

# State of the U.S. Flexible Packaging Industry

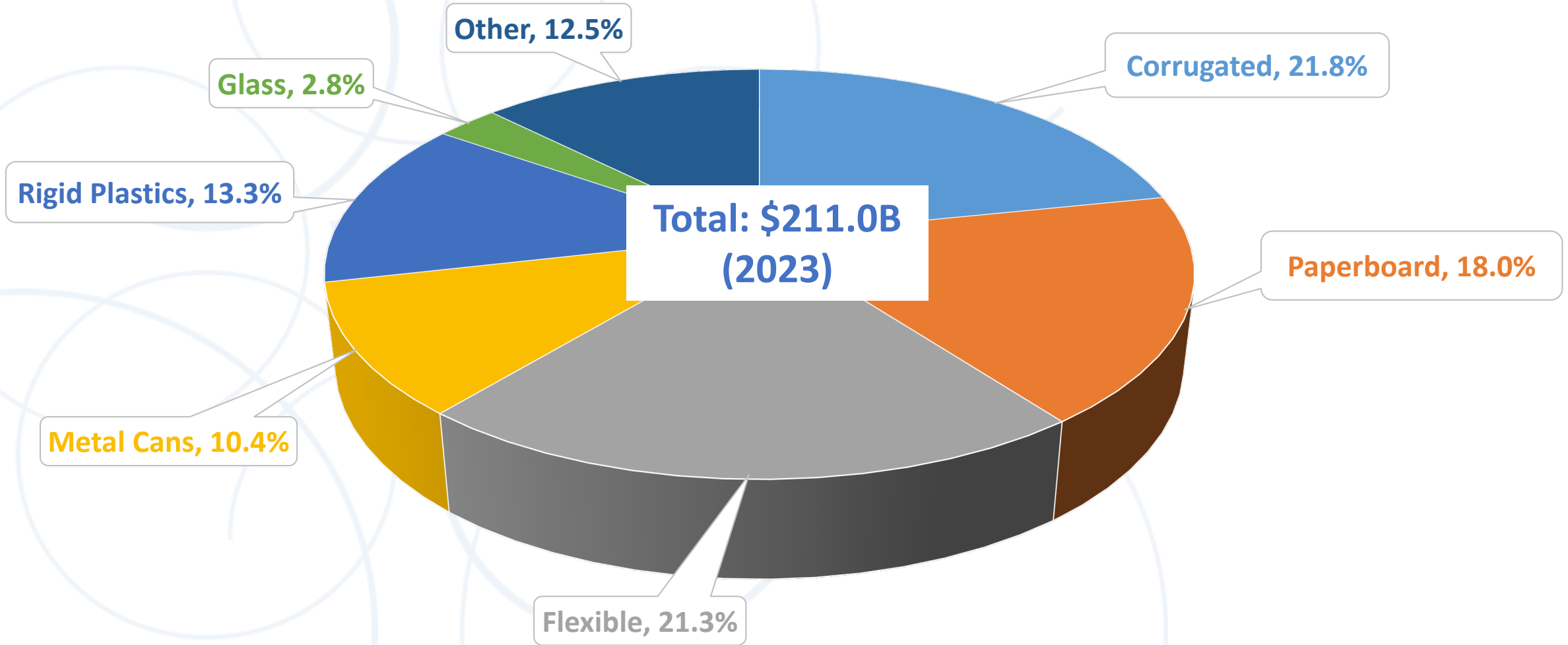
Alison Keane, Esq., CAE, IOM  
President & CEO  
April 15, 2024



# Let's Talk About Flexibles!

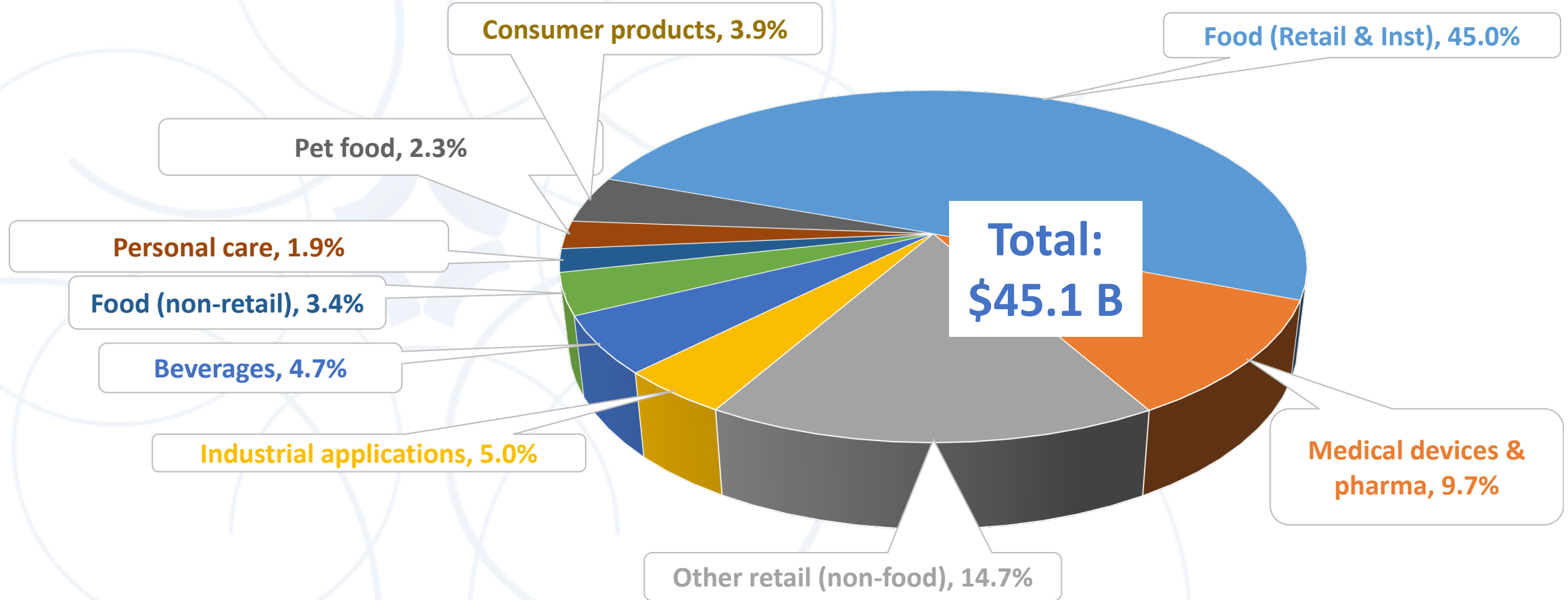


# Total U.S. Packaging Market % Breakdown by Segment



Source: Inforum (May 2024)

