

2024 CIRCULAR PLASTICS CHALLENGE



HOSTED BY

NET IMPACT 

IN PARTNERSHIP WITH

THE *Coca-Cola* COMPANY

HILLENBRAND

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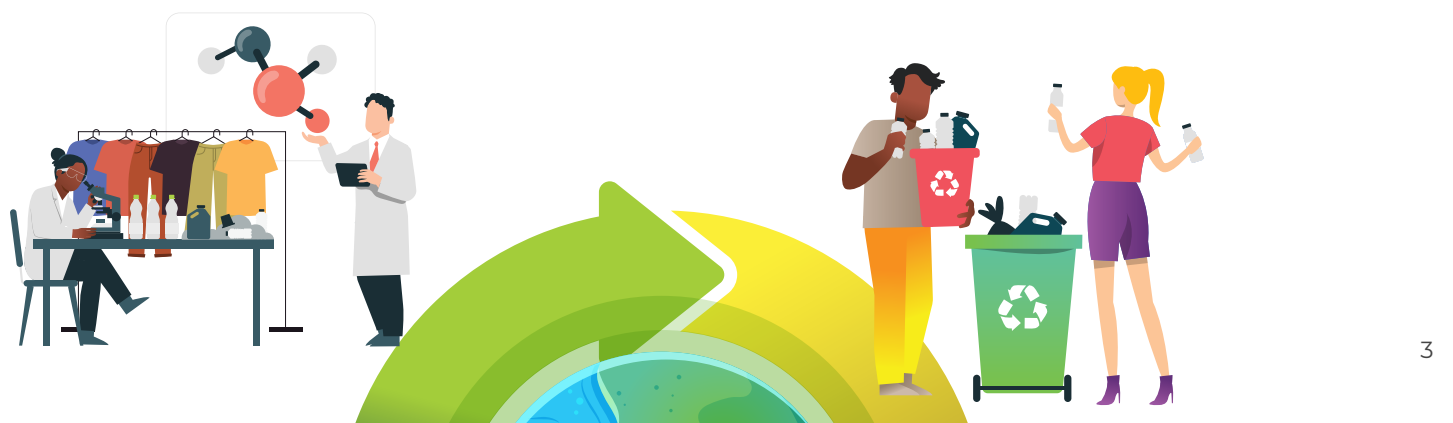
INTRODUCTION

Net Impact is thrilled to launch the **2024 Circular Plastics Challenge** to generate industry-shifting ideas to keep plastics in the economy and out of the environment.

The 2024 Circular Plastics Challenge invites participants to submit solutions that will rethink the plastics value chain to increase the supply of post-consumer recycled material or “PCR”. All participants who download the challenge brief will be invited to attend an exclusive industry connections event, a virtual networking opportunity to meet professionals in the plastics industry and learn about the latest developments and challenges of circularity in plastics.

After all submissions are received, up to five finalist teams will be chosen to present their concepts to an expert panel of judges in a virtual final showcase broadcast at NPE, the largest plastics trade show in the United States. During the virtual showcase, the judges will select the winning idea for the \$10,000 grand prize, with \$2,500 and \$1,000 awarded to second and third place, respectively.

TIMELINE



CHALLENGE CONTEXT & PROMPT

As global plastic pollution increases, regulatory pressure, and consumer demand are mounting for a more circular economy for plastics. Plastic packaging brand owners and manufacturers are confronted with the multi-faceted challenge of managing consumer preferences for convenience, cost competitiveness, packaging performance, and recyclability. In 2018, in partnership with the Ellen MacArthur Foundation and the UN Environment Programme, the New Plastics Economy Global Commitment united businesses, governments, and other organizations from around the world to develop a common vision and strategy for a circular economy for plastic.

With over 500 signatories representing nearly 20% of all plastic packaging produced globally, one of the most popular pledges is around minimum recycled content commitments or “rPET” for recycled polyethylene

terephthalate. For example, the United Kingdom Plastic Pact aims to reach 30% of recycled content in all plastic packaging for its members by 2025. Polyethylene terephthalate, also known as PET, is one of the most widely used types of plastic in consumer goods for its versatility, performance, and ability to be 100% recyclable.

However, the demand for rPET is not keeping pace with supply due to low levels of recycling rates, particularly in the United States. According to a 2023 McKinsey and Company report, from 2012-2022, rPET supply grew at only about 1 percent per annum, while consumption has increased approximately 4 percent per year over the same period¹. If brands meet their stated recycled-content commitments for 2030, demand for rPET will rise by some 15 percent per year between 2022 and 2023, while supply is expected to grow at only 1 percent per year, resulting in demand being three times the level of available supply by 2030².

