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EUROPEAN CLUSTERS AS CIRCULAR ECONOMY CATALYSTS

A policy brief



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green accelerator for EU clusters



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The transition to a circular economy (CE) represents a significant shift from traditional linear economic models, emphasizing sustainability, resource efficiency, and waste reduction. Clusters (geographical concentrations of interconnected businesses, suppliers, and institutions) play a pivotal role in facilitating this transition. They foster collaboration, innovation, and knowledge sharing among stakeholders, which are essential for developing circular practices and technologies.

This policy brief, based on the analysis performed and the lessons learned during the ENDURANCE project, aims to explore the critical role of clusters in advancing the circular economy, providing insights into their operational dynamics and potential for driving systemic change.

The structure of this policy brief is designed to provide a comprehensive overview of the relationship between clusters and the circular economy. Chapter 1 introduces the role of clusters in circular economy transition; Chapter 2 highlights challenges to cluster development in relation to CE; and Chapter 3 focuses on a set of key policy recommendations for policymakers aimed at strengthening cluster initiatives.

By framing these insights and recommendations, this policy brief seeks to support policymakers and stakeholders in harnessing the full potential of clusters as engines of a more sustainable and resilient circular economy.

*The ENDURANCE Project Partnership
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CHAPTER 1: THE ROLE OF CLUSTERS IN THE CIRCULAR ECONOMY TRANSITION

UNDERSTANDING CLUSTERS

A cluster refers to a group of firms, related economic actors, and institutions that are located near each other and have reached a sufficient scale to develop specialised expertise, services, resources, suppliers and skills.

Today, many clusters emerge when companies collaborate with research institutions, public stakeholders, private investors, and startups. This collaboration aims to foster innovation and development within a particular sector or technological domain.

Clusters often originate at different levels (local, regional or national levels), leveraging the advantages of proximity to enhance cooperation and knowledge sharing. Importantly, a cluster serves as a neutral platform, remaining independent of political and technological biases.

THE PRESSURE TO TRANSITION TO CIRCULAR PRACTICES

The traditional linear economy, characterized by a "take-make-dispose" model, leads to significant waste and environmental degradation. In contrast, a circular economy promotes practices such as reusing, recycling, and refurbishing products, which help minimize waste and reduce the consumption of finite resources. This shift can significantly lower greenhouse gas emissions and mitigate biodiversity loss by decreasing the extraction of raw materials and the associated ecological impact.

As global populations grow and demand for raw materials increases, companies face challenges related to resource scarcity and price volatility. A circular economy encourages the efficient use of resources by keeping materials in circulation for as long as possible. This not only reduces dependence on virgin materials but also lowers costs associated with raw material procurement.



Embracing circular economy principles can also unlock substantial economic value. Estimates suggest that transitioning to a circular model could generate trillions in economic benefits globally by 2030 through increased competitiveness, innovation, and job creation. For instance, the European Union anticipates creating around 700,000 jobs in this sector by 2030.^[1]

Finally, there is a growing consumer preference for sustainable products and practices. Companies that adopt circular economy strategies can enhance their brand reputation and appeal to environmentally conscious consumers by offering durable, repairable, and recyclable products.

The pressure to transform linear business models into circular ones requires companies to rethink their collaboration in the value chain, revisit their innovation strategy while monitoring upcoming regulations. Clusters have a central role to support their companies in taking the leap.

CLUSTERS AS CIRCULAR ECONOMY CATALYSTS

Clusters have the potential to significantly contribute to the transition to a circular economy (CE) by fostering collaboration, innovation, and knowledge sharing among businesses, research institutions, and public entities. These geographical concentrations of interconnected organizations create an ecosystem conducive to sustainable practices, enabling firms to adopt circular business models that prioritize resource efficiency and waste reduction.

Collaboration and knowledge sharing

Clusters serve as platforms for collaboration, allowing companies to share resources, expertise, and best practices across the value chains. This collaborative environment is crucial for overcoming barriers to circularity, such as high initial investments and lack of awareness about sustainable practices. For instance, cluster organizations facilitate partnerships that encourage the development of innovative solutions for waste management and resource recovery, thereby promoting material recycling and biological recovery initiatives. By pooling resources and knowledge, cluster members can implement circular practices more effectively than they could individually.

