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STEERING COMMITTEE ORGANIZATIONS:
The U.S. Plastics Pact is a consortium founded by The Recycling Partnership and World Wildlife Fund, as part of the Ellen MacArthur Foundation’s global Plastics Pact Network.
The U.S. Plastics Pact (U.S. Pact) is bringing forward never-before-seen plastics data and challenging companies operating under difficult market conditions to reduce waste. The U.S. Pact launched in August 2020 with 62 businesses and organizations and now includes over 115 members, or Activators, as we call them. We are leading a collaborative effort to build a circular economy for plastic packaging in the U.S. As part of our commitment to transparency, businesses and organizations that join the U.S. Pact commit to sharing annual data related to our targets. This report provides aggregated data from U.S. Pact Activators on their current use of plastic packaging and actions taken in the consortium’s second year (2021) to move toward the achievement of the targets and ultimately a circular economy for plastics. In 2021, we delivered our 2020 Baseline Report, highlighting initial progress made by U.S. Pact Activators.

Progress since the Baseline Report includes:

- Creation of the Target 1 List and progress toward elimination of problematic and unnecessary plastic packaging materials;
- Improved design of recyclable plastic packaging;
- Continued increases in the use of postconsumer recycled content (PCR) in plastic packaging;
- Improved technologies and increased use of technology to make the recycling process more efficient; and
- Pilots and support of innovative and reusable product delivery models.

Much is the same as we reflect on 2021 data. Why is that? 2021 was a challenging year. Most notably, cascading fallout from the COVID-19 pandemic affected product demand, labor, material and equipment availability, logistics, and consumer markets. The residual pressures on manufacturing in the U.S. continue to be a challenge, pushing out company plans by months, if not longer. Even so, a number of companies are taking action and working toward our targets, which is highlighted in an ever-growing number of case studies.

How do we overcome this? The U.S. Pact must continue to rally Activators around our common language and definitions, gathering novel data to model the future potential, and, finally, supporting and inspiring companies to move toward our circular economy vision. Others external to the U.S. Pact have begun to dismiss the possibilities of 2025 commitments, but the U.S. cannot rely solely on the promises of policy to be the solution. Although four U.S. states passed extended producer responsibility (EPR) in 2021 and 2022, those programs will not be up and running until after 2025. Furthermore, the potential solutions offered within the United Nations’ Global Plastics Pollution Agreement (treaty) under development hinge on the ratification of the treaty. The U.S. Pact can and will demonstrate how different interventions—including policy, technology, and infrastructure developments—can change systems and ultimately raise the national U.S. recycling rate.

The U.S. Pact’s unique stakeholder mix and common focus wield strength as companies negotiate additional EPR programs and update and expand possibilities with deposit return systems. The U.S. Pact is also a learning platform for the implementation of business-to-business and business-to-consumer reuse in the U.S. Conceding on 2025 commitments will not foster the support still needed to shake the plastics packaging value chain out of the status quo. We must continue to push the boundaries of collaboration and transparency to build the circular economy for plastics packaging.

EMILY TIPALDO, EXECUTIVE DIRECTOR, U.S. PLASTICS PACT
ACTIVATORS OF THE U.S. PLASTICS PACT

AS OF OCTOBER 27, 2022

117 Activators

11 ACTIVATORS JOINED AFTER THE APRIL 1, 2022, REPORTING COHORT CUTOFF DATE FOR THE 2021 ANNUAL REPORT.

For a listing of the Activators that provided data for the 2021 Annual Report, see page 38.

For-Profit U.S. Pact Activators by Size Based on Reported U.S. Annual Revenue

- 25 BUSINESSES Above $1B
- 8 BUSINESSES $101M - $1B
- 4 BUSINESSES $50M - $100M
- 22 BUSINESSES $1M - $49M
- 7 BUSINESSES Under $1M

57%

11%

32%

State & Local Governments

GOVERNMENTS 13

Not-for-Profit U.S. Pact Activators

TRADE ASSOCIATIONS 17
NOT-FOR-PROFIT ORGANIZATIONS 18
ACADEMIC/RESEARCH 2

For-Profit U.S. Pact Activators

CPGS & RETAIL TRADE ASSOCIATIONS CONVERTERS GOVERNMENTS RECLAIMERS & CHEMICAL RECYCLERS CONSULTANTS, TECHNOLOGY & INVESTMENT COS MRF/PRFS RAW MATERIAL SUPPLIERS

23 17 18 13 20 8 7 3

117 Activators

11 ACTIVATORS JOINED AFTER THE APRIL 1, 2022, REPORTING COHORT CUTOFF DATE FOR THE 2021 ANNUAL REPORT.
2025 TARGETS

The U.S. Plastics Pact is igniting system change to realize a circular economy for plastics in the U.S. by setting the national strategy and driving action to:

**TARGET 1**
Define a list of plastic packaging that is problematic or unnecessary by 2021 and take measures to eliminate the items on the list by 2025

**TARGET 2**
100% of plastic packaging will be reusable, recyclable, or compostable by 2025

**TARGET 3**
Undertake ambitious actions to effectively recycle or compost 50% of plastic packaging by 2025

**TARGET 4**
Achieve an average of 30% recycled content or responsibly sourced, biobased content in plastic packaging by 2025
2025 U.S. PACT FOCUS AREAS

The U.S. Pact gathered and analyzed novel data that indicates where the U.S. has the greatest opportunities and the most work to do to establish a circular economy for plastics packaging. In short, PET bottles (such as water and soda bottles) make up the largest category of plastic packaging within the U.S. Pact (more than double the tonnage of other categories) and provide the greatest opportunity in the short term. PET packaging is a format that is well understood and handled by reclaimers and for which robust demand exists. To the right are the identified focus areas through 2025.

**REDUCTION:** Develop a virgin plastic packaging reduction target.

**ELIMINATION:** Take measures to eliminate the 11 problematic and unnecessary materials identified by the U.S. Pact.

**REUSE:** Support reuse innovators through the U.S. Pact’s Reuse Catalyst to increase data collection, information sharing, and U.S. guidance (e.g., definitions, developing policy support, and consumer understanding) and encourage consumer goods companies and retailers to implement reuse systems.

**DESIGN:** Ensure 100% of PET and HDPE bottles meet the Design for Recyclability guidelines set forth by the U.S. Pact (e.g., for recyclability meeting the APR Design Guidance) and the usage of postconsumer recycled resin (PCR) increases from 7% average to 15% across all rigid packaging.*

*Data sets include the following: 2020 Baseline Report, 2021 U.S. Pact Activator data, Target 3 Strategy Assessment, Target 4 Modeling 30% PCR Usage

**POLICY:** Support policies that facilitate the increased collection and sortation of beverage bottles, like well-designed deposit return systems (DRS), extended producer responsibility (EPR), and PCR mandates in development. Contribute to the UN Global Treaty National Action Plan development.
2025 TARGET PROGRESS

KEY DATA POINTS
The data helps the U.S. Pact have a better understanding of the scale of the challenges ahead and action steps we must take to address the gaps.

**5.9 million MT**
the total weight of plastic packaging placed on the market by U.S. Pact Activators.

**37%**
of all plastic packaging in scope in the U.S. by weight is produced by U.S. Pact Activators.

**TOP 3**
PET bottles, HDPE bottles, and smaller multi-material flexible packaging are the top-three plastic packaging formats represented within the U.S. Pact by tonnage.

**TARGET 1**
86% of the plastic packaging placed on the market by U.S. Pact Activators by weight did not contain items on the Problematic and Unnecessary Materials List.

**TARGET 2**
36% of plastic packaging placed on the market by U.S. Pact Activators by weight is reusable, recyclable, or compostable; an additional 2% complies with U.S. Pact Design for Recyclability Guidelines but is not yet recycled in practice and at scale.

**TARGET 3**
13.3% is the national U.S. recycling rate for plastic packaging.

**TARGET 4**
8% is the average postconsumer recycled content (PCR) or responsibly sourced biobased content in scope used by U.S. Pact Activators.
CIRCULAR ECONOMY VISION
FOR PLASTIC PACKAGING IN THE U.S.

