

Flexible Plastics: the road to circularity

Webinar Series



REDUCING
PLASTIC WASTE
IN CANADA



Funded by
the European Union

WEBINAR #1 BRIEF

Roadmaps to Circularity for Flexible Packaging in Europe

INTRODUCTION TO THE REDUCING PLASTIC WASTE IN CANADA PROJECT

The two-year project aims to deepen knowledge and strengthen the implementation of solutions to reduce plastic waste in Canada through knowledge sharing and peer-to-peer exchanges with European Union (EU) counterparts. The project is part of the Circular Plastics in the Americas Program as part of the EU commitment to the UN Sustainable Development Goal to support the transition toward sustainable production and consumption.

WEBINAR OBJECTIVE



The first webinar in the series on flexible plastics circularity features the perspectives and lessons from four leading organizations that have developed and are implementing comprehensive roadmaps to drive the recovery of flexible plastic packaging.

SPEAKERS



Sarah Brooks
Moderator
Canada Plastic
Pact



Niels van Marle
Speaker
Netherlands
Institute for
Sustainable
Packaging (KIDV)



Graham Houlder
Speaker
CEFLEX - Circular
Economy for
Flexible
Packaging



Adam Herriott
Speaker
UK WRAP -
Waste and
Resources
Action
Programme



**George
McLoughlin**
Speaker
Ellen MacArthur
Foundation (EMF)

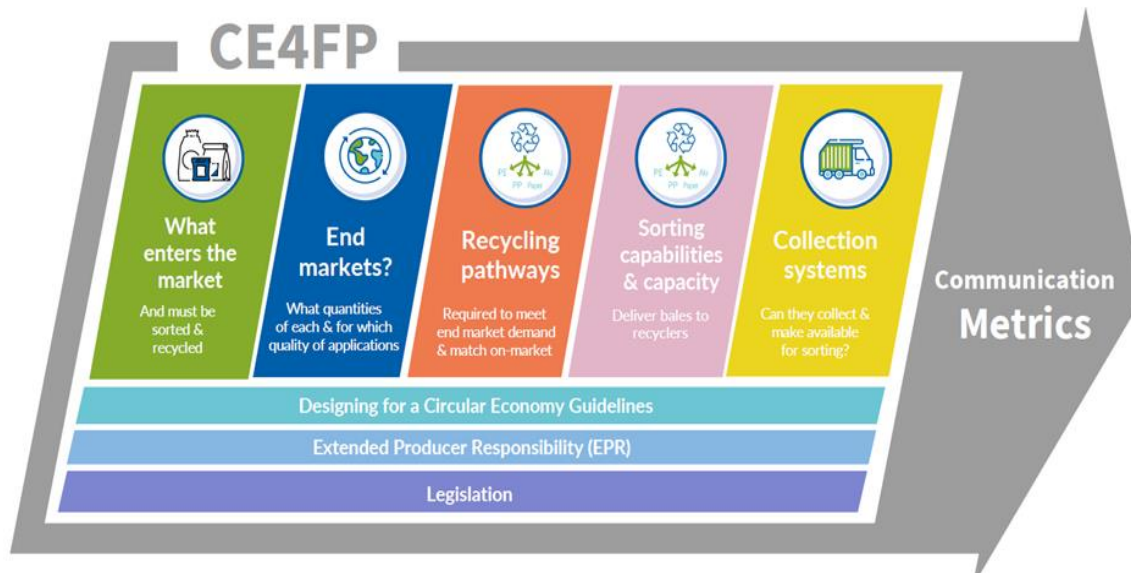
Opening Remarks – Sarah Brooks, Canada Plastic Pact (CPP)

Sarah Brooks set the scene by highlighting the importance of roadmaps in steering the efforts of the value chain and the need to integrate the socio-economic context and stakeholder engagement in their development. In a dynamic and complex environment such as the one for flexible packaging, there are diverse roles for roadmaps: they can either provide high-level guidance to stakeholders or describe a step-by-step pathway towards specific outcomes. We can learn from these various approaches and how they are being implemented reflecting their different contexts and implementation objectives. The webinar’s four experts shared their organisation’s experience in developing roadmaps, engaging various players and early progress in their implementation.