Net Impact’s Circular Plastics Challenge calls upon innovators, system-thinkers, and sustainability practitioners from all backgrounds to consider:

How might we increase the supply of rPET to create a more circular economy for plastics?

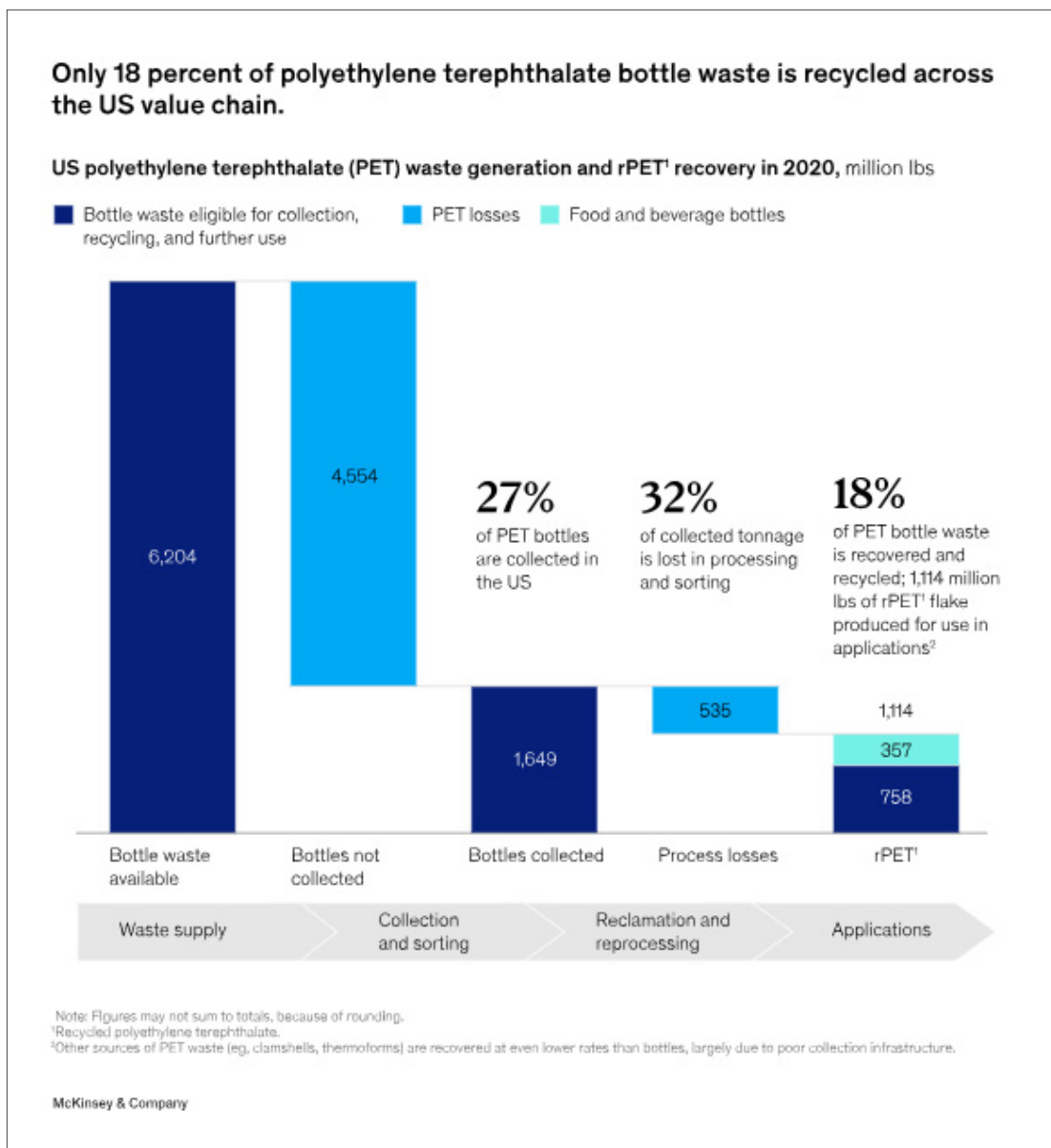
¹ McKinsey & Company (2023). Filling the gap: Boosting supply of recycled materials for packaging.

² McKinsey & Company (2023). Filling the gap: Boosting supply of recycled materials for packaging.



VISUALIZING PET WASTE GENERATION AND rPET RECOVERY

The graphic below illustrates the PET bottle recovery process in the United States. PET bottles have the highest recovery rates compared to other PET products, such as food containers. As the graphic illustrates, less than 1/3 of the total PET bottles produced are collected for recycling. After processing and sorting, only 18% of PET bottles are recovered and recycled.



