

E-commerce Packaging: Planning for Policy Shifts



AMERIPEN®

Informed Packaging Decisions Start Here™

Figure 1: E-Commerce Retail Share and Total Sales



Source: U.S. Census Bureau, emarketer.com



Informed Packaging Decisions Start Here™

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

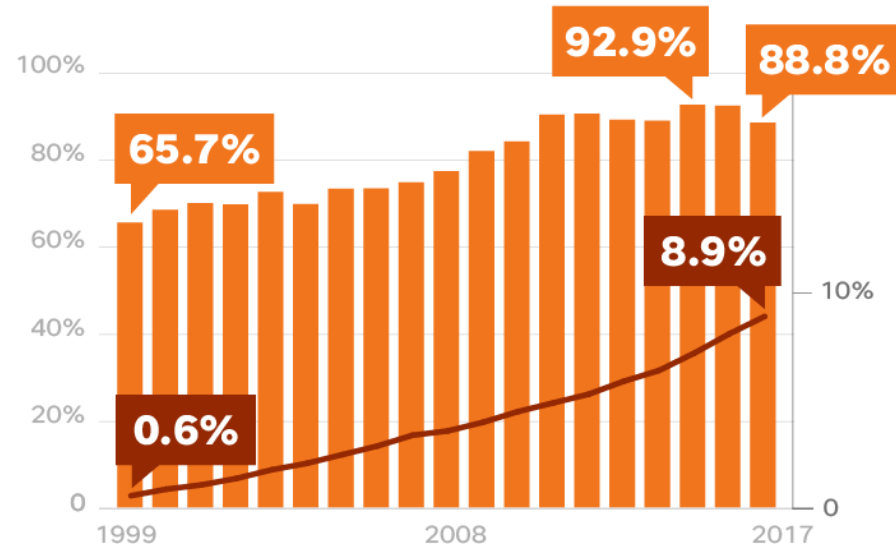
 **AMERIPEN®**

Informed Packaging Decisions Start Here™

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



 AMERIPEN®

Informed Packaging Decisions Start Here™

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.

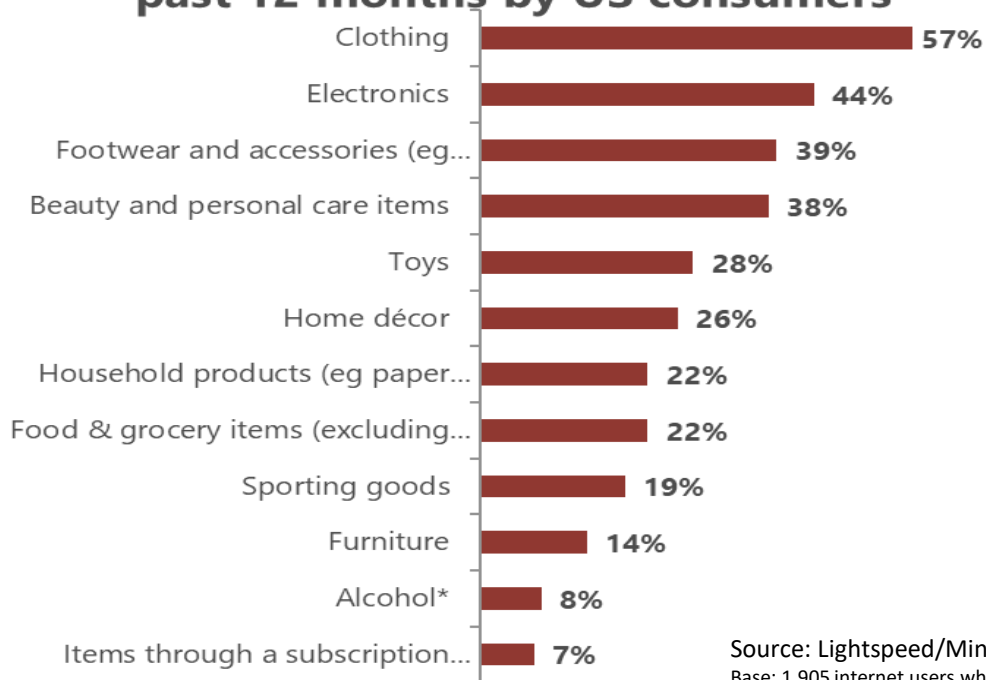


Increased Flexible and Multi-Material Formats: Primary Packaging



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



Informed Packaging Decisions Start Here™

Rise of Grocery



Convenience is King



 AMERIPEN®

Informed Packaging Decisions Start Here™

Logistics Cost Key to Ecommerce Success



Unboxing Experience



 AMERIPEN®

Informed Packaging Decisions Start Here™

In Summary



Ecommerce Shipping Guidelines

- Frustration Free – make it easy to open and recycle
- Ships in Own Container (SIOC). No need for fulfillment to have to package

This is a highly competitive space

Innovations Happening



Rigid Container sold in stores. For e-commerce would require taped lid, insertion into poly bag, protective packaging within corrugate container



Flexible pouch. Reduce need to tape lid and use poly bag. Can ship in corrugate or mailer. 50% less plastic overall.

Innovation is Happening Cont'd



Rigid Container. Lid need
taping and wrapped in poly
bag. Protective Packaging and
corrugate



Multi-layer film pouch inside
corrugate. Considered “SIOC”
thus no extra corrugate. No
need for poly bag.

Innovation is Happening Cont'd



Shift from glass or rigid plastic to Carton. No need for protective poly bag. Likely to still ship in corrugate with some protective cushioning but a lot less required with carton format.

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?

Kyla Fisher

Program Manager—AMERIPEN

kylaf@ameripen.org



Informed Packaging Decisions Start Here™