# Circular Innovation Challenge

## **Electric Vehicle Batteries**

Global Edition 2025

Supported by

RECYC-QUÉBEC
Québec

Powered by



Partnered with









## **CHALLENGE OBJECTIVES**

RECYC-QUÉBEC and Cycle Momentum are joining forces to mobilize Quebec's industrial ecosystem addressing both the challenges and opportunities of efficiently managing materials from the energy transition, all through the lens of a circular economy.

This call for projects therefore aims to:



Identify innovative technological solutions worldwide for the sustainable management of materials from electrical vehicle batteries.



Facilitate the adoption of these innovative solutions by industrial companies based in the Province of Quebec.



Emmanuelle Géhin

President and CEO, RECYC-QUÉBEC

"We must strengthen the circularity of batteries in the electric vehicle industry now in order to be able to absorb the large volumes of materials that will reach the end of their life in the coming years. With this partnership, RECYC-QUÉBEC is not only consolidating its position as a leader in the circular economy, but is also getting concretely involved in the recycling aspect of Quebec's strategy for the recovery of critical and strategic minerals."

# IMPLEMENT SUSTAINABLE SOLUTIONS FOR THE BATTERY MANAGEMENT OF ELECTRIC VEHICLES

The electrification of transport is booming in Quebec, impacting not only cars, but also trucks, buses, recreational vehicles, boats, trains and industrial equipment.

For several years now, Quebec industry has been actively working on implementing structuring initiatives to improve the management of used batteries.

Although the volumes of end-of-life batteries to be managed are currently low due to their long lifespan (13 to 14 years), a significant increase is expected within the next 4 to 5 years. A study published by RÉCYC-QUÉBEC in 2022 estimates that the total quantity of end-of-life electric vehicle batteries will increase exponentially, reaching approximately 12,000 metric tons by 2030, 120,000 metric tons by 2040 and 150,000 metric tons by 2050.

Considering this expected increase in the volume of end-of-life batteries, it is essential to promote a circular approach by exploring all possible technological solutions to extend the life of batteries, promote their reuse and improve their recycling.

Without a structured and proactive approach, there is a risk that these batteries will be exported to other markets for recycling. This would mean a loss of economic and materials management opportunities for Quebec.

A robust circular ecosystem would maximize the use of local resources, reduce Quebec's dependence on imported critical materials and position the province as a competitive player in the North American battery industry.







## WHAT ARE WE LOOKING FOR?

#### TYPES OF SOLUTIONS EXPECTED

This call for projects aims to identify, evaluate and test the best technological solutions available worldwide to promote the second life, reconditioning and recycling of electric vehicle batteries, namely:

- Fixing & Repairing Batteries –Keeping batteries in use within the same vehicle by repairing and replacing components when possible.
- Reconditioning and Remanufacturing When repair is not sufficient, extend lifespan further by refurbishing, replacing modules, and repackaging for continued use.
- Second-Life Applications When batteries are no longer viable for mobility, repurpose them for energy storage and other applications.
- Efficient Recycling of Materials When batteries reach their end of life, recycle them to recover materials and minimize environmental impact"

## WHO CAN APPLY?

#### PROFILE OF TARGET COMPANIES

#### (LOCAL AND INTERNATIONAL)

- Small, medium, large businesses and startups with more than 2 years in operation
- Company's solution must be at TRL 6 or higher (technological maturity level), scalable and ready for implementation.
- Company interested in participating in pilot projects with manufacturers in the province of Quebec, Canada.
- Company with more than 3 employees Languages spoken: French or English

#### **APPLY NOW**



#### Patrick Gagné PDG, Cycle Momentum

"At Cycle Momentum, we firmly believe that innovation and collaboration are the keys to meeting the challenges of the energy transition. This partnership with RECYC-QUÉBEC will catalyze innovative solutions that will not only reduce environmental impact, but also create new economic opportunities for Quebec. Together, we can turn challenges into opportunities and build a more sustainable future."

