

# Better Together—EPR and Recycling Refunds

Rhode Island Joint Commission  
on Plastic Bottle Waste

*December 9, 2024*

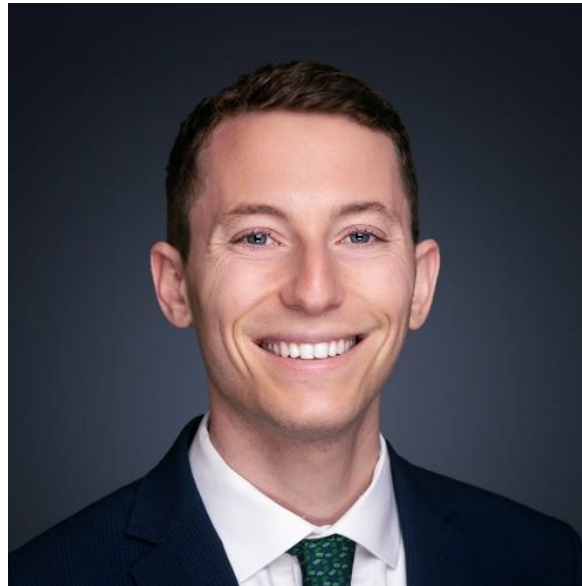


# WHO WE ARE

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*President*  
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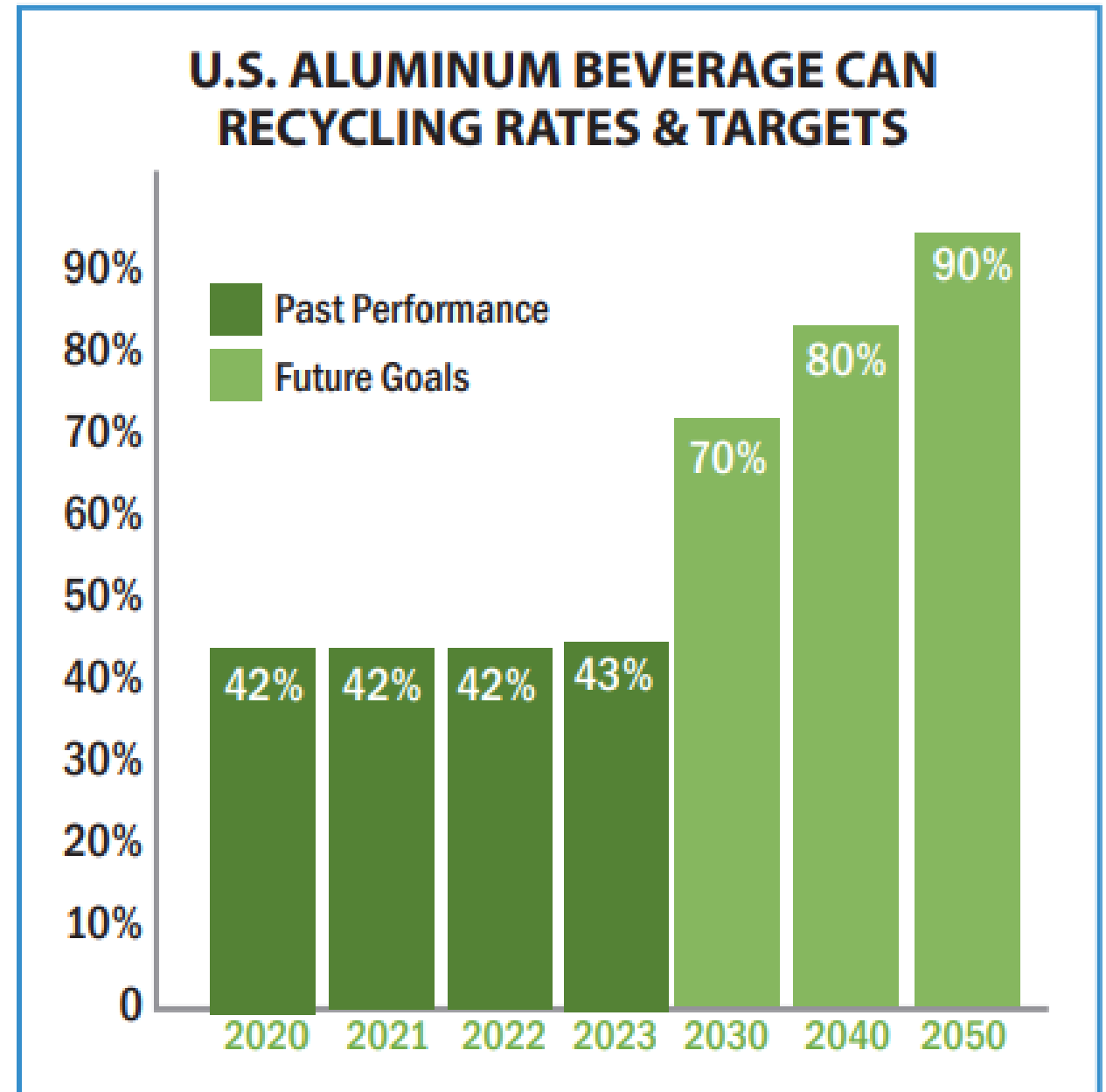
# MAIN POINTS

- Aluminum beverage can, glass bottle, and PET plastic bottle recyclers and container manufacturers need more, high quality recycled material to make new containers to feed existing domestic manufacturing and produce lower carbon containers
- Rhode Island's recycling system would benefit from EPR, but the best results at the lowest cost come with EPR+RR
- There are industry players interested in EPR+RR that want to work with RI lawmakers and stakeholders to craft an EPR+RR recycling bill that would make RI a leader/pioneer in the United States and the world and produce a world class recycling system

## PROBLEM STATEMENT

- As with other packages, plastic PET bottles, glass bottles, and aluminum beverage can recycling rates have essentially stagnated, and there is not enough recycled material to meet demand or domestic manufacturing capacity

