBMOs and companies, and exchanges with CE platforms and trade bodies.

4 Circle Economy, (2025), '**Circularity Gap Report 2025**'.

5 Please note, there is no universal definition of CE, leading to difficulties into its implementation and within policies. See Kirchherr, J., N. H. N. Yang, F. Schulze-Spüntrup, M. J. Heerink, and K. Hartley. 2023. "Conceptualizing the CE (Revisited): An analysis of 221 Definitions." Resources, Conservation and Recycling.

Circular business model and sectoral approaches

A range of **circular business models** are being implemented across industries, often in combination depending on the nature of the business. The most common[6] include:

- **Circular supply models:** using renewable, recycled or regenerative inputs
- **Sharing models:** promoting access over ownership (e.g. renting, pooling)
- **Product-as-a-service:** offering usage-based services instead of sales
- **Product life extension:** through eco-design, repair, reuse or refurbishment
- **Resource recovery:** recycling and recovering energy or materials from waste

Key sectors prioritised by UNEP[7] and the Ellen MacArthur Foundation[8] include **construction, food systems, textiles, mobility, electronics, and plastics,** due to their high material use and systemic influence.

Within these sectors, some offer particularly **strong opportunities for circular innovation.** For example, ship recycling, construction and automotive show high potential for material recovery and reuse. Conversely, plastics and textiles present greater challenges due to material complexity and degradation.

6 UCEM, (2024), '**5 circular business models (and how they can give you a competitive advantage**'.
7 UNEP, The Role of Business in Moving from Linear to Circular Economies, **online**.
8 Ellen MacArthur Foundation (EMF) (2021, reprint). Completing the picture: How the circular economy tackles climate change.

I. Regional policy landscape: what are the dynamics?

Though not exhaustive due to differing national contexts, this section outlines **CE trends across four regions.** It is important for employers to be aware of upcoming and ongoing regulatory developments in order to be able to analyse the potential positive and negative impacts on labour markets and in turn effectively adapt and provide feedback to governments. Emerging regulations can drive new business opportunities in activities like recycling and green technology, while also impacting labour markets through evolving skill needs, and job impacts both positive and negative depending on timing and location. It is important to develop policies based on evidence and best practices in order to minimise labour market disruptions and maximise the capacity of employers and workers to adapt and evolve based on new needs. Governments play a key role in this regard and need to promote collaboration across the board to ensure an efficient and just transition. The private sector plays a key role through innovation, technology development and new business models which can increase productivity and satisfy consumer demands while reducing environmental impacts. However, it is important to take into account national contexts and capacities, which can directly impact the implementation and adoption of new practices and measures.

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Some of the most common CE policies and measures

- **Extended Producer Responsibility (EPR):** EPR schemes shift the responsibility for products to producers, covering their entire lifecycle—from design to end-of-life. Policies such as deposit return schemes on liquid containers (deposit on purchase of a product that is refunded upon return of the container), product disposal fees (producers funding collection and disposal of products like batteries, electronics or tires), or even creating organisations that fulfil these obligations on a nationwide basis on behalf of their member companies (see **Green Dot** in Europe) are all examples of EPR, When designed appropriately they can help achieve environmental goals such as recycling targets[9]. EPR can be implemented through various mechanisms, including take-back systems, fees, or taxes.
    - **Effective EPR systems** are country-specific and require strong institutional capacity, appropriate incentives, and collaboration between government, industry, and consumers. Success depends on

9 OECD, **Extended producer responsibility and economic instruments**.

evidence-based design, alignment with labour market realities, and continuous monitoring.

- **3R policies (reduce, reuse, recycle):** This policy framework promotes a hierarchy of waste management strategies:
  - **Reduce:** Minimising waste through eco-design or efficiency measures;
  - **Reuse:** Extending product life through repair or repurposing;
  - **Recycle:** Recovering materials from end-of-life products.
  - Instruments like **Deposit Return Schemes (DRS)** support 3R goals by incentivising product return and reuse, particularly for high-volume consumer items such as bottles or electronics.
- **Public procurement and eco-design standards:** Green public procurement (GPP) policies and mandatory eco-design criteria promote circularity by encouraging the purchase and production of long-lasting, repairable, and recyclable products.
- **Economic instruments (further examples[10]):** Governments use a broad set of economic tools to shape market behaviour and support circular goals. These are typically classified as:
  - **Price-based instruments:** These alter the relative cost of products and behaviours - such as taxes or fees on virgin materials, packaging, or waste; tax credits or deductions for circular investments; advance disposal fees. For example, in the UK plastic packaging with less than 30% recycled plastic is taxed at 200GBP per tonne. On the other hand in Italy enterprises receive tax credits for purchases of products made of recycled and compostable materials.
  - **Performance-based instruments:** These set environmental targets and allow market players to choose how to meet them-such as tradable permits (e.g. for waste or emissions). For example, green public procurement can incentivise suppliers of products to use more recycled content through additional criteria as is the case in Japan's Act on Promoting Green Procurement.
- **Fiscal and market-based instruments:** Examples include tax allowances, exemptions, deductions, or credits for specific green innovation investments or circular business models, landfill or incineration taxes, and reduced VAT rates for second-hand goods. These instruments aim to shift market signals in favour of circular products and services.
- **Information and labelling schemes:** Consumer awareness and behaviour play a key role in circularity. Labelling schemes, such as product durability ratings or repairability indexes, inform purchasing decisions and support product transparency.

10 OECD, (2025), '**Economic instruments for a resource-efficient circular economy**'.

1. Europe and Central Asia

The **European Union** stands out as the region having the most **policies and regulations[11] specifically on CE.** Since the launch of the European Green Deal in 2019 and the CE Action Plan in 2020, the EU has adopted a wide array of CE-related legislation—such as rules on packaging, the right to repair, sustainable products (ESPR), single-use plastics, batteries, and critical raw materials, etc. However, despite this momentum, efforts often lack cross-sectoral coherence, with many policies developed in silos and without a comprehensive, cross-cutting vision for resource management[12].

In 2025, the European Commission reaffirmed CE as a strategic industrial priority through the **Clean Industrial Act**. By focusing on energy-intensive industries and the clean technology sector, it outlines plans to remove key barriers, launch a new CE Action Plan by 2026, and explore measures like trans-regional CE hubs and VAT reform on second-hand goods, with a 2030 goal of global leadership in CE. In parallel, the EU has also undertaken official analyses of the labour market impacts[13] of CE policies – a dimension that should be central to any policy development in this area, given the workforce transformation required by the circular transition.

Outside the EU, its regulatory influence extends globally through the **Brussels Effect[14]**—where EU policies shape international regulations and business practices. This is especially visible in CE-related areas: national initiatives like France's Repair Index or Germany's rules on unsold goods have driven broader EU harmonisation, which in turn influences global norms. Companies and governments outside the EU often align with its standards—either de facto, to maintain market access, or de jure, through similar legislation that supports both environmental and trade goals. The ripple effect is notable in sectors like textiles and packaging. For instance, California's SB-707 mirrors elements of the EU's 2023 EPR proposal.

