



**Smart Prosperity  
Institute**



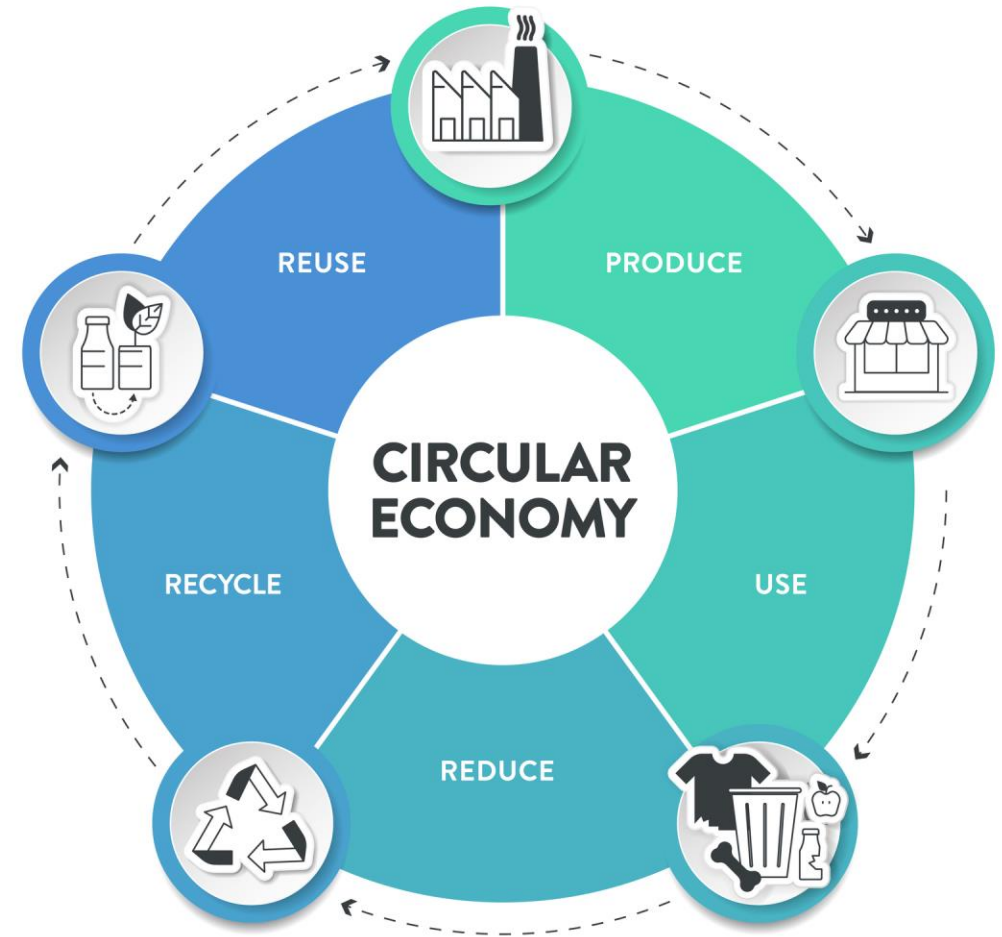
A Solution Space by  
**Generate Canada**

# Insights from a Circular Economy Policy Inventory for Canada

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# Circular economy: what is it?

A framework for responding to the global challenges of unsustainable resource use and the environmental impacts that this causes, including emissions and environmental degradation.



Source: Smart Prosperity Institute 2021

# Three core principles of circular economy (CE)

Waste and pollution  
are designed out the  
economy

Products and  
materials are kept  
in use

Natural systems are  
regenerated and  
enhanced

Source: Ellen MacArthur Foundation

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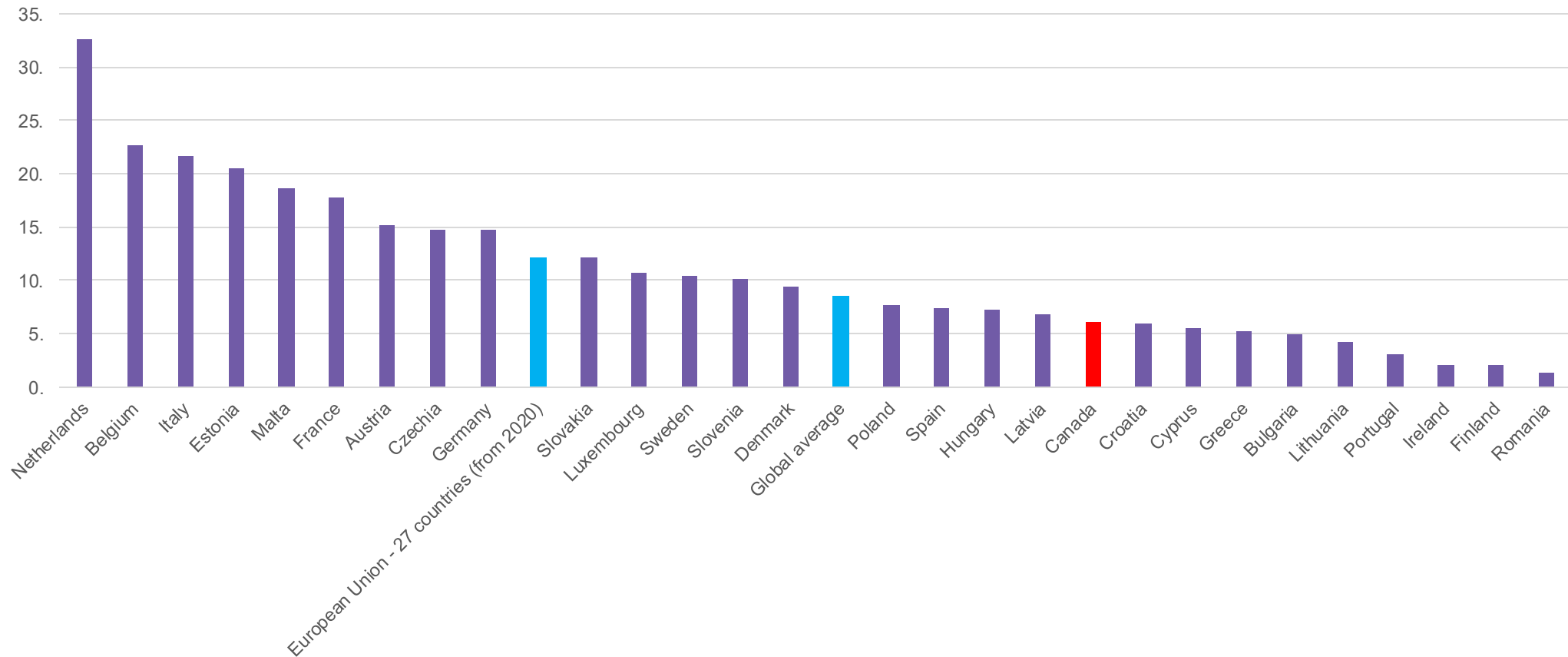
**Circular economy models could avoid the loss of up to  
US\$4.5 trillion of global economic growth by 2030 and as  
much as US\$25 trillion by 2050.**