# ALUMINUM BEVERAGE CANS



**SOURCE:** 2024 Aluminum Beverage Can KPI Report



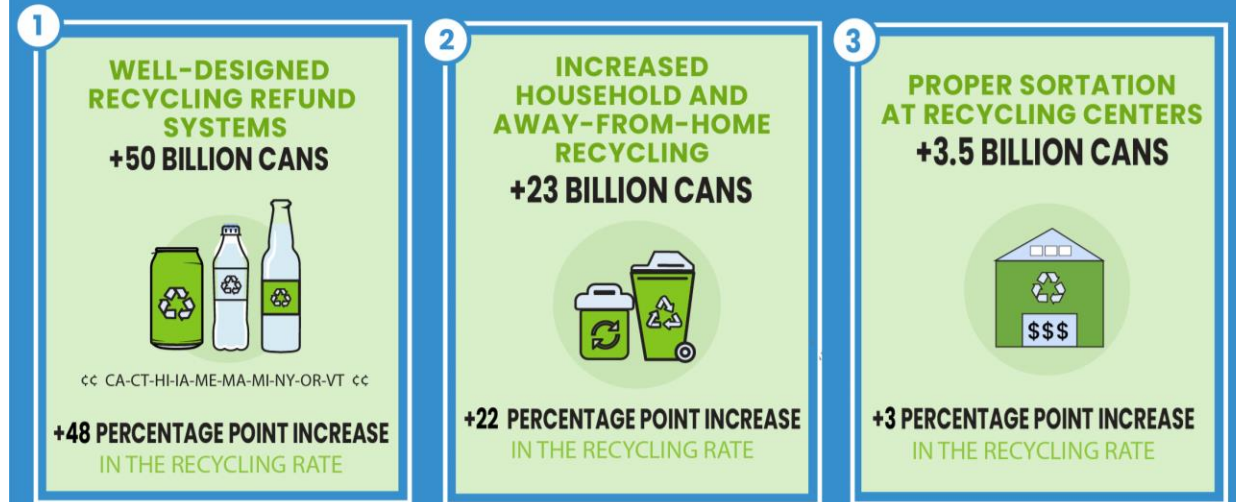
# ALUMINUM BEVERAGE CANS

## FOUR PILLARS OF ACTION TO ACHIEVE RECYCLE RATE TARGETS



[WWW.CANCENTRAL.COM/TARGETS](http://WWW.CANCENTRAL.COM/TARGETS)

## HOW MORE ALUMINUM BEVERAGE CANS COULD BE CAPTURED IN THE RECYCLING SYSTEM



The above numbers are based on CMI modeling and assumptions. The increase in the recycling rate is based on the 2020 cans available for recycling in the United States of the 103.3 billion aluminum beverage cans.

[WWW.CANCENTRAL.COM/TARGETS](http://WWW.CANCENTRAL.COM/TARGETS)

# ALUMINUM BEVERAGE CANS

## HOUSEHOLD ACCESS TO ALUMINUM BEVERAGE CAN RECYCLING

TYPE OF ACCESS	POUNDS OF ALUMINUM CANS PER HOUSEHOLD LOST ANNUALLY TO TRASH
<b>NO CURBSIDE OR DROP-OFF AVAILABLE</b> 6% of U.S. Households	<b>All 20 Pounds</b>
<b>DROP-OFF ACCESS ONLY</b> 21% of U.S. Households	<b>17 Pounds</b>
<b>CURBSIDE THROUGH SUBSCRIPTION</b> 20% of U.S. Households 30% Service Uptake; 60% Capture/Per Participant	<b>16 Pounds</b>
<b>CURBSIDE IN BINS</b> 9% of U.S. Households	<b>14 Pounds</b>
<b>CURBSIDE IN CARTS-LIMITED EDUCATION</b> 22% of U.S. Households 65% Participation; 60% Capture/Per Participant	<b>12 Pounds</b>
<b>CURBSIDE IN CARTS-ROBUST EDUCATION</b> 22% of U.S. Households 80% Participation; 75% Capture/Per Participant	<b>8 Pounds</b>

# APR PRIORITY POLICIES TO IMPROVE PLASTICS RECYCLING



## Design

Harmonized design standards can help reduce consumer confusion and increase participation in recycling, streamline processing, and deliver higher quality recycled plastics.



## Collection

**Extended Producer Responsibility (EPR) laws** provide the needed funding and coordination to scale local recycling programs. **Bottle deposit programs** incentivize recycling and reduce litter for beverage containers.



## Remanufacturing

Minimum recycled content standards, tax credits, and other economic tools create stronger end markets and unlock investment and innovation so recycled plastics replace virgin plastics as the primary feedstock for new plastic products.





## HOW BOTTLE BILLS INCREASE PLASTICS RECYCLING

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PET recycling saves energy, reduces pollution, and reduces use of fossil fuels.

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Lack of supply is our biggest challenge to increasing recycling rates.

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We can recycle 50% more bottles today than are collected.

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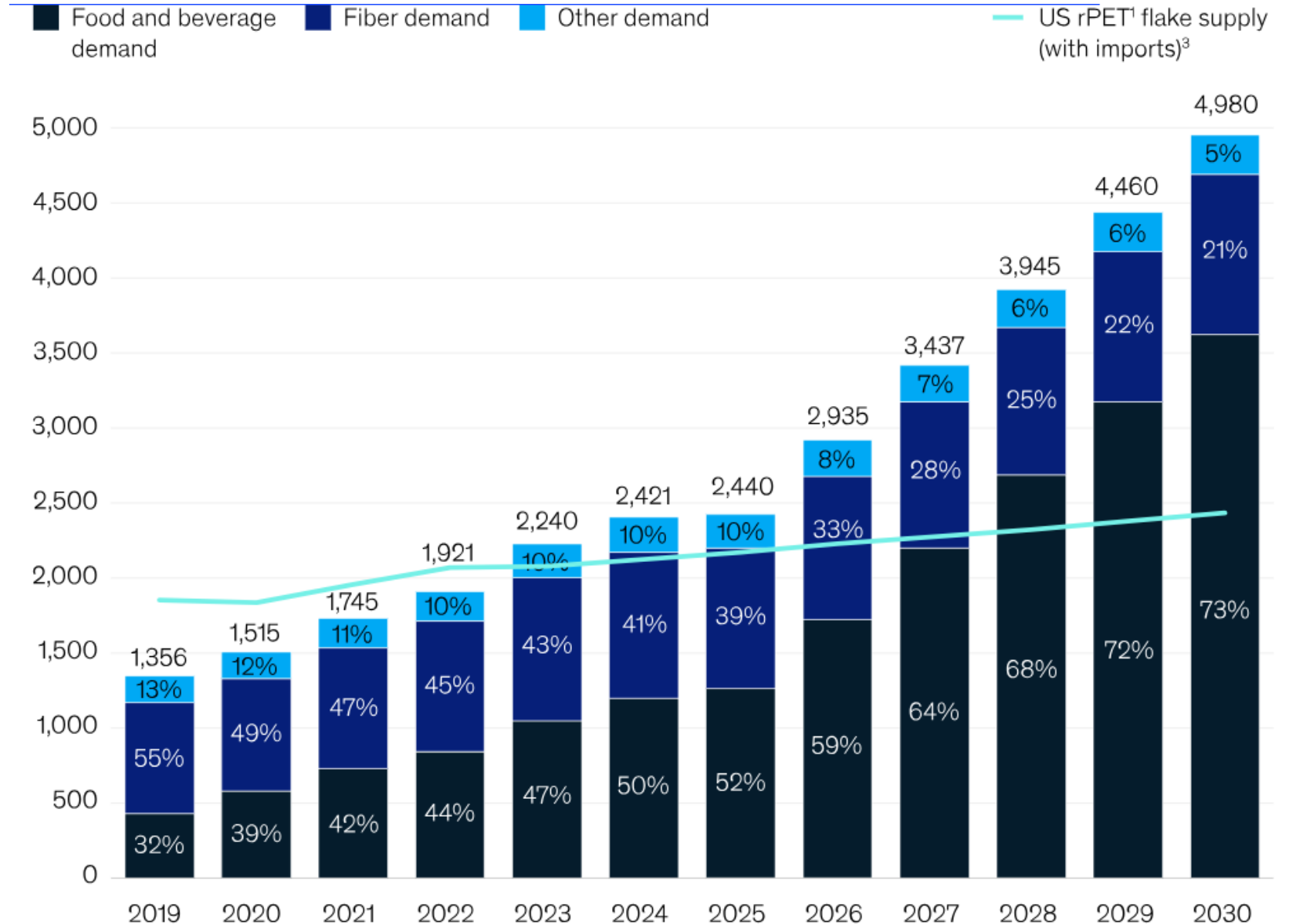
PET recycling needs to nearly triple to meet projected demand.