2. Asia and Pacific

The Asia-Pacific region is marked by its **significant diversity, encompassing countries at various stages of development, including numerous island nations that face distinct challenges in waste management and resource utilisation[15].** Asia-Pacific, the world's most populous and dynamic region, accounts for approximately two-thirds of global economic growth[16] and 63% of global material consumption[17] through a diversity of sectors such as textile, electronics, mining and others.

In recent years, the region **has shown growing interest in CE principles:**

- Several countries have adopted **national strategies to guide long-term policy planning.** For instance, Cambodia launched its CE Strategy and Action Plan in 2021. Indonesia followed in 2024 with its CE Roadmap and National Action Plan for 2025–2045, targeting five key sectors: food and beverages, textiles, construction, plastic packaging, and electronics.

11 It has been noticed in the survey that European stakeholders anticipate growing interest to CE, due to upcoming EU legislation and mature enabling policies.

12 ZWE, 2024, 'Managing materials for 1.5°C'. **Online**.

13 Impacts of circular economy policies on labour markets (2018). **Online**.

14 Concept developed by Bradford (2020) and developed here Bocken N. et al. (2025), The Brussels and California Effects? Circular Economy Policy Influence Across Borders', Circular Economy and Sustainability.

15 UNCRD, 2025, 'Draft concept note and programme of 'High-Level 12th Regional 3R and Circular Economy in Asia-Pacific. Theme: Realizing Circular Societies Towards Achieving SDGs and Carbon Neutrality in Asia Pacific'. **Online**.

16 IMF, Regional economic outlook. Asia and Pacific: challenges to sustaining growth and disinflation, 2023. **Online**.

17 UNEP, 'Supporting resource efficiency'. **Online**.

Vietnam also introduced its National Action Plan for CE in 2025, with a vision extending to 2035.

- In Southeast Asia, **EPR schemes include various approaches and stages of development which require careful assessment and monitoring by employers to understand their impacts fully.** EPR schemes are being actively developed and implemented across the Asia-Pacific region[18], particularly for packaging waste, with countries like Vietnam and Thailand taking the lead. Cambodia is also beginning to explore EPR through pilot projects.

For more than 15 years, **China**'s government has been a frontrunner on CE policies, with a focus on addressing pollution, promoting resource efficiency, and advancing industrial ecology, implemented through its latest 14th Five-Year Development Plan on the Circular Economy (2021–2025). The plan sets several ambitious targets, including an 86% utilisation rate for crop stalks, 60% for both bulk solid and construction waste, and the production of 20 million tonnes of recycled non-ferrous metals. It also outlines key priorities, such as strengthening circular practices in agriculture and promoting closed-loop agricultural production systems[19].

In **Australia,** despite growing awareness and government action, progress toward a CE has been slow. The country established a **CE Ministerial Advisory Group** in February 2023 which aims to guide the government on transitioning towards more circularity. Then, the country adopted in 2024 its **CE Framework**, with the objective to double the national circularity rate by 2035.

3. Americas

Overall, U.S. policies remain fragmented, with limited coordination across states and relatively few federal-level regulations on producer responsibility or chemical safety[20]. There is a lot of variability across states with some having more specific legislation on CE than others.

In **Latin America and the Caribbean** (LAC), as a region with significant agricultural and resource production activities, the transition is strongly focused on three priority sectors: mining, waste management, and the bioeconomy. The CE model has received growing political support across the LAC region[21]:

- Since 2019, **more than 80 public initiatives** have been launched, and the concept gained traction at the regional level with the creation of the **Regional Coalition on CE**. Established by the Forum of Ministers of Environment of LAC, the Coalition—supported by UNEP, UNIDO, and other international partners—aims to foster a common vision, enhance cooperation, and promote knowledge exchange across countries.
- Many countries have **adopted CE national roadmaps** - for instance, Colombia was the first country to **adopt one** in the region in 2019 ; in Ecuador a **Circular Pact** was signed by over 330 supporting parties who drive the country's transition to a CE in 2019; Peru recently adopted **a strategy** until 2030 in 2025 ; in Brazil it was recently submitted to **public consultation**.

However, as well as in federal countries like **Canada, Mexico or Argentina,** CE policy frameworks are often more developed at the subnational level than nationally.

18 Extended Producer Responsibility on Plastics in Southeast Asian Countries, 2025. **Online**.
19 Circular Innovation Lab, (2023), '**China's Circular Economy Policies : review and reflection'**.
20 Ibid.
21 UNIDO, Chatham House. (2020). The CE in Latin America and the Caribbean: Opportunities for building resilience. **Online**.

- In **Mexico,** for example, various states have adopted their own CE laws, such as Oaxaca's CE Law or Querétaro's legislation on waste prevention and circular waste management.
- Major cities are also taking the lead: **Mexico City and Buenos Aires** have launched local CE strategies, the latter's plan for 2024–2028 targeting specific value chains such as transportation-related waste (including tyres and batteries), food systems (with a focus on food waste and packaging), and textiles.

4. Africa

The adoption and implementation of CE policies remain **at an early stage across most African countries.** Despite Africa's wealth in natural resources, domestic resource consumption remains low due to generally lower income levels[22]. Many African businesses already apply CE principles informally—for instance, in Katamanto, Accra (Ghana), home to the world's largest second-hand clothing market, where repair and upcycling are common practices. At the same time, political momentum is growing.

At the continental level, Rwanda, South Africa, and Nigeria launched the **African CE Alliance (ACEA)** in 2017. Regionally, CE efforts largely focus on trade and policy harmonisation. The East African Community (EAC) has led initiatives, such as taxing second-hand clothing imports and restricting certain plastics. Nonetheless, **main political actions remain at the country level.** The major dynamics can be summarised as follows[23] [24]:

- Rwanda and Ghana both adopted national **CE Action Plans and Roadmaps** in 2022, followed by Nigeria in 2024. Other nations, such as Senegal, have initiated similar dynamics, while countries like Morocco have embedded CE principles into their Nationally Determined Contributions (NDCs), highlighting a gradual integration into broader climate and development agendas.
- **EPR** is **gaining traction.** South Africa and Kenya are implementing EPR in packaging; Nigeria and Senegal are developing frameworks. In electronics, Kenya, Nigeria and Rwanda have drafted e-waste policies.

At the subnational level, **several local governments have taken initiative in embedding CE principles into urban planning.** For example, in South Africa, the City of Cape Town launched an Industrial Symbiosis Programme, adopted a Green Procurement Action Plan in 2020, and is currently developing what would be the first CE Action Plan for an African city.

The territories of **African and Indian Ocean Developing Island States** (AIODIS)[25] face unique challenges, including limited infrastructure, geographic isolation, and institutional or political barriers that hinder the implementation of CE policies. Despite these constraints, some island states have taken notable steps forward. Seychelles stands out as one of the few African countries to have introduced a Deposit Return Scheme (DRS), which has been in place since 2007. Mauritius has also made strides, banning certain single-use plastic products in 2021, adopting a national CE strategy in 2023, and preparing to implement EPR policies for packaging.

22 Trinomics, ACEN, 2021, **CE in Africa-EU cooperation**.
23 Ibid.
24 Ellen MacArthur Foundation (EMF) (no date) . Circular economy in Africa : examples and opportunities.
25 COI, Swiofish, World Bank Group. (2021). **CE in the African and Indian Ocean Developing Island States: Existing strategies and state of play**.

