Sustainable e-Commerce Shipping

Landscape Study
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Agenda

- Introduction
- E-commerce Sustainable Shipping Ecosystem
  - Recycling Process
  - Reusable Packaging
  - AI driven package consolidation
- Recommendations
Packages received on a single day

All came at different times

Happens multiple times a week
Introduction

According to UN trade and development experts UNCTAD, the e-commerce sector saw a “dramatic” rise in its share of all retail sales

From **16% to 19%** in 2020
Introduction

Sustainability-marketed products grew **7.1 times faster** than products not marketed as sustainable.

A P&G study found that **54%** of the over 5000+ men surveyed across 11 countries cared about sustainability now more than ever.

Research found that consumers are even willing to **pay over 10% more** for sustainable packaging.
We need a **sustainable shipping ecosystem** to address the high shipping demand and preserve the planet for the next generations.
Sustainable e-Commerce Shipping Ecosystem

Each branch plays a crucial role in providing long term sustainability.
Recycling Process

HOW RECYCLING WORKS

1. HOUSEHOLDS
Consumers separate their recyclables and trash and put out for collection.

2. HAULERS
Haulers collect and transport recycling to a materials recovery facility (MRF).

3. PROCESSORS
Recyclables are processed at a materials recovery facility (MRF) and sold to manufacturers.

4. MANUFACTURERS
Buyers turn recycled commodities into new products.
74% of recyclables end up in landfills (30,000 tons)

Problems
- Today’s recycling processes don’t run exactly as smoothly as they should
- Percentage of recycling that actually gets recycled is very less
- Complex rules and poor compliance makes recycling ineffective

Recycling Process

![Image of recycling process and rules]

- Keep these items out of your recycling cart:
  - NO Food, Food-soiled Paper, Waxed Cardboard
  - NO Plastic Bags & Film
  - NO Cords/Wires & Hoses
  - NO Food Wrappers
  - NO Yard Waste & Grass Clippings
  - NO Foam Cups & Containers
  - NO Diapers & Pet Waste
  - NO Clothing & Shoes
  - NO Hazardous or Medical Waste

- Recycling rules:
  1. Recycle all bottles, cans, and paper
  2. Keep items clean and dry
  3. No plastic bags
Recycling Process

● Fixing the Problem
  ○ Improve technology for sorting and recovering materials
  ○ Need more recycled Product materials
  ○ Enforce Best Practices and awareness
Larger Contributors to Sustainable Shipping

Reusable Packaging
- Good Club
- The Better Packaging Co
- Intelsius

AI Driven Package Consolidation
- DHL
- Opas
- Walmart
- Amazon
- Target
- Ship7
Recyclable & Reusable Packages – Boox

Selected as one of Time’s Best Inventions 2021

Constructed from polypropylene

Costs $1–$2.50 per shipment

Can make more than 20 journeys before being recycled
Recyclable & Reusable Packages – Boox

After unpacking their items,
1. customers fold the Boox flat,
2. scan a QR code and
3. send it back to Boox with the included return label

No other box or envelope required
Recyclable & Reusable Packages – Boox

44% lighter than a comparable cardboard box

The manufacturing footprint of a brand new, reusable Boox is less than two single-use cardboard boxes
Recyclable & Reusable Packages – The Better Packaging

Develops sustainable packaging solutions that consider the complete lifecycle impact of a product from raw material sourcing, right through to end-of-life disposal.

Customer list already include Rip Curl, L’Oreal, Karen Walker, and AllBirds, to name a few.

With month-on-month growth of 15% and an expanding catalogue of sustainable packaging options.
Recyclable & Reusable Packages – The Better Packaging
Package Consolidation & Delivery

E-Commerce Fulfillment Market

$77.57 B in 2020
$168.72 B by 2028
# Package Consolidation & Delivery

## E-Commerce Retailer Domestic Market

<table>
<thead>
<tr>
<th>Company</th>
<th>Common Service</th>
<th>Differentiators</th>
<th>Constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon</td>
<td>Order consolidation with $1 incentive</td>
<td>Automated process</td>
<td>Items from same fulfillment center</td>
</tr>
<tr>
<td>Target</td>
<td>Multiple packages from different stores</td>
<td></td>
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</tbody>
</table>
### Package Consolidation & Delivery

#### E-Commerce International Shipping

<table>
<thead>
<tr>
<th>Company</th>
<th>Common Service</th>
<th>Supported Countries</th>
</tr>
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</table>
| [Ship7](#) | **How does it work:**  
1. Multiple online orders in Country A  
2. Ship multiple packages to a centralized address (Country A)  
3. Package consolidation  
4. Ship one package to shoppers in Country B | USA  
UK |
| [Buyee](#) | **Benefits:**  
1. Cost efficient 80% cost saving  
2. Reduced damage risk  
3. Lower fuel emission and expenditure  
4. Improved quality control | USA  
Japan  
UK |
| [MyUS.com](#) | | USA  
UK |
| [Easy Shop](#) | | USA  
UK |
| [OPAS](#) | | USA  
UK |
Package Consolidation & Delivery

Walmart built an AI driven supply chain consolidation centers to lower fuel emission and expenditure.
Each branch plays a crucial role in providing long term sustainability.
Challenges

Governments are reluctant to add more regulations regarding recycling

Exceptions: Japan

Requires residents to wash items, remove labels, and fold cartons, and waste must be labeled so that individuals are held accountable.

Exceptions: San Francisco

Zero waste goal, 80% of its waste out of landfills

City requires residents and companies to separate the waste

Food vendors have to use compostable / recyclable containers

25 cents for checkout bags
**Recommendations**

Government and non-profit organizations to help raise public awareness through campaigns and mandates

The profit margin is low. Need more government subsidies for infrastructure improvements

Need major e-commerce players and shipping companies to collaborate
Recommendations

Challenge everyone to think of creative solutions for packaging
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