Spring 2022

# Rethinking the Recycling of Plastic Packaging

## Overview of Phase II Projects

GAPC CPT

GROUPE D'ACTION PLASTIQUES CIRCULAIRES
CIRCULAR PLASTICS TASKFORCE

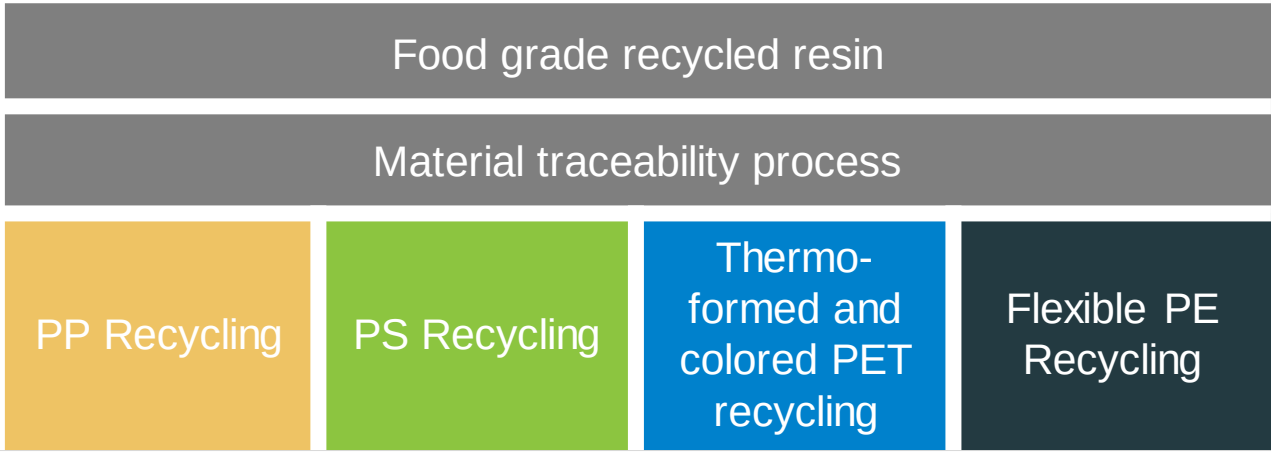
# Phase II-III Objectives and Projects

**Implement industrial-scale solutions to quickly & concretely improve the quality of sorted materials, as well as the recycling rate of plastic packaging.**

More specifically, the projects will look at:

- Increased capture rate and quality measurement at MRFs
- Secondary sorting at processors
- Production of food-grade PCR resins

The projects will be adapted to consider the specificity of each plastic type and their value chain



# Sorting, secondary sorting and recycling of PE flexible packaging

## Objective

**Optimize the capture rate of flexible plastics in MRFs and at recyclers using a digital watermark marking system, which allows the distinction between food and non-food packaging**

- **How**: Integration of digital watermark on packaging and optimization of equipment for sorting and recycling flexible plastics
- **Implementation steps**
  - Phase 1: Preliminary tests in manufacturer test centers
  - Phase 2: On-site tests at sorting centers (2) and recyclers
  - Phase 3: Food and non-food packaging separation tests

# Secondary sorting of rigid plastics and recycling of PP and PS packaging up to food grade

## Objective

**Enable the production of recycled PP and PS up to food grade from curbside collection by obtaining approval of a secondary sorting and recycling process**

- **How**: Implementation of a pilot line for secondary sorting and recycling of rigid plastics and development of machine learning for sorting systems through artificial intelligence
- **Implementation steps**
  - Production and sorting of bales: improvement of the recognition rate of packaging in a real world environment
  - Development of a database containing information on packaging, ensuring better recognition
  - Transport of sorted plastics to recyclers to supply the various developed markets (supply chain concept)

# Recyclability analysis of clear thermoformed PET

## Objective

**Demonstrate the technical ability to recycle bales containing higher proportions of thermoformed PET and maintain product safety for food applications**

- **How**: With recyclers, carry out on-site testing of bales containing thermoformed PET in various proportions
- **Implementation steps**
  - Production of bales containing various proportions of thermoformed PET (mono-PET, PET/PE)
  - Transport to recyclers and measure of recyclability parameters
  - Determination of thermoformed PET bale specifications (and eco-design rules, where applicable)

# Documentation of the process for obtaining food grade certification for recycled resin

## Objective

**Develop a roadmap aimed at systematizing the process of obtaining food grade certification for recycled resins, while maintaining the high level of quality standards required**

- **How :** With the support of a consultant, proactively collaborate with Health Canada and ECCC
- **Next Steps**
  - Publication of a call for qualification to select a service provider
  - Creation of a Technical Monitoring Committee
  - Selection of a service provider, finalization of the schedule and start of the work

# Traceability pilot project throughout the value chain, adapted to plastics from Quebec curbside collection

## Objective

**Evaluate the approach, advantages, disadvantages and compatibility of various traceability systems and measure their applicability in Quebec, Canada and North America, then plan a pilot project**

- **How**: With the support of a consultant, plan the integration of a pilot project into other industrial projects supported by the CPT
- **Next Steps**
  - Publication of a call for qualification to select a service provider
  - Selection of a service provider, finalization of the schedule and start of the work

# Overview of Partner Selection Criteria

| Criteria | Description |
| --- | --- |
| Contribution to the project | The partner brings a significant contribution to the project (financial or in kind) |
| Adherence to the CPT collaborative model and functioning | The partner understands that CPT's work relies on stakeholder collaboration, transparency and respect of the functioning principles agreed upon within working groups |
| Respect of timelines and deadlines | The partner's contribution will not delay in any way the project implementation and the achievement of agreed-upon objectives within the set timeline |

# To contact us  and share your willingness to support our projects: info@gapc.ca

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