



CIRCULAR ECONOMY LEADERSHIP CANADA

Knowledge Series Webinar:
Funding for Circular Economy Initiatives in Canada

November 10, 2022
9:30-11am PT / 12:30-2pm ET



Opening Remarks

Land Acknowledgement

While we meet today virtually, we would like acknowledge that our participants are joining us today from the traditional and unceded Indigenous lands and territories right across Canada. We would like to thank the Indigenous Peoples for allowing us to live, work, and play on their lands, and for the opportunity to share in their stewardship.

About CELC

Circular Economy Leadership Canada (CELC) is working to connect Canada's circular economy community and serves as a bridge to similar networks around the world.

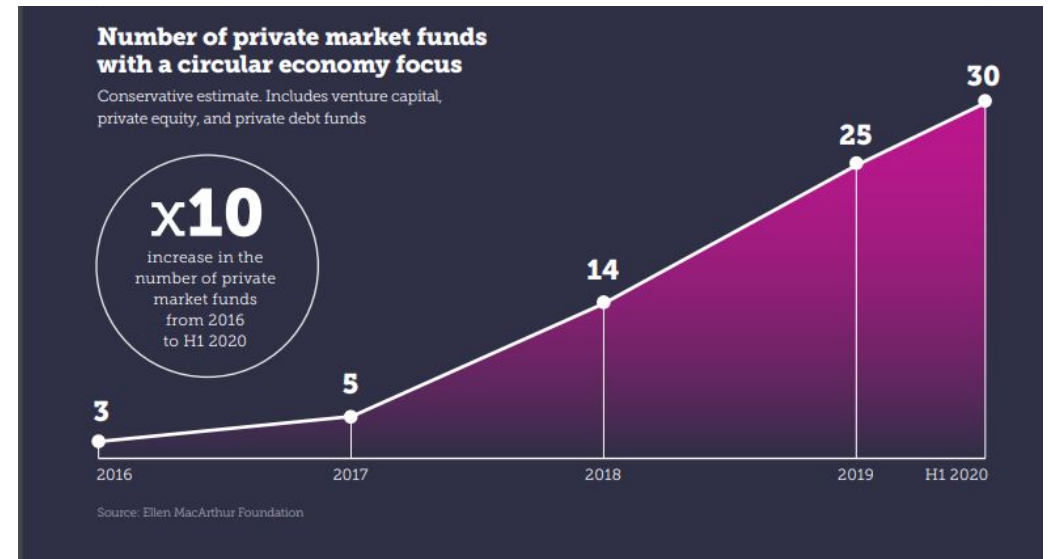
We provide **thought leadership, technical expertise**, and **collaborative platforms** for accelerating systems change and the transition to a low carbon, circular economy in Canada.



- **Serve as a national hub**
- **Foster constructive dialogue**
- **Make the business case for CE**
- **Champion a national CE strategy**
- **Accelerate CE through our work streams and special projects**

Knowledge Series: Funding for Circular Initiatives in Canada

- Increased attention on funding for circular economy
- 10X increase in private market CE funds
- More than 70 relevant funding programs in Canada
- *Yet....Securing funding for circular economy companies and projects can be a challenge!*



Source: Ellen MacArthur Foundation [Financing the Circular Economy Report](#)



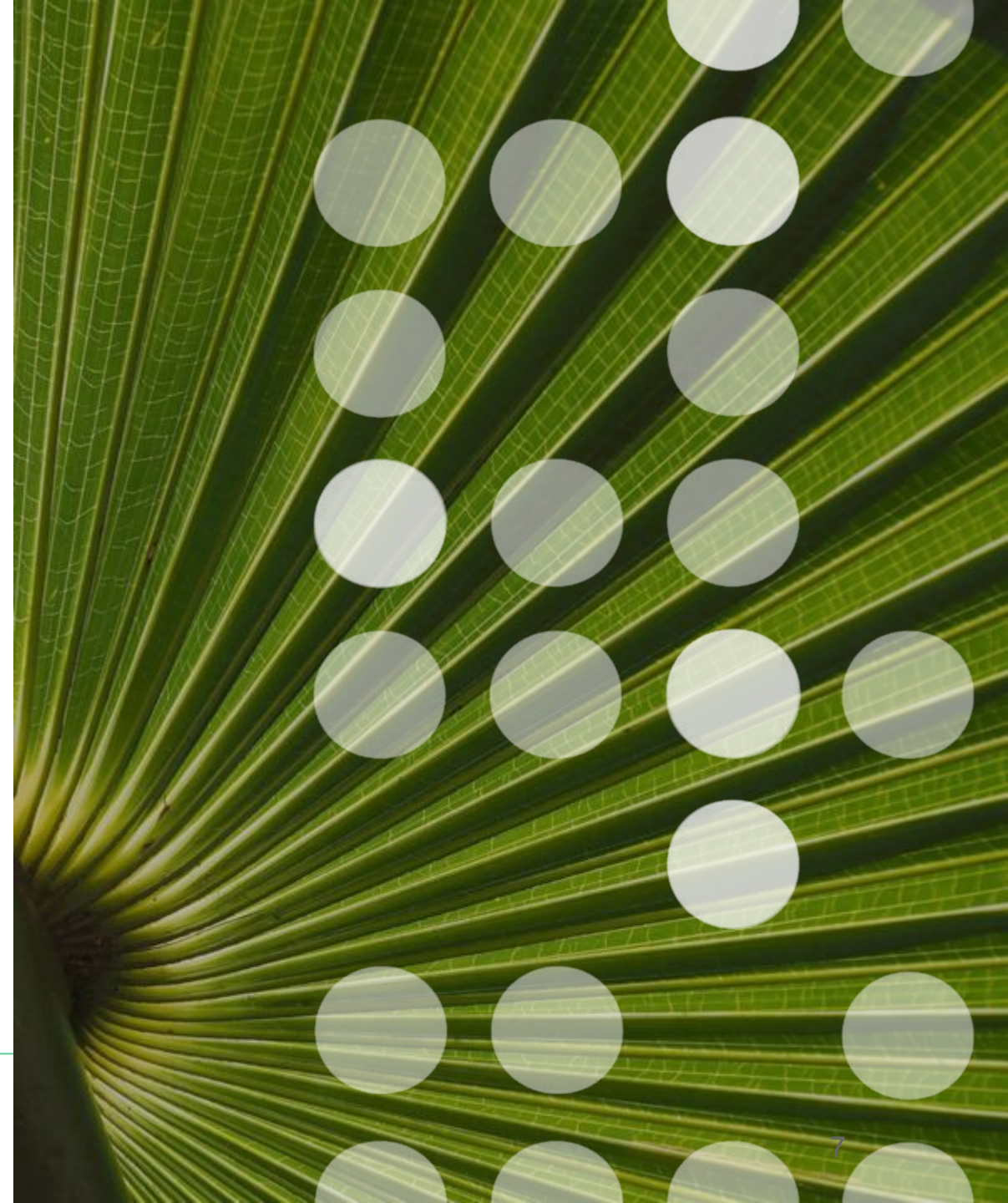
Webinar Objectives

1. Outline various funding opportunities and avenues available to organizations interested in advancing circular economy opportunities in Canada.
2. Provide recommendations, insights, and tips from experts in this area to ensure the likelihood of a successful outcome.