The U.S. Plastics Pact is a part of the Ellen MacArthur Foundation’s global Plastics Pact Network, all aiming toward similar targets. We need to create value and drive change for a circular economy for plastics packaging in the U.S. focusing on the following elements. This Vision is detailed in our Roadmap to 2025.

**TARGET 1**
Define a list of plastic packaging that is problematic or unnecessary by 2021 and take measures to eliminate the items on the list by 2025

Problematic and unnecessary plastic packaging materials without a path to a well-funded and scalable circular trajectory are eliminated from the U.S. market.

**TARGET 2**
100% of plastic packaging will be reusable, recyclable, or compostable by 2025

100% of plastic packaging on the U.S. market is either reusable, recyclable, or compostable—in practice and at scale.

Retailers and brands integrate efficient and effective business-to-consumer reuse programs, including as part of e-commerce operations, with an eye toward greater growth and scale.

Business-to-business reuse programs are integrated into the majority of U.S. food and retail chains at scale, including as part of e-commerce operations.

Design for recyclability guidance is widely available, standardized, and easy for brands to digest, prioritizes material circularity, and lowers environmental impact.

Brands and retailers, in partnership with not-for-profit organizations and state and local governments, will find solutions to achieve 100% reusable, recyclable, or compostable packaging solutions, moving away from non-circular packaging.

Guidance is in place to advise how to achieve circularity for new plastic packaging materials introduced to the U.S. market.

Demonstrated acceptance of and ability to process compostable packaging in industrial composting facilities at scale and development of widespread collection systems.

See the Vision in the Roadmap to 2025, starting on page 7.
CIRCULAR ECONOMY VISION
FOR PLASTIC PACKAGING IN THE U.S.

TARGET 3
Undertake ambitious actions to effectively recycle or compost 50% of plastic packaging by 2025

Achievement of this target requires companies to take full responsibility for what is within their control, complemented by collaborative action and policies.

Plastic packaging on the U.S. market will have a recycling rate (on average) of 50% or a composting rate (on average) of 50%, and this is composed of the following:

- Americans have widespread and equitable access to recycling at their residences, workplaces, and schools, as well as via drop-off programs.
- Take action to ensure:
  - PET, PP, and HDPE bottles have a minimum recycling rate of 70%.
  - PET non-bottle rigid packaging has a minimum recycling rate of 50%.
  - PP plastic non-bottle containers/rigid packaging have a minimum recycling rate of 50%.
  - HDPE plastic non-bottle containers/rigid packaging have a minimum recycling rate of 30%.
  - Film and flexible packaging is collected for recycling via all recycling means, including drop-off collection and standard residential programs such as curbside collection.

  - PE film (including PE pouches) has a minimum recycling rate of 30%.
  - Other polyolefin film (i.e., PP or potential PE/PP mix) has a minimum recycling rate of 30%.
  - Robust domestic end markets exist for all materials listed above.

Support extended producer responsibility (EPR) policy funded by all packaging types to assist community and materials recovery facilities (MRFs). The EPR framework will incentivize reuse, recyclability, and design for lower environmental impact through eco-modulation and offers flexibility for deposit return systems (DRS) to meet beverage packaging recycling rates. Policies such as EPR and DRS will help ensure the quality supply of PCR to enable the achievement of Target 4.

Compostable packaging solutions and infrastructure are advanced through collective efforts external to and in coordination with the U.S. Pact.
Achieve an average of 30% recycled content or responsibly sourced, biobased content in plastic packaging by 2025

Achievement of this target requires companies to take full responsibility for what is within their control, complemented by collaborative action and policies.

The U.S. Pact will undertake ambitious actions to work toward an average of 30% postconsumer recycled content by weight or responsibly-sourced, biobased content across the U.S. packaging portfolio.

The U.S. Pact will prioritize the use of postconsumer recycled content (PCR) in packaging with the fewest challenges, supporting the highest and best use of the material (e.g., rigid plastic packaging) while adhering to food safety requirements and facilitating continual improvement in using PCR in food-contact applications.

The U.S. Pact will work toward achieving appropriate PCR mandates to create market demand for postconsumer recycled content.

The inclusion of PCR or responsibly-sourced, biobased content will align with the goals of Target 2, achieving 100% reusability, recyclability, or compostability by 2025.

Responsibly-sourced, biobased content must meet the five criteria outlined by World Wildlife Fund (WWF) and proven credible certification:

- Is legally sourced, conforms to Universal Declaration of Human Rights (UDHR), and is produced in a safe and healthy way for workers and surrounding communities;
- Is one that is derived from renewable biomass;
- Does not adversely impact food security and affordability and maintains or improves social and economic conditions along with ecosystem services in producing communities;
- Does not result in destruction of critical ecosystems or loss of High Conservation Value (HCV) habitats; and
- Contributes to landscape resilience and is resilient to the impacts of climate change.
## 2021 SUMMARY
### U.S. PLASTICS PACT PACKAGING FORMATS

<table>
<thead>
<tr>
<th>Packaging Format</th>
<th>2021 Weight (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET Bottle</td>
<td>1,072,182</td>
</tr>
<tr>
<td>HDPE Bottle</td>
<td>405,677</td>
</tr>
<tr>
<td>&lt;A4 Multi-material Flexibles</td>
<td>307,842</td>
</tr>
<tr>
<td>PP Other Rigid</td>
<td>295,602</td>
</tr>
<tr>
<td>&lt;A4 PE Flexibles</td>
<td>237,316</td>
</tr>
<tr>
<td>&gt;A4 Mono-material PE Flexibles in B2C Context</td>
<td>176,711</td>
</tr>
<tr>
<td>Other</td>
<td>150,696</td>
</tr>
<tr>
<td>PET Thermoforms</td>
<td>133,367</td>
</tr>
<tr>
<td>PS Rigid</td>
<td>74,592</td>
</tr>
<tr>
<td>HDPE Other Rigid</td>
<td>66,244</td>
</tr>
</tbody>
</table>

### PORTFOLIO TOTALS BY PACKAGING FORMAT CATEGORY

<table>
<thead>
<tr>
<th>Packaging Format</th>
<th>2021 Weight (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;A4 PP Flexibles</td>
<td>61,632</td>
</tr>
<tr>
<td>Other PET Rigid</td>
<td>58,473</td>
</tr>
<tr>
<td>Other &gt;A4 Flexibles</td>
<td>57,698</td>
</tr>
<tr>
<td>PP Bottle</td>
<td>25,186</td>
</tr>
<tr>
<td>&gt;A4 Mono-material PE Flexibles in B2B Context</td>
<td>24,732</td>
</tr>
<tr>
<td>EPS Rigid</td>
<td>18,701</td>
</tr>
<tr>
<td>PVC Rigid</td>
<td>6,891</td>
</tr>
<tr>
<td>PE Tubes</td>
<td>6,416</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3,179,958</strong></td>
</tr>
</tbody>
</table>

Note: Includes only sales to consumers and retail (no business-to-business)
ACHIEVING VALUE-CHAIN ALIGNMENT
In summer 2021, the U.S. Plastics Pact achieved Activator consensus and adopted a definition and U.S.-specific criteria to identify “problematic” and “unnecessary” plastic packaging within our scope. Activators evaluated items and approved the list in accordance with the definition and criteria using the most comprehensive publicly available data from federal and state agencies, not-for-profit organizations, and trade associations.

PUBLIC TRANSPARENCY
The U.S. Plastics Pact’s Problematic and Unnecessary Materials List was publicly released in January 2022. Along with the list, the U.S. Pact also held a public webinar and published the definition, criteria, and data sources that informed our decisions.

MOVING INTO ACTION
With the list publicly released in January 2022, Activators are now focusing efforts toward elimination. The 2021 numbers presented in this 2021 data report thus provide the baseline from which Activators are taking action in 2022 and beyond. We anticipate that momentum toward elimination will continue building in the years to come.

EMPOWERING ELIMINATION
By the end of 2022, U.S. Pact Activators are expected to have in place the necessary plans to facilitate phased elimination in their businesses/supply chains by 2025. Circular alternatives for eliminating the list of problematic and unnecessary packaging items are identified in Design for Circularity guidance for reuse, recyclability, and compostability, expected to be made publicly available in early 2023.

