

# Catalyzing a circular economy in your community

How circular concepts and frameworks respond to the climate emergency





### **FEDERATION** OF CANADIAN

#### **FÉDÉRATION CANADIENNE DES** MUNICIPALITIES MUNICIPALITÉS

The **national voice** for Canada's local governments since 1901.

We foster the development of sustainable communities to build **better lives**.



La **voix nationale** des collectivités locales du Canada depuis 1901.

Nous favorisons le développement de communautés durables pour améliorer les conditions de vie.











#### THE GREEN MUNICIPAL FUND

- Founded in 2000 by the Federation of Canadian Municipalities through investments from the Government of Canada.
- GMF exists to enhance the quality of life for people in Canada by accelerating a transformation to resilient, net-zero communities.
- Provides a globally unique mix of funding, capacity building, and strategic support.
- Delivers environmental, economic and social benefits.





### **GREEN MUNICIPAL FUND (GMF)**

A \$2.4 billion program funded by the Government of Canada and delivered by the Federation of Canadian Municipalities.



2.9 mil.

tonnes of greenhouse gases avoided

2,300+
projects approved

\$1.6 B worth of approved projects



#### **OVERVIEW**

- Circular Economy (CE) in action at the municipal level in Canada
- Richmond, BC Case Study: connecting CE to climate change adaptation and resilience
- GMF's (new) climate change adaptation programming