Today's Agenda

Time (ET)	
12:30pm	Welcome & Opening Remarks
12:40pm	Speaker Presentations <ul style="list-style-type: none">• Mathieu Sasseville, Fondation• Bryn Crawford, University of BC (UBC)• Emmanuella Sea-Nduka, Emissions Reduction Alberta (ERA)• David Messer, Circular Opportunity Innovation Launchpad (COIL)• Graham Day, Spring Activator
1:20pm	Panel Discussion
1:40pm	Audience Q&A
1:55pm	Closing Remarks



Audience Polls

circulareconomyleaders.ca



Speaker Presentations

circulareconomyleaders.ca



Mathieu Sasseville

Principal Advisor, Impact Investment,
Fondaction





**Fonds
économie
circulaire**

THE VALUE PROPOSITION OF THE CIRCULAR ECONOMY FUND

A GROWING MARKET

- The circular economy represents a **4.5 trillion USD global market**
- In Quebec, **the recycling and repurposing business** alone represents a **700M\$ CDN market**
- Consumer **demand for green products is increasing fast**
- **Several regulations are driving change** in the Quebec market
 - Modernization of Québec's deposit and selective collection systems
 - Ban on single-use plastic
 - Ban on textile waste in Montreal
 - Organic material valorisation strategy

THE FUND'S VALUE PROPOSITION

First impact fund dedicated to circular economy in Canada

Targets \$30M of private investments

Benefits from \$3M in grants from Recyc-Québec & Technical assistance from the City of Montreal

Leverages Fondation impact investment team's deep expertise in the sector

Lots of industrial synergies with Fondation's existing portfolio

Opportunity to achieve both circularity and GHG impact targets



TURNING A PROBLEM INTO AN OPPORTUNITY

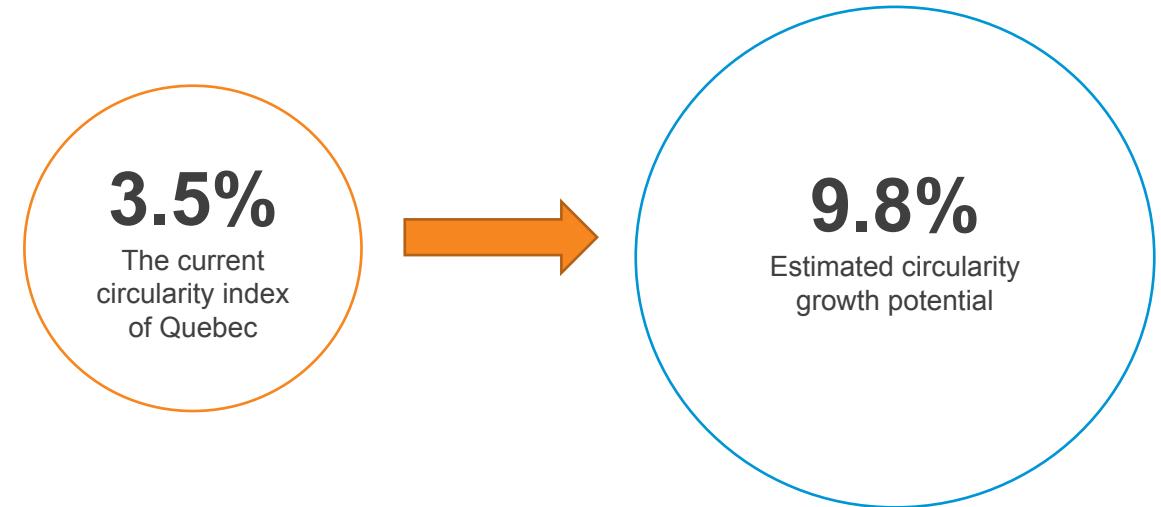
Canada is the leader in per capita waste generation among OECD countries

A total of **5.4 million tonnes of waste were sent to landfills** in the province in 2018

The quantity of residual materials disposed of in Quebec (excluding sludge) has **increased by 4%** between 2015 and 2018.

The **recycling rate is stagnating** at around 52% in Quebec

Quebec's circularity index is low but potential for improvement is large



KEY FEATURES OF THE FUND'S INVESTMENT STRATEGY

Companies must be in
**POST-START-UP or START-UP
PHASE**

The company has a
**CIRCULAR ECONOMY BASED
BUSINESS MODEL**
or wishes to adopt circular
economy practices

Targeted companies are
LOCATED IN QUEBEC

The company's financial
projections demonstrate a
REALISTIC EXIT OPTION
over the life of the fund (10
years)

The company's activities
contribute to
**OPTIMIZING THE USE OF
RESOURCES AND/OR
REDUCING RESIDUAL
MATERIALS**

The company's activities
contribute to
GHG REDUCTIONS



SECTOR AND STRATEGIC FOCUS OF THE FUND

Main sectors of investment (~75%)

Agri-food

Recycling and repurposing

Eco-construction

Other sectors of interest (~25%)

- Textiles & fashion
- Sustainable mobility
- Electronics

- Eco conception
- Responsible consumption and supply
- Optimization of operations

Rethink

- Industrial ecology
- Recycling and composting
- Valuation

Giving new life to resources

- Maintenance and repair
- Donation and resale
- Reconditioning
- Economy of functionality