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Bottle bills are most proven policy to highest PET collection rates.

# GAP IN RECYCLED PET SUPPLY

Demand for rPET has outpaced supply – we need more bottles to replace use of virgin plastics



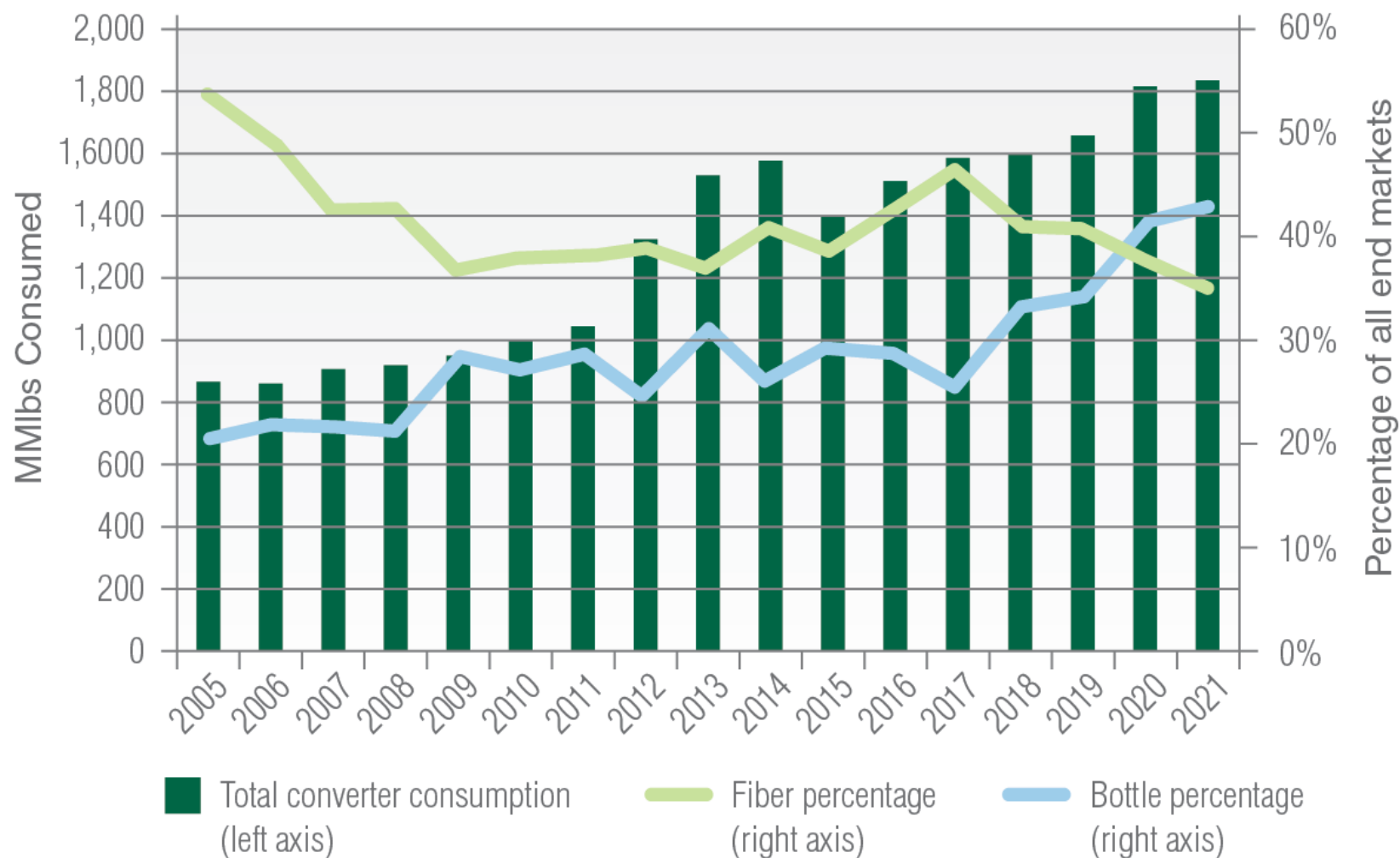
Source: McKinsey report Sept. 2023

# CORRECT THE RECORD

PET bottles are recycled back into bottles more than any other product category.

Over 92% of plastics are recycled in North America, not sent overseas.

