Circular Finance in Canada: **Assessing the Risks & Rewards**

SUMMARY REPORT

November 2025

CIRCULAR ECONOMY LEADERSHIP CANADA

A Solution Space by Generate Canada

DELPHI

CIRCULAR ECONOMY LEADERSHIP CANADA

Circular Economy Leadership Canada (CELC) creates the knowledge, networks, and opportunities that accelerate circular innovation across Canada's economy. CELC is part of a broader family of organizations under the umbrella of Generate Canada, a not-for-profit charity, focused on advancing a "strong and inclusive economy that thrives within nature's limits". Tapping into a network of Partner organizations across the country, CELC provides thought leadership, technical expertise, and collaborative platforms for accelerating systems change and the transition to a low carbon, circular economy in Canada.

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Special Note: *The information and recommendations expressed in this document belong to the report authors (CELC and Delphi) and do not necessarily represent the views and opinions of the financial institutions or work stream partners.*

Contents

1. Executive Summary

This Summary Report, "Circular Finance in Canada: Assessing the Risks and Rewards", analyzes the challenges and opportunities for financing circular economy (CE) business models and activities in Canada. It serves as a call to action for all stakeholders to work together to unlock the vast potential of circular finance in Canada. Circular finance is defined as any type of financial service or tool that supports the transition to more circular business models and supply chains.

From Linear Risks to Circular Solutions

A CE approach is not just an environmental choice but a critical strategy for mitigating a range of inherent "linear risks" that businesses and financial institutions currently face. The report emphasizes that the traditional linear economic model—where resources are extracted, used, and then discarded—is increasingly unstable. This model exposes businesses and the finance sector to significant risks, including resource scarcity and price volatility due to reliance on finite virgin materials, which can lead to supply chain disruptions.

Businesses also face regulatory and policy shifts, as governments worldwide implement new regulations, carbon pricing, and extended producer responsibility rules that penalize linear models. Furthermore, a linear approach creates geopolitical instability by depending on global supply chains for materials, making businesses vulnerable to trade disruptions. There is also a significant reputational and brand risk, as consumers and investors increasingly demand sustainable practices, penalizing companies with wasteful models. Finally, the linear model results in rising waste management costs and limited landfill capacity.

By adopting CE principles, businesses can actively de-risk their operations, which in turn creates less risk for the finance sector. This is achieved through strategies like increased resource efficiency, reduced waste, and the creation of more resilient, localized value chains that are less dependent on volatile global markets and virgin resources.

Financing Needs & Barriers

The report identifies several key areas where businesses need funding to transition to or scale up circular models. This includes financing for research and development (R&D) of new circular materials and processes, as well as capital for operational and strategic costs like day-to-day working capital and marketing. Significant investment is also needed for technology and infrastructure development, such as new recycling facilities and repair hubs, and for business growth and expansion to scale successful ventures. The report also highlights the need for flexible financial solutions, such as innovative lending and green bonds, to manage cash flow.

Companies face two major, interconnected barriers to scaling these models: operational and financial.

- **Operational Barriers:** These include significant infrastructure gaps, such as a lack of facilities for processing reclaimed materials or food waste. Reverse logistics are also complex and costly, making it difficult to collect and transport secondary materials. Economic factors, such as high upfront capital expenditures for new equipment, as well as policy and regulatory issues such as unstable mandates or complex permitting processes, create additional hurdles. Finally, cultural and market barriers exist, with consumer skepticism often impacting the adoption of products made from secondary materials.

- **Financial Barriers:** Financial institutions (FIs) can perceive CE businesses as high-risk, leading to a low appetite for lending. Many CE companies, especially small and medium-sized enterprises (SMEs), lack the long track records or traditional collateral that lenders require. The report notes that investment programs often favor tech-heavy cleantech models over material-intensive CE businesses in recycling or asset management. Furthermore, new business models and materials face high insurance premiums due to a lack of historical data, which further deters investment.

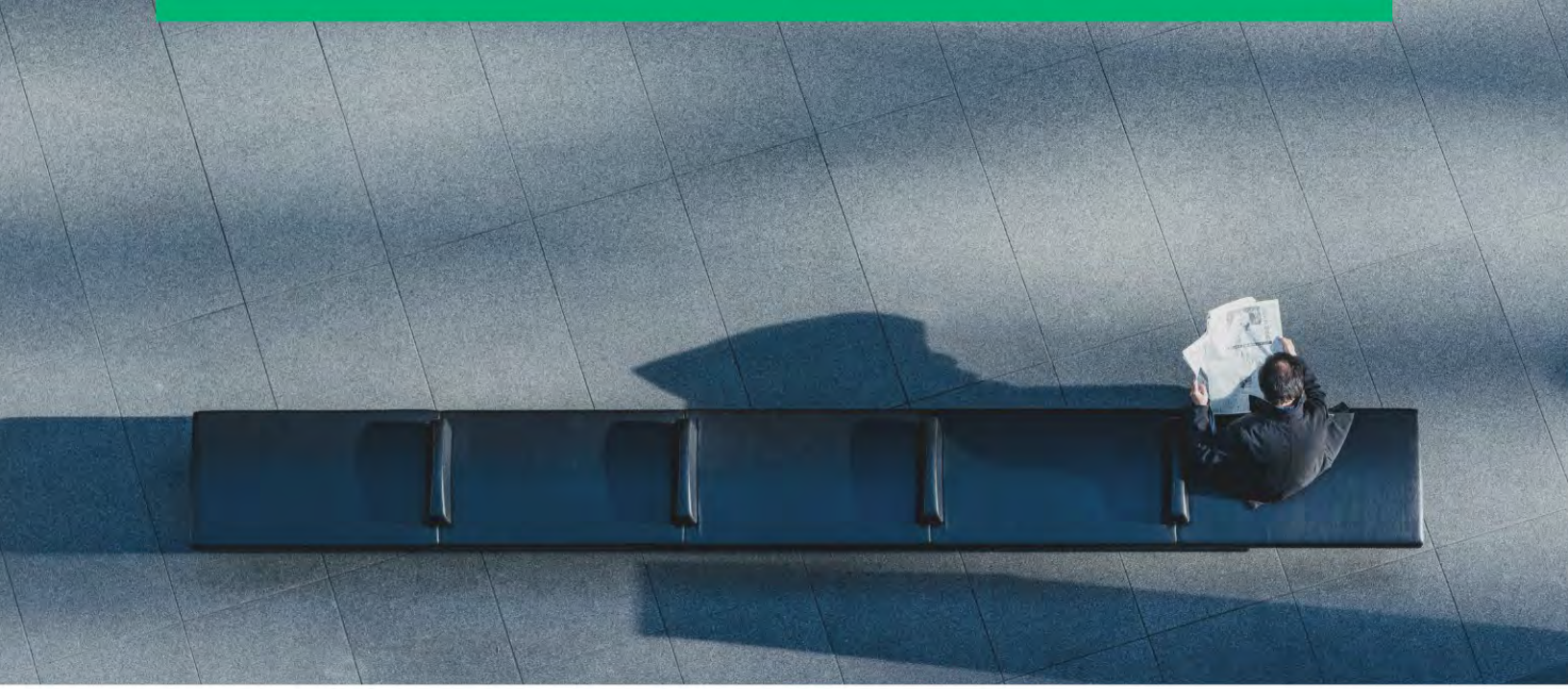
Enabling Conditions & Recommendations

Despite these challenges, the report highlights several enabling conditions that can unlock financing. These factors include the inherent benefits of circular solutions, such as cost reduction and efficiency from reduced waste and resource use, and revenue potential from new models like "product-as-a-service" (PaaS). A CE approach also provides risk mitigation by stabilizing supply chains, and benefits from growing consumer and investor demand for sustainable products. Well-designed policy and regulatory drivers can also make CE models more financially attractive. Finally, partnerships and trust between businesses, FIs, and governments are crucial for de-risking early-stage investments.

The report concludes that circular finance should be considered "future-ready finance" that can build supply chain resilience and support job creation. It offers recommendations for key stakeholders to accelerate Canada's transition to a competitive circular economy (as outlined in **Table ES1** below).

Financial Institutions	• Build internal CE expertise and embed circularity into risk frameworks and into financial products / services. • Continue to develop flexible financing structures designed to support CE related projects and infrastructure (e.g., leasing, sustainability-linked loans, blended finance). • Collaborate across sectors to standardize definitions and metrics, de-risk innovation, and scale proven models. • Lead through circular procurement, by offering visibility to circular SMEs, and by piloting innovative financial tools.
Businesses	• Work to ensure a strong management team and other business fundamentals. • Strengthen financing potential by highlighting policy alignment, securing long-term partnerships and supply chain agreements, and embracing long-term cost savings. • Explore diverse financing structures and different types of capital, bundling various types of funding where possible, and engage insurers early to address coverage concerns. • Use demonstration and pilot projects and impact-focused data to de-risk models and attract investment. • Actively participate in standard-setting and policy advocacy to shape enabling frameworks.
Governments	• Invest in infrastructure and provide grants, loans, and tax credits to circular businesses. • Incentivize digital traceability platforms, standardize reporting, and align on data and measurement best practices. • Design predictable, long-term policy frameworks / programs, streamline permits, and integrate circularity into public procurement. • Fund training and forums to educate investors and other financial sector stakeholders on circular business models. • Support standardized impact metrics and provide grants for reporting systems.

Table ES1: Recommendations for financial institutions, businesses, and governments.



2. Key Messages

- **Report Overview:** This summary report "Circular Finance in Canada: Assessing the Risks and Rewards", provides an analysis of the challenges and opportunities for accessing financing to support circular economy (CE) business models and activities in Canada, building on previous work led by Circular Economy Leadership Canada (CELC), including the development of the *Financing the Circular Economy Guidance Document* for Financial Institutions (FIs) in Canada which offers a framework for categorizing CE projects and initiatives.

- **A Call to Action**: The report serves as a vital call to action for all stakeholders to collectively unlock the immense potential of circular finance in Canada. Canadian FIs can play a critical role by addressing linear and circular risks, building capacity for identifying the benefits of CE business models and activities, supporting collaboration, engaging with industry and governments, and developing innovative financial solutions.

- **Circularity as a De-risking Strategy:** The report emphasizes that embracing the CE is not merely an environmental imperative, but can also be a de-risking strategy for businesses and the financial sector given current supply chains and economic models are often fraught with inherent "linear risks" such as: resource scarcity and price volatility, regulatory and policy shifts, geopolitical instability, reputational and brand risk, and costs related to waste management. The CE can mitigate risks by promoting resource efficiency, waste reduction, and resilience through diversified material sourcing and localized value chains.

- **Financing Needs & Opportunities:** The report identifies diverse needs and types of activities where businesses require funding and financing for their CE related ventures and activities, including: research and development (R&D), operational and strategic costs, technology and infrastructure, business growth and expansion, and financial flexibility and cash flow management.

- **Barriers to Scaling Circular Economy Business Models:** Companies encounter two common types of barriers when looking to grow their CE activities and business models—*operational* and *financial*—that are deeply interconnected. Infrastructure gaps, policy and regulatory complexity, and market immaturity hinder performance, which in turn reduces investor confidence. Simultaneously, rigid financing models and limited understanding of CE business dynamics restrict access to capital. These barriers collectively stifle scale-up, leaving promising CE models underfunded despite strong environmental and economic potential.

- **Business Fundamentals Remain Critical:** The report emphasizes that while securing financing for CE activities can be challenging, lenders and investors are still looking for companies with solid management teams and strong fundamentals (CE focused or not). Furthermore, access to capital and financing can also be highly dependent on a company's business stage - for example, whether it's an early-stage venture or a more established and mature company.

- **Enabling Conditions That Unlock Financing Potential:** Despite the challenges, several enabling factors can unlock financing for CE businesses. Success requires alignment across companies, financiers, and policy actors. Demonstrating financial advantages, leveraging supportive market dynamics, and cultivating strong relationships between financiers and businesses are key to unlocking capital flows.

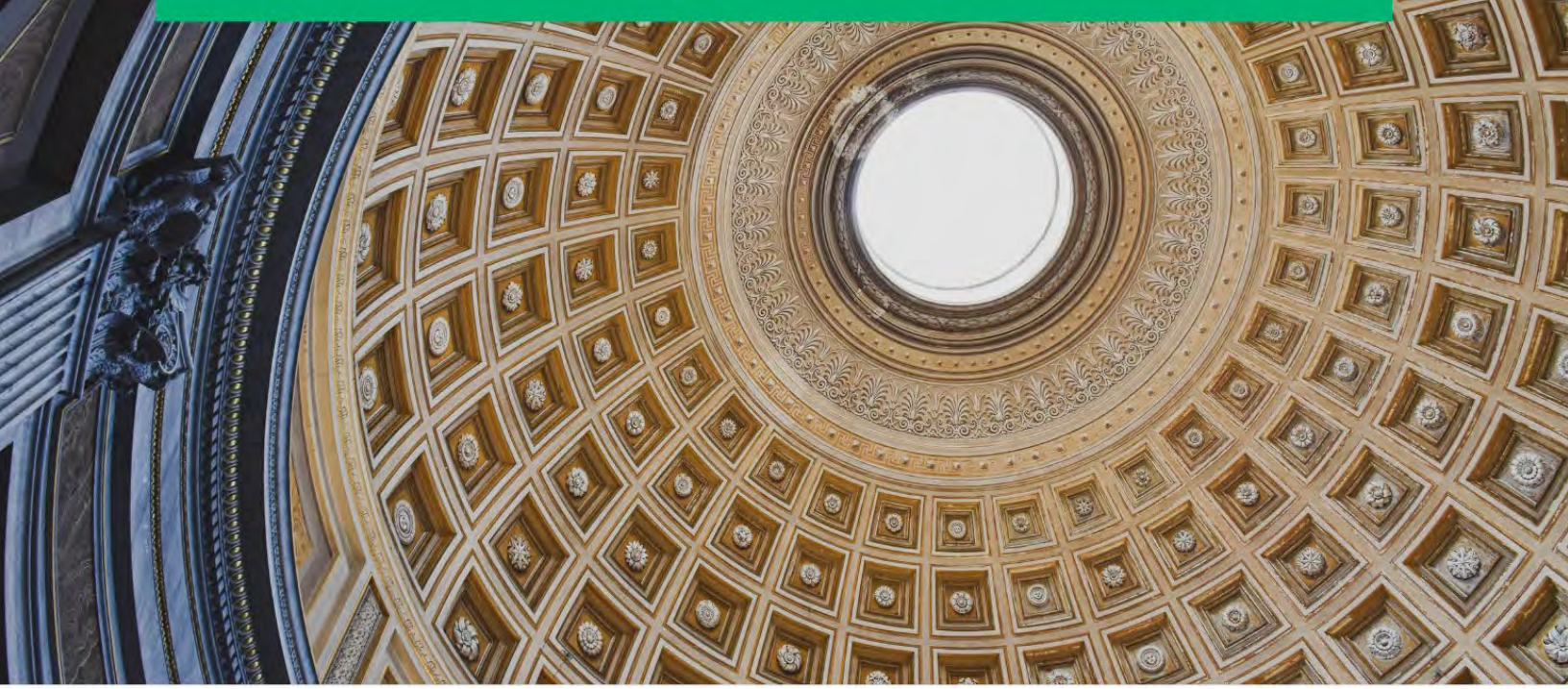
- **Importance of Future-Ready Financing:** Circular finance is more than a sustainability agenda—it represents "future-ready finance" that supports companies who collectively are working to build supply chain resilience, drive resource efficiencies, reduce waste and carbon, and foster local job creation. While barriers remain, targeted actions from financial institutions, businesses, and governments can accelerate Canada's transition toward a more competitive CE.

- **Recommendations:** The report provides a number of recommendations by audience type:

    - *Financial Institutions:* FIs could work to build internal expertise on the CE and integrate it into their risk frameworks. They could also develop flexible financing structures like sustainability-linked loans and collaborate with others to standardize metrics and de-risk innovation.

    - *Businesses:* Businesses can focus on strong management and fundamentals while highlighting the long-term benefits of their models, such as cost savings and alignment with regulatory trends. They could also explore diverse funding structures and use pilot projects and data to demonstrate the viability of their models to investors.

    - *Governments:* The report recommends that governments provide stable, long-term policy frameworks, streamline permitting, and offer targeted incentives like grants and low-interest loans. They could also embed circularity into public procurement to create demand and lead cross-sectoral collaboration.



