

E-commerce Packaging: Planning for Policy Shifts



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Ecommerce = New Distribution Paradigm

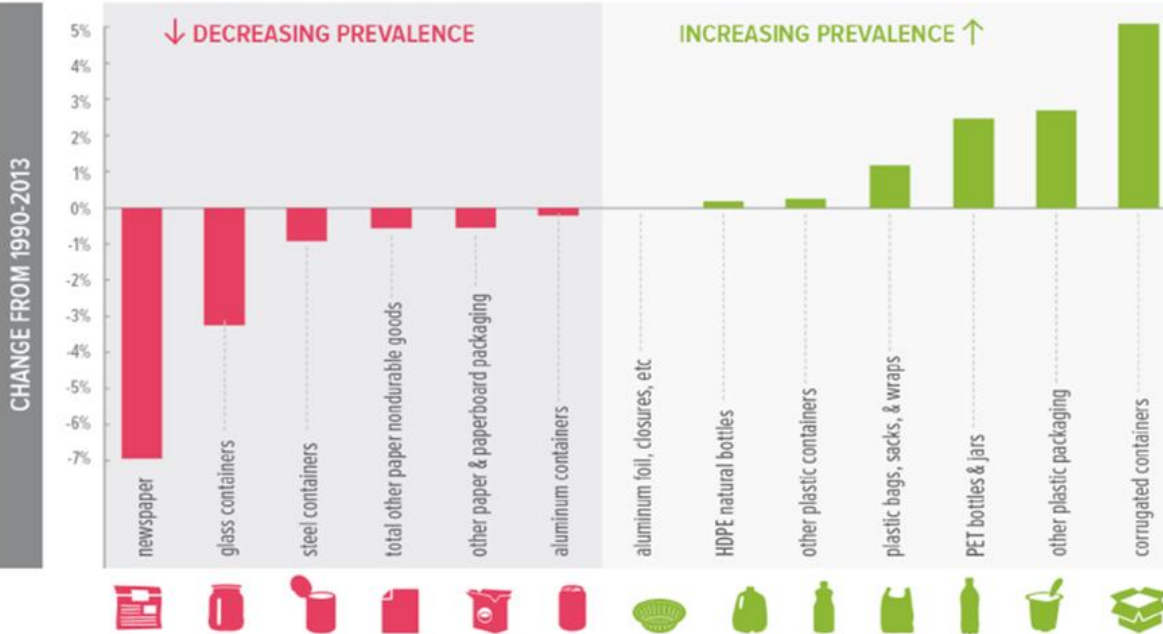


RETAIL



E-COMMERCE

Packaging and the Waste Stream is Evolving



**HOW
PACKAGING
IS
EVOLVING:
2013 to
1990
Baseline**

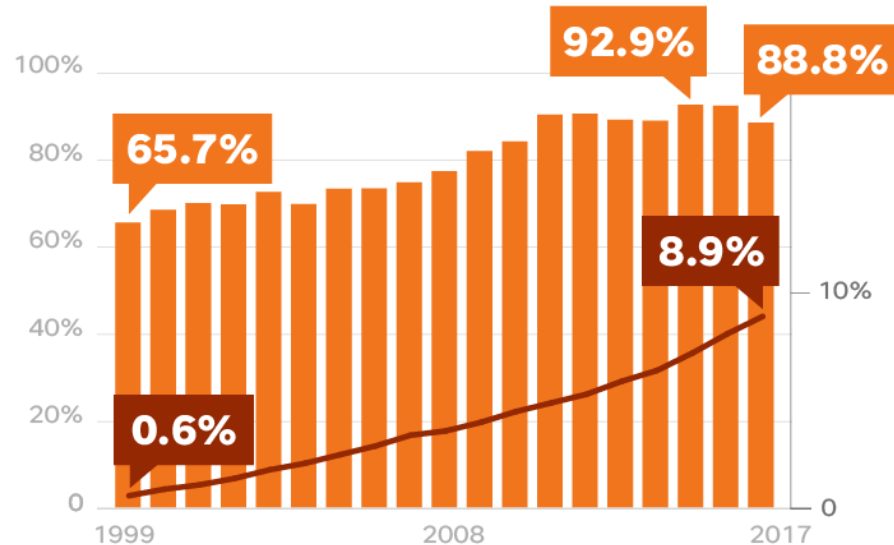
Source: USEPA

Image Courtesy RRS, 2018

Corrugate Data Trends

Cardboard recycling down as online sales rise

● Cardboard recovery rate ● E-commerce rate¹



¹ – as a percentage of total U.S. retail sales
SOURCE U.S. Census, American Forest & Paper Association)
Karl Gelles/USA TODAY

Protective Cushioning Data

Includes air pillows, paper fill, foams, labels. Our definition excludes corrugate.

