



Introduction to CAA MD Program Planning

Presented by Andi Crooms, CAA
To Maryland Advisory Council 5/28/2026

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Agenda

1. CAA Overview
2. EPR Across the States
3. CAA MD Program Planning
4. CAA Discussion Approach
5. Reuse/Refill
6. Responsible End
MarketValidation
7. Conclusion and Next Steps

Collecting Your Input: Intro to Slido

What is Slido?

An interactive Q&A and polling tool that lets you submit questions and vote on priorities in real time — so we can capture your input as we go, not just at the end.



1

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Go to slido.com and enter the event code
CAA-MD-AC

2

Ask

Submit questions at any time during the presentation

3

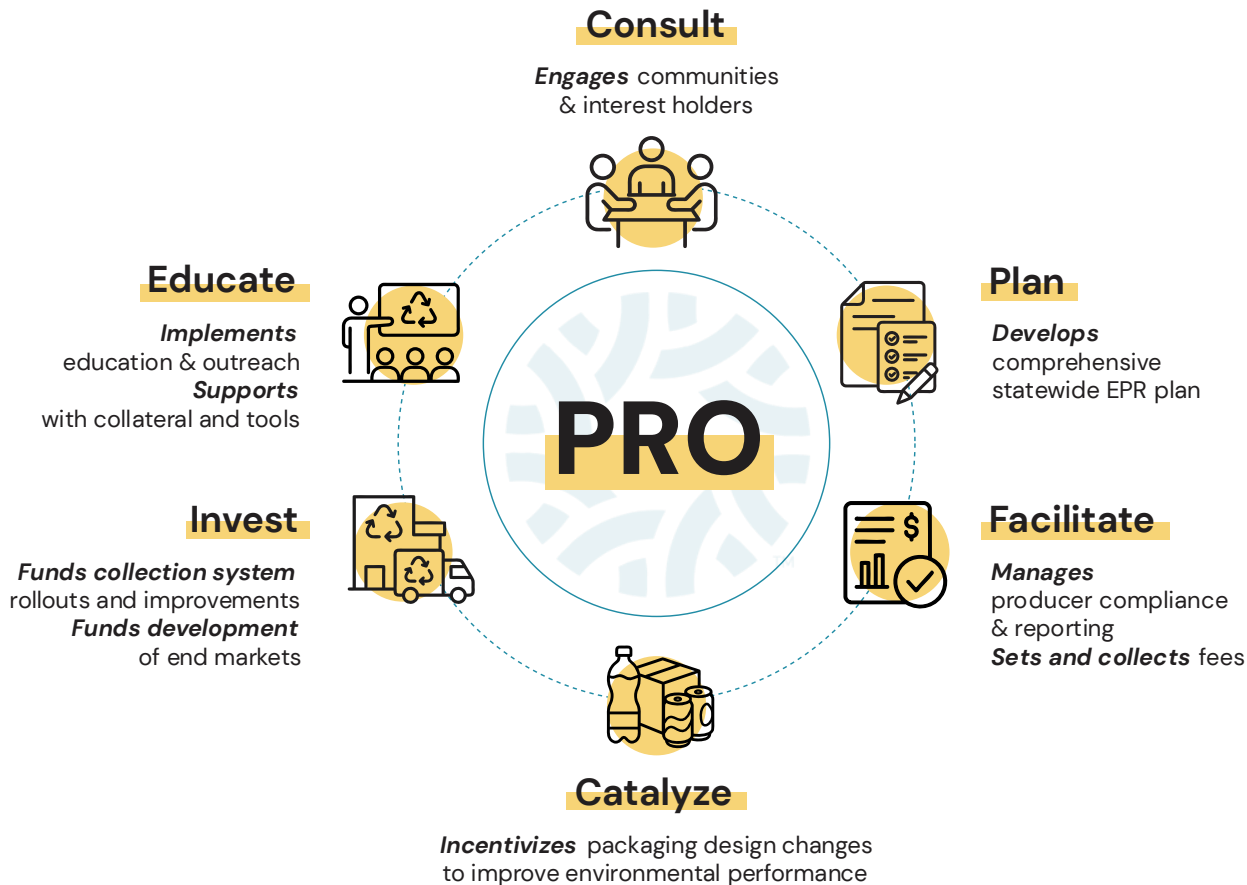
Vote

Upvote questions from others that you want addressed



The Role of the PRO

A **Producer Responsibility Organization (PRO)** is a producer-led nonprofit organization that manages and improves the system for collecting and recovering materials after use. We facilitate compliance with Extended Producer Responsibility (EPR) laws, leading to positive environmental outcomes for communities.



Building Momentum, State by State

Oregon, Colorado, California

Washington, Minnesota, Maryland



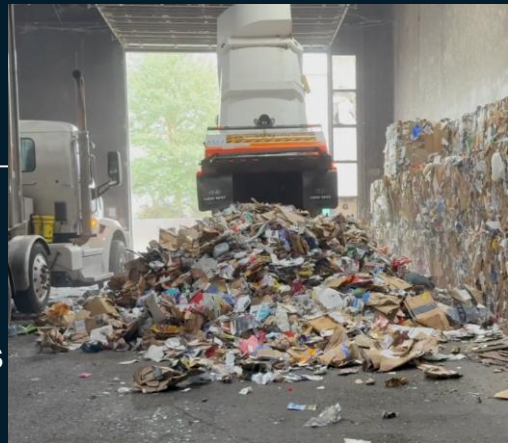
Implementation Updates

Oregon

- **\$3.1 million** to communities for contamination reduction programs designed to prevent contamination before it starts.
- **\$19.5 million** to fund upgrades and stabilize market fluctuations that can raise costs.
- **50,000 recycling carts and 14 recycling trucks** for communities that currently lack access to recycling services.
- CAA has opened **22 drop-off Recycle On Centers** for hard to recycle items.