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Source: Lacy & Rutqvist 2015

# Canada currently lags on circularity...

Circular material use rate (%)

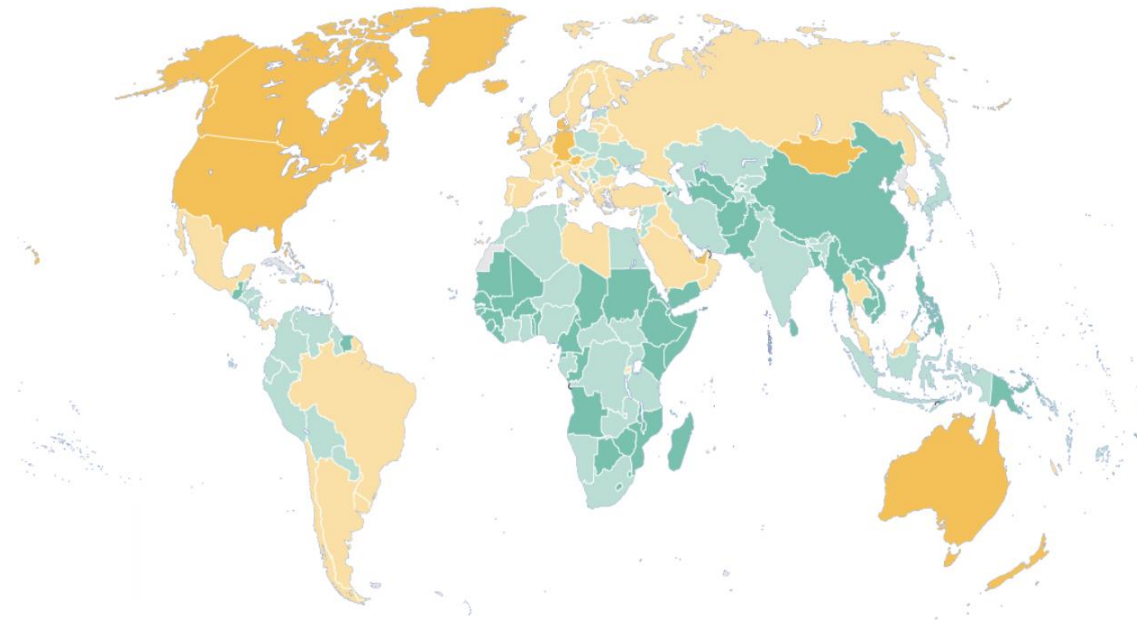


Source: Eurostat (2024)

# ...and is among the top waste generators globally.

Annual municipal solid waste generated per capita  
(kilograms/capita/day)

0-0.49    0.50-0.99    1.00-1.49    Greater than 1.50    No data



# Canada's Circular Economy Policy Inventory

A first-of-its-kind inventory of **existing** CE policies across Canada, at the municipal, provincial, federal and regional levels.

It supports:

- Identification of policy gaps
- Identification of opportunities for harmonization
- Future policy development
- Future research

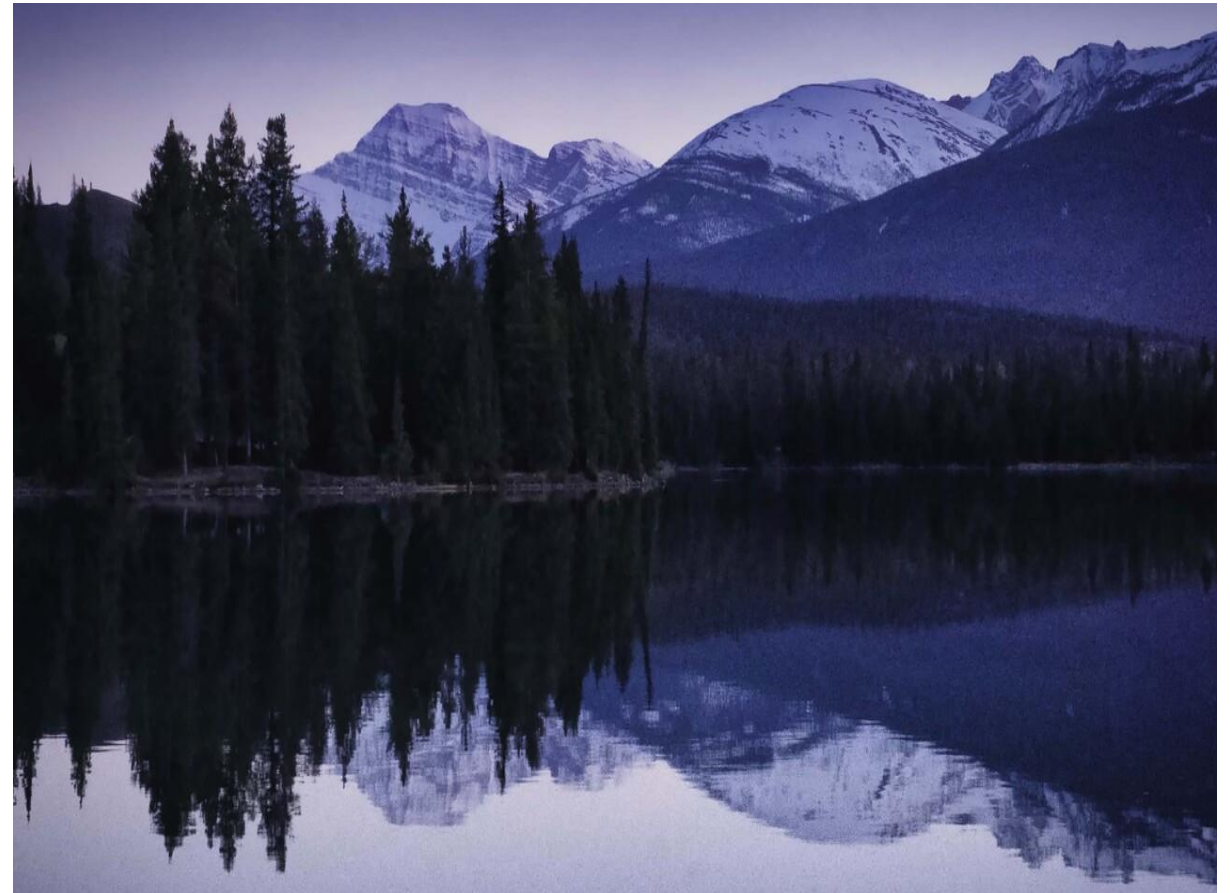


Photo credit: Jim Dawson Photography

# Research questions

1. What is the current landscape of municipal, provincial, territorial and federal CE policies in Canada?
2. Where are the gaps in policy?
3. What opportunities exist for policy harmonization?