[1] European Commission: Directorate-General for Environment, Cambridge Econometrics, ICF and Trinomics, Impacts of circular economy policies on the labour market – Final report and annexes, Publications Office, 2018, <https://data.europa.eu/doi/10.2779/574719>



Innovation and technological advancements

Clusters are instrumental in driving innovation necessary for the circular economy. They provide access to cutting-edge research and development opportunities that can lead to the creation of new technologies aimed at enhancing sustainability. For example, clusters can help businesses transition to circular bioeconomy models by supporting product design that emphasizes durability, reuse, and recyclability. The presence of diverse stakeholders within clusters fosters a dynamic environment where innovative ideas can flourish, leading to the development of new green technologies and business models.

Policy advocacy and support

Cluster organizations also play a vital role in advocating for policies that support the transition to a circular economy. They can act as intermediaries between businesses and policymakers, ensuring that the voices of SMEs are heard in discussions about circular economy initiatives. By engaging in policy dialogues, clusters can influence regulations that facilitate resource efficiency and sustainable practices at both local and regional levels. Their involvement helps create a regulatory framework that encourages businesses to adopt circular strategies.

Economic and environmental benefits

The transition facilitated by clusters not only promotes environmental sustainability but also enhances economic resilience. By reducing dependence on raw materials through recycling and reuse, clusters help mitigate risks associated with supply chain disruptions and price volatility. Moreover, the collaborative nature of clusters can lead to positive spillover effects across industries, amplifying the impact of circular economy initiatives beyond their immediate geographic boundaries.

CHAPTER 2: BARRIERS TO CLUSTER DEVELOPMENT

Clusters have the potential to play a crucial role in the transition of small and medium-sized enterprises (SMEs) to a circular economy, yet they face several barriers and challenges that hinder this transformation. Understanding these obstacles is essential for developing effective strategies to support SMEs in adopting circular practices.

KEY BARRIERS AND CHALLENGES FROM SMES PERSPECTIVE

- **Limited financial resources:** One of the most significant challenges for SMEs is access to finance. Transitioning to a circular economy often requires substantial upfront investments in new technologies, processes, and materials. Many SMEs struggle to secure the necessary funding, which can impede their ability to innovate and implement circular practices effectively.
- **Lack of knowledge and awareness:** Many SMEs are not fully aware of the benefits or implications of adopting circular economy principles. This knowledge gap can lead to hesitation in making changes, as companies may not understand how to integrate circular practices into their existing business model. Furthermore, there is often a lack of guidance on how to initiate this transition, leaving SMEs uncertain about where to start.
- **Regulatory and administrative burdens:** The complexity of regulations surrounding waste management, recycling, and sustainability can pose significant challenges for SMEs. Compliance with these regulations often requires additional administrative efforts that smaller firms may not have the capacity to manage. This burden can discourage SMEs from pursuing circular initiatives.
- **Insufficient government support:** Many SMEs report a lack of effective government policies that facilitate the transition to a circular economy. While some initiatives exist, they may not be adequately tailored to meet the specific



needs of SMEs or may lack sufficient funding and resources. As a result, there is often an absence of supportive frameworks that could incentivize or assist SMEs in their transition efforts.

- **Cultural resistance and mindset shifts:** Transitioning to a circular economy often requires a fundamental change in business practices and organizational culture. Some SMEs may be resistant to change due to established ways of operating or fear of potential short-term losses associated with new investments in circular practices.
- **Supply chain challenges:** The transition also involves rethinking supply chains, which can be complex for SMEs that rely on existing linear models. Issues such as limited access to sustainable materials, difficulties in establishing partnerships with other businesses, and the need for collaboration across sectors can complicate the shift towards circularity.
- **Technological limitations:** Many SMEs lack the technical expertise or resources needed to adopt advanced technologies that facilitate circular practices. This includes challenges related to product design for durability and recyclability, as well as implementing efficient waste management systems.
- **Market-fit challenges:** Many SMEs struggle to translate their environmentally-friendly technical innovations into profitable business models.

KEY BARRIERS AND CHALLENGES FROM CLUSTER ORCHESTRATORS PERSPECTIVE

Strategic challenges

- **Lack of shared understanding and vision:** Cluster orchestrators often face difficulties in aligning a diverse group of members and stakeholders around a unified circular economy goal and a clear long-term vision.
- **Diverse and conflicting business strategies:** Managing conflicting priorities and business models among cluster members presents a significant challenge, as orchestrators must balance and reconcile these differences to move forward collectively.
- **Ecosystem adaptation:** Orchestrators are required to continuously monitor



within the ecosystem, identify new opportunities, and adjust strategies to ensure the cluster remains relevant and effective in meeting evolving needs.

