

International E-commerce and the Impact on Shipping and Packaging: Something New or Business as Usual?

Pacific Millennium Packaging

Providing Reliable and Efficient Solutions
for Your Packaging Needs

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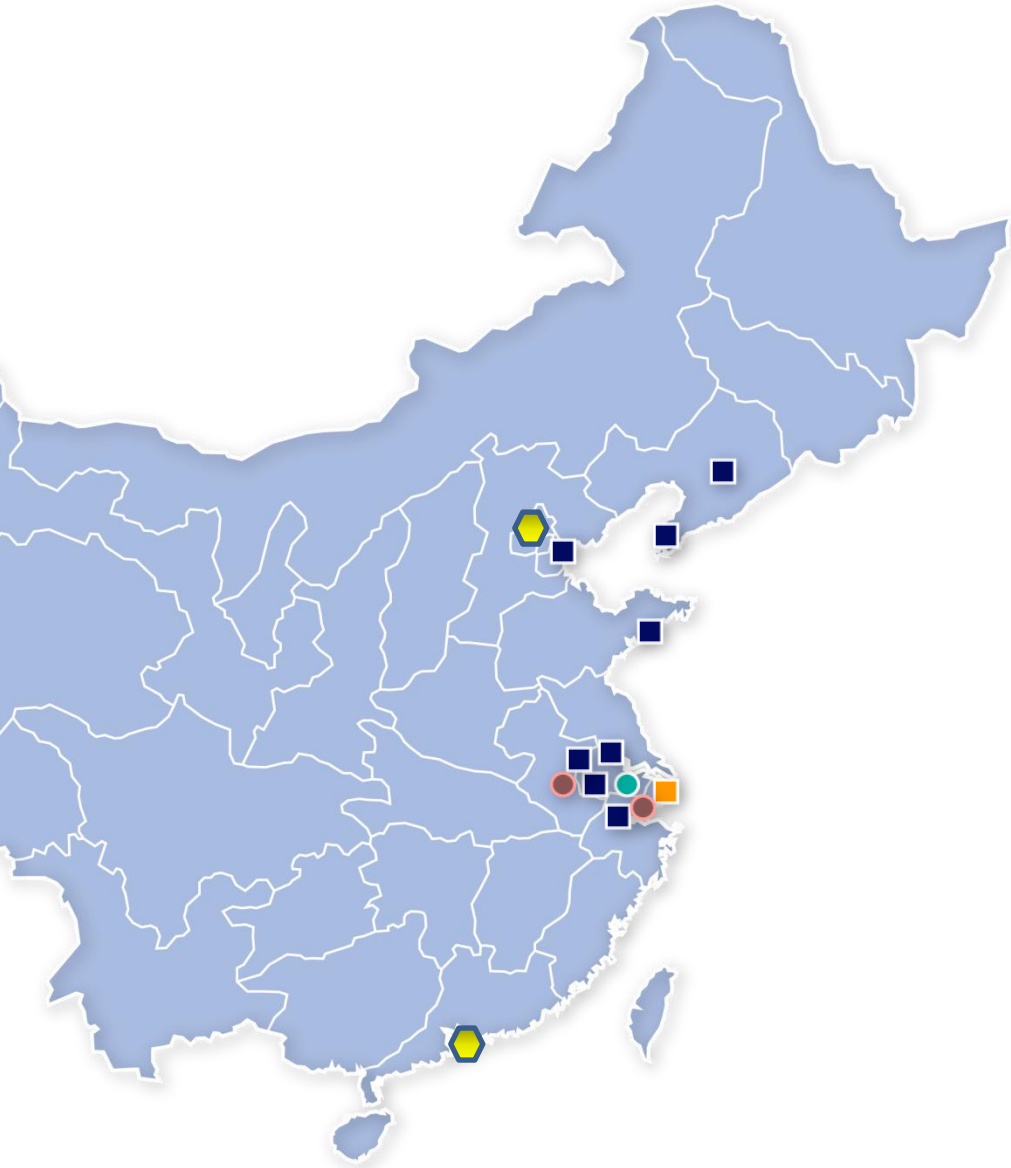
Pacific Millennium Packaging:

Introduction

- Pacific Millennium was established in San Diego, California, USA, in 1977, starting in the paper trade business between USA and Asia.
- In 1987, the company expanded into manufacturing by setting up a 100% recycled paper mill in Hong Kong.
- In 1990, Pacific Millennium entered into joint venture arrangements in China with Smurfit Stone, International Paper and Carter Holt Harvey.
- 2010 marked the entry into testing and design for the packaging group by setting up an R&D center.
- Today, Pacific Millennium is committed to being the best paper packaging company in China.