3. Introduction & Background

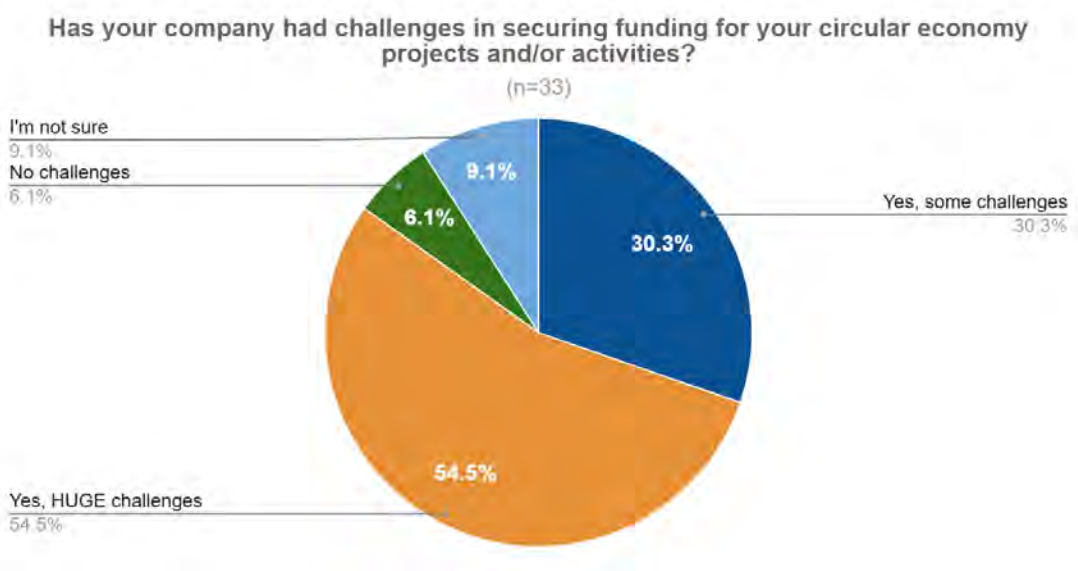
Project Context

Based on years of engaging with businesses who are working to deploy and scale their circular business models and solutions, CELC has found that access to capital and financing often ranks highly as a critical challenge.

For example, results from an audience poll as part of a webinar hosted by CELC and the United Nations Environment Programme Finance Initiative (UNEP FI) found that more than four out of five (85%) Canadian companies surveyed have had challenges securing financing or funding for their CE initiatives (see **Figure 1**). Only six percent identified having had no challenges. The list of companies who responded was diverse, from startups to more established SMEs, as well as larger corporations and multi-nationals doing business in Canada.

Reasons behind the challenges in securing funding and financing can be as diverse as the companies themselves, including factors such as the company's industry or sector, its business model, its level of maturity, its overall financial health, and more. The challenges may be specific to the company's CE business model that struggles to succeed in today's 'linear economy', or they may be more generally related to issues and challenges experienced by companies regardless of whether they are focused on CE efforts (such as the experience of the management team or their stage of growth).

This research initiative, part of a broader work stream on *Circular Finance in Canada*, sought to better understand the dynamics behind financing CE businesses and activities in Canada, including digging into some of the unique risks, challenges, and opportunities.



Source: *Financing the Circular Economy in Canada webinar* (December 2024)[1]

Figure 1: Canadian company polling results from CELC's *Circular Finance in Canada* webinar.

Background on Circular Finance Work Stream

In 2022, CELC launched a *Circular Finance in Canada* work stream in collaboration with UNEP FI, Delphi, and several leading Canadian financial institutions and stakeholders.[2]

Work stream partners examined global and Canadian trends in circular finance and engaged with industry to develop a *Financing the Circular Economy in Canada Guidance Document*.[3] The Guidance Document provides a categorization system that establishes clear definitions for what business activities and/or processes can be classified as circular. It is a sector and technology-agnostic tool that can be used by financial institutions to identify projects and activities that contribute to the CE.

A second phase of work was launched in September 2024. Objectives of work stream 2.0 included:

- Building greater awareness, knowledge, and capacity on the topic of CE and circular finance in Canada;
- Better identifying the risks and opportunities related to lending, investing and insuring CE businesses and initiatives; and
- Deepening the understanding of the finance sector's role in supporting the CE in Canada, including its linkages to addressing climate change, nature loss, and social impact.

CELC worked with Delphi to undertake primary and secondary research to better understand the issues and risks related to financing CE businesses and activities in Canada, and how capital can flow to CE businesses, projects, and infrastructure,

[1] CELC Knowledge series: Financing the Circular Economy. Emerging trends and opportunities for Canada. December 5, 2024
[2] CELC, UNEP FI, Delphi, 2024. Financing the Circular Economy: A Guidance Document for Canadian Financial Institutions.
[3] Ibid.

About this Report

This report summarizes the findings from work stream 2.0 focused on analyzing and summarizing the risks and opportunities for circular finance in Canada. Two industries (agri-food and construction / real estate) were identified by the Circular Finance work stream partners as key sectors of interest, given their strong potential for CE growth and investment.

Research Methodology

Insights shared in this report are based on desktop research and 27 key informant interviews with stakeholders from the agri-food (8 interviews) and construction / real estate (10 interviews) industries, as well as with financial sector partners (9 interviews), conducted between November 2024 and May 2025. The report also builds from research undertaken as part of the *Circular Finance in Canada* work stream 1.0, a webinar on the topic hosted in December 2024 by CELC and UNEP FI, and a conference session on 'Financing the Shift' at the *Canadian Circular Economy Summit* in April 2025.[4]

Intended Audience

This report is primarily designed for financial institutions seeking to better understand the risks, opportunities, and enabling conditions associated with circular finance in Canada. However, it is also intended to support companies and governments by offering a broader view of the current state of circular finance in Canada and providing recommendations for businesses seeking financing and policy-makers looking to enable the growth of Canada's circular economy.

Recognizing that circular finance is still evolving, this report aims to build shared awareness across stakeholder groups and foster a common understanding of the barriers and enablers that will shape the future of circular finance in Canada. Investment and lending decisions occur within complex ecosystems, and building awareness of the systemic barriers, business realities, and policy dynamics can help financial institutions engage and advise more effectively, anticipate future opportunities, and support the transition to a more circular economy.

While not all insights are directly actionable by financial institutions, understanding the systemic challenges and perspectives of other actors—such as businesses, regulators, and infrastructure providers—is essential for building greater knowledge and capacity within this space.

Defining the Circular Economy

The CE model is an alternative approach to traditional methods of conducting business. As defined in the "Harmonized Circular Economy Finance Guidelines" report, recently published by the International Finance Corporation:

"A circular economy is an economic system that aligns production and consumption activities to minimize the use of natural resources and promote the regeneration of nature; maintains the value of products and materials for as long as possible; and designs out waste generation."[5]

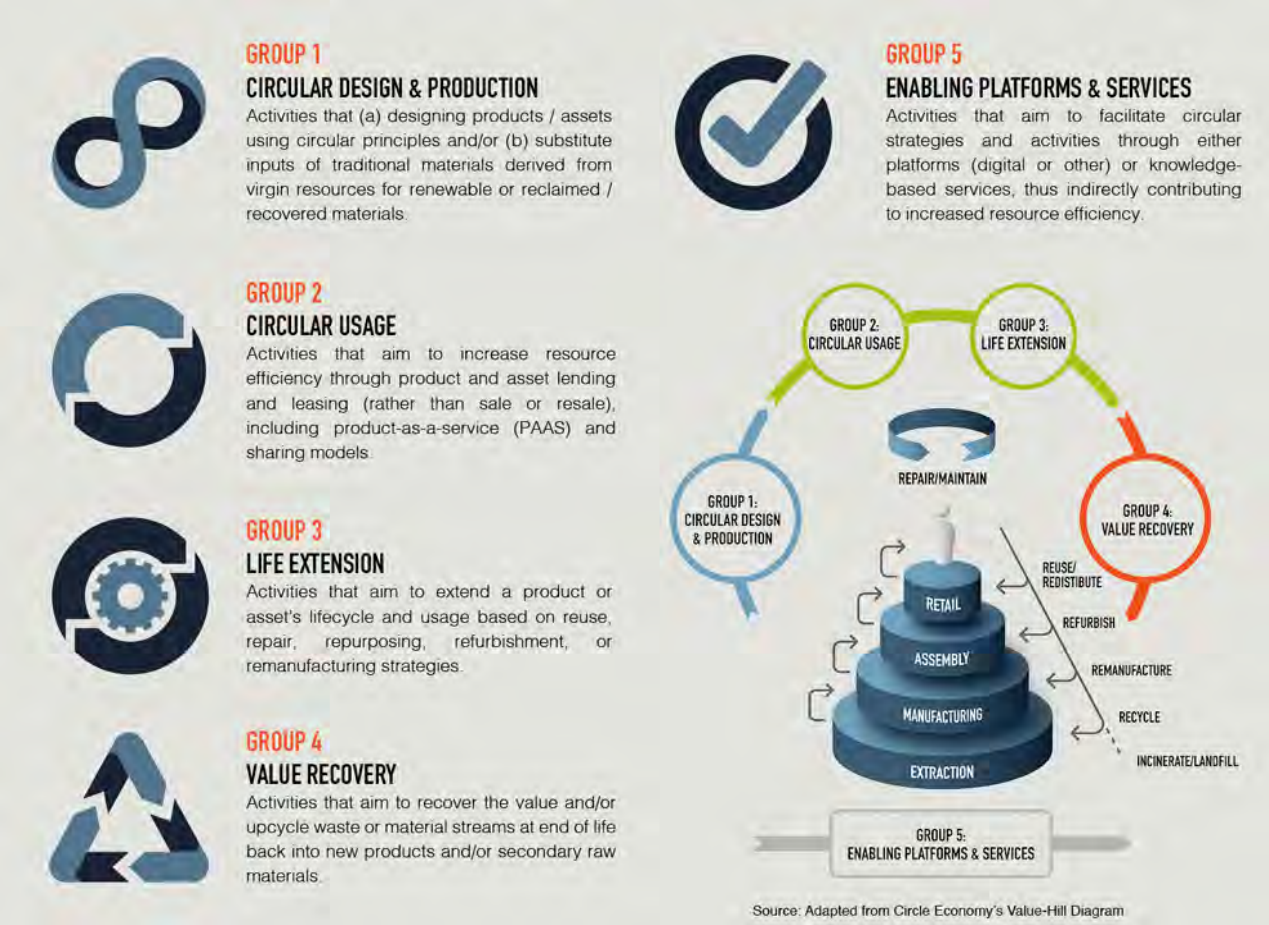
[4] See conference session summary here: https://www.circulareconomysummit.ca/_files/ugd/1e0592_aa8a8d31a05640e69647a4ddd313c102.pdf

[5] International Finance Corporation, et al, 2025. Harmonized Circular Economy Finance Guidelines

In contrast to the traditional linear "take-make-waste" model, the goal of the CE is to maximize material value and reduce waste. A circular economy is a framework that moves well beyond the 3Rs of Reduce, Reuse, and Recycle to encompass a more fulsome '9R circular strategies' framework.[6]

Transitioning from a linear to a circular system can have significant economic, environmental, and societal benefits that could reduce risk, create opportunities, and generate long-term value and resilience. The transition to a more circular economy will require structural changes, as well as a rethink of production and consumption systems and supply chains, including corresponding technologies, infrastructure, processes, and business model innovations—all of which will require financial resources.

Circular economy projects and activities can be classified within five business model groupings, as described at a high-level in the figure below, sourced from the Financing the Circular Economy Guidance Document for Canadian financial institutions (**Figure 2**).[7]



Source: CELC, UNEP FI, Delphi, 2024. Financing the Circular Economy: A Guidance Document for Canadian Financial Institutions

Figure 2: Circular Business Model Groupings.

[6] EU knowledge base. 9R Framework, Grow Circular; 9 R's: Rethink, Reduce, Reuse, Repair, Refurbish, Remanufacture, Repurpose, Recycle, Recover.
[7] CELC, UNEP FI, Delphi, 2024. Financing the Circular Economy: A Guidance Document for Canadian Financial Institutions

Current State of Circular Finance in Canada

Circular finance is any type of financial service or tool that supports the transition to more circular business models and supply chains. The CE offers a major opportunity for the financial sector to deliver on climate commitments and other environmental and social objectives, while benefiting from sources of new investment and long-term value creation.

A global movement is underway to accelerate the deployment of capital to support businesses as they transform their models, products, services, and infrastructure to enable a more circular economy. This is reflected in the recent release of the *Harmonized Circular Economy Finance Guidelines*[8], published in May 2025 by the International Finance Corporation, in collaboration with The Circulate Initiative, Circle Economy and Intesa Sanpaolo.[9] The guidelines build on CE taxonomies from around the world—including Canada's own guidance document—with the goal of scaling investment into CE solutions.

Many countries and regions are including CE as an environmental objective in their sustainable finance taxonomy work (including the EU, China, Southeast Asia, and Australia and Mexico). However, Canada remains in the early stages of circular finance deployment.[10][11] Sustainable finance taxonomy efforts in Canada so far have not explicitly included CE, leaving a notable gap in the current framework. The Circular Finance Guidance Document[12] developed as part of Phase 1 of this work stream, helps to close this gap by providing guidance for Canadian financial institutions on identifying and categorizing CE activities and financing opportunities—while laying the groundwork for future integration into Canada's broader sustainable finance taxonomy.

Financial institutions (FIs) in Canada are beginning to integrate CE principles into their investment, lending, and insurance practices; for example, through green bonds, sustainability-linked loans, and impact investment strategies. Current investment and lending activities that support circularity are frequently embedded within broader sustainability, climate-related, and/or ESG goals. These include financing for initiatives that extend product lifecycles and improve resource efficiency through reuse, repair, and material recovery.

Many FIs are increasingly weighing how well a transaction supports their sustainable investment and lending goals, alongside their standard credit evaluations, as part of their decision-making processes. However, while sustainability considerations are increasingly being factored into investment and lending decisions, transactions must still meet standard credit evaluation criteria first. Circular economy businesses and projects may align with FI sustainability frameworks and objectives, but they are typically assessed only after passing conventional financial risk thresholds.

In addition, while momentum is building, the way circularity is reflected (or not) in the internal taxonomies and frameworks amongst FIs in Canada remains inconsistent across institutions. Circular practices are often grouped and categorized differently, depending on the organization's overarching sustainability strategy, prioritization of specific sectors over others, and internal definitions.

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[8] International Finance Corporation, et al, 2025. Harmonized Circular Economy Finance Guidelines
[9] Ibid.
[10] Government of Canada. Sustainable Finance Action Council (SFAC)
[11] Government of Canada, 2024. Government advances Made-in-Canada sustainable investment guidelines to accelerate progress to net-zero emissions by 2050
[12] CELC, UNEP FI, Delphi, 2024. Financing the Circular Economy: A Guidance Document for Canadian Financial Institutions

For example, both Scotiabank and RBC include CE in their frameworks, but Scotiabank's Climate-related Finance Framework[13] includes bio-based materials under its "Circular Economy Adapted Products, Production Technologies, and Processes" category, while RBC's Sustainable Finance Framework[14] does not include this under their category of the same name.

Without consistently classifying CE lending and investment opportunities within sustainable finance frameworks, there is a risk that FIs will overlook these opportunities as part of their broader ESG strategies.

The insurance sector is also beginning to adopt and support circular practices through its operations, risk evaluation, and claims management practices. Examples include "build back better" coverage[15] that encourages rebuilding in line with CE principles, as well as claims processes that prioritize reuse / repair over replacement (e.g., drying in place) practices, thereby reducing waste. These developments point to a growing recognition of circularity as a lever for delivering economic value across the financial services sector, while also bringing environmental co-benefits.

[13] Scotiabank Climate-Related Finance Framework

[14] RBC Sustainable Finance Framework

[15] Cooperators. Claims and Sustainability.

4. Overview of Linear Versus Circular Risk

Incorporating insights from desktop research and stakeholder engagement, two tables were developed that link linear and circular risks to financial risks (see Tables 1 and 2). These risks are examined through the lens of how they translate into financial risks for the company—and, by extension, for financial institutions and investors.

These frameworks draw inspiration from well-established models of climate and nature risk[16][17], recognizing that while there are similarities, climate and nature risks differ from CE risks in important ways. Climate and nature risks are typically more systemic, where external events—such as extreme weather or biodiversity loss—create disruptions and financial consequences.

In contrast, circular risks emerge primarily from operational and business context factors, such as supply chain dependencies, product lifecycles, or waste management practices. Despite these differences, there are significant overlaps between climate, nature, and circular risks, particularly where the adoption of circular practices mitigate environmental impacts and related financial exposure.[18][19]

Linear Risks

Linear business models, which are tied to the current "take-make-dispose" economic system, are increasingly exposed to financial risks as environmental, resource, and supply chain challenges intensify. These risks are rooted in a reliance on finite resources, complex and largely linear supply chains, inefficient resource and waste management, and short material usage life cycles.