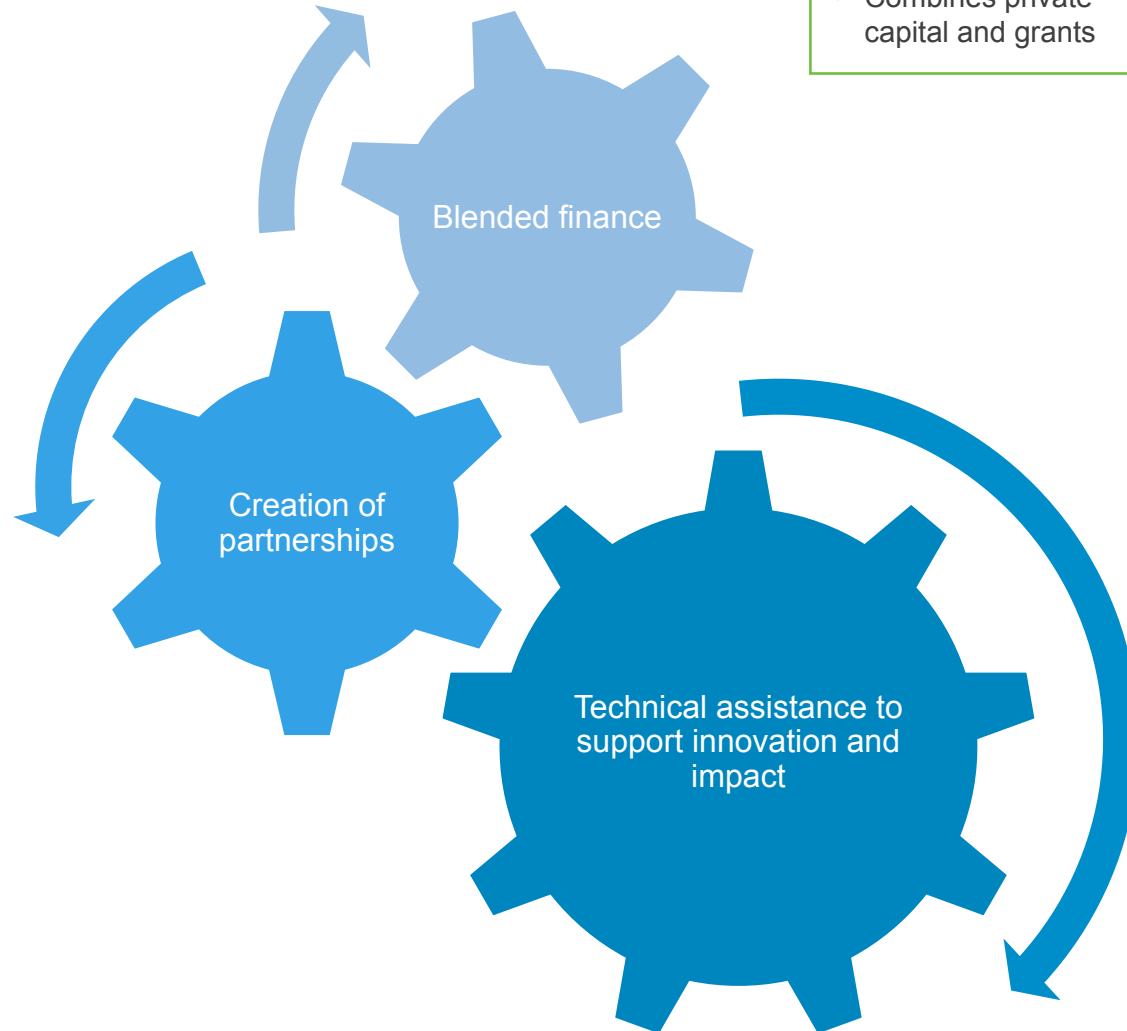
Extend life

- Collaborative economy
- Rental

Use more frequently



INVESTING DIFFERENTLY, BEYOND MONEY



- Combines private capital and grants

- Strategic and impact sponsors
- Establishment of a strategic committee
- Active participation in the ecosystem

- Establishment of specialized technical assistance
- Collaborate with networks of incubators and accelerators

 **Fondation**

RECYC-QUÉBEC
Québec 

Montréal 

ctt*éi*
CENTRE DE TRANSFERT TECHNOLOGIQUE
EN ÉCOLOGIE INDUSTRIELLE

Éco
Entreprises
Québec

Chaire de gestion
du secteur de l'énergie
HEC MONTRÉAL

 **SYNERGIE**
MONTRÉAL

SYNERGIE
Québec



INVESTMENT APPROACH

- The Fund aims to **invest in 20-25 companies** and will deploy its capital in the form of **equity** and **quasi-equity** (ex: convertible debt).
- We invest can invest in different structures:
 - **Direct business** investments
 - Investments in **projects**
 - The creation of **joint ventures**
- The Fund will invest a **minimum of \$250,000** and a **maximum of \$2M** CDN per investment round
- We will invest a **maximum of \$3M per company**
- **Targeted companies** can market a **product, a service or even a technology**
- **Exceptionally** , the Fund may invest in companies at **other stages of development** (max 10% of the total capital committed by the Fund)



PORTFOLIO INVESTMENTS

Investments made by the Circular Economy Fund



STILL good

ONYM

FERME TOURNEVENT

CarbiCrete

Examples of Fondation's investments in circular economy



WASTE ROBOTICS®

entosystem

Pierre Du Moulin inc.

KONCAS RECYCLAGE

Enerkem

ALLIANCE MAGNESIUM



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Let's stay in touch

Mathieu Sasseville
Investment Principal,
Impact Investments

mathieu.sasseville@fondaction.com

Bryn Crawford

Manager, MMRI Circular Economy
Programs, UBC



Materials and Manufacturing Research Institute (MMRI) and the Circular Economy

Thursday, 10th November 2022



THE UNIVERSITY OF BRITISH COLUMBIA

Presentation overview

- MMRI background
- Research Pillars
- Funding avenues
- Example project



Materials and Manufacturing Research Institute

Materials and Manufacturing Research Institute (MMRI)

A multi-disciplinary, multi-campus
research hub

- Developing a high-impact cluster of research excellence in different sub-areas of materials and manufacturing.
- Expanding collaboration with other UBC Institutes/Centres, and a number of leading national and international research networks and industrial sectors.
- >120 collaborating faculty from multidisciplinary backgrounds
- **Ultimate vision:** Be a role model in Canada to link basic and applied research on materials and manufacturing.