Geographic Presence of Packaging Operations



- **Headquarters:** Shanghai
- **ISTA Lab:** Kunshan
- **Corrugated Plants (8):**
Suzhou, Zhejiang (Tongxiang), Nanjing, Qingdao, Tianjin, Dalian, Taicang (planned), Shenyang (planned)
- **Sheet Plants (2):** Kunshan and Wuhu
- ⬡ **Service Hubs (Warehouses) (2):**
Shenzhen and Beijing

Pallet/Packaging Testing Service

Testing Center Key Facts:

- Location: Kunshan, Jiangsu (40 minutes from Hongqiao Airport in Shanghai)
 - ISTA Certified (can perform independent quality testing)
 - Advanced testing equipment
 - Strong Team of Qualified Engineers with advanced degrees and extensive packaging experience (50% have more than 5 years experience)
- Specific Pallet Test:
 - Performance Testing for all material types of pallets.
 - Familiar with international standards for Wood and Plywood Pallets



Compression Test

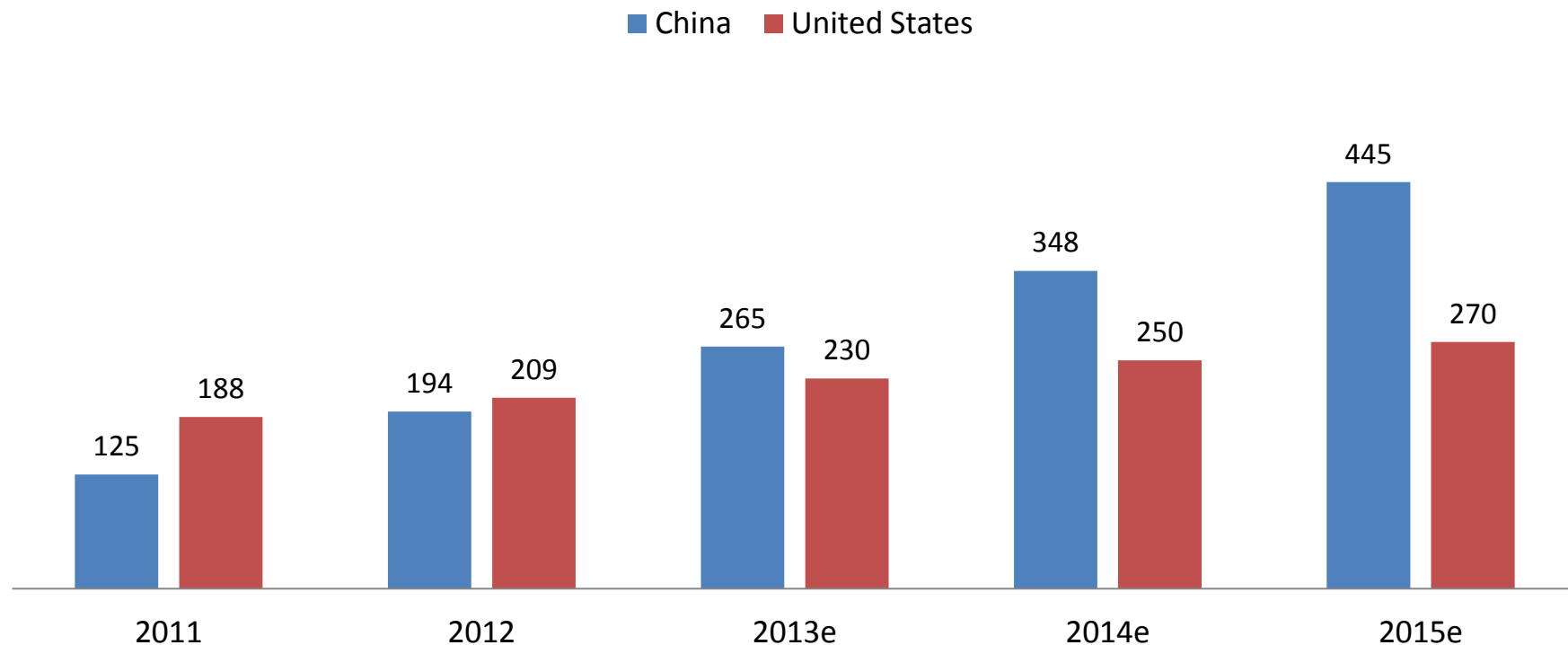