Colorado

- Request for Reimbursements
 - Local Government
 - Post-Collection Processing Services
 - Open Market services
- Opportunities for Compost Facility funding
- **Several layers of Education and Outreach** through
 - Local governments
 - Service providers
 - Statewide awareness campaign



"Emerging" States Status

State	Needs Assessment	Rules	Covered Material Category List	Collection Lists	Producer Registration	Producer Reporting*	CAA Register with State	Program Plan Due	First Producer Fees due (anticipated)
MARYLAND	Completed early 2025	-1st pkg final rules adopted on May 15, effective on May 25. -2nd pkg anticipated	In rules	Due July 1, 2027	Portal opened March 2026	By May 31, 2026	July 1, 2026	July 2028	2029
MINNESOTA	-Prelim done Feb 2026 -Final due Dec 2026	Starting in 2026	Drafting with needs assessment	Due July 1, 2028	Portal open since spring 2025	By May 31, 2026	July 1, 2026	October 2028	2029
WASHINGTON	-Prelim due Dec 2026 -Final due Dec 2027	Due by 2028	Initial lists for needs assessment due Oct 1, 2026		Portal open since Nov 2025	By May 31, 2026	March 1, 2026	October 2028	Early fees invoiced Jan 2027 Full program 2029

* In spring 2026, CAA will collect initial supply data from producers in simplified reporting categories for MD, MN, WA. These data will be used for program planning generally and for early fee setting in WA

Maryland Key Dates

July 2026

PRO must Register with MDE on behalf of all covered producers by July 1, 2026.

**June 2027 +
annual**

PRO must Register with MDE on behalf of all covered producers annually by June 30.

July 2028

Full program plan (individual or PRO) must be submitted to MDE July 1, 2028.

2029

50% cost reimbursement to service providers based on 2028 baseline data.

2030+

Reimbursement ramps to 90%+ of verified service provider costs.

Program Plan Development Milestones

2026

- Engage interest holders
- Carry out recycling system mapping
- Supplemental data collection and analysis

2027

- Develop performance targets in consultation
- Develop plan components
- Ongoing consultations with interest holders
- Ongoing data verification and supplemental analysis

2028

- Conduct advisory board review of draft plan
- Ongoing consultations with interest holders
- Incorporate advisory board and public comments
- Finalize and submit plan for MDE review and approval

“Sweating the Details” – Current Workstreams

Data Collection Framework

- Integrating MRA & HB 264 requirements
- Identifying gaps in needs assessment
- Additional data collection begins Summer 2026

Producer Registration & Outreach

- Building registration infrastructure
- Developing producer-facing resources
- Direct outreach to producers

Service Provider Engagement

- Outreach to MRN, MES, NMWDA
- Planning service provider/municipal/county gov listening tour
- Conference engagement strategy

Advisory Council/MDE Engagement

- Quarterly discussions on core topics
- Seek feedback from MDE/AC as needed
- Submission of draft plan for AC review required in 2028

Data Collection Framework: Needs Assessment vs. Program Plan Requirements

Needs Assessment (SB 222) Feb 2025
to characterize Maryland's recycling system
Pre-EPR law

Needs Assessment: Single Future Scenario

Maryland Program (SB 901)
requires significantly more detailed data, analysis,
and stakeholder input

Program Plan: Multiple Scenarios, Seven Targets

SB 901 Required Performance Goal Categories

**Source
Reduction**

**PCR
Content**

**GHG
Reduction**

**Recycling
Rates**

**Composting
Rates**

**Reuse
Rates**

**Return
Rates**

Engagement Strategies

Service Provider Tours & Meetings

- Haulers, MRF/transfer operators, composters
- Refill/reuse operators
- Local governments
- Structured conversations via MRN, MES, NMWDA
- Understand operational realities & concerns
- Input on infrastructure & cost data

Producer Tools & Producer Consultation

- Registration guidance & webinar sessions
- Covered materials scope & definitions
- Reporting requirement walkthroughs
- Ongoing FAQ & support resources
- Ongoing Consultation

Advisory Council & Broader Interest Holder Engagement

- Collaborative sessions on high priority topics/key elements
- Listening to end users/covered entities/trade orgs/ etc.
- Structured framework for input
- Ongoing consultation
- Real-time Q&A via Slido
- Iterative feedback on plan components

Producer Registration and Outreach

Producer Resources

- Registration portal & guidance documents
- Covered materials definitions & scope
- Fee structure overview
- Reporting requirements & timelines
- FAQ and support channels

<https://circularactionalliance.org/producer-resource-center>

Monthly Newsletter

- Updates for each state and new resources.

Producer Webinars

- 101 Producer Onboarding
- 102 Registration & Agreements
- 103 Budgeting for EPR Fees
- Sign up for producer events on [our website](#).

Producer questions? producer.support@circularaction.org



Covered
producer
registration
form.



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Producer Registration

Upcoming Producer Events



In this session, members from CAA will answer questions live from producers related to registration, reporting and fee payment. This session is open to all registered producers.

May 21, 2026



In this session, members from CAA will answer questions live from producers related to registration, reporting and fee payment. This session is open to all registered producers.

May 26, 2026



In this session, members from CAA will answer questions live from producers related to registration, reporting and fee payment. This session is open to all registered producers.