MMRI: Research Pillars



UBC Funded
Research Clusters

Cluster of Research
Excellence in
Biocomposites

Cluster of Research
Excellence in
Comfort-Enhancing
Technologies

Cluster of Research
Excellence in Plastic
Recycling



NSERC CREATE Funded
Program

CREATE in Immersive
Technologies (CITech)




NFRF Funded Cluster

AI-based Optimization
of Manufacturing
Processes with
Limited Data



Research Network
Initiative

Biocomposites
Research
Network



IRAP Circular
Economy Seed
Funding for Canadian
SMEs



Government
of Canada

Federally Funded
Initiative

Accelerating Circular
Economy (ACE)

<https://mmri.ubc.ca/mmri-research-pillars/>



Funding avenues

Level of effort/cost



Circular Economy Seed Fund

NRC Industrial Research Assistance Program



**NSERC
CRSNG**

Alliance

Option 1

Option 2

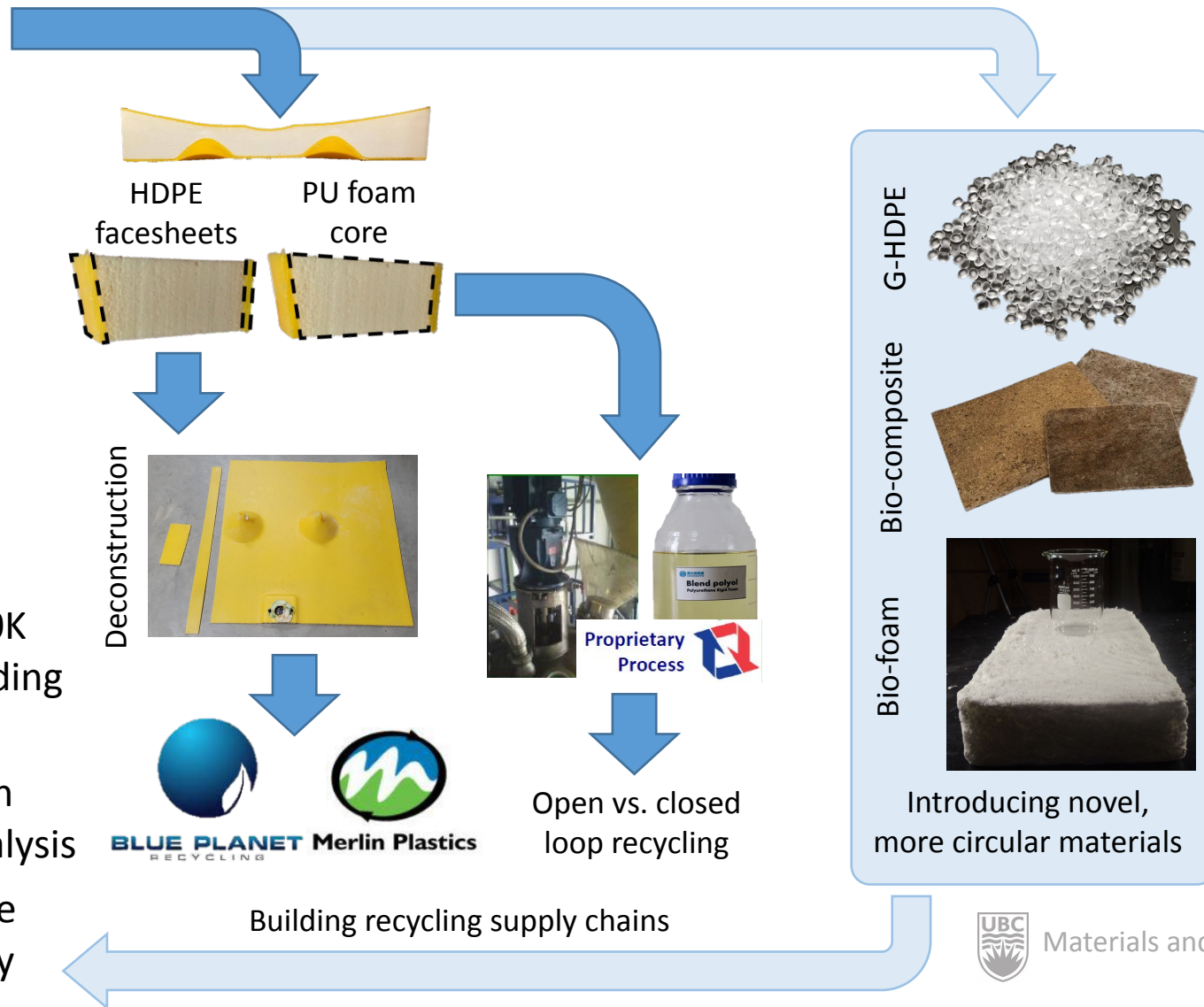


**INNOVATIVE SOLUTIONS
CANADA**



Value	Leverage ratio	Duration	Application restrictions/conditions
\$9,000	100% (no company cash)	3-4 months	<ul style="list-style-type: none"> • For-profit SMEs (<500 employees) • Incorporated in Canada • One funded project only
\$15,000 - \$240,000 (typical)	50%	0.5-4 years (typical)	<ul style="list-style-type: none"> • Public, private or non-profit sectors • Students (interns) located on-site 50% of the time
\$20K-\$1M (per year)	Large org's: 50% sole partner, 66.7% multiple partners SMEs: 66.7% (2:1)	1-5 years	<ul style="list-style-type: none"> • None
\$30K-\$300K (per year)	All partner sizes: Up to 100%	1-5 years	<ul style="list-style-type: none"> • One app per faculty per 12 months • Must have societal impact, long-term broad benefits, making connections
\$300,000 (typical)	33% (2:1 matching dollars to Ignite dollars)	<3 years (must go to market)	<ul style="list-style-type: none"> • Must pursue a novel innovation • BC-based partnership of at least one academic and one industry partner • Applied science-based, TLR >3-4
\$1.27-2.75M (typical)	100% (no company cash)	<2.5 years (multi-phase process)	<ul style="list-style-type: none"> • TRL 1-6, advance state-of-the-art • Must define new market space(s) • >50% wages, employees, execs primarily live in Canada • >80% procurement from Canada

Example project (Mitacs): circularizing luggage totes in YVR for reduced total lifecycle footprint



 Mechanical testing and experiment design for quality assurance

 + Tensile properties of thermoplastic elastomers (ASTM D412)

 + Shore D hardness for scratch resistance (ASTM D2240)

 + Wear resistance (ASTM D4060)

Introducing novel, more circular materials

- G-HDPE 
- Bio-composite 
- Bio-foam 

- ✓ \$90K company + \$90K Mitacs matched funding (\$180K total)
- ✓ Includes supply chain design, footprint analysis
- ✓ Investigating multiple options for circularity

Thank you!



Emmanuella Sea-Nduka

Business Partner, Emissions Reduction
Alberta





**Delivering climate
change solutions the
world needs**



About Emissions Reduction Alberta (ERA)

MANDATE

Reduce GHG emissions and grow Alberta's economy by accelerating the development and adoption of innovative technology solutions.