II. Role of EBMOs in promoting adequate policies for circularity and supporting members

1. Circular Economy, an opportunity for businesses?

§1 The business case for implementing the circular economy

Opportunities for businesses to implement CE principles vary widely by sector, size and business model. Beyond the environmental benefits, circularity can offer compelling **economic and social advantages**[26] [27] [28] —but uptake often requires capital investments, long-term development, and an enabling environment based on targeted support and incentives, particularly for SMEs that rely heavily on labour market conditions and policy frameworks. Crucially, circularity presents **opportunities for job creation and labour market transformation.**

Although disruptions based on time and place can create labour market challenges, many CE activities—especially in repair, reuse, and waste management—are labour-intensive and can generate decent work locally. In low-and middle-income countries, informal workers already play a key role in resource recovery. Integrating them into formal value chains, can improve livelihoods, reduce inequalities, and strengthen social outcomes. For employers and their organisations, supporting this transition means promoting innovation and entrepreneurship through the development of new skills, competencies, business activities as well as ensuring that governments properly support employers in this transition.

> Circular strategies also contribute directly to climate and sustainability goals, providing businesses with cost-effective ways to cut emissions. By replacing resource-intensive processes with remanufacturing, recycling, and reuse—often powered by renewable energy—companies can avoid substantial emissions at the source.

Circular strategies also contribute directly to **climate and sustainability goals,** providing businesses with cost-effective ways to cut emissions. By replacing resource-intensive processes with remanufacturing, recycling, and reuse—often powered by renewable energy—companies can avoid substantial emissions at the source. Addressing inefficiencies in material flows, such as the 95% loss (or USD 80–120 billion annually)[29] in value from plastic packaging, delivers both environmental and economic benefits.

26 EMF, (2021), 'Completing the picture - How the CE tackles climate change'. **Online**.

27 United Nations Environment Programme (UNEP). (2021). The Role of Business in Moving from Linear to Circular economies. UNEP , Nairobi. Available **online**.

28 Potential Economic Pay-Off of a Circular Economy (KPMG). (2020). **Online**.

29 Ellen MacArthur Foundation, The new plastics economy: catalysing action (2017).

In this way, the CE enables the decoupling of growth from resource consumption and fosters a more resilient, future-fit business environment.

Circular strategies—such as reducing raw material use, extending product lifespans, or recovering value from waste—can help **lower operational costs and reduce resource dependency,** especially amid volatile raw material markets and geopolitical instability. These approaches also **strengthen supply chain resilience and promote long-term visibility,** particularly when guided by life cycle approach[30] (LCA). While larger firms often lead in this space, SMEs still face persistent barriers to accessing finance and technical support, despite growing interest from public and private investors.

§2 Key barriers to circular economy adoption

The table below presents three main categories of barriers to circularity, distinguishing between those faced by SMEs and larger enterprises. Beyond technical, technological and economic barriers, the **focus here is placed on obstacles most relevant to employment outcomes, access to circular practices, and skills development**—such as financing, workforce transformation, and institutional capacity—rather than purely operational or infrastructural constraints[31]. These challenges, while varying in form and intensity depending on company size, also differ significantly across geographic contexts. As illustrated in the regional analysis, in many developing contexts, CE adoption is still nascent, limited by infrastructure, weak enforcement of environmental regulations, and limited private sector capacity. This has direct implications for how CE-related obligations (e.g. EPR, reporting requirements, eco-design rules) are received by businesses, especially SMEs. CE strategies must be adapted to national contexts and institutional maturity in order to maximise efficiency (this may include more gradual timelines, capacity-building phases, and context-specific policy sequencing).

Actor / Barrier	Access to finance and investment needs	Labour market and skills	Knowledge and institutional support
SMEs (small and medium-sized enterprises)	• Limited access to CE-specific finance (e.g. green loans, grants). • High capital investment required for circular operations. • Limited capacity for seeking funding options and going through bureaucracy.	• Lack of technical skills in repair, remanufacturing, eco-design. • Informal workers excluded from formal CE systems along with significant challenges of the informal economy. • Small scale limits workforce training initiatives.	• Limited awareness of circular business models (e.g. product-as-a-service, closed loops). • Weak public support for SME capacity building in CE. • Small size limits in-house expertise on technology adoption and development.
Large companies / multinationals	• Better access to green finance, but short-term return expectations limit CE investment. • High capital expenditure and costs for systemic change.	• Retraining and upskilling programmes are resource-intensive and slow to implement. • Potential job displacement in traditional linear roles. • Difficulty scaling internal transitions and lack of expertise in circular business transformation.	• Fragmented public understanding of CE systems. • Complex compliance requirements (e.g. EPR, digital product passports). • Lack of consistent support from authorities and an enabling environment for circular systems.

30 The life-cycle approach (LCA) is commonly defined as a methodology for business to evaluate the environmental impact of a product or service throughout its life cycle, meaning from production to disposal, based on several criteria. LCA methodologies may differ, so ISO 14040 and 14044 create international standards.

31 It has been also underlined by all respondents to the survey. - While operational and infrastructural challenges—such as logistics, technology gaps, or waste management capacity—also affect circular adoption, this analysis focuses primarily on barriers with direct implications for employment, access to circular practices, and skills development.

Among the most significant challenges to advancing the circular economy are regulatory and institutional barriers that directly affect labour market dynamics and skills development.

- A major issue is the **lack of appropriate enabling environments at the national level as well as harmonised regulations across countries,** and even within regions, which complicates the implementation of coherent circular strategies and hinders the development of clear, shared standards essential for training and workforce planning.
- The **absence of a common operational definition and fragmented regulations for CE can limit alignment and present risks** for exporters in emerging economies who face increasing regulatory divergence. Divergent standards on packaging, EPR, carbon footprinting, and digital product passports may unintentionally act as trade barriers.
- **Financial barriers remain critical,** particularly for SMEs, as high upfront investment needs and limited access to dedicated financing restrict their ability to invest in new skills and technologies necessary for circular operations. Particularly in developing and emerging economies, SMEs struggle to access affordable financing for circular innovation due to high perceived risk, lack of assets for collateralisation, and limited awareness among financial institutions. Green finance instruments are still underdeveloped or inaccessible outside large firms or urban centres.
- **Infrastructure and technology challenges impact workforce needs,** as many sectors require new technical skills for reverse logistics, recycling, and circular product design, but existing training systems are not yet adapted to meet this demand.
- **Social barriers also play a role:** informal workers in sectors like waste collection or repair face difficulties in formalisation and access to training, while broader workforce transitions require support to minimise disruption and enable reskilling. In some countries[32], tensions have emerged as informal waste pickers express concerns about being sidelined by formal CE initiatives—fearing loss of income or exclusion.

Addressing these interconnected challenges is vital to ensure that the circular economy creates decent jobs, supports worker transitions, and fosters inclusive growth. While the circular economy is often presented as offering a "triple dividend" — economic, environmental and social — most evidence to date comes from the Global North. Tools such as the **NICE** model by UNIDO aim to fill this gap by assessing socio-economic impacts of circular practices in developing countries[33].

