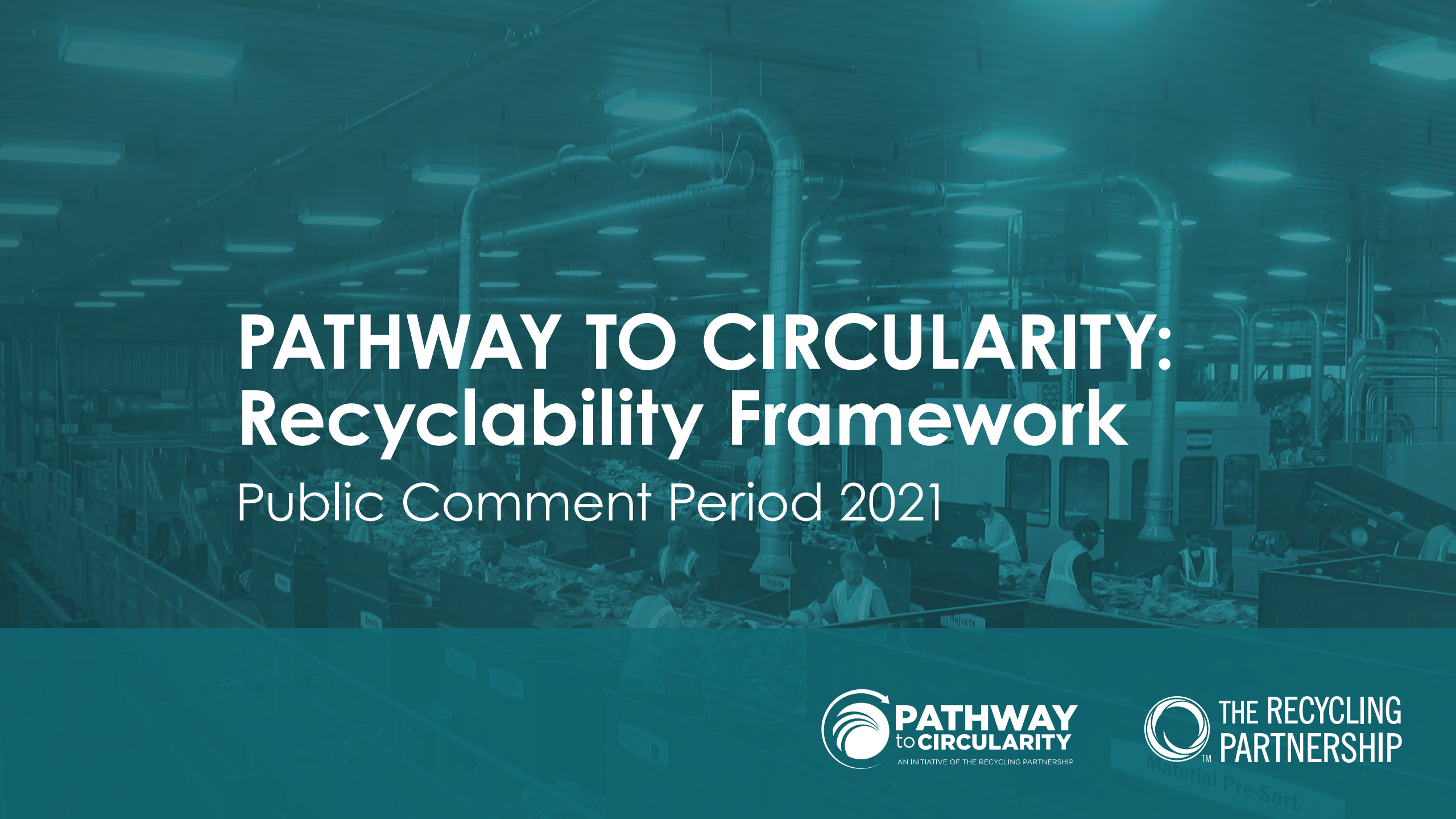

PATHWAY TO CIRCULARITY: Recyclability Framework

Public Comment Period 2021

PATHWAY to CIRCULARITY
AN INITIATIVE OF THE RECYCLING PARTNERSHIP

THE RECYCLING PARTNERSHIP

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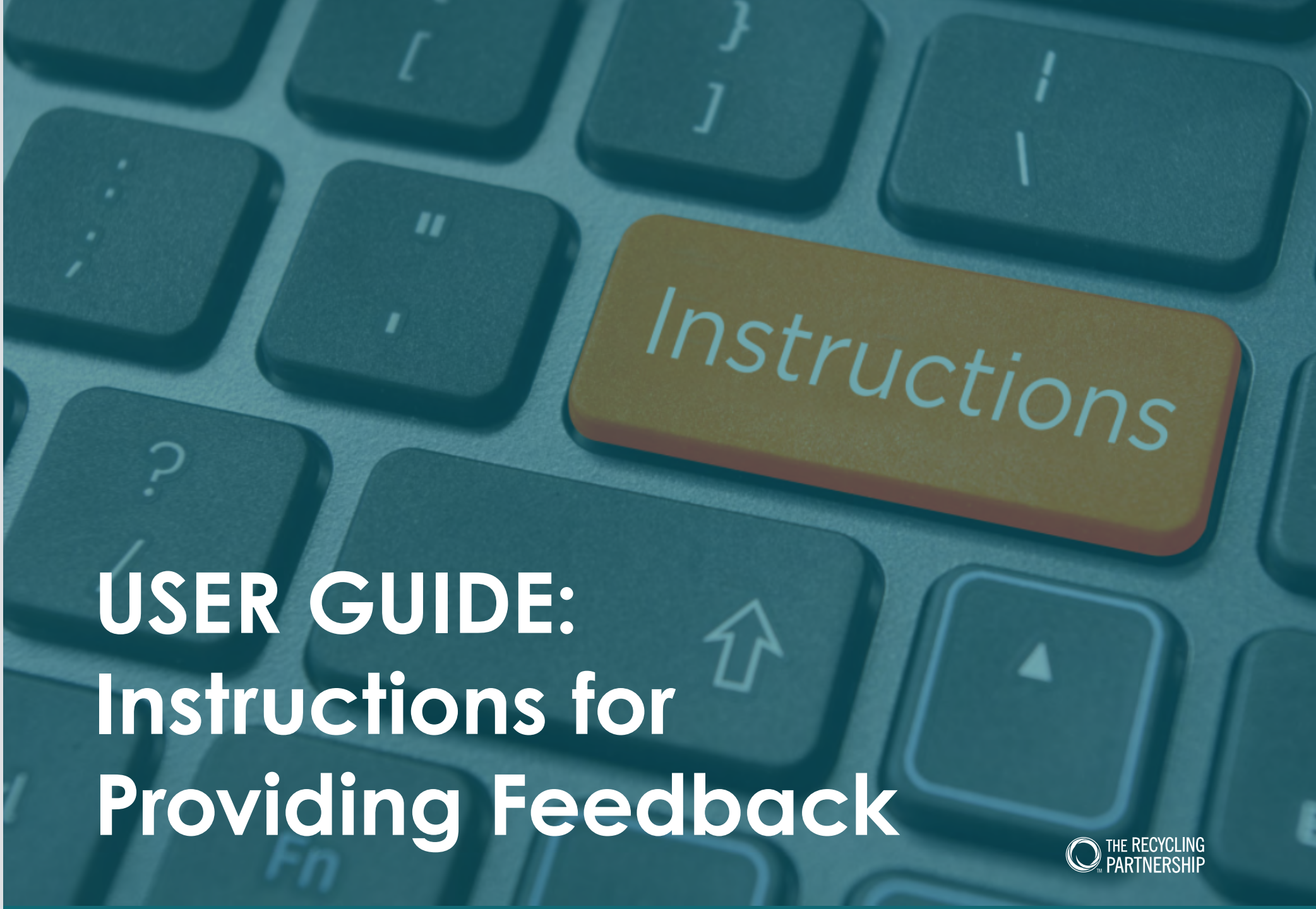

USER GUIDE: Instructions for Providing Feedback

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User Guide

Through August and September 2021, The Recycling Partnership is opening the Pathway to Circularity Recyclability Framework for public comments.

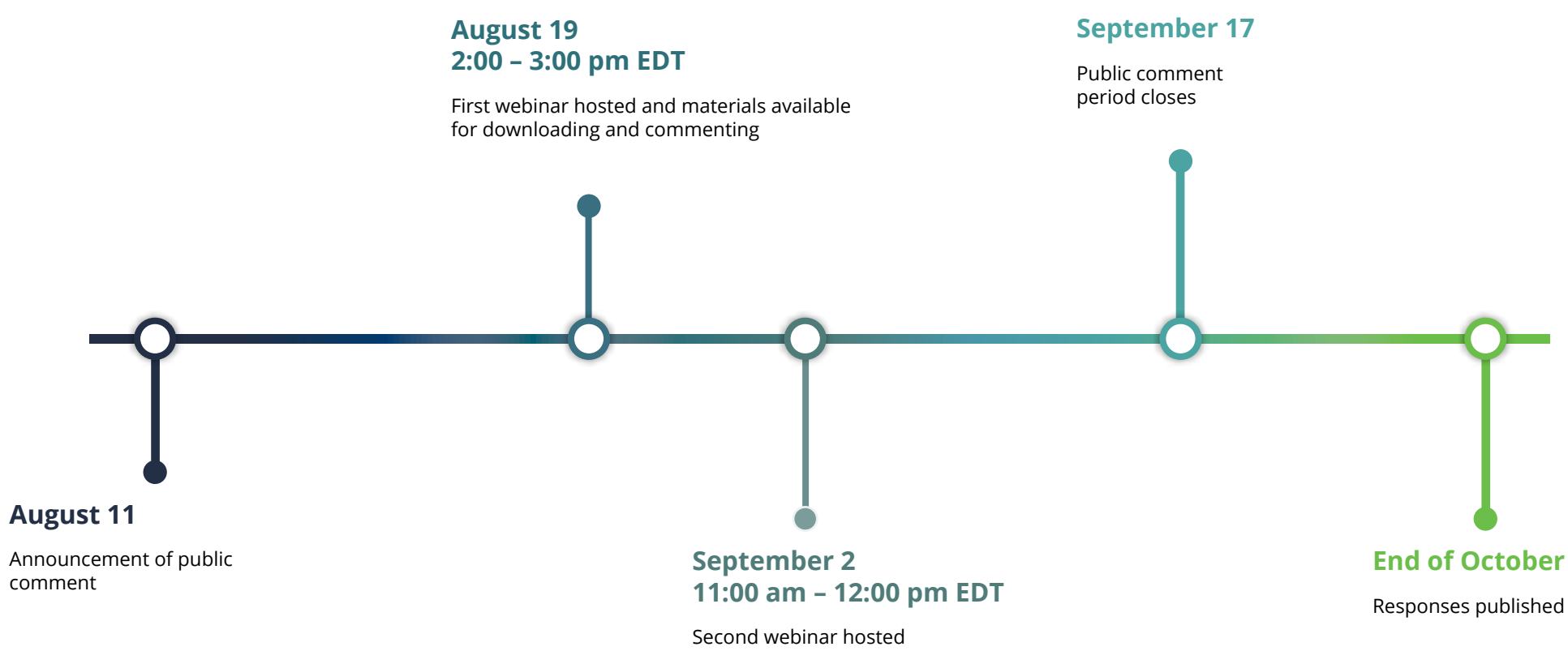
The Pathway to Circularity Recyclability Framework defines the building blocks to help brands successfully navigate current and future packaging and recycling system challenges, making circularity tangible. The Recyclability Framework, the first of several aspects of the Pathway to Circularity to be developed, strives to deliver new depth to industry conversations and bring to light the interdependence of the many factors that shape recycling. We want your feedback, so that we can ensure the framework is comprehensive and representative, for the benefit of all stakeholders in the recycling system.