Drop Test



New Trends in Global Supply Chain

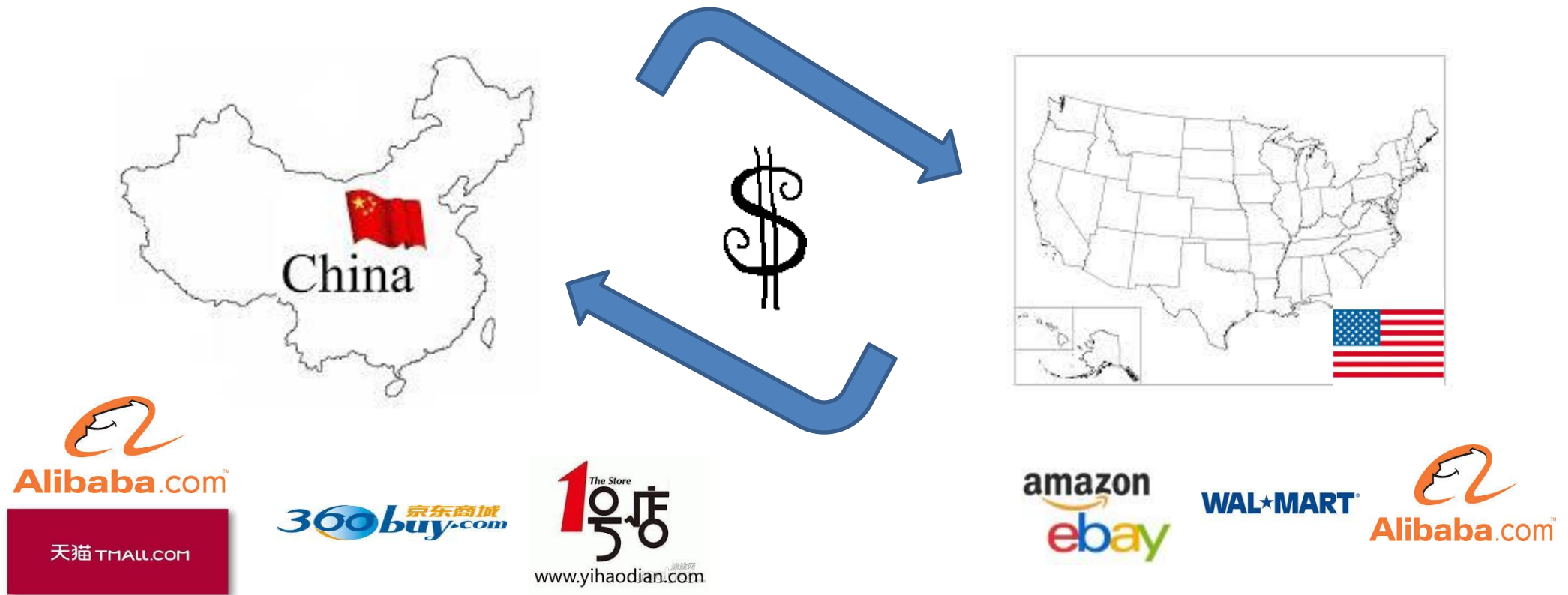
China versus United States in E-Commerce Sales (USD\$ Billions)



Source: Alibaba 2013

KEY TRENDS: CHINA IS SET TO SURPASS UNITED STATES IN 2013 AS LARGEST E-COMMERCE MARKET (\$265 BILLION USD VERSUS \$230 BILLION)

International E-Commerce



ALTHOUGH LARGE E-COMMERCE PLAYERS DETERMINE THEIR OWN LOGISTICS AND SHIPPING, SOME COMPANIES (INCLUDING Tmall ACCOUNTS AND NICHE PLAYERS) MUST STILL MAKE THEIR OWN DECISIONS

Key International E-commerce Case Studies



- **January 2013:** Began selling milk made by ASDA, a UK supermarket chain.
- Became the only online retailer in China authorized to directly purchase commodities from foreign suppliers.
- With the import authorization, Yihaodian is able to offer some foreign products at prices that are one third below that of competitors.