2. The central role of EBMOs to accompany business in promoting Circular Economy strategies

Addressing CE barriers requires not only an enabling policy frameworks but also a supportive environment that helps businesses navigate this complex transition. **EBMOs are well positioned to support this shift by equipping companies**—especially SMEs—with the tools, knowledge, and connections they need to adopt circular practices while at the same time advocating for enabling measures and adequate policies from national governments. The confederation of Indian Industry (CII) has developed a **National Circular Economy Framework** and actively engages in discussions at international and national level to promote circular policies.

32 For instance in Brazil for waste pickers (exchanges with Jocelyn Blériot from EMF). See also examples in India in Circle Economy, (2024), '**Circularity & informality : redefining narratives**'.

33 IAP, (2023), '**The socioeconomic impact of circularity in developing countries**'.

EBMOs can **raise awareness among their members, build capacity, establish platforms for sharing expertise and connect businesses to public programmes and financing opportunities.** By adapting their existing services and expertise, they help promote CE across sectors, offering tailored guidance that reflects the specific challenges companies face[34].

As key social partners involved in policy discussions, EBMOs also have a central role to play in shaping effective and realistic regulatory frameworks.

In addition to their traditional advocacy role, EBMOs can provide **strategic value by helping companies anticipate regulatory changes, adopt sustainability-related tools** (such as life cycle assessments or circularity KPIs), and shift their approach from reacting to anticipating. While sustainability is now recognised as one of the five main megatrends impacting enterprises[35], EBMOs have a unique opportunity to support companies in navigating new expectations and identifying strategic opportunities linked to circularity. The Federation of Egyptian Industries (FEI) has engaged in a **series of activities** through the CLUSTER4GREEN project on promoting and enabling circular industrial activities in the country. The Romanian employers Confederation Concordia launched a **guidebook** on business practices across various sectors to raise awareness about the opportunities CE brings for companies.

As key social partners involved in policy discussions, EBMOs also have a **central role to play in shaping effective and realistic regulatory frameworks.** Their insights into business realities make them essential interlocutors for public authorities, particularly in ensuring that new policies related to circularity are workable—especially for SMEs. Raising awareness about both the risks and the opportunity of the transition is essential, and these organisations are well placed to ensure that policy development aligns with business needs on the ground.

Another key area of impact lies in labour market intelligence. For example, the Brazilian Confederation of National Industry (CNI) has produced an analysis of needs and priorities for fostering a circular economy at the national level[36].Circular strategies will change the way many businesses operate—and that means new roles, new skills, and new ways of working. **EBMOs can help anticipate these shifts, identify emerging skill needs, and connect companies with the right training solutions.** They can also act as a bridge between the private sector, education providers, and training institutions, encouraging more collaborative and targeted approaches to reskilling and capacity building. The foundation of the **Spanish employers' organisation CEOE** is actively implementing a program on circular economy in the electronics sector which includes awareness-raising, recycling and social development.

34 Survey responses confirm a strong consensus on this role: respondents highlight EBMOs as key catalysts for CE adoption, particularly through advocacy, technical support, and sector-wide coordination.

35 ILO/ACTEMP, 2019, 'The role of Employer and Business Membership Organizations in supporting business adaptation and mitigation to climate change', **online**.

36 **Circular Economy Strategic Path for Brazilian Industry (2020)**.

III. Reshaping work and skills for a more circular economy

Impacts of CE activities and policies extend beyond environmental and economic spheres—they can also produce wide-ranging impacts on labour markets and occupations across regions, sectors, and skill levels. This is why the **concept of just transition** is also relevant in the context of CE and the consequences and impacts of CE policies need to be carefully analysed and anticipated. If properly managed, a just transition approach could lead to **net job creation,** provided that governments and stakeholders anticipate disruptions and invest in adequate support mechanisms.

> A successful CE transition therefore requires not only the creation of new jobs, but also the right conditions for workers and enterprises to thrive. Yet, too often, CE strategies focus narrowly on material flows, overlooking the socio-economic dimensions.

Although CE and just transition stem from different origins, they share common objectives: **fostering sustainable development and resilient labour markets.** The shift away from linear economic models will bring both job gains and losses, raising key questions about timelines, the location, nature, and quality of future employment. A successful CE transition therefore requires not only the creation of new jobs, but also the right conditions for workers and enterprises to thrive. Yet, too often, CE strategies focus narrowly on material flows, overlooking the socio-economic dimensions. Embedding the policy framework outlined in the ILO's 2015 Guidelines for a Just Transition[37] into CE plans and strategies can help to ensure that labour markets can adapt and contribute to this transformation.

1. Employment implications of the Circular Economy: opportunities and uncertainties

While employment is widely recognised as one of the most significant socio-economic benefits of the CE transition, **projections vary considerably depending on assumptions and methodologies used[38].** The recently launched **Jobs in the Circular Economy Initiative** is working on a new, harmonised approach to produce more accurate estimates of current CE-related employment.

37 ILO, (2015), '**Guidelines for a just transition towards environmentally sustainable economies and societies for all**'.

38 See also for different methodologies : Circle Economy, ILO, S4YE, Page (2024), 'Measuring and modelling circular jobs', **online**.

Table: Summary of key findings from major international studies, presented in a joint report by the ILO, Circle Economy, and S4YE on *Decent Work in the CE*[39]

Source	Scenario / Policy basis	Projected net job impact	Time horizon
ILO (2018[a], updated 2019[b])	5% increase in recycling (selected materials)	+7 to 8 million jobs	By 2030
OECD (2020)[c]	Material fiscal reform policies	+1.8 million jobs	By 2040
Various global/regional studies (2020)[d]	General CE transitions	+0% to +2% net employment growth	Varies
Donati F. et al study (2018)[e]	Product lifetime extension & resource efficiency (static model)	Net job losses (strategy-specific only)	N/A

Notes:

a ILO (2018). World Employment Social Outlook 2018: Greening with Jobs.

b ILO (2019). Skills for a Greener Future.: a global view. **Online**.

c Chateau, J. & Mavroeidi, E. (2020). The jobs potential of a transition towards a resource efficient and CE. **Online**.

d Laubinger, F., Lanzi, E., & Chateau, J. (2020). Labour market consequences of a transition to a CE: A review paper. **Online**.

e Donati, F. et al. (2020). Modelling the CE in environmentally extended input-output tables: Methods, software and case study.

While most studies predict net job creation, the scale and distribution of these gains remain highly **context dependent and could vary widely across countries and regions.** Crucially, differences in modelling—such as whether dynamic investment or price effects are considered—can significantly affect projections. This underscores the need for CE strategies to be accompanied by robust, inclusive labour policies that anticipate both opportunities and disruptions - potentially through national just transition sectoral roadmaps involving employment, industry, and environmental ministries, targeted higher education programmes, and related measures supporting the formalisation of informal work as well as broader labour market measures that support enterprises and workers in the transition.