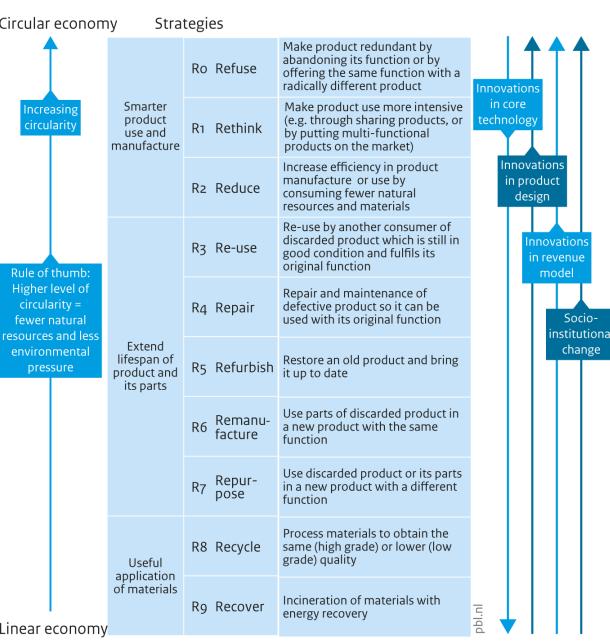


### Circular Economy in Canada

A brief introduction



#### Circularity strategies within the production chain, in order of priority



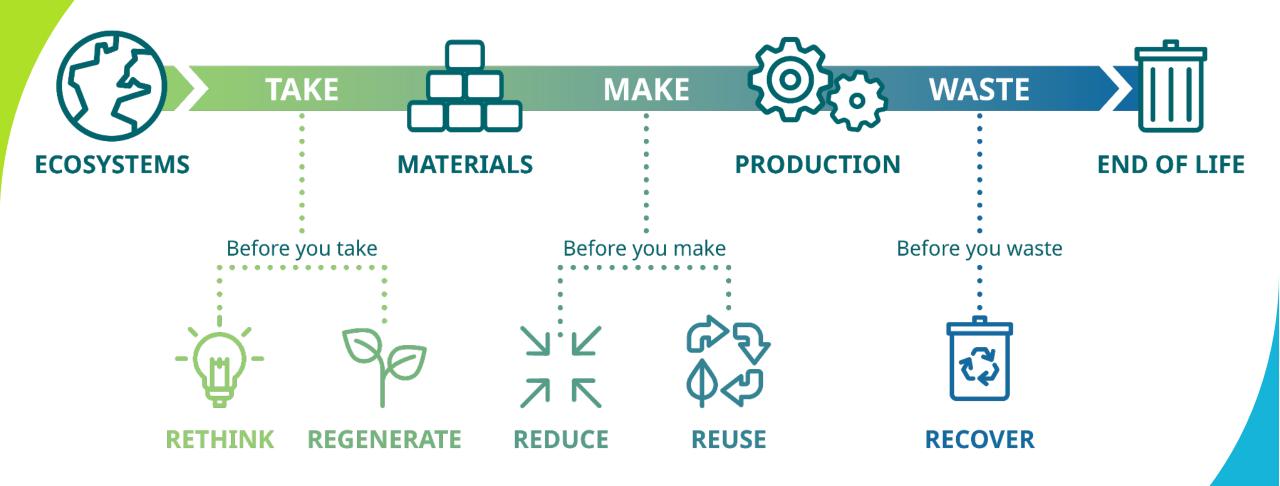
### THE 9 R'S OF CIRCULARITY

A general framework to guide decision making across the value chain



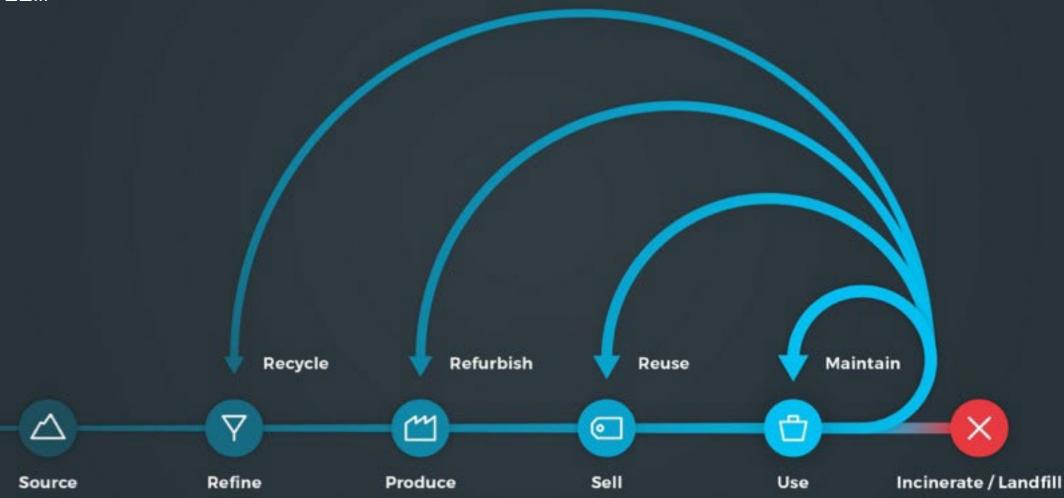
Source: RLI 2015; edited by PBL

#### ALORS QUE PEUVENT FAIRE LES VILLES ? LE CADRE D'ACTIONS DE LA VILLE CIRCULAIRE





DANS UNE **ÉCONOMIE CIRCULAIRE**, LES RESSOURCES RESTENT DANS LE CIRCUIT LE PLUS LONGTEMPS POSSIBLE...



### RAPID GROWTH IN MUNICIPAL CIRCULAR ECONOMY INITIATIVES ACROSS CANADA IN THE PAST 10 YEARS

- Circular deconstruction & recommissioning
- ICI sector food recovery
- Recycled asphalt
- Multisectoral partnerships
- Energy recovery
- Synergistic manufacturing
- Circular Procurement

- Commercial sector container reuse
- Biogas innovation
- Recycled construction materials
- Agri-food sector collaborations with municipalities
- Innovation in textiles pickup

and waste management



### ABOUT THE CIRCULAR CITIES AND REGIONS INITIATIVE (CCRI)

The Canadian Circular Cities and Regions Initiative (CCRI) works to build circular economy knowledge and capacity in the Canadian local government sector – offering a national webinar series on innovative approaches and providing direct support, guidance and peerto-peer exchange to Canadian communities as they take steps to become more circular.























### Richmond, BC Case Study

Connecting CE to climate change adaptation and resilience



### What do we mean by Multisolving?

Potable Water Conservation Sustainable Materials Net-zero, Management resilient, Net-Zero GHGs NET sustainable, **ZERO** & Resilience & equitable Biodiversity and future **Ecological Function** Socio-economic benefits

(including anti-racism, equity, inclusion and

Reconciliation)



### RICHMOND, BRITISH COLUMBIA'S CIRCULAR ECONOMY STRATEGY

- Phased implementation towards a Circular Economy strategy started in 2018 with a pilot testing circular procurement across the city
- Integrating circular criteria across the organization saw early successes that neither decreased quality nor increased cost
- The success of the circular procurement work continued to shine through to it's 2023 Circular Economy Strategy



### RICHMOND, BRITISH COLUMBIA'S CIRCULAR ECONOMY STRATEGY

• The strategy is guided by 6 crosscutting directions making it particularly useful for connecting seemingly disparate municipal activities such as waste management and climate adaptation





### EXAMPLE 1: RECLAIMED ASPHALT PAVEMENT TO SUSTAINABLY REPLACE STORM-SURGE DAMAGED ROADS

- A merger between procurement requirements and circular principles which:
  - Has the same warranty as virgin material asphalt
  - Same total cost of ownership
  - Includes climate-resilient technical criteria
- Replacing asphalt damaged during storm surges now has ready to use suppliers for more sustainably-sourced materials



### EXAMPLE 2: REGENERATIVE AGRICULTURE TO REDUCE FOOD WASTE AND IMPROVE SOIL HEALTH

 Strategic Directions 1 (maximizing ecosystem services) and 2 (regenerative food systems) act as a nexus for producing local food, reducing reliance on imports, and regenerating soil quality and water retention 1.2.3. Maintain a soil management procedure(s) that identify opportunities for sustainable urban development, while enhancing soil health and fertility.