# U.S. Flexible Packaging Industry Breakdown By End-Use Market 2023



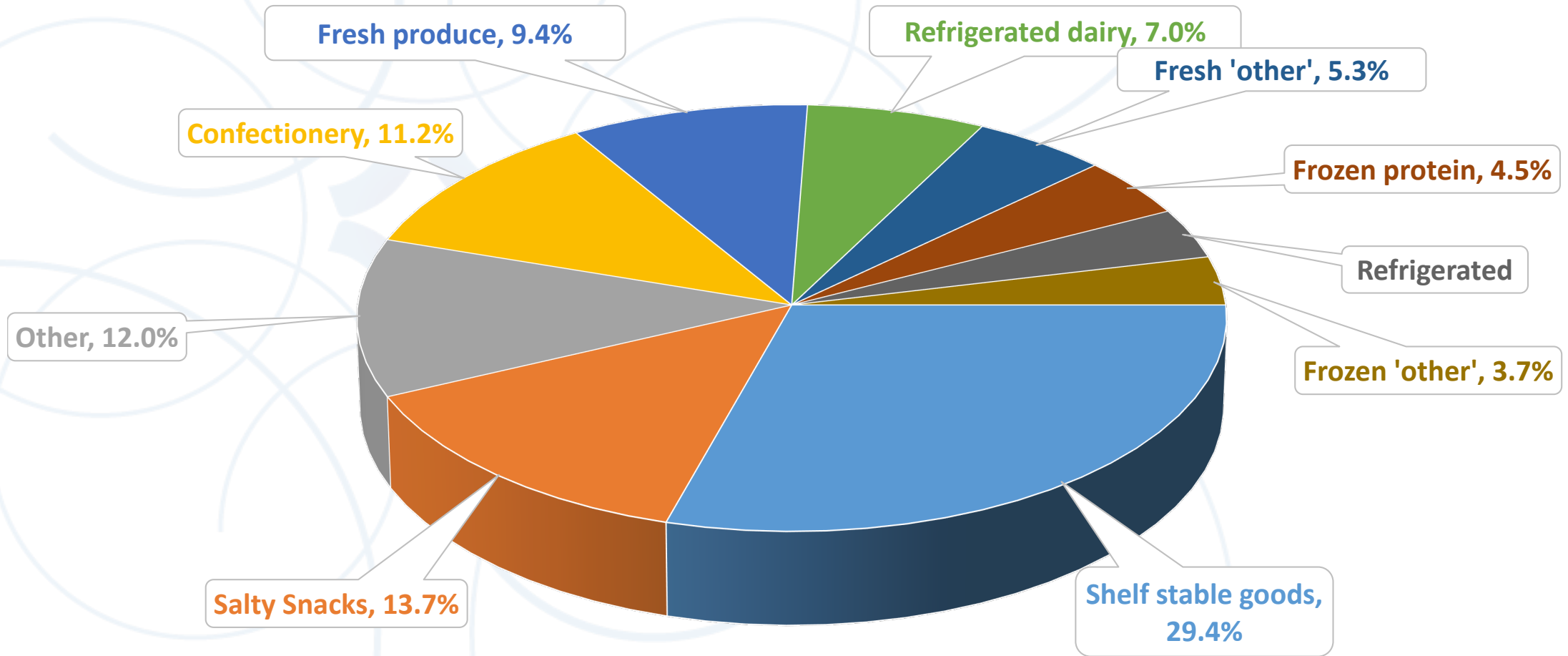
Source: 2024 State of the U.S. Flexible Packaging Industry Survey

Industry size (2023) based on Inforum recalculation – May 2024

Note: Average used for calculation. There is insufficient data to report Institutional (non-food), Shipping, and Nutraceuticals

# Food – Flexible Packaging % by Category

## By Market 2023



Source: FPA 2024 State of the U.S. Flexible Packaging Industry Survey

# U.S. Flexible Packaging Unit Volume Growth Potential



Market	2019-2024 CAGR	2024 - 2027 CAGR
<b>FOOD</b>	<b>2.1%</b>	<b>2.3%</b>
Plant-based Dairy	9.2%	7.9%
Dried Baby Food	12.4%	7.5%
Food Kits	2.5%	16.2%
Chocolate Pouches & Bags	6.0%	5.9%
Shelf Stable Fruit & Vegetables	10.5%	5.0%
Meat Snacks	6.5%	4.8%
Savory Snacks	4.7%	3.7%
Sugar Confectionery	2.4%	3.4%
Snack Bars	0.6%	3.3%
Chocolate Spreads	15.9%	8.5%
<b>BEVERAGES</b>	<b>-0.8%</b>	<b>-1.1%</b>
Tea	9.5%	3.8%
Juice	-1.8%	-2.1%

Market	2019-2024 CAGR	2024 - 2027 CAGR
<b>HOME CARE</b>	<b>1.4%</b>	<b>2.1%</b>
Liquid Air Fresheners	3.3%	2.6%
Detergent Tablets	5.0%	5.1%
Laundry Care	3.7%	3.7%
<b>DOG &amp; CAT FOOD</b>	<b>4.8%</b>	<b>2.6%</b>
Cat Treats & Mixers	11.7%	6.8%
Cat Food	7.1%	4.7%
Dog Treats & Mixers	2.5%	-0.2%
Dog Food	2.9%	0.6%
<b>BEAUTY &amp; PERSONAL CARE</b>	<b>0.3%</b>	<b>-0.9%</b>
Liquid Soap	8.1%	4.5%
Adult Sun Care	4.2%	2.8%
Hand Sanitizers	12.3%	-3.1%
Facial Makeup	-0.4%	1.9%
Lip Products	-0.5%	1.3%

Source: Euromonitor International Passport Data – March 2024

Based on the number of packaging units sold to consumers through all retail channels



