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Reuse Is Today’s Way for Transport Packaging

Presented by:
Reusable Packaging Association
Presenter

Tim Debus
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Reusable Packaging Association
Objectives

- Explain why a reusable packaging system is “today’s way” to transport goods
  1. Macro forces and global trends
  2. Achievable business values

- Discuss steps to get started with reuse
“Plastics aren’t inherently bad. It’s what we do, or don’t do, with them that counts.”
Transforming Materials Management

Linear Model
Single Use Disposable
Waste Creation
Recycling
Landfill, Pollution
Circular Model
Value Extension
Maximum Reuse
Recycling
Transforming Materials Management
“For a sustainable world, the transition from a linear to a circular economy is essential.”

- Frans van Houten, CEO and Chairman, Philips

Adapted from Ellen MacArthur Foundation; Philips
What in the World?

Climate Change
Trash
Pollution
Recycling
Population
Natural Resources
Politics
“Limiting global warming to 1.5°C above pre-industrial levels would require major reductions in greenhouse gas emissions in all sectors.”
42 percent of U.S. GHG emissions are associated with the manufacturing, use and disposal of materials and products.

“As a result, changing materials management patterns is an important strategy to help reduce or avoid GHG emissions (EPA, 2009b).”
Climate Change

Summary Life Cycle Assessment results:
RPCs vs. corrugate boxes

- 64% lower Energy Demand
- 66% lower Acidification
- 31% lower Global Warming
- 86% lower Eutrophication
- 78% lower Ozone Depletion
- 42% lower Photochemical Smog
- 80% lower Water Consumption
- 86% lower Solid Waste

COMPARATIVE LIFE CYCLE ASSESSMENT OF REUSABLE PLASTIC CONTAINERS AND DISPLAY-AND NON-DISPLAY-READY CORRUGATED CONTAINERS USED FOR FRESH PRODUCE APPLICATIONS, published in February 2017 by Franklin Associates, A Division of Eastern Research Group (ERG).
“Recycling is paramount to reducing GHG emissions, but is not sufficient to reach the full potential of circular economy. **Reuse and lifetime extension are key strategies towards a less energy and GHG intensive consumption.**”

“Results prove beyond reasonable doubt that, even in the case of durable packaging containers requiring the use of comparatively energy-intensive materials for their production, the **reuse scenario is characterized by lower environmental impact indicators** across the board, and as such is the most advisable and environmentally sound option.”
Trash

The world's trash crisis, and why many Americans are oblivious

The world produces more than 3.5 million tons of garbage a day — and that figure is growing.

America is a wasteland: The U.S. produces a shocking amount of garbage

The average American produces more than four pounds of trash every day.

America Is Throwing Out Way More Garbage Than We Thought

New estimate is more than double the EPA's.
Trash

A CENTURY OF AMERICAN GARBAGE
LANDFILLS OVER TIME, BY SIZE AND CURRENT STATUS

1970

LANDFILL STATUS
- Open
- Closed

2013

LANDFILL STATUS
- Open
- Closed

Source: https://www3.epa.gov/lmop/projects-candidates/

Source: www.saveonenergy.com/land-of-waste/
Trash

US Municipal Solid Waste

Million Tons

Pollution

“After a single use, 95% of plastic packaging material value ends up in landfills, as roadside litter, or in the ocean.”

Americans throw away 2.5 million plastic bottles every hour.

In the U.S., the overall recycling rate for plastic bottles is 31.1%.
Pollution

Ocean Conservancy’s International Coastal Cleanup

8 of Top 10 Items are Packaging

Top 10 Items Collected in the United States

1. Cigarette Butts
2. Food Wrappers
3. Plastic Bottle Caps
4. Plastic Beverage Bottles
5. Beverage Cans
6. Straws, Stirrers
7. Glass Beverage Bottles
8. Plastic Grocery