# PARTICIPATION OF KEY PLAYERS IN THE ELECTRIC VEHICLE VALUE CHAIN

The innovative companies selected will have the privilege of meeting an ecosystem of key players in the electric vehicle value chain which will be future potential users of these solutions to ensure optimum management of second life, reconditioning and advanced recycling materials. Thanks to their commitment, our partners will help expand the project's reach and foster discussions on battery refurbishment, reuse, and recycling.







Cycle Momentum will provide personalized support to ensure that selected companies are well prepared for meetings with participating manufacturers and key stakeholders.

#### CUSTOMIZED SPONSORSHIP AND COLLABORATION PROGRAM WITH SELECTED INNOVATIVE SOLUTIONS

The 3 to 5 innovative solutions selected will take part in a 10-week personalized coaching program between from July to October 2025, which will include the following elements:

- An assessment of the company's ability to present its solution effectively to the value chain stakeholders.
- Preparation workshops based on identified needs.
- A series of structured meetings between selected companies and those stakeholders to explore possible collaboration areas.



## **SELECTION PROCESS**

#### **NEXT STEPS**

#### 1. Pre-selection on the basis of applications

An initial selection will be made upon receipt of the applications. They will be assessed based on the evaluation criteria, and you will receive confirmation of your pre-selection around May 23rd.

#### 2. Interviews with shortlisted candidates

During the week of May 26th, we will schedule an interview to learn more about you, your team, and your company, including your product or service, market, competitive landscape, and interest in the program."

#### 3. Presentation to a jury

Shortlisted candidates will be invited to make a presentation and take part in a question-and-answer session during the week of June 9th. The jury will consist of RECYC-QUÉBEC, Cycle Momentum and industry representatives.

#### 4. Final decision

We will confirm their selection to the 3-5 shortlisted companies during the week of June 16

#### **APPLY NOW**

#### **KEY DATES**

#### **SELECTION: FROM OCTOBER 30 TO DECEMBER 10, 2024**



MARCH 26 TO MAY 5

Call for entries



MAY 6 TO **JUNE 13** 

Selection process



**WEEK OF** JUNE 9

Jury presentation with industrialists partners

Final decision

**WEEK OF** 

**JUNE 16** 

#### PROGRAM: WEEK OF DECEMBER 10 TO END OF FEBRUARY 2025



**JULY** 9-18

Assessment of selected companies' ability to present to industry



**JULY** 

21-31 Organization of preparatory workshops according to



**AUGUST 4 TO SEPTEMBER 30** 

improvement of identified gaps through a personalized identified needs program to prepare meetings with industry