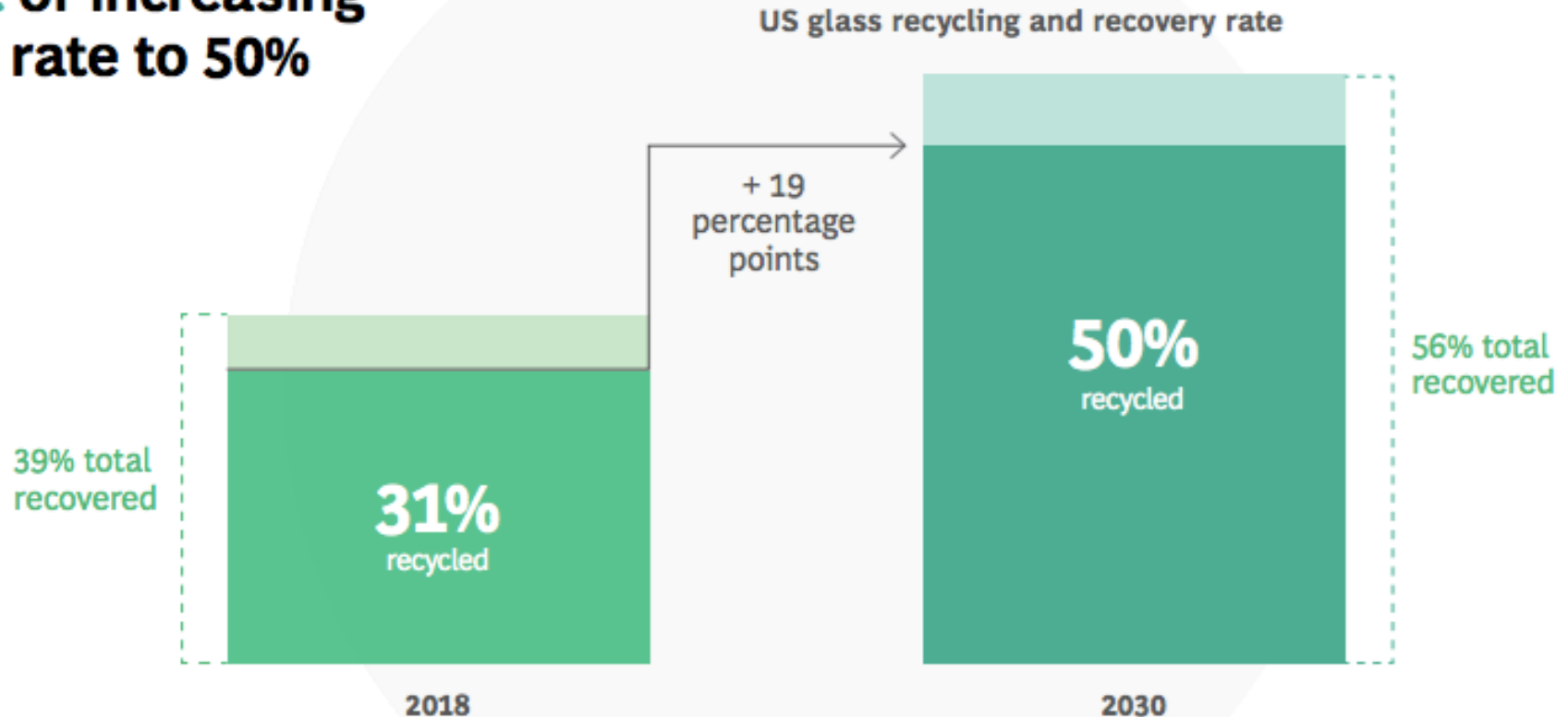
## RPET USE IN U.S. / CANADA END MARKETS



Source: NAPCOR 2021 PET Recycling Report

# GLASS BOTTLES

The glass container industry has set a **bold target** of increasing the US recycling rate to 50%



Sources: United States Environmental Protection Agency; Glass Packaging Industry (GPI); BCG.

Note: The 39% figure represents the rate of glass recovered (or collected), but some recovered glass is lost to landfills or as it moves along the recycling value chain, from sorting to processing to manufacturing. The remaining 31% is recycled into new containers. Some variability exists in how recycling rates are calculated across the US.

# GLASS BOTTLES

**Three key pillars ensure every glass bottle has a path to recovery**

**1**

**Leave no bottle behind**



Ensure consumers have a way to recycle every glass bottle at a cost lower than waste disposal

**2**

**Transform the recycling system**



Develop infrastructure that is capable of economically sorting, processing, and transporting glass to manufacturing sites