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[16] Network for Greening the Financial System, 2024. Nature-related financial risks:: A conceptual framework to guide action by central banks and supervisors

[17] Network for Greening the Financial System, 2020. Case Studies of Environmental Risk Analysis Methodologies.

[18] Ellen MacArthur Foundation (2021). Completing the Picture: How the circular economy tackles climate change.

[19] Sitra (2022). Tackling root causes: Halting biodiversity loss through the circular economy.

Recent global trade disruptions—whether from pandemics, tariffs, or other shocks—have exposed just how vulnerable supply chains can be, with serious consequences for businesses and economic resilience. As resource scarcity intensifies (e.g., demand and supply of critical metals and minerals) and environmental regulations tighten, companies are increasingly at risk of disruptions, rising costs, and potential liabilities.

Furthermore, cumulative linear risks can drive inflation and may result in insurance withdrawal and debt crises.

By adopting circular practices—such as closed-loop systems, local sourcing, waste reduction strategies, material reuse, and designing for product longevity—businesses can mitigate linear risks, creating more resilient and financially sustainable operations, as well as a more stabilized financial system at a macro level.

Table 1 outlines the risks inherent to the linear model, how they translate into financial risks, how circularity can serve as a risk mitigation strategy, and which CE groupings (as described in Figure 2 and Appendix 1) would be most directly relevant for mitigating risks. Viewing circularity as a de-risking approach shifts the perspective, revealing how certain linear risks are often overlooked because they are so embedded in traditional business thinking. By linking the linear mindset to tangible financial risks, this framework helps to highlight circularity as a strategic approach to managing risks.

Table 1: Linear risks, financial risks, and opportunities for risk mitigation through circular practices.

Linear Risks	Financial Risks	Opportunity for Risk Mitigation through Circular Practices
Resource scarcity Risks related to the depletion of finite resources and reliance on non-renewable virgin materials.	• **Input cost volatility**: Increased costs due to shortages of virgin or raw materials. Commodity price fluctuations for finite resources can destabilize production costs. • **Stranded assets**: Investment in infrastructure tied to non-renewable resources may become obsolete.	Adopting closed-loop systems (e.g., recycling, reusing materials) to reduce dependency on finite resources. **Key business models**: Group 1: Circular Design and Production Group 4: Value Recovery
Supply chain disruption Risks related to long, complex, linear supply chains.	• **Supply chain disruptions:** Linear supply chains are vulnerable to disruptions and systemic risks (e.g., geopolitical risks, natural disasters, or public health emergencies). • **Increased transportation costs and impacts:** Long, inefficient supply chains not only drive up logistics expenses but also expose businesses to greater risks from fuel price volatility, regulatory changes, and geopolitical disruptions.	Adopt circular practices—such as adopting circular supply loops, or creating closed-loop systems—to help mitigate these risks by shortening supply chains and increasing resilience. **Key business models:** Group 1: Circular Design and Production Group 3: Life Extension Group 4: Value Recovery Group 5: Enabling Platforms

Waste management and pollution Costs and liabilities from excessive waste production, regulatory pressure, and pollution	• **Regulatory fines:** Increased regulations on waste and pollution can result in fines, with litigation being long-tailed in nature. • **Increased disposal costs:** Landfill taxes and waste disposal costs can increase operational expenses. • **Increased cost of materials/energy:** Cost of wasted or inefficient use of energy of materials. • **Reputational damage:** Poor waste management can lead to public backlash, damaging a company's reputation.	Implement waste-reduction strategies (e.g., design for disassembly, closed-loop recycling) to reduce waste volumes and the associated costs and risks. **Key business models:** Group 1: Circular Design and Production Group 4: Value Recovery Group 5: Enabling Platforms
End-of-life product liabilities Risks from products designed for short-term use, with built-in obsolescence or without end-of-life considerations.	• **Product recalls and warranty costs**: Shorter product life cycles may lead to increased returns, repairs, and customer dissatisfaction. • **Loss of market share**: Consumers increasingly favour durable, sustainable products. • **Asset depreciation**: Products with short life cycles depreciate faster, reducing long-term value. • **Compliance costs**: Adapting to new regulations (e.g., EPR) may require extensive adjustments to business models and products. • **Liability costs**: Managing end-of-life disposal or the environmental impact of waste can result in legal or clean-up costs. • **Decommissioning costs**: Assets that become obsolete without circular planning may incur significant remediation, disposal or recycling costs.	Design products for longevity, reusability, repair, or refurbishment to help mitigate obsolescence, reducing long-term costs and helping to meet regulatory requirements. **Key business models**: Group 1: Circular Design and Production Group 2: Circular Usage Group 3: Life Extension

✓ **Financial Institutions**
Linear risks are increasingly material to credit and investment decisions. Understanding them helps FIs avoid stranded assets, reputational damage, and regulatory exposure. • **Integrate linear risk factors into credit and risk assessments.** Ensure your risk teams are factoring in resource scarcity, supply chain fragility, and waste liabilities when evaluating clients. • **Use circularity as a lens for de-risking.** Encourage analysts to compare circular vs. linear models—don't let traditional assumptions obscure hidden risks. • **Engage clients on circular strategies.** Ask how they are mitigating linear risks through design, supply chain, and end-of-life planning. • **Pilot circular risk scorecards.** Use tools like the Circular Risk Scorecard to evaluate exposures and opportunities more systematically.
✓ **Businesses**
Understanding how circularity mitigates financial risks helps build a stronger investment case and improves access to capital. • **Highlight circularity as a risk mitigation strategy.** When pitching to investors or lenders, emphasize how your model reduces exposure to the linear risks outlined above • **Quantify the benefits.** Provide data on cost savings, reduced waste, or improved asset longevity to strengthen your financial narrative. • **Anticipate investor concerns.** Be ready to explain how your model addresses supply chain reliability, end-of-life liabilities, and compliance risks.
✓ **Governments**
Many linear risks—like resource scarcity, supply chain fragility, and waste stream liabilities—are systemic and policy-sensitive. Proactive regulation and incentives can shift market behavior and reduce exposure across the economy.

Circular Risks

While circularity offers promising solutions to the challenges presented by conventional linear models and supply chains, it also introduces unique risks that can impact both operational and financial stability. These risks, outlined in Table 2, often stem from the complexities inherent in a systemic shift from linear to circular systems, as well as circular business models trying to operate within the largely linear economy today.

Unreliable feedstock availability and quality, challenges with reverse logistics, and gaps in infrastructure can disrupt operations and supply continuity. Additionally, market and consumer risks—such as the potential for greenwashing and inconsistent consumer participation and demand—can undermine circular initiatives. Operational risks related to quality and safety concerns, as well as a reliance on policy and regulation, further complicate the scale up of circular models and add risk. By proactively addressing these challenges, businesses and FIs can enhance their resilience and fully realize the financial benefits of circular models.

Table 2: Circular risks, financial risks, and opportunities for risk mitigation.

Circular Risks	Financial Risks	Potential Risk Mitigation Strategies
Supply chain	• **Unreliable feedstock availability:** Risks associated with inconsistent access to circular materials (e.g., recycled or biobased), leading to potential supply chain disruptions. • **Supply chain complexities:** Challenge of managing a circular supply chain, including reverse logistics, material sourcing, and managing feedstock (including material quality, sorting, and storage). • **Infrastructure gaps:** Limited infrastructure for upcycling and recycling, which is often location-specific, and the lack of a robust collection and processing system can impact feedstock availability. • **Supply chain transparency:** Lack of transparency and traceability for circular feedstocks can lead to non-compliance penalties, liability for unethical or unsustainable practices, and reputational damage.	Diversify material sourcing, invest in infrastructure to support reverse logistics, and increase supply chain transparency through the use of digital tools (e.g., material passports, blockchain, etc.) to help mitigate risks related to feedstock reliability and traceability.
Market and customer	• **Greenwashing liability:** Potential for businesses to make exaggerated or misleading claims about their circularity efforts, leading to reputational and legal risks. • **Unpredictable consumer behaviour:** Unpredictability of consumer actions, such as participation in recycling programs, which can affect the consistency and quality of recycled materials. . • **Novelty**: Lack of awareness and familiarity with circular business models (e.g., product-as-a-service) can result in low demand for circular products and services and deter investors.	Provide clear and verifiable claims through third-party certifications, coupled with consumer education and pilot programs to build trust and support adoption.

Safety and liability concerns	• **Perceived riskiness of circular products/activities**: Customer or investor concerns over the safety or reliability of circular products (e.g., recycled products or reused materials) may limit market acceptance. • **Certification and compliance costs**: Ensuring circular products (e.g., reused/repaired/refurbished products, products made with recycled materials) meet performance or regulatory standards may increase operational costs. • **Legal exposure**: Potential legal consequences if products made from circular inputs fail or cause harm. • **Insurance**: Lack of historical data on circular products (e.g., reused materials or modular systems and their performance) can make underwriting difficult.	Engage regulators and insurers early to clarify requirements, then conduct rigorous testing and certification. Transparently report results to build trust and reduce perceived risks around circular products.
Regulatory	• **Evolving policies and regulations:** Shifting or unclear regulations (e.g., Extended Producer Responsibility, recycled content mandates) may require costly redesigns or adjustments.	Design flexible systems to respond to shifting regulatory requirements, and engage in policy dialogue to understand and shape the trajectory of future frameworks.

✓ Financial Institutions

Circular risks are often unfamiliar and under-assessed in traditional risk frameworks. Understanding them helps FIs avoid mispricing risk, improve underwriting, and support viable circular ventures.

- **Engage early with clients on risk mitigation strategies.** Ask circular businesses how they're addressing supply chain transparency, product safety, and regulatory uncertainty.
- **Support pilot programs and data collection.** Encourage clients to run pilots and gather performance data—especially for novel models like product-as-a-service or reuse platforms.

✓ Businesses

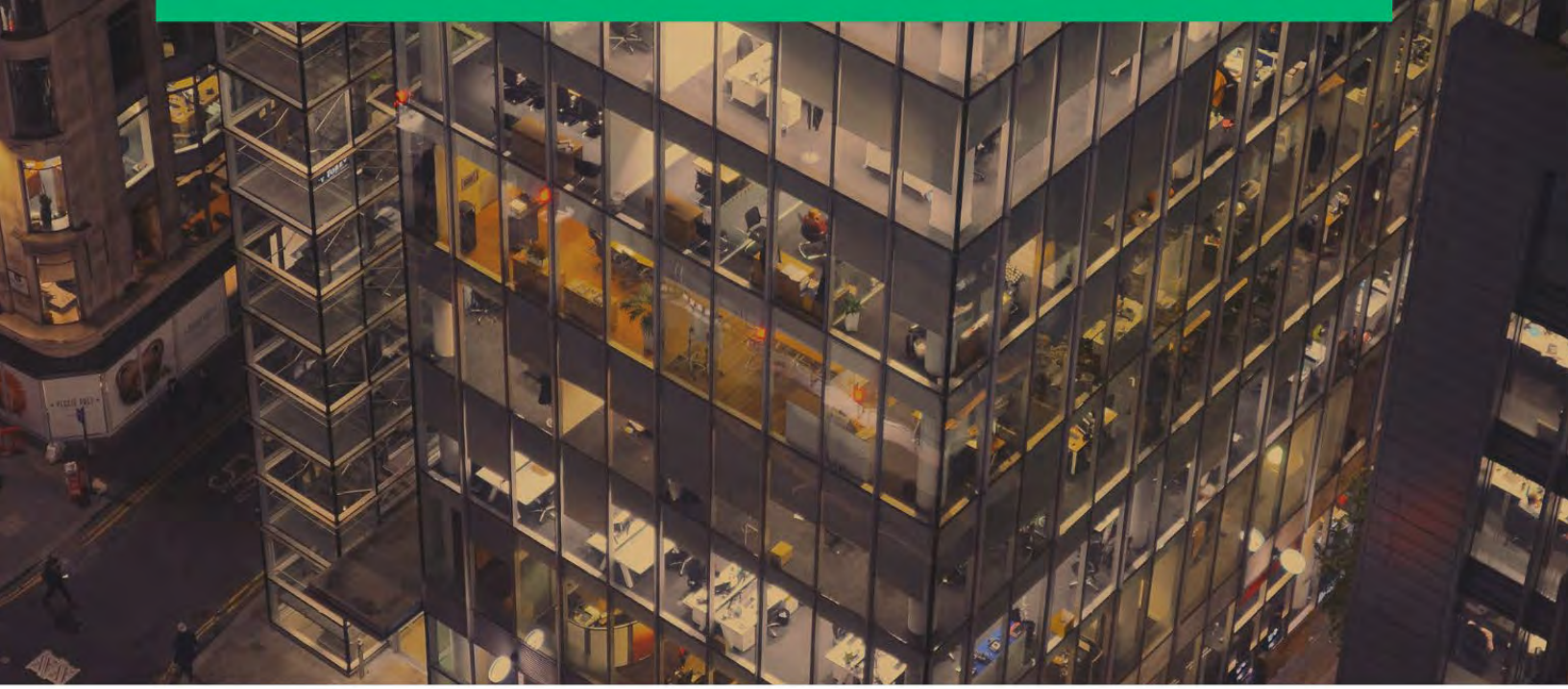
Circular risks are sometimes the reason investors hesitate. Knowing them—and proactively addressing them—can strengthen your pitch and improve financing outcomes.

- **Anticipate investor concerns.** Be ready to speak to feedstock reliability, reverse logistics, and product safety—these are common red flags for financiers.
- **Build trust through transparency.** Use third-party certifications, material passports, and clear reporting to reduce perceived risk and demonstrate credibility.
- **Pilot and document.** Run small-scale pilots to test logistics, consumer behavior, and product performance—then use that data to de-risk your model.
- **Engage insurers and regulators early.** Clarify requirements for reused or recycled materials to avoid delays or unexpected costs.
- **Design for flexibility.** Build systems that can adapt to shifting regulations or consumer preferences—this shows resilience and lowers perceived risk.

✓ Governments

Circular risks often stem from policy gaps or uncertainty. Addressing these risks through targeted policy, programs, and support can accelerate adoption and reduce systemic barriers.

- **Clarify, harmonize, and stabilize regulations.** Provide long-term certainty around EPR, recycled content mandates, and reuse standards to reduce business risk.
- **Support infrastructure development.** Invest in reverse logistics, recycling hubs, and digital traceability tools to address feedstock and supply chain risks.
- **Support certification and standards development.** Create clear, accessible pathways for circular products to meet performance and regulatory requirements.
- **Fund pilot programs and access to data.** Help businesses and FIs gather the data needed to validate circular models and reduce perceived risk.
- **Promote consumer education.** Support campaigns that build public trust in circular products and services—reducing market risk and boosting demand.



5. Financing Needs & Opportunities

As businesses work to adopt circular practices and business models, they face a range of financing needs. The examples below illustrate common areas where funding is needed and opportunities for financing may exist - which are often linked to a company's stage of development or growth (e.g., start-up, small business looking to grow, a larger corporate expanding its manufacturing or diversifying its product or service offerings, etc.). These examples span research and development (R&D), operational and strategic, and scale up and growth-related investments. The list below, while not exhaustive, illustrates the diverse types of support businesses may seek when adopting or scaling circular models.

Research and Development (R&D)

Access to capital for research is critical for both innovation and investment-readiness. Pilot projects and feasibility studies, in particular, serve as proof points for circular business models-demonstrating technical viability, market demand, and potential returns, which can help attract follow-on investment. Life Cycle Assessments (LCAs) are also frequently cited as a necessary step in understanding environmental impacts and providing the data needed to meet sustainability criteria increasingly required by investors and lenders. These activities help businesses make informed decisions and align with market expectations around transparency and performance.

Circular Financing Opportunities:

- Early-stage investing (i.e., angel, venture capital, bootstrapping): Impact investors focused on circular ventures
- Research funding: Public-private partnerships or R&D grants for circular and/or green technology innovation

Operational and Strategic Costs

Many circular businesses require financing to cover essential operational expenses as they establish and grow their companies or undertake circular activities. This includes rent for facilities where circular production or logistics activities take place, wages for employees who manage or implement circular systems, and other day-to-day costs associated with running their business operations. These expenses may not be unique to circular models, but they are critical to sustaining their delivery, particularly during early or transitional phases.