Simply Bridal



- Wedding dresses and bridesmaid dresses made in China
- Shipped to United States
- Marketing, Sales, and Customer Service are done in United States

Key Issues for E-commerce Companies

- E-commerce companies are struggling to reduce costs throughout their supply chain, including cost of goods, warehousing (pick & pack), last mile, and returns (damaged/unwanted).
- Although packaging must be strong and reliable, procurement managers are asking for “creative” solutions to cut cost.
- Social Responsible or Green Initiatives that save money and can generate press are strongly welcomed

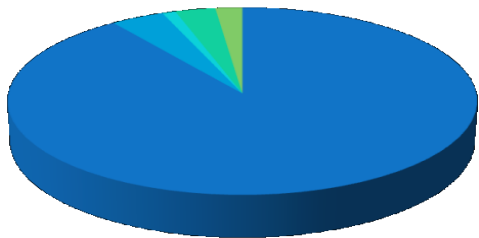
Global Pallet Market Overview

- Wood - 90%
- Recycle wood - 4%
- Steel - 1%
- Plastic - 3%
- Corrugated - 2%

7 billion Pallets Globally

90%+ wood based

Annual production of new pallets is estimated at 850 million.








Result is large amounts of wood waste

ISPM 15: Application to Wood Pallets

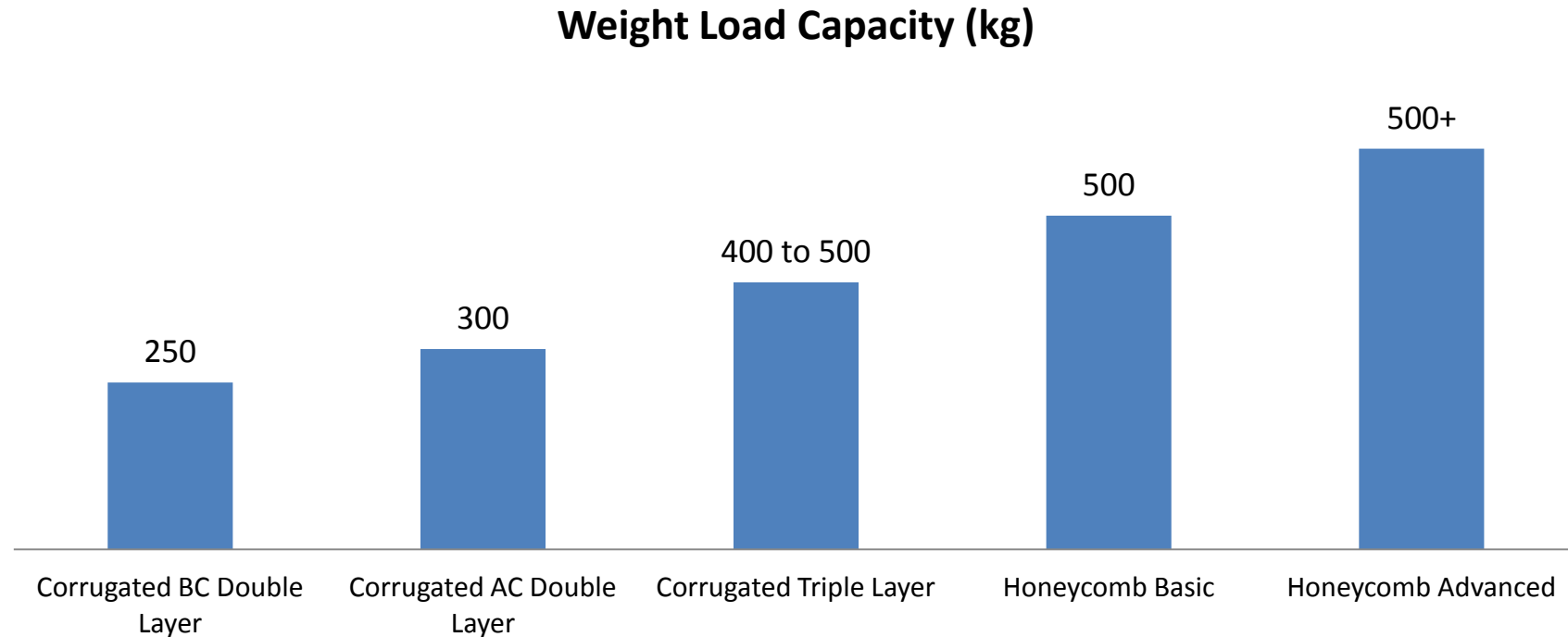
- **International Standards For Phytosanitary Measures No. 15 (ISPM 15):**
 - Aims to prevent the international transport and spread of disease and insects that could negatively affect plants or ecosystems
- **Materials Affected:**
 - **Requires Treatment:** wooden pallets, wooden crates, wooden drums, wood cases
 - **Exempt:** Paper, plastic or wood panel pallets (i.e. OSB, hardboard, and plywood).
- **Key Treatment Certifications:**
 - Heat Treatment (IPPC HT stamp)
 - Fumigation using Methanol Bromide (MB stamp)
- **Costs of Treatment:** labor (stacking, loading, and stamping) and the cost to heat/fumigate pallets (usually per lump sum of pallets)