VISION

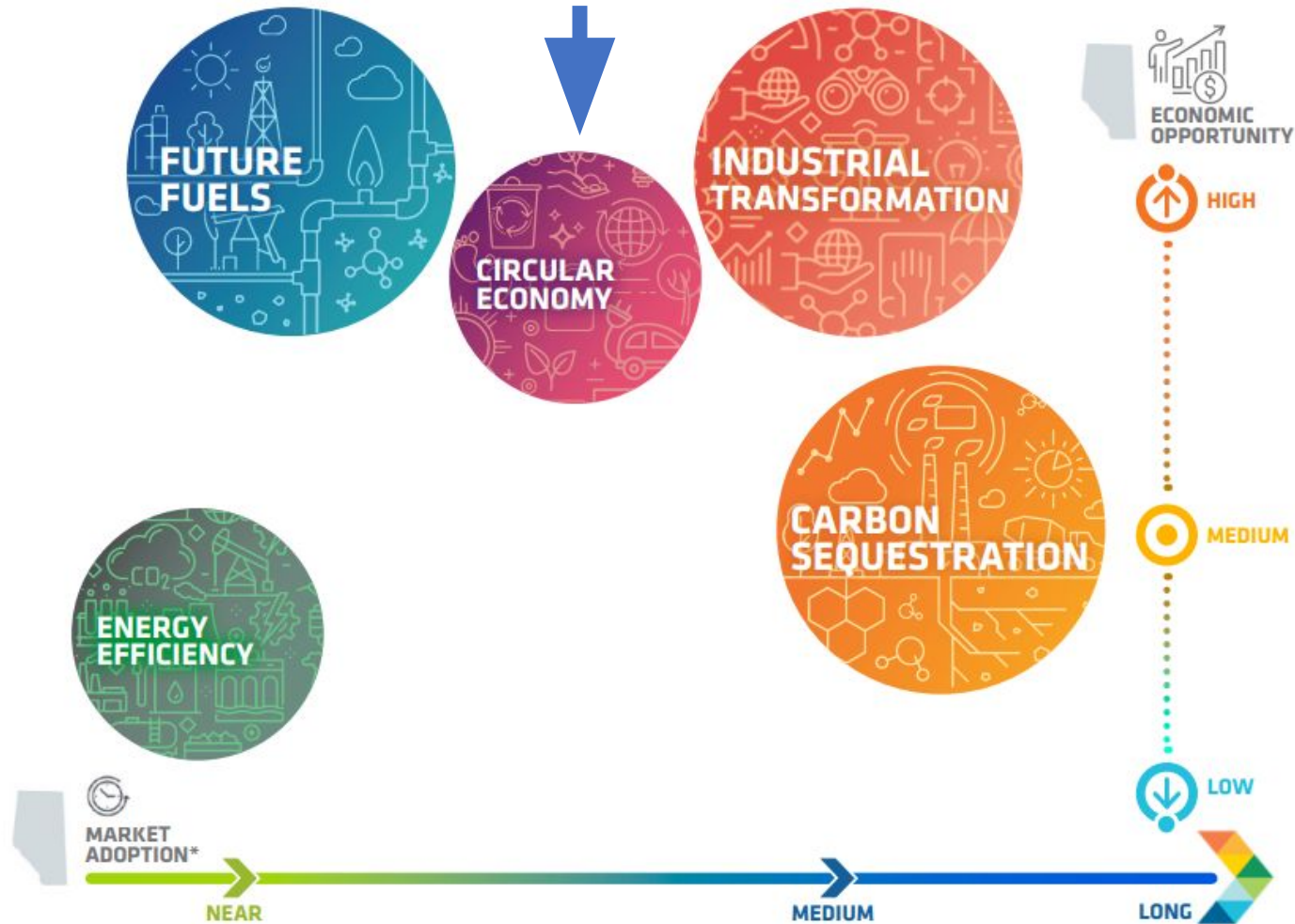
Alberta has competitive industries that deliver sustainable environmental outcomes, attract investment, and are building a diversified, lower emissions economy.