- Anticipate ~ 4-9% growth/year until 2025
- Retailers noting a 30-50% increase in past five years but anticipate that should drop as new technology to help right-size transit packaging reduces needs
- Desire to shift from foams but widely recognized as most effective material for heavy use items.



Mailer Bags/Envelopes

- Anticipated to be one of the fastest growing packaging materials due to dim weight. Some shifting from corrugate to mailers.
- Predominately used with fashion (largest sales category) or light weight items.
- Can be single PE materials or multi-material. PE mailers can be recycled via store drop off. Multi-material are not recoverable.



PolyBags

- Required for liquids and rigid protection.
- Used with clothing.
- Helps with bar code identification
- Retailers reporting a shortage—sometimes needing to substitute PE bags with multi-material alternatives.

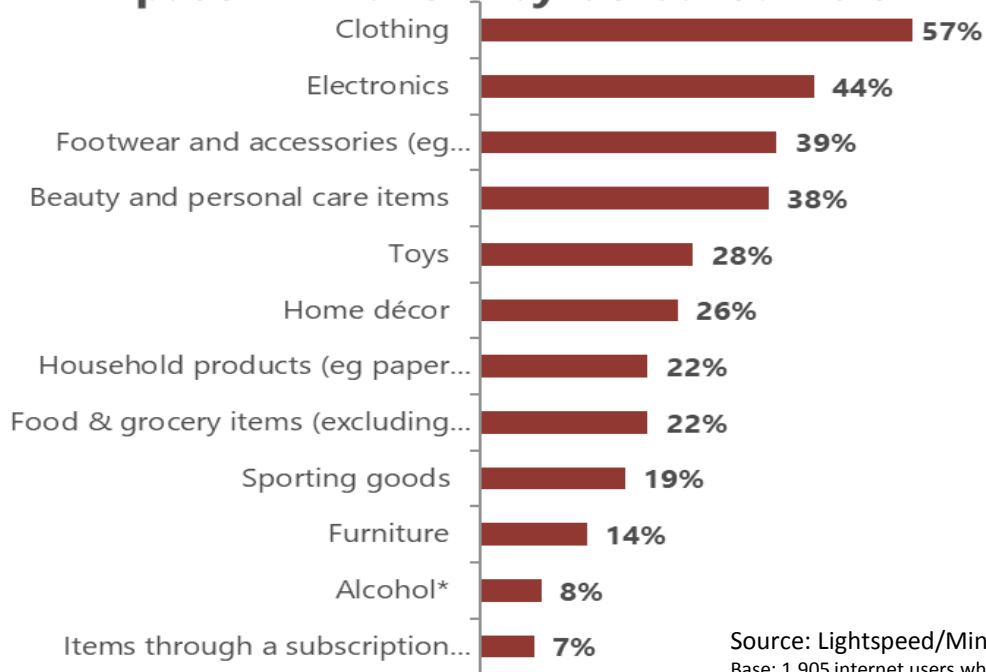


Increased Flexible and Multi-Material Formats: Primary Packaging



Leading Product Sales in US (2017)

Products purchased online in the past 12 months by US consumers



Source: Lightspeed/Mintel

Base: 1,905 internet users who have shopped online in the last 12 months



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Rise of Grocery



Convenience is King



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Logistics Cost Key to Ecommerce Success



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Unboxing Experience



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In Summary



E-Commerce Policy Options

Ecommerce Trend	Impact	Potential Policy/Program Area
Increased corrugate in curbside	Ease of recovery	Increased need for carts
Increased Flexible Films (poly bags, mailers etc.)	Access to recycling	Mono materials accepted at store drop off but usage is low ~4% Do we need to explore chemical recycling or other options?
	Research & Development	Investment needed to help create end markets and reprocessing technologies.
	Bans	If bag ban extend to other loose films, what is the impact for protection?
	Supply Challenges	Retailers noting restricted supply. Can recycled credit help? Need innovation but also need quality

E-Commerce Policy Options

Ecommerce Trend	Impact	Potential Policy/Program Area
Reuse	Goal Setting	Do we need to find better ways to recognize source reduction in state recovery goals?
	Design	How could system be designed for reusable totes or other formats? How does this work for multiple/cart products?
Increased use of RFID and QR codes	Contamination	Impact of embedded small electronics on material stream?
Sachets or sampling pouches	Small sized formats. Multi-materials	End Market R&D sortation investment or need to explore alternative collection and recovery formats?
Grab & Go stores or restaurants	Increased on the go packaging and food service packaging in curbside	Role for composting? Consumer education to reduce contamination.

Questions?

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