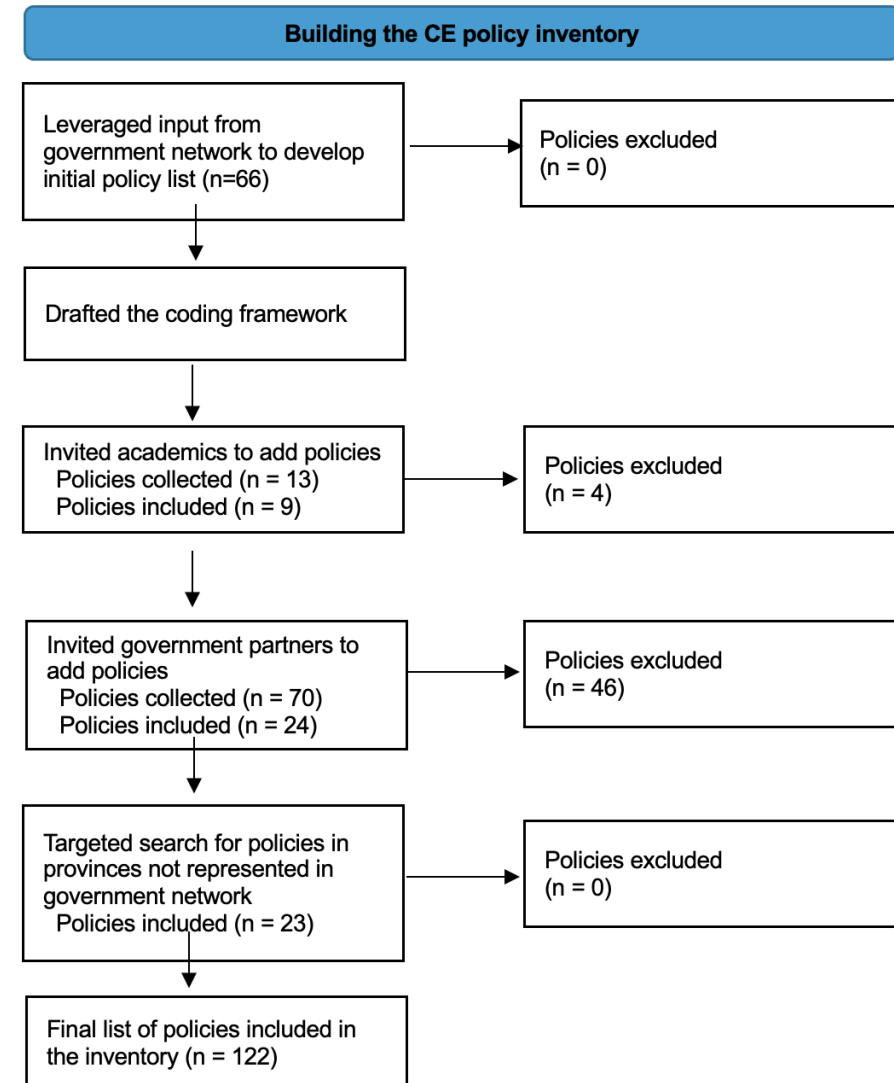
# Building the inventory

## Inclusion criteria:

- Policies are defined as “circular” if described as such by the implementing government or if they employ commonly accepted circular approaches.
- If announced, proposed, in progress or implemented at the time of the search.

## Exclusion criteria:

- If cancelled, elapsed, sunset or no longer funded at the time of the search
- If initiated by a non-government entity.



# Coding framework

CE Policy Category	Brokering	Jurisdiction Type	Municipal
	Business Support		Provincial
	Circular Infrastructure		Territorial
	Consumer Habits		Federal
	Education and Skills		Federal/Provincial/Territorial
	Extended Producer Responsibility	Sector	Public Facilities
	Fiscal Instruments		Construction & Built Environment
	Monitoring		Plastic
	Municipalities and local authorities		Food and Farming
	Policy Design		Energy
	Product Requirement		Mining
	Public Procurement		Electronics, Batteries and ICT
	Research and Innovation		Forestry and Bioresources
	Resource Management		Mobility
	Roadmap governance		Industrial, Commercial and Institutional (ICI)
	Sector level action plans		Textiles
	Standards		Chemicals
	Trade policy and international governance		Nature Restoration
	Waste Management		Furniture
	Worker and Consumer Rights		Renewables

The coding framework largely mirrors the C2P2 Climate Mitigation Policy Inventory coding framework, but with new CE-specific categories.

# Limitations

## Preliminary

Not yet a comprehensive database of all CE policies across Canada. Future extensions could improve comprehensiveness.

## Defining circular policies

Policies are defined as “circular” if described as such by the implementing government or if they employ commonly accepted circular approaches.

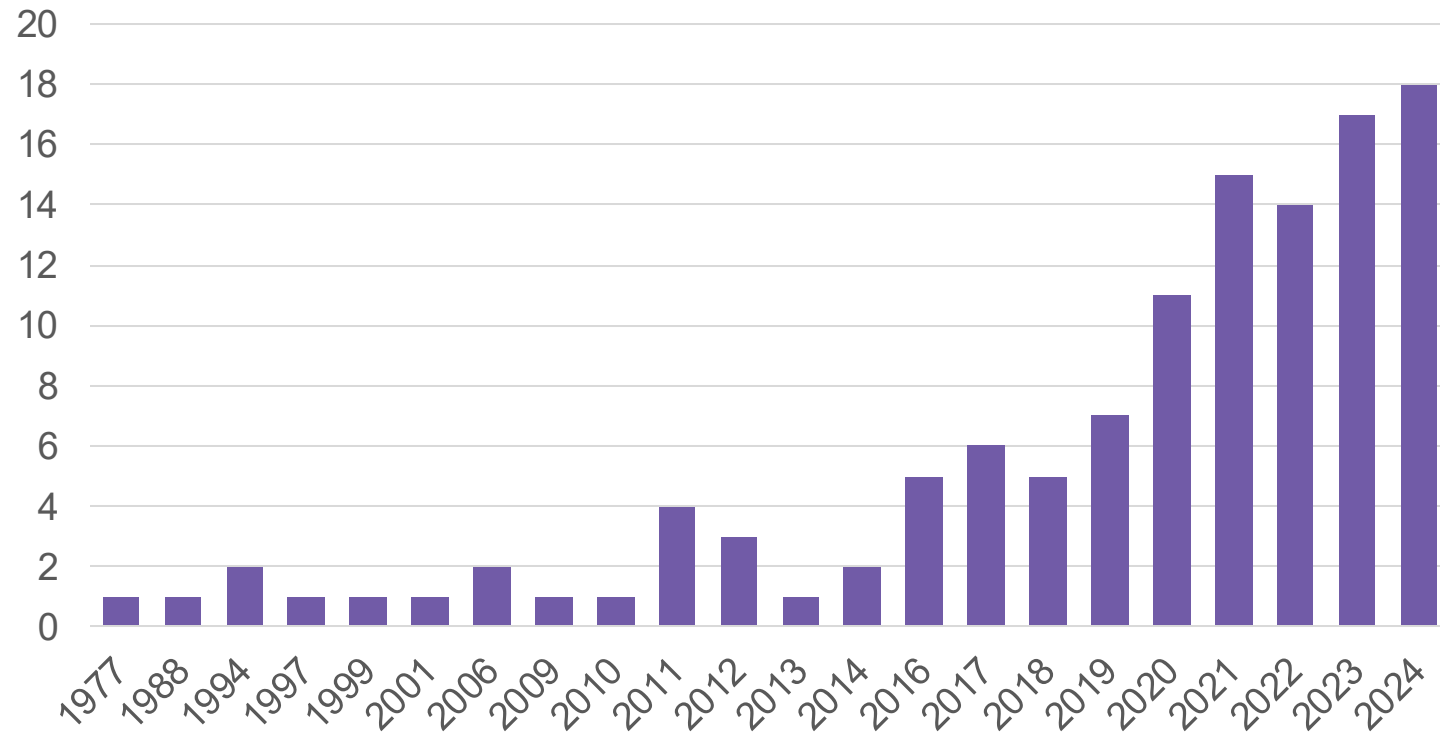
Policies were not assessed on their potential or actual success at improving circularity.