Circular Financing Opportunities:

- Green or sustainability-linked loans
- Research funding: Public-private partnerships or R&D grants for circular and/or green technology innovation

Technology and Infrastructure

Businesses frequently need capital to invest in physical and digital infrastructure that are part of their circular business models. This includes technology and equipment such as biodigesters, sorting and recycling equipment and technologies, and AI-based software that can optimize energy use. These investments help increase efficiency, minimize waste, and embed circular principles into day-to-day operations, manufacturing, and production.

Circular Financing Opportunities

- Sustainability-linked loans
- Blended finance, public-private partnership (especially for infrastructure-heavy ventures)
- Project finance for infrastructure (long-term and collaborative financing for capital-intensive and/or shared infrastructure and facilities)

Business Growth and Expansion

Companies need funding to launch or expand circular business models. Start-up costs—such as setting up new circular operations or entering unfamiliar markets—can be significant. Equipment leasing programs are being developed as part of a shift from product ownership to service-based models. Marketing support is another key area, as many businesses must educate their customers about the benefits and value of circular products / services to drive adoption and behaviour change.

Circular Financing Opportunities

- Green bonds / circular bonds (e.g., issued by an investment bank and purchased by large private equity funds or sovereign wealth funds with sustainability mandates)
- M&A finance for circular acquisitions (financing deals to acquire startups or tech that support deeper circular operations)
- Venture capital (ESG and impact investing)
- Equipment financing
- Trade expansion lending programs
- Trade credit insurance

Financial Flexibility and Cash Flow Management

Finally, financial tools that improve liquidity and reduce pressure during critical growth stages can also help. This includes refinancing existing start-up loans to improve cash flow, or securing lines of credit to bridge funding gaps when taking on new projects. These flexible financial solutions allow companies to remain agile and resilient as they evolve their models and scale their impact.

Circular Financing Opportunities

- Sustainability-linked loans
- Bridge financing
- Project re-financing
- Working capital financing

Further to the financing needs based on a business' stage of start-up, expansion, and operation, financing considerations also differ based on the unique CE business model grouping, as outlined by the examples in Table 3 below.

Table 3: Examples of financing needs for businesses by CE business model grouping.

Financing Needs	• Design software (e.g., BIM, design tools) • Manufacturing equipment / technology (e.g., packaging lines, mass timber pre-fab, etc.) • Material innovation (e.g., bioproducts) • R&D equipment	• Cleaning and repair spaces and equipment • Spare part inventories • Reverse logistics / transportation • Insurance for product leasing	• Warehousing • Reverse logistics / transportation • Sortation & recycling equipment / technologies • Energy recovery (e.g., gas capture)	• Digital platforms • AI software • Blockchain technology • Robotics • Office space

6. Barriers to Scaling Circular Economy Initiatives

This section outlines the key **operational barriers** that hinder the adoption of circular business practices, followed by the **financial barriers** that limit access to capital. While distinct, these categories are closely interconnected. Operational challenges—such as infrastructure gaps, policy misalignment, or supply chain constraints—can weaken business performance and influence investor perceptions, making it more difficult to secure funding. At the same time, access to finance can play a critical role in helping businesses overcome these very barriers; for example, by enabling investment in new technologies, infrastructure, or market development. Many of these challenges are directly tied to the risks outlined in the previous sections.

This section highlights key barriers that emerged from the research, with insights organized thematically, with sub-themes identified where relevant. It is important to note that several of the operational and financial barriers discussed are not unique to CE initiatives. They are common hurdles for many early-stage ventures or impact-oriented projects more broadly. However, the research provides added context for how and where these challenges show up specifically for CE businesses.

Operational Barriers to Circular Business Practices

While circular business models offer a compelling alternative to traditional linear systems, their implementation presents a range of operational, systemic, and cultural challenges. From infrastructure limitations and regulatory hurdles to customer adoption and supply chain complexity, these challenges can significantly impact the viability and scalability of circular initiatives. Understanding these obstacles is essential for identifying where targeted support—through policy, technical assistance, or investment—is needed to enable the shift toward a more circular economy.

Infrastructure Gaps

- **Space and processing equipment:** Implementing CE practices often requires additional space for sorting, storing, and processing materials. Many organizations may lack the necessary capital and/or infrastructure to support these activities.
    - **Example**: Construction, deconstruction, and reclamation companies often struggle to find space to store recovered materials until they can be reused in future projects. One interviewee described a major construction project that involved dismantling and reusing steel structures from a historic government building. The steel, originally added during mid-20th century renovations, was carefully removed and stored for future reuse as part of a broader restoration effort. The interviewee emphasized that this kind of material recovery was only possible because the project had access to dedicated infrastructure and government-provided storage space—highlighting a key enabler often missing in typical construction projects. Similarly, companies piloting take-back and reuse programs for plastic containers face storage challenges—particularly when materials are light-sensitive and require special handling. Access to storage space is especially relevant for circular Value Recovery business models (Group 4), where materials must often be held until they can be repurposed or redeployed.
    - *"From a pure business point of view, there are challenges with holding space in a warehouse for plastic containers where our business says we need that space."*
    - *"We have an interesting relationship with the developer who is allowing us to lease a site from them that will be undergoing demolition any day now…but it would be helpful to know that we have a place for a longer period. Finding a dedicated storage space where we can warehouse this material downtown is really important to us."*

- **Reverse logistics**: Logistical challenges, such as coordinating the collection and distribution of materials, can hinder the efficient operation of CE systems.
    - **Example**: An agriculture company that supplies crop inputs and services highlighted challenges in piloting take-back programs for packaging materials, citing logistical difficulties in storing and collecting materials until vendors can retrieve them. The company also noted that rural communities often lack the necessary infrastructure for efficient collection and recycling, posing a significant barrier to implementing circular solutions. These types of logistical barriers are particularly relevant for Value Recovery business model (Group 4), where the ability to retrieve and process materials efficiently is critical to success.
    - *"When you think of all those challenges that municipalities have with the collection and sorting and everything like that, in rural communities, there's none of it."*
    - *"Managing the reverse logistics for collecting tools and batteries back into the system is a significant challenge and an area needing more development. We are actively seeking third-party vendors to assist with this."*

✓ **Financial Institutions**

- **Infrastructure gaps are a major barrier to circular scale-up—but also a clear investment opportunity.** FIs can play a catalytic role by financing enabling and infrastructure, prioritizing collaborative projects and shared infrastructure (e.g., reverse logistics, storage, etc.).
- **Identify infrastructure as a strategic investment area.** Warehousing, reverse logistics, and processing facilities are critical enablers—consider project finance, blended finance, or green bonds to support them.
- **Support clients with non-financial resources.** Explore ways to offer discounted or in-kind access to space (e.g., unused real estate, short-term leases) or broker partnerships with developers and municipalities.
- **Include infrastructure needs in due diligence.** Ask circular businesses about their access to storage, logistics, and processing capacity—these are often overlooked but essential to viability.
- **Co-invest with public or philanthropic partners.** Infrastructure-heavy ventures may benefit from shared-risk models—FIs can help structure and lead these efforts.
- **Use infrastructure gaps to inform portfolio strategy.** Identify sectors or regions where infrastructure limitations are holding back circular growth—and target support accordingly.

✓ **Businesses**

Infrastructure challenges can derail circular operations. Planning ahead and demonstrating readiness can improve investor confidence and operational resilience.

- **Have a clear infrastructure plan.** Show how you'll manage storage, logistics, and processing—especially if your model depends on material recovery or reuse.
- **Build partnerships early.** Engage with developers, municipalities, or logistics providers to secure space and services—don't wait until scale-up.
- **Explore shared-use models.** Consider co-locating with other circular businesses or using temporary space to reduce costs and increase flexibility.
- **Highlight infrastructure as a differentiator.** If you've secured reliable space or logistics, make it part of your pitch—it signals readiness and reduces perceived risk.

✓ **Governments**

Infrastructure gaps are a public-good problem. Strategic investment and policy support can unlock circular growth, especially in underserved regions and sectors.

- **Fund enabling infrastructure**. Prioritize public investment in circular hubs, reverse logistics networks, and material recovery facilities—especially in rural or underserved areas.
- **Offer incentives for space provision**. Create tax credits or grants for developers who lease space to circular businesses, or for companies that retrofit facilities for circular use.
- **Support shared infrastructure models**. Encourage co-location, industrial symbiosis, or municipal partnerships to reduce costs and improve access.
- **Integrate circular needs into urban planning**. Ensure zoning, permitting, and land-use policies support circular activities like deconstruction, reuse, and material storage.
- **Facilitate matchmaking**. Help connect circular businesses with available space and/or logistics providers through public platforms, incubators, and innovation hubs.

Supply Chain Constraints

- **Feedstock reliability and availability**. Since circular systems depend on the consistent supply of recycled or repurposed materials, disruptions—such as limited access to post-consumer recycled materials or variations in material quality—can hinder production and increase costs.
    - **Example**: Companies relying on high-quality recycled plastics or minerals might face price spikes, delays, or shortages if collection rates fall short. While recycling critical minerals can ease supply chain pressures associated with virgin materials, securing a consistent supply of recyclables remains a challenge. Slower-than-expected EV adoption and the long lifespan of batteries have limited the volume of end-of-life materials available for recycling. A reliable and consistent feedstock supply is particularly important for Group 1 (Circular Design and Production) and Group 4 (Value Recovery), where material inputs directly shape product performance and market viability.
    - *"They (packaging customers) understand that if they're going to make a claim that they're putting 25% recycled content in their package and then their access to recycled content drops, there's a huge risk for those brands."*

- **Supply chain transparency**: Ensuring transparency in the supply chain is crucial for effective circularity. This involves tracking materials throughout their lifecycle to ensure they are reused, recycled, or disposed of responsibly. However, achieving this level of transparency can be difficult due to the complexity of supply chains and the need for collaboration across multiple stakeholders.
    - **Example**: A sustainable investment firm managing approximately USD 40 billion in assets highlighted the critical role of supply chain transparency in enabling CE outcomes. According to the firm, visibility across the supply chain is essential for effective circularity, as it supports accurate tracking of materials, improves resource efficiency, and enables more reliable end-of-life recovery and recycling.
    - *"The whole circular story starts with transparency on the supply chain side, because with better tracking of how an item is constructed, knowing exactly what materials it's made of can help with the end-of-life stage for recycling. There are complex items, especially in textiles, that are impossible to recycle because there is no information on how they're made."*

✓ Financial Institutions

Supply chain constraints—especially feedstock reliability and transparency—can directly impact the financial viability of circular ventures. Understanding these risks helps FIs assess projects more accurately and support resilient models.

- **Evaluate feedstock risk in credit assessments.** Ask clients how they secure consistent access to recycled or repurposed materials—especially for models dependent on post-consumer inputs.
- **Support supply chain transparency initiatives.** Encourage or co-invest in digital tools (e.g., material passports, blockchain) that improve traceability and reduce compliance risk.
- **Use supply chain data to inform risk pricing.** Projects with robust tracking and diversified sourcing may warrant better terms or lower risk premiums.
- **Facilitate partnerships.** Help connect circular businesses with upstream suppliers or logistics providers to strengthen feedstock pipelines.
- **Track sector-specific risks and vulnerabilities.** Monitor sectors (e.g., packaging, construction, textiles) where feedstock volatility or transparency gaps are most acute—and adjust portfolio strategies accordingly.

✓ Businesses

Feedstock and transparency issues can be deal-breakers for investors. Addressing them head-on builds credibility and improves access to capital.

- **Secure and diversify feedstock sources.** Build relationships with multiple suppliers, and consider backup plans for material shortages or quality issues.
- **Invest in traceability tools.** Use digital platforms to track material inputs and lifecycle—this supports compliance, builds trust, and strengthens your pitch.
- **Be transparent about risks.** Acknowledge potential supply chain challenges and show how you're mitigating them—this signals maturity and preparedness.
- **Align with industry standards.** Use recognized certifications or reporting frameworks to validate your supply chain practices.
- **Educate your customers.** If your model depends on consumer participation (e.g., take-back programs), build awareness and incentives to ensure consistency.

✓ Governments

Supply chain constraints are often systemic and require coordinated policy responses. Addressing them can unlock circular growth and reduce risk across the economy.

- **Support supply chain transparency tools.** Provide grants or incentives for digital traceability platforms that help businesses track and verify circular materials.
- **Standardize reporting requirements.** Develop clear guidelines for material disclosure, recycled content claims, and lifecycle tracking to reduce compliance uncertainty.
- **Facilitate cross-sector collaboration.** Convene industry groups to align on feedstock standards, data sharing, and reverse logistics coordination.
- **Monitor and address bottlenecks.** Identify sectors or regions where supply chain constraints are most severe—and target policy interventions accordingly.

Economic Factors

- **Operational, start-up, and scaling costs**: The initial costs of implementing CE practices can be high, including investments in new technology, infrastructure, and training. Ongoing operational expenses, such as maintenance and labour, can also be significant. These costs can be a major barrier for companies, especially SMEs with limited financial resources. Scaling up production to meet market demand requires significant capital investment in equipment and operations. Traditional lenders may be hesitant to finance specialized equipment that may have limited resale value. The risk is compounded in sectors where technology is evolving rapidly, making long-lived assets vulnerable to premature obsolescence and increasing the financial risk of CE investments.
    - **Example**: A manufacturer of a flexible plastic package developed a mono-material pouch that is easier to recycle than the multi-material alternative. However, it requires new manufacturing equipment and can't be produced on existing production lines, requiring a significant investment to transition the equipment.
    - *"Take eight machines and switch them over. If we do the math, we're talking about a 4 to 5 million dollar investment and that's just on the finishing lines. Then it takes about a year for a machine to be manufactured. This capital investment is not something that you can just do overnight."*
    - *"The second you buy a piece of equipment to make something, you need that to run for 10-15 years, maybe 20 years, to get your money back. And the advances of technology are coming so quickly, that most people are shy to make a financial investment. A machine bought today is likely not going to be competitive in three to five years."*

- **Insurance requirements**: Organizations that receive food donations or engage in other CE activities may be required to take out substantial insurance to protect against potential liabilities. These requirements can add complexity and cost, making it more challenging to implement CE initiatives. Obtaining insurance for new materials and technologies, such as building materials made from recycled content, can be difficult. Insurers may be hesitant to cover these innovations due to perceived risks and lack of historical data on their performance.
    - **Example**: A large grocery retailer noted that partner organizations donating surplus food to farms (rather than to people) faced significantly higher insurance requirements, since Good Samaritan protections do not apply. Similarly, a large construction firm highlighted that construction insurance for mass timber can make building with it cost prohibitive.
    - *"When we give (food) to farms, the organizations we work with have to take out a lot of insurance to protect us from anything that might go wrong as a result of us giving our food away. There's a Good Samaritan protection related to giving food to charities but not related to farms."*
    - *"Any time you do anything new, insurance pays more attention. With respect to mass timber, for instance, the cost of construction insurance for that is 6 to 10 times right now what it is for concrete and steel."*

✓ Financial Institutions

High upfront costs and insurance barriers are major blockers for circular businesses—especially SMEs. FIs can play a key role in unlocking capital and reducing perceived risk.

- **Design financing products for long-term value.** Circular investments often have longer payback periods—consider flexible terms, leasing models, or sustainability-linked loans.
- **Support blended finance structures.** Partner with public or philanthropic actors to de-risk early-stage or infrastructure-heavy investments.
- **Engage with insurance sector.** Help shape underwriting standards for circular materials and technologies to reduce cost barriers and improve access.
- **Offer advisory support.** Help clients understand how to structure capital stacks and blend funding sources strategically to prepare for financing
- **Recognize the potential circularity as a cost-saving strategy.** While upfront costs may be high, circular models often reduce long-term operational expenses—factor in lifecycle savings and resilience benefits into into ROI assessments.

✓ Businesses

High costs and insurance hurdles can deter investors. Demonstrating financial planning and risk mitigation builds credibility and improves funding outcomes.

- **Explore alternative financing.** Consider equipment leasing, revenue-based financing, or partnerships to reduce upfront capital needs.
- **Engage insurers early.** Understand coverage requirements for reused materials, food recovery, or novel technologies—and plan accordingly.
- **Highlight long-term savings.** Quantify how circularity reduces waste, energy use, or disposal costs—this strengthens your investment case.
- **Use pilot data to de-risk.** Demonstrate performance and cost-effectiveness through small-scale trials before scaling up.

✓ Governments

Economic barriers—especially capital intensity and insurance costs—can stall circular innovation. Policy support can reduce risk and unlock private investment.