representatives

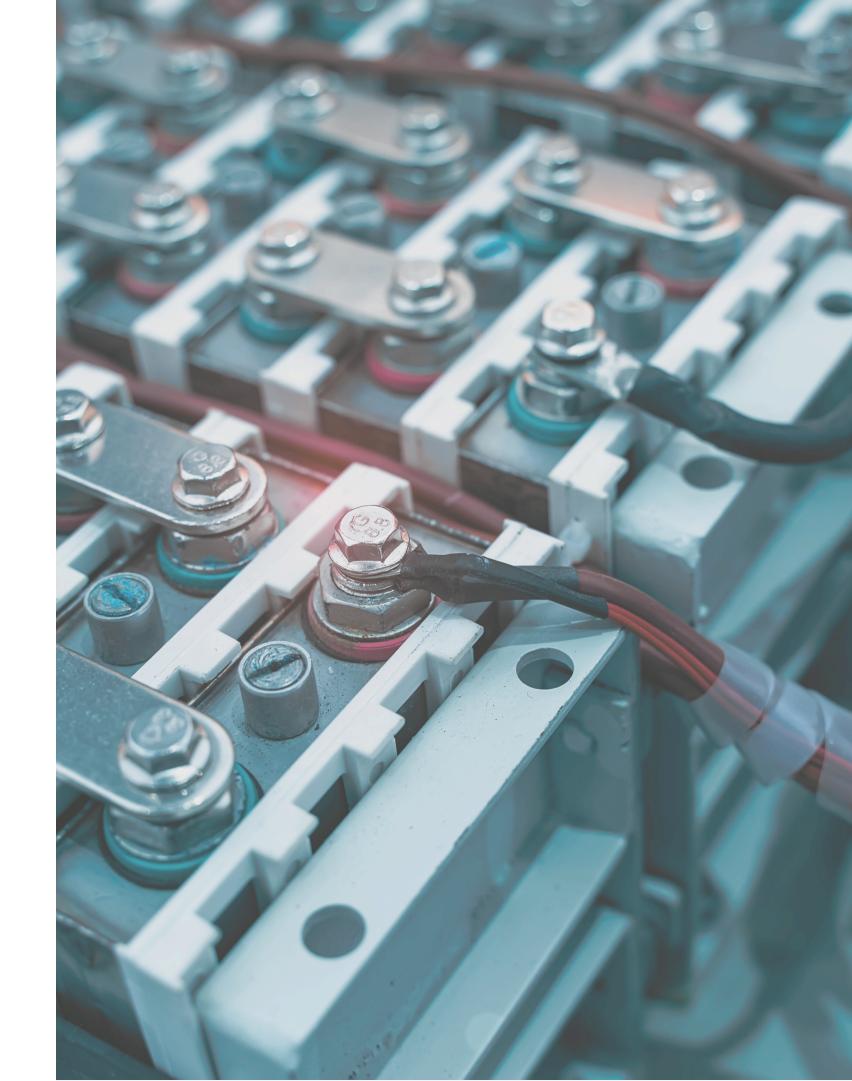


**STARTING IN** MID-OCTOBER

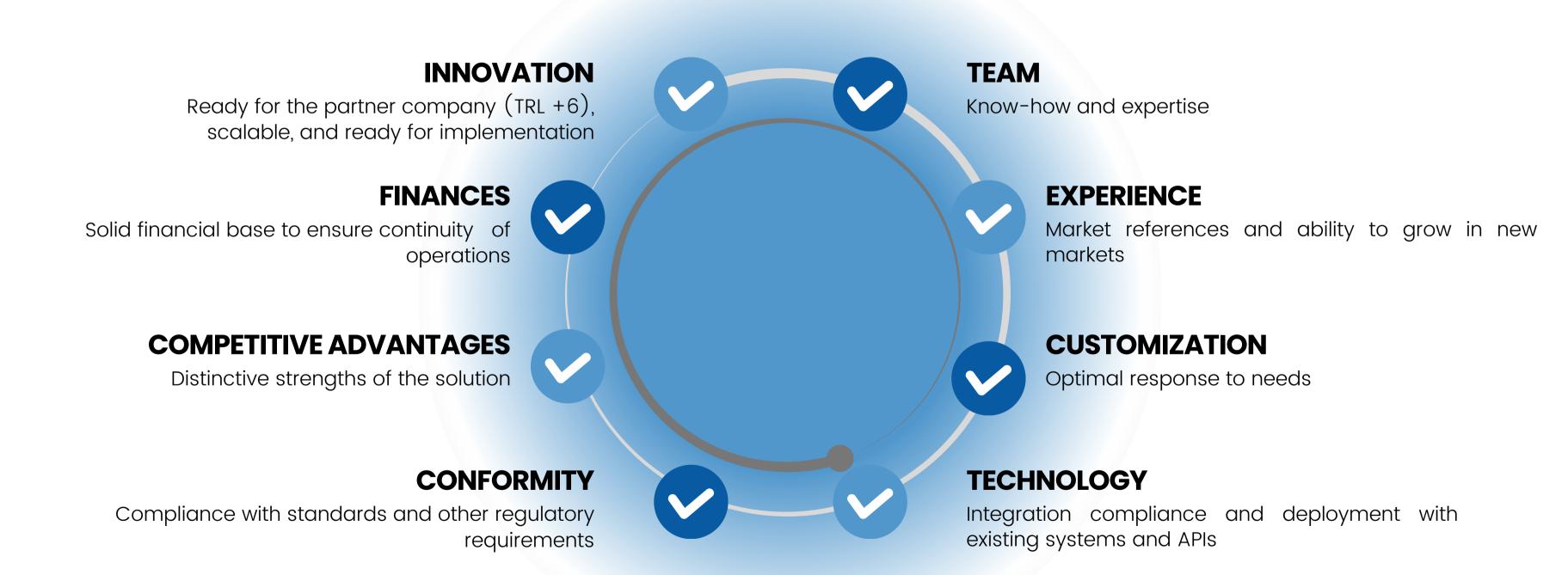
Development of partnerships by manufacturers