2. Reallocation between regions

Studies also highlight that **employment benefits will be distributed unevenly across regions and sectors.** The following table, based on a joint report by the ILO, Circle Economy, and S4YE on Decent Work in the CE[40], summarises key findings from several studies:

Region	Employment gains	Employment Losses	Key Determining Factors
Latin America and the Caribbean[f]	+10 million new jobs	-	Growth from recycling and reprocessing secondary materials (e.g., metals, plastics, glass and pulp)
Europe[g h]	+0.5 million new jobs	-	Early adoption of material tax reforms and technological innovation
Asia and the Pacific	+15 million new jobs[i]	-5 million jobs[j]	Lack of economic diversification and absence of labour redeployment strategies

39 ILO, Circle Economy, and S4YE on Decent Work in the CE, **online**.

40 Ibid.

Region	Employment gains	Employment Losses	Key Determining Factors
Africa	-	-1 million jobs[k]	If no economic diversification and active redeployment strategies
Middle East	-	-200,000 jobs[l]	Weak reforms and lack of innovation strategies

Notes:

f ILO, 2018, 'World employment social outlook 2018. Greening with jobs'. **Online**.

g Ibid.

h According to **EEA**, in 2021, people employed in the circular economy represented 2,1%.

i PWC, 2025, 'Reinventing Asia Pacific'. **Online**. NB : Nevertheless, the estimation has to be treated with caution as it is unclear if it is taking into account recycling and just counting existing jobs by formalising informal work.

j JUST2CE, 2021, 'Labour in the transition to the circular economy'. **Online**.

k ILO, 2018, 'World employment social outlook 2018. Greening with jobs'. **Online**.

l Ibid.

While some regions, particularly Latin America, the European Union and Asia and Pacific (depending on the studies), could potentially experience significant job growth, others may face considerable job losses unless proactive measures – such as economic diversification and labour redeployment – are put in place.

An important dimension often overlooked in CE discourse is **the rebound effect[41], where well-intentioned circular initiatives in wealthier countries can have unintended negative consequences elsewhere,** particularly in the Global South[42], on jobs. For instance, in the fashion sector, slower production cycles promoted in the name of sustainability can lead to reduced demand from fast fashion retailers, jeopardising the livelihoods of workers[43] in manufacturing hubs like Tamil Nadu[44], India. This example underscores the urgent need **to consider global labour dynamics and ensure that the transition to circularity does not inadvertently disrupt labour markets.**

“While some regions, particularly Latin America, the European Union and Asia and Pacific (depending on the studies), could potentially experience significant job growth, others may face considerable job losses unless proactive measures – such as economic diversification and labour redeployment – are put in place.

41 Gonçalves Castro C. (2022), 'The rebound effect of CE: Definitions, mechanisms and a research agenda', Journal of Cleaner Production.

42 Park S. et al., (2025), 'The world needs a CE. But workers in developing countries shouldn't pay the price', The Conversation. **Online**.

43 Repp L. et al., (2021), 'Circular economy-induced global employment shifts in apparel value chains: Job reduction in apparel production activities, job growth in reuse and recycling activities', Resources, Conservation and Recycling, Volume 171.

44 Härri A., Levänen J., (2024), "It should be much faster fashion"— textile industry stakeholders' perceptions of a just circular transition in Tamil Nadu, India', Discover Sustainability, Volume 5, article number 39.

Consistent with this, **the implications of a move towards secondary resources and circular practices such as repair and recycling remain underexplored from the perspective of developing countries**—especially those historically reliant on primary material production. As circularity could reduce demand for virgin materials, **questions arise about whether these economies may face declining job opportunities in extractive industries.**

3. Reallocation between sectors

One of the most significant employment-related effects of the CE lies in the **reallocation of jobs and economic activities across sectors.** Several studies[45] consistently project that **sectors involved in raw material extraction and processing will experience job losses.** Industries such as construction, non-metallic minerals, electronics, and motorised vehicle manufacturing are particularly vulnerable to these shifts. In contrast, **sectors aligned with circular practices**—like secondary steel reprocessing, waste management, and repair services—are expected to see significant job growth. Broadly speaking, the consensus among existing studies is **that most employment opportunities generated by the CE will be concentrated in so-called "core circular jobs."[46]** These include labour-intensive roles in maintenance, recycling, repair, and reuse[47]—activities that are foundational to circular business models.

Example: Deposit Return Systems (DRSs) provide a compelling example of how CE policies can drive job creation

- The Reloop Platform[48] highlights that DRSs can generate between **11 and 38 times** more jobs than traditional curb side recycling systems for beverage containers. This difference is largely due to the labour-intensive nature of DRSs, requiring more workers for collection, sorting, and transportation.
- **Reuse systems in the Global South show strong economic and employment potential.** A report[49] by WWF and the Ellen MacArthur Foundation emphasises the creation of local jobs in reuse systems, generating new roles like packaging washing and collection, which benefit both local economies and MSMEs.

Nevertheless, the **limitations of current data are underscored by the literature,** as highlighted in this report on *Decent Work in the CE*[50]. **Employment benefits may still be underestimated, as much of the current research tends to focus narrowly on sectors directly linked to circular activities[51].** As a result, there is limited consideration of adjacent sectors that function as either direct enablers—such as circular equipment engineers or digital information managers—or indirect enablers, including education, reverse logistics, and

45 As summarised in Circle Economy, ILO, S4YE, Page (2024), 'Measuring and modelling circular jobs', **online** which focus on 4 major studies: ILO (2018). World Employment Social Outlook 2018: Greening with Jobs; ILO (2019). Skills for a Greener Future: a global view; European Commission. (2018). Impacts of CE policies on the labour market: Final Report; World Bank (2022). Squaring the Circle: Policies from Europe's CE Transition.

46 Circle Economy (2020). Jobs & Skills in the CE. State of Play and Future Pathways.

47 Wiebe, K. et al. (2019). Global CE scenario in a multiregional input–output framework.

48 Reloop Platform, 2021, 'Deposit Return Systems create more jobs', **online**.

49 EMF, WWF, 2021, 'Reuse in the Global South', **online**.

50 Circle Economy, ILO, S4YE. (2023). Decent work in the CE: An overview of the existing evidence base.

51 Repp, L., Hekkert, M., & Kirchherr, J. (2021). CE-induced global employment shifts in apparel value chains: Job reduction in apparel production activities, job growth in reuse and recycling activities.

transportation services[52]. This gap in analysis suggests a need for a broader and more integrated approach to understanding the full employment potential of the CE. For instance, the potential impact of circular economy on agriculture sectors and activities is often underestimated[53] while many countries have strong regenerative agricultural potential.

Industrial symbiosis (IS): circular innovation with employment potential

IS is a **key pillar of industrial ecology and the circular economy.** It involves one company or sector making use of waste and by-products, generated by another as inputs. By keeping resources in productive use for longer, IS reduces environmental impacts while unlocking new business and employment opportunities.

Since its incorporation into EU law in 2018 and inclusion in the Circular Economy Action Plan, IS has **gained growing attention as a means of reducing emissions,** especially in industrial clusters aiming for net-zero. Most IS exchanges take place across sectors—over 80%[54]—with significant untapped potential beyond construction, where intra-sector exchanges remain dominant.

IS is **particularly relevant for developing countries[55],** where informal or small-scale enterprises often lead resource recovery efforts. Evidence shows that IS can generate employment, especially in micro and small businesses integrated into the supply chains of larger anchor firms. In eco-industrial parks—such as those in Argentina and across parts of Africa—examples include job creation in composting, bioenergy, and material reuse.