- **Provide targeted funding.** Offer grants, tax credits, or low-interest loans for circular equipment, infrastructure, and insurance premiums.
- **Support blended finance initiatives.** Co-invest with private actors to de-risk high-capex circular ventures and attract mainstream capital.
- **Clarify insurance standards.** Work with industry to develop clear, consistent guidelines for insuring circular materials and technologies.
- **Recognize circularity in procurement.** Adjust public procurement criteria to reflect lifecycle cost savings and circular benefits.

- **Promote financial literacy.** Fund programs that help SMEs understand capital planning, insurance, and financing options for circular models.

Policy and Regulatory Issues

- **Policy stability**: Inconsistent or short-term policies can undermine the viability of circular business models by creating uncertainty for long-term planning and investment. Uncertainty in policy and contract duration can undermine offtake agreements, for example. In the context of circular practices, these agreements are often used to support projects involving recycled materials, renewable inputs, or secondary raw materials. However, when policies (e.g., subsidies, recycling mandates, procurement requirements, carbon credits) are unstable or short-term, it becomes harder to secure such agreements. Without stable, supportive policies, it's difficult to guarantee long-term returns, which can deter buyers and financiers from committing to circular projects.
    - **Example**: A company collaborates with dairy farms to transform on-farm organic waste into renewable natural gas (RNG) and nutrient-rich fertilizer. The RNG is sold to market, providing shared revenue for farmers while advancing their sustainability goals. The company emphasized that carbon credit programs play a critical role in making such projects financially viable by generating revenue and attracting investment. However, uncertainty around these programs presents a significant challenge. They underscored the need for long-term government commitments to ensure a stable policy environment that supports investment in CE initiatives.
    - *"When we were looking at that economic model, an off taker is really critical. So much of our revenues come from carbon credit programs as well. This policy environment is really critical and top of mind given all the changes that are happening"*
- **Permitting**: Policy and regulatory barriers, such as stringent permitting requirements, can hinder the implementation of CE practices.
    - **Example**: A major grocery retailer described efforts to advance food diversion and rescue initiatives but noted that food safety regulations—particularly around the use of personal containers for sensitive items like meat and seafood—make it difficult to adopt reuse systems. For example, food safety regulations require establishments to ensure the safety of all food, even when customers bring their own containers, posing a challenge for reuse systems.
    - **"***Related to food safety, whenever you go into a store that's selling food, it's on them to make sure that everything is safe, even if you bring your own container. So that opens up a whole challenge, especially with more sensitive products like meat and seafood."*
- **Lack of standards:** While progress has been made (for example, the strategic focus of the CSA Group[20] in developing standards to support the CE), gaps in standardization remain a barrier to scaling circular initiatives. For example, the absence of universally accepted standards for green building materials, recycled content, or reused components can lead to uncertainty in procurement, performance verification, and insurance underwriting. Without clear technical or safety benchmarks, project developers, buyers, and financiers may be reluctant to adopt or invest in circular solutions due to concerns about liability, durability, or regulatory compliance.

[20] CSA Group: Circular Economy

✓ Financial Institutions

Policy instability, permitting hurdles, and lack of standards can directly affect the bankability of circular projects. FIs need to understand these risks to assess viability and structure deals appropriately.

- **Factor policy risk into investment decisions.** Assess the stability of subsidies, carbon credit programs, and procurement mandates when evaluating circular projects.
- **Engage in policy dialogue.** Collaborate with industry groups and regulators to advocate for consistent, long-term policies that support circular investments.
- **Use policy signals to guide portfolio strategy.** Track emerging regulations (e.g., EPR, building codes) to identify sectors where circularity is becoming a competitive advantage.

✓ Businesses

Navigating policy and regulatory complexity is essential for scaling circular models. Being proactive and informed can reduce delays, improve investor confidence, and unlock new opportunities.

- **Document regulatory alignment.** Show how your model complies with or anticipates future regulations—this strengthens your investment case.
- **Plan for policy uncertainty.** Build flexibility into your business model to adapt to changing subsidies, mandates, or carbon credit programs.
- **Participate in standard-setting initiatives.** Join industry efforts to define standards for recycled content, green building materials, or circular design.
- **Engage early with regulators and advocate for supportive policies.** Understand permitting requirements and compliance obligations—especially for food safety, reuse systems, or novel materials—and share your experience to help shape practical, enabling regulations.

✓ Governments

Policy and regulatory clarity is foundational to CE growth. Addressing instability, permitting complexity, and standardization gaps can unlock private investment and accelerate adoption.

- **Ensure policy stability.** Design long-term, predictable programs (e.g., carbon credits, recycling mandates) to support investment planning and offtake agreements.
- **Streamline permitting for circular activities.** Review and revise permitting processes to reduce friction for reuse, recycling, and food recovery initiatives.
- **Accelerate standard development.** Fund or coordinate efforts to establish clear, widely accepted standards for circular materials, products, and processes.
- **Embed circularity in procurement and building codes.** Use public procurement and regulatory frameworks to create demand and normalize circular practices.
- **Facilitate cross-sector coordination.** Convene stakeholders to align on regulatory needs, share best practices, and co-develop enabling frameworks.

Financial Barriers Related to Investment and Lending for CE Initiatives

This section summarizes additional financing roadblocks identified by stakeholders during primary research. Many of the challenges to securing investment are directly linked to the circular risks outlined in Table 2 in the previous section, as well as the broader operational and systemic barriers discussed above.

Understanding these financial barriers is essential to developing effective strategies for unlocking capital and scaling circular solutions. However, it is also important to distinguish between challenges related to a company's business fundamentals versus the fact they are pursuing a CE product or service business model. Struggling to get financing for an unproven technology or circular business model (requiring early-stage financing) is different from a company seeking financing that is in poor overall financial health or existing debt burden. Research suggests that having strong business fundamentals is a pre-requisite - financially strong companies with good cash flow will generally receive financing regardless of whether they are "circular". In some cases, circularity can even be shown as an efficiency or cost-saving measure.

Furthermore, it's important to recognize that the problem in accessing capital may not be so much related to being a "circular business", as much as it is related to the stage of that business. For example, a company in an early stage of development might find that qualifying for a loan is difficult due to a lack of proven potential for repayment. That early stage company must instead rely more on personal capital, government or philanthropic foundation grants, subsidies, and specialized investment.

Lastly, it is important to note that funders, lenders, investors, and financial institutions have varying levels of risk tolerance. For publicly listed financial institutions for example, shareholder primacy (meeting financial targets and returning capital) is a primary objective. Giving preferential treatment to companies that deliver benefits to the environment or communities as "loss leaders" (i.e., if they under-perform financially or bring greater financial risk) can present an existential struggle from the financial institution's perspective. Financial institutions must find a way to balance sustainability objectives and impact with financial returns, while also recognizing that long-term evidence of the economic benefits or impact from circular business models and activities is not always available.

Unmet Investment Criteria

- **Risk appetite**: Traditional financing models often require historical data and a track record of financial performance, which new business models and companies may not have. This lack of historical data can make it difficult for CE companies, which are often new, to secure loans and investment. This real or perceived risk can deter investors and make it challenging for CE companies to secure funding. This was one of the most common barriers identified by research participants.
    - **Example**: A company producing recycled aggregate for the concrete and construction sector initially struggled to secure financing because they lacked the three years of operating data typically required by traditional lenders. This sentiment was also echoed by many of the FIs that were interviewed, who noted that smaller companies often do not have enough track record or financial performance to be considered for sustainable investments, posing a challenge for inclusion in their portfolios.
    - *"Small cleantech companies are not in the scope of our investment. They are too small or too risky. They don't have enough of a track record to be sustainable enough in terms of financial performance."*
    - *"Despite my extensive experience and more than 50 loans across various companies, securing funding is never a piece of cake. A significant hurdle is the low appetite for risk, particularly from traditional banks in Canada, which are perceived as taking 'zero risk'. Furthermore, a major deterrent for*

entrepreneurs, especially first-timers, is the requirement for personal guarantees on loans, which discourages new ventures."

- **Heavy emphasis on digital technologies / models:** According to some interviewees, current investment trends are prioritizing AI, digital, and technology-focused innovations. Many funds have specific criteria, such as focusing on the digital or tech industry (e.g. Climate Tech Fund at BDC Capital focuses on industrial or grid-scale GHG reduction technologies), which means that "low tech" circularity initiatives often aren't eligible for these financing opportunities. While some CE businesses—such as those developing enabling technologies or platforms (Group 5)—may still qualify, this focus on digital and technology innovations was seen as a barrier for companies working in other, more material—or capital-intensive areas of circularity.
    - **Examples:** A company producing recycled aggregate and another developing modular construction blocks from recycled materials both shared that they were ineligible for funding programs focused on digital innovation and cleantech, despite demonstrating strong circularity potential and market demand.
    - *"A lot of investments are focused on the digital side of things. Most of the VCs we've engaged with want to see a higher X Factor, but we're limited by equipment scaling. It's hard to get more than 10X growth on a manufacturing business per annum just because you're limited by the deployment of technology and a lot of the VCs are looking for that unicorn."*
    - *"We weren't able to get any cleantech funding because we were considered circular economy. We weren't cleantech....and even though we do reduce carbon, it's from Scope 3."*

✓ Financial Institutions

Circular businesses often fall outside traditional investment criteria. FIs can unlock new opportunities by adapting their frameworks and expanding their risk lens.

- **Revisit eligibility criteria.** Consider adjusting requirements (e.g., years of operating history, asset types) to better accommodate early-stage circular ventures.
- **Expand definitions of innovation.** Recognize that sustainability isn't always tech-driven—material recovery, reuse, and design innovation can deliver impact.
- **Pilot alternative risk assessment tools.** Use a circular risk scorecard or impact metrics to evaluate long-term value and resilience beyond conventional financial performance.
- **Support capital stack development.** Help clients blend grants, equity, and debt to meet financing needs.
- **Create dedicated circular pools.** Establish funding mechanisms that explicitly include circular businesses, even if they don't fit traditional ESG or cleantech categories.

✓ Businesses

Many circular businesses struggle to meet conventional investment criteria. Especially in the start-up phase. Understanding how to position your model and structure your financing can improve access to capital.

- **Tailor your pitch to investor expectations.** Highlight financial viability, risk mitigation, and long-term value—even if your model isn't tech-based or high-growth.
- **Build a layered capital strategy.** Combine grants, equity, debt, and alternative financing to meet your needs.

- **Use impact data to strengthen your case.** Quantify environmental benefits (e.g., Scope 3 reductions, waste diversion) to appeal to sustainability-focused investors.
- **Clarify your growth trajectory.** Even if scaling is slower or more physical, show how your model can expand and deliver returns over time.
- **Seek out aligned investors.** Focus on funds or institutions that prioritize circularity, impact, or blended finance—not just tech or rapid scale.

✓ Governments

Many circular businesses are excluded from mainstream financing due to rigid investment criteria. Policy interventions can help bridge this gap and enable capital flow.

- **Fund non-tech circular innovation.** Create grant programs or incentives for material recovery, reuse, and design-based circular models—not just digital or cleantech.
- **Support blended finance structures.** Use public capital to de-risk early-stage or capital-intensive circular ventures and attract private investment.
- **Encourage inclusive investment criteria through national frameworks.** Work to ensure that CE activities—especially non-tech and material-based models—are explicitly recognized in government sustainable finance taxonomies and investment guidelines. This helps signal legitimacy to investors and expands access to capital.
- **Build investor awareness.** Host roundtables or publish guidance to help investors understand circular business models and their long-term value.

Lack of Understanding Related to CE Business Models

- **Lack of understanding**: Financial institutions often do not fully understand CE models, making it difficult for companies to secure funding. This lack of understanding can lead to misalignment between the company's goals and the investor's expectations, or the perception that circular initiatives are riskier than linear alternatives.
    - **Examples**: A company producing recycled aggregate described early resistance from financiers who didn't fully understand the value or mechanics of their circular model. Another interviewee from the construction sector noted that while some benefits—like reduced material costs—were recognized, others, such as savings on time and labor related to waste disposal, were frequently overlooked by investors unfamiliar with circular operations. This gap in understanding is often business model–specific—models like recycling tend to be more familiar to investors, while others, such as product-as-a-service (PaaS) or reuse platforms, are less well understood and may face greater skepticism.
    - *"We're involved in upcycling and the circular economy. The models are not fully understood by traditional investment firms or banks, so it's very hard for them to understand the potential of these models and the potential of the market. It's early on and people don't really have the expertise to analyze it"-Construction sector company involved in resource recovery*
    - *"The insurance sector is a stakeholder group that needs the most work in understanding PaaS models. There's a lack of clarity on liabilities, pricing for insuring refurbished items versus new ones, and the overall risk profile for such business models." - Construction sector company delivering a PaaS business model*

✓ Financial Institutions

Misunderstanding circular models leads to missed opportunities and misjudged risk. Building internal capacity helps FIs better evaluate and support viable CE ventures.

- **Invest in internal education.** Build awareness across teams—especially credit, risk, and ESG—about the diversity of circular models, including less familiar ones like product-as-a-service or reuse platforms.
- **Engage directly with CE businesses.** Host roundtables or site visits to understand operational realities and value creation mechanisms.
- **Update evaluation frameworks.** Include circularity-specific metrics and qualitative indicators to better assess models that don't fit conventional molds.
- **Avoid one-size-fits-all assumptions.** Recognize that circularity spans sectors and models—what works for recycling may not apply to reuse or modular design.

✓ Businesses

Circular models are often unfamiliar to investors. Clear, tailored communication and proactive engagement can bridge the gap and improve funding outcomes.

- **Tailor your messaging.** Clearly explain how your model works, how it creates value, and how it differs from traditional or linear approaches.
- **Be prepared to educate.** Expect to spend time walking investors through your operations, especially if your model is novel or sector-specific.
- **Use analogies and case studies.** Help investors relate by comparing your model to familiar ones or showing real-world examples.
- **Anticipate skepticism.** Address perceived risks directly—e.g., durability, customer adoption, or revenue predictability.
- **Build relationships.** Long-term engagement with investors can help shift perceptions and build trust in your model.

✓ Governments

A limited understanding of circular business models can slow investment and innovation, particularly for models that fall outside conventional sustainability or growth narratives.

- **Promote circular literacy across the finance ecosystem.** Fund training programs, publish guidance, or host cross-sector forums to help financial institutions, insurers, and investors better understand circular business models and their value creation mechanisms.
- **Encourage inclusion in sustainable finance frameworks.** Ensure diverse circular models are explicitly recognized in government taxonomies, investment guidelines, and ESG reporting standards.

Lack of Data

- **Lack of impact data**: Business and financial institutions have a variety of data needs to support their operational and investment priorities and accelerate the CE. A recent report by Ivey School of Business highlighted three primary categories of data:[21]
    - Data that motivates (i.e., environmental and economic cost and savings data)
    - Data that enables (i.e., material and supply chain data)
    - Data that supports evaluation (i.e., benchmark and measurement data)

  Often, environmental data is required to demonstrate performance metrics (e.g., GHG emission reductions) in order to qualify for certain lending or investment opportunities. This data must be comprehensive and verifiable to meet the criteria set by investors and lenders. Accurate data is essential for measuring the impact of CE practices and demonstrating their benefits, particularly in the context of anti-greenwashing legislation, collecting comprehensive and credible environmental data to support CE initiatives is often challenging and costly, with the lack of standardized data and the high expense of conducting life cycle assessments (LCAs) posing significant barriers.

  Obtaining Environmental Product Declarations (EPDs) for niche materials can also be difficult, yet they are crucial for measuring carbon capture and other environmental impacts. Investors often focus on the potential for GHG emission reductions when evaluating CE investments. Therefore, credible data to show positive environmental impact is essential, and investments are frequently assessed based on their GHG reduction potential, alongside cost and time to commercialization.

    - **Example:** In the construction sector, one company highlighted challenges using new low-carbon materials, particularly when trying to meet building standards in places like Vancouver and Toronto, or procurement requirements for large government-funded buildings. These projects often require detailed EPDs to prove environmental performance.

    - *"I think there's interest in circular things because they're inherently lower carbon. Part of the challenge I think is getting the data for that. The more niche you get. the harder it is to get an EPD that you can defend."*

[21] Ivey School of Business (2025). "The Data Dilemma: Motivating, Enabling, and Evaluating a Circular Economy" https://online.flippingbook.com/view/552412170/8-9/

✓ Financial Institutions

Impact data is increasingly essential for investment decisions, especially under anti-greenwashing regulations. Supporting data development can unlock CE financing.