Graham Houlder, Circular Economy for Flexible Packaging (CEFLEX)

Initiated in 2016 with 20 stakeholders, CEFLEX now represents over 190 stakeholders from all parts of the European flexible plastic packaging value chain. Together they employ 500,00 people in 5,450 locations. Driven by a circularity mission, the CEFLEX roadmap is comprehensive in its vision. It has been endorsed by CEFLEX members, together with a set of actions for each part of the value chain.

The CEFLEX demand-driven CE4FP



By 2025, CEFLEX envisions an established collection, sorting and reprocessing infrastructure for post-consumer flexible packaging across Europe. It will be based on end-of-life technologies and processes which deliver the best economic, technical and environmental outcome for a circular economy.

Critical elements in the implementation of the CEFLEX roadmap include: understanding what is being placed on the market; developing end markets; determining recycling pathways and how sorting should be organised given the specific requirements of mechanical and chemical recyclers. Three key enablers for this roadmap were identified as: (1) having in place the Design for a Circular Economy Guideline; (2) Extended Producer Responsibility (EPR) schemes, and; (3) recycling legislation.

Niels van Marle, Netherlands Institute for Sustainable Packaging (KIDV)

KIDV is an independent knowledge institute funded by the Dutch extended-producer responsibility (EPR) program that assists companies in the Netherlands to reduce the environmental impact of their packaging in the packaging value chain. The Dutch EPR program (Afvalfonds Verpakkingen) has accepted flexible plastic packaging in its collection system for years and more recently multi-laminate flexibles and metalized laminates.




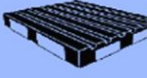

The KIDV roadmap is aligned with the objectives of the CEFLEX where all mono-PP and mono-PE will be recycled into new film packaging for in non-food grade applications. It includes nine possible pathways to improve the circularity of flexible plastic packaging, with the following 4 activities as key elements:

1. Design flexible plastic packaging with preference for mono-PE formats
2. Limit the use of barriers, inks, adhesives and additives that can have an impact on the recyclability.
3. Avoid multilayer materials with PET-layers as these have an impact on recyclability.
4. Instruct end-users on correct use and disposal by introducing a logo for flexible packaging.

For sorters and recyclers the following priority activities have been identified.

1. Sort mono-PE < A4 to the DKR 310 commodity bale.
2. No longer sort mono-PP and PO (combinations of PE and PP) flexible plastic to the mixed plastics DKR 350 bale, but instead sort them to a new commodity PO bale (DKR 323). Flexible plastic packaging containing PET must be minimized in order to meet the DKR 323 specifications.

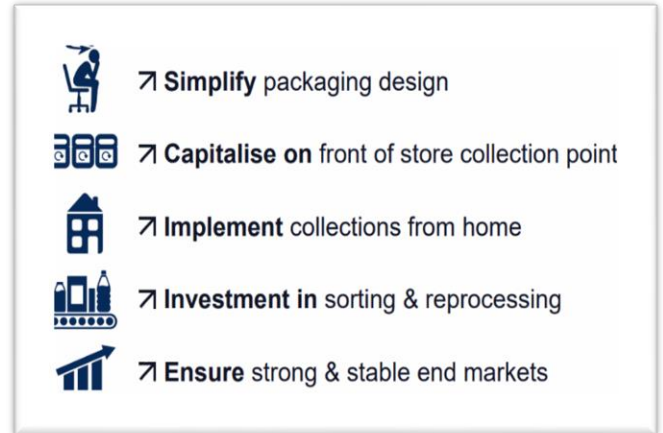
KIDV is currently in the process of evaluating the nine pathways identified in the roadmap with the value chain actors, including Afvalfonds Verpakkingen. Lesson learned from the roadmap implementation: (1) recognition that recycling targets in the Packaging and Packaging Waste Directive (PPWD) are volume driven instead of quality driven with specific recycling targets for plastic packaging at 50% by 2025 and 55% by 2030; (2) without a preference for quality recyclate there is little incentive to change current practices from a focus on sorting flexibles to processing mixed plastics, as this meets the volume driven targets at the least cost, and; (3) strong need for official definition of recyclability. KIDV recommends the following quality indicators which rank the output of recycling process into six category levels from 0 to 5 (0 on the scale is raw material equivalent food grade recyclate, whereas 5 has limited recyclability).

