



Dissolution & Circular Packaging Innovations

Understanding the Dissolution Process and the Role of Recycled Content in the Circular Economy

A complimentary national webinar from SAF & NSAC
August 26, 2026

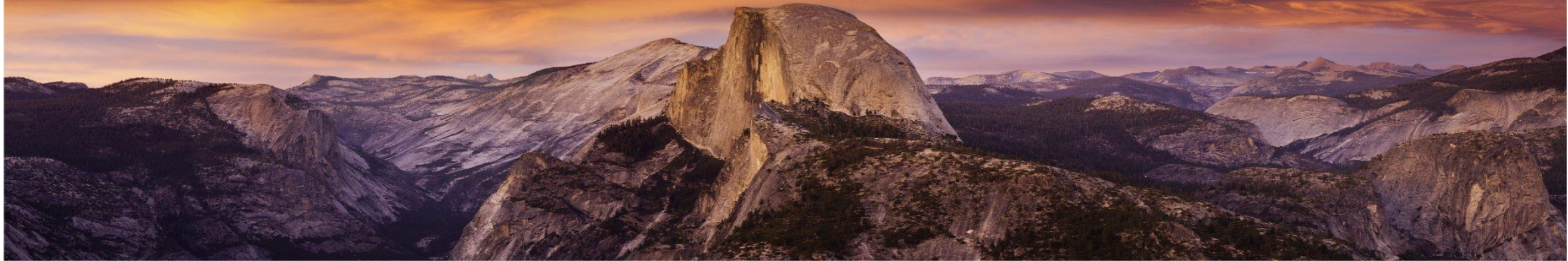
Who We Are



The National Stewardship Action Council (501c4) and the Stewardship Action Foundation (501c3) advance policies and solutions that grow a responsible circular economy, one that protects public health, honors essential workers, and strengthens resilient communities. Through collaborative, accountable systems, we ensure that responsibility is shared fairly across producers, governments, and communities, while creating local jobs, supporting U.S. recycling and remanufacturing, and generating long-term economic value nationwide.

We serve as a neutral convener of cross-sector conversations on policy, processing, and end markets.

Anti-trust Statement



This is an educational webinar. The dialogue functions shall not be used to obtain unlawful company advantages or achieve any anti-competitive objectives for any segment of the group. It is required that our participating companies and members avoid any conduct that might violate or appear to violate antitrust laws and, during all dialogue meetings, please refrain from discussion of prices, pricing policies, terms, or conditions of doing business and/or market allocation. Please avoid any discussion that may be viewed as exclusionary, including discussions that may suggest that a dialogue member ceases to do business with a specific supplier or customer. These guidelines also refer to any discussion that happened in breaks or informal settings. If, at any time, a topic raises concern for a participating group or member, we will stop the conversation and get legal advice.

Why Bring These Voices Together?



NSAC and SAF are connecting policy, infrastructure, and end markets. As growing national nonprofits, our organizations work across the U.S. to advance practical circular economy solutions from policy development through implementation.

Today we're focused on recovered material → processing → new products & packaging.

And, our conversation brings together different parts of the value chain to look at what's working, what's changing, and what it takes to move material into meaningful end markets.

Thank you for joining today's conversation.

Before We Get Started

The Chat: Introduce yourself, share where you're joining from, and connect with other attendees.

Q&A: Please submit questions for our speakers through the Q&A feature rather than the chat so we can keep track of them.

- We'll save time for audience questions following the presentations.

Other Housekeeping Notes:

- This webinar is being recorded.
- Please keep the conversation respectful, constructive and focused on the topic.
- Today's speakers are sharing their own perspectives and experiences.

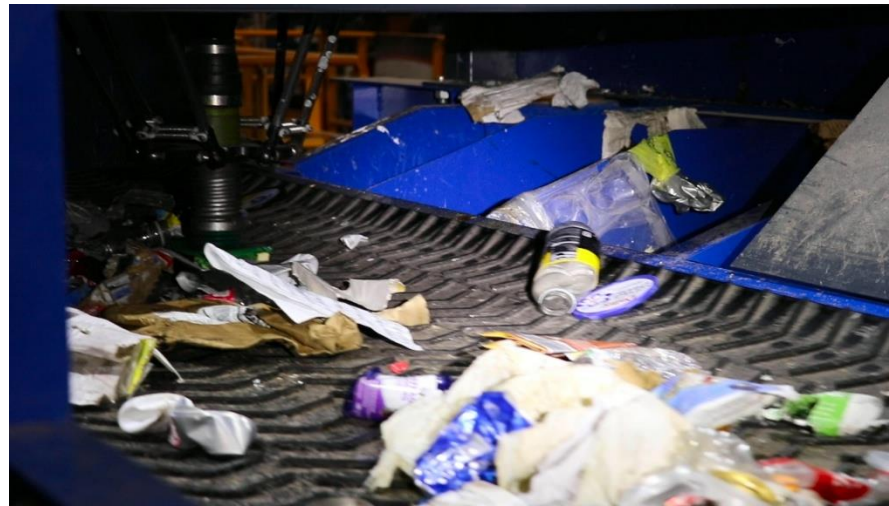
The recording and follow-up materials will be shared with registrants after the webinar.





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Rumpke Waste & Recycling

Rob Kurtz – Recycling Marketing Specialist

Molly Yeager – Communications Manager



The Recycling Leader

- Rumpke is a family owned and operated company that started in 1932.
- Purchased the first recycling center in 1989.
- Today we have 16 recycling facilities
- Annually, Rumpke recycles more than a billion pounds of material



Rumpke's Recycling Facilities - Columbus



- Opened in 2024
- North America's largest and most technologically advanced.
- \$106 million investment.
- 226,000 Sq. Ft.
- Processing capabilities of 250,000 tons annually

Rumpke's Recycling Facilities - Cincinnati



Plastic Recycling Expansion

- Rumpke started accepting tubs in January 2021
- Expanded PP collection to include cups in 2022



THE TABLES HAVE *Churned*
ON WHAT PLASTICS CAN GO
INTO YOUR RECYCLING CART.