Broad definition of “policy”.

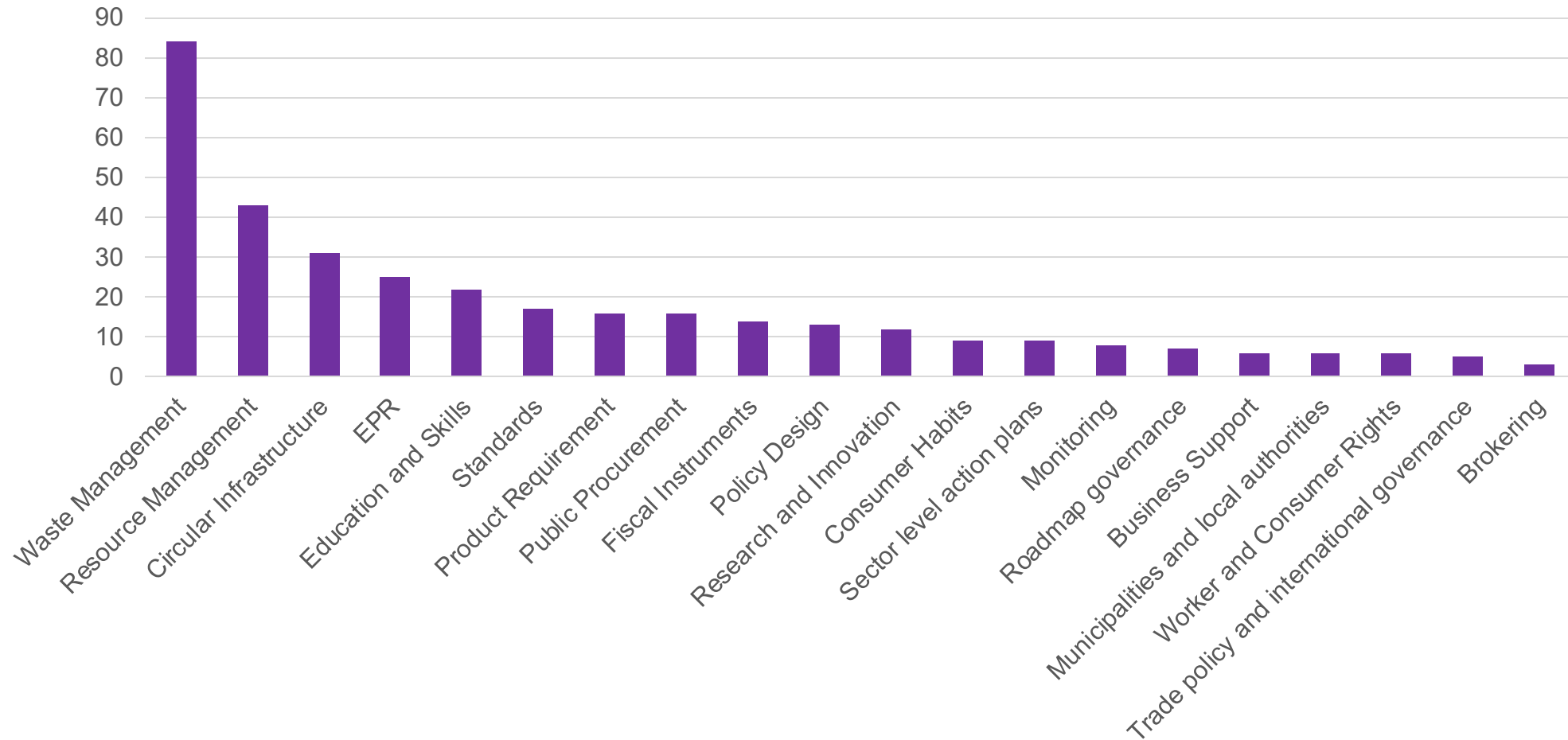
## No weighting

Policies are not weighted on their scope or expected impact. Totaling the number of CE policies in the inventory (a.k.a. policy density) does *not* give an accurate picture of CE policy coverage or stringency across Canada.