Source: McKinsey & Company



SUBMISSION DETAILS AND ELIGIBILITY

SUBMISSION ELIGIBILITY

- Undergraduate students, graduate students, and professionals from around the world are welcome to apply.
- Submissions must come from teams of two to four members, ideally with a variety of academic backgrounds or perspectives. If your team has more than four people, up to four can be chosen to participate in the final showcase event. Please reach out for special circumstances.
- If selected, finalist teams will be expected to commit to participating in the virtual final showcase in early May 2024. The final showcase will last approximately two hours and require approximately six to eight hours of preparation.
- Early-stage businesses or startups that have raised more than \$100,000 in capital are **ineligible to apply**.

SOLUTIONS THAT ARE IN SCOPE:

- **Business model innovation** — reuse, refill, deposit schemes, Extended Producer Responsibility (EPR) concepts
- **Collection systems** — industry methods that can increase collection rates without increasing the burden on consumers
- **Package design innovation** — packaging that is designed to be recycled
- **Product redesign/Innovative elimination** — Lush Cosmetics creating shampoo in solid form, eliminating the need for bottling
- **Material standardization** — plastics production that has a significantly smaller set of material/additive combinations
- **Cleaning and sorting technologies** — manufacturing or technology that eliminates barriers to recyclability

SUBMIT HERE

Each team must submit their proposal using the [2024 Circular Plastics Challenge Application Form](#)

Early Submission Deadline

Teams who submit by the early submission deadline on March 8, 2024, will receive personalized feedback from Net Impact.

Teams will have the option to revise and resubmit their idea before the final submission deadline. When selecting finalist teams, only the most recent submission will be reviewed.

Final Deadline

Submissions must be received **prior to 11:59 pm Pacific Time on March 29, 2024.**

SOLUTIONS THAT ARE OUT OF SCOPE:

If your solution is primarily focused on one of these topics, it will not be eligible for the finals:

- **Waste to fuel schemes/chemical recycling**
- **Solutions that replace plastic using aluminum, glass, or paper**
- **Plastics crediting systems**
- **Biodegradable and bio-based plastics**
- **Consumer education and training initiatives³**
- **Policy or public sector solutions**

³ This program recognizes that consumer education plays a large role in systems change, and that many new solutions will require consumer education as part of its successful deployment. However, solutions should not be solely consumer education initiatives.

SELECTION CRITERIA

Winning solutions will clearly identify **what** problem they are trying to solve, **why** it's important (what impact it would have), and **how** it's innovative and feasible, including where and how their solution will be implemented.

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POINTS

CLARITY OF GOALS AND OBJECTIVES

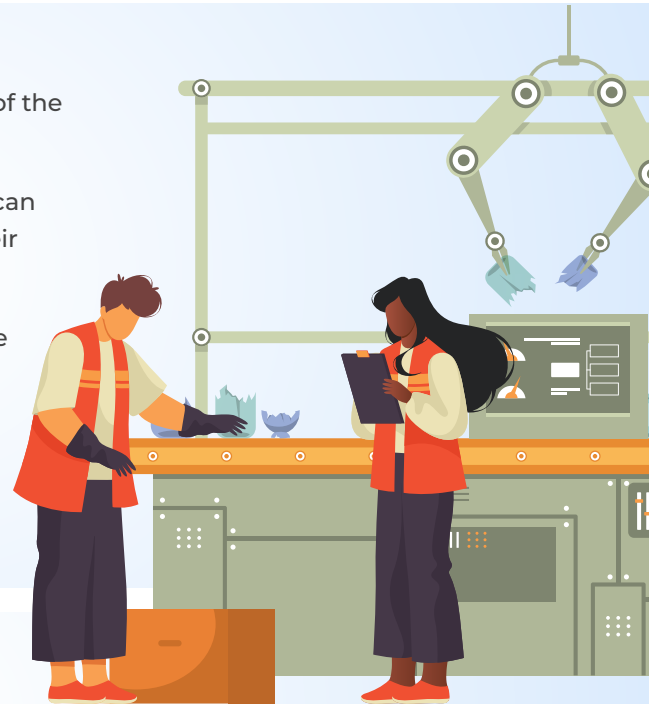
The submission clearly defines what problem it solves, how the solution addresses the problem, and which part of the value chain the solution addresses.

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POINTS

FEASIBILITY

The proposal is feasible, as defined by a combination of the following factors:

- **Viability:** a company or a consortium of companies can hypothetically take the idea and implement it in their business.
- **Scalable:** it's a solution that has the potential to drive change at scale within the private sector.
- **Consumer Adoption (if applicable):** with the proper investment and infrastructure, the solution can be easily adopted by consumers.