Rumpke Now Accepts
CUPS & TUBS
IN RECYCLING!



RUMPKE WASTE & RECYCLING
Done Right

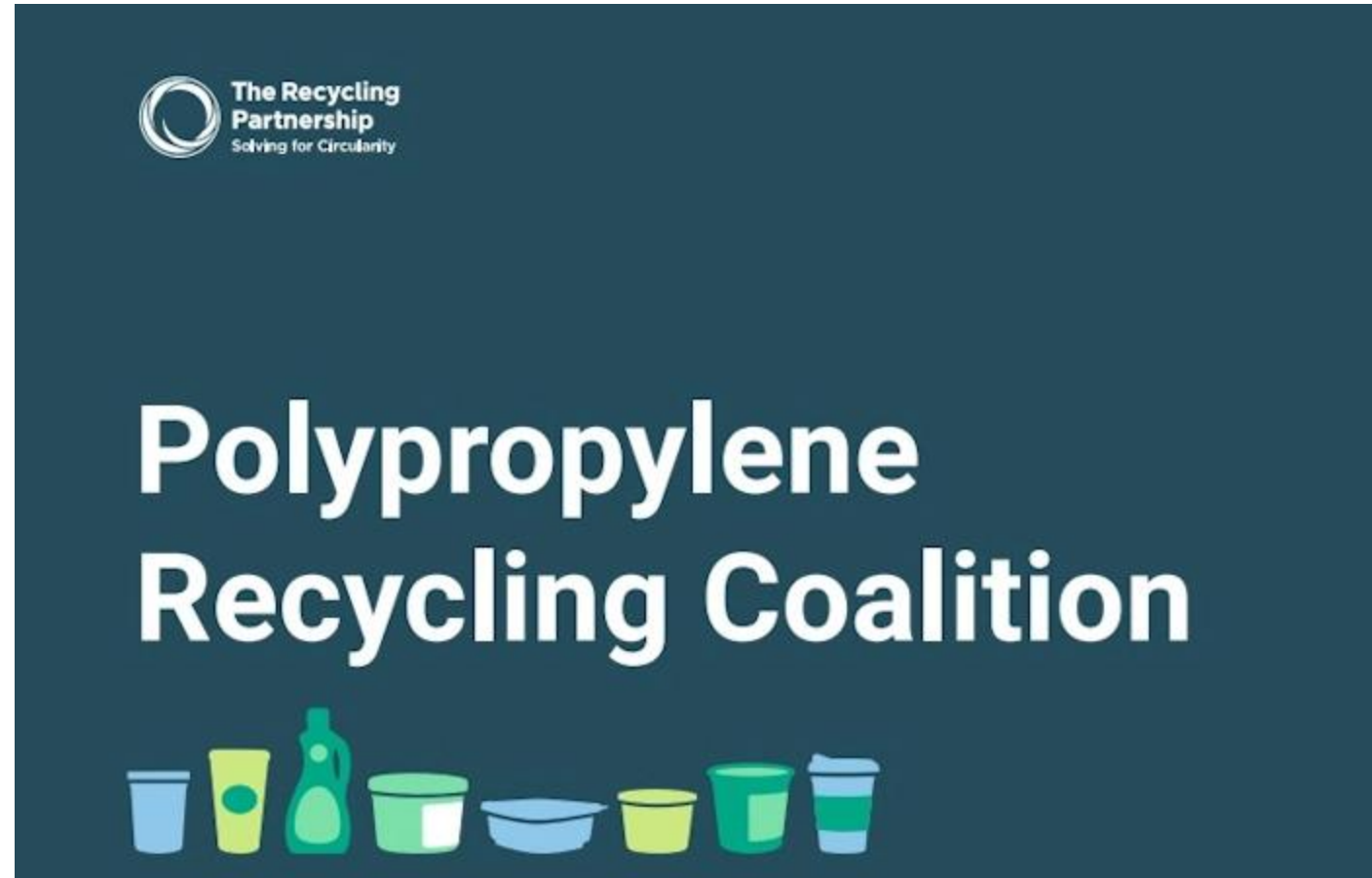


Technology Investments

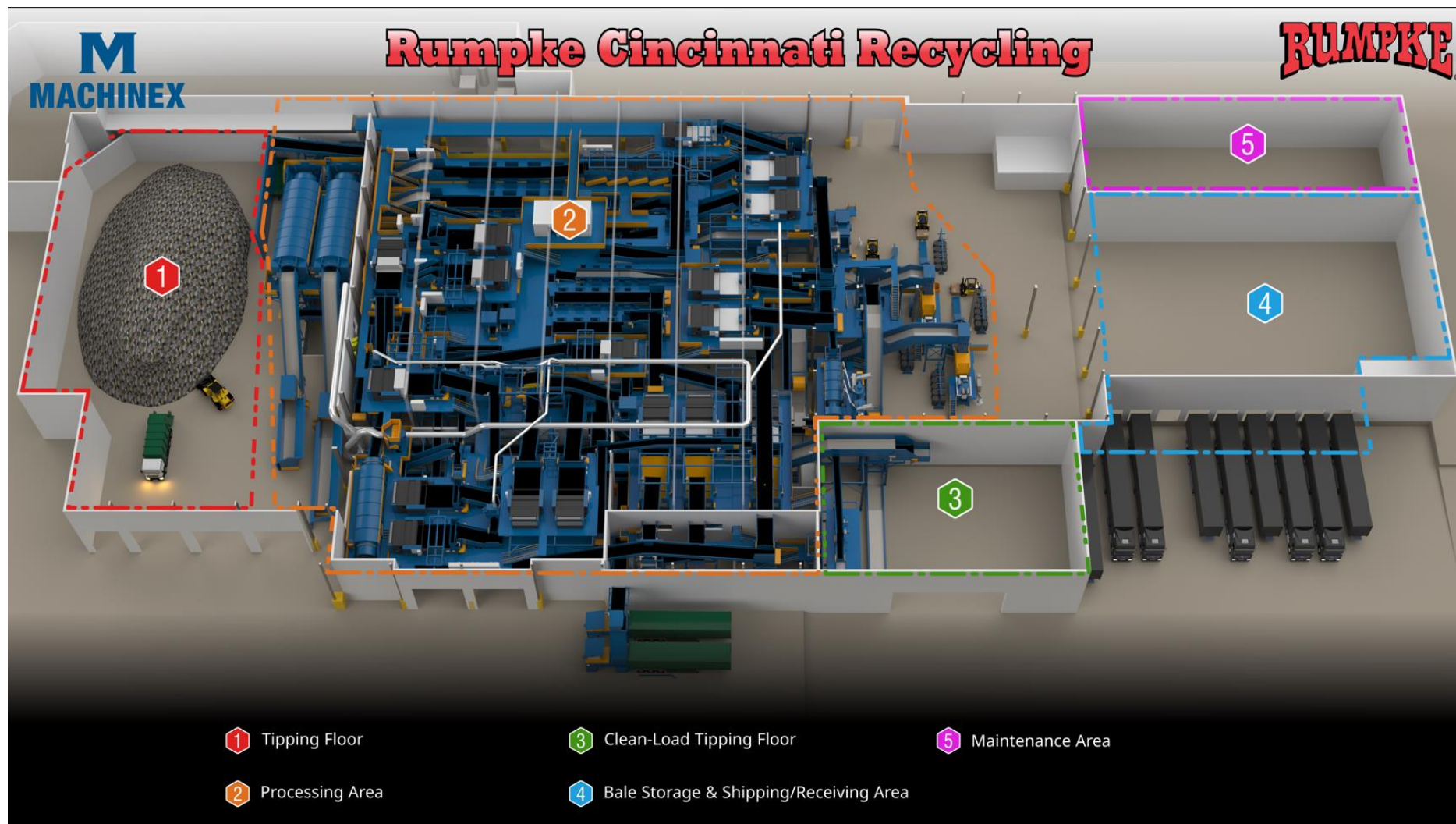


Plastic Recycling Expansion

- Assistance from The Recycling Partnership's Polypropylene Recycling Coalition
- One of a handful of MRFs to received funding
- Aided in the addition of technology at our Cincinnati Recycling Facility



Planned Investments



Results

- 8,200 tons processed to date
- Now averaging about 350 tons per month





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PureCycle Technologies

Christian Bruey – Director, Sustainability & External Affairs



PureCycle Makes Circularity Possible



Without PureCycle's support and investment, Rumpke wouldn't have been able to expand our accepted materials to include PP tubs and cups. Having PureCycle as an end-user in Ohio was the key that made this growth possible. We're now producing more than 350 tons per month of PP bales across our network of recycling facilities.

-Mark Prestileo
Rumpke Waste & Recycling

Increasing our use of recycled content has been a top priority for us, but it required the right technology to meet our strict purity standards. PureCycle's resin has bridged the gap beautifully, exhibiting properties comparable to virgin polypropylene.

-Erik Johnson
Churchill Container

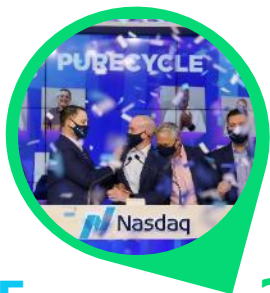
IPL Schoeller are leaders in the use of PCR across our European business, and we have been wanting to incorporate recycled polypropylene into the right product in North America for several years with our eye on the PureCycle resin due to its high quality, clarity, and broad use cases.