- **Clarify data expectations.** Communicate what environmental data is needed for financing—e.g., GHG reductions, LCAs, EPDs—and offer guidance on how to collect it.
- **Support data infrastructure.** Invest in or partner with platforms that help businesses generate and verify impact data.
- **Use proxies where needed.** For early-stage or niche models, consider sector benchmarks or qualitative indicators when full data isn't available.
- **Incentivize data collection.** Offer better terms or access to capital for businesses that provide robust environmental performance data.
- **Collaborate on standardization.** Work with regulators and industry groups to develop consistent, credible metrics for circular impact.

✓ Businesses

Environmental data is often a gatekeeper for financing. Building a credible data strategy strengthens your investment case and supports long-term growth.

- **Prioritize impact measurement.** Invest in LCAs, EPDs, or third-party audits to quantify your environmental benefits.
- **Use data strategically to tell your story.** Frame your environmental impact in terms investors care about—GHG reductions, cost savings, regulatory alignment—and tailor your reporting to meet the specific criteria of your target funders.
- **Leverage partnerships.** Work with academic institutions, consultants, or data platforms to fill gaps and validate results.

✓ Governments

Robust environmental data is essential for unlocking circular investment. Policymakers can play a key role in reducing data barriers and improving credibility across the finance ecosystem.

- **Support standardized impact metrics.** Work with industry and regulators to develop consistent frameworks for measuring circularity and environmental performance—such as LCAs, EPDs, and Scope 3 emissions.
- **Fund data generation and access.** Provide grants or incentives for businesses to conduct LCAs, obtain EPDs, and build credible impact reporting systems—especially for SMEs and niche sectors.
- **Promote data transparency and comparability.** Encourage open-access platforms or reporting tools that allow investors to assess circular projects on a level playing field.

In summary, barriers to financial market participation in the CE stem from broader operational and systemic challenges, making it harder to attract capital. At the same time, finance is often needed to overcome these very barriers, reinforcing the interconnection between the two.

The poll results shown in **Figure 3**, drawn from a live session at the Canadian Circular Economy Summit (CCES 2025), reinforce these themes. Respondents pointed to the difficulties evaluating the ROI of circular initiatives as a key barrier, linked to a perception around greater risk, echoing the insights shared by interviewees engaged through primary research. A lack of precedent and general awareness were also noted as barriers, linking to the novelty of some CE business models, products, and materials. These poll results serve as a useful snapshot of broader perceptions and validate many of the insights emerging from the research.

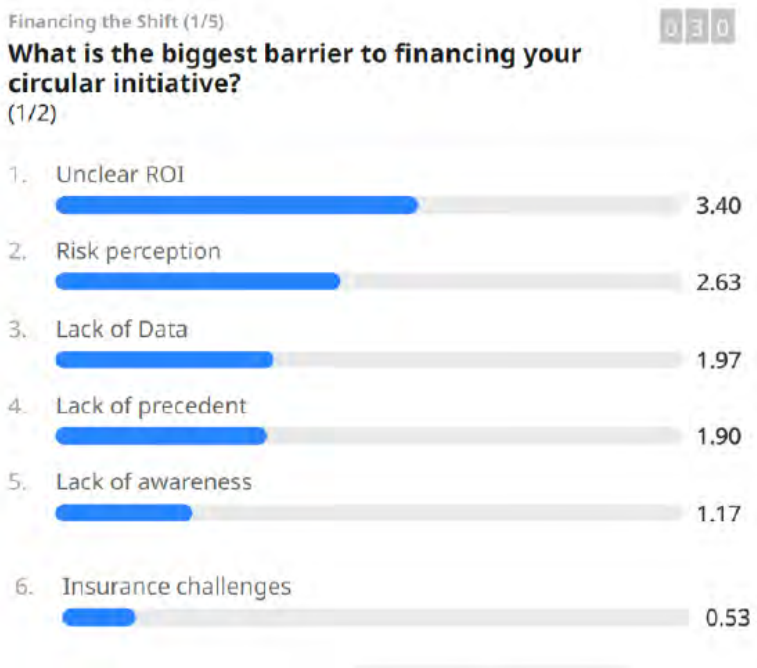
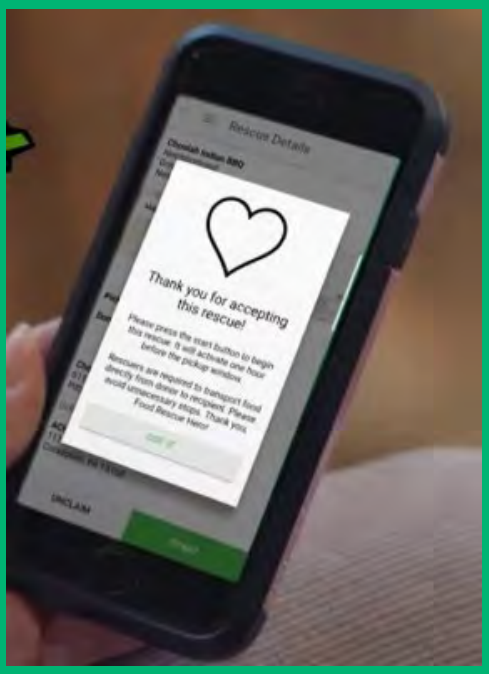


Figure 3: Poll results from *Financing the Shift: De-risking Investments to Scale Circular Economy Solutions* (April 16, 2025) Canadian Circular Economy Summit in Montreal.[22]

[22] See conference session summary here: https://www.circulareconomysummit.ca/_files/ugd/1e0592_aa8a8d31a05640e69647a4ddd313c102.pdf


Rescue Details
Thank you for accepting this rescue!
Please press the start button to begin this rescue. It will activate one hour before the pickup window.
Rescuers are required to transport food directly from donor to recipient. Please avoid unnecessary stops. Thank you, Food Rescue Hero!
UNCLAIM

7. Enabling Factors For Unlocking Financing

Understanding how to overcome barriers and recognizing success factors is crucial for attracting investment in circular initiatives. While many of these drivers are relevant to companies across various industries, they are particularly pertinent in areas that are relatively new to the financial sector, such as the CE.

The following points highlight the key enablers for the successful flow of capital into circular initiatives, as identified by interviewees who have credited these factors in helping them to overcome barriers. Some are driven by businesses, others by financial institutions, and many—like trust and relationship building—emerge from both sides working together. These enablers are important for helping to connect the dots between promising circular models and the financing needed to scale them.

As with the barriers discussed above, many of these enabling conditions are relevant to sustainability-oriented ventures or early-stage businesses more broadly. However, the insights here illustrate how these factors show up in the context of CE models, with concrete examples drawn from stakeholder experiences.

Demonstrated Financial Viability and Economic Benefits

- **Cost reduction potential:** While the ROI for CE projects and initiatives is context specific, many CE initiatives demonstrate financial advantages. As highlighted in Table 1, circular approaches can mitigate key linear risks and their related financial impacts. For example, circular projects that reduce material waste and associated costs, optimize resource use, or retain asset value can present compelling economic cases for investors. As companies reach full automation and economies of scale, the cost reductions may become even more substantial, making sustainable practices more affordable and attractive to investors.
    - **Example:** A producer of a modular construction product made from recycled materials highlighted the significant cost savings associated with their product, particularly around waste reduction and project efficiency. Traditional construction often incurs substantial expenses tied to managing off-cuts, clean-up crews, bin permits, and disposal fees—sometimes accounting for up to a third of total project costs. By contrast, their modular system minimizes waste and retains material value throughout the construction process, offering both environmental and economic benefits.

- *"You've got permits for the bins on the street. You've got the cost of disposal. You've got all the wasted materials. About a third of a project's cost is related to waste management. That's not surprising...that is industry standard once you start to look at the aggregated cost of what it takes to manage lost materials. Manage the materials, the manpower required and the cost of dumping a lot of people only see the cost of dumping. But it's all of those costs that are associated with the waste "*

- **Insurance claims efficiency:** The adoption of circular practices in the insurance industry can significantly reduce waste, lower claim costs, and speed up settlement timelines. As these co-benefits become more widely recognized, they offer a compelling case for broader adoption. Demonstrating operational efficiencies and reduced liabilities can help insurers view circular approaches as lower-risk, supporting both uptake and underwriting.
    - **Example:** An insurance cooperative described using new industrial cleaning technologies to restore, rather than replace, damaged items—reducing both costs and waste. Their "drying in place" technique preserves materials affected by clean water, such as solid wood and textiles, enabling faster cycle times, significant cost savings, and a reduction in landfill disposal.
    - *"We can dry out existing materials and get a client's home back to normal faster with that approach than ripping everything out and then rebuilding. So there are upsides to the client as well. And then just from an environmental standpoint, there's less debris going to the landfill. So there's not really a downside to it, honestly. The only downside on our side is some, yeah, some clients are skeptical."*

Market Dynamics

- **Customer demand for circular products:** When a product or service gains significant attention and interest from the market (e.g. high volume of purchase orders), it indicates a substantial opportunity for growth. High demand can be compelling for investors, as it suggests a viable and profitable venture. However, converting market interest into capital requires strategic planning and sufficient initial investment to scale operations.
    - **Example:** One company developing interlocking, Lego-like building blocks for circular construction—made from recycled materials and designed for easy assembly and reuse—shared how strong market interest has played a key role in building momentum. The blocks retain their value at the demolition phase, supporting circularity through material recovery and reuse. While the company has not yet secured investment, they described several "viral" moments and tangible demonstrations of demand that have captured the attention of financiers and signaled potential for future growth
    - *"We got over 20 million views across platforms, literally tens of thousands of inquiries. We still haven't followed up with everyone. It's literally impossible. We get hundreds every week still but trying to turn that interest - that proven market demand that we have now - into capital has been way more challenging than I would have guessed. We have a pipeline of over $35 million, we can't even deliver on in two years full out of business going full tilt. But we need that initial capital to invest into equipment to expand team operations, to finish certification" – Construction start-up*

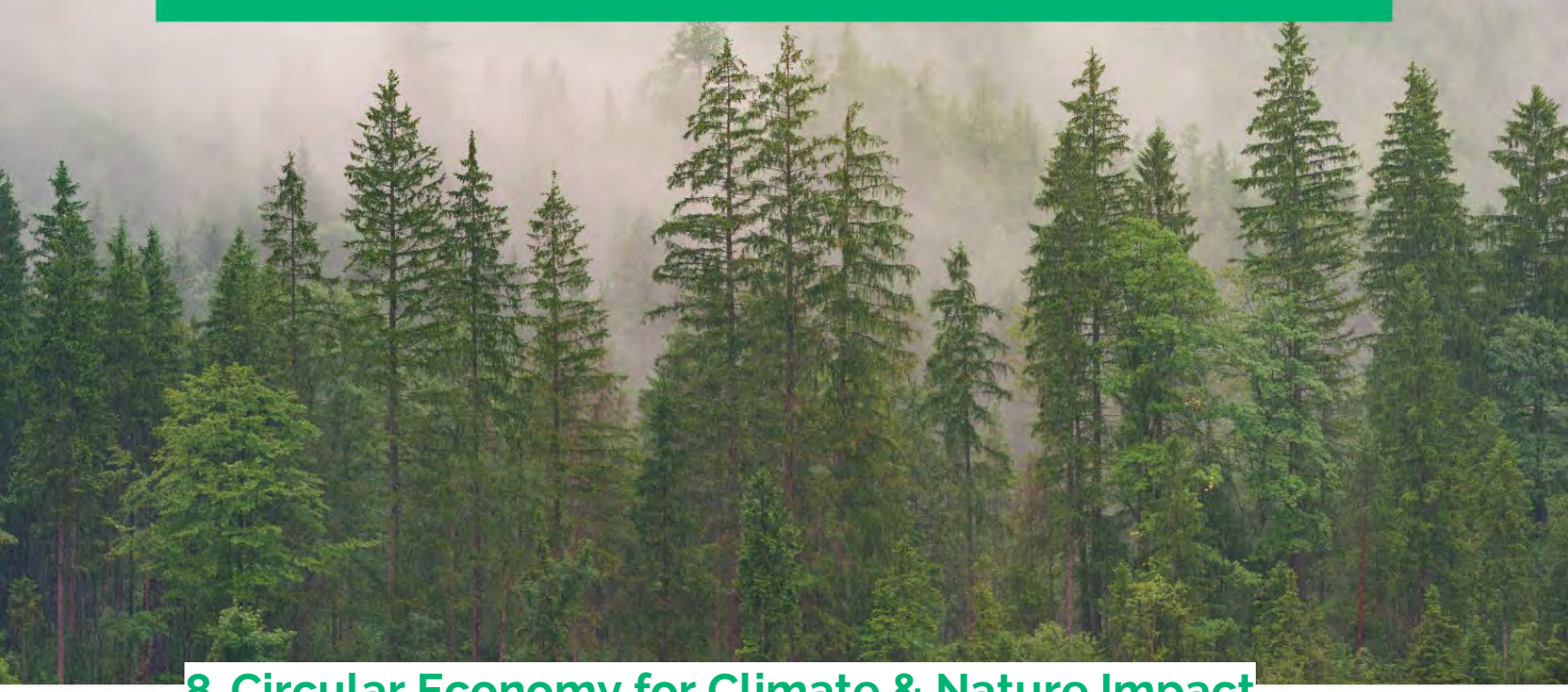
- **Client interest and demand for impact investments:** For financial institutions, growing client interest in sustainability, nature, and circularity can drive investment in circular finance. Increasing demand from clients for investments aligned with these topics indicates a shift towards more sustainable practices. Developing tools and frameworks to clearly define what constitutes circular finance can support the effective development of products that meet this increasing client demand.
    - **Example:** An FI highlighted that clients are increasingly interested in nature, biodiversity, and circularity, seeking ways to align their investments with these topics.

- *"Now we're having a lot of clients asking about how do we invest in nature. And circularity is a piece of that puzzle".*

- **External regulatory, policy, and standards:** External drivers such as LEED certification, extended producer responsibility (EPR) laws, building codes, and recycling mandates play a crucial role in enabling a shift to more circular practices. They help provide clear signals to the market, reducing uncertainty, and supporting the business case for circular investments. These drivers improve the financial viability of circular business models by increasing demand certainty, de-risking long-term investments, and aligning public and private incentives around sustainable outcomes.

  - **Example**: Interviewees from the construction sector pointed to embodied carbon requirements in building codes—such as those in the Vancouver Building Code—as a key driver for adopting circular materials and practices. Similarly, a representative from a major grocery retailer cited landfill bans on perishable food as an important policy incentive for advancing food waste diversion initiatives.

  - *"The more building codes, like the Vancouver Building code- which has embodied carbon requirements, and the Toronto Green Standard include this - then other municipal standards or provincial building codes will too as they evolve. It will be useful I think"*



8. Circular Economy for Climate & Nature Impact

Given the growing momentum around climate action, positioning CE initiatives as enablers of climate goals offers a compelling pathway to unlock additional financing. Financial institutions and impact investors are increasingly recognizing the role of CE strategies in achieving climate goals, particularly through the lens of Scope 3 emissions and embodied carbon. Circularity is emerging as a financial strategy aligned with decarbonization and nature-positive outcomes. Several trends that emerged from stakeholder engagement include:

- **Climate finance and circularity:** Sustainable finance targets—such as multi-billion-dollar climate-related lending commitments—are driving banks to prioritize projects with demonstrable GHG reduction potential. CE ventures that can clearly articulate their emissions impact may be more likely to attract funding, especially in high-emission sectors like agri-food and construction.

- **Scope 3 emissions and embodied carbon:** Circular initiatives are often framed as mechanisms to reduce embodied carbon—particularly in the construction sector—where material reuse, modular design, and low-carbon materials (e.g., mass timber) can significantly cut GHG emissions. Several FIs noted that circularity is a practical pathway to manage Scope 3 emissions, which are otherwise difficult to quantify and control. One interviewee from the construction sector highlighted how a simple policy change in Asia that encourages the reuse of steel, led to a shift in how infrastructure assets (like bridges and towers) are now bolted during construction instead of welded, allowing for material reuse and significantly reducing carbon footprints by enabling easier dismantling and material reuse at end-of-life.

- **Transition plans:** CE strategies can be integrated into credible transition plans, offering tangible ways for financial institutions and their counterparties to meet climate and sustainability targets. By embedding circular principles—such as product life extension, waste elimination, and value chain redesign—into transition planning, companies can show progress beyond energy-related measures. For financial institutions, this provides a diversified pathway for meeting climate targets across portfolios, particularly in sectors where emissions reductions are harder to achieve through conventional levers alone.

- **Data-driven investment decisions:** Investors are increasingly requiring robust data to validate the climate benefits of circular projects. Environmental Product Declarations (EPDs), LCA's, and third-party audits are becoming essential tools to quantify emission reductions and justify preferential financing terms, such as interest rate discounts for low-carbon projects.