**3**

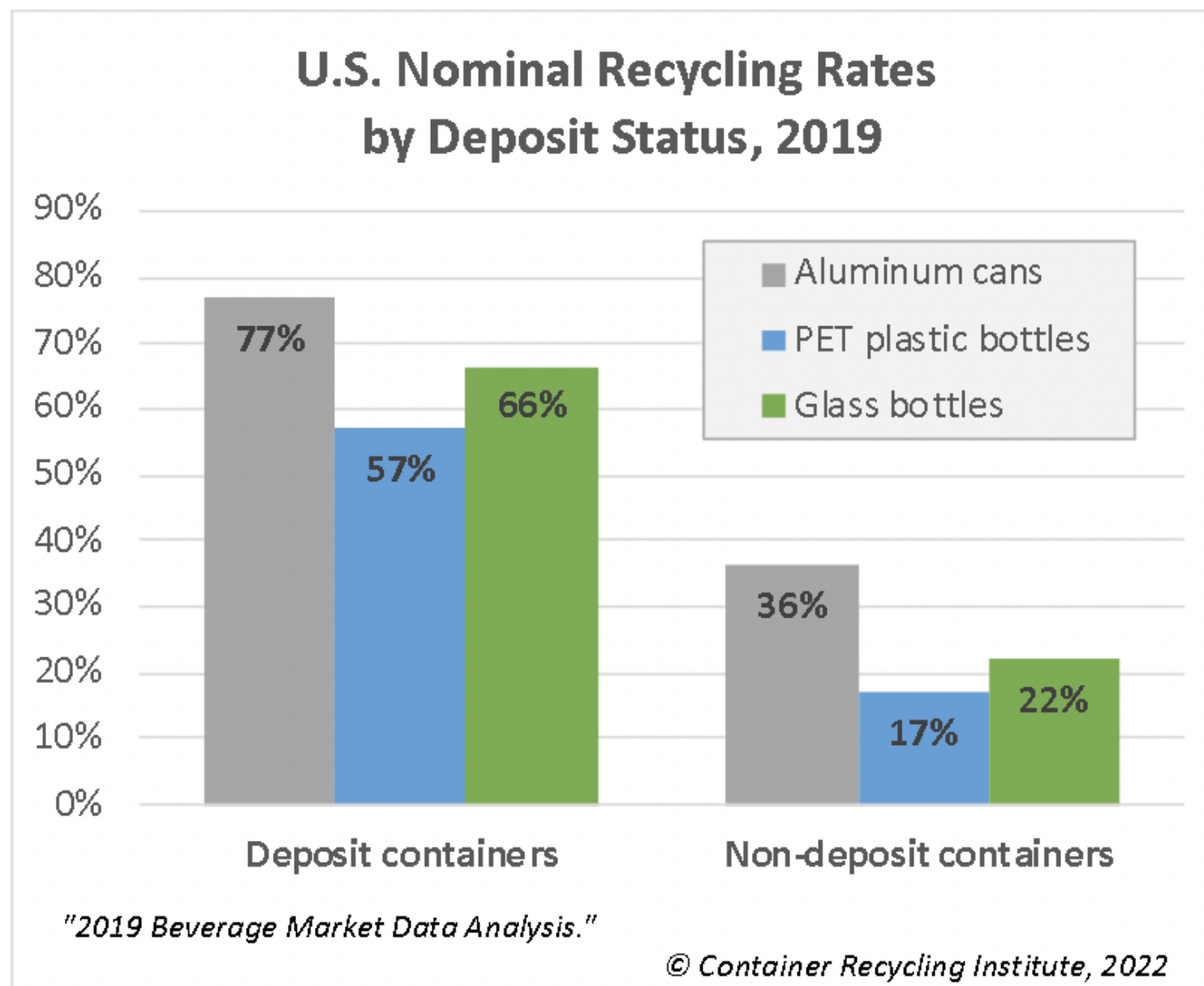
**Drive collective action**



Identify collaboration opportunities between the private and public sectors to forge a nationwide commitment to solve the recycling challenge



## RECYCLING REFUNDS DELIVER HIGHER RECYCLING VOLUMES AND QUALITY





# RECYCLING REFUNDS DELIVER HIGHER RECYCLING VOLUMES AND QUALITY

## SINGLE STREAM



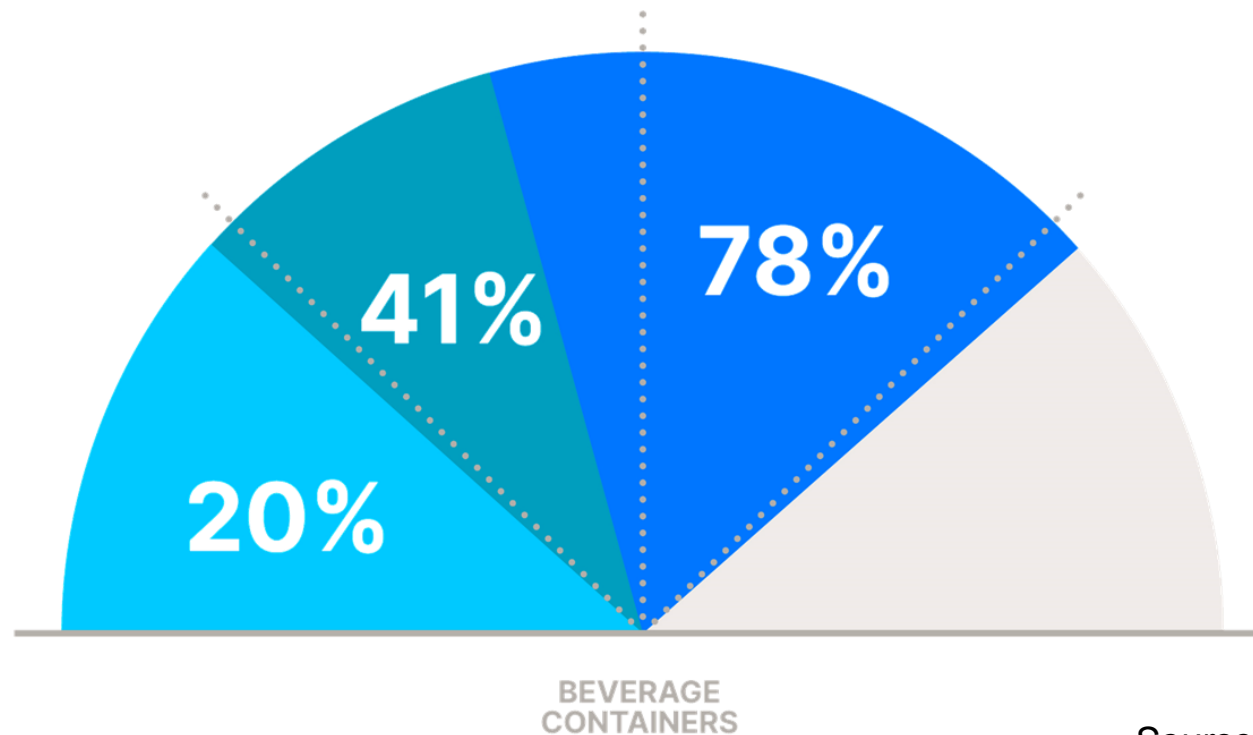
## BOTTLE BILL GLASS





# RECYCLING REFUNDS DELIVER HIGHER RECYCLING VOLUMES AND QUALITY

## Closed Loop Recycling Rate—WA State Modeling



Source: [Ball/Eunomia 50 States of Recycling 2.0](#)