This document is intended to provide an overview of The Pathway to Circularity Recyclability Framework, including what it is, how it was developed, and other relevant contextual background. It also includes the framework, numbered by section, to enable you to provide comments and feedback.

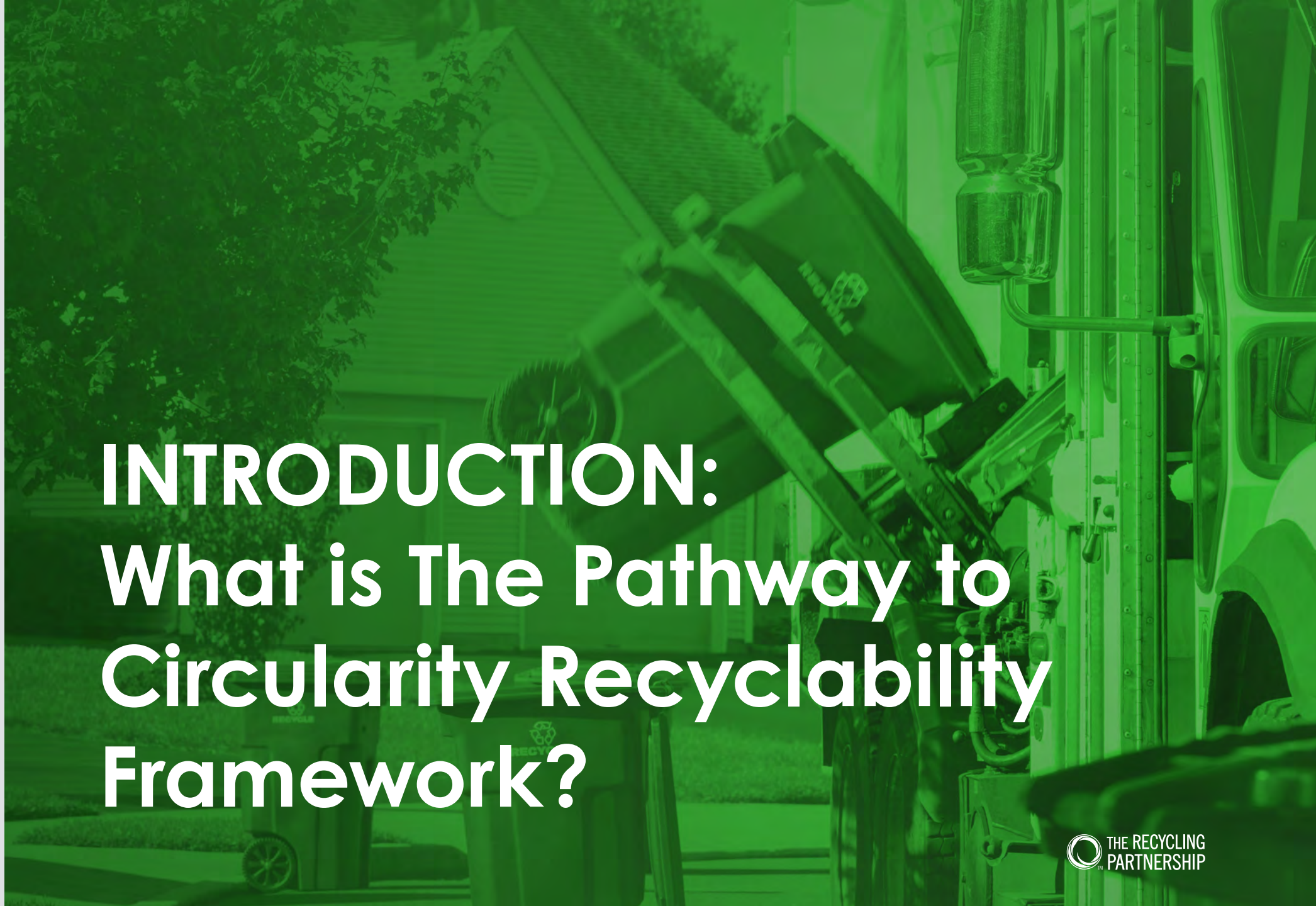
We encourage you to attend one of our webinars before providing feedback, as it may help clarify and answer any questions you may have.

To provide input on the Framework, please read the following document and take note of any feedback you may have. In the provided online submission form, you may comment on the Framework or leave a general comment. Comments and their responses will be shared publicly following the close of the comment period.

User Guide: Feedback Timeline



THE RECYCLING PARTNERSHIP



INTRODUCTION: What is The Pathway to Circularity Recyclability Framework?