The elimination of Per- and Polyfluoroalkyl Substance (PFAS) is the subject of ongoing discovery work. The state of regulations and research on the use of PFAS is currently well developed for fiber packaging, in which PFAS use is common and better understood.

continued on next page
The U.S. Pact is conducting research on the use cases and prevalence of PFAS in plastics packaging, U.S. regulations on PFAS in plastics packaging, and the state of research on alternatives to PFAS in plastics packaging.

LOOKING AHEAD
Per our Roadmap to 2025, the U.S. Pact will review the list of problematic and unnecessary items to ensure relevance is maintained in 2023. The review will include a reassessment of items that were identified “to investigate” in 2021. Each of these items’ trajectory toward circularity will be carefully considered to evaluate actions taken to solve the issues associated with their use or disposal. As in 2021, items will be assessed in accordance with the agreed definition and criteria as well as transparent, publicly available data sources.

OVERVIEW

A Keystone Target
The U.S. Plastics Pact’s targets are interconnected. Eliminating problematic and unnecessary materials to meet Target 1 is the keystone that supports the achievement of all other targets.

The removal of key non-reusable, non-recyclable, and non-compostable materials:

- Facilitates the shift toward reusable, recyclable, and compostable alternatives to achieve Target 2;
- Improves collection, sortation, and processing of recyclable and compostable items to achieve Target 3; and
- Increases yield and quality of postconsumer recycled content (PCR) available to use in new packages to achieve Target 4.
The material must also meet one or more of the following criteria to be considered problematic or unnecessary:

CRITERION 1: Is the material reusable, recyclable, or compostable now or will it be by 2025?

- **NO**: The material is NOT considered problematic or unnecessary.
- **YES**: The material must also meet one or more of the following criteria to be considered problematic or unnecessary:

CRITERION 2: Does the material contain hazardous chemicals or create hazardous conditions that pose a significant risk to human health or the environment (applying the precautionary principle) during its manufacturing, recycling (whether mechanical or chemical), or composting process?

- **UNNECESSARY**

CRITERION 3: Can the material be avoided (or replaced by a reuse model) while maintaining utility? (Is the format or material necessary?)

- **UNNECESSARY**

CRITERION 4: Does the material hinder or disrupt the recyclability or compostability of other items?

- **PROBLEMATIC**

CRITERION 5: Is there a high likelihood of the material being littered or ending up in the natural environment?

- **PROBLEMATIC**

Does the material **meet Criteria 2, 3, 4, and/or 5**?

- **NO**: The material is NOT considered problematic or unnecessary.
- **YES**: The material is considered problematic or unnecessary.
U.S. Pact Activators will take measures to eliminate the following items by 2025:

- Cutlery*
- Intentionally added¹ Per- and Polyfluoroalkyl Substances (PFAS)²
- Non-Detectable Pigments such as Carbon Black
- Opaque or Pigmented PET—Polyethylene Terephthalate bottles (any color other than transparent blue or green)
- Oxo-Degradable Additives, including oxo-biodegradable additives
- PETG – Polyethylene Terephthalate Glycol in rigid packaging
- Problematic Label Constructions—This includes adhesives, inks, materials (e.g., PETG, PVC, PLA, paper). Avoid formats/materials/features that render a package detrimental or non-recyclable per the APR Design® Guide. Labels should meet APR Preferred Guidance for coverage and compatibility and be tested in any areas where this is unclear.
- PS—Polystyrene, including EPS (Expanded Polystyrene)
- PVC—Polyvinyl Chloride, including PVDC (Polyvinylidene Chloride)
- Stirrers*
- Straws*

The 11 items listed are not currently reusable, recyclable, or compostable with existing U.S. infrastructure at scale and are not projected to be kept in a closed loop in practice and at scale by 2025.

* When non-reusable, non-recyclable, or non-compostable per U.S. Pact definitions and provided as an ancillary item to the primary container. For instance, a packet of plastic cutlery provided with a prepared salad or a straw/stirrer provided with an on-the-go beverage would be defined as problematic whereas cutlery, straws, or stirrers sold as a product would not.

¹ “Intentionally added” either in the package or in the manufacturing of that package.

² PFAS or perfluoroalkyl and polyfluoroalkyl substances, are defined as the class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom at or above 100 parts per million, as measured in total organic fluorine.
ESTABLISHING OUR ELIMINATION BASELINE

This is the first time Activators reported on the use of these materials. The 2021 data presented here covers the year prior to the establishment of the Problematic and Unnecessary Materials List in January 2022. This data thus provides the baseline from which Activators are now taking action.

Activators are researching and developing alternatives for these materials, investing in updating equipment to transition away from these materials, and updating procurement and vendor contracts to specify circular, sustainable materials in place of those on the list.

Redesign must happen now. Making changes to packaging and product delivery systems to make them either reusable, recyclable, or compostable can be a multi-year process. The U.S. Pact supports Activators’ redesign efforts through educational sessions and innovation showcases. And, based on timeline estimates, design changes must happen now if we anticipate seeing significant reductions of items on the Problematic and Unnecessary Materials List in the next couple of years.

14% of packaging put on the market by U.S. Pact Activators contained one or more materials on the Problematic and Unnecessary Materials List in 2021.

<table>
<thead>
<tr>
<th>Problematic and Unnecessary Materials</th>
<th>Total Weight of Materials (MT)</th>
<th>% Contribution to Packaging Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PETG</td>
<td>196,592</td>
<td>3%</td>
</tr>
<tr>
<td>PS</td>
<td>130,390</td>
<td>2%</td>
</tr>
<tr>
<td>Problematic Label Constructions</td>
<td>129,321</td>
<td>2%</td>
</tr>
<tr>
<td>Oxo-Degradable Additives</td>
<td>90,718</td>
<td>2%</td>
</tr>
<tr>
<td>Straws*</td>
<td>86,630</td>
<td>1%</td>
</tr>
<tr>
<td>Opaque or Pigmented PET</td>
<td>67,691</td>
<td>1%</td>
</tr>
<tr>
<td>Non-Detectable Pigments</td>
<td>57,412</td>
<td>1%</td>
</tr>
<tr>
<td>PVC</td>
<td>44,538</td>
<td>1%</td>
</tr>
<tr>
<td>Intentionally Added PFAS</td>
<td>1,361</td>
<td>0.02%</td>
</tr>
<tr>
<td>Cutlery*</td>
<td>-</td>
<td>0%</td>
</tr>
<tr>
<td>Stirrers*</td>
<td>-</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>804,653</td>
<td>14%</td>
</tr>
</tbody>
</table>

*As of 2021 data collection, no U.S. Plastics Pact Activators sold cutlery or stirrers into the U.S. market.
PAC Worldwide introduced the Ecojacket® Flex, a curbside recyclable, padded, all-paper mailer that offers the same reliable protection and durability as a poly bubble mailer. Ecojacket Flex is an alternative to mixed substrate mailers, which cannot be recycled. Ecojacket Flex helps e-commerce retailers meet their sustainability goals.

The Ocean Foundation continues to work within the international governance arena to shift the plastics conversation. Instead of asking why plastics are so problematic, it developed a solution-driven approach that re-examines the way plastics are made from the production stage so that plastic materials can be more readily recycled. The Ocean Foundation is an accredited observer to the UN Environment Assembly (UNEA) and is actively engaged in the process to develop a new international agreement to end plastic pollution. There is an undeniable link between the United States’ domestic policies to combat the plastic pollution crises and what occurs within international governance processes such as the negotiations for a plastics treaty.

ALDI is taking action to eliminate plastic shopping bags from stores by the end of 2023. These bags have already been eliminated from over 500 stores so far in October 2022, and ALDI plans to phase them out across all their U.S. stores over the next year. This commitment builds on the company’s existing sustainable packaging initiatives, including its goal to make all ALDI-exclusive packaging reusable, recyclable, or compostable and to utilize 20% post-consumer recycled content in plastic packaging by 2025. Through their Corporate Responsibility Progress Report released in 2022, ALDI reported that 62% of ALDI-exclusive packaging is now reusable, recyclable, or compostable — tracking well towards their 2025 goal.