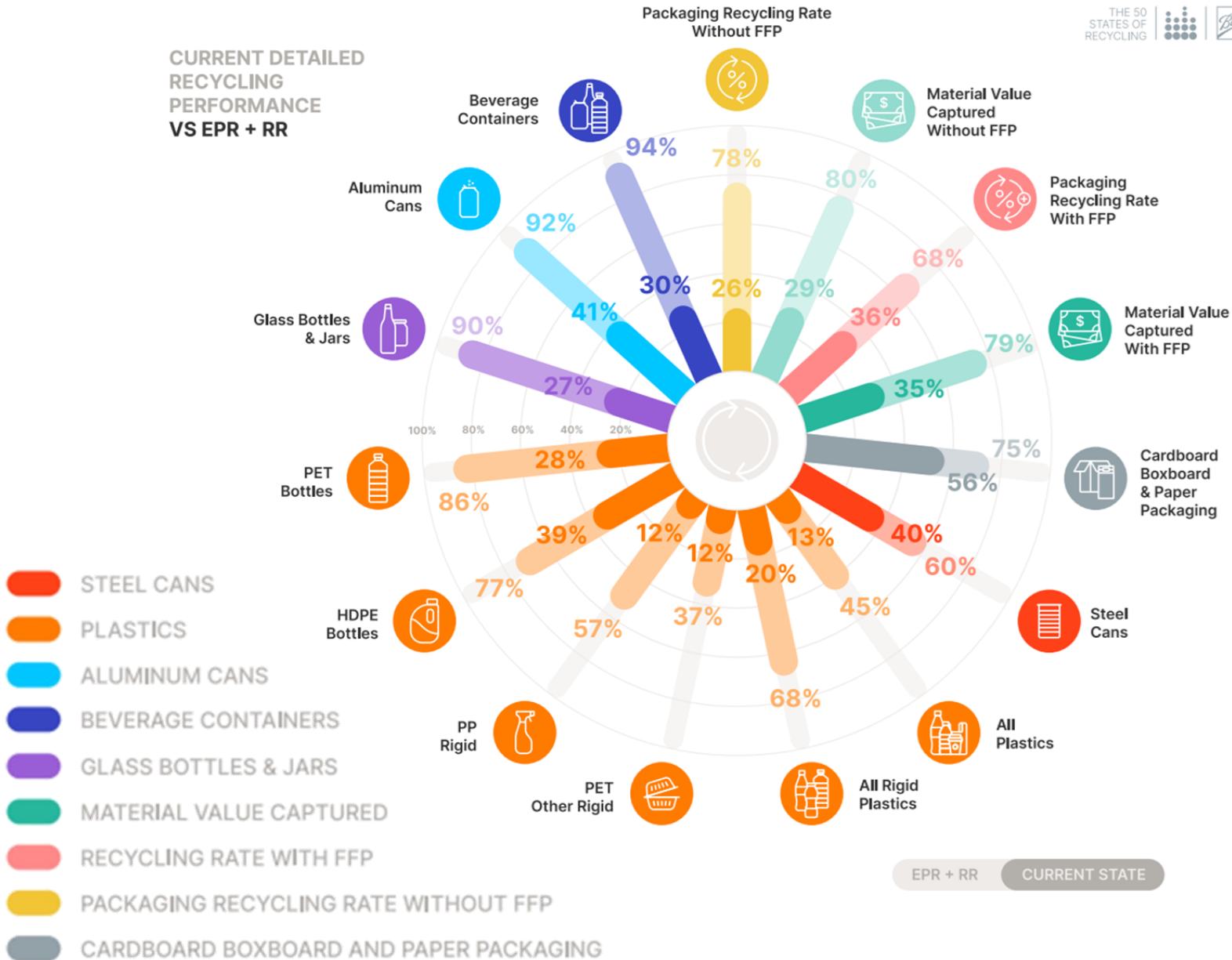


# EPR+RR DELIVERS HIGHER RECYCLING RATES THAN EPR ALONE

## WA State Modeling

THE 50 STATES OF RECYCLING

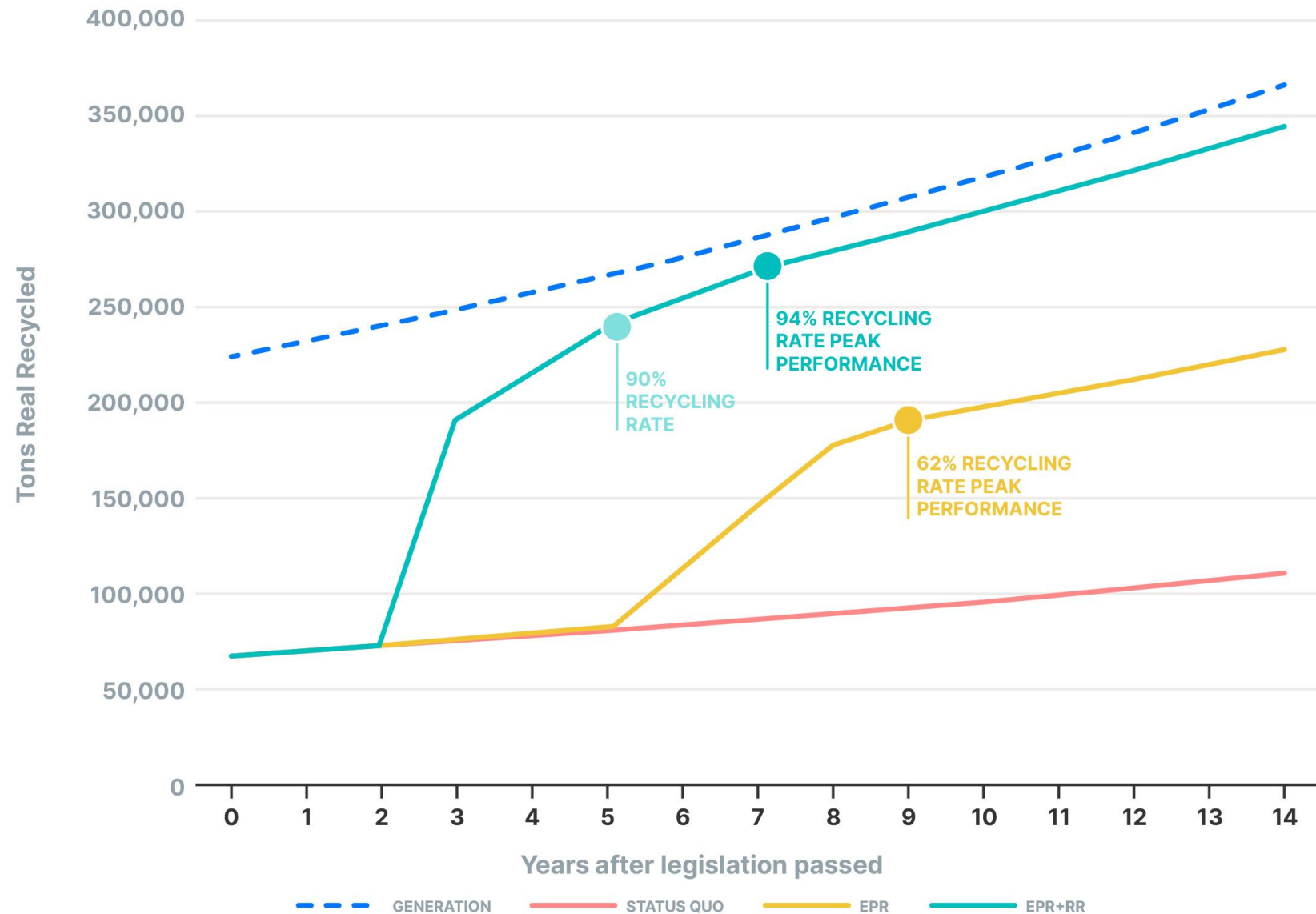
CURRENT DETAILED RECYCLING PERFORMANCE VS EPR + RR