- **Value distribution and inclusion:** Ensuring that the benefits of circular economy initiatives are fairly distributed, especially to vulnerable actors, requires orchestrators to design effective incentives and equitable participation mechanisms.

Operational challenges

- **Insufficient support tools and resources:** A major operational challenge is the need to develop, source, and provide tailored tools, methodologies, and resources that specifically address the requirements of circular economy initiatives.
- **Investment needs:** Orchestrators must find ways to sustain ongoing investments in infrastructure, capacity building, and incentives, all while maintaining their own financial sustainability and operational viability.
- **Cross-sector integration:** Building and managing effective partnerships across different industries and value chains is complex, requiring orchestrators to bridge gaps and foster collaboration between sectors that may not have previously worked together.
- **Cross-border integration:** To maximise impact, clusters need to extend collaboration across borders. This requires working with partners not previously worked with.

Technical challenges

- **Digitalization and data sharing:** Implementing interoperable digital platforms and managing data sharing are significant technical hurdles, as orchestrators must ensure transparency, facilitate information exchange, and enable accurate tracking of materials and sustainability impacts.

Relational challenges

- **Governance and power dynamics:** Coordinating actors who operate without hierarchical authority, managing non-contractual relationships, and ensuring sustained commitment from all participants are persistent relational challenges for orchestrators.



- **Specialist-generalist collaboration:** Facilitating meaningful interactions and effective knowledge exchange between deep technical experts and broad-based coordinators is essential, yet often difficult to achieve within the cluster context.
- **Partnership building:** Fostering trust and collaboration among actors with differing objectives, backgrounds, and expectations is a continual challenge that orchestrators must address to ensure the success of circular economy initiatives

CHAPTER 3: POLICY RECOMMENDATIONS

Policies can significantly enhance the role of clusters in facilitating the transition to a circular economy (CE) by creating supportive frameworks that empower small and medium-sized enterprises (SMEs) to adopt circular practices. This chapter provides key recommendations for policymakers aimed at strengthening cluster initiatives around circular economy. It emphasizes the need for supportive regulatory frameworks, investment in infrastructure, and incentives for collaboration among businesses within clusters.

>> INSPIRE AND TRAIN

Promoting awareness and training programs

Policymakers should allocate dedicated resources to develop and support a wide array of training and educational offerings. These can include targeted workshops that address practical aspects of circularity (such as eco-design, life-cycle analysis, and new business models) in ways that relate directly to the needs of cluster members. Seminar series led by industry experts and academics can provide up-to-date knowledge, and informational campaigns tailored for specific sectors can help overcome skepticism and inertia within clusters. These initiatives should be adaptive, regularly updated, and responsive to emerging trends and regulations in the circular economy.

Develop online learning platforms and toolkits for SMEs to access training at their convenience.

A central policy action is to create and maintain online learning platforms that offer modular training, video tutorials, and interactive toolkits accessible anytime. These platforms should be designed for user-friendliness, especially for small and medium-sized enterprises (SMEs) with limited resources and time. Practical tools can include self-assessment checklists, guidelines for eco-design, templates for circular business models, and calculators for resource efficiency. Digital portals, like



Denmark's 'Circular Enterprise (Cirkulær virksomhed)', demonstrate how such platforms can empower SMEs with actionable, step-by-step instructions across areas like eco-design, waste prevention, and new business models.

Support the creation of “circular economy ambassadors” within clusterstrained individuals who champion and mentor others in their transition.

Governments should encourage and potentially co-fund the identification and training of “circular economy ambassadors”: cluster members equipped with in-depth circular economy expertise who actively mentor and guide their peers. These individuals can act as change agents by sharing best practices, providing tailored advice, and organizing events that foster a community of practice within clusters. Recognition or certification of ambassadors, together with peer-to-peer forums, can help anchor a culture of continuous improvement and innovation.

Organize demonstration projects and site visits to successful circular businesses, enabling peer-to-peer learning.