Kwik Lok’s Fibre-Lok closures are now available in the United States. The fiber-based closure is a replacement for the company’s ubiquitous polystyrene closure products used predominantly by the bakery and produce industries. The closures must run through the thousands of closing machines customers have already invested in with little or no additional investment or downtime. And the closures must be reusable for the consumer to keep their purchased food product fresh and safe through the life of the produce.
The U.S. Pact and Walmart are showcasing businesses innovating circular solutions that make progress on the U.S. Pact’s four targets, particularly Targets 1 and 2 that focus on moving away from problematic or unnecessary materials and toward greater reuse, recyclability, and compostability. Finalists and winners of the **U.S. Pact’s Sustainable Packaging Innovation Award** are chosen from submissions to Walmart’s Circular Connector, a database of packaging solutions meeting circularity requirements that is publicly available to everyone.

Winners in each of the four categories were evaluated by a robust judging panel of NGOs, retailers, and manufacturers. Criteria included adherence to U.S. Pact design targets, circularity, manufacturability, and impact on the consumer experience. Winners received manufacturing trial discussions, mentoring sessions with Walmart’s Private Brand Packaging Team, recognition at VERGE as well as a GreenBiz webinar, and a technology showcase promotion through the U.S. Pact. They also were interviewed on Cory Connors’ Sustainable Packaging Podcast.

### Target 1: Innovation Award

**RECYCLABILITY:** Pharmaceutical blister packages are traditionally made using PVC to thermoform cavities for the pills and an aluminum foil-based lidding to incorporate the package’s opening feature. Amcor created AmSky™ blister package, both lidding and thermoformed base, using HDPE, one of the most recycled plastics in the world. AmSky™ strictly followed APR recycling design guidance and has received APR Critical Guidance Recognition for the PE film stream acknowledging its recyclability.

**REFILL:** Clorox Concentrated Refillable Cleaners are a line of concentrated refill pods and durable bottles/triggers. The Clorox Company’s pod design delivers an intentional design for material reduction, reuse, and recyclability, while retaining child resistance and maintaining cleaning performance. The pod is optimized for recyclability through intentional sizing and labeling considerations that enable MRF sorting and utilizes highly recoverable HDPE (EBM grade). With each refill, 80% of plastic is saved compared to that of a traditional spray delivering the same amount of product.

**COMPOSTABILITY:** Coffee pods can be challenging to recycle due to their small size and the need to remove coffee grounds. Smile Compostable Solution’s pods are 62% biobased, supporting Target 4 as well, and contain no petroleum plastic or PLA. The other 38% is a compostable liquid oxygen barrier added to the plant base during molding. The coffee pods may be placed in home composting.

**REUSE:** DeliverZero created a network of returnable reusable packaging. The company makes it easy for merchants, point-of-sale systems, and delivery apps to offer customers the option to receive orders in reusable packaging that can be returned to any point in their network or with a future order. DeliverZero’s containers are BPA free, NSF-certified, and designed to be reused up to 1,000 times. Reusable packaging eliminates waste and the emissions associated with manufacturing, shipping, and disposing of single-use packaging.
OVERVIEW

100% of plastic packaging will be reusable, recyclable, or compostable by 2025

ISSUING DESIGN GUIDANCE
The U.S. Plastics Pact design guidance provides standards that Activators are working toward to ensure plastic packaging placed on the market is compatible with reuse, recycling, and composting systems. The U.S. Plastics Pact Design for Circularity Playbook will be published publicly in 2023 to help businesses navigate these complex topics and provide insight into how Activators are making changes to achieve Target 2. Our guidance is forward-looking, bringing together and aligning the best available design guidance in North America and globally.

MEASURING DESIGN FOR RECYCLABILITY
Recycling systems for some packaging categories are well-established in the U.S., while recycling systems for other categories are in varying stages of development. Starting with this 2021 report, the U.S. Pact is measuring design for recyclability as a key performance indicator (KPI) of Target 2. The KPI helps the U.S. Pact and its Activators identify gaps, prioritize targets for conversion, and ultimately monitor progress toward the goal of recyclability in practice and at scale to meet the ambitious Target 2.

A package is considered “designed for recycling” for the U.S. Pact when it meets Preferred status in accordance with the APR Design® Guide or meets specific interim guidance where formal APR guidance is being developed. For example, the Consumer Goods Forum Golden Design Rule #6 informs current design guidance for film and flexibles made from mono-material PP and other polyolefins (PE/PP mix).

The U.S. Pact supports the APR Design® for Plastics Recyclability Training Program, where APR experts walk teams through the design process, offering customized guidance to meet the unique needs of each company and its products. Activators are also encouraged to use The Recycling Partnership’s Plastic IQ tool, which generates personalized data-based action plans and has provided input to The Recycling Partnership’s Pathway to Circularity.

continued on next page
OVERVIEW

SETTING THE STAGE FOR REUSE AND COMPOSTING
Infrastructure in the U.S. for reuse and composting of packaging is in its nascent stages.

We have benchmarked best practices in reuse/refill business models and launched the Reuse Catalyst to accelerate the cross-industry uptake of reusable and refillable packaging in the United States. Facilitated by the U.S. Pact and in collaboration with Closed Loop Partners, the Reusable Packaging Association, and World Wildlife Fund, the Reuse Catalyst aims to bolster the development of emerging and established reuse and refill innovators, and the broader industry, through shared learnings, expertise, connectivity, and amplification.

Composting collection and processing infrastructure is limited. Despite the climate urgency of keeping food scraps out of landfills, the majority of composters in the United States accept only yard waste and agricultural feedstocks, and access to composting services is limited for both commercial and household food waste generators. Until access to composting is able to scale, no product categories or material formats currently meet the 30% recovery requirements established by the U.S. Pact. We are coordinating with existing consortia and research efforts to grow and scale composting infrastructure and access, including participating in Closed Loop Partners’ Composting Consortium, which aims to build a roadmap for investment in technologies and infrastructure to address the growth in production of compostable food packaging.

THE ROLE OF DESIGN
Packaging design is a critical early step toward reaching the U.S. Pact’s ambitious targets by 2025.

Other elements—including, but not limited to: access to collection, sortation, and processing infrastructure; end market development and expansion; and consumer education and participation—will also need to come together to realize circularity in practice and at scale for all plastic packaging.

Design is the key to unlocking circularity by enabling all of these necessary elements to grow.
The U.S. Pact selected 20 Partners for its Reuse Catalyst, a program designed to support and develop innovators that have scalable reuse solutions for the United States. Reusable packaging reduces the demand for non-renewable virgin plastic packaging and offers a strong economic growth opportunity.

If 20% of global plastic packaging is converted to reusable packaging, $10 billion would be added into the economy.

Companies of all sizes that are deploying commercial reusable or refillable packaging models within the United States were eligible to apply.

Reuse Catalyst Partners benefit from increased brand recognition and visibility. The participants gain access to the U.S. Pact network of 115+ retailers, investors, and experts, among others, for mentorship, knowledge sharing, and potential partnership opportunities. This includes the potential for one-on-one sessions with retailers, investors, and mentors. The U.S. Pact will host meetings with the participating innovators as regular check points throughout the collaboration period to discuss progress, challenges to overcome, data collection, and other areas of opportunity or assistance.

Surveys will be completed by the participants and deployed by participants to their customers to support the collaborative efforts to obtain shared learnings around reuse modeling, customer sentiment and accessibility, source reduction capability and scalability, and collaboration between stakeholders, among other insights. Participants will share their individual lessons on reuse; data-driven insights will be aggregated and anonymized to share more broadly and accelerate the growth of the industry. Customer and individual data will be kept confidential.

The Reuse Catalyst is a pillar of the U.S. Pact’s broader reuse efforts to accelerate the cross-industry uptake of reusable packaging in the United States. The program is facilitated by the U.S. Pact in collaboration with Closed Loop Partners, Reusable Packaging Association, and World Wildlife Fund.
Every year the Ellen MacArthur Foundation assesses global recyclability based on its definition. Each national Plastics Pact conducts its own assessment. U.S. Pact definitions are in line with the Ellen MacArthur Foundation’s definitions and are different from on-pack labeling claims.