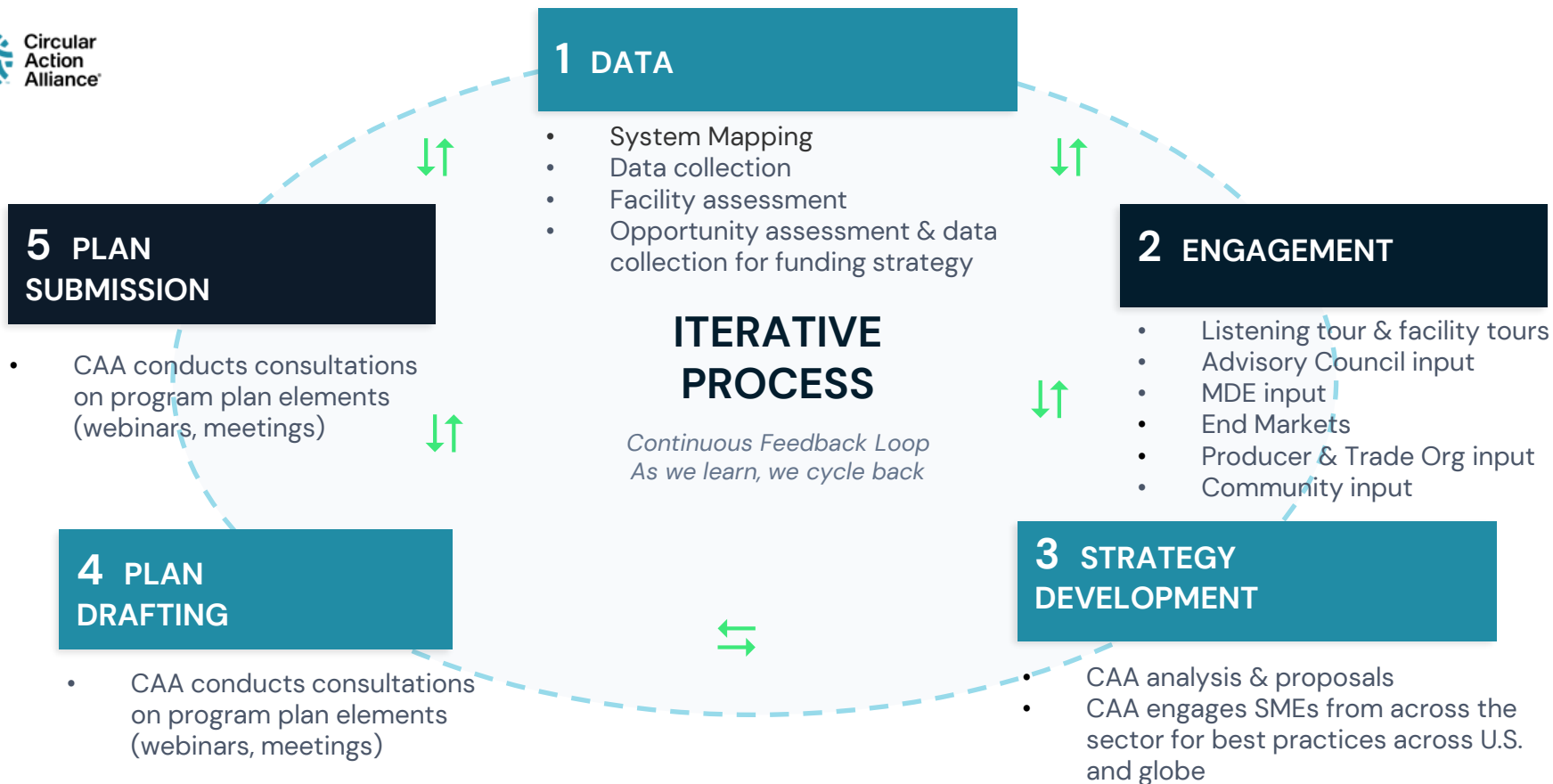
May 28, 2026

Program Plan Development: An Iterative Process

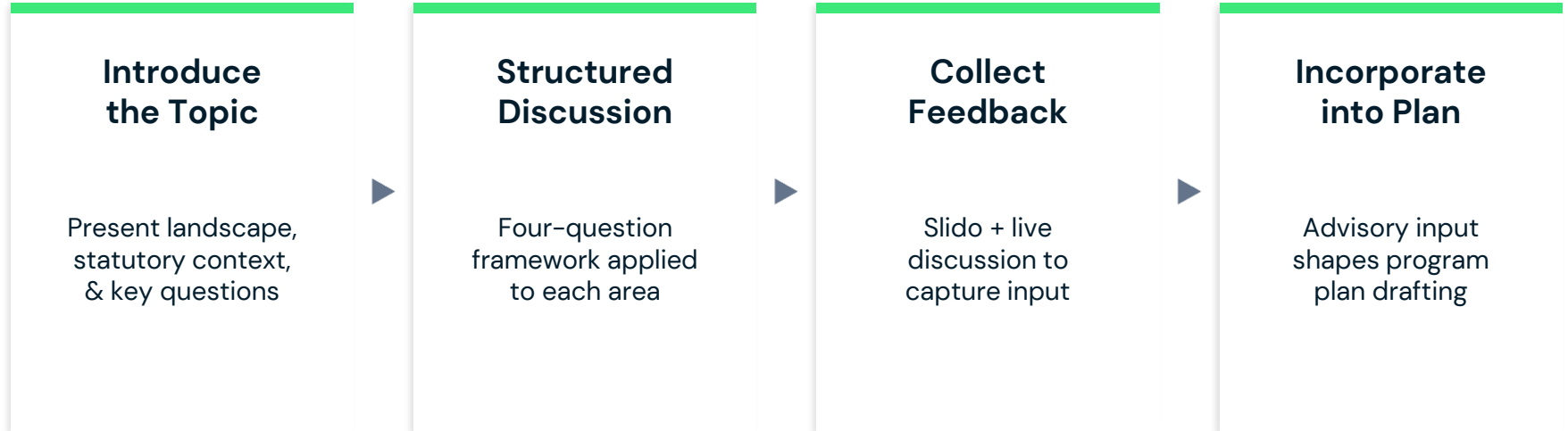
This is not a linear process — as strategy develops, we return to engagement and data collection to validate and refine



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Presenting Program Topics to the Advisory Council



Framework for Conversation

For each topic, we'll work through a consistent four-question framework:

1

What does the statute require?

Identifying the specific legal requirements and definitions in SB 901 that apply to this topic area.

2

What do we know today?

Reviewing existing data, infrastructure, and practices from the needs assessment and other sources.

3

What are the gaps?

Where current data or systems fall short of what's needed to build the program plan.

4

What input do we need from you?

Specific questions where Advisory Council expertise and perspective will shape the plan.

Today's Agenda Topics

TOPIC 1

Reuse & Refill

Landscape of reuse/refill systems — types, definitions, and why we need a careful, considered approach.