Comparison for 48x40 Pallets: Material

Material	Advantages	Disadvantages	Pallet Weight	Target User	Load Capacity (Dynamic)
Steel Pallet 	Sturdy, long life, sanitary, rackable	Heavy and expensive	30 - 220 kg	Heavyweight products	1300 kg +
Plastic Pallet 	Sanitary, RFID, water proof, repetitive use	Low strength, expensive, susceptible to temperature	9 - 30 kg	Captive pallet program (food, distribution)	Variable: 1300 kg (heavy plastics)
Wood Pallet 	Reusable, sturdy, rackable	Heavy, not sanitary, prone to insects	18 - 30 kg	OEM's, Re-handlers	1000 kg
Honeycomb Pallet 	Higher load capacity than corrugated	More expensive than corrugated pallets	4.5 - 9 kg	One-way, light weight, retail	500 kg+
Corrugated Pallet 	Light weight, no fumigation, easy to recycle	Light weight, no fumigation, easy to recycle	4.5 - 9 kg	One-way, light weight, retail	300 to 400 kg

Load Capacity for Paper Pallets



Paper Pallets are ideal for one-way shipping due to cost, customization, and ability to meet international safety standards

Pallet Design Services

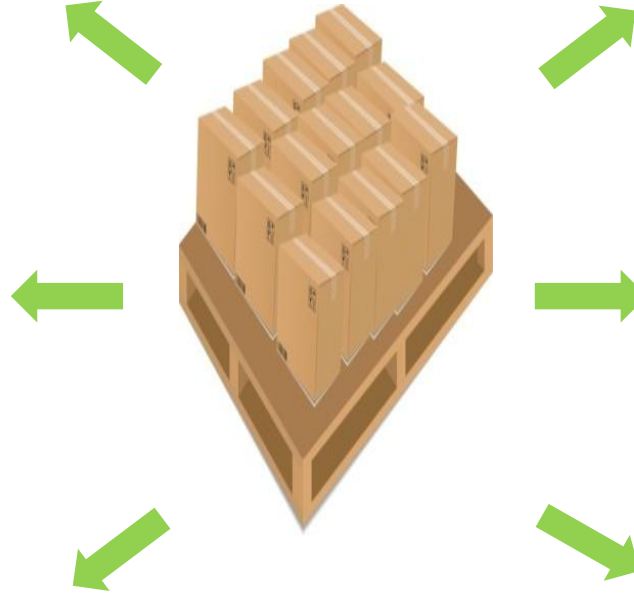
The importance of design when selecting your pallets

Racking Systems for Warehouses:

Determine the best type of pallets your rack system can use (steel, aluminum, plastic) through design and testing.

Size Analysis: Help find packaging efficiencies and ensure product safety for full, half, and quarter pallet sizes.

Material Improvement: Determine which type of material can handle load capacity and stiffness requirements (while keeping total cost in mind).



Pallet Design: Euro Pallets, Asian/China standards. Block and Stringer.

Optimizing Packaging for Pallets: Modifications to packaging can make pallet loads more efficient.