STRATEGIC PRIORITIES



Technology Roadmap: Portfolio areas of focus

MIX OF OPPORTUNITIES,
PRIORITIES + CHALLENGES
ACROSS INDUSTRIES

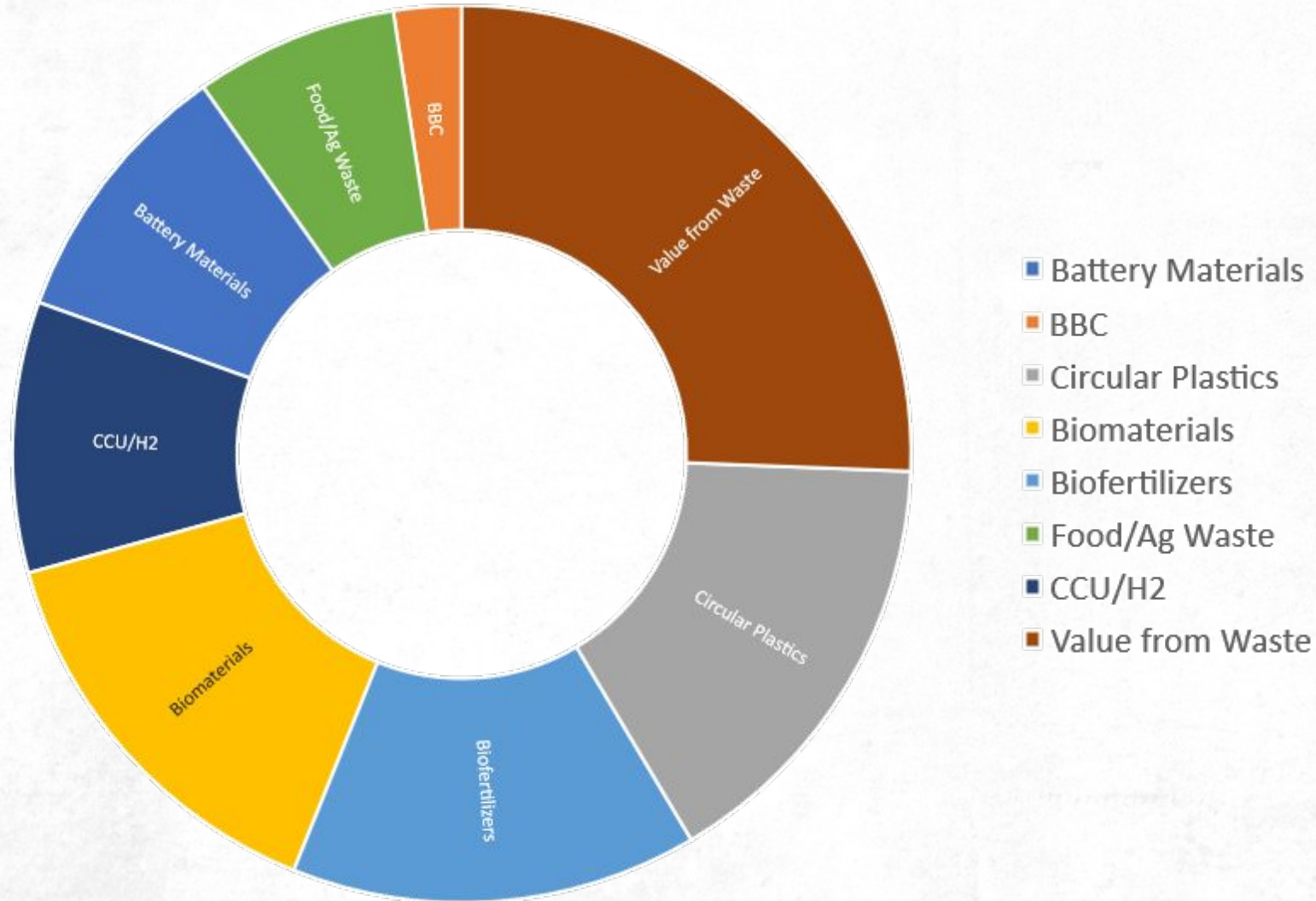


ERA Circular Economy Challenge

- **\$50M** call for proposals for projects accelerating demonstration or deployment of innovative solutions (technologies or practices) to:
 - Accelerate Alberta's transition towards a low-emissions economy
 - Enhance the competitiveness and sustainability of Alberta's industries, institutions, and communities
 - **Deliver GHG benefits** across the **entire material value chain and cradle-to-cradle product lifecycle**
 - Improve material efficiency, lifecycle environmental footprint, and security of supply for key materials and products
 - Reduce emissions from existing product supply chains, and diversity into inherently low-emissions products.
- Wide range of TRLs eligible but must include **field pilot, demonstration, or first-of-kind deployment** in Alberta

Circular Economy Submissions Overview

Total Applications: 82



Review Criteria

Criterion	Description
Technology and Innovation	Proposals will be evaluated on the strength of the proposed solution and alignment of the opportunity with the call for proposals, including: the novelty of the technology or practice; the competitive advantages relative to existing technologies and practices; and the expected advancement over the course of the project.
Project Implementation Plan	Proposals will be evaluated on the strength of the project implementation plan, including achievability of the work plan, the plan to obtain financing for the project, the capacity of the project team, and the strength of support from project partners, where applicable.
GHG and Non-GHG Benefits	Proposals will be evaluated on the potential for GHG reductions (project and market) in Alberta and on a lifecycle basis by 2025, 2030, and beyond. Socioeconomic, environmental, and sustainability benefits will also be considered. This includes near term direct benefits from implementation of the project and longer-term benefits from future commercial implementations (e.g. benefits arising from market rollout.)
Market and Value Proposition	Proposals will be evaluated on the opportunity for commercialization and widespread market adoption of the innovation in Alberta, including the value proposition of the solution, alignment with market needs, the plan for knowledge transfer/sharing, and the expected pathway toward commercial deployment.

Future Opportunities

- Partnership Intake Program
 - Projects can be referred through Trusted Partners
 - ERA contribution: \$500K- \$5M minimum
 - ERA contributions must be matched on a one-to-one basis with private contributions
- Future funding calls



(through the Canada First Research Excellence Fund)

(through the Canada First Research Excellence Fund)



Q&A

CONTACT: Emmanuella Sea-Nduka
(eseanduka@ualberta.ca)

David Messer

Executive Director, Circular Opportunity
Innovation Launchpad (COIL)





**Circular Opportunity
Innovation Launchpad**

Financing the Circular Economy

Advancing circular innovation across Canada 

Funded by:
Federal Economic Development
Agency for Southern Ontario

Canada



Circular Opportunity Innovation Launchpad

- **Innovation and business acceleration** to developing, prove and scale transformative circular solutions.
- **100+ companies across Ontario** supported in programs; sample demonstrates revenue projections \$10M+.
- **Focus on food, environment, construction-demolition sectors.**



Innovative business models

Scalable approaches to grow the circular economy across Ontario and beyond



Cluster creation

B2B collaborations where unavoidable waste fuels new businesses and products



New circular technology

Patentable IP that can generate new purpose and value from surplus materials



Social & environmental impact

Solutions that reduce GHGs and plastics and deliver community benefits




Circular Opportunity Innovation Launchpad

CE transition strategies need to be **place-based** and **sector focused**, leveraging public/private capacity and resources to **inspire innovation** and **systems redesign**.

 **Circulate** CoLab
Challenges, prototypes, demonstration projects

 **Re(PURPOSE)** Incubator
Upcycled/new products

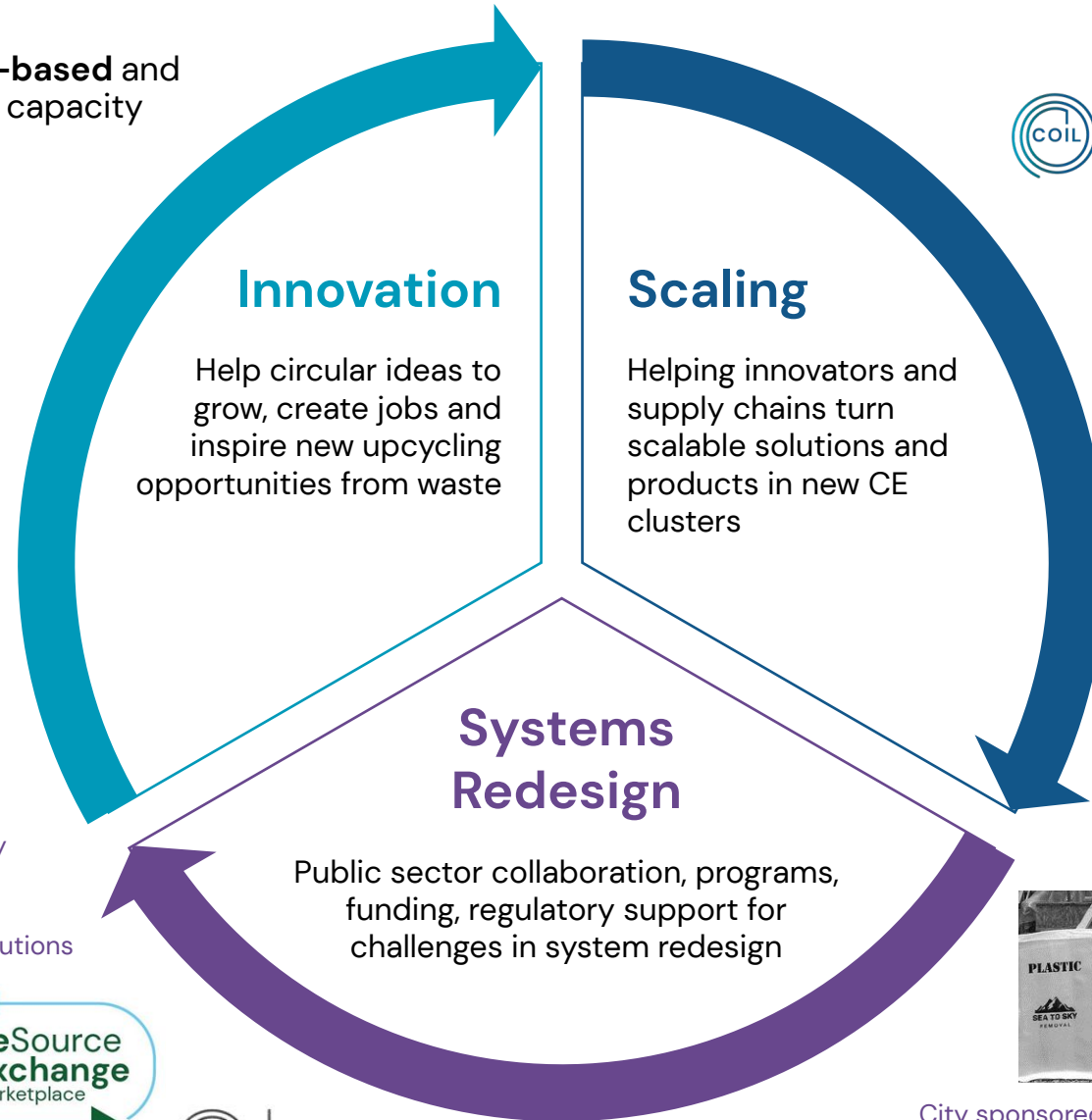
 **Zero Waste** Economic Transformation Lab
Mapping flows & econ/policy factors resulting in waste