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POINTS

INNOVATION

The solution is a novel idea that either builds on an existing innovation or is completely new.

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POINTS

IMPACT

The proposal clearly and measurably outlines the impact the solution would have on increasing the supply of rPET. Successful submissions will include Key Performance Indicators (KPIs) to show the estimated increase in supply. Some examples of KPIs might include estimated tons of materials recycled, improved collection rates, landfill diversion rate, etc.

FINAL SHOWCASE

Five finalist teams will be chosen to attend a virtual final showcase that will be broadcasted at NPE, the largest plastics tradeshow in the United States. At the final showcase, up to five finalist teams will share their concepts with the expert judging panel. Finalist teams should be prepared to present their idea to the expert judges and answer their questions about objectives, impact, feasibility, and innovation. Judges will have the opportunity to ask teams questions before selecting the winners.

The final showcase will take place the week of May 6, 2024. When invited to continue to the final round of the Challenge in April 2024, Net Impact will notify finalist teams of the exact date of the final showcase. Teams should expect to spend six to eight hours preparing for the final showcase.

PRIZES AND BENEFITS

INDUSTRY CONNECTIONS EVENT

Everyone who downloads the case brief will be invited to attend a virtual industry connections event to network with sponsoring partners and learn how industry leaders incorporate circularity into their companies.

Five finalist teams will be paired with a subject matter expert mentor ahead of the virtual final showcase at [NPE](#). In addition to participating in the final showcase, finalist teams will also compete for the following grand prizes:

FIRST PLACE:

\$10,000

SECOND PLACE:

\$2,500

THIRD PLACE:

\$1,000

GET IN TOUCH

For more information about the Circular Plastics Challenge, please email us at CircularPlastics@netimpact.org



APPENDIX I: UNDERSTAND THE PROBLEM

Use these resources to better understand the challenge of increasing the supply of rPET for brand owners and manufacturers.

- [Filling the gap: Boosting supply of recycled materials for packaging](#) — This report from McKinsey & Company is a good primer about the challenges to increasing supply and explores three ways to boost rPET availability in the US market.
- [2022 Global Commitment Progress Report](#) — Report compiled by the Ellen MacArthur Foundation with input from the UN Environment Programme on the progress of the 500 signatories of the 2018 Global Commitment to combat plastic waste.
- [Designing out Plastic Pollution](#) — A variety of Ellen MacArthur Foundation's resources on how to create a circular economy for plastics.

APPENDIX II: GET INSPIRED

Here are some case studies of how companies have increased the supply of rPET.

[The Coca Cola Company: Green to Clear PET](#)

By changing the color of the plastic packaging on Coca-Cola's iconic green Sprite bottle, the company was able to increase the likelihood that the bottle will be recycled into rPET.



[Plastic Fischer](#)

Based in India and Indonesia, Plastic Fischer is using low-tech technology to capture, collect and process plastics in rivers while creating local jobs.

[Waste Bazaar](#)

Using a mobile-based app, Waste Bazaar supports informal waste-pickers to earn money by collecting post-consumer recyclables for manufacturing industries at competitive prices.



APPENDIX III: EXAMPLE SUBMISSIONS

Label free bottle (inspired by [Evian](#))

Flexible plastic film that is the material of choice for beverage bottle labels must be recycled in a separate way than the plastic bottles themselves. Currently, there is no cost-effective method for removing these plastic labels from bottles, and therefore may render the recyclable PET bottle unrecyclable due to the label in which it's wrapped. This is why our team is proposing a label-free PET bottle that will save millions of flexible plastic labels from going into recycling centers and clogging up machinery, and increase recyclability for PET bottles.



We estimate that this innovation will save 2 million tons of flexible plastic labels from entering recycling facilities if adopted by major manufacturers like PepsiCo and Coca-Cola, and increase PET bottle collection by 12%. With our engraved logo on recycled PET bottles, we eliminate the need for the additional plastic film by including all pertinent label information on the bottle itself, without compromising the bottle's performance. The technology is readily available for large-scale manufacturing companies to adopt this practice in their value chain and can in fact save companies money in the long term due to the savings in material costs.

At scale, if we can increase the amount of PET bottles collected and properly recycled, more recycled PET (rPET) supply will be available to keep the plastic material in circulation, reducing our reliance on virgin plastic stock.

Note: This is a fictional submission and does not reflect any accurate measurement metrics of the Evian bottle innovation. It is intended to act as an example submission of what solutions should include.