-Melissa Vettleson
IPL Schoeller

Key PureCycle Milestones

2015

PureCycle obtains the process license and establishes headquarters in Orlando, Florida



2021

PureCycle becomes publicly traded on the Nasdaq as "PCT"



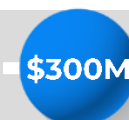
2023

Ironton Facility produces first rPP resin at commercial scale



2024

Denver, PA PreP Facility comes online



2012

Initial design of the PureCycle process is developed by the Procter & Gamble Company

2019

First pilot plant comes online in Ironton, Ohio

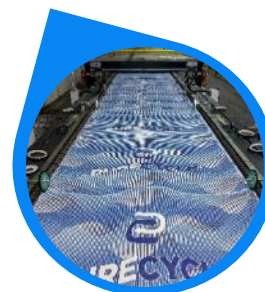


2023

Announces site of European Facility at Port of Antwerp-Bruges' Next District

2024

First commercial product (rug) manufactured from fiber made with PureFive™ resin



2024

1 million pounds of rPP produced in a week

2025

Announcement of \$300 million capital raise for future expansion sites

2025

Process begins to bring $\approx$ 100 million lbs. of annual compounding capacity to Ironton Facility by end of '25



PureCycle's Recycled PP – A True Circular Solution

OUR PROCESS

- PureCycle uses a physical recycling process (dissolution) to recycle polypropylene (PP)
- Plastic-to-plastic solution, not chemical recycling
- No mass balance credits needed
- Lower carbon emissions vs. virgin PP
- >90% PCR feedstock with >90% waste sourced from U.S. and Canadian curbside

OUR PRODUCT

- Thermoforming, injection molding, BOPP film and textile grades available
- Low PE and contaminants, comparable to virgin PP
- FDA NOL – confirmed as suitable for 100% food contact COU A-H
- Association of Plastic Recyclers' (APR) PCR Certified¹
- GreenCircle Certified for Recycled Content
- Colorable to match existing brand requirements