# EPR+RR DELIVERS HIGHER RECYCLING RATES THAN EPR ALONE

Impact of Policy on Beverage Container Recycling in Washington



Source: [Ball/Eunomia 50 States of Recycling 2.0](#)

# RHODE ISLAND HAS ROOM FOR IMPROVEMENT ON RECYCLING



**163,517 total generated residential tons and 42,784 current recycled tons**

Source: [TRP State of Recycling Report](#)

# BENEFITS FOR RHODE ISLAND WITH RPR

- A recycling rate with an EPR alone system would create a 67% recycling rate in RI
- Additional recycled tons with an ideal system is 66,398 tons

Total tons  
generated



**163,517**

Total under  
current system



**42,784**

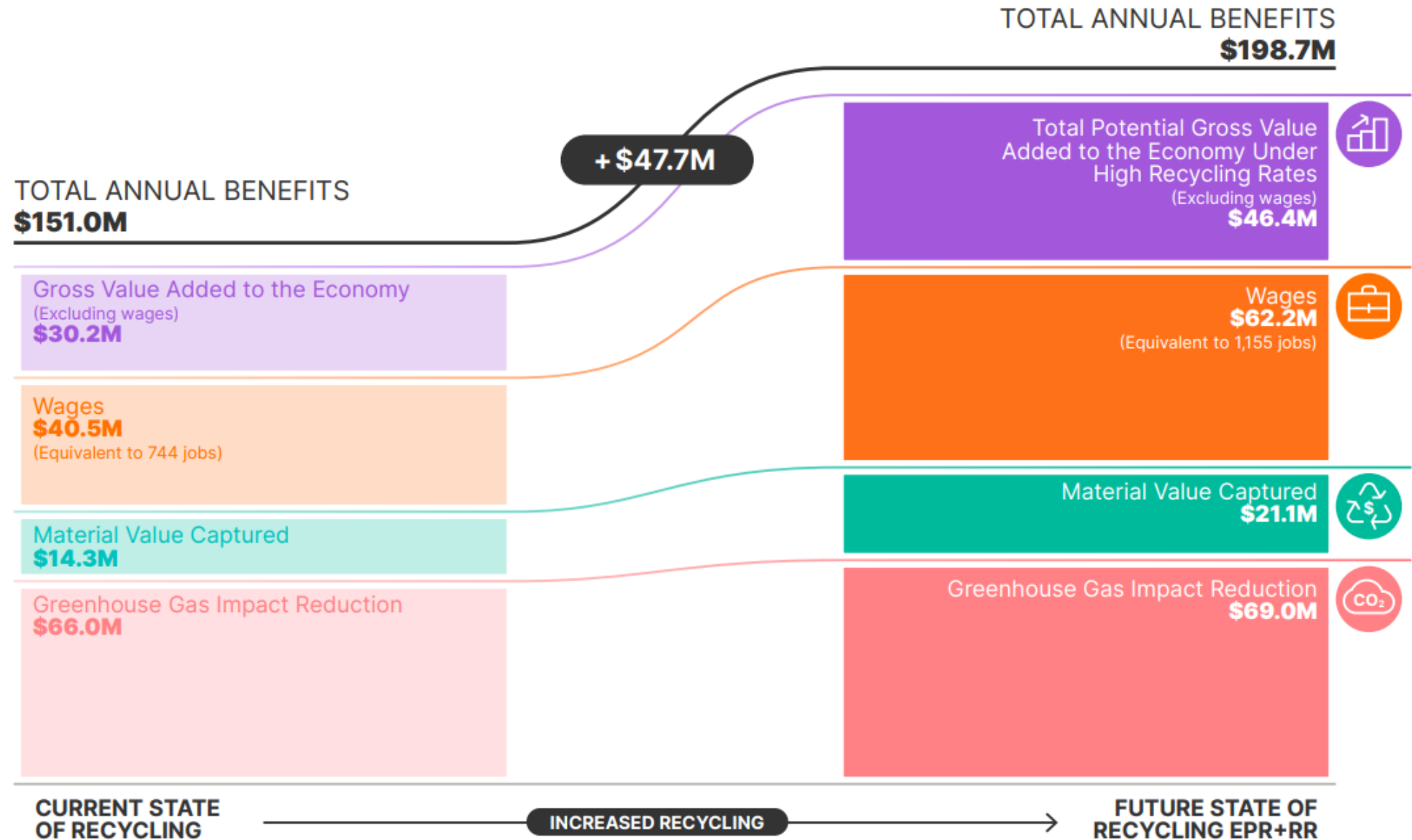
Total recycled  
under EPR



**109,182**

Source: [TRP State of Recycling Report](#)

# BENEFITS FOR RHODE ISLAND WITH EPR+RR



Source: [Ball/Eunomia 50 States of Recycling 2.0](#)

# IMPLEMENTING EPR+RR PROGRAMS TOGETHER PROVIDES A MULTITUDE OF BENEFITS



**Accelerates Maximum Recovery Rates to Maximize Environmental Benefits:** Achieves highest beverage recycling rate and high overall packaging recycling rates.



**Enables Close Loop Recycling to Create a Strong Domestic Supply of Material:** RR provides better material quality which leads to more closed loop recycling.



**Maximizes Access & Convenience:** Include businesses, schools, parks, on-the-go and will serve to complement recovery rates from curbside EPR programs.



**Protects and Enhances Local Recycling Programs:** Implementing EPR+RR together enhances and bolsters single-stream recycling programs. All materials will pay their own way via producer fees to be collected, sorted, and recycled. Additionally, RR-covered beverage containers that flow through the single-stream recycling system will also be compensated via producer fees. EPR will increase the total tons processed by MRFs, creating a more sustainable and effective recycling system.



**Co-Develop Programs to Drive Efficiency:** Develop infrastructure in tandem to maximize efficiencies and cost savings. For example, RR sites can serve as drop-offs for EPR or other hard to recycle materials.



**Litter Prevention:** RR programs have up to 84% less littered beverage containers than states without a RR. Reduce overall litter by up to 65%.