- **Nature and biodiversity linkages:** While less explicitly quantified, circular practices such as waste reduction, material reuse, and regenerative agriculture are increasingly seen as contributing to nature-positive outcomes. These links are often embedded in broader climate action plans and engagement strategies with portfolio companies.

- **Trade-offs and systemic thinking:** Some institutions highlighted the complexity of aligning circularity with climate and biodiversity goals, given that tradeoffs often exist. For example, reducing plastic packaging may conflict with food waste reduction targets, illustrating the need for integrated, systems-based approaches in investment assessments.

To summarize, circular finance is gaining traction as a credible and necessary component of climate-aligned investment strategies. However, its integration depends heavily on the availability of credible data, sector-specific metrics, and a nuanced understanding of trade-offs across environmental and economic objectives.

✓ Financial Institutions

Circularity is increasingly recognized as a lever for achieving climate targets—especially Scope 3 emissions and embodied carbon. Understanding this link can help FIs diversify their climate finance strategies and unlock new investment pathways.

- **Leverage circularity to address Scope 3 emissions in portfolio decarbonization.** Scope 3 emissions—often the largest and hardest to measure—can be reduced through circular strategies like material reuse, product life extension, and waste elimination. To integrate this into GHG strategies, FIs could work with clients to identify circular interventions, request data such as LCAs and supplier-level emissions disclosures, and incorporate these into financed emissions reporting and transition planning.
- **Incentivize low-carbon circular projects.** Offer preferential financing terms (e.g., interest rate discounts) for projects with verified reductions in embodied carbon or waste.
- **Strengthen data requirements.** Encourage use of LCAs, EPDs, and third-party audits to validate climate impact and avoid greenwashing.
- **Encourage systems thinking in portfolio assessments.** Account for trade-offs (e.g., packaging vs. food waste) and co-benefits (e.g., biodiversity) when evaluating circular investments.

✓ Businesses

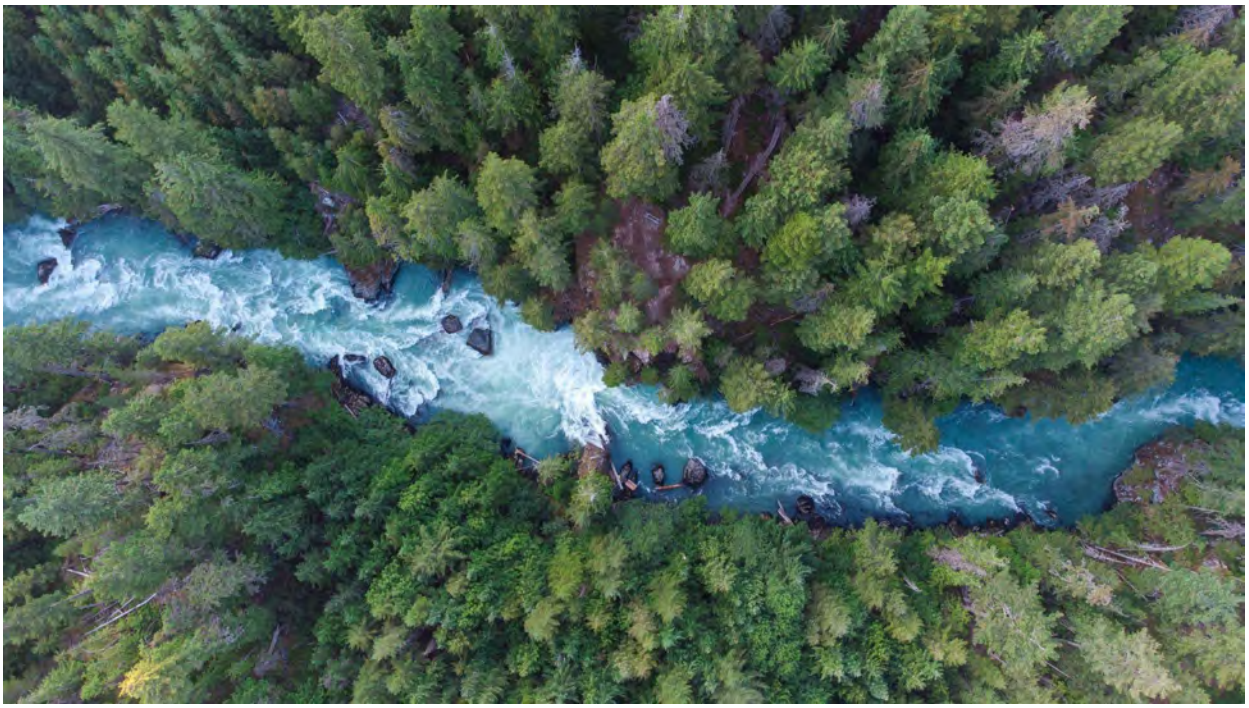
Positioning circularity as a climate solution can improve access to capital—especially from funds focused on GHG reductions, nature-positive outcomes, or transition planning.

- **Frame circularity as climate action.** Highlight how your model reduces Scope 3 emissions, embodied carbon, or waste—especially in high-impact sectors like construction or agri-food.
- **Align with investor climate goals.** Tailor your pitch to show how your circular practices support decarbonization, resilience, or biodiversity outcomes.
- **Invest in credible impact data.** Use LCAs, EPDs, or third-party audits to quantify your climate benefits and strengthen your case for climate-aligned financing.
- **Embed circularity in transition plans.** Show how your business contributes to broader sustainability goals—beyond energy efficiency or renewable energy.
- **Anticipate trade-offs.** Be transparent about potential tensions (e.g., packaging vs. food waste) and explain how your model balances environmental priorities.

✓ Governments

Circularity is a powerful but under-leveraged tool for achieving climate and nature goals. Policy support can help mainstream circular finance and ensure it's reflected in national strategies.

- **Support data infrastructure.** Fund development of sector-specific metrics, LCAs, and EPDs to help businesses and investors quantify circular climate benefits.
- **Promote circularity in climate policy.** Embed circular principles in building codes, procurement standards, and carbon credit programs to drive adoption and investment.
- **Encourage systems-based assessments.** Develop tools and guidance that help investors and regulators evaluate circular projects holistically—including trade-offs and co-benefits.



9. Additional Sector-specific Insights

As financial institutions explore opportunities to support CE businesses, it is important to recognize that sector-specific dynamics shape both the risks and opportunities of circular finance. Construction / real estate and agri-food—two high-impact sectors—present distinct considerations for FIs. While earlier sections explored how circular and linear risks vary across different circular business models, this section highlights some considerations for circular finance across the two sectors investigated as part of this research. *Please note that this is not a comprehensive analysis, but rather a synthesis of qualitative insights from stakeholder interviews and research.*

Asset Ownership / Valuation and Investment Horizon

- **Construction / Real Estate**: Many real estate developers do not retain ownership of buildings through their full lifecycle. This short-term ownership model can disincentivize upfront investment in circular design features (e.g., modular construction, deconstruction planning) that yield longer-term benefits. Without mechanisms to capture downstream value (e.g., resale premiums, avoided demolition costs), circular investments may be deprioritized. Circular features (e.g., design for disassembly, embodied carbon reduction) are rarely reflected in traditional property valuations, making it harder to justify higher upfront costs.

- **Agri-Food**: Agri-food businesses often operate with shorter asset cycles (e.g., seasonal production, perishable goods), making them more agile but also more vulnerable to volatility. Circular investments—such as regenerative agriculture or food waste valorization—can offer quicker returns, but require robust data to demonstrate climate and biodiversity benefits.

End-of-Life Experience and Infrastructure

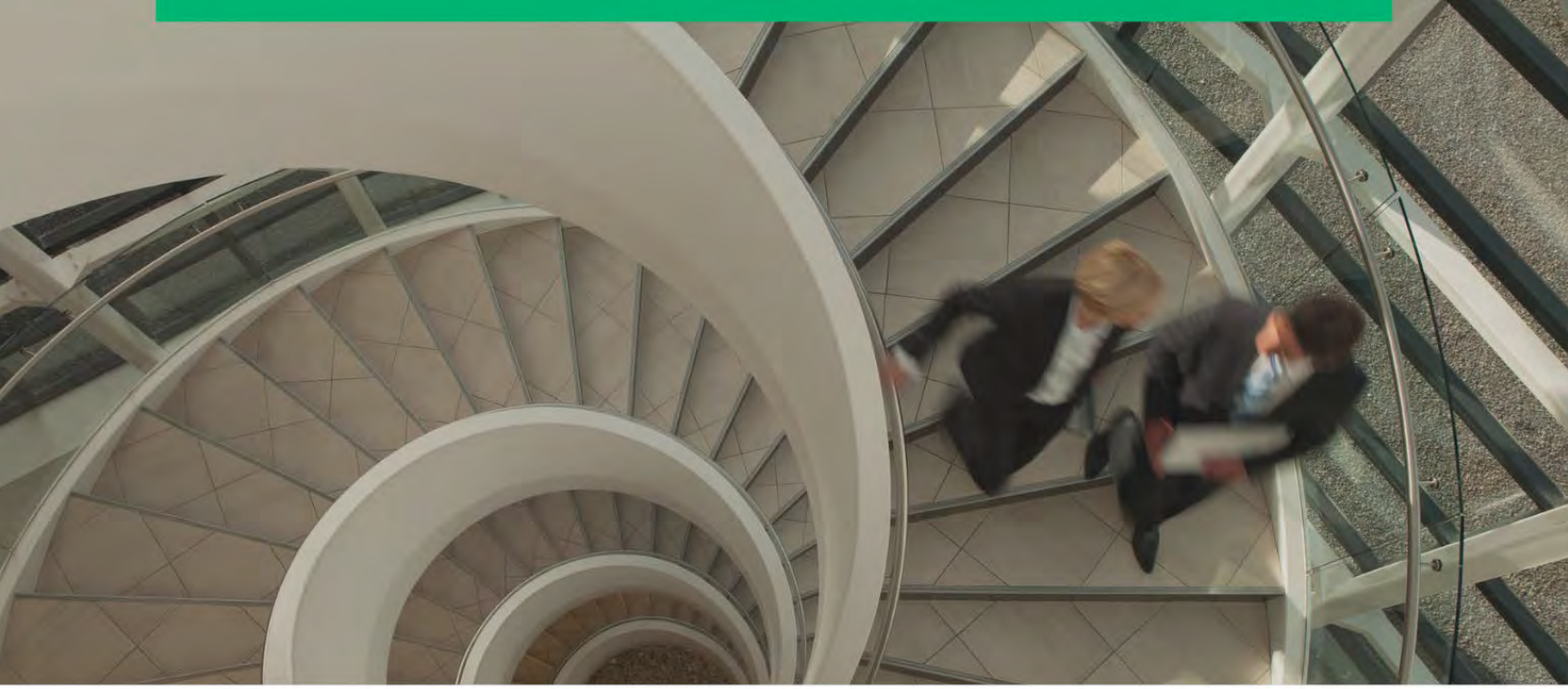
- **Construction / Real Estate**: The long lifespan of buildings means there is limited practical experience with circular end-of-life strategies (e.g., material recovery, adaptive reuse). This creates uncertainty for investors and insurers, particularly in the absence of standardized deconstruction protocols or secondary materials markets.

- **Agri-Food**: End-of-life considerations are more immediate, especially in food waste management. However, infrastructure gaps (e.g., composting, anaerobic digestion) and regulatory barriers (e.g., food safety laws) can limit the scalability of circular solutions.

Regulatory and Market Acceptance

- **Both Sectors**: Regulatory constraints around reused or recycled materials are particularly stringent in both sectors, compared to many others (e.g. fashion). In real estate, building codes and insurance requirements often restrict the use of reclaimed materials. In agri-food, food safety standards limit the use of surplus or "imperfect" food, despite growing consumer interest in waste reduction.

- **Tolerance for "Eco" Products**: Both sectors face skepticism around the performance or safety of circular products. For example, reused construction materials may be perceived as lower quality, while consumers may question the freshness or safety of upcycled food products.



10. Non-Financial Levers for Financial Institutions

Poll results from a recent Circular Finance panel session (**Figure 4**) asked participants what kind of support would make it easier to approach a financial institution with a CE idea. The responses highlighted several recurring needs: better impact metrics, tools to stack grants and funding sources, insurance products to de-risk investments, concrete case studies, and tailored risk assessment tools.

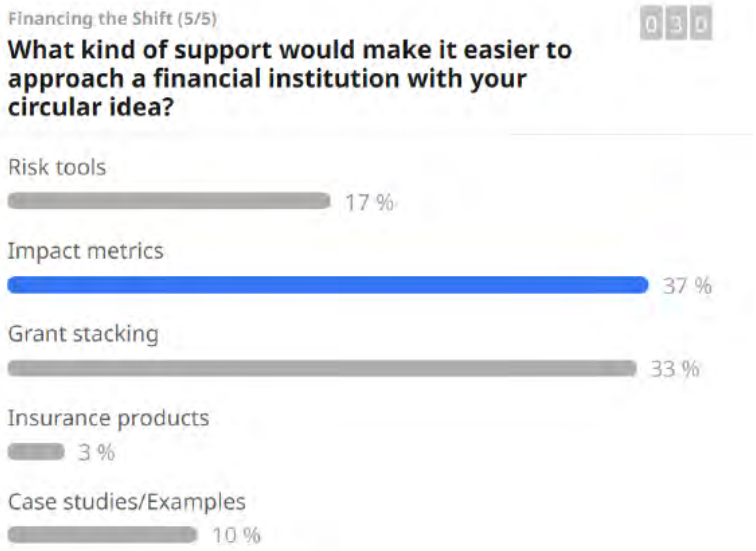


Figure 4: Poll results from *Financing the Shift: De-risking Investments to Scale Circular Economy Solutions* (April 16, 2025) Canadian Circular Economy Summit in Montreal.[23]

[23] See conference session summary here:
https://www.circulareconomysummit.ca/_files/ugd/1e0592_aa8a8d31a05640e69647a4ddd313c102.pdf

These findings point to a mix of support types—some that financial institutions can directly provide or influence, and others that may require collaboration with government, industry groups, or third-party enablers. The insights also align closely with the interview findings and reinforce the barriers and enablers discussed in the previous section.

More specific areas identified through this research where FIs can leverage non-financial efforts to support businesses looking to grow and scale their circularity efforts are provided below.

Leading by Example: Circular Procurement and Operations

- **Integrate circular products and services into internal operations** (e.g., office furniture, building materials, IT equipment).
- **Serve as an adopter / demonstrator of circular services and solutions**, supporting companies that are leaders in the CE and helping normalize circular models in mainstream procurement.

Amplifying Awareness and Education

- **Act as a convener and match-maker** between larger clients and SME solution providers, pairing clients offering CE products and services with those seeking sustainable solutions. For example, if financing a major agrifood or construction project, identify opportunities to connect with circular SMEs that offer relevant innovations, creating win-win scenarios across the portfolio.
- **Act as an amplifier** by helping to "spread the word" about CE models and opportunities. This could include hosting industry roundtables, cross-sector workshops, or innovation challenges that bring together stakeholders from across the value chain, including suppliers, buyers, policymakers, and investors.
- **Leverage marketing channels, public campaigns, or industry partnerships** to promote CE practices across sectors and share case studies.

Supporting Innovation in Financial Tools

- **Explore and pilot new types of financial instruments** tailored to CE, such as revenue models linked to carbon credits or product-as-a-service offerings.
- **Create space for experimentation** with business models that don't fit conventional asset-based lending.

11. Conclusions & Recommendations

As the CE and circular supply chains in Canada continue to evolve and mature, financial institutions have a critical role to play in enabling the shift from linear to circular industries and business models. Key takeaways from this research reveal that:

- **Linear business models are becoming increasingly risky.** From resource scarcity and supply chain fragility, to regulatory pressure and stranded assets, the traditional "take-make-waste" economy exposes businesses—and their financiers—to growing financial and reputational risks.

- **Circularity can be a de-risking strategy.** Circular business models have the potential to reduce exposure to volatile input costs, regulatory liabilities, and waste-related expenses. They also offer new revenue streams and long-term resilience.

- **Data is an important currency.** Investors and lenders are demanding robust, verifiable data—such as life cycle assessments and Environmental Product Declarations—to quantify the benefits (e.g. climate and nature benefits) of circular projects and justify preferential financing and avoid greenwashing claims.

- **Embodied carbon and Scope 3 GHG emissions are becoming critically relevant.** Circular strategies are increasingly being used to address life cycle carbon emissions, particularly through material reuse, product longevity, and low-carbon design.