Policies should also fund and promote demonstration projects in which select cluster members pilot circular economy initiatives, such as closed-loop production, resource sharing, or product-as-a-service models. Site visits to successful circular businesses allow for first-hand observation of benefits and operational challenges, while facilitated peer-learning events enable clusters to directly exchange knowledge and build collaborative networks. Demonstration projects serve as living labs and can be used as case studies to inspire broader adoption.



Denmark's Green Business Development (Grøn Omstilling) program funds training and advisory services for SMEs on circularity

[Read more here](#)

Denmark's Green Circular Transition (Grøn Cirkulær Omstilling – GCO) is a national initiative, running from 2019 to 2023, aimed at helping Danish SMEs across various sectors develop and implement green and circular business models. The program, funded by the EU, engaged 40 companies through tailored, design-driven courses lasting three to six months. Participants worked closely with green mentors and business houses to apply circular practices in their operations.



>> SUPPORT, SHAPE AND STRENGTHEN

Providing financial support and incentives

Financial barriers are among the most significant obstacles for SMEs transitioning to circular business models. Policymakers should facilitate access to funding through dedicated grants, subsidies, and low-interest loans specifically targeted at circular initiatives. In addition, introducing tax incentives, such as reduced VAT rates for recycled products or credits for investments in circular technologies, can further motivate SMEs.

Facilitate access to dedicated funding mechanisms

Governments should establish specialized grant programs, subsidies, and low-interest loan facilities reserved for circular economy initiatives within clusters. These funds should be easy to access and designed to co-finance transitional investments, covering costs related to new equipment, circular design processes, or establishing reuse and recycling systems. To maximize impact, financial schemes must offer clarity in eligibility criteria, application support, and transparent reporting requirements.

Introduce tax incentives

Tax policy is a powerful lever for motivating adoption of circular models. Policymakers can introduce measures such as reduced VAT rates for products with recycled content, tax credits for investments in resource-efficient machinery, and deductions for R&D related to circular solutions. These incentives lower the effective cost of innovation and encourage SMEs to experiment with new business models and technologies.

Establish green public procurement (GPP) policies

By embedding circular principles into public purchasing rules, governments can create stable demand for recycled, reused, or remanufactured products and services. This “green procurement” approach should include explicit criteria prioritizing circularity in tenders, rewards for supplier innovation in resource efficiency, and long-term procurement contracts to give market certainty. Clusters benefit as SMEs see their innovations rewarded with reliable public sector demand.



Support cluster investment platforms or co-financing funds

Governments and development banks can co-create investment platforms that pool resources for larger, risk-sharing capital infusions into cluster-led circular economy projects. These collective funds can finance high-impact demonstration sites, shared infrastructure (such as waste sorting or advanced recycling facilities), or pre-commercial pilots that single firms could not afford alone. Such platforms are particularly effective for scaling technologies that require significant upfront investment but benefit whole clusters.

Provide innovation vouchers and feasibility support

SMEs often need help to take first steps toward circularity. Offering targeted “innovation vouchers” or micro-grants (usable for hiring consultants, conducting feasibility studies, or piloting prototypes) lowers the barrier to experimentation. This helps clusters seed a pipeline of circular projects, fostering a culture of innovation and iterative risk-taking.



France's ADEME Circular Economy Fund

[Read more here](#)

France's ADEME Circular Economy Fund, coordinated by the French Environment and Energy Management Agency (ADEME), is a leading model for supporting SMEs and clusters in their circular transition. This fund provides grants, loans, and subsidies specifically earmarked for circular economy projects, including initiatives in recycling, eco-design, resource optimization, and collaborative business models. The fund supports collaborative projects involving multiple SMEs and clusters.

Advocating for supportive regulatory frameworks

Policymakers can significantly accelerate the role of clusters in the circular economy by enacting regulatory frameworks that both encourage circular practices and remove unnecessary administrative obstacles, especially for SMEs.



Simplifying regulatory procedures for circularity

Governments should streamline rules and procedures relating to waste management, recycling, product certification, and compliance paperwork. This reduction in bureaucratic complexity enables SMEs within clusters to allocate more resources to innovation rather than compliance. For instance, simplifying environmental permitting or offering “fast-track” certification for circular products helps prevent regulatory bottlenecks and fosters early adoption of new processes. Regional authorities, as highlighted in the Interreg Europe brief, are increasingly anchoring circular economy in economic and innovation strategies through simplified, dedicated support hubs and targeted regulatory assistance.