**Expands Reuse and Refill Opportunities:** Environmental NGOs are advocating for refill in EPR, but RR provides the mechanism to achieve this.





since 1986

# RECYCLING POLICY COST MODEL

Applied to Washington State

November 21, 2024

# BACKGROUND OF THE COST STUDY

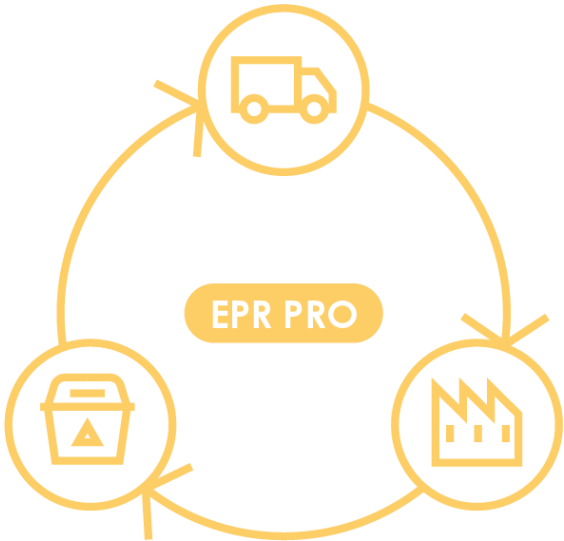
RRS was retained to analyze the costs and impacts of different recycling policies. This study focuses on Extended Producer Responsibility (EPR) and Recycling Refund (RR) programs—also known as Deposit Return Systems (DRS) or bottle bills—across various scenarios. The primary objective was to determine the most cost-effective approach for increasing recycling rates and reducing greenhouse gas (GHG) emissions, acknowledging that both EPR and DRS policies are proven strategies for enhancing recycling rates and boosting the availability of recycled content. This work aims to recommend an optimal policy framework, guided by return on investment (ROI) in terms of recovery, GHG reduction, and cost efficiency.

## **Objectives:**

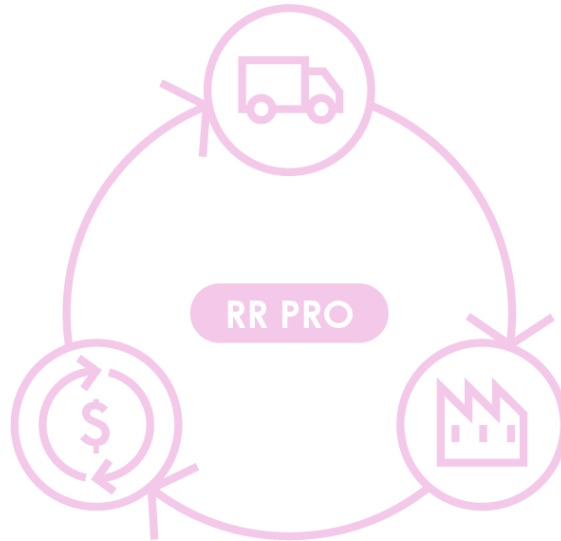
- Model cost and collection outcomes of EPR, RR, and combined systems.
- Create hypothetical fee schedules based on cost modeling.
- Identify the policy framework with the best ROI.

# POLICY SCENARIOS MODELED

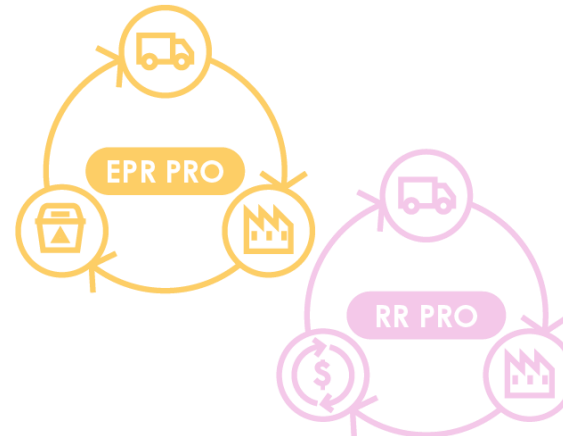
EPR



RR



EPR & RR  
SEPARATE



EPR+RR  
COORDINATED



# HIGH LEVEL SUMMARY OF KEY TAKEAWAYS

EPR + RR Coordinated offers the **most cost-effective** recycling policy solution and achieves the highest recycling rates.

EPR+RR Coordinated Offers the Lowest System Cost and Lowest Cost Per Ton



- **Total fees paid are lowest for both EPR & RR programs**
- Results in a **net system cost decrease of ~\$36.5M** and a decrease in costs for both EPR and RR systems

EPR+RR Coordinated Offers the Best ROI for Decarbonization



- Recycled materials under EPR+RR contribute an estimated reduction of over 271,000 MTCO<sub>2</sub>e
- Coordinated EPR+RR fees are approximately **\$4 per MTCO<sub>2</sub>e, supporting cost-effective emissions reduction**

EPR+RR Combined PRO Delivers Synergies and Reducing Costs



- **Allows for a Single PRO** to operate both systems
- Allows for synergies in infrastructure and operations
- EPR+RR depot collection network is shared

EPR+RR Achieves Higher Recycling Rates – Providing the Most Cost Effective Means for Brands to Get Their Material Back



- RR collects the most beverage containers, yielding approximately **20% more material**
- By owning redeemed containers through the RR system, the PRO can **give brands direct access to used containers, supporting greater circularity**

# CHPR BASICS



- The [Coalition for High Performance Recycling \(CHPR\)](#) is a diverse group of consumer brands, environmental nonprofits, material manufacturers, packaging suppliers, and trade associations united in our mission to improve recycling systems across the country.
- Supporting policies that promote EPR and Recycling Refunds
- Working primarily in states that are currently exploring EPR for packaging legislation





# CHPR BASICS

## CHPR Members

CHPR is proud to be supported by leading brands, companies, nonprofits, and organizations committed to advancing high-performance recycling, including:

The Recycling Partnership

The Association of Plastic Recyclers

The Aluminum Association

Red Bull North America

Primo Brands

Novelis

Niagara Bottling

New Belgium Brewing Company

Indorama Ventures North America

Glass Packaging Institute

Diageo North America

Constellium N.V.

CLYNK

Can Manufacturers Institute

Ball Corporation

# MAIN POINTS

- Aluminum beverage can, glass bottle, and PET plastic bottle recyclers and container manufacturers need more high quality recycled material to make new containers to feed existing domestic manufacturing and produce lower carbon containers
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# DISCUSSION