# Economic Impact of the Flexible Packaging Industry

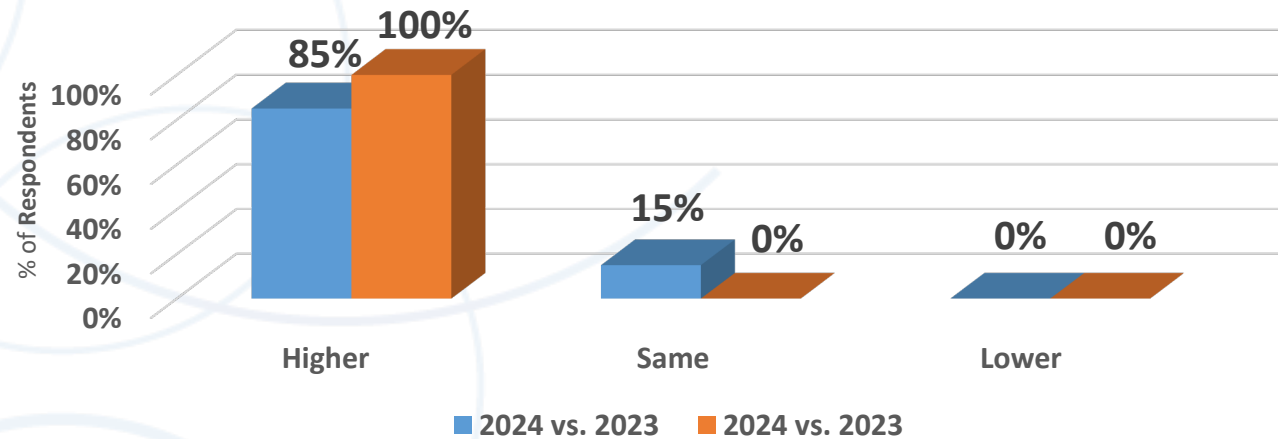
	Employment (1,000 persons)	Labor Income (Billion \$)	Value Added (Billion \$)	Output (Billion \$)
Direct	\$83.0	\$7.2	\$10.9	41.5
Indirect	\$112.2	\$10.2	\$19.7	48.9
Induced	\$120.9	\$7.9	\$14.4	25.4
<b>Total</b>	<b>\$316.1</b>	<b>\$25.3</b>	<b>\$45</b>	<b>115.8</b>

Source: Inforum and the U.S. Census Bureau

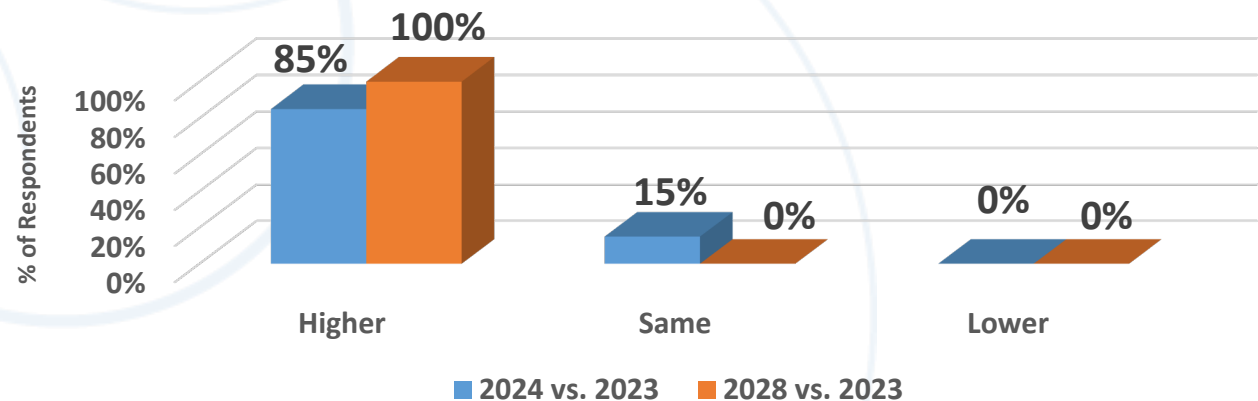


# Converters' Sales Revenue and Volume Performance

### Converters' Sales Revenue (\$) Performance 2024 vs. 2023 and Expected 2028 vs. 2023



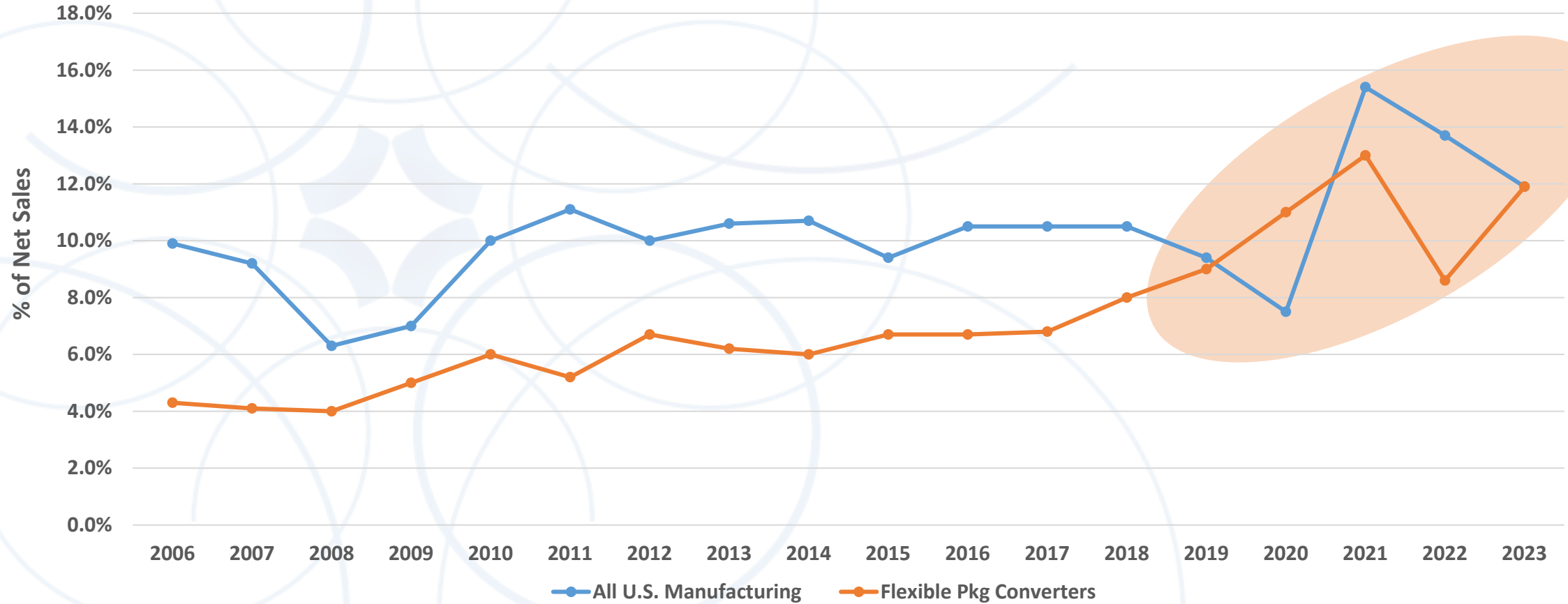
### Converters' Sales Volume Performance 2024 vs. 2023 and Expected 2028 vs. 2023