TOPIC 2

Responsible End Market Validation

Responsible Markets (REMs) address a core question: *What happens to material after collection and who is accountable?*

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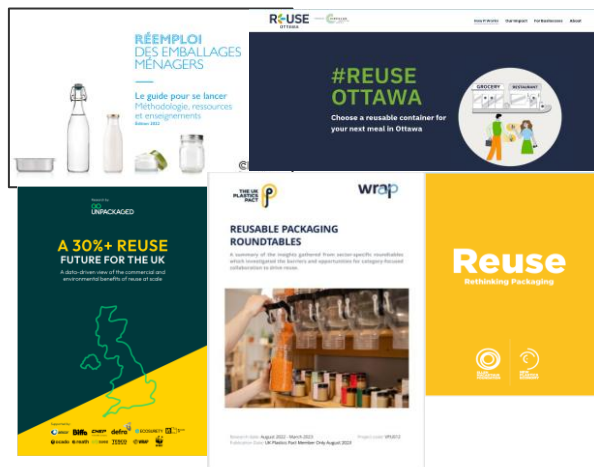
Towards Reuse & Refill in Maryland: An overview

Overview

1. Global Landscape Analysis
2. The Maryland Context
3. Solution Opportunity Assessment

Global Landscape Analysis

Journey of Learning: Landscape Scan



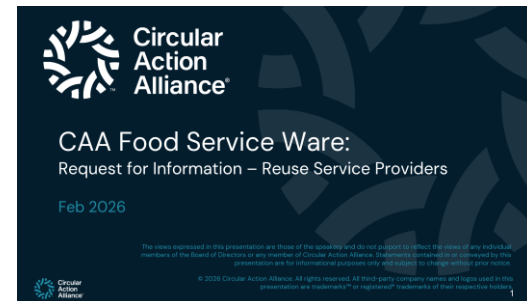
Global Scan

What are the best practices and opportunities globally?



California Landscape Scan

What already exists in California?



Reuse Service Provider Scan

Request for Information

Global Scan Overview

Countries studied

- United States
- France (Citeo)
- Canada (refillable beer, Ottawa food service)
- Belgium (Valipac, Fost Plus)
- Netherlands (Verpact/KIDV)
- United Kingdom (WRAP, Innovate UK)
- Italy (CONIP)
- Germany (Mehrwegpflicht obligation)
- Australia (APCO)

Pilots reviewed

- Consumer Goods Forum (Reuse City)
- Circular Innovation Council (Reuse Ottawa)
- The Refill Coalition (UK led by Unpackaged)
- Citeo (France PRO)
- Closed Loop Partners (Petaluma Project)

Other organizations reviewed

- Ellen MacArthur Foundation
- Sustainable Packaging Coalition
- KIDV/Planet Reuse
- The Reuse Portal (UNEP)
- Reloop
- Upstream
- APCO (Australia PRO)
- Valipac/Fost Plus (Belgium PROs)
- US Plastics Pact
- Returnable Packaging Association
- Canada Plastics Pact
- WRAP

Ultimately, No Proven Pathway

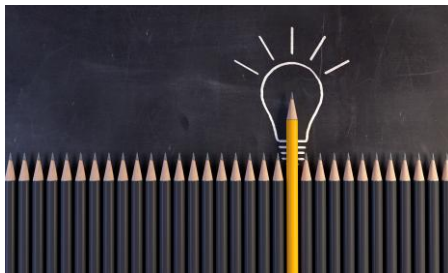
History of reuse...



...in niche areas

- Returnable beverage containers
- Dine-in food service ware
- Exchange programs
- B2B transport packaging (e.g., pallets, milk crates, produce trays)

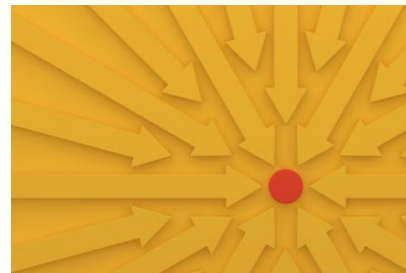
No one path to success...



...community is still learning

- No magic bullet
- Different considerations based on packaging type and distribution system
- Many small-scale pilots

Key takeaways...



...no simple solutions

- Closed loop and shorter supply chains transition more quickly
- Container shape and level of hygiene drive different washing infrastructure needs
- Alliances enable alignment for pooled/shared packaging

Background: Cost Breakdown – Single Use vs Reusable

Factors*:

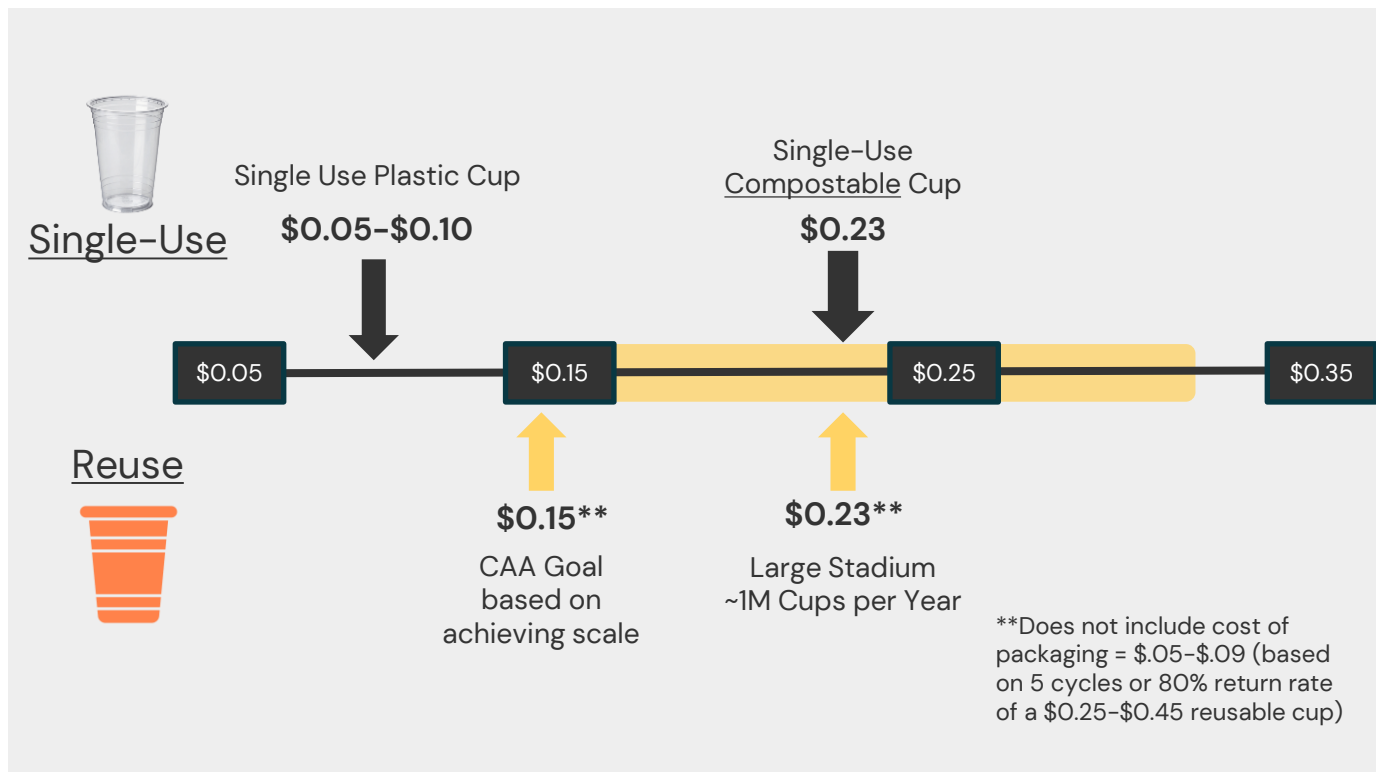
Cost of packaging:

- SUP cup = \$.05
- Compostable cup = \$.23
- Reusable cup = \$.25–\$.45

Collect, sort, wash, dry, delivery:

- SUP cup = \$0.00
- Compostable cup = \$0.00
- Reusable cup = \$.15–\$.30 / cycle

***Not included:** Customer Acquisition Cost, Setup Costs (training, signage), Addl Labor.



Statutory Definitions: Reuse vs. Refill

§9-2501, Environment Article



REUSE §9-2501(Z)

Return of covered material to the marketplace by a **producer or service provider**

- Designed for multiple uses without change in form
- Designed for durability & maintenance
- Supported by adequate logistics at a retail location, by a service provider, or by/on behalf of a producer
- Compliant with health & safety laws



REFILL §9-2501(V)

Continued use of covered material by a **consumer** through a system that is:

- Designed for repeated filling of a covered material
- Supported by adequate logistics for convenient consumer access
- Compliant with health & safety laws

Scope of R&R in MD

§9-2501, Environment Article and COMAR 26.04.14

COVERED ENTITIES

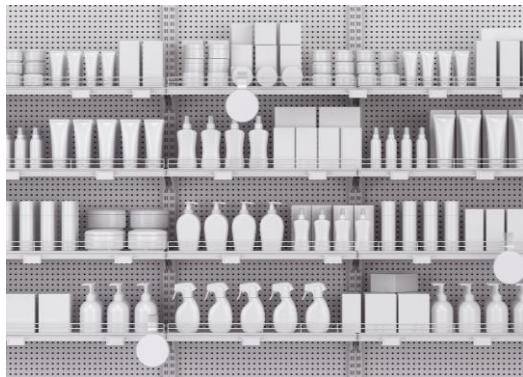
- Single-family residences
- Multi-family residences
- K-12 schools — public or non-public kindergarten, elementary, or secondary schools, and their campuses
- Childcare centers — as defined in §9.5-401 of the Education Article
- Public buildings owned or operated by the state or a local government, including leased and rented properties that a state or local government operates
- Public land — parcels owned, operated, or leased by the state or local government, including parks, state and local highways, and public open space as identified in local zoning (this one was added in COMAR, not in the original statute text)
- Commercial/institutional buildings — but only those that source-separate paper products for recycling where those paper products don't meet the definition of packaging (narrow scope — this is the COMAR provision for non-packaging paper)

COVERED SERVICES

- (a) “Covered services” means:
- (i) Collecting, transferring, transporting, sorting, processing (including the cleaning of covered materials to ensure recovery in the form of recycling, reuse, or refill), recovering, preparing, or otherwise managing covered materials for purpose of waste reduction, reuse, recycling or composting; and
 - (ii) Public education and outreach activities related to the activities described in (a)(i).
- (b) “Covered services” includes:
- (i) Litter cleanups where covered materials are collected, sorted, transported and processed for recycling;
 - (ii) Reuse and refill services.
- (c) “Covered services” does not include disposal of covered materials.

Solution Opportunity Assessment

Journey of Learning: Assessing and Mapping the Numbers



Assessed the numbers

Where are the components
and plastic tonnage?



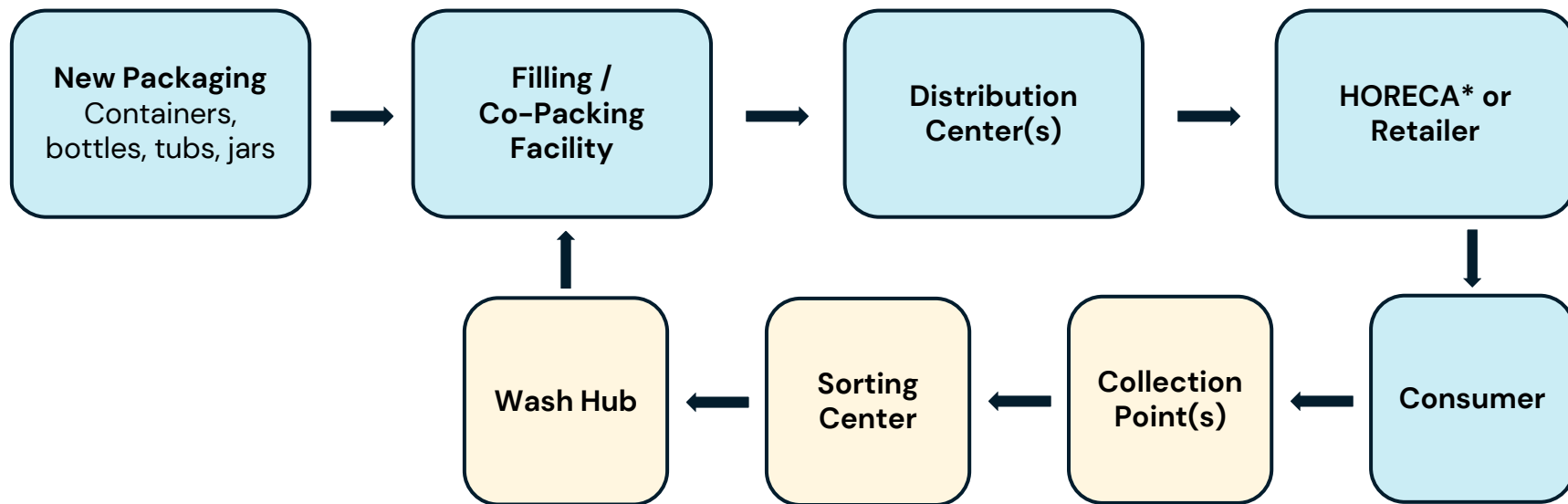
Mapped to potential reuse / refill & elimination solutions

What reuse / refill & elimination solution
can be used?