<table>
<thead>
<tr>
<th>Evidence found that a “system for recycling” exists in practice and at scale today worldwide</th>
<th>Packaging Format Category</th>
<th>Evidence found that a “system for recycling” exists in practice and at scale today in the U.S.</th>
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<tbody>
<tr>
<td>Yes</td>
<td>PET Bottle</td>
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</tr>
<tr>
<td>Yes</td>
<td>PET Thermoforms</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>Other PET Rigid</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>HDPE Bottle</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>HDPE Other Rigid</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>PP Bottle</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>PP Other Rigid</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>PE Tubes</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>EPS Rigid</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>PS Rigid</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>PVC Rigid</td>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
<td>&gt;A4 Mono-material PE Flexibles in B2B Context</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>&gt;A4 Mono-material PE Flexibles in B2C Context</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>Other &gt;A4 Flexibles</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>&lt;A4 PE Flexibles</td>
<td>No</td>
</tr>
<tr>
<td>No</td>
<td>&lt;A4 PP Flexibles</td>
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</tr>
<tr>
<td>No</td>
<td>&lt;A4 Multi-material Flexibles</td>
<td>No</td>
</tr>
<tr>
<td>No Data</td>
<td>Other</td>
<td>No Data</td>
</tr>
</tbody>
</table>

**GLOBAL RECYCLABILITY ASSESSMENT**

The table indicates which categories of plastic packaging can be considered recyclable in practice and at scale globally (i.e., currently achieve a 30% postconsumer recycling rate in multiple regions, collectively representing at least 400 million inhabitants), based on the New Plastics Economy 2021 Recycling Rate Survey.

**U.S. RECYCLABILITY ASSESSMENT**

The table indicates which categories of plastic packaging can be considered recyclable in practice and at scale in the local market (30% postconsumer recycling rate in the U.S. Pact market(s)), based on the U.S. Pact lead organization’s data.
### DATA SUMMARY

36% of plastic packaging* placed on the market by U.S. Pact Activators is reusable, recyclable, or compostable.

PET bottles, HDPE bottles, small multi-material flexibles, and PP Rigid contribute the greatest to the total packaging. Because PET and HDPE bottles are considered recyclable formats, these formats are an opportunity to increase the total recyclable packaging by making design changes to eliminate materials and components that prevent them from being recycled.

Taking action to technically design packaging for recycling is something companies have within their control. The U.S. Pact developed a Design for Recyclability Playbook to establish consistency in guidance for Activators on criteria for ensuring plastic packages placed on the market are compatible with the recycling system.

* Totals include U.S. Pact Activators’ business-to-consumer and business-to-retail packaging, and exclude business-to-business and raw material producer totals to avoid the possibility of double counting.

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- 2025 Targets
- Circular Economy Vision
- Target 1
- Target 2
- Target 3
- Target 4
- Advisory Council Message
- Activator Quotes
- U.S. Pact 2021 Annual Report Respondents
- Looking Ahead

<table>
<thead>
<tr>
<th>Packaging Format Category</th>
<th>Percent of Total Packaging by Weight</th>
<th>Percent of Format That is Recyclable</th>
<th>Percent of Format That is NOT Recyclable</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET Bottle</td>
<td>34%</td>
<td>74%</td>
<td>26%</td>
</tr>
<tr>
<td>HDPE Bottle</td>
<td>13%</td>
<td>61%</td>
<td>39%</td>
</tr>
<tr>
<td>&lt;A4 Multi-material Flexibles</td>
<td>10%</td>
<td>61%</td>
<td>39%</td>
</tr>
<tr>
<td>PP Other Rigid</td>
<td>9%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>&lt;A4 PE Flexibles</td>
<td>7%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>&gt;A4 Mono-material PE Flexibles in B2C Context</td>
<td>6%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Other</td>
<td>5%</td>
<td>4%</td>
<td>96%</td>
</tr>
<tr>
<td>PET Thermoforms</td>
<td>4%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>PS Rigid</td>
<td>2%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>HDPE Other Rigid</td>
<td>2%</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>&lt;A4 PP Flexibles</td>
<td>2%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Other PET Rigid</td>
<td>2%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Other &gt;A4 Flexibles</td>
<td>2%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>PP Bottle</td>
<td>1%</td>
<td>55%</td>
<td>45%</td>
</tr>
<tr>
<td>&gt;A4 Mono-material PE Flexibles in B2B Context</td>
<td>1%</td>
<td>77%</td>
<td>23%</td>
</tr>
<tr>
<td>EPS Rigid</td>
<td>1%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>PVC Rigid</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>PE Tubes</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

See U.S. Pact Definitions
Additionally, U.S. Pact Activators who were classified as brands, converters, consumer packaged goods, retailers, and packaging producers were asked to provide an overview of actions taken and progress made over the reporting period to make 100% of their plastic packaging reusable, recyclable, or compostable by 2025 [according to U.S. Pact definitions].

Recognizing that the packaging redesign development and implementation timeline takes one to two years when alternate technology exists, and three years or longer when new technology must be developed, most U.S. Pact Activators were still in design or testing phases in 2021. Additionally, significant raw material, line capacity, and labor shortages created unique challenges and delays in testing alternate materials. We anticipate seeing more significant implementation of circular formats beginning in 2023 based on typical development/implementation timelines and accounting for the unprecedented supply chain challenges of 2021.

In response to the qualitative information provided in the annual reporting, the U.S. Pact is facilitating best practice sharing, educational sessions, and innovation showcases to assist Activators in overcoming identified challenges. The U.S. Pact and our Activators remain committed to Target 2.

Additional consumer goods (CPG) companies and retail Activators within the U.S. Pact are piloting and implementing reuse models in some way. Up 9% from the 2020 baseline, 42% of CPG/Retail Activators have a reuse model in place for business-to-consumer packaging.
ADHERING TO DESIGN FOR RECYCLABILITY GUIDANCE

Design is the necessary first step toward enabling circular pathways to develop. Circular recycling systems cannot exist in practice and at scale unless producers 1) design their packaging to make collection, sortation, processing, and end markets possible and 2) create a demand pull by specifying and using postconsumer recycled content (PCR) made from these materials.

The U.S. Pact has defined Design for Recyclability guidance. A circular plastic package design contains only materials that are preferred and avoids the use of materials that are problematic and unnecessary, detrimental to recycling, or render the package non-recyclable.

For packaging formats that have a recycling system in place, it is critical that companies meet the highest design standards to maximize recycling rates and enable production of high-quality PCR.

For other packaging formats that don’t yet have a recycling system in place in practice and at scale, meeting the same rigorous design standards is necessary to allow recycling systems to grow.

* These plastic packaging formats are based on the results of the Ellen MacArthur Foundation’s Recyclability Assessment on page 22.
The U.S. Plastics Pact endorsed Preferred package design as defined in the APR Design® Guide for Plastics Recyclability as the standard that Activators are following to achieve Target 2. APR has refined the guidance for priority design features, clarified test protocols, and expanded the Meets Preferred Guidance Recognition program, encouraging new innovations in package design including new near-infrared detectable black and dark colorants and Preferred label constructions.

Eco-Cycle was one of the lead organizations to develop and pass House Bill 22-1355 in Colorado, the third producer responsibility policy for packaging in the United States and the first fully producer-funded and -operated statewide recycling system for customer-facing packaging and printed paper. A Colorado Producer Responsibility Policy will increase the state’s low recycling rate and create more equitable access by making it easy for all Coloradans to recycle more plastics and other commodities. It will also benefit the companies that make our products by creating a more resilient domestic supply chain of recycled materials to make new products, thus reducing reliance on imported materials.

National Stewardship Action Council (NSAC) and Ocean Conservancy (OC) participated in negotiating, drafting, and ultimately passing California’s Plastic Pollution Prevention and Packaging Producer Responsibility Act (CA SB 54). This new law establishes the most robust extended producer responsibility policy in the U.S. by requiring that all packaging in the state to be recyclable or compostable by 2032 and that plastic packaging achieve a 65% recycling rate in the same timeframe. The law includes the first-ever source reduction requirements for single-use plastic packaging — by 25% over 10 years.
In 2021, Washington state passed a law (WA SB 5022) aimed at improving the state’s recycling system and reducing litter. The law establishes minimum recycled content requirements for plastic beverage containers, trash bags, and plastic household cleaning and personal care product containers, bans expanded polystyrene containers as they are a type of problematic and unnecessary plastic packaging, and sets standards for customer opt-in for food service packaging and accessories.