THE RECYCLING PARTNERSHIP

A History of Determining Packaging Recyclability

A lot of impactful work has been done concerning what must be true for a package to be considered recyclable.

For example:

- The Federal Trade Commission (FTC) Green Guides puts specific parameters around claims relating to recyclability
- Walmart developed The Recycling Playbook as a useful tool to support the transition to more sustainable packaging
- The Sustainable Packaging Coalition has a How2Recycle labeling system supported by questions and guidance on recyclability claims
- ASTRX (The Applying Systems Thinking to Recycling Project) did extensive work to identify and address recycling system challenges
- Several industry associations have developed design (for recyclability) guides, or are in the process of doing so
- Where they exist, Extended Producer Responsibility (EPR) policies have resulted in the development of detailed determinations for recyclability in those regions, e.g., Europe

However, in the U.S., this recyclability work remains complicated. There is a need to have industry alignment around a single source of truth for determining and increasing recyclability that is transparent, collaborative and oriented toward action.

Why is The Pathway needed?

Currently, this need for a transparent, single source of truth for recyclability determination is coming into sharper focus due to:

- Increasing brand commitments around recyclability and circular economy
- The FTC Green Guides requirement that a packaged "can be collected, separated, or otherwise recovered" yet the determination process is unclear resulting legal risk
- Increasing consumer consciousness around environmental impacts of packaging, coupled with cynicism about recycling legitimacy
- Emerging relevant state and national policy, e.g., Maine and Oregon's EPR legislation
- Evolving domestic end markets following international scrap market turbulence relating to China's National Sword Policy to ban the import of recycled plastics and other materials
- Ever-changing packaging design innovation

These matters indicate that brands, retailers and recyclers need a defined set of actions to determine packaging recyclability and take action to address system challenges. The Framework is intended to bring necessary clarity and solutions to each area of difficulty, to support more stakeholders to successfully navigate the recycling system and effectively advance the circular economy.

What is The Pathway to Circularity Recyclability Framework?

The Pathway to Circularity Recyclability Framework is an action-oriented, solutions-based initiative that outlines and addresses current and future packaging recyclability challenges. It is a "living" framework, meaning it can evolve over time as necessary to meet the needs of the system. It has drawn from a number of sources, including FTC Green Guides and the Walmart Playbook. The original development of the Pathway was supported by Colgate-Palmolive, Johnson & Johnson, and Walmart.

The Framework for Pathway was created with ongoing industry input and expertise, in particular from The Circularity Council. Using the Pathway to Circularity's Recyclability Framework, brands and retailers can determine the recyclability of their packaging, discover areas for improvements and learn how to successfully address them.

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What is The Pathway to Circularity Recyclability Framework?

The Framework consists of five building blocks. Each building block contains 1-2 mandatory requirements, all of which are needed for the packaging to pass the Pathway as "recyclable," as well as optional criteria to help improve the circular potential of packaging.

If these criteria are not met, the Framework suggests actions such as package re-design, or participating in or forming material coalitions that serve to evaluate the action needed to progress packaging towards recyclability.

Pathway to Circularity Key Definitions

While key definitions have been drafted, common understanding of the Pathway's core concepts and requirements are dependent on the industry's feedback of the Framework. Definitions will be finalized once The Partnership has integrated industry feedback into the Framework.

RECYCLABILITY FRAMEWORK

THE RECYCLING PARTNERSHIP

Recyclability Building Blocks

Design for Circularity

- ☐ Does the package follow the respective industry's design guide?
- ☐ **Optional:** Does the package include post-consumer recycled materials?

Recyclability Prevalence

- ☐ Is 75% of the market volume for the consumer package category in a recyclable format?

Access & Adoption

- ☐ Do 60% of U.S. consumers have access to recycling for the package?
- ☐ **Optional:** Does the package include accurate consumer recyclability labeling/messaging?

Capture Journey

- ☐ Does the package successfully sort at a 90% Materials Recovery Facility (MRF) Capture Rate?

Packaging Fate

- ☐ Does the package fall into the relevant Institue of Scrap Recycling Industries (ISRI) specifications?
- ☐ Are end markets for the recycled package sufficient?

DESIGN FOR CIRCULARITY

Required Pathway Criteria

Does the package follow the respective industry's design guide?

Explanatory Information

A package must be **designed for recyclability**. While the body of a package may be easily recyclable, companies must also ensure that package components—such as labels, lids, additives and liners—do not prevent the package from being recycled.

The simplest way to check that a package's design is compatible with existing recycling and processing capabilities is to **refer to the Design Guide issued by the industry organization** associated with the primary material of the package. These tools provide guidelines to achieve optimum sorting, reprocessing and recoverability.

Within the Recyclability Framework of the Pathway to Circularity, The Recycling Partnership looks forward to referencing existing and emerging Design Guide content such as:

- Plastics: The Association of Plastic Recyclers (APR)
- Glass: Glass Packaging Institute (GPI)
- Cartons: Carton Council of North America
- Paper: American Forest & Paper Association (AF&PA)
- Aluminum: Aluminum Association
- Steel: TBD

DESIGN FOR CIRCULARITY

Optional Pathway Criteria

Does the package include post-consumer recycled material?

Explanatory Information

While the inclusion of post-consumer recycled (PCR) material is not a requirement for passing through the Pathway's Recyclability Framework, this is an important element to add value to the recycling system and improve the circularity of a package.

In the past few years, many companies have made **public recycled content goals** to reach sustainability targets or accelerate collective commitments like the U.S. Plastics Pact. As well as being an important driver for circularity by stimulating demand for recycled material, the inclusion of post-consumer recycled material may also be a smart way to prepare for any future legislative preferences in this area.