Understanding Reuse / Refill Packaging Infrastructure

Infrastructure Diagram



*Hotel, Restaurant, Cafe/Catering

Classifying Reuse / Refill & Elimination Solutions – Infrastructure Intensity



Type 1: Packaging-Enabled Solutions

- No infrastructure or equipment needed at system level
- Producers do the "work"

B2C Refill Via Single-Use Packaging

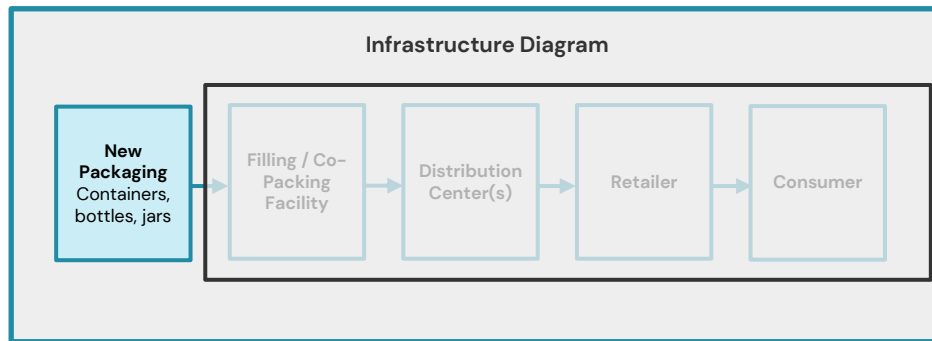


Example 1: Refill via tray insert for cosmetic products

The consumer refills the outer container with a single-use tray filled with new product

Key Takeaways:

- No shared infrastructure required
- Producers can continue to transition independently
- Very little tonnage
- But helps build the refill habit



Example 2: Refill via large format container for home care products

The consumer uses large format and pours into a refillable container



Type 2: Infrastructure-Enabled Solutions

- Requires additional equipment and infrastructure
- But reusable item stays within a defined boundary, in a closed loop
- Can be executed in a single location

On-Site Reusable Food Service Ware



**On-Site FSW at Large Venues
(with deposits)**
(e.g., stadiums, resorts, amusement parks, movie theaters)

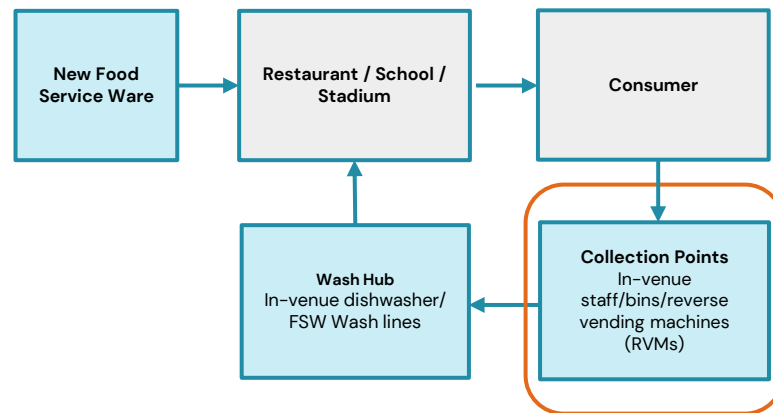


**Dine-In FSW at Large Venues
(without deposits)**
(e.g., K-12 schools, universities, corporate cafeterias, hospital cafeterias)



Dine-In FSW at Small Venues
(e.g., dine-in portion at quick service restaurants)

Infrastructure Diagram



Key Takeaways:

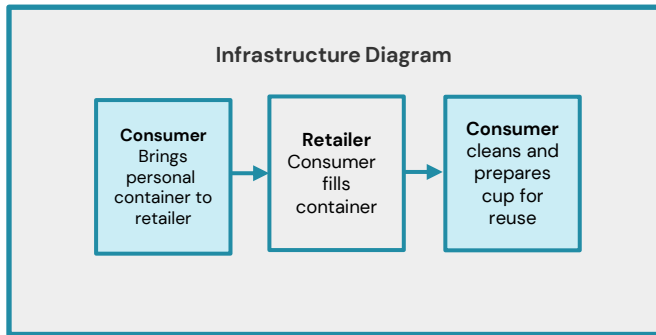
- Tens of thousands of individual locations
- Prioritize closed loop large venues
- Builds reuse habit for next generation

Bring Your Own Container / Cup Programs



Example: Bring Your Own Cup / Container programs

With refill via bulk purchasing, consumers refill their own containers with products, such as coffee from a coffeeshop or hand soap at a refillery



Key Takeaways:

- Some equipment potentially required, usually per location
- Limitations: Little tonnage, usually liquid soaps or dry goods work in these formats
- Helps continue to reduce single-use plastics

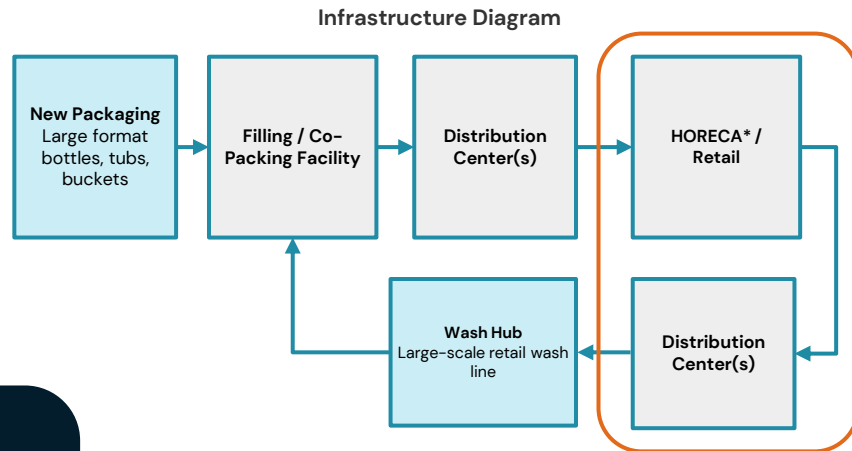
Type 3a: System-Enabled Solutions: Collected from Business

- Requires significant system infrastructure to be in place
- Reusable item moves across various locations, but does not reach consumer