Source: FPA 2024 State of the U.S. Flexible Packaging Industry Survey



# Profit Before Tax as a % of Net Sales

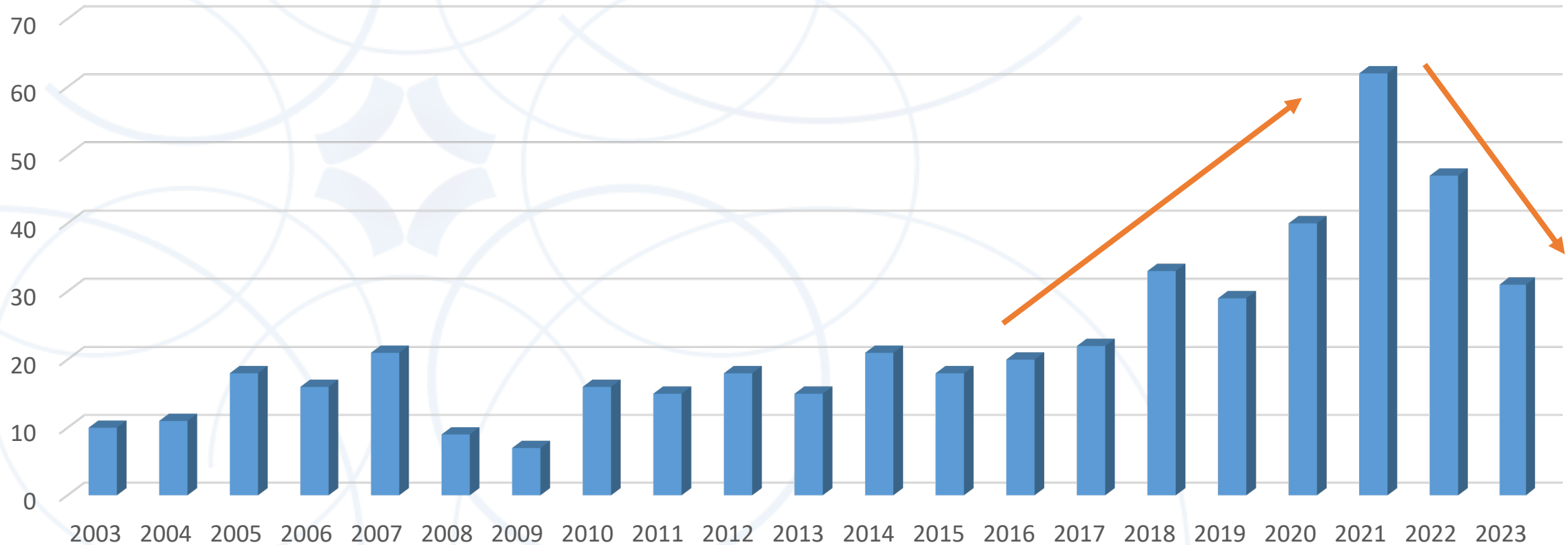


Source: FPA 2024 State of the U.S. Flexible Packaging Industry

# Flexible Packaging M&A (2003-2023)



U.S. Flexible Packaging Domestic Mergers & Acquisitions for 2003-2023



Source: FPA *State of the Industry Reports*, FPA accumulated M&A data for 2023, precedent flexible packaging transactions, and PMCF