## WHY APPLY FOR THIS CHALLENGE?

- 4 High visibility and access to a network of key players in Battery electric vehicle sector.
- Opportunity to develop a strategic collaboration and/or pilot project with the network of industry players to demonstrate your solution. Examples of sought-after collaborations include: pilot projects, co-development projects, supplier-client agreements, strategic partnerships, investments, and licensing.
- Direct access to experts from RECYC-QUÉBEC, a Crown corporation in the province of Quebec that promotes innovation in this sector. RECYC-QUÉBEC experts have access to an extensive network of players in the Quebec and Canadian circular economy ecosystem.
- Cycle Momentum's experts provide guidance on supply chain, financing strategies, marketing, price positioning and communications, to help you prepare for meetings with Battery electric vehicle sector stakeholders.
- 4 Raise your company's profile with a communication campaign on social networks.
- Opportunity to present your company and technology to a panel of renowned experts and entrepreneurs.
- Cycle Momentum's local partners support international companies wishing to establish themselves in Quebec.



## **SELECTION CRITERIA**



## ABOUT RECYC-QUÉBEC

RECYC-QUÉBEC is a Crown corporation created in 1990 with the aim of making Quebec a model of innovative, sustainable waste management for a zero-waste society. RECYC-QUÉBEC promotes, develops and encourages the reduction, reuse, recovery and recycling of containers, packaging, materials and products, as well as their reclamation, with a view to the circular economy and the fight against climate change.

## **ABOUT CYCLE MOMENTUM**

Cycle Momentum is an international acceleration and innovation platform whose mission since 2015 has been to identify and support the development of cutting-edge technologies to address the major ecological challenges facing humanity. A member of the Cycle Capital platform, Cycle Momentum offers acceleration and open innovation programs to support entrepreneurial growth, financing and commercialization of climate technologies. We establish the necessary collaborations between manufacturers and start-ups to accelerate their commercialization. We offer investment opportunities through our Origo program and our extensive network of investors.

Propulsé par

Québec \* \*

Opéré par









### **OUR PARTNERS**



InnovÉÉ is an industrial research sector group (RSRI) dedicated to funding and supporting companies and research centers in their collaborative R&D projects related to electric energy, transportation electrification, and smart transportation.



Propulsion Québec, the industrial cluster for electric and smart transportation in Québec, is a nonprofit organization dedicated to accelerating the growth of Québec's zero-emission ground transportation industry and enhancing its international competitiveness. Founded in 2017, it now represents and mobilizes over 215 member organizations from the electric and smart transportation ecosystem through various initiatives. Propulsion Québec currently focuses its efforts on three key sectors: zero-emission vehicles, charging infrastructure, and battery technology.



The Energy Transition Valley (VTE) is an innovation hub dedicated to developing key energy sectors, including batteries, electrification, hydrogen, and the decarbonization of heavy industry and transportation. We bring together entrepreneurs, industry leaders, municipalities, and the research community within attractive and sustainable living environments.VTE aims to establish a world-class research and innovation ecosystem that will develop cutting-edge decarbonization solutions to accelerate energy transition.