B2B Back-of-House Prefilled Returnables



Example 1: peeled potatoes in 5-gallon buckets → reusable buckets



Key Takeaways:

- Likely able to collect on-site, but disruptive to retailer/operator operations
- Supply chain by supply chain approach required
- Convert a few standard formats at a time

Example 2: large format personal care products → reusable jugs



Case Study: Euro Plant Tray

Alliance initiated by

7 flower growing associations,
flower wholesalers and DIY retailers
(today more than 30 GER, NL, AT, CH, FR
members)

HORNBACH

OBI

FleuraMetz
Successful together

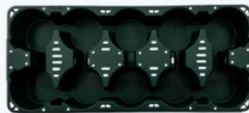
mvp plants worldwide

SAGAFLO

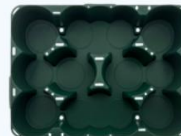


3 years of design & business model planning

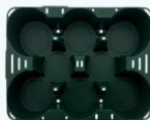
4 standard tray formats, more
designs currently in development



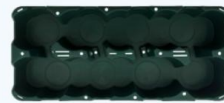
12 cm



9-9.5 cm



5-13 cm



10.5-13 cm

Plastic saved

1,058 tons in Year 1
1% market share



Key Takeaways:

- With crowd-funding, reusable plant tray costs less than single-use plant tray at the 4th cycle
- Modest complexity: collected on-site, no washing, no refilling required

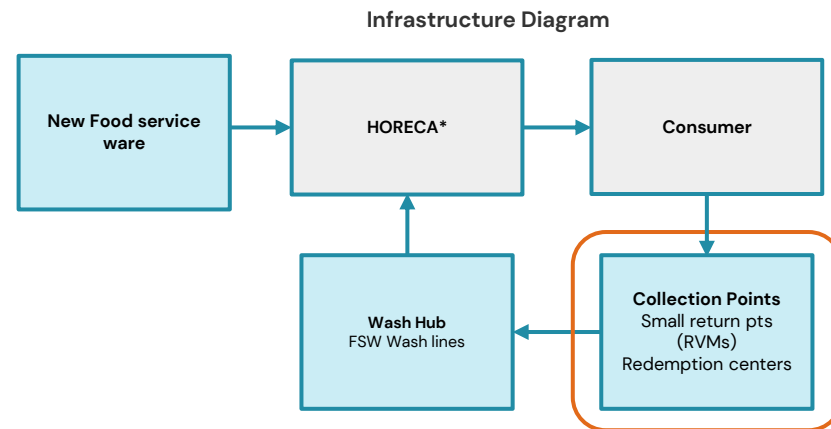
Type 3b: System-Enabled Solutions: Collected From Consumer

- Requires significant system infrastructure to be in place
- Reusable item moves across various locations in an open loop
- Consumer must return to collection point

Take-Out Reusable Food Service Ware



Take-Out Food Service Ware
(e.g., restaurants, fast food, food trucks)



Key Takeaways:

- Tens of thousands of individual restaurants to onboard
- Requires consumers to return to a central collection point
- Drives fast moving volume through collection points and reverse logistics infrastructure / complements potentially slower Retail B2C Prefills cycles

B2C Retail Prefilled Returnables



Example 1:
prefilled creams

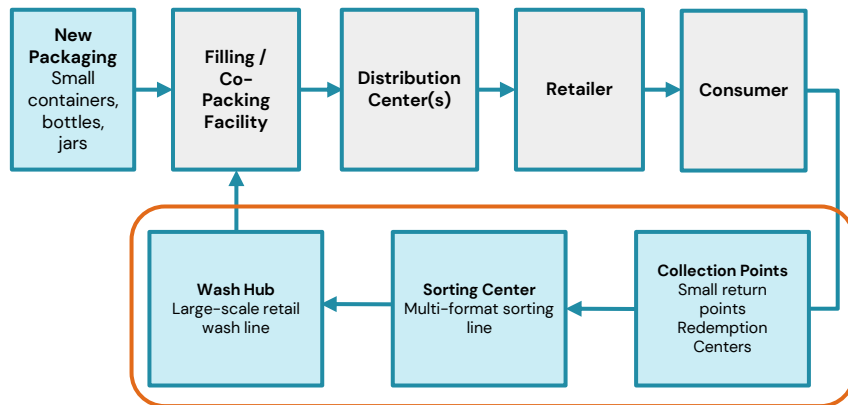


Example 2:
prefilled condiments



Example 3:
prefilled office supplies

Infrastructure Diagram



Key Takeaways:

- Potential for scale: 1 reusable container can reach many
- The most complex infrastructure
- Requires the most complex consumer behavior change
- Sector-specific pre-competitive alliance required
- Limitation: Converts a few standard formats at a time

Case Study: Citeo ReUse

Tight Steering Committee

14 associations, brands, retailers



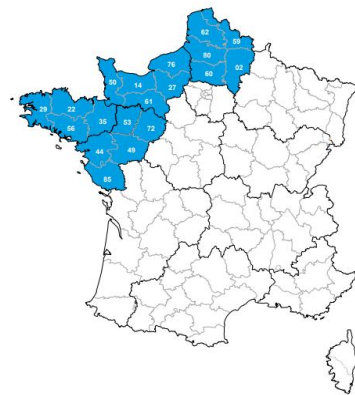
4 Years of Themed Sprints

5 standard packages & operating model



June 2025 launch

2 standard glass packages
16M residents, 400 stores (October),
>100 SKUs available



Key Takeaway:

- Largest in-store returnable initiative in the world – collect, wash, back to producer, refill