 **Harvest Impact**
Social enterprise/finance solutions

Facilitating B2B material exchanges

 **ReSource Exchange** Marketplace

 **Data Hub**



Evolve
Pre-Accelerator



Activate
Circular Accelerator

Helping start/scale ups commercialize CE business models

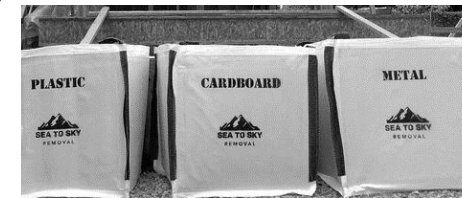


Expanding Canada's Upcycled Certified standard



Centre for Building Sustainable Value

Circular Food Leadership Program; educates businesses in systems design



City sponsored innovation challenge for C&D waste source separation

Business Funding Programs

Activate

Circular Accelerator

Scaling for proven circular businesses

- ✓ \$5,000-\$20,000 grant; loan opportunities
- ✓ Hands-on executive-level mentorship
- ✓ Exclusive circular economy curriculum

Heartwood Farm & Cidery



Nonalcoholic sparkling cider through regenerative agriculture and waste diversion.

- ✓ Product line expansion
- ✓ Ready-for-market products/services

Circulate

CoLab

Team-based prototyping across the supply chain

- ✓ \$20,000 grant
- ✓ \$100,000 winning grant to develop Demonstration Project

Upcycled Whole-Plant Powders



Fruit and vegetable residues Upcycling into different powder form through enzymatic hydrolysis.

- ✓ Patentable IP
- ✓ New Products/Services
- ✓ New applications of technology

Funded by:
Federal Economic Development
Agency for Southern Ontario

Canada

Circulate CoLab Process

Apply: Teams of 2-7 companies



CoLab: Top 3-5 teams selected.



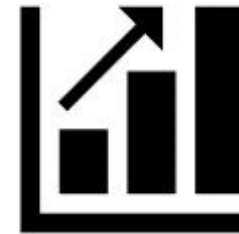
Prototype: \$20k / 16 weeks to prototype solution.

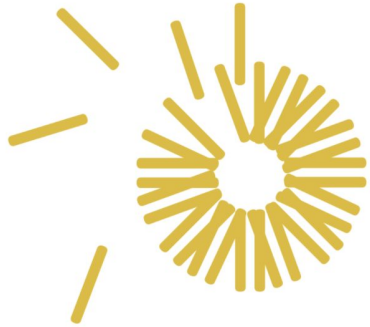


Pitch: Pitch solution to expert committee.



Demonstration Project: At least one team gets \$100k to scale to full demonstration project





Harvest Impact

Delivering accessible financing, technical and social supports to food, farm and environment sector entrepreneurs (including nonprofits & social enterprises) undertaking Circular Economy Initiatives.





Harvest Impact

We are seeing:

- companies grow and thrive
- increase in decent work;
- increase in participants' household income;
- improved access to nutritious local food
- decrease in food waste
- increased local financial investment



10
social finance
loans to date

\$125,900
in lending

5
businesses
mentored

\$3,000,000
Social finance fund
under development

Climate-Smart Circularity Assessment Framework

- As part of **COIL Climate and Circularity Solution Hub** developing matrix to assess climate-smart circularity of projects or businesses.
- Building on **flexible LEED model** for buildings
- Starting with **regenerative agriculture** – intention to move to other sectors and part supply chain.
- **Common standard** that could be used by funders, insurers, supply chain customers, consumers

Collaborators:



Centre for Building Sustainable Value



Network for Business Sustainability

Supporters:

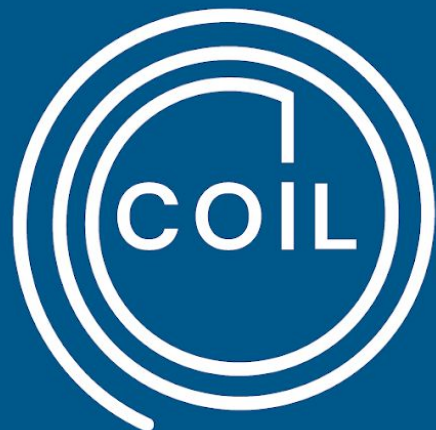


Farm	Business	NFP
✓✓✓	✓	
✓	✓	
✓✓		✓
✓	✓✓	✓✓✓
✓	✓	✓✓
✓	✓✓	✓
	✓	✓
	✓	✓

SOIL HEALTH			
Minimal disturbance	Continuous roots	Soil armour	Crop diversity
ANIMALS			
Adaptive Grazing	Genetics	Feed amendments	Manure Management
BIODIVERSITY			
Riparian buffers	Hedgerows	Diverse intercropping	Habitat protection
EQUITY			
Food security role	Seed sharing	Landback solution	Living wage
SHORT SUPPLY CHAINS			
Local processing	Community Supported Agriculture (CSA)	Community of practice	Sharing economy
RESOURCE ALLOCATION (WASTE REDUCTION)			
Biodigestion	Plastics recycling	Food gleaning	Reduced use of landfill
ADAPTATION			
Climate resilient species	Stormwater management	Off grid	Cold storage
ENERGY			
Solar or wind production	Reduced equipment use	Alternative fuel machinery	Passive thermal and cooling

Figure 1: Simplified matrix





Circular Opportunity Innovation Launchpad

David.Messer@guelph.ca

coil.eco

Twitter: COIL_CE

Graham Day

Director of Impact Investing, Spring
Activator





SPRING

Meet Spring

An Impact Ecosystem Organization

Graham Day, Investment Program Director



Change the
world through
innovation.