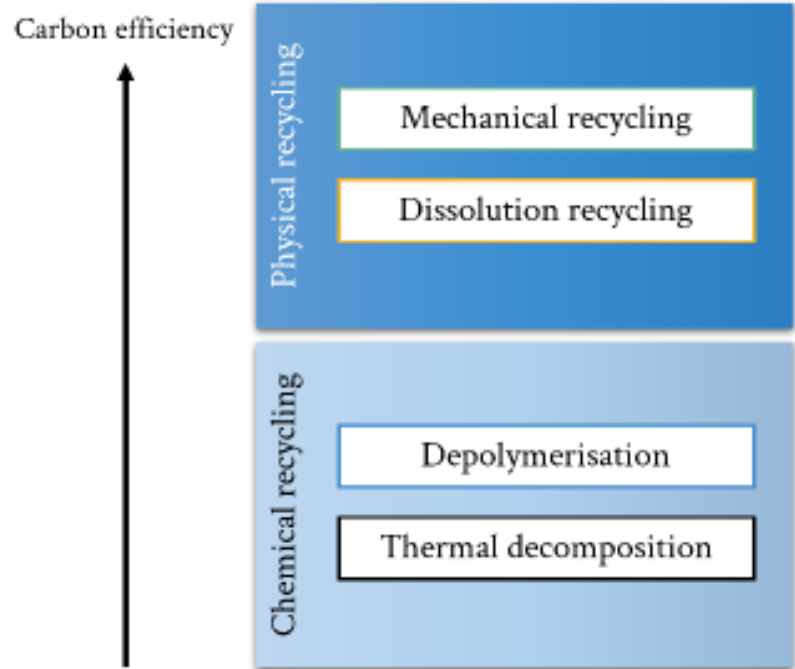
BEFORE



AFTER

¹HPP15-100 grade of PureFive™ resin has achieved APRs PCR Certification for exceeding the 90+% recycled content requirement. It is also the base recycled content used in all blends of PureCycle's compounded resin grades.

Dissolution is Not Chemical Recycling

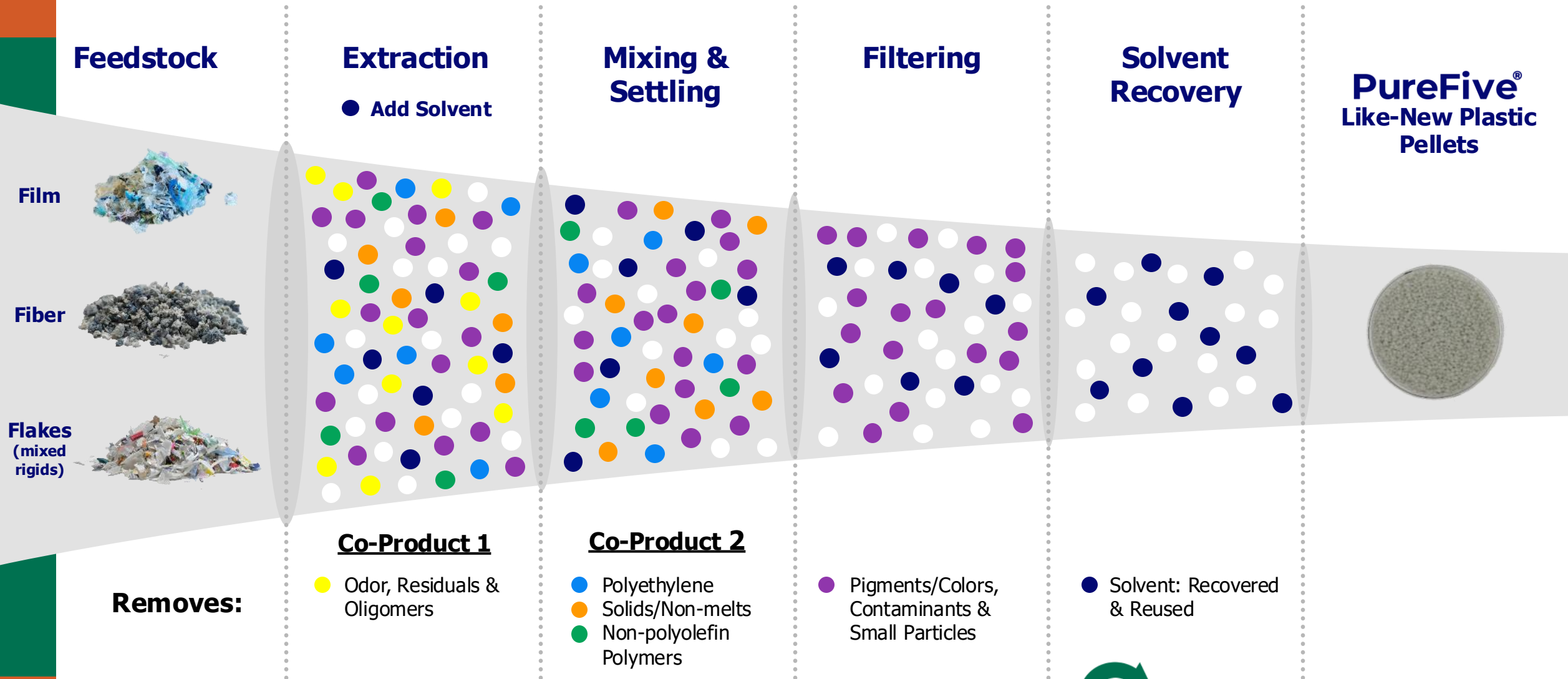


[Graphic from Plastic Recyclers Europe White Paper on Dissolution](#)

Organizations, Agencies, & Scientific Journals are Differentiating Between “Physical Recycling” & “Chemical Recycling”