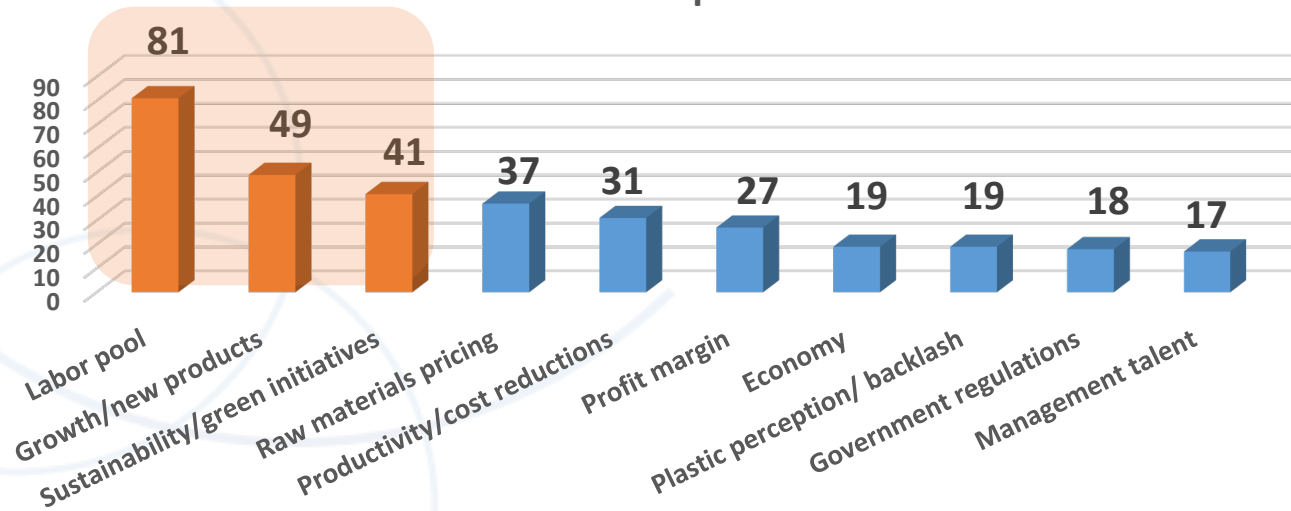


# Converter & Supplier Most Important Issues

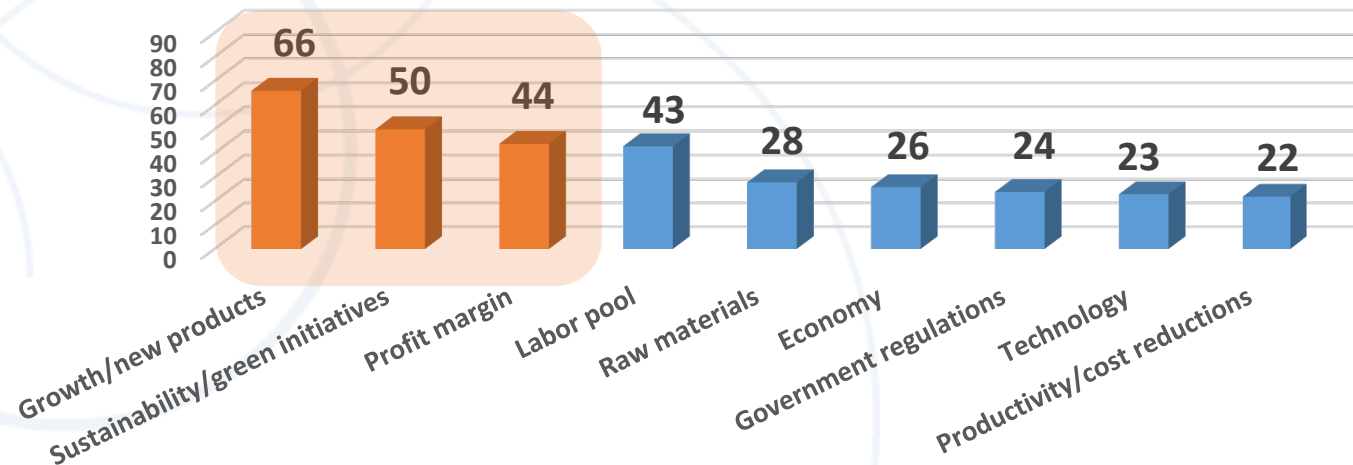
Relative importance based on combined rank totals.