Palmolive Shake & Clean Eco-Friendly Dish Soap results in 75% less plastic per refill by allowing users to reuse an existing bottle instead of buying a new 20-ounce bottle. The user adds water to the bottle, which decreases weight and associated carbon impacts from shipping. The dish soap bottle is made from 100% recycled plastic. By partnering with Walmart, Colgate-Palmolive was able to bring a breakthrough refill technology to the market.

Unilever USA’s Dove body-wash kit includes an infinitely recyclable, reusable aluminum bottle and one Daily Moisture Body Wash Concentrate refill. The refills are 4x concentrated compared to standard Dove body wash. Once customers use two concentrate refills, they will be using 50% less plastic with continued use compared to standard body wash. Additionally, from the first refill, 80% less water is shipped (per refill). After a year of refills, there are 21% fewer greenhouse gas emissions from manufacturing.

Digimarc’s smart labeling, which can use QR codes, digital watermarking, near-field communication (NFC), or RFID tags, allows brands to connect directly with customers through digitized products. Combining digitized products with the Digimarc Product Cloud allows brands to share real-time, contextualized recycling information with consumers directly through the product item. Customers simply scan the code on the product’s packaging or label with their smartphone to easily access information about the recyclability of a product and how to correctly recycle that product based on ZIP code or geo-location.
TARGET 3 OVERVIEW

Undertake ambitious actions to effectively recycle or compost 50% of plastic packaging by 2025

ESTABLISHING THE BASELINE
While data regarding Targets 1, 2, and 4 is an aggregation from Activator reports, the U.S. Plastics Pact must rely on external sources to measure progress toward Target 3. The U.S. EPA’s annual Advancing Sustainable Materials Management: Facts and Figures report is our core data source, with recognition of its shortcomings. To arrive at the most accurate measurement, we therefore supplemented the EPA data with reliable industry data, available through the Association of Plastic Recyclers (APR) and the National Association for PET Container Resources (NAPCOR), to calculate a baseline recycling rate of 13.3% for the materials within the U.S. Pact scope.

Due to a lack of national data on a composting rate for plastics, it is assumed that 13.3% is the combined baseline recycling and composting rate. The U.S. Pact is seeking to actively influence the evolution of data for both the recycling and composting rates of plastic packaging.

PET bottles, HDPE bottles, and smaller, multi-material flexible packaging are the top-three plastic packaging formats represented within the U.S. Pact by tonnage.

BENCHMARKING POLICIES
The U.S. Pact outlines three key policy mechanisms that would support our goals: extended producer responsibility (EPR), deposit return systems (DRS), and postconsumer recycled content (PCR) mandates. These programs, designed using best practices and boosted by supporting policies, can overhaul our linear system, integrate consumer access, produce strong environmental outcomes, and create financial efficiency. Legislative design and architecture are critical to these programs’ success.

continued on next page
OVERVIEW

MODELING SYSTEM CHANGE

Working with an external adviser, we developed a model to demonstrate how different interventions—including policy, technology, and infrastructure developments—could achieve systemic change and ultimately raise the national U.S. recycling rate. The model is being used to inform Target 3 actions.

The U.S. Plastics Pact is also participating in existing consortia and stimulating investment through industry engagement and policy drivers to increase recycling and composting access and infrastructure expansion.

EPR is not explicitly represented in the chart, as it is assumed that when EPR is enacted several of the levers noted would be encompassed in the EPR program together.
To incorporate products made from recycled flexible packaging (films, wraps, bags, and pouches), The Kraft Heinz Company launched a pilot project in collaboration with Materials Recovery for the Future stakeholders to demonstrate the use of roof board made from this recycled feedstock. If the roof board performs as well as standard building materials, there is an opportunity to incorporate it in more facilities in the future. Additionally, the roof board is expected to be recyclable at its end of life.

AMP Robotics applied its experience in artificial intelligence (AI) to teach its robots to recognize clear bottles from green or opaque bottles to help Evergreen, one of North America’s largest producers of food-grade recycled polyethylene terephthalate (rPET), double its annual production. With robots focused on refining the quality of material, separating plastics more precisely by color, Evergreen has seen pick rates of up to 120 bottles per minute—an increase of up to 200% and higher-quality yield as robots are removing up to 90% of contamination.

AMP Robotics raised $91 million to scale its business operations and continue its international expansion. The new funding will enhance manufacturing capacity to support a fleet of hundreds of robots around the world and further AMP’s ongoing development of AI-enabled automation applications for recycling, like AMP Vortex™, the company’s latest innovation for recovery of film and flexible packaging.
More plastic needs to be recycled, and while the public wants to do its part, the rules can be confusing, often resulting in contaminated recyclables. International Recycling Group (IRG)’s newBin is testing how plastic recycling rates can be raised through expanded access, education, incentivization, and improved collection. Through newBin’s mobile app, customers receive coupons as a reward for recycling all plastic types in one bin.

Across multiple funds, the Closed Loop Infrastructure Group provides a flexible mix of financing solutions, such as secured and unsecured loans and mezzanine debt to support a range of circular economy projects, companies, infrastructure, and enabling technologies. By deploying catalytic capital, which seeks to accelerate and de-risk the development of high-impact projects and companies, the Infrastructure Group is uniquely positioned to finance projects spanning the value chain from material collection to processing and remanufacturing, supporting the circular economy along the way.
An average of 30% recycled content or responsibly sourced, biobased content in plastic packaging by 2025

We are working together to achieve an average by weight across all plastic packaging placed on the market by U.S. Pact Activators. This is not a target per each business or package.

**ACTIVATORS ARE REQUIRED TO HAVE PUBLICLY STATED COMMITMENTS TO UTILIZE PCR**

Every Activator has a role to play in increasing the usage of postconsumer recycled content (PCR). For packaging users and producers, this means a commitment to designing in a targeted amount of PCR into the packaging. Other Activators can support the usage of PCR through supporting policy, creating technologies, and even requiring PCR in the materials they procure for internal use.

**PROMOTING BEST-IN-CLASS PRACTICES**

The U.S. Plastics Pact Design for Recyclability Playbook helps Activators prioritize action by identifying best-in-class practices for the use of PCR per format, acknowledging challenges, and highlighting opportunities for innovation for maximum use of PCR. The Design for Recyclability Playbook and other resources shared with U.S. Pact Activators explain the value of using PCR and responsibly sourced, biobased content, certification of these materials, and how to facilitate their use in practice.

**SUPPORTING POLICIES**

We assessed the potential impacts of multiple policy approaches and developed a policy benchmark that outlines effective legislation on PCR mandates and eco-modulation provisions within extended producer responsibility (EPR) legislation. The supply of PCR plastics generated through an increased recycling rate per Target 3 is critical to U.S. Pact Activators meeting Target 4 obligations.

**DEVELOPING A RECYCLED CONTENT STRATEGY**

The U.S. Plastics Pact completed research in early 2022 to develop a strategy for the achievement of this target by the priority resins and formats. We are analyzing modeled scenarios, including key challenges, attention to food-contact requirements, and actions related to Targets 1-3 that will enable making progress in Target 4.

**DEVELOPING A PCR PROCUREMENT TOOLKIT**

To assist Activators in purchasing and qualifying PCR, the U.S. Pact launched a workstream to develop a PCR procurement toolkit. This will include guidance on PCR certification and will be publicly available in early 2023.

**OVERVIEW**

### TARGET 4 PROGRESS TRACKER

<table>
<thead>
<tr>
<th>2021</th>
<th>2025 GOAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>30%</td>
</tr>
</tbody>
</table>

8% average postconsumer recycled content or responsibly sourced, biobased content in scope used by U.S. Pact Activators

Recycled and biobased content address feedstock sources, as opposed to end-of-life characteristics such as recyclability or compostability.

**Recycled Content**

Postconsumer recycled content (PCR) is essential to the circular economy. Using PCR reduces dependence on finite natural resources and creates a demand-pull for collection, sorting, and recycling.