- [International Standards Organization \(ISO\)](#) – 15270-1; 15270-3
- [Food & Drug Administration \(FDA\)](#)
- [Canadian Standards Group \(CSG\)](#)
- [State of Washington EPR Legislation \(SB5284\)](#)
- [Oregon Department of Environmental Quality \(DEQ\)](#)
- [Green Blue; Sustainable Packaging Coalition \(SPC\)](#)
- [New Jersey Department of Environmental Protection](#)
- [Proceedings of the National Academy of Sciences \(PNAS\)](#)
- [American Chemical Society \(ACS\)](#)
- [Nova Institute](#)
- [Association of Plastic Recyclers \(APR\)](#)
- [Plastic Recyclers Europe \(PRE\)](#)

From Waste to 100% PureCycled Polypropylene



PureCycle Sorting Facility

Location: Denver, Pennsylvania

Processing Capacity: 10 TPH

Size: 325,000 sq ft

Additional Details:

- Using Machinex Technology
 - Four MACH Hyspec® Optical Sorters
 - Two SamurAI® Sorting Robots
 - Two Machinex II-RAM Balers
- Began operations September 2024
- 19 jobs created with plans for more



Our Ironton Facility: The First of Many



Location: Ironton, Ohio, USA

Design Capacity: 107M lbs/year

Status: In commercial production

Jobs: 75+ high-paying jobs

Construction: Modular for speed and cost-efficiency

Compounding: 100MM lbs. of compounding capacity on site

Supply Chain:

- Bag in / out
- Truck in / out
- Rail in / out

Future Global Sites:

- Rayong, Thailand
- Antwerp, Belgium
- Augusta, Georgia, USA
- Central Japan

PureFive® in Action



HOT LIDS



SOUVENIR CUPS



SNACK WRAPPERS



FIBER RUGS



PEN CAP & BARREL



PACKAGING TAPE



YOGURT CUPS



CONTACT-SENSITIVE CAPS



TIDE CAPS



CHILD-PROOF CAPS



STANDUP POUCH



BUMPER FASCIA



PICKLE CONTAINERS



SNAPPACK CONTAINER



DOWNY CAPS





Thank You

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IPL Schoeller

Melissa Vettleson – Sustainability and Materials Engineer



OUR INDUSTRIES

IPL Schoeller serves a wide range of industries across the supply chain, with expertise for each unique product need, including:

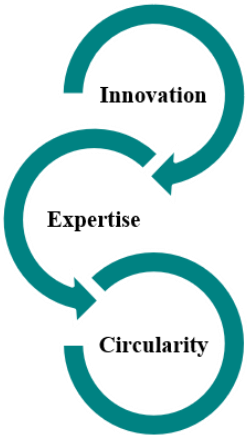
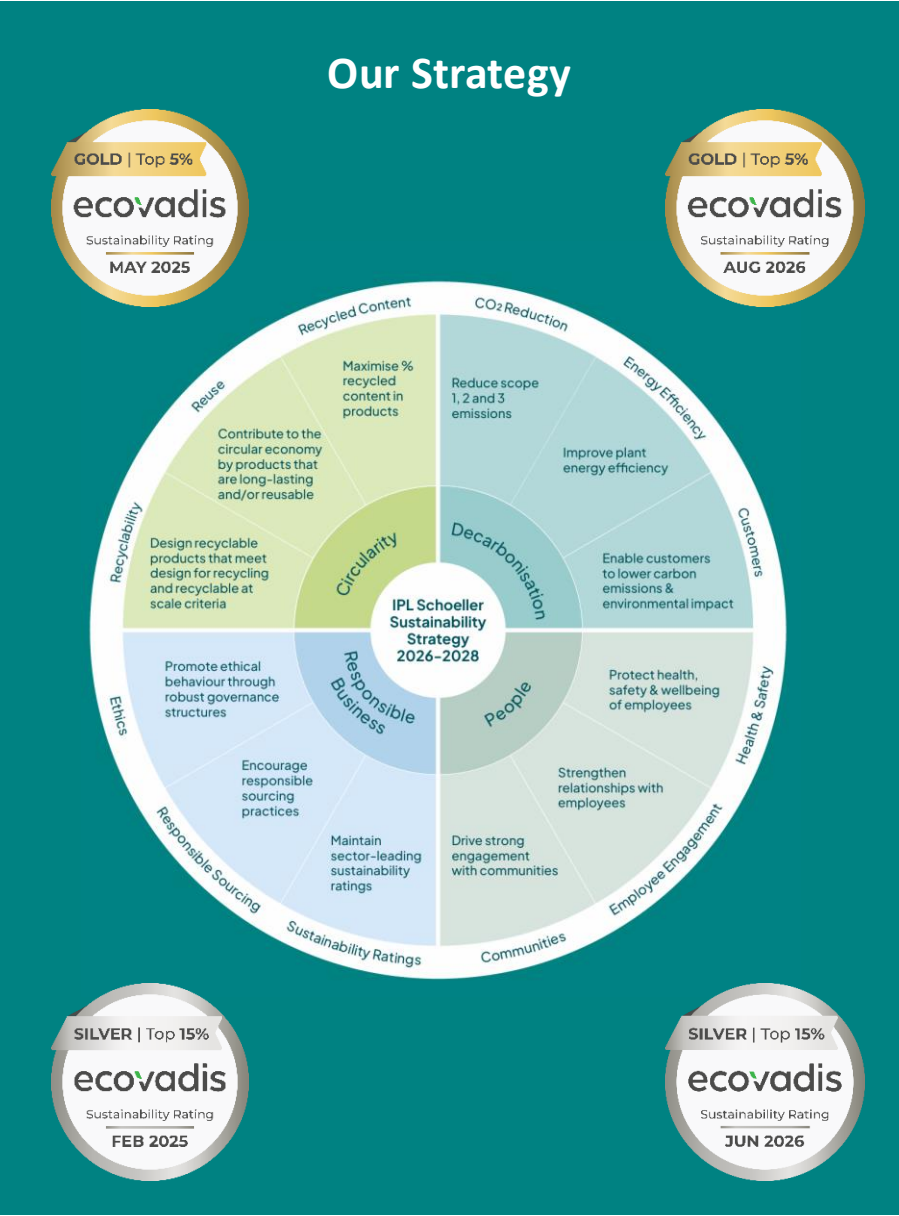
 Agriculture	 Environmental	 Industrial & Chemicals
 Food	 Fisheries	 E-commerce
 Retail Channels	 Automotive	 Cosmetic & Pharmaceutical