#### 1.3. Promote nature-based solutions

1.3.1. Explore opportunities to foster the development of contemporary landscapes and architecture that incorporates natural and living materials while optimizing the use of land through policies, measures, and actions that promote their use.





### EXAMPLE 3: FLOOD PROTECTION MANAGEMENT STRATEGY INCORPORATES CIRCULAR APPROACHES

 Structural upgrade to South Dike which included circular criteria in the construction such as reused soil, recycled raw materials, and low-carbon transport





## GMF's (new) climate change adaptation programming

Connecting the lines across GMF programmes for more sustainable communities



### Net Zero Transformation



### Eligibility

- 1. Innovation significant improvement in performance over best practice through:
  - The development and/or application of new knowledge, policy, practice, business model, or advanced technology; or,
  - A new or emerging application of an existing technology or practice (e.g., in a new context).
- 2. Alignment with a net-zero future
  - Significant GHG reductions
  - Replication potential





### **NET ZERO TRANSFORMATION:** PROJECTS WE'RE SEEKING

This offer seeks to fund innovative projects including, **but not limited to**:

- 1. Retrofit techniques that significantly reduce costs and shorten payback periods
- 2. Funding mechanisms or incentives to accelerate zero-carbon new builds and retrofits
- 3. Regenerative buildings that contribute net-positive environmental benefits
- 4. Microgrids and battery storage that help meet peak electricity demand and add resilience to local grids
- 5. Resilient, net-zero, inclusive and complete neighbourhoods
- 6. Brownfield initiatives that apply in-situ remediation approaches, use renewable or little energy, reuse soil and demolition materials, and restore the site's ecological features
- 7. Integrated modal shift and transportation demand management (TDM) strategies that address potential rebound effects
- 8. Local circular economy initiatives for apparel textiles or construction / demolition materials that currently go to landfill
- 9. Net-zero and net-positive water and wastewater systems



### Local Leadership for Climate Adaptation



#### **Climate-Ready Plans and Processes**

**Spring/Summer 2025** 

Integration of equitable and inclusive climate resilience into municipal plans, processes and management systems, such as asset management systems planning. One application per city or partner.

#### **Adaptation in Action**



#### **Spring/Summer 2025**

Increased implementation of equitable climate adaptation action taken by Canadian municipalities. Prioritizing new applicants.

#### **Financing Adaptation**





Fall 2025



### Growing Canada's Community Canopies

### \$291 million

**Funding for** 

1.2m trees in 300+ communities

by

2030-2031







### Growing Canada's Community Canopies

Support Canadian local governments in growing, managing and protecting their community canopies

- Tree planting funding Spring/Summer 2025
- Strategic funding (plans, studies) Summer 2025
- Capacity development offered by FCM and Tree Canada
- Can't be stacked with projects funded under 2 Billion
   Trees
- For planting grants, \$10m max total funding per municipality, but no cap on number of projects







#### **Adaptation in Action**

- Study: up to **\$70,000**
- Implementation project : up to \$1M
- HVAC retrofit, stormwater pond

expansion, green infrastructure installation, backup power, etc. Distinct projects

#### **Climate-Ready Plans and Processes**

- Up to **\$140,000**
- Risk Assessment, Adaptation Plan, Asset Management System, Land Use Planning, Infrastructure Design Manuals, etc
- City-wide systems

#### **Growing Canada's Community Canopies**

- Planting grant : up to \$10m
- Tree planting (parks, street trees, naturalized areas, etc.)

**BUILDING A RESILIENT COMMUNITY** 

### LOOKING TO FUND YOUR CIRCULAR INITIATIVE OR GET SUPPORT FROM YOUR PEERS?

- Contact your GMF representative (gmfinfo@fcm.ca) to learn about what funding is available to support you
- Contact the CCRI to inquire about joining our network of leading CE communities in Canada – beginners welcome! (info@canadiancircularcities.ca) (cpembleton@fcm.ca)

Vous cherchez à financer votre initiative circulaire ou à obtenir le soutien de vos pairs ?

- Contactez votre représentant du FMV (fmvinfo@fcm.ca) pour connaître les fonds disponibles pour vous soutenir
- Contactez la VRC pour vous renseigner sur la possibilité de rejoindre notre réseau de communautés de formation continue au Canada - les débutants sont les bienvenus! (info@canadiancircularcities.ca) (cpembleton@fcm.ca)