Weighted 1-5, with 5=most important

### Converters' Most Important Issues



### Suppliers' Most Important Issues

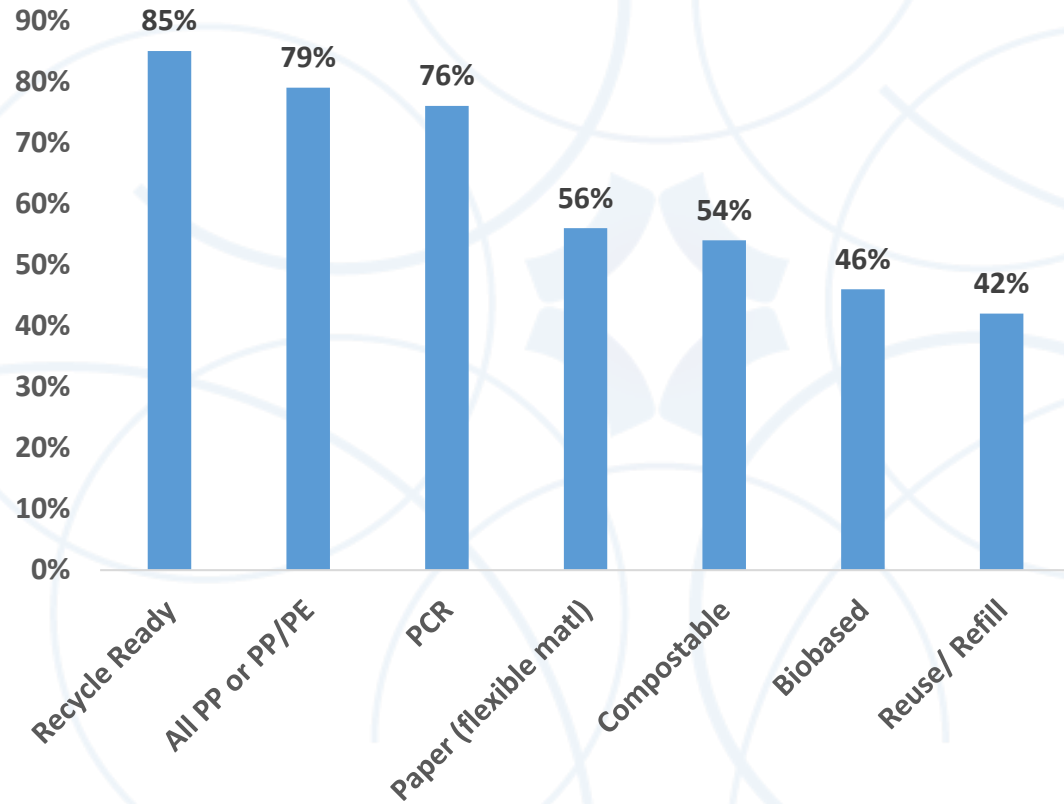


Source: 2024 State of the U.S. Flexible Packaging Industry Survey

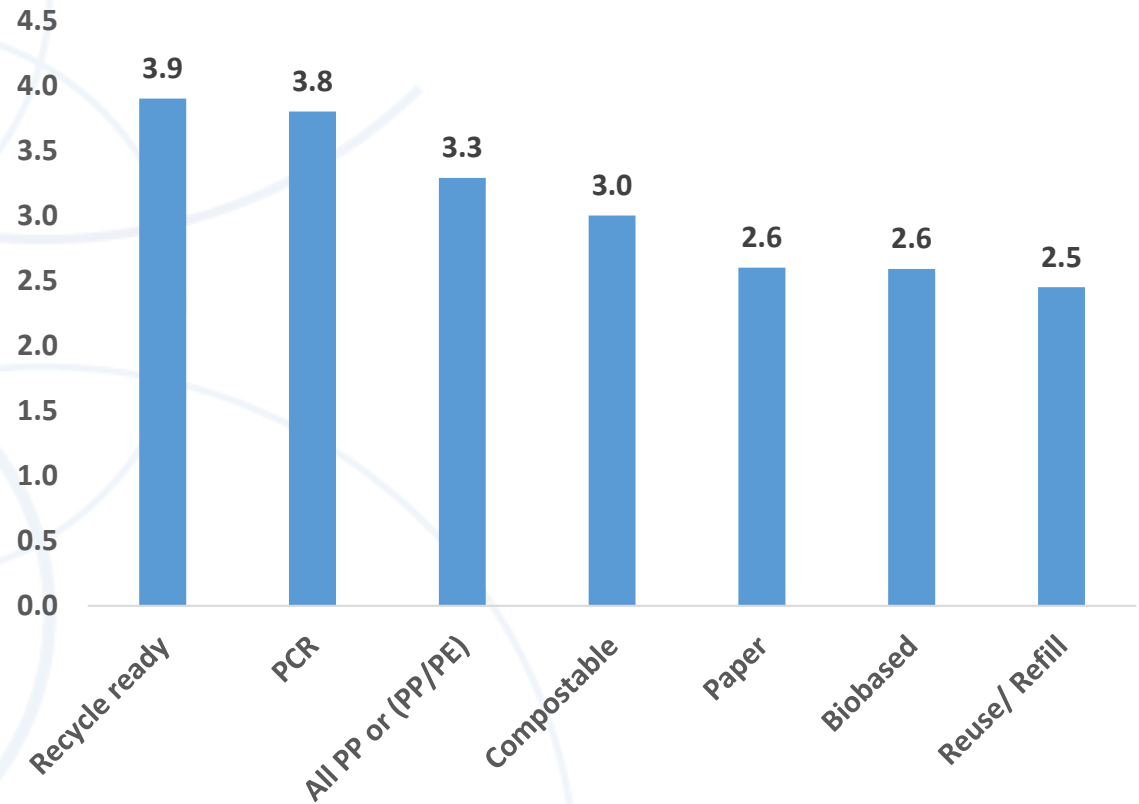
# Sustainability & Emerging Materials



Using today



Importance in 3 years



Using a scale of 1-5

(5 = Extremely Important / 3 = Moderately Important / 1 = Not Important)

Source: 2024 State of the U.S. Flexible Packaging Industry Survey



# Public Perception of Plastic and Packaging

- Push to eliminate plastic and plastic packaging continues, with a new emphasis on toxics
  - Regardless of sustainability and lifecycle implications
  - Regardless of recyclability and compostability
  - Not just an ENGO issue anymore



# Brand's Packaging Circularity Goals



- Ellen MacArthur Foundation's (EMF) Global Commitment
- US Plastics PACT/Plastics Pollution Treaty (INC)
- U.S. SEC ESG/Proxy Votes
- State EPR Mandates
  - Recyclable as well as Recycled; PCR; Reduction; Toxics
  - Labeling
- Canadian Plastic Pollution Prevention Programs

## Corporate

- Investor Focus on ESG Criteria
- Brand Perception
- EPR
- EMF – New Plastics Economy
- Plastics Backlash
- E-commerce
- Package Design
- Refill/Return/Reuse Systems

# State Advocacy 2024



## • Packaging legislation in:

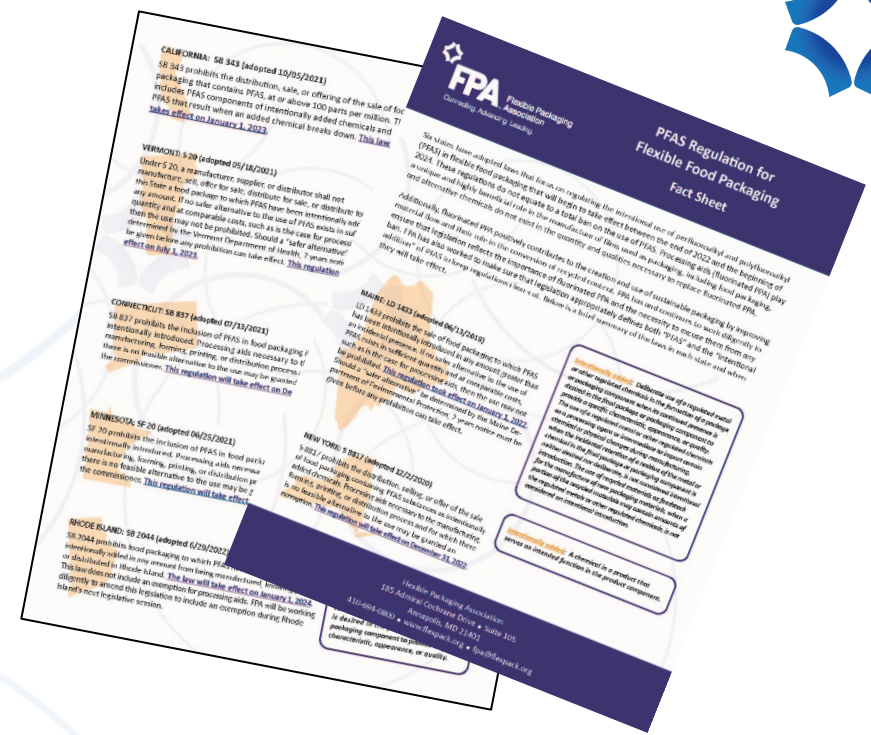
- Washington (EPR dead)
- Hawaii (Needs Assessment)
- New York (EPR)
- New Jersey (EPR)
- Minnesota (EPR)
- New Hampshire (EPR dead)
- Rhode Island (EPR, Toxics)
- Vermont (Labeling)
- Maine (Labeling, Toxics, Advanced Recycling)
- Tennessee (EPR)
- California (Bag Ban, Toxics)



# State Advocacy 2024



- Extended Producer Responsibility
  - California, Colorado, Oregon and Maine
    - Needs Assessment – Maryland, Illinois
    - New states? Minnesota!
- PFAS (processing aids)
  - And other “toxics” in packaging legislation
- Advanced Recycling
- PCR Content
- Labeling
  - Recyclability





# State Advocacy 2024 – EPR Regulations



- Circular Action Alliance chosen as PRO
  - Oregon, Colorado, California and Maryland
    - Maine and Illinois?
- OR: January 1, 2025 program must be implemented
  - Payment timeframe not dictated
- CO: January 1, 2025 producers pay, prior to program plan submission and approval
  - Implementation tied to scenario and program approval
  - Needs assessment open for public comment
- ME: 2026 producers pay
  - Tied to effective/approval date of PRO
- CA: January 1, 2024 PRO must be formed with participating producers (done)
  - July 1, 2027 Producers must participate?