RECYCLABILITY PREVALENCE

Required Pathway Criteria

Is 75% of the market volume for the consumer package category in a recyclable format?

Explanatory Information

Package design innovation allows companies to choose from a selection of formats for packages, some of which are not recyclable. “Look-a-like packages” that comprise either uncommon materials or formats can present challenges to the recycling system by contaminating recycling streams, causing consumer confusion, and eventually eroding consumer trust.

Packages must pass the **75% prevalence threshold** to ensure that they do not deviate from the consumer “norm.” To achieve this, 75% of the market volume for the consumer package category (e.g., toothpaste tube) must be in a recyclable format. To use a well-known example, over 75% of carbonated beverages in plastic bottles are in recyclable PET plastic.

The Circularity Council developed the prevalence threshold to create confidence to on-ramp innovative packages while mitigating contamination in material recovery facilities (MRFs). The Council voted to set the threshold at 75% to support design innovation while also aspiring to a high standard for Materials Recovery Facility (MRF) economics and environmental benefits.

ACCESS & ADOPTION

Required Pathway Criteria

Do 60% of U.S. consumers have access to recycling for the package?

Explanatory Information

To be recyclable in the U.S., a package must have **access to municipal recycling**. The Federal Trade Commission (FTC) Green Guides require an item to achieve a **60% consumer access threshold** to be considered recyclable. According to the FTC, this means that 60% of U.S. consumers have access to a recycling program that recovers the item from the waste stream and reuses it or uses it in manufacturing.

ACCESS & ADOPTION

Optional Pathway Criteria

Does the package include accurate consumer recyclability labeling/messaging?

Explanatory Information

The current role of on-pack labeling is to explain how something can or should be recycled or disposed. Some labels are issued by industry associations, while others are created by producers or suppliers. Accurate and easy-to-understand messaging facilitates **consumer adoption of recycling behaviors** for a package.

CAPTURE JOURNEY

Required Pathway Criteria

Does the package sort at a 90% MRF capture rate?

Explanatory Information

There is variability in MRF sortation equipment and processes. Items that are not designed to respond to the common methods of sorting will not be appropriately captured for recycling. Instead, they maybe sent from the MRF to the landfill with other unsortable material, or "residue."

Therefore, in order to be considered recyclable, a package must be able to be **successfully sorted at the MRF**. This ensures that the greatest possible amount of recyclable material possible is captured by the MRF. To define this, the Circularity Council has developed the **90% MRF Capture Rate threshold**, with guidance from the APR Sorting Potential Protocol (co-funded by ISRI). Setting a robust threshold gives consumers confidence that packages are actually going to be recycled and decreases waste in the process, resulting in more recycled content.

The current intent is for this capture rate to be measured by performing simulated MRF tests that result in:

- The package's MRF capture rate meeting the 90% capture rate threshold, OR
- The package's MRF capture rate being within 5% of current capture rate capabilities of the targeted commodity (i.e., the control format)

PACKAGING FATE

Required Pathway Criteria

Does the package fall into the relevant Institute of Scrap Recycling Industries (ISRI) specifications?

Explanatory Information

An important step to inform if a package may be accepted by the industry for recycling is to know that it **conforms to a common specification**. The inbound and outbound specifications detail which materials and package formats are accepted by MRFs and end markets, therefore identifying which materials may cause contamination issues.

ISRI specifications will be used in the Recyclability Framework due to their broad acceptance in the recycling industry.

PACKAGING FATE

Required Pathway Criteria

Are end markets for the package sufficient?

Explanatory Information

For a package to be considered recyclable, it must have a viable path to becoming something else. In other words, there must be **demand from an end market**. The Framework assesses end market sufficiency based on the presence of key attributes or variables of any material/format combination.

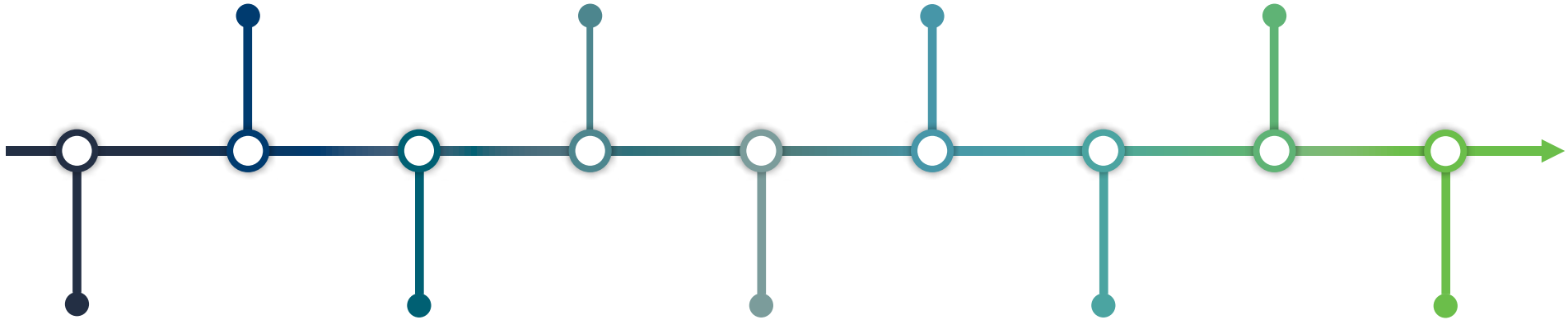
The draft attributes for evaluating an end market are: **National/Regional Scale** (reach of market); **Export Reliance** (dependency on export markets to other continents); **Market and Buyer Diversity** (variety and number of end user applications and buyers); **Demand/Supply** (balance between demand and marketplace supply); **Material Circularity** (likelihood of the material being made into another package or product that has the potential to be recycled again); **MRF Value** (marketplace value of material generated from a MRF); and **Quality/Yield** (yield of recyclable material [versus contaminants or loss] from the package during processing).