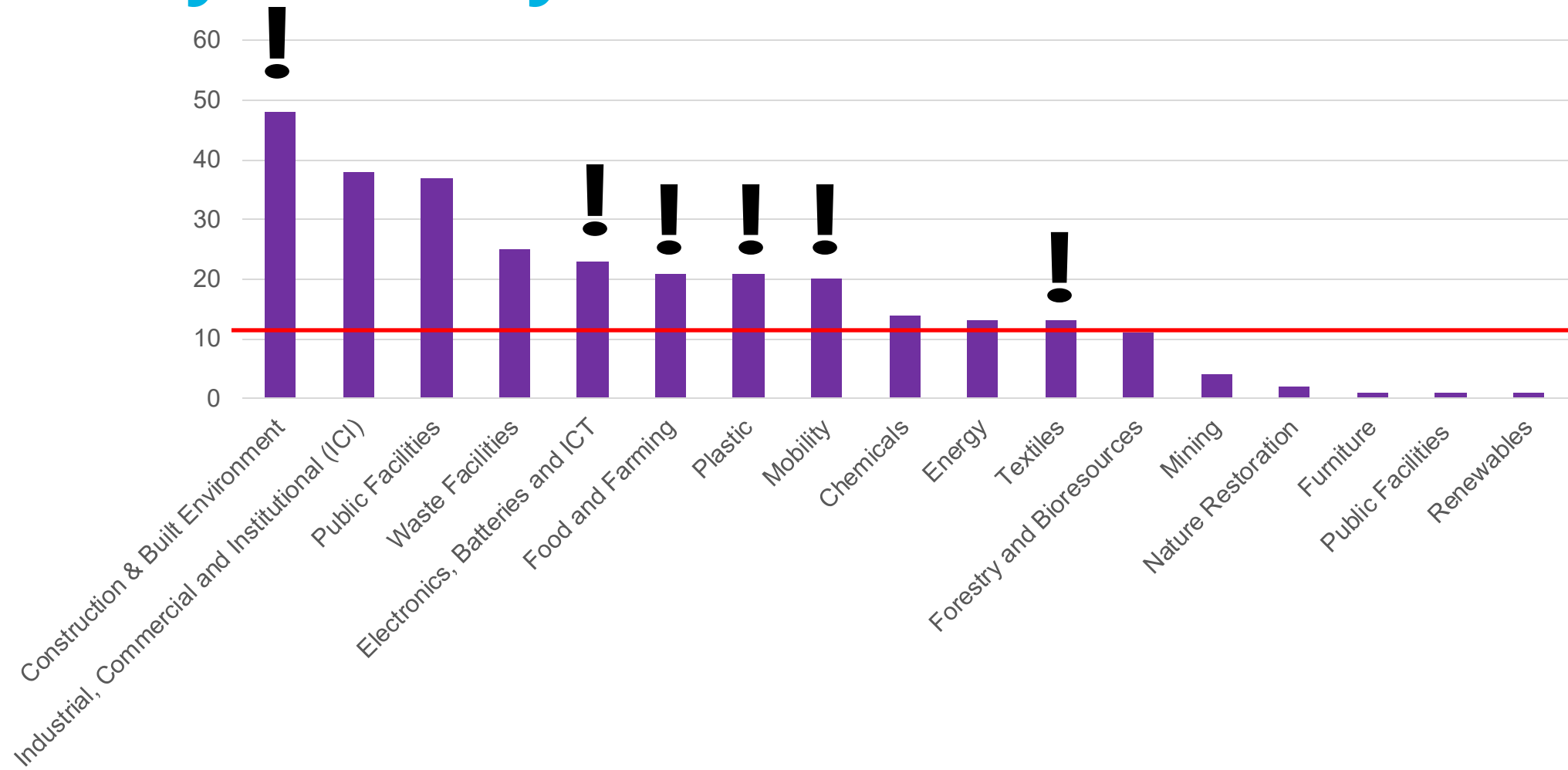
# Policy count over time



# Policy count by CE Policy Category

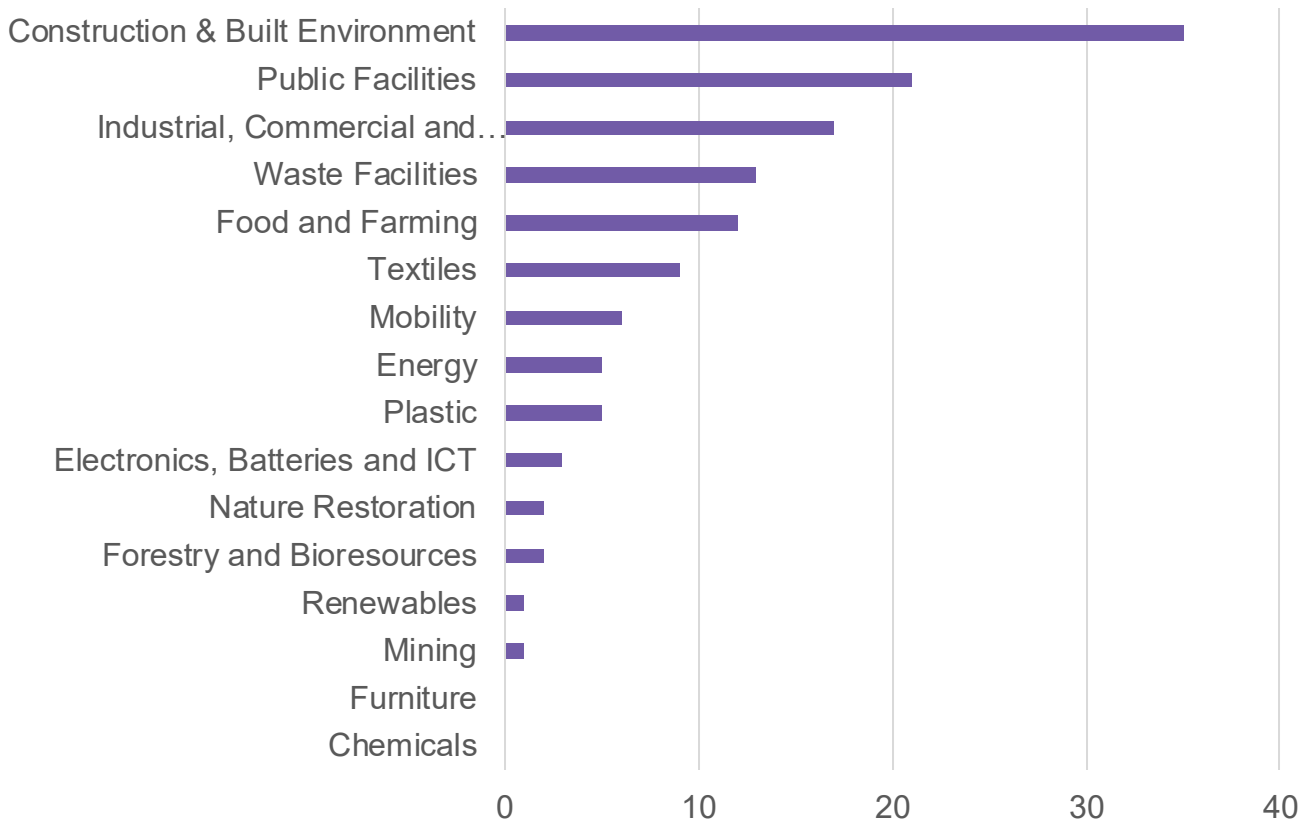


# Policy count by sector