Post industrial (pre-consumer) content is excluded from the U.S. Plastics Pact commitments. While in a circular economy it is encouraged that this waste is kept in the system, the priority is to avoid waste as part of an efficient production process.

**Biobased Content**

The U.S. Plastics Pact aims to ensure that bioplastics contribute to a sustainable, circular flow of renewable materials. The Bioplastic Feedstock Alliance (BFA) informs our work on biobased plastic as part of the circular economy.
Limited supply of high-quality postconsumer recycled content is a key constraint in progress toward Target 4. Supply will increase through redesign efforts related to Targets 1 and 2 as well as policy, collection, technology, and education efforts related to Target 3. Activators used virtually no responsibly sourced, biobased content as an input this year and have focused instead on sourcing postconsumer recycled content (PCR) content to meet this target.

Plastic on the market should be sourced from sustainable inputs to reduce the need for virgin fossil-based plastic and curb climate impacts associated with virgin plastic production.

### targets

- **Target 1**: 11%
- **Target 2**: 12%
- **Target 3**: 13%
- **Target 4**: 8%

---

**Data Summary**

<table>
<thead>
<tr>
<th>Packaging Format Category</th>
<th>Percent Contribution of PCR Material to Packaging Total* (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PET Bottles</td>
<td>4%</td>
</tr>
<tr>
<td>HDPE Bottles</td>
<td>2%</td>
</tr>
<tr>
<td>PET Thermoforms</td>
<td>1%</td>
</tr>
<tr>
<td>HDPE Other Rigid</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>8%</td>
</tr>
</tbody>
</table>

* Totals include U.S. Pact Activators’ business-to-consumer and business-to-retail packaging, and exclude business-to-business and raw material producer totals to avoid the possibility of double counting.

---

**Percent of PCR by Format**

- **HDPE Other Rigid**: 19%
- **PET Thermoforms**: 15%
- **HDPE Bottle**: 14%
- **PET Bottle**: 12%
- **Other PET Rigid**: 7%
- **>A4 Mono-material PE Flexibles in B2C Context**: 7%
- **Other**: 4%
- **<A4 PE Flexibles**: 4%
- **PP Other Rigid**: 3%
- **PE Tubes**: 2%
- **EPS Rigid**: 2%
- **PS Rigid**: 1%
- **>A4 Mono-material PE Flexibles in B2B Context**: 1%
- **Other >A4 Flexibles**: 1%
- **PP Bottle**: 1%
- **<A4 Multi-material Flexibles**: 0%
- **PVC Rigid**: 0%
- **<A4 PP Flexibles**: 0%
In 2022, the U.S. Food and Drug Administration (FDA) issued a Letter of No Objection (LNO) for Revolution’s proprietary recycling method to produce postconsumer recycled, linear low-density polyethylene (PCR-LLDPE) for food-contact applications. PCR produced under Revolution’s process can be used at content levels up to 100% in the manufacture of food contact articles for all food types under nearly all Conditions of Use as defined by the FDA. The announcement of Revolution’s FDA LNO represents a significant step forward in addressing the increasing global need for flexible film recycling and sustainable consumer packaging.

**Firstar Fiber Inc.**’s Project School Board™ is a pull-through recycling-program—that is, locally recovered resources flow directly back to the community, thereby generating numerous environmental, social, and economic benefits. The program serves an important role as the connection for a very visible demonstration of how otherwise-overlooked plastics can build community pride and appreciation for recycling efforts. Through the Hefty® EnergyBag® program, hard-to-recycle plastics—like the candy wrappers and juice pouches—are collected at the curbside, and Firststar Fiber’s Plastic Pre-Processing Facility (PPRF) uses the plastic packaging to make a variety of products, many of which would otherwise be made with 100% virgin resins. Stackable plastic pallets produced through the program are made with 85% postconsumer resins recovered from the bag program. The PPRF gathers materials from over 40 rural communities in Nebraska. If Firstar’s PPRF is expanded into other states, more rural communities will get a chance to see commonly discarded materials turned into usable recycled products.

**DASANI** introduced bottles made from 100% recycled plastic (excluding caps and labels) across the U.S. and Canada. This innovation from The Coca-Cola Company spans all immediate consumer packages including individual 20-ounce, 1-liter and 1.5-liter DASANI bottles and 10-ounce and 12-ounce multi-packs in the U.S. For every pound of recycled plastic (rPET) material used (in lieu of new PET), greenhouse gas emissions are reduced by 65%. By moving to bottles made of 100% recycled plastic, DASANI expects to avoid using over 20 million pounds of new plastic compared to 2019—the equivalent of 552 million bottles—in 2023 alone.
**TARGET 4**

**ACTIVATOR ACTIONS**

**Circular**

Full service platform to help brands meet sustainability goals.

Circular.co’s digital platform connects the plastics value chain to stimulate circularity. Brands can search for the environmentally preferred materials they need to hit their production goals, and recyclers can easily source feedstock from collectors. This allows businesses to more easily diversify their supply chain and enables efficient online sourcing and transactions.

**RECYCLED CONTENT**

Requirements for Plastic Goods and Packaging.

Ocean Conservancy published “Recommendations for Recycled Content: Requirements for Plastic Goods and Packaging,” a report on PCR standards and the pathway to get to minimum recycled content standards. The document focuses on the current landscape of recycled content for plastic packaging in the U.S. as well as how to grow end markets for these materials given their prevalence in the waste stream and in the environment.

**MARS WRIGLEY**

Mars Wrigley, North America worked with Berry Global to incorporate 15% recycled content into M&M’S®, STARBURST®, and SKITTLES® 60-, 81-, and 87-ounce Club Jar to drive the demand and circularity of the rPET stream, resulting in a reduction of approximately 300 tons of virgin plastic a year. Berry also was able to reduce the weight by 10 grams per jar, saving 374 metric tons of carbon dioxide (CO2).

**APR’s PCR Certification Program**

Provides transparency to support a reliable, robust postconsumer recycled content (PCR) market and fosters trust at a critical juncture in the plastics packaging value chain. Any plastics reclaimer generating PCR pellet or flake can participate in this program to provide customer assurances in the authenticity of their product.

**ADVISORY COUNCIL MESSAGE**

APR’s PCR Certification Program provides transparency to support a reliable, robust postconsumer recycled content (PCR) market and fosters trust at a critical juncture in the plastics packaging value chain. Any plastics reclaimer generating PCR pellet or flake can participate in this program to provide customer assurances in the authenticity of their product.

**Looking Ahead**

Ocean Conservancy published “Recommendations for Recycled Content: Requirements for Plastic Goods and Packaging,” a report on PCR standards and the pathway to get to minimum recycled content standards. The document focuses on the current landscape of recycled content for plastic packaging in the U.S. as well as how to grow end markets for these materials given their prevalence in the waste stream and in the environment.
2021 was a year of unprecedented challenges with labor and raw material shortages, port congestion, a rise in online shopping, and a halt to manufacturing trials due to the COVID-19 pandemic and extreme weather events. It has been a privilege to guide the U.S. Pact and the 115+ members spanning the plastics value chain through these additional challenges.

Through the work of our 11 active workstreams, the U.S. Pact published our *Problematic and Unnecessary Materials List*, developed a Design for Recyclability Playbook for Activators, developed recommendations for reuse pilots and scalability, formed a public-sector Activator working group to address public-sector issues in relation to the U.S. Pact, and supported the ongoing development of *The Recycling Partnerships’ Pathway to Circulariry* and the work of *Closed Loop Partners’ Composting Consortium*.

The numbers may seem static, but there is a lot of dynamic and building activity. Data is a critical component to creating a circular economy for plastics, and the U.S. Pact’s transparent reporting process is helping drive policy, practices, and innovation. We are partnering with Walmart and its *Circular Connector* and Innovation Awards to find, vet, amplify, and connect companies that are innovating the solutions to close the gap. And to help identify circular solutions to challenging formats, we will host additional technology showcases. The time for decisive action is now, and we welcome all businesses and organizations committed to keeping plastic in our economy and out of the environment to join our efforts.