OUR BUSINESS

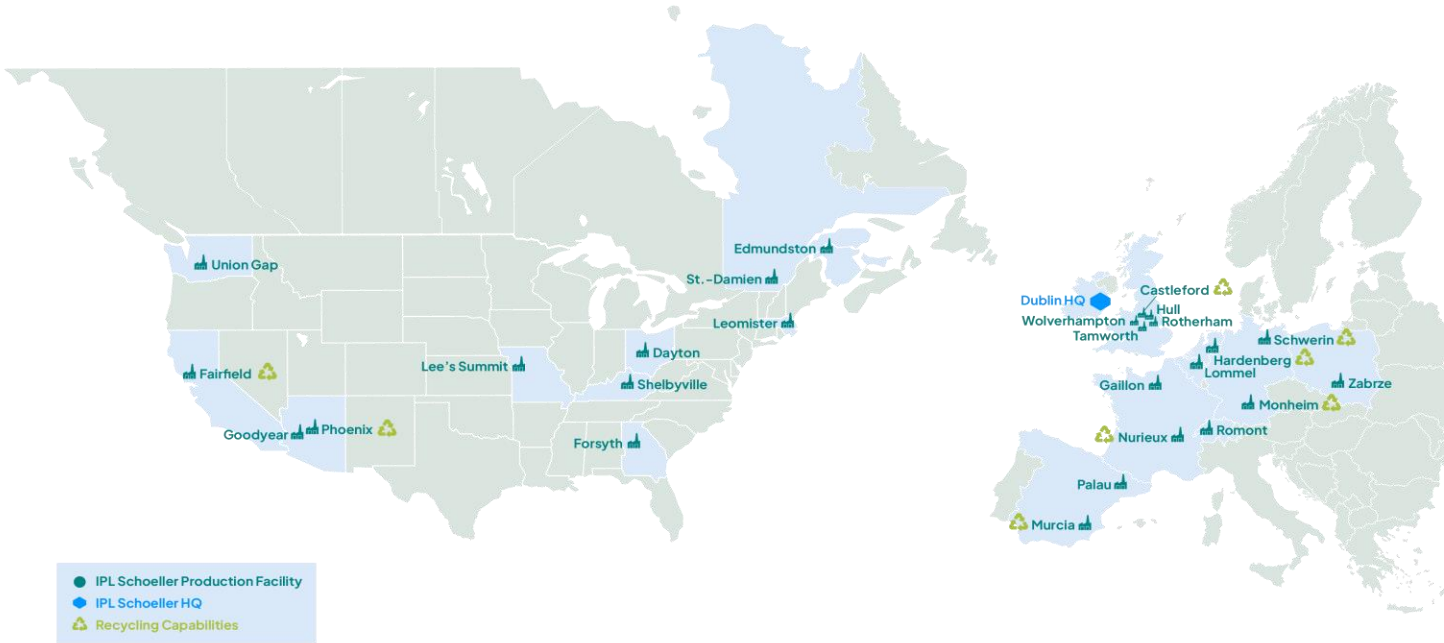
IPL Schoeller is a leading plastic packaging provider, partnering with customers to deliver sustainable solutions to the food, consumer, agricultural, logistics and environmental end-markets