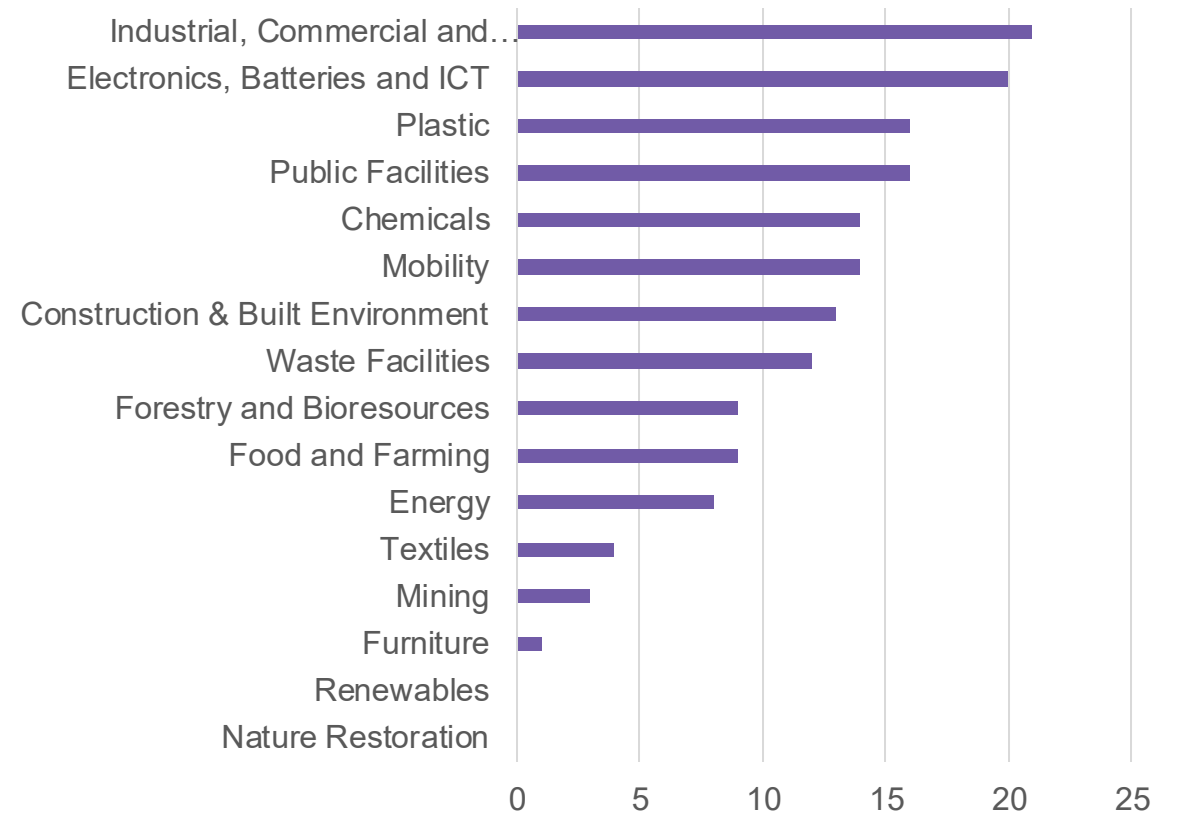


# Policy count by sector and jurisdiction type

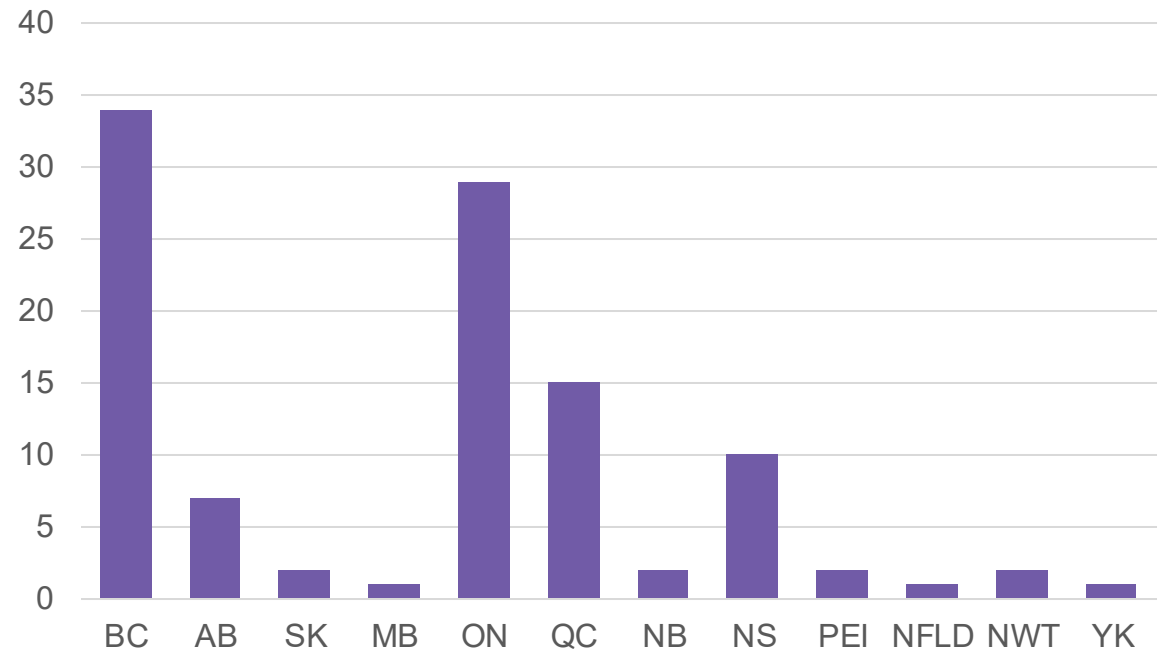
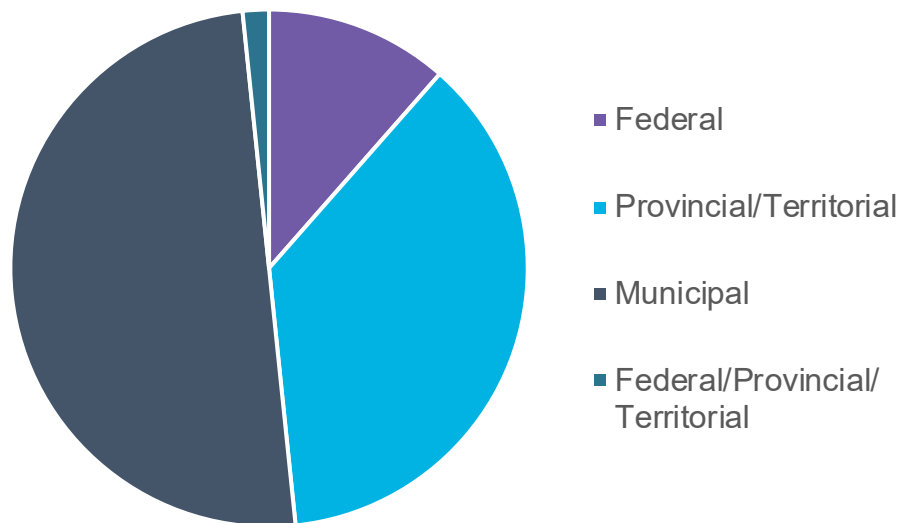
Municipal policies