DR. ANJA MALAWI BRANDON
Ocean Conservancy

ALLI KINGFISHER
Washington State, Department of Ecology

ASHLEY C. HALL
Walmart

CHERISH MILLER
Revolution

GARY McELYEA
The Coca-Cola Company

HOLLI ALEXANDER
Eastman

KATE DALY
Closed Loop Partners

LISA LINNELL
Target

MICHAEL HODGES
Amcor

RACHEL GOLDSTEIN
Mars, Inc.

RHODES YESPEN
Biodegradable Products Institute (BPI)

RICHIE GETTER, NATALIE BETTS
Balcones Resources, Inc.

SUSAN FIFE-FERRIS
Seattle Public Utilities

STEVE ALEXANDER
Association of Plastic Recyclers (APR)
“To advance towards zero waste, Seattle supports and promotes policies and practices that create a circular economy and reduce Seattle’s waste and carbon pollution as rapidly as possible. The U.S. Plastics Pact is playing a critical role in bringing those with a vested interest to the table to make commitments and work out actionable solutions to reduce plastic waste and ensure that the plastics in our consumption stream are captured and actually reused, repurposed, or recycled.”

NATALIE BETTS
Director of Partnerships & Municipal Relations, Balcones Resources, Inc.

“Being a U.S. Plastics Pact Activator is invaluable. As a recycler and MRF operator, so much of our business is impacted by how packaging is designed and produced, and how governments communicate about how to recycle, but our industry has for so long lacked consistent communication channels with these critical stakeholders. The U.S. Pact offers a uniquely constructive, collaborative place to work together with the entire value chain toward a circular future for plastics.”

SUSAN FIFE-FERRIS
Solid Waste Planning & Program Management Director, Seattle Public Utilities

“Stakeholder collaboration is key to enabling a circular economy for plastics. Danone North America is proud to participate with other forward-thinking U.S. Plastics Pact Activator organizations working towards systemic change through aggressive targets.”

MARCU ALEXANDER
Manager, Packaging Sustainability, Danone North America

“Bold commitments, smart and dedicated people, and a roll-your-sleeves-up-and-do-the-hard-work attitude—that’s what defines the U.S. Plastics Pact and base of Activators. The Sustainability Consortium is happy to be a part of this important multi-stakeholder collaborative effort.”

DR. KEVIN DOOLEY
Chief Scientist, Professor of Supply Chain Management in the W. P. Carey School of Business at Arizona State University

RHODES YEPSEN
Executive Director, Biodegradable Products Institute

“BPI has been leading the charge to set clear guidance and parameters on compostable packaging solutions for Activators to meet the U.S. Plastic Pact’s targets.”

“Bold commitments, smart and dedicated people, and a roll-your-sleeves-up-and-do-the-hard-work attitude—that’s what defines the U.S. Plastics Pact and base of Activators. The Sustainability Consortium is happy to be a part of this important multi-stakeholder collaborative effort.”

STEVE ALEXANDER
President and Chief Executive Officer, The Association of Plastic Recyclers (APR)

HEIDI SANBORN
Founding Director, National Stewardship Action Council (NSAC)

“‘BPI has been leading the charge to set clear guidance and parameters on compostable packaging solutions for Activators to meet the U.S. Plastic Pact’s targets.’

“As a U.S. Pact Activator, we must continue to focus on smart and tangible solutions that enable the circular economy for plastics. The U.S. Pact provides a uniquely constructive, collaborative place to work together with the entire value chain toward a circular future for plastics.”

Visit usplasticspact.org
THE FOLLOWING U.S. PACT ACTIVATOR ORGANIZATIONS CONTRIBUTED DATA TO MAKE THIS REPORT POSSIBLE

Ahold Delhaize USA
ALDI US
ALPLA
Amcor
American Beverage Association (ABA)
AMP Robotics
Association of New Jersey Recyclers
Association of Plastic Recyclers (APR)
Austin Resource Recovery (City of Austin, TX)
Balcones Resources, Inc.
Berkeley Ecology Center
Biodegradable Products Institute (BPI)
California Product Stewardship Council (CPSC)
Central Virginia Waste Management Authority (CVWMA)
Charter Next Generation (CNG)
Chittenden Solid Waste District (CSWD)
Church & Dwight Co., Inc.
City and County of San Francisco, Department of the Environment
City of Phoenix, AZ
City of Tacoma, WA, Environmental Services Department
The Coca-Cola Company
The Clorox Company
Closed Loop Partners
Closure Systems International (CSI)
CLYNK
Colgate-Palmolive Company
Conagra Brands
Consumer Brands Association (CBA)
Danimer Scientific
Danone North America
Digimarc Corporation
Eastman
Eco-Cycle
Eureka Recycling
Evertis Americas
FMI, The Food Industry Association
Freeport Eco-Systems LLC
General Mills
The Global Kaiteki Center
Henkel Corporation
Hennepin County, MN
Hi-Cone
INEOS Styrolution
International Aviation Waste Management Association (IAWMA)
International Recycling Group
Keurig Dr Pepper
Kimberly-Clark
King County, WA
The Kraft Heinz Company
KraveBeauty
Kwik Lok Corporation
L’Oreal USA
M4 Factory
Mars, Incorporated
Mondelez International, Inc.
National Association for PET Container Resources (NAPCOR)
National Recycling Coalition (NRC)
National Stewardship Action Council (NSAC)
National Waste & Recycling Association (NWRA)
Nestlé
Nexus Circular
Northeast Recycling Council, Inc. (NERC)
Ocean Conservancy
Oceanic Global
PAC Worldwide
Pact Retail Accessories
PADNOS
PakTech
Pet Sustainability Coalition
Plant Based Products Council
Plastic Reduction Project
Pretium Packaging, LLC
PreZero US, Inc.
Product Stewardship Institute (PSI)
Pure Strategies
PureCycle Technologies, Inc.
RadTech International
Reckitt
RecycleGo
rePurpose Global
Returnity Innovations
Reusable Packaging Association (RPA)
Revolution
rPlanet Earth
Salt Lake City Corporation
Seattle Public Utilities
Smile Compostable Solutions
Solid Waste Agency of Lake County, IL (SWALCO)
Solid Waste Association of North America (SWANA)
The Sustainability Consortium (TSC)
Sustainability Management Association (SMA)
REMADE Institute
Target
The Ocean Foundation
The United States Composting Council
Unilever United States
UPM Raflatac
Vinventions
Walmart, Inc.
Washington State Department of Ecology
Yerecic Label
IN CLOSING, THE DATA IS CLEAR

For years, companies called for data and metrics to inform voluntary, legislative, and regulatory efforts to address plastic pollution. Many used the darkness or lack of data as a cover and continued to maintain business operations as usual. Now the U.S. Plastics Pact has compiled much of this data, enabling the assessment of the state of plastic recycling, the types and amounts of plastic packaging in the U.S. market, the amount of postconsumer recycled content (PCR) being used, and the amount of problematic and unnecessary items in circulation for a significant slice of the U.S. market. Additionally, the U.S. Pact has data to show what is required to achieve our circular economy targets, including significant reduction in certain materials, high levels of recycling, and PCR use.

2025 is two years away, and the evolution required to build and foster a circular economy for plastics packaging is slowly in motion. The pandemic, supply chain constraints, and inflation have further complicated a challenging undertaking. Must the timeline speed up for climate goals to be met and plastic pollution to be addressed? Yes! Policy requirements will bring each and every player to the table and will address infrastructure needs in a way that the U.S. has never seen before. But, while we advocate for policies such as deposit return systems (DRS), extended producer responsibility (EPR), and postconsumer recycled content mandates to be passed or implemented, there is no time to be idle. We must work together to make up for lost time and reduce the accumulation of additional plastic waste while we wait for policy to bring ultimate solutions.

The guideposts of the U.S. Pact’s 2025 Targets remain as relevant today as the day the U.S. Pact launched. Before policy kicks in to address plastic packaging waste in the U.S., we must push the boundaries of voluntary commitments. Consumers are concerned about the plastic waste crisis more than ever before. Now is the time for savvy companies and organizations to assess what it means to operate and thrive within a circular economy for plastics packaging. The U.S. Pact is the organization defining the cohesive vision for 2025 and beyond.

JOIN US! Demonstrate your leadership, energy, enthusiasm, commitment, and transparency to build the circular future.