# Federal Advocacy 2024

- Labeling for Recyclability
  - Federal Trade Commission Green Guides
  - National Legislation
- Administration's Strategy for Reducing Food Loss and Waste
- EPA's Strategy to Reduce Plastic Pollution
- Two Federal Bills
  - Recycling Infrastructure and Accessibility Act
  - Recycling and Composability Accountability Act
- Hearing on Federal EPR 3.6.24; 4.22.24
- 2024 Presidential Election Year
  - Lack of Federal Action Means More State Action
- Canadian Pollution Prevention Plans and Regulations

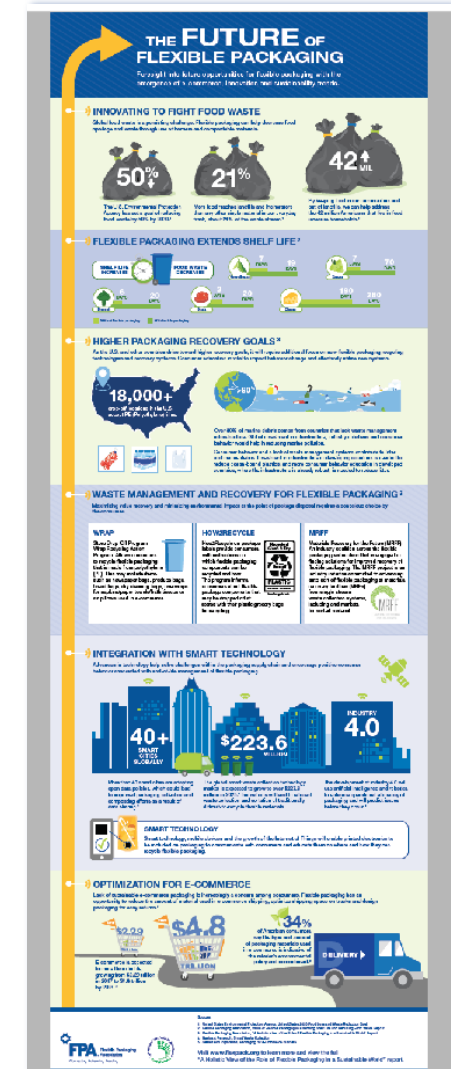




# Challenges

## Infrastructure for Collection, Sortation, and Reprocessing

- All 4 EPR laws treat film and flexibles differently
- General lack of access to curbside collection for flexibles regardless of the state
- Store drop-off program in jeopardy
- Preliminary regulations in California state film is not recyclable and can not be labeled as such
- Need prove of concept and scalable solutions for collection, sortation and reprocessing





# Solutions

Infrastructure  
for Collection,  
Sortation, and  
Reprocessing

- Coalitions and Partnerships to address film and flexibles circularity and leverage resources



CONSORTIUM  
FOR WASTE CIRCULARITY



- Renewed TRP Film and Flexible Coalition Membership
  - Pilot/Proof of concept for California EPR
- Engaged with the Recycled Material Standard
  - The RMS is the most comprehensive third party standard available for recycled materials.
    - Full Chain of Custody
    - Mass Balance
    - Includes Post-Consumer & Post-Industrial Materials
    - Multi-Site Certification and Group Certification
    - Consensus Body Development Process
    - Book and Claim System
    - Fuel Exclusion
  - Have been asked to join Advisory Committee

Initiatives of





- A collaboration open to all stakeholders ensuring the value & recovery of flexible films and store drop off labels.
  - Operate a **best-in-class plastic film recycling directory**
    - Establish a verification program to ensure data, validity, and robustness
    - Publicly report on program success through annual reports
  - Educate consumers and policymakers on the **benefits of flexible plastic film products**
  - Promote the **responsible use and recycling** of flexible plastic film products
    - Increase recycling opportunities
    - Develop end markets for recycled plastic film and flexibles
  - Educate consumers on **how to recycle** flexible plastic film products

# Sustainability Benefits of Flexibles



## BENEFICIAL ATTRIBUTES OF FLEXIBLE PACKAGING

Optimizes volume and weight of packaging necessary to protect products as they move through the supply chain



Resource efficient, thus reducing water, energy, and GHG emissions during production, distribution, and use



Protects products throughout e-commerce supply chain thus reducing damage and loss



Reduces volume and weight of packaging waste in need of end-of-life management

Improves transportation and storage efficiency



Extends shelf-life of food thus reducing food waste



# Sustainability Case Studies



## STREAMLINED LIFE CYCLE ASSESSMENT\* E-COMMERCE MAILER PACKAGING CASE STUDY

### MAILER PACKAGE COMPARISON

Mailers are becoming more than just a way to ship products. They are a number of other products that can be used for mailer boxes, the standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



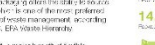
### FOSSIL FUEL CONSUMPTION

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### GREENHOUSE GAS EMISSIONS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



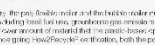
### WATER CONSUMPTION

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### RECOVERY BENEFITS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### IMPLICATIONS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.

FORMAT	FOSSIL FUEL CONSUMPTION (GJ/KG)	GHG EMISSIONS (KG CO2E/KG)	WATER USE (L/KG)	RECYCLED FIBER (PERCENTAGE)	POST-CONSUMER WASTE (PERCENTAGE)
DOUBLE MAILER	1.49	13.87	2179	6.4	88.3%
SINGLE MAILER	2.60	23.15	13415	2.6	19.7%
WATER-GUARD MAILER	2.25	18.95	10169	2.6	43.3%
PA SHIPMENT	3.14	26.81	16181	2.7	11.8%

\* This study is based on a streamlined LCA methodology. For more information, please visit [www.flexiblepackaging.com](https://www.flexiblepackaging.com).

## LIFE CYCLE ASSESSMENT MOTOR OIL PACKAGING CASE STUDY

### MOTOR OIL PACKAGE COMPARISON

Motor oil has traditionally been packaged in rigid HDPE bottles, but recently there have been examples of motor oil being packaged in flexible stand-up pouches called "flexible". For this Life Cycle Assessment study, flexible stand-up pouches called "flexible" and rigid HDPE bottles were evaluated for their environmental impacts across the product lifecycle.