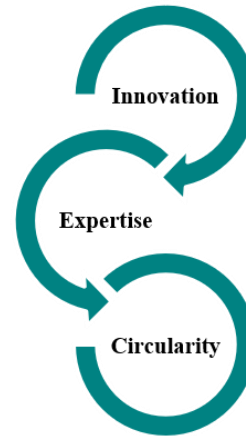
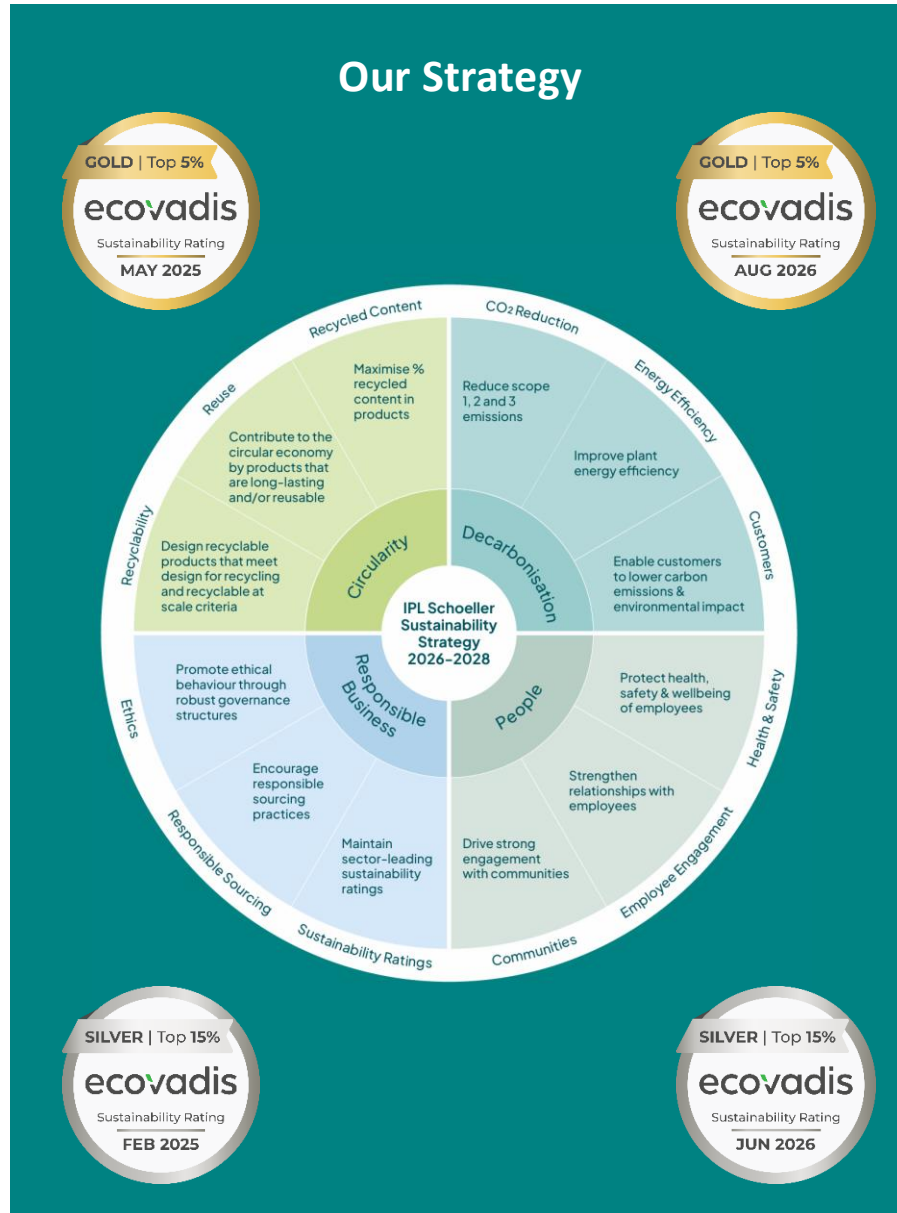
\$1.3B Annual Revenue	80+ Years of innovation in injection molding	3,800 Employees
50+ Countries with IPL Schoeller presence	26 Global manufacturing facilities	8 Facilities with recycling capabilities (2 in North America)
\$870K Invested in local communities since 2019	31% Decrease in CO ₂ emissions since 2021	28% Recycled materials across all IPLS production





IPL Schoeller was built on the combined strengths of organizations who each brought a legacy of innovation, sustainability, and circular thinking. From material science and product design to engineering and manufacturing; advancing what is possible has always been part of our culture. This foundation has enabled IPLS to quickly adopt and scale innovative sustainable materials, helping drive the transition toward a more circular economy.





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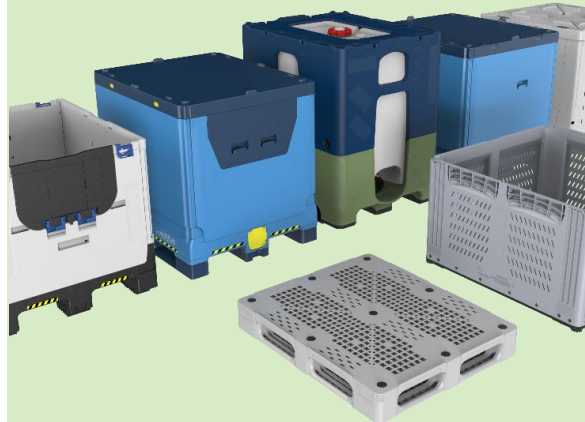
Innovation and R&D Support

- End-to-end product development
- Part design optimization and testing
 - e.g. plastic reduction, improved shape/nesting and durability
- Lightweighting through emerging molding technologies
- Secondary packaging reduction
- Reduction of transport emissions with improved pallet design
- Integration of new materials: continuously increasing recycled content

Environmental Containers



Bulk Returnable Transport Packaging



Handheld Returnable Transport Packaging



Primary Packaging and Retail



Extended Producer Responsibility (EPR): Producers (brand owners) pay fees on the materials they produce and sell in a state or province.

States have performance goals that include:

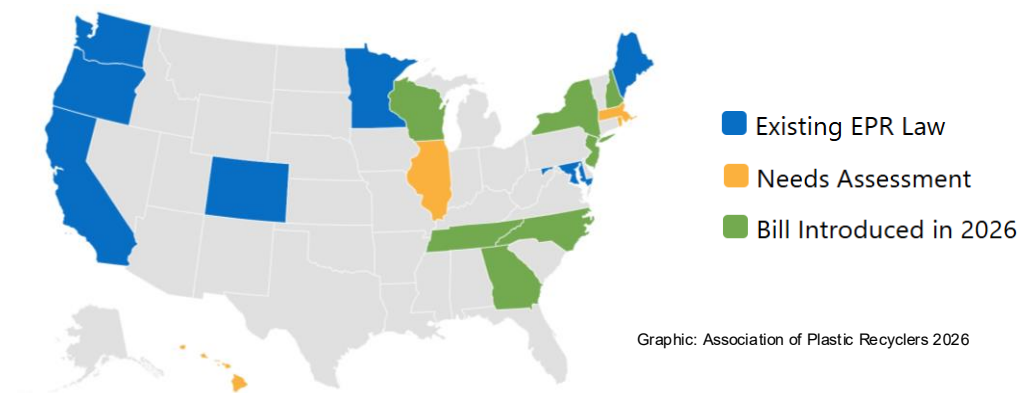
- Recycling access
- Recyclability requirements
 - Base material-specific recycling rate
 - Overall recycling rate
- Source reduction
- Reuse
- Post-consumer recycled material (PCR)
 - 9 States
 - Under NJ and Oregon IPLS is a producer

Recycled Content Mandates: Mandates on % recycled content present in a product. Often built into EPR but stand-alone laws exist.