Embedding circularity in standards and accreditation

Policymakers should require that national and international product standards, quality assurance schemes, and sectoral accreditation processes explicitly include criteria for resource efficiency, product longevity, repairability, and recyclability. The development of clear, universally recognized guidelines reduces uncertainty for businesses and assures clusters that circular innovations will be recognized and rewarded in the marketplace. Regulatory reforms like these make compliance less ambiguous and level the playing field for SMEs pursuing sustainable practices.

Regulatory sandboxes for innovative experimentation

Clusters benefit when governments create “sandbox” regulatory environments, designated spaces or time-limited waivers that allow clusters to pilot and scale new circular solutions under relaxed regulatory conditions. This approach lets clusters test innovative models (e.g., product-as-a-service, shared logistics, or industrial symbiosis) without fear of immediate penalties for deviating from standard regulations. Lessons and data from sandboxes can guide future, more adaptive policy design, and encourage rapid learning and scaling at the cluster level.

Harmonizing regulations to enable cross-border circular initiatives

For clusters operating in regions with integrated trade and supply chains (such as the EU), regulatory harmonization is essential. Policymakers should work to align waste classifications, product standards, and logistics rules between jurisdictions, thereby removing barriers to the exchange of secondary materials and circular goods across borders. Uniform standards help clusters access broader markets, benefit from economies of scale, and foster international collaboration in circular value chains.



The UK's Waste and Resources Action Programme (WRAP)

[Read more here](#)

WRAP works closely with government and industry to clarify and streamline sector regulations, develop voluntary agreements, and set circular product standards across high-impact sectors (such as food, textiles, and plastics). By collaborating on simplified regulation and best-practice guidelines, WRAP helps clusters and SMEs navigate regulatory complexities, reduce waste, and embed circularity in procurement and product design.



Finland's Circular Economy Roadmap

[Read more here](#)

Finland's Circular Economy Roadmap, coordinated by Sitra and embraced by the government, features explicit regulatory reforms. Key among them are policies supporting product-as-a-service models by modifying liability, taxation, and product ownership rules to favor circularity. The roadmap's regulatory changes also include pilot programs, sandboxing, and harmonized waste rules to eliminate obstacles for SMEs wishing to test, scale, or export circular solutions within clusters. Research shows that regulatory complexity and uncertainty are among the largest barriers Finnish SMEs face, so this ongoing reform is critical.

Facilitating innovation and technology transfer

Clusters hold a strategic position to drive innovation and technological advancement in circular economy practices through concentrated collaboration and resource sharing. Policymakers can amplify these advantages by fostering environments that stimulate research, development, and the diffusion of circular innovations.



Fund innovation hubs and technology incubators

Investment in dedicated innovation hubs and technology incubators within clusters encourages experimentation with circular solutions. These hubs provide physical and virtual spaces where startups, SMEs, researchers, and larger companies converge to co-create, test, and prototype new circular technologies and approaches. Public funding can ensure these hubs have the infrastructure, expertise, and tailored programming to accelerate green innovation, including sustainability-focused R&D projects. Such hubs act as catalysts for localized innovation ecosystems that generate scalable and replicable circular economy solutions.

Promote collaborative R&D projects and partnerships

Policymakers should facilitate partnerships between universities, research institutions, and businesses residing in clusters. By supporting joint R&D efforts, governments enhance the commercialization potential of emerging circular technologies and stimulate cross-sector knowledge exchange. Encouraging interdisciplinary consortia helps bridge academic research with real-world applications, shortening the innovation cycle and enriching the cluster's technological capabilities.

Support intellectual property sharing through patent pools

To speed diffusion and reduce barriers related to intellectual property (IP), governments can incentivize or support the creation of patent pools or shared IP arrangements. These frameworks enable cluster members to access, share, and build upon patented circular technologies more flexibly, thus reducing duplicative R&D effort and fostering collaborative innovation ecosystems.

Fund pilot projects for demonstrating scalability

Policymakers should allocate funding for pilot demonstration projects within clusters that validate the commercial viability and scalability of novel circular solutions. These pilots provide evidence of technical feasibility, economic benefit, and environmental impact, serving as powerful use-cases to convince more companies to adopt circular models. They also allow for iterative learning and refinement under real operational conditions.