### WATER CONSUMPTION

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### GREENHOUSE GAS EMISSIONS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### FOSSIL FUEL CONSUMPTION

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### END OF USE SUMMARY

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### RECOVERY BENEFITS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### IMPLICATIONS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.

FORMAT	FOSSIL FUEL CONSUMPTION (GJ/KG)	GHG EMISSIONS (KG CO2E/KG)	WATER USE (L/KG)	RECYCLED FIBER (PERCENTAGE)	POST-CONSUMER WASTE (PERCENTAGE)
STANDARD RIGID HDPE BOTTLE	2.60	23.15	13415	2.6	19.7%
STAND-UP FLEXIBLE POUCH	1.49	13.87	2179	6.4	88.3%

FORMAT	FOSSIL FUEL CONSUMPTION (GJ/KG)	GHG EMISSIONS (KG CO2E/KG)	WATER USE (L/KG)	RECYCLED FIBER (PERCENTAGE)	POST-CONSUMER WASTE (PERCENTAGE)
STANDARD RIGID HDPE BOTTLE	2.60	23.15	13415	2.6	19.7%
STAND-UP FLEXIBLE POUCH	1.49	13.87	2179	6.4	88.3%

\* This study is based on a streamlined LCA methodology. For more information, please visit [www.flexiblepackaging.com](https://www.flexiblepackaging.com).

## LIFE CYCLE ASSESSMENT COFFEE PACKAGING CASE STUDY

### COFFEE PACKAGE COMPARISON

Coffee is one of the most popular beverages and is packaged in a variety of package formats. For this Life Cycle Assessment (LCA) study, the standard flexible pouch, stand-up and glass canister package formats were evaluated for their environmental impacts across the product lifecycle.



### WATER CONSUMPTION

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### GREENHOUSE GAS EMISSIONS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### FOSSIL FUEL CONSUMPTION

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### END OF USE SUMMARY

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### RECOVERY BENEFITS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.



### IMPLICATIONS

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.

The standard double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials. But the standard, double-flap, no glue, double-flap, as well as hybrid options made from a variety of materials.

FORMAT	FOSSIL FUEL CONSUMPTION (GJ/KG)	GHG EMISSIONS (KG CO2E/KG)	WATER USE (L/KG)	RECYCLED FIBER (PERCENTAGE)	POST-CONSUMER WASTE (PERCENTAGE)
STANDARD FLEXIBLE POUCH	1.49	13.87	2179	6.4	88.3%
GLASS CANISTER	2.60	23.15	13415	2.6	19.7%
PLASTIC JAR	3.14	26.81	16181	2.7	11.8%

\* This study is based on a streamlined LCA methodology. For more information, please visit [www.flexiblepackaging.com](https://www.flexiblepackaging.com).

## E-Commerce

## Product

## Food



# Promotion

## FlexPack VOICE®

### Perfect Packaging

### SPMC

### Social Media



theperfectpackaging · Follow

theperfectpackaging 3w  
No bulky boxes here! Flexible packaging helps bring precious space back to your freezer.

Posted @withregram ·  
@deebesorganics Heading to Hawaii? We have exciting news! Our Costco-sized 35 packs are available at all @Costco stores in Hawaii year-round. We've got your family vacation treats covered 🍌🍌🍌

📍: @HawaiiCostcoFinds #CostcoFinds #HawaiiCostco #HawaiiCostcoFinds #DeeBeesOrganics

tiffanie.anne 2w  
Love this! 🍌🍌  
1 like Reply

50 likes  
December 20, 2023



Perfect Packaging Sponsored

Follow to learn more about the perks of this perfect packaging.

### BENEFITS OF FLEXIBLE PACKAGING

- Easy to store
- Easy to take on the go
- Keeps food fresh longer
- Resealable to extend shelf life
- Uses less materials, energy and water
- Less emissions generated
- Lightweight and Less Space = lower shipping costs
- Recycling potential

PERFECT PACKAGING

# Join the Conversations

## • Join us on Social Media

- FPA
- Perfect Packaging
- ELC
- SPMC



EMERGING  
LEADERSHIP  
COUNCIL



Flexible Packaging Association  
23,767 followers  
3mo · 🌐

Did you know? Good EPR legislation involves harmonizing state-by-state legislation and programs across the country?

Did you know? Well-crafted EPR Legislation · 7 pages

Did You Know FLEXIBLES?

**EPR**  
What Does Good  
**EXTENDED PRODUCER**

theperfectpackaging · Follow

theperfectpackaging · 11w  
It's fall baking time! Make it sustainable with ingredients in flexible packaging!

Posted @withregram · @traderjoes  
"Maple Marshmallow Popcorn Bars," feat. #TraderJoes Mini Maple Flavored Marshmallows - Tap the link in our bio to get this easy #TJsRecipe!

True to their moniker, these 'mallows are both maple-flavored (courtesy of maple syrup & natural flavors) and miniature in size. And like the other magnificent #marshmallows we offer throughout the year, they're vegan, gluten free, and kosher.

Use them in a batch of crisp rice treats or popcorn bars (pictured), float them...

27 likes  
October 25, 2023



FPA  
@FlexPackOrg

Promote

These manufacturers are stopping consumers in their tracks with powerful designs. [flexpackvoice.com/galleries/?gid...](https://flexpackvoice.com/galleries/?gid...)

9:00 AM · Oct 3, 2023 · 66 Views

View post engagements

Perfect Packaging  
October 18, 2023 · 🌐

Want to dive deeper into the benefits of flexible packaging? Check out our resources.

PERFECTPACKAGING.ORG  
**Resources - Perfect Packaging - Flexible Packaging**  
Resources GENERAL <https://youtu.be/Cm9hgRWolec?si=5XyCKym7PWmQR1ONFPA> 2023 Flexible Packaging Achievement Awards Competition





# The Future is Flexible!

- Industry continues to grow despite packaging and plastic backlash
- FPA assists with information, protection, connection, and promotion
- Labor, supply chain, and sustainability remain the top issues
- Need to continue to work on closing the circularity loop while protecting our products by emphasizing their benefits
- Supply chain collaboration is key



**Packaging Second only to Nature's Original**