4. Impacts on and relevance of the informal sector

In order to achieve the projected opportunities and successfully increase the impact of CE policies and the CE transition, the **informal sector** - which is widespread in many regions- needs to be taken into account. Activities such as waste picking, recycling, repair, and the informal trade of second-hand goods already form the backbone of circular practices[56] in large parts of the Global South[57]. These activities are often carried out outside of formal arrangements, under what is referred to as 'informal productive activities'—defined as 'all productive activities carried out by persons or economic units that are – in law or in practice – not covered by formal arrangements'[58].

52 Circle Economy (2020). Jobs & Skills in the CE. State of Play and Future Pathways.
53 Interview with Jocelyn Blériot from Ellen MacArthur Foundation.
54 WEF, (2021), '**How symbiosis can help industrial clusters reach net-zero**'.
55 ILO, (2024), '**Industrial symbiosis and productivity – the employment effects in developing countries**'.
56 (IPCC (2022). Climate Change 2022: Mitigation of Climate Change. Working Group III.).
57 Korsunova A. et al. (2022), 'Necessity-driven CE in low-income contexts: How informal sector practices retain value for circularity', Global Environmental Change.
58 ILO, 2023, Resolution concerning statistics on the informal economy, **online**.

The size and significance of the informal economy are substantial:

- About **60% of the world's population is working in the informal economy** and it accounts for approximately 80% of enterprises worldwide[59].
- It is **not limited to the Global South** - in low-income countries, informal employment can represent up to 73% of the workforce, highlighting its critical role in providing employment where formal opportunities are scarce.
- Informality is widespread in **urban areas,** particularly waste picking - with an estimated 11.4 million waste[60] pickers worldwide (a figure which previously ranged between 12.5 and 56 million[61]). These workers are often engaged in collecting, sorting, and recycling materials such as plastics, metals, and e-waste, contributing significantly to the recovery of valuable materials and circularity of local economies.

At the same time, there is **growing recognition of the need to better address the informal sector within CE policies[62],** as highlighted by several organisations during the 9th World Circular Economy Forum (2025)[63]. Many studies emphasise the potential for formalisation of informal circular activities – particularly in recycling[64], to **improve working conditions and productivity,** but requires care to avoid marginalising vulnerable workers and successfully transitioning these activities into the formal economy.

A useful lens is the concept of **necessity-driven circularity[65],** which draws attention to circular practices already widespread in low-income informal contexts. Rooted in economic need and aimed at preserving the value of goods and materials, these practices are often left out of formal CE frameworks despite their scale and relevance. EBMOs can also play a key role[66] in facilitating the transition to the formal economy through digitalisation mechanisms, skills development and business development services and by acting as intermediaries between policymakers and CE enterprises, helping to ensure that formalisation pathways are inclusive, pragmatic, and responsive to on-the-ground realities[67].

“Many studies emphasise the potential for formalisation of informal circular activities – particularly in recycling, to improve working conditions and productivity, but requires care to avoid marginalising vulnerable workers and successfully transitioning these activities into the formal economy.

Some countries are already moving in this direction. In **South Africa,** for instance, the informal waste sector has been integrated into the national EPR system. Waste pickers must now register in a national database, and new guidelines

59 Dewick, P. et al, (2022). The puzzle of the informal economy and the CE.
60 (Lau , W. et al. (2020). Evaluating scenarios toward zero plastic pollution. Science, 369(6510), 1455-1461.
61 MacArthur, D., Waughray, D., & Stuchtey, M. (2016). The new plastics economy, rethinking the future of plastics.
62 Ibid.
63 WIEGO, International Alliance of Waste Pickers, Ellen MacArthur Foudnation, Circle Economy, '**World Circular Economy Forum 2025 : a call to centre inclusivity & perspectives from the Global South**'.
64 K. ZIsopoulos Filipos, (2023), 'Informal recyclers as stakeholders in a CE', Journal of Cleaner Production.
65 Korsunova A. et al. (2022), 'Necessity-driven CE in low-income contexts: How informal sector practices retain value for circularity', Global Environmental Change.
66 ILO, (2024). **Role of employers' organizations in facilitating the transition to formality**.
67 IOE, (2021), '**The Informal Economy: an employer's approach**'.

promote collaboration with formal actors. These measures aim to ensure fair pay, legal recognition, and better protections—while preserving the autonomy of informal workers and opening access to financial support.

5. What does this mean in terms of skills and education?

According to ILO[68], the potential creation of over 100 million jobs in a circular and sustainability-oriented economy depends entirely on workers' access to adequate training and the implementation of enabling policy measures. As circular strategies reshape economic sectors and job roles, investment in and development of, relevant lifelong learning, and vocational training become a key pillar of a just transition.

Skills mapping and regional disparities

A recent empirical study **analysing the 'skills requirements for CE'[69]** offers a data-driven framework to identify and monitor the specific skill requirements of circular industries and maps CE skills using concepts of comparative advantage and skill complexity. Applied to Italy—a country actively pursuing circularity despite regional disparities—this empirical approach reveals a **highly diverse landscape of required competencies and shows the limits of "one-size-fits-all" strategies.** The study identifies two key groups of circular sectors:

- **Core circular industries** (e.g. repair, reuse, waste management) rely heavily on manual, psychomotor, and mechanical skills, making them accessible to low-skilled or displaced workers. These roles are especially important for inclusive job creation in regions where automation and digitalisation have disrupted traditional jobs.
- **Enabling circular industries** (e.g. eco-design, R&D, circular innovation) demand more complex, knowledge-intensive and cognitive skills: systems thinking, interdisciplinary collaboration, digital fluency. These sectors are typically concentrated in urban, high-income regions with robust innovation ecosystems.

While some less-developed regions are well-positioned to support core CE sectors, enabling circular sectors remain clustered in more economically advanced regions. These findings advocate **for regionally tailored policies that align training investments with territorial strengths and industrial specialisation strategies.**

68 ILO, (2019), '**Skills for a greener future:a global view**'.

69 Buyukyazici D., Quatraro F. (2025), 'The skill requirements of the CE', Ecological Economics. **Online**.

Evolving skill demands: adaptation over replacement

Rather than requiring workers to adopt entirely new and unrelated skill sets, **the shift to circularity emphasises upskilling and continuous learning[70].** A 2021 study[71] on the skilling implications of the European labour market suggests a rise in demand for mid-level qualifications, with relatively few skills becoming obsolete. Many circular jobs—particularly in fields such as repair, remanufacturing, redesign, and sorting—**require more work experience and specialised training than their linear counterparts.** This reinforces the importance of practical and vocational learning pathways, as well as lifelong learning frameworks that integrate both technical and soft skills[72].

The skills **mismatch also has a geographic dimension.** In regions like Eastern Europe (e.g. Bulgaria, Croatia, Poland, Romania), businesses might find it more challenging to implement circular practices due to a higher share of unskilled labour and limited technical training infrastructure, making models like reverse logistics or refurbishment harder to implement[73]. Such labour market characteristics can also impact the demand and consumer side as well as the broader development of circular ecosystems and materials. In the Global South, circular skills efforts often target informal workers—mainly in waste management—through legal and technical training[74]. While digital skills are increasingly seen as key, there's little research on the specific tech competencies needed for circular transitions in these areas[75] [76]. More broadly, given the regional nature of manufacturing jobs, local skill ecosystems must align with circular needs.