	Quality indicator	Products created with recycled content	Input material (the percentages given are purely indicative)
FOOD	CAT-0	EQUALS VIRGIN	Assumed quality resulting from chemical recycling
	CAT-1		Pellets with rPP content > 98 %; PE content < 2 %; impurities < 0.1 %
NON-FOOD	CAT-2		Pellets with rPP content > 90 %; PE content < 10 %; impurities < 0.5 %
	CAT-3		Pellets with rPP content > 80 % and rPO content > 90%
	CAT-4		Pellets of mixed plastics with > 90 % PO's
	CAT-5		Pellets of mixed plastics with > 70 % PO's

Adam Herriott, Waste and Resources Action Programme, UK (WRAP)

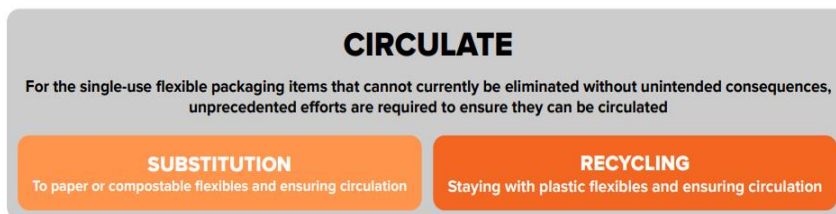
WRAP's Plastic Pact Roadmap for the UK aligns with the CEFLEX roadmap and incorporates the CEFLEX Design for a Circular Economy (D4ACE) guideline. WRAP's roadmap was first published in 2019 and updated in 2021, reflecting the need to adapt to changing conditions during implementation. The UK Roadmap is divided into 3 key areas: (1) Design; (2) Collections, Communications and Sorting, and; (3) Processing and End Markets. UK Plastic Pact signatories are actively engaged in the UK WRAP roadmap development and implementation.

The Roadmap focuses on efforts to simplify packaging design, increase Front-of-Store (FOS) collection of flexible plastics, and consumer education with the objective of including curbside collection in the longer-term. Recently the UK government announced EPR requirements for packaging starting in 2024, including calls for standardization of how packaging and other recyclables are collected at curbside under an EPR scheme, with mandatory collection of flexible packaging by 2027. The UK government and private sector have invested in pilot projects for flexible plastic collection and recycling. The UK Plastic Pact's Roadmap is working closely with the OPRL (On Pack Recycling Label) to align binary labelling (simple yes/no recyclability instructions), to be standardized across the UK. To address the challenge of end markets, the UK Plastic Pact has set up collaborative end market trials to test flexible materials using both mechanical and chemical recycling to avoid these materials going into lower quality recycling applications.



George McLoughlin, Ellen MacArthur Foundation (EMF)

EMF focuses their roadmap on B2C flexible plastic packaging - over the past 18 months the EMF engaged with over 100 organizations and facilitated twenty-eight workshops and explored six solution pathways, leading to development of an overarching strategy with 21 urgent and specific actions to deliver circular economy solutions under three action themes: (1) Move away; (2) Circulate, and; (3) Drive a strong upstream innovation agenda.



The strategy requires first to move away from flexible packaging that can be easily substituted. Meeting new recycling targets will require flexibles to be included in EPR schemes with fees set to cover the true net costs of recycling these materials. Separate recycling targets for flexible plastic packaging should also be included in EU recycling targets which currently do not distinguish between flexible and rigid plastics. For single use plastic flexible packaging that cannot be

easily eliminated without unintended consequences, unprecedented efforts are required to ensure they can be circulated in the economy. In parallel, businesses need to further accelerate their packaging design changes to switch to mono-material, eliminate some flexible plastic packaging, and reduce use of coating, glues and inks.