Federal/Provincial/Territorial policies



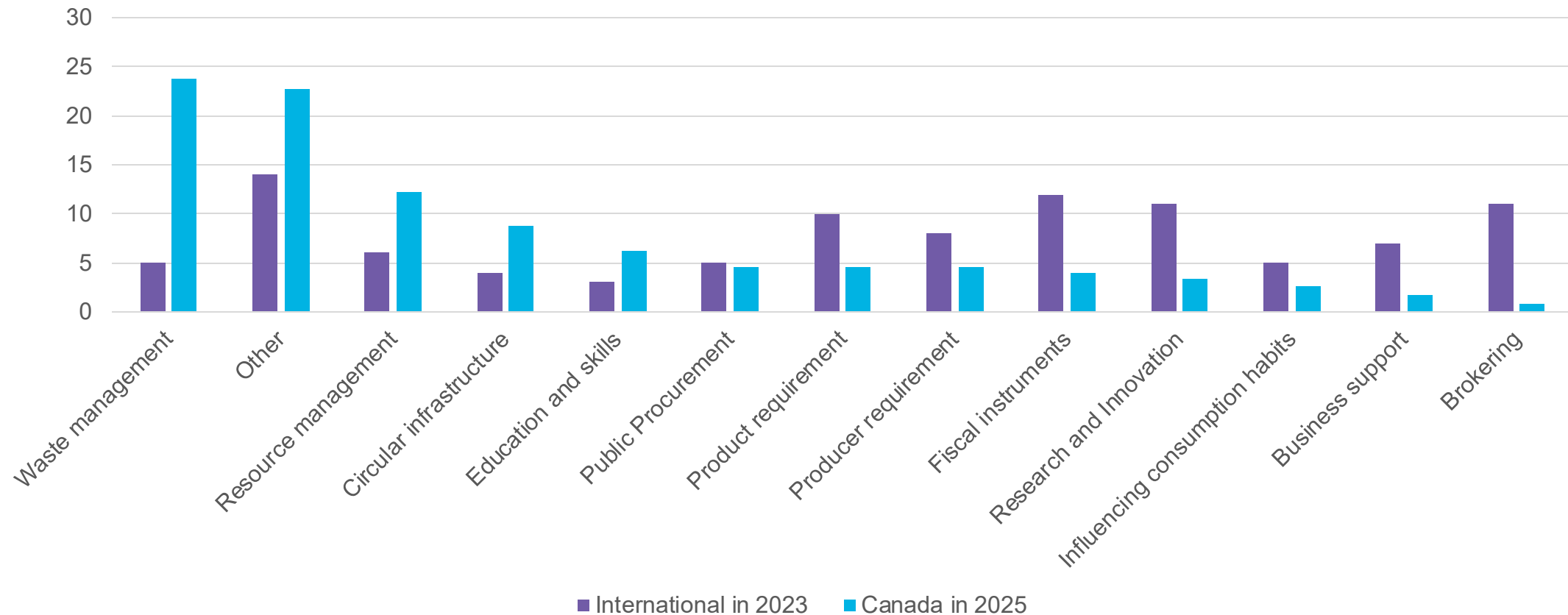
# Policy count by jurisdiction



Alberta, Newfoundland, Saskatchewan and Manitoba have the **highest per capita disposal net of diversion rates**. Room to develop CE policies in these provinces.

# How does Canada compare internationally?

Policy Count by CE Category, Canada and international



Source: UNIDO and Chatham House (2023), National Circular Economy Roadmaps: A Global Stocktake for 2024; CE Policy Inventory.

# Inspiration for future policy directions

## Product requirements

- Digital product passports, e.g., circular product passport for wind farms
- Require use of recycled materials in production



EU: Since July 2024, Ecodesign for Sustainable Products Regulation (ESPR)



Netherlands: Halve the use of raw materials in key product areas by 2030

## Business support

- Promote development of tools to measure circularity at the business level
- Technical support for SMEs to design circular solutions

## Fiscal instruments

- Reduce taxation on repair
- Shift labour taxes to raw material taxes

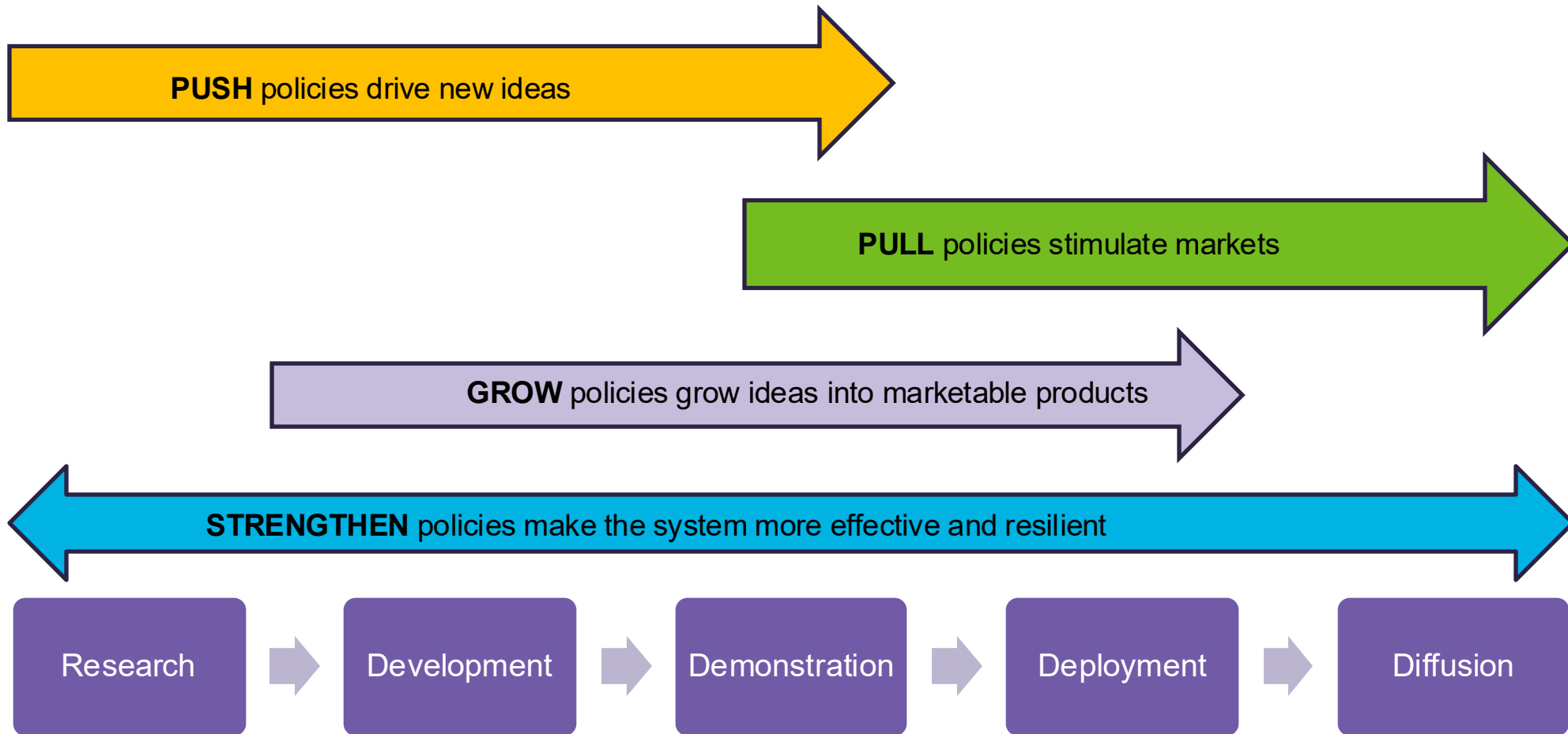


Sweden: Since 2016, labour costs on home repairs and maintenance are eligible for a 50% tax deduction