The Circularity Council is developing the method to appropriately apply a weighting to these attributes.

THE JOURNEY: Past, Present, & Future of The Pathway

THE RECYCLING PARTNERSHIP

Past, Present & Future



October 2019

The Recycling Partnership's Bridge to Circularity report, highlighting the need for a Pathway to Circularity, is released.

July 2020

The Polypropylene (PP) Coalition is formed. To date, 30 members have invested to increase PP recycling.

April 2021

The Circularity Council establishes the 75% Prevalence Threshold.

August 2021

The Recycling Partnership announces Public Comment Period for the Pathway to Circularity Recyclability Framework.

September 2019

The Film & Flexibles Coalition is formed. Today, more than 20 members are supporting pilot projects to prove effective and efficient collection.

June 2020

The Circularity Council is formed to address uncertainties in the industry.

January 2021

The Circularity Council establishes the 90% MRF Capture Rate.

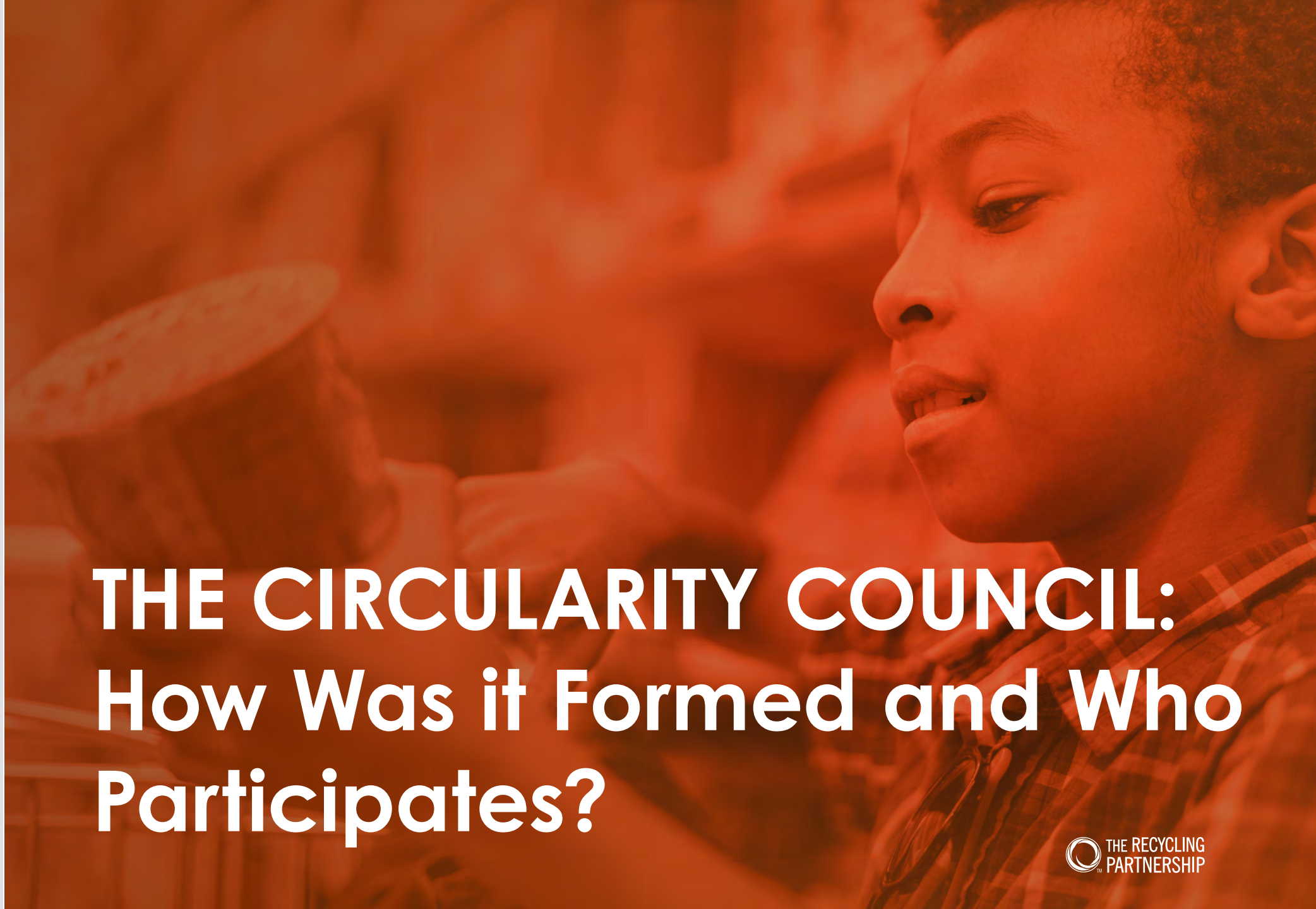
July 2021

The Circularity Council discusses end market attributes.

Fall 2021

The Public Comment Period will close, comments will be reviewed and responses will be published.

THE RECYCLING PARTNERSHIP



THE CIRCULARITY COUNCIL: How Was it Formed and Who Participates?