Educational and training challenges

Ultimately, the findings on mapping competencies[77] reinforce the need for **dynamic, context-sensitive skill strategies.** As the skill content of circular industries evolves with technological progress, continuous monitoring is vital to inform reskilling efforts and anticipate future demands. Integrating these insights into national and regional education policies is key—not only to support both core and enabling CE sectors, but also to bridge the persistent disconnect between labour market needs and training systems. Supplying the new skills required will also entail significant efforts in training and professional development, where regional actors can play a key role in both delivery and coordination[78].

This underscores the **critical role of vocational education and lifelong learning frameworks.** It is crucial for governments and employers to promote stronger links between CE strategies and national TVET systems, including curriculum reform. Existing training systems often fail to match the needs of evolving circular sectors. A persistent **'deep skills gap'** reflects a **mismatch between what is taught and the competencies required in the field.** This disconnect is frequently rooted in a limited understanding of circular business models among employers, policymakers, and education providers. Apprenticeships are increasingly recognised

70 Laubinger, F., Lanzi, E., & Chateau, J. (2020). Labour market consequences of a transition to a CE: A review paper. and Alvis, S. & Avison, Z. (2021). Levelling up through CE jobs.

71 Trinomics (2021). European Social Partners' Project on CE and the World of Work - Final Report.

72 Burger, M. et al. (2019). The heterogeneous skill-base of CE employment.

73 World Bank (2022). Squaring the Circle: Policies from Europe's CE Transition.

74 UNDP (2021). The economic Social and Environmental Benefits of a CE in Indonesia.

75 Dwivedi, A., & Paul, S. K. (2022). A framework for digital supply chains in the era of CE: Implications on environmental sustainability.

76 Circle Economy (2021). Closing the skills gap: vocational education & training for the CE.

77 Martin H., (2025), Skills for a circular economy transformation - a regional case study from Sweden', International Journal of Training and Development.

78 Martin H., (2025), Skills for a circular economy transformation - a regional case study from Sweden', International Journal of Training and Development.

as effective mechanisms for building the skills needed for a green transition[79], as they foster close coordination between education providers and social partners. Apprenticeship schemes can be deployed for rapid development of skills and filling existing gaps while improving collaboration and exchange of information between public services and employers. In this regard, the ILO Recommendation No. 208 provides a relevant guiding framework which outlines effective ways of promoting apprenticeships systems and TVET reform.

Furthermore, there remains a **lack of granular labour market data.** While general trends have been identified, few studies provide detailed insights into the specific skills required within distinct CE sectors—especially outside high-income countries. There is strong need across countries and regions to conduct regular labour market needs assessments to anticipate the scale, type, and location of circular jobs. Finally, and building on earlier observations, existing projections rarely consider whether workers themselves aspire to transition into CE-related roles. The social dimensions of job attractiveness, working conditions, and career progression remain underexplored, and should be a key focus of future research and policy development. There is a need to promote and for governments to implement more robust anticipation tools and mechanisms, labour market information systems, social dialogue and coordination with employers.

79 CEDEFOP, (2022), '**Apprenticeships for greener economies and societies**'.

IV. Circular Economy toolkit: best practices and recommendations for EBMOs and companies

1. Supporting EBMOs and business in the transition to Circular Economy strategies

As EBMOs already support their members in sustainable development[80], **the integration of CE activities and knowledge sharing can be an extension of this ongoing work**—not as an isolated topic, but as a strategy underpinning other areas such as environmental sustainability, **just transition**, and business development. Like sustainability and just transition, CE policies are cross-cutting and carry significant labour market implications, requiring coordinated action and a holistic approach when designing support measures and services for members[81].

To effectively guide their members, EBMOs should first **build their own understanding and expertise in CE principles.** This can entail internal training, international collaboration, and engagement with experts or frontrunning companies.

EBMOs can support their members at two levels to foster circularity in their activities:

- **Through enabling advisory services and knowledge sharing,** including peer learning and exchange of good practices across regions and sectors, establishing thematic working groups, offering training and technical assistance, and connecting businesses with international stakeholders and support networks.
- **By providing practical tools and methods** to operationalise circularity—such as conducting circularity audits[82] (using indicators like ISO 59020 or the **WBCSD's Circular Transition Indicators (CTI) Enabling Solutions Guide**), identifying gaps and challenges, and supporting the development of CE strategies at company or sector level. Sectoral approaches can be especially effective in enabling industrial symbiosis or value chain collaboration.

Beyond the different regulatory and policy measures which could facilitate their increased uptake of circular activities and strategies, SMEs require tailored support - simplified tools, clear guidance, and access to knowledge networks. EBMOs can help with providing access to this support, helping SMEs understand circular business models and facilitating access to financial or technical assistance. Furthermore, EBMOs could also help bridge the finance gap and assist members in finding funding opportunities and advocating for more innovative and accessible financing mechanisms for companies.

Moreover, **skills and employment must be considered central elements of the transition.** EBMOs should build their capacities to anticipate labour-related impacts of circularity while engaging the government in the development of relevant policy frameworks. **Establishing trend observatories, engaging in national and tripartite skills councils and regularly**

80 ILO (2022). **The role of Employer and Business Membership Organizations (EBMOs) in supporting business adaptation and mitigation to climate change**.

81 ILO (2024). **The business case for just transition**.

82 Ellen MacArthur Foundation (EMF) (2021, reprint). Completing the picture: How the circular economy tackles climate change.

sharing good practices (for example through a national platform like **SYNAPSE** in France) - within and across regions and sectors - would help businesses to better anticipate transformations and identify potential gaps in skills development. Where possible, training centres and institutions should also be involved in this work and provide dedicated capacity-building on circularity and related sustainability strategies for business (like **SENAI** in Brazil, **CII-ITC** in India, or **ECO FEI** in Egypt).

2. Strengthen continued engagement in policy and research initiatives

A major challenge highlighted by both businesses and the literature is the **lack of harmonised CE policies across countries and regions[83].** Businesses—through their EBMOs—should continue to advocate for more coherent legal frameworks that reduce compliance burdens, facilitate cross-border trade, and create a level playing field. However, **caution is needed when adapting CE policies across contexts.** Effective regulation must strike a balance between cost and impact, and reflect socio-economic, political, and cultural realities. Harmonisation—such as greater alignment between EU and US policies[84]—can enhance global coherence, but must remain context-sensitive.

In this context, **EBMOs are well-positioned to participate in national and international policy agendas.** They should champion circular approaches tailored to SMEs, while promoting inclusive strategies that consider diverse development levels and potential rebound effects especially on Global South[85] (e.g. waste).