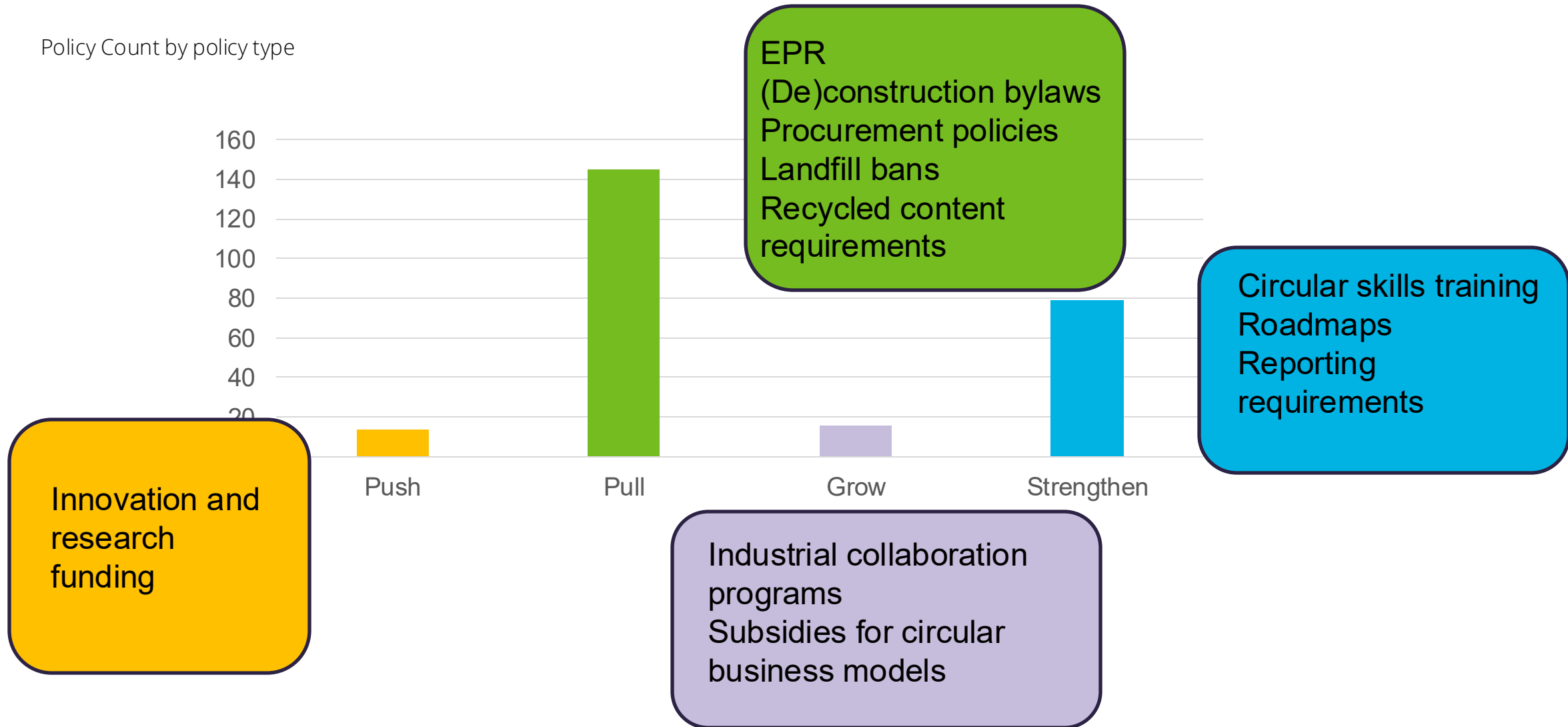
Denmark: Since 1990, tax on extracted raw materials to promote use of recycled materials

# Stages of clean innovation model



# Policy count, stages of clean innovation

Policy Count by policy type



# Future research

- Investigate how **CE and climate policies intersect, clash and complement** one another by using the CE and climate policy inventories in tandem.
- Explore **optimal sequencing** of CE policies and scope a CE policy trajectory.
- **Sectoral deep dives** to map policies that interact to either impede or improve circularity along value chains.

# Future extensions

- **Territorial and northern municipal policies** whose addition would not only improve the comprehensiveness of the inventory but also provide **insight into Indigenous-led approaches** to circularity policy
- Policies that **employ circular practices and/or approaches**, but which are not commonly defined as 'circular' or where increasing circularity is not a stated objective
- Extend the coding framework to enable analysis of the differential impact of CE policies on **equity-deserving groups**
- Develop Canada-specific indicators of effectiveness or stringency of CE policies by compiling evidence of policy impact on a sector-by-sector basis

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**THANK YOU!**

**Explore the CE Policy Inventory and the CE Initiatives Inventory**

**[HERE](#)**

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# Links with carbon mitigation policies

- The Ellen MacArthur Foundation estimates that **45% of global GHG emissions are associated with how we produce and consume**, while 55% are associated with fossil fuels and could be addressed by switching to renewable energy sources (EMF 2019).
- **But CE and climate policies are not always complementary**, particularly given current GHG emissions reporting protocol
- Examples:
  - Canada's Food Waste Reduction Challenge - devotes CAD 20 million to food waste reduction, while reducing upstream and downstream GHG emissions
  - Quebec's household composting program aims to divert organic materials from landfill and in doing so, reduces households' GHG emissions.

# Policies targeting high-waste sources



## Plastics

There are 21 policies targeting the Plastics sector in the inventory

Examples:

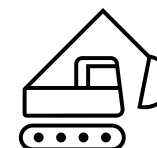
- Federal Plastics Registry
- Extended Producer Responsibility (7)
- Victoria's Single-use Items Reduction Bylaw



## Electronics

There are 23 policies targeting the Electronics, Batteries and ICT sector in the inventory

Over half (12) are Extended Producer Responsibility (EPR) regulation



## Construction

There are 48 policies targeting Construction and the Built Environment

Examples

- Standards on Embodied Carbon in Construction
- Halifax's Administrative Order 27