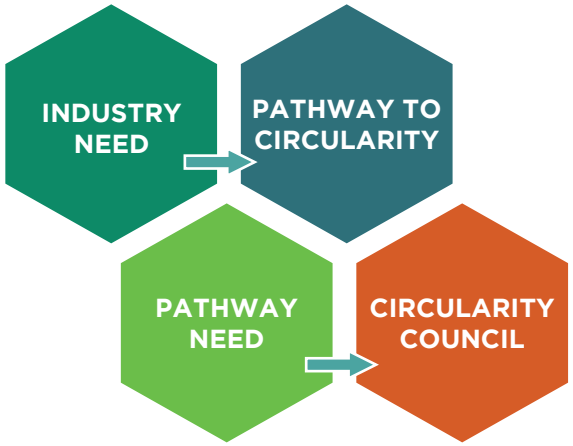
THE RECYCLING PARTNERSHIP

Why was it Formed and Who Participates?

The Pathway to Circularity is the response to an industry need for clarity and transparency around packaging circularity.

As The Recycling Partnership built out the robust framework of the Pathway to Circularity, we identified various gray areas in the recycling industry. We knew we needed to bring together thought leaders to explore how to bring clarity to address these gaps.

Formed in June 2020, the Pathway to Circularity Industry Council (the Circularity Council) is a group of 35 senior industry leaders representing various material types, brands, government, Materials Recovery Facilities (MRFs), NGOs, retailers, and trade associations brought together by The Partnership to establish industry definitions and thresholds.



The Circularity Council meets regularly to discuss missing and needed determinants for recyclability. The following have been determined by the Circularity Council:

- 75% Prevalence Threshold, to establish recyclability of varying packaging formats
- 90% MRF Capture Rate, to determine the successful sorting of packaging
- Potential attributes for end market assessment

End Market Attributes and Weighting are in the process of being finalized.