Create technology matchmaking platforms

Effective innovation ecosystems require platforms that connect technology providers with SMEs seeking circular solutions. Policymakers can support the design of digital or physical matchmaking platforms that help identify complementary capabilities, facilitate technology transfer, and accelerate the uptake of ready-to-implement innovations within clusters. Such platforms reduce search costs and enable SMEs to more rapidly integrate circular technologies into their operations.



The Basque Country's Circular Economy Innovation Hub

[Read more here](#)

This hub functions as a collaborative ecosystem where SMEs, research centers, and larger enterprises coalesce to drive circular economy innovation. It provides services that range from joint R&D support to business model development, fostering strong cross-sector partnerships and accelerating the deployment of circular technologies.

>> BUILD BRIDGES

Involving Circular Economy actors in cluster development

Effective cluster development for a circular economy depends on the active and early inclusion of diverse circular economy actors (such as recyclers, remanufacturers, and service providers) to ensure cluster strategies and initiatives address real-world challenges and opportunities on the ground.

Establish advisory boards with Circular Economy experts

Policymakers should encourage clusters to form advisory boards that include a broad spectrum of circular economy actors alongside experts from academia, business, and policy. Such boards can provide strategic guidance, help identify sector-specific circularity challenges, and advise on innovative solutions. Having representatives from diverse sectors ensures that cluster strategies are well-



informed, cross-cutting, and grounded in operational realities. Advisory boards also serve as a governance mechanism to foster trusted collaboration among stakeholders.

Support participatory planning and co-design processes

Involving SMEs and other stakeholders through participatory planning in cluster strategy development helps ensure that the cluster's circular economy actions respond directly to the needs and constraints of businesses. Policymakers should promote inclusive workshops, focus groups, and consultation processes that allow all actors (including small companies and emerging circular startups) to voice their perspectives and co-create action plans. This collective design approach enhances cluster ownership, relevance, and the likelihood of successful implementation.

Encourage inclusion of NGOs and civil society for social sustainability

To fully embed sustainability, it is crucial that NGOs, civil society organizations, and community representatives participate in cluster governance and planning. Their involvement ensures that social and environmental objectives, such as equity, community well-being, and just transitions, are integrated alongside economic goals. Civil society actors can also help hold clusters accountable, raise public awareness, and facilitate the alignment of cluster activities with broader sustainability targets.



Sweden's Circular Economy Stakeholder Platform

[Read more here](#)

This platform brings together businesses, academia, public agencies, and other stakeholders to jointly develop cluster strategies and action plans focused on circularity. Its multi-stakeholder nature allows for knowledge exchange across sectors and helps align regional circular economy objectives with national policies. The platform fosters ongoing dialogue and coordination among diverse actors, enhancing cluster coherence and impact.



Italy's Circular Districts

[Read more here](#)

Italy's Circular Districts exemplify how local authorities collaborate closely with waste managers, SMEs, and other circular economy actors in cluster governance. These districts involve actors at multiple levels to identify circular business opportunities and overcome local challenges related to circular resource management. The governance structure of Circular Districts ensures that policies and initiatives are context-specific and co-owned by a broad coalition of actors.

Encouraging cross-sector collaboration

Cross-sector collaboration between clusters, such as manufacturing, agriculture, and ICT, can significantly enhance circular economy outcomes by combining diverse expertise, resources, and market access to innovate systemic solutions beyond individual sectors. Policymakers should design and fund initiatives that break down silos and actively foster partnerships across different industrial and service sectors.

Promote inter-cluster partnerships with shared sustainability goals

Policies should incentivize clusters from distinct sectors to form alliances around common circular economy objectives like waste reduction, efficient resource use, or product life extension. Through facilitated networking events, joint workshops, and multi-sector consortiums, clusters can identify synergies where by-products or waste streams from one sector become inputs for another, enabling industrial symbiosis and circular material flows. For example, the Arctic Industry and Circular Economy Cluster in Finland unites mining, processing, universities, and SMEs to jointly advance sustainable resource utilization and circular operations.

Support development of regional mega-clusters

Regional mega-clusters bring together multiple, complementary sectoral clusters (e.g., construction, textiles, ICT) at a higher territorial level to create scale advantages, boost innovation, and unlock broad systemic impacts. Policy support can include financing shared infrastructure, facilitating multi-sector governance structures, and encouraging cross-sector innovation challenges. These mega-



clusters can function as powerful ecosystems for circular economy diffusion, surpassing the impact possible within isolated sectoral clusters.