Table: a set of policy-oriented recommendations that EBMOs and businesses could promote

Theme	General recommendations	Focus for the Global South[m]
Shaping CE strategies and policies	• **Support the design and implementation of national CE roadmaps and industrial symbiosis** with active business involvement. This includes engaging in national and regional efforts to shape comprehensive CE strategies[n]. • **Ensure policy coherence across sectors** (waste, industry, agriculture) and levels (local to national) including at the global level. International dialogue and alignment can ensure stronger development of CE measures and promote the use of trade as a catalyst. • **Promote the development of sound waste management policies as part of CE strategies** - Promote evidence-based tools and schemes through public-private collaboration. These tools should also consider the role of informality and reflect local waste management contexts.	• **Prioritise enforcement of existing environmental regulations and strengthen monitoring and capacity-building**. • **Align CE policies across sectors** for effective coordination, in both developed and developing regions. • **Combine product-specific regulations with systemic strategies and allow for sufficient time as well as progressive implementation of measures.**

83 In the survey conducted, many respondents underline a regulatory uncertainty, especially concerning EPR schemes and policy enforcement.

84 Bocken N. et al. (2025), The Brussels and California Effects? Circular Economy Policy Influence Across Borders', Circular Economy and Sustainability.

85 Ibid.

Theme	General recommendations	Focus for the Global South[m]
Financing the CE transition	• **Facilitate access to finance for SMEs adopting circular business models,** through green loans, guarantees, and blended finance[o]. • **Embed CE criteria into public funding** (innovation, recovery plans). • **Provide fiscal incentives** (tax deductions, reduced VAT) for circular investments. • **Promote public-private investment platforms** and financial literacy.	• Introduce targeted tax benefits and microfinance for circular SMEs along with awareness-raising in financing institutions. • Use **fiscal instruments** to discourage excessive waste generation and reliance on virgin material. • **Promote access to capital through PPPs** and adapted incentive schemes. • More targeted financial de-risking instruments, blended finance models, and capacity-building for local banks to better assess circular business models.
Promoting CE skills and jobs	• **Align skills policies with CE and just transition goals**. • **Mainstream CE in education and training systems** and expand apprenticeships. • **Engage EBMOs in identifying future skills needs** and co-developing training solutions. • **Recognise the informal sector** as a key actor in CE systems and key challenge to address for more systemic implementation.	• **Raise public awareness** through campaigns and outreach. • **Integrate CE strategies and national TVET systems, including through curriculum reform**. • **Encourage North-South cooperation** for CE training and capacity building[p].

Notes:

m Yaotian D. et al. (2025), 'Integrated analysis of CE policy innovations in developing countries through experts' perspectives' Journal of Environmental Management, **online**.

n A **practical toolbox** has been developed by several international organisations, to build circularity into nationally determined contributions (NDCs).

o As shown in studies, SMEs often need the support of public procurement. See Bocken N. et al. (2025), The Brussels and California Effects? Circular Economy Policy Influence Across Borders', Circular Economy and Sustainability.

p H. Trevisan A. et al. (2025), 'Enhancing CE education and training for the manufacturing sector: a holistic skills framework', Journal of Environmental Management. **Online**.

3. Maintain and create synergies, build 'circular hubs'

Collaboration—across borders, sectors, and governance levels—is essential to scale up CE efforts. For EBMOs, **building partnerships and aligning with existing CE ecosystems can be a powerful way to support their members through the transition.** The examples below present a selection of key initiatives and networks that EBMOs can engage with to foster collaboration and develop synergies aligned with national and sectoral realities.

§1 Global collaboration

Over the past years, several global platforms have emerged to coordinate CE efforts, promote harmonised principles and facilitate knowledge sharing.

- **IOE Employers' Alliance for Green Skills** is a network of IOE members and corporate partners working on capacity-building and the promotion of green skills and training in the context of just transition, circular economy and other sustainability topics.
- **Global Alliance on CE and Resource Efficiency (GACERE)** is a collation of governments promoting CE and sustainable resource use through multilateral coordination.
- **The Global Circularity Protocol for Business** (GCP) is a framework developed by WBCSD and One Planet Network to guide businesses in setting circularity targets and reporting.

- **Platform for Accelerating the CE** (PACE) is a neutral public-private platform (hosted by World Resources Institute (WRI)) focusing on food, minerals, and climate. The alliance delivers demand-driven policy advice and capacity-building initiatives that align economic growth with job creation, environmental sustainability, and social equity.
- **The Partnership for Action on Green Economy** (PAGE) is a UN-led alliance supporting CE-oriented capacity building and policy advice, such as a regional training programme for 700+ civil servants across Central Asia.
- **Circle Lab** is an online hub for cities, businesses, and citizens to explore and co-design circular strategies.
- **Circular Economy Coalition** (Circularity4all) is an international coalition of individuals and organisations across more than 30 countries. It is hosted by **Circular Regions**, which aim to connect all stakeholders and share resources.

§2 At regional level

While global frameworks set the vision, **regional platforms operationalise it** — translating CE ambitions into tangible local action. These platforms are often more attuned to local economic dynamics, regulatory landscapes, and labour market needs, and therefore particularly relevant for EBMOs and the enterprises they represent. A recent example is the **Circular Alliance of Regions** (CARe), launched in May 2025 by Circle Economy, which facilitates coordination and experience-sharing between regional actors engaged in the circular transition.

Europe and Central Asia

Several platforms operate at the EU level, including the **European CE Stakeholder Platform** (ECESP), a joint initiative of European Commission and the European Economic and Social Committee, **Switch to Circular Economy Value Chains**, **JUST2CE**, an EU-funded project focused on a just transition to the circular economy. The **European Investment Bank** (EIB) supports the CE transition through awareness-raising, advisory services, and financing; while initiatives like **Up2Circ** assist European SMEs on their circular journey.

Asia and Pacific

Key platforms include **Circular Asia**, the **ASEAN CE Stakeholder Platform (ACESP)** and **SWITCH ASIA**, an EU-funded program addressing sustainability and circular economy issues. The **Asian Development Bank** provides financing for CE projects throughout the region. In the Pacific, **PacWastePlus** drives circular initiatives, while Australia hosts platforms such as the **CE Alliance Australia** (CEAA); **Circular Australia**; **Australian CE Hub**.

Americas

Regional collaboration includes the **Latin American and Caribbean CE Coalition** (launched in 2021) and the **US CE Coalition**. The **AL-Invest Verde** programme, funded by the EU, supports circular economy development across 12 Latin American countries.

Africa

Several networks contribute to CE advancement: **ACEA** (African CE Alliance), the **ACEN** (African CE Network) - soon to be rebranded **AfricaCircular**, **ICLEI** (Local Governments for Sustainability), **GAYO** (Green Africa Youth Generation), and the **Indian Ocean Commission** (COI) which promote diversified cooperation in the Indian Ocean region. On the funding side, the **African Development Bank** has established **ACEF** (Africa CE Facility) - a dedicated fund to CE, and the **AfriCircular Innovators Programme** co-funded by AfDB and ACEA, supports circular initiatives driving sustainable and inclusive growth across the continent.

Abbreviations

CE	Circular economy
DPP	Digital product passports
DRS	Deposit return systems
EEE	Electrical and electronic equipment
EBMOs	Employer and business membership organisations
EPR	Extended producer responsibility
ILO	International Labor Organization
IOE	International Organisation of Employers
IS	Industrial symbiosis
NGOs	Non-governmental organisations

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