Entrepreneur Development

- Incubation
- Acceleration
- Investment
- Resilience



Ecosystem Development

- Ecosystem strategy and implementation
- Platform



Investment Development

- Investor Training
- Funding Support
- Investor Summits

52

50+ Global
Communities

110

100+ Ecosystem
Players Supported

30

\$30+ Million
Raised

1500

1500+ Alumni
Trained

500

500+ Companies
Supported



Investment Development

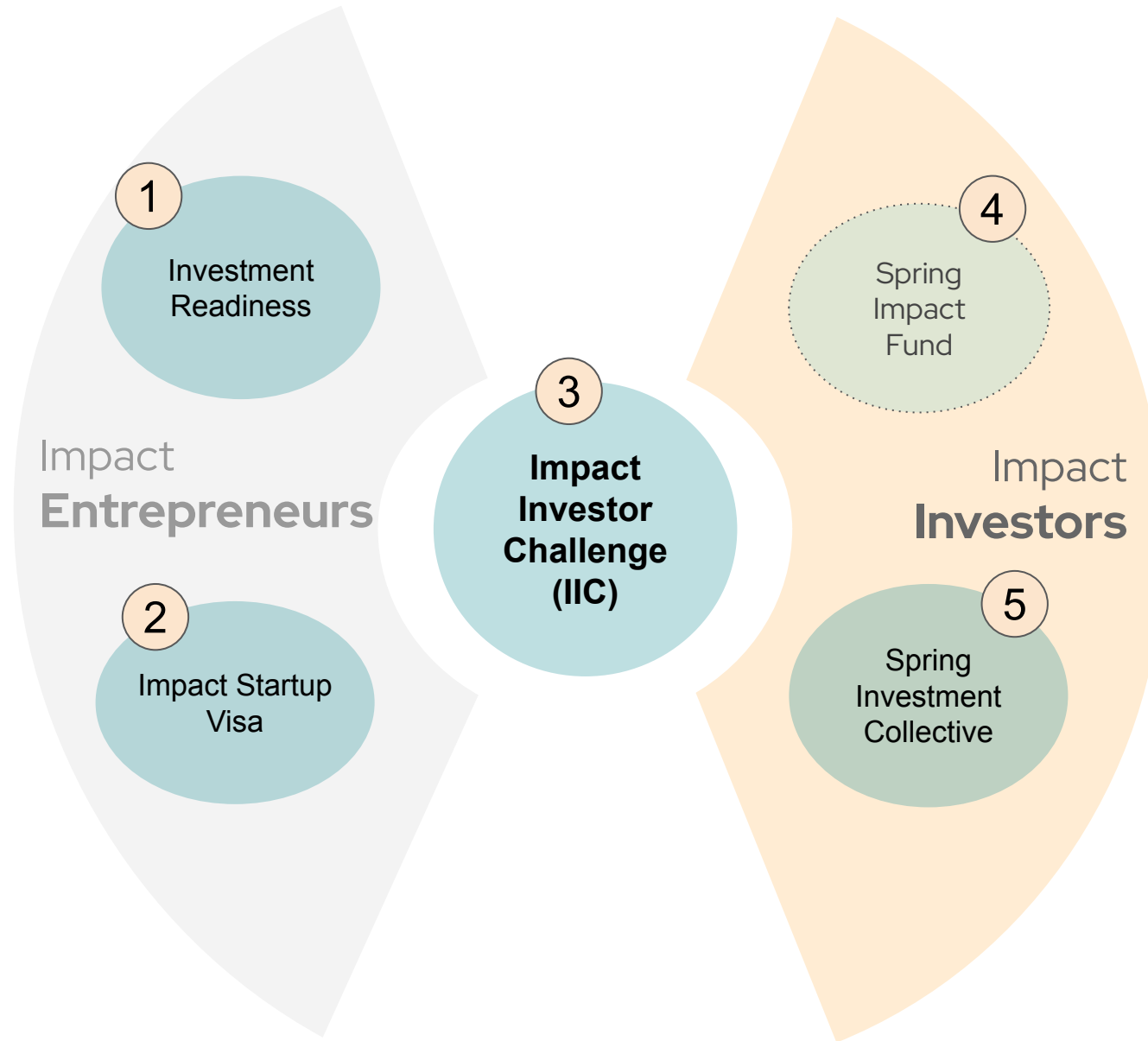


SPRING



SPRING

The Spring Investment Ecosystem Model



THE IMPACT INVESTOR CHALLENGE NUMBERS

- » 160+ impact investors trained
- » 170+ companies featured
- » 38 finalists
- » \$1,000,000+ made in direct impact investments
- » \$15M+ catalyzed in impact investment

WINNERS



OPENOCEAN
ROBOTICS

heal mary

Indiegraf



moment energy



Circular Rubber
Technologies Inc.



VIRIDIS
RESEARCH

Upcoming Opportunities

British Columbia Angels for Climate Solutions (Feb 2023)

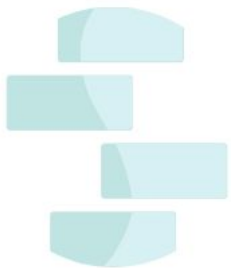
Quebec CleanTech Challenge (Mar 2023)

Atlantic CleanTech Challenge (Fall 2023) - in process

Ontario Impact Challenge (Fall 2023) - in process

For more information, visit www.spring.is and subscribe to our newsletter

Or contact help@spring.is



Connect With Us



Panel Discussion

circulareconomyleaders.ca



Audience Q&A

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Closing Remarks

- Big **THANK YOU** to our presenters!
- Download the [Funding Resources Spreadsheet](#)
- Sign-up for CELC's [Monthly Newsletter](#)
- Join CELC's [Partner network](#)

THANK YOU!



CIRCULAR ECONOMY LEADERSHIP CANADA

www.circulareconomyleaders.ca

CONTACT

Paul Shorthouse
Managing Director, CELC
pshorthouse@circulareconomyleaders.ca