Fund joint collaborative projects and challenge calls

Joint funding competitions can require collaboration between different clusters, catalyzing the co-development of innovative circular solutions that leverage cross-sector knowledge and capabilities. Challenge calls can focus on shared problems, such as circular packaging, sustainable construction materials, or digital tools for circularity, encouraging clusters in different industries to partner and pilot scalable circular business models together.

Develop digital platforms for inter-cluster matchmaking and collaboration

Digital matchmaking platforms are essential to connect clusters, identify complementary circular projects, and facilitate knowledge exchange across sectors. These platforms can provide tools to share best practices, offer access to technical expertise, and showcase circular innovation opportunities. For instance, Cluster Collaboration.eu facilitates networking across European clusters, while regional examples like Circular Flanders connect construction, textiles, and plastics clusters for joint projects.



Flanders' Circular Flanders

[Read more here](#)

Circular Flanders actively supports collaborative circular projects between clusters in diverse sectors including construction, textiles, and plastics. This program provides funding and coordination, enabling cross-sector partnerships that pool resources and expertise to develop innovative circular solutions addressing shared challenges.

>> STRATEGIZE AT LOCAL LEVEL

Implementing localized strategies

The transition to a circular economy requires policies that are tailored to the specific



social, economic, and environmental contexts of regions and industries. Localized strategies empower regional authorities to leverage their unique cluster dynamics, existing strengths, and priority challenges, ensuring that circular economy actions are relevant, practical, and impactful.

Provide technical assistance and funding for regional cluster mapping and needs assessments

Policymakers should allocate resources to support regions in conducting detailed cluster mapping and comprehensive needs assessments. This foundational step identifies local industry strengths, material flows, innovation capabilities, and gaps in circular practices. Data-driven insights enable targeted action plans that align with a region's economic structure and sustainability goals. Technical assistance may include expertise in circular economy assessment methodologies and support for data collection and analysis, facilitating evidence-based policymaking.

Encourage local pilot projects with potential to scale

Funding and facilitation for pilot projects enable regions to test circular economy innovations in real-world settings. These pilots serve as proof-of-concept demonstrations that provide critical lessons on feasibility, scalability, and economic viability. Successful pilots can attract further investment and be replicated by other clusters or regions. A stepwise approach allows for iterative learning, reducing risk for participating SMEs and stimulating local innovation ecosystems.

Facilitate partnerships with local universities, innovation centers, and community organizations

Robust local cooperation networks enhance circular economy initiatives by blending technical knowledge, innovation capabilities, and community engagement. Partnerships with universities and research institutes foster R&D and evidence-based strategy development, while collaboration with community organizations ensures social inclusiveness and local buy-in. This cross-sector collaboration helps mainstream circular economy principles into local economic development and builds broad support across stakeholders.



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Scotland's Circular Glasgow

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The Circular Glasgow program exemplifies a localized strategy adapted to a unique urban and industrial context. It focuses on supporting businesses to innovate and become future-proof by integrating circular economy principles that consider Glasgow's specific economic profile and social priorities. The initiative includes collaboration with local authorities, universities, and businesses to develop actionable circular solutions tailored to the city's needs and capabilities.

CONCLUSION

The integration of clusters into circular economy strategies not only promotes environmental sustainability but also enhances economic resilience by fostering innovation and competitiveness. As highlighted by various studies, effective policies that support cluster development can lead to substantial improvements in resource management and waste reduction across industries.

By recognizing and harnessing the potential of clusters, policymakers can drive significant progress towards achieving sustainable economic systems that prioritize circularity.

This policy brief aims to provide key recommendations for leveraging clusters as catalysts for the transition to a circular economy. By addressing both opportunities and challenges while offering concrete policy actions, it seeks to empower stakeholders at all levels to contribute effectively to this transformative agenda.

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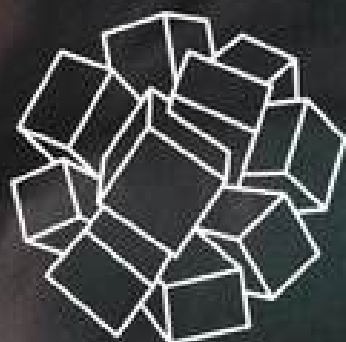
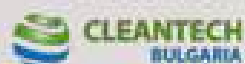
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