To unlock the potential of circular finance, Canada's financial sector can take action through the activities such as:

- Building internal capacity to understand and evaluate circular business models.
- Embedding circularity factors and considerations into investment criteria, risk frameworks, and product design.
- Collaborating across sectors to standardize data, de-risk innovation, and scale impact.

Circular finance is not just about sustainability—it's about smart, future-ready finance that aligns profit with purpose, building supply chain resilience, increasing material productivity and resource efficiency, reducing waste and carbon, and investing in local communities and jobs.

Barriers remain, but they can be solved. Challenges such as infrastructure gaps, policy uncertainty, and limited understanding of circular models persist. Targeted actions, such as those put forward for financial institutions, businesses, and governments in the recommendations below, can accelerate progress.

Recommendations for Financial Institutions

- **Addressing Infrastructure Gaps:** Infrastructure gaps are identified as a significant obstacle but also a clear investment opportunity. FIs can act as a catalyst by financing enabling infrastructure like warehousing, reverse logistics, and processing facilities through project finance, blended finance, or green bonds. FIs can also help clients by offering non-financial resources, such as access to unused real estate or by brokering partnerships. When conducting due diligence, FIs could assess a circular business's access to storage, logistics, and processing capacity, as these are critical to viability. Furthermore, FIs can co-invest with public or philanthropic partners on infrastructure-heavy projects to share risk.

- **Addressing Supply Chain Risk:** Feedstock reliability and transparency in the supply chain can directly impact a circular venture's financial viability. FIs could evaluate feedstock risk during credit assessments, especially for businesses dependent on post-consumer inputs. FIs can also support supply chain transparency initiatives by co-investing in digital tools like material passports or blockchain. FIs can use this supply chain data to inform risk pricing, potentially offering better terms to projects with robust tracking and diversified sourcing.

- **Dealing with Policy Uncertainty:** Policy and regulatory instability, permitting hurdles, and a lack of standards can affect a circular project's "bankability". Financial institutions could factor these policy risks into their investment decisions. Engaging in policy dialogue and tracking emerging regulations (such as regional bans, extended producer responsibility rules, and construction material standards) can help FIs identify sectors where circularity is becoming a competitive advantage. FIs can use this insight to adjust internal risk assessments, identify opportunity windows for clients, and guide investment and lending priorities.

- **Addressing a Lack of Knowledge and Awareness:** General lack of awareness and/or misunderstanding of circular business models can lead to missed opportunities and misjudged risk. To address this, FIs can deepen their knowledge on the subject, continuing to invest internally in education and capacity building (including with credit, risk, and ESG departments) in order to build awareness of circular activities across sectors, as well as diverse business models like "product-as-a-service", "sharing", and "reuse platforms". FIs can also work to evaluate their existing portfolios to identify examples of where they are already investing in circularity but may not be classifying it in this way, reducing the perceived novelty or risk while informing their future strategies by building on existing strengths. FIs could then turn outwards to build from this knowledge and further validate or vet the risks and opportunities more broadly through engagement with clients and other stakeholder groups.

- **Misalignment with Investment Criteria:** FIs often find that circular businesses do not fit their traditional investment criteria, such as a long operating history or conventional asset types. To overcome this, FIs can adapt their frameworks by creating dedicated circular pools of funding and piloting alternative risk assessment tools, like a circular risk scorecard[24], to evaluate long-term value and resilience. Circular risk scorecards can help financial institutions evaluate the risks and opportunities associated with linear versus CE projects, making it easier to make informed investment decisions and evaluate early-stage ventures.

- **Addressing Data and Impact Metric Gaps:** The lack of robust environmental data presents a hurdle. FIs can help by clarifying their data expectations and even supporting the development of tools, templates, platforms, and/or partnerships that streamline reporting and enhance data availability and transparency, helping businesses generate and verify impact data. FIs can also incentivize businesses to collect this data by offering better terms or easier access to capital.

- **Addressing Other Economic Factors:** High upfront costs and insurance barriers are major blockers for circular businesses. FIs can help by designing financing products with flexible terms and longer payback periods, as circular investments often bring long-term value. FIs can also support blended finance structures to de-risk early-stage investments and engage with the insurance sector to help shape underwriting standards for circular materials, technologies, and practices.

Recommendations for Businesses

- **Addressing Infrastructure Gaps:** Businesses may look to develop clear infrastructure plans, build partnerships with developers and logistics providers early, and consider shared-use models with other circular businesses. Demonstrating a reliable infrastructure plan can signal readiness to investors and reduce perceived risk.

- **Addressing Supply Chain Risk:** Businesses could secure and diversify their feedstock sources and have backup plans for material shortages. Investing in traceability tools like digital platforms to track materials can build trust and strengthen their pitch to investors. It's also important to be transparent about potential risks and show how you are mitigating them.

- **Dealing with Policy Uncertainty:** Businesses can improve investor confidence by documenting how their model aligns with or anticipates future regulations. Companies could also build flexibility into their business model to adapt to changing policies and participate in standard-setting initiatives to help define standards for circular materials and design.

- **Addressing a Lack of Knowledge and Awareness:** Businesses can work to educate financial institutions. This involves clearly explaining how their model works, using analogies and case studies, and proactively addressing potential skepticism about risks like durability or customer adoption.

- **Misalignment with Investment Criteria:** To improve access to capital, businesses could tailor their pitch to highlight financial viability, long-term value, and risk mitigation, even if they are not tech-based or high-growth. Companies can prepare for the various types of capital that are most relevant to their particular stage of the business. This can involve bundling various non-dilutive financing options (e.g., no-interest loans, grants, etc.), as well as consideration for different types of investment capital strategies (e.g., angel and venture capital, equity financing, etc.). Companies can also build a layered capital strategy, combining

[24] Kopgroep Circulair Financieren. 2024. A practical guide to the Circular Risk Scorecard

grants, equity, and debt that involve different actors in the financing and funding world, not just the traditional banks and financial institutions..

- **Addressing Data and Impact Metric Gaps:** Businesses could prioritize impact measurement by investing in things like life-cycle assessments (LCAs) or third-party audits. Companies can also leverage partnerships to validate their results and strategically use this data to tell a compelling story to investors.
- **Addressing Other Economic Factors:** High upfront costs and insurance hurdles are major barriers, especially for small and medium-sized enterprises (SMEs). Businesses can address this by exploring alternative financing options like equipment leasing and engaging with insurers early to understand coverage requirements. Highlighting long-term savings from reduced waste or energy use can strengthen their investment case.

Recommendations for Governments

- **Addressing Infrastructure Gaps:** Governments can fund and incentivize enabling infrastructure, such as circular hubs, reverse logistics networks, and material recovery facilities, especially in underserved regions. Governments can also offer tax credits or grants to developers who lease space to circular businesses or retrofit existing facilities. Additionally, policymakers can integrate circular needs into urban planning and help connect businesses with available space.
- **Addressing Supply Chain Risk:** Governments can provide grants or incentives for digital traceability platforms to help businesses track and verify circular materials. Governments can also standardize reporting requirements and convene industry groups to align on feedstock standards and data sharing.
- **Dealing with Policy Uncertainty:** Governments can design long-term, predictable programs to support investment planning. Governments can also streamline permitting for circular activities and accelerate the development of standards for circular materials and products. Finally, embedding circularity into public procurement and regulation can help create market demand.
- **Addressing a Lack of Knowledge and Awareness:** Governments can promote circular literacy across the financial sector. Governments can fund training programs, publish guidance, and host forums to help investors better understand circular business models and their value.
- **Misalignment with Investment Criteria:** Governments can create grants and incentives for non-tech circular innovations, such as material recovery and reuse models. Governments can also support blended finance structures that use public capital to de-risk early-stage ventures and attract private investment. Ensuring that CE activities are recognized in national sustainable finance frameworks helps signal legitimacy to investors and expands access to capital.
- **Addressing Data and Impact Metric Gaps:** Governments can support the development of standardized impact metrics. Governments can also provide grants and incentives for businesses to generate and build credible impact reporting systems, particularly for SMEs and niche sectors.
- **Addressing Other Economic Factors:** Governments can provide targeted funding through grants, tax credits, or low-interest loans for circular equipment and infrastructure. Governments can also co-invest with private actors to de-risk capital-intensive ventures and clarify insurance standards for circular materials and technologies.

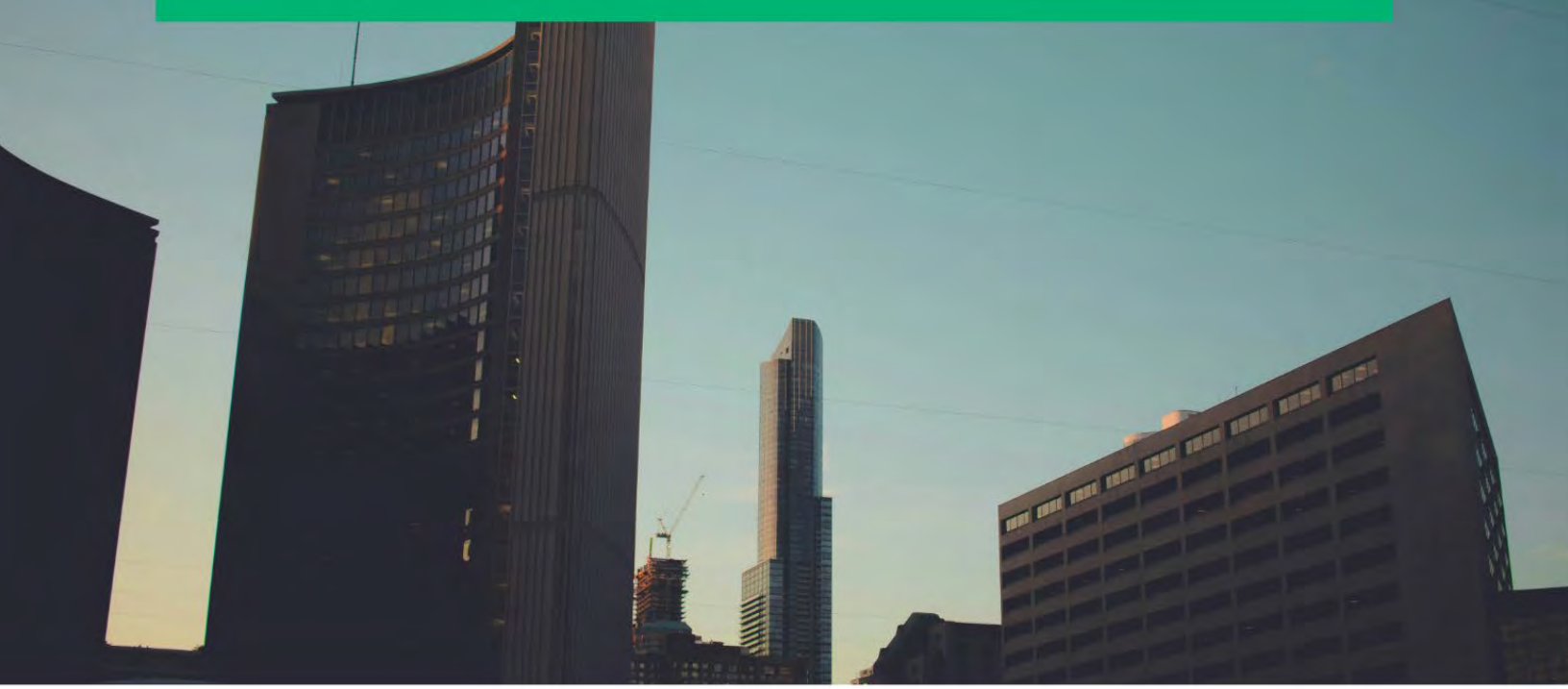
Opportunities for Future Research

Further to the research that was carried out on this project to date, additional research could bring value by deepening the knowledge and insights in areas that include:

- **Developing case studies and identifying best practices**: Develop and share case studies of successful CE projects and businesses in Canada, including their lessons learned around funding and financing - including different examples of both lending and investing strategies and models. Highlighting best practices and successful examples could inspire companies and investors to adopt new models and innovate where gaps exist.

- **Comparing internal sustainable finance frameworks and taxonomies**: Compare how financial institutions classify circularity to identify best practices and areas for improvement. This could help standardize definitions and enhance consistency in circular finance practices across the sector.

- **Exploring opportunities for blended finance:** Explore opportunities to use blended finance as a mechanism to scale CE funding, using public or philanthropic capital to de-risk opportunities for private investors. By absorbing early-stage or perceived higher-risk components, blended finance structures can help attract mainstream capital to circular business models, projects, and infrastructure that may not yet meet traditional risk-return thresholds.



12. Additional Resources

- CELC, UNEP FI, Delphi, 2024. Financing the Circular Economy: A Guidance Document for Canadian Financial Institutions.
- Ellen MacArthur Foundation, 2020. Financing the Circular Economy, Capturing the opportunity
- Ellen MacArthur Foundation, 2021. Completing the Picture: How the circular economy tackles climate change
- Ellen MacArthur Foundation, Universita Bocconi, Intesa Sanpaolo, 2021. The Circular Economy as a de-risking strategy and driver of superior risk-adjusted returns.
- International Finance Corporation, et al, 2025. Harmonized Circular Economy Finance Guidelines
- Kopgroep Circulair Financieren. 2024. A practical guide to the Circular Risk Scorecard
- Raes, J., 2020. Financing Circularity, Demystifying Finance for Circular Economy, UNEP FI
- Schröder and Raes, 2021. Financing an inclusive circular economy: De-risking investments for circular business models and the SDGs
- Shorthouse, Paul, 2025. The Circular Economy and Circular Finance: Blog. Institute for Sustainable Finance Primer Series.
- Sitra (2022). Tackling root causes: Halting biodiversity loss through the circular economy.

Appendix 1: Circular Business Models

The Canadian categorization system for classifying circular economy activities (a previous output of this work stream) includes five groups of activities, described below (with a non-exhaustive list of examples).

GROUP 1: CIRCULAR DESIGN & PRODUCTION. Activities contributing to Circular Design and Production aim at increasing resource efficiency through (i) design innovation, (ii) process innovation and reengineering and/or (iii) material innovation and substitution. While such interventions take place early in the product lifecycle, their positive environmental impacts mostly materialize in the use and after-use phases and through reduced use of virgin materials.

Examples:

- Packaging design with the possibility of reuse/recycling.
- Circular design / construction enabling easy disassembly, reuse, and repair.
- Regenerative production of food and biomaterials, including agroecology, conservation agriculture, and agroforestry.
- Use of re-used and/or recycled materials in construction.
- Development of circular food products with diverse ingredients, lower impact ingredients, recycled ingredients, and regeneratively produced ingredients.

GROUP 2: CIRCULAR USAGE. Activities contributing to Circular Usage models aim at increasing resource efficiency through product and asset use-optimizing and leasing (product as a service), as well as sharing models**.**

Examples:

- Facade / building envelope leasing.
- Packaging reuse / refill models.
- Heating or cooling equipment and/or supply services (e.g., steam provision services).

GROUP 3: LIFE EXTENSION. Activities contributing to Life Extension models aim at increasing resource efficiency through product and asset lifecycle extension based on reuse, repair, repurposing, refurbishment, or remanufacturing strategies. Such interventions typically take place during or at the end of the use phase of products and assets.

Examples:

- Initiatives for returnable packaging systems (e.g., food containers) where the user is the owner of the reusable package.
- Building renovation/retrofitting
- to enable flexible use and/or adaptive reuse of the building or infrastructure asset.
- Rehabilitation of degraded land to return to useful state and remediation of abandoned or under-utilized brownfield sites in preparation for redevelopment or return to its natural state.

GROUP 4: CIRCULAR VALUE RECOVERY. Activities contributing to Circular Value Recovery models aim at increasing resource efficiency through the recovery of wastes in preparation for reuse and recycling or other CE strategies. Such interventions typically take place during the after-use phase of products and assets.

Examples:

- Selective deconstruction of building components, sorting, and refinement of construction and demolition waste to facilitate recycling.
- Biomass composting initiatives (i.e., nutrient recycling).
- Initiatives to transform inedible food by-products into inputs for new products

GROUP 5: ENABLING PLATFORMS & SERVICES. Activities in the Enabling Platforms and Services group aim at enabling or facilitating other circular activities / projects through platforms (digital or other) and knowledge-based services, thus indirectly contributing to increased resource efficiency.

Examples:

- Creation of a material passport / inventory for refurbished objects.
- Circular design technologies that promote the use of construction planning tools (e.g., building information modeling or BIM) to optimize the consumption of materials, reduce the generation of construction waste and take advantage of materials from recycled or reused sources.
- Research projects in the CE, including pre-design, design, pre-feasibility, and feasibility studies of circular activities.