DISCUSSION Q & A

63%

Active in Q&A



1h12'

Average
participating time



Questions from participants focused on:

- Technical opportunities for recycling of multilayer plastics.
- The EU packaging waste directive and targets, understanding its role in driving change.
- Understanding the role of consumers in sorting and recycling.
- Understanding how the increased costs for sorting flexibles is factored into the roadmaps.
- The relationship between simplification of materials choices versus performance and carbon footprint
- The future collection of flexibles, as dedicated or commingled stream.

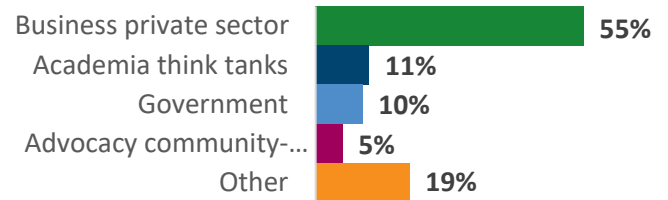
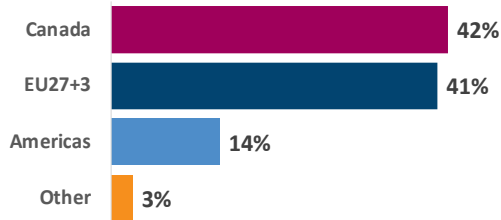
KEY TAKE AWAY MESSAGES

- All roadmaps involved consultations and collaborations with the various parts of the plastics value chains in their development and implementation. They have been initiated by diverse types of organisations to drive and coordinate change towards circularity of flexible plastics.
- Roadmaps for flexible plastics are not static plans, they must be able to adapt with changing contexts and lessons in implementation.
- Roadmaps recognise the foundational elements of the existing regulatory and infrastructure system and work to link with a variety of initiatives. For example, they acknowledge that EPR schemes are required to drive both design changes and collection systems, along with the financial backing to implement a truly circular economy for flexible plastics.
- Design for recycling plays a critical role in the shift towards a circular economy for flexible plastic packaging. All Roadmaps emphasize a preference for mono-material polyethylene (PE) and polypropylene (PP) packaging design
- Inclusion of flexible packaging-specific recycling targets and EPR fees that reflect the net costs to manage flexibles are key to further stimulating action throughout the value chain.
- Emerging issues include: how to integrate requirements for quality recycle to incite investments in sorting; effective labelling to increase consumer participation in collection systems; driving upstream innovation to increase recovery of flexible plastics.
- The webinar was very well received, with many participants indicating they found the webinar very good with new knowledge being acquired.

EVENT AUDIENCE



Participants joining from the following countries: Participants working in the following sectors:



KEY RESOURCES

CEFLEX: ceflex.eu

Design Guidelines for a Circular Economy guidelines.ceflex.eu

Graham Houlder, CEFLEX Packaging Coordinator: Graham@ceflex.eu

Netherlands Institute for Sustainable Packaging (KIDV) kidv.nl

KIDV Recycle Checks Tools kidv.nl/recycle-checks-en

KIDV Library kidv.nl/library#/

KIDV Roadmap 'Multilayer flexible packaging in a circular economy'

Niels van Marle, Packaging Expert KIDV: n.vanmarle@kidv.nl

Waste and Resources Action Programme (WRAP) UK: wrap.org.uk

UK Plastic Pact wrap.org.uk/taking-action/plastic-packaging/initiatives/the-uk-plastics-pact

Roadmap for creating a circular economy for flexible plastics wrap.org.uk/resources/guide/creating-circular-economy-flexible-plastic-packaging

Adam Herriott, Adam.Herriott@wrap.org.uk

Ellen MacArthur Foundation – Flexible Packaging Strategy

[Executive Summary of Flexible Packaging: Urgent Actions Needed to Deliver Circular Economy Solutions](#)

Ellen MacArthur Foundation – [Other Plastic Resources](#)

Disclaimer:

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