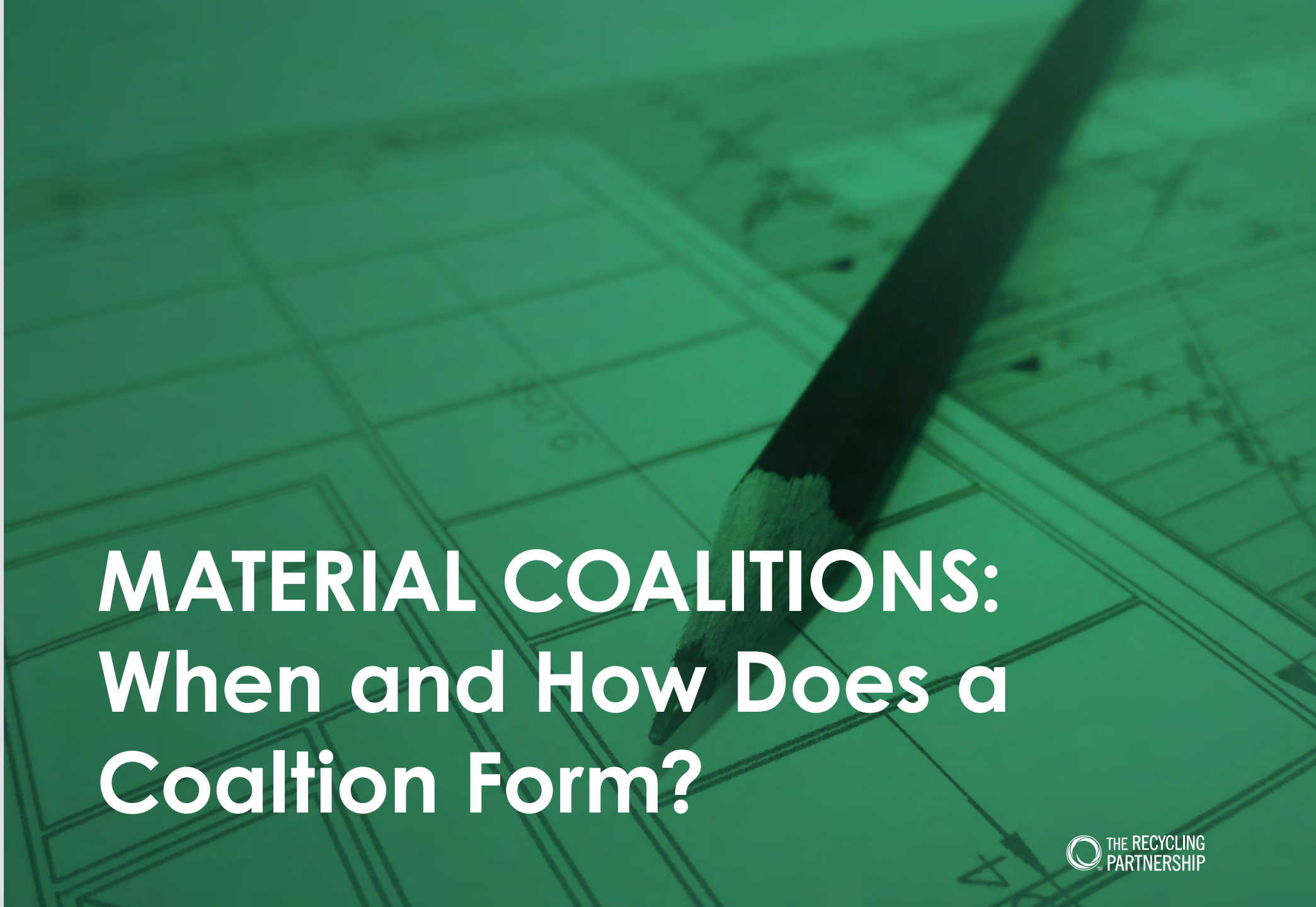
THE RECYCLING PARTNERSHIP

Pathway to Circularity Industry Council

PAPER	**AF&PA**	Brian Hawkinson, *Executive Director Recovered Fiber*
	Carton Council	Derric Brown, *VP of Sustainability*
	International Paper	Aimee Greg, *VP Recycling & Recovered Fiber*
	Pratt	Cathy Foley, *VP Industry Relations and Supply Chain*
	Recycled Paperboard Alliance	Paul Schutes, *Executive Director*
GLASS	**Glass Recycling Coalition**	Scott DeFife, *President at Glass Packaging Institute*
	Owens-Illinois	Jim Nordmeyer, *VP Global Sustainability*
METAL	**Tri-Arrows Aluminum**	Jonathan Butcher, *VP Commercial*
	Ball Corporations	Sara Axelrod, *Director of Sustainability, Beverage Packaging*
	Silgan Containers	Carolyn Takata, *Marketing Director*
PLASTIC	**ACC**	Craig Cookson, *Senior Director Recycling & Recovery*
	APR	Steve Alexander, *President & CEO*
	Indorama	Byron Geiger, *COO*
	KW Plastics	Scott Saunders, *General Manager*
RETAILERS	**Amazon**	Terese Kietzer, *Senior Manager Sustainability*
	Walmart	Ashley C. Hall , *Director of Sustainable Packaging*

BRANDS	**Colgate-Palmolive**	Ann Bedarf, *Packaging Sustainability Manager*
	Johnson & Johnson	Michael Chung, *Sr. Manager Sustainable Packaging*
	PepsiCo	Ed Socci, *Director Advanced Research*
	Starbucks	Chris McFarlane, *Project Manager*
ORGs	**Closed Loop Partners**	Bridget Croke, *Managing Director*
	ISRI	Cheryl Coleman, *Vice President Sustainability*
	SPC	Nina Goodrich, *Director of Sustainable Packaging Coalition*
	The Recycling Partnership	Keefe Harrison, *CEO*
CITY & STATE	**City of Phoenix**	Ginger Spencer, *Public Works Director*
	South Carolina	Richard Chesley, *Manager SW & Recycling*
	NERC	Lynn Rubinstein, *Executive Director*
MRFs	**Balcones Resources**	Joaquin Mariel, *VP of Operations*
	Casella Recycling	Bob Cappadona, *Vice President*
	Eureka	Kate Davenport, *Co-President*
	Republic Services	Pete Keller, *VP Recycling and Sustainability*
	Rumpke	Steve Sargent, *Director of Recycling*
	Sims	Tom Outerbridge, *Manager*
	Waste Management	Brent Bell, *VP Recycling*

THE RECYCLING PARTNERSHIP



MATERIAL COALITIONS: When and How Does a Coaltion Form?

THE RECYCLING PARTNERSHIP

When and How Does a Coalition Form?

Collaboration amongst all stakeholders is the key to success of the recycling system. The Pathway to Circularity Recyclability Framework was established as a transparent process that clearly outlines what it takes for a package or material to be recyclable. When a package or substrate does not meet the criteria to make it through the Pathway gates, companies are encouraged to take action to address the challenges.

Coalitions are a proven model to address challenges and deliver the solutions needed. If a coalition does not exist, The Partnership or other entities may consider forming one. Below are criteria The Partnership considers before forming a coalition.

PATHWAY TO CIRCULARITY COALITION FORMATION CRITERIA

- Multiple companies across the value-chain (such as producers, converters, brands, and retailers) are ready to join the initiative with multi-year committments to contribute to make meaningful progress toward a solution.
- There is a path to scalable, circular solutions that can be achieved through actionable steps.
- The format/material is expected to have a significant presence in a circular system of the future.
- There are no viable alternative formats or materials that could serve the same purpose with increased recyclability/circularity.
- It is aligned with The Recycling Partnership's mission, leverages the core competencies of The Partnership and does not duplicate efforts.

Coalitions and Other Initiatives Guided by The Pathway

PATHWAY to CIRCULARITY
POLYPROPYLENE RECYCLING COALITION
AN INITIATIVE OF THE RECYCLING PARTNERSHIP

Polypropylene

Polypropylene (PP) is a material of value and enjoys successful recycling in communities and MRFs throughout the U.S. The Polypropylene Recycling Coalition, formed in July 2020, focuses on increasing curbside access for PP, assisting MRFs with sorting PP and maintaining vibrant, robust PP end markets. In its first year, the PP Coalition made grants for equipment that has the potential to increase PP recycling access by more than six percent and improve recycling for more than $16 million Americans.

PATHWAY to CIRCULARITY
FILM & FLEXIBLES COALITION
AN INITIATIVE OF THE RECYCLING PARTNERSHIP

Film & Flexibles

Film & Flexible packaging faces a variety of recycling challenges. Formed in September 2019, this Coalition focuses on proving and scaling solutions to efficiently and effectively recycle plastic film & flexible packaging materials from households. The initiative involves every aspect of the Pathway to Circularity from design to sortation and end markets.

Aluminum

Aluminum cans play a critical role in recycling adding significant value, yet some are lost in MRFs because they are missorted. To address this challenge, a pilot program was initiated to provide grants to MRFs to fund equipment to boost recovery of cans even further.

PATHWAY to CIRCULARITY

AN INITIATIVE OF THE RECYCLING PARTNERSHIP

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