Building The Consumer Behavioral Ladder

Low Effort

High Effort

Refill via
Single-Use
Packaging



Builds awareness
and normalizes
refill, no return
required

Bring Your Own
Container



Introduces offsite
refill and personal
responsibility for
container
management

On-site Reusable
Food Service Ware



Establishes the return
habit within a
controlled, convenient
environment

Take-Away
Reusable Food
Service Ware



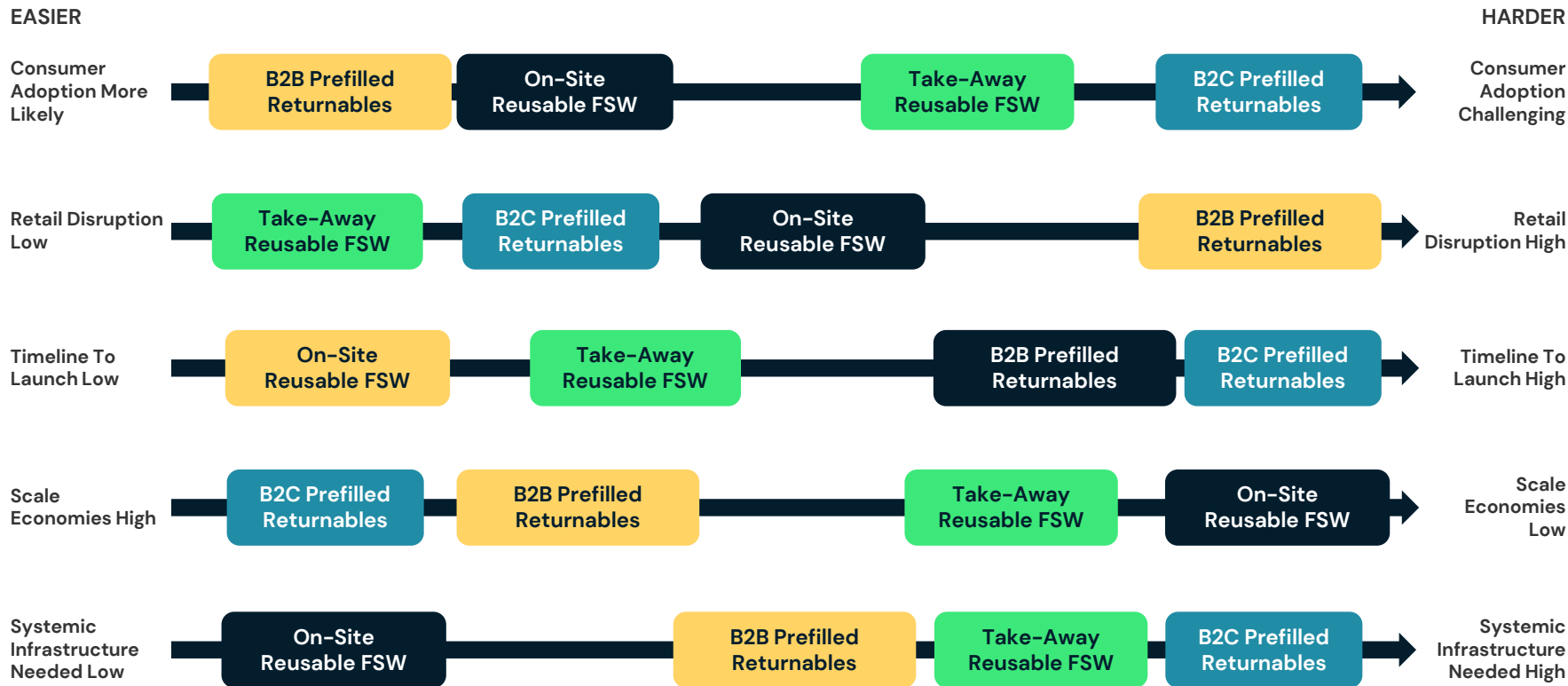
Extends the return
habit beyond the
point of use; higher
coordination and
commitment
needed

Retail Prefilled
Returnables



Most advanced
behavior, requires
choosing heavier,
less convenient
reusable over single
use and returning
off-site

Classifying Reuse / Refill & Elimination Solutions





Responsible End Market Standard

What is a Responsible (End) Market?

Common definition	Statutory obligation	Different requirements
A market in which the recycling and recovery of materials or the disposal of contaminants is conducted in a way that benefits the environment and minimizes risks to public health and worker health and safety.	PRO must: • have a process to verify end markets are REMs. • support service providers in sending materials to REMs. Usually, service providers have an obligation send materials to REMs	• Some states are more prescriptive (e.g. OR, CA, MN) than others (e.g. CO). • Requirements are usually more detailed in rules than in statutes

REM requirements exist in almost all EPR states

Why Develop a REM Standard?

Responsible Markets (REMs) address a core question: *What happens to material after collection and who is accountable?*

1. **Statutory obligation:** End markets verification against REM requirements is a statutory obligation for the PRO in all states (except Maine).
2. **Liability:** A formal standard is required to assess and track end market compliance.
3. **Trust:** REM is a new concept. The development of a standard will enable robust engagement with interested parties and ensure that a range of perspectives are included in developing the verification criteria, building confidence in the process.
4. **Harmonization:** Need to verify all material types across states. CAA can advance harmonization through a standardized verification process.
5. **Program Plan:** CAA has proposed the development of this standard as part of its program plans.

What Is the CAA REM Standard?

- Applies to recycling of paper, packaging, and food serviceware
- For entities downstream of the MRF/depot/collection
- Harmonizes shared state requirements; state-specific appendices for unique rules
- Focused on compliance-level assessment in line with EPR REM requirements
- Applicable to certification of Responsible Market entities worldwide
- What the standard does not cover:
 - Recycled content claims or chain-of-custody
 - MRFs and Collection Operations
 - Composting facilities

REM Standard Structure

Core Pillars

- Legal Compliance
- Labor Health & Safety
- Environmental Soundness
- Transparency
- Assurance of Processing & Disposition

Addenda

- State-Specific Yield

Responsible Market Categories

End Markets and Supply Chain Entities
w/ Processing

Supply Chain Entities – No processing

Supply Chain Entities – No possession

Disposal Entities

Public Comment Period – May 5 – July 7, 2026

- **Purpose:**

- Improve the draft standard
- Identify unclear or unworkable requirements
- Strengthen verifiability and outcomes
- Ensure the standard works across facility types and materials

Not a referendum on EPR statute or regulations

- **General information:**

- May 5 – July 7, 2026
- All interested parties welcome to comment on draft REM Standard text
- Comments will be reviewed, themed, and dispositioned

***circularactionalliance.org/
rem-standard-public-
comment***



Discussion

Is this a useful way of collaborating on topics?

We want your honest feedback on the topic-by-topic, four-question framework approach. Does this structure give you meaningful opportunities to shape the program plan?

What priority topics does the Advisory Council want to weigh in on early?

Help us prioritize: which program plan elements are most important for you to have input on before drafting begins? Where does your expertise matter most?

Thank You



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