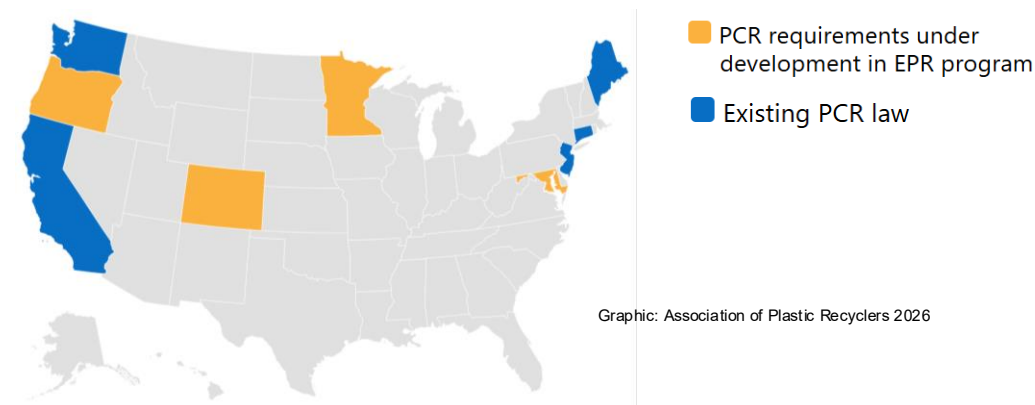
Ecomodulation:

- Failure to meet certain goals may result in higher fees for packaging materials (malus).
- Good performance results in bonuses and fee reductions (bonus).

Extended Producer Responsibility



Recycled Content (PCR) Mandates



The challenges of recycled content

Full process can take 3-6 months

Qualification of New Materials

Initial material validation

Regulatory documentation
clearance by production
facility

Sample run and mold
validation

Testing: quality, size,
performance, migration

Line trials, customer samples

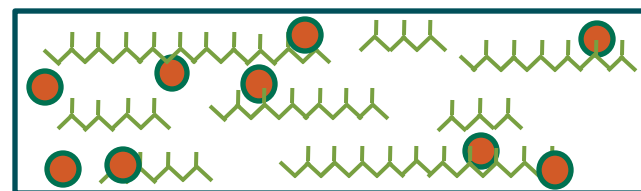
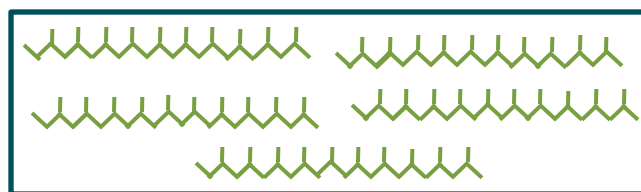
Customer validation and
testing

What is in the pellet changes its
behavior and how it can be used

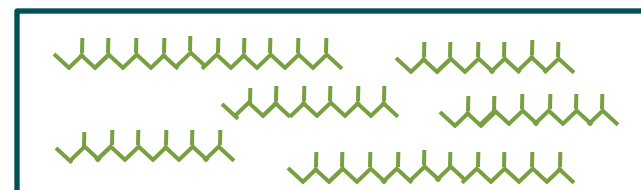
How a resin flows changes how it can
be processed



Virgin



Other resins, colorants, and additives



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Success and solutions: Food-Contact Container on Store Shelves

- Cleveland Kitchen, IPL Schoeller, PureCycle Partnered to Produce a Clear Container for Pickles
- 24-ounce container made using 25% PureFive® resin and arrived on store shelves across the United States in June
- Cleveland Kitchen products are sold at Walmart, Whole Foods, Sprouts, Target, Albertsons and Kroger



“Our fermented foods are living products. They deserve packaging that reflects the same commitment to health and the planet that our customers expect from what’s inside the container. Partnering with IPL Schoeller and PureCycle gives us a container with meaningful recycled content, full food-contact compliance, and a credible story we can put right on our label. We’re proud to be ahead of the regulatory curve and even prouder that it didn’t require any compromise on product quality.”

-Luke Visnic
Cleveland Kitchen Chief Product Officer

Success and solutions:



SnapPack Square EVO is an off-the-shelf product line providing speed to market to our customers. It supports IPLS' partnerships with suppliers, supply continuity.



Features 20% clear, food grade recycled polypropylene



SnapPack Square Virgin (IPLS)
Tuna Salad



SnapPack Square EVO with
PureFive Ultra (IPLS)

- Made with PureCycle PureFive Resin
- Photo-quality IML decoration
 - Plain
 - IML 3 face
 - IML 5 face
- Pursuing APR Preferred Certification*

- Meets California and New Jersey PCR requirements
- Non-detachable break tab
- Efficient square design
- Microwave and dishwasher safe
- 100% polypropylene



Thank you!

Comments?
Questions?
Additional information?



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Q&A

*with today's panelists and with assistance
from the subject-matter experts in the chat*



REINVESTING IN THE U.S. — ReMade in America is our priority!



Join the movement for
ReMade in America – add
your name or organization
to the pledge today



Change is here and it's
accelerating



Collaboration is our only path
forward



Circular economy solutions
deliver more than
environmental benefits



It's time to reinvest in
America's circular economy



Made in America. Remade
in America.



National Expertise + Working Groups

Here's your chance to hear from our nation's leading subject-matter experts:

1. **Household Hazardous Waste** – advancing safer end-of-life management
2. **Packaging & EPR Implementation** – unlocking the economic, & public health environmental benefits of recycling and a circular economy
3. **Textile Circularity** – driving recycling, reuse, resale & innovation at scale
4. **Recycling Refunds / Deposit-Return Systems** – scaling proven solutions to scale the collection and recycling of valuable materials
5. **Illegal Single-use Ink Toner Cartridges** – protecting markets and consumers from fraud and deception

Our **National Working Groups** meet at least four times each year and sub-groups will meet more frequently.

Ready to learn more or join?

Contact **Heath** at  heath@nsaction.us