Storage and Handling Design Solutions: Analysis on space needed to store pallets and cost needed to dispose of pallets.

Case Study: Ikea

New Paper Pallet Design: In 2011, Ikea decided to switch from wood pallets to paper pallets for one way shipping.

- Can support a load of 1,650 pounds
- 90% lighter than wood pallets
- Optimized to fit trucks and Ikea Products.

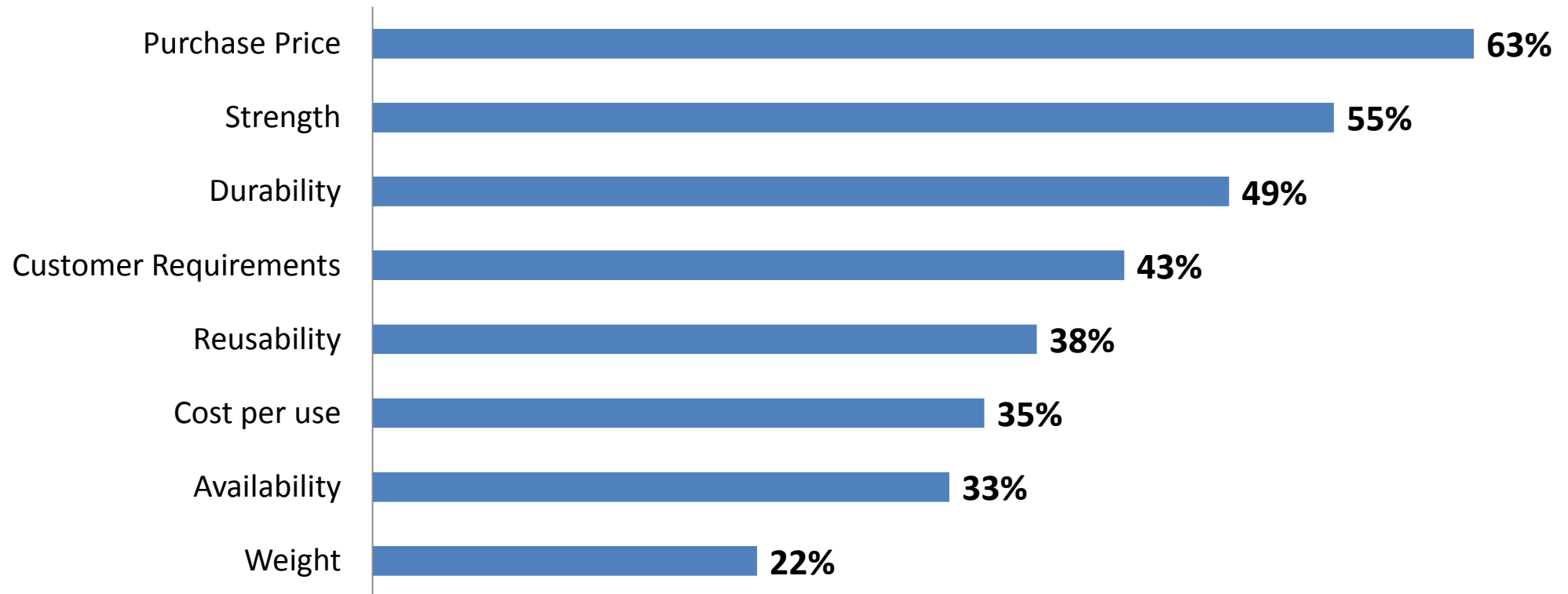
Advantages:

- Environmental benefits fit with Ikea's social platform: Ikea can recycle paper pallets
- Savings: Will cut transportation bills by \$193 million/year due to Reduced weight and less truck shipments (carrying back wooden pallets)



Pallet Decisions

Key Factors for Customers when Purchasing Pallets (Survey 2012)



Peerless Research Group 2012

Implications for Shippers

- **New Opportunities:** Due to demand for new and various types of products, new opportunities will exist for seafreight, especially in the LCL category (lower volumes in beginning).
- Packaging requirements will exceed even those of LTL, because the cargo will not only be packed with other shippers' goods, but will be subject to the rigors of sea transport.
- E-commerce companies may be willing to look more closely at new alternatives such as paper pallets. This will require testing to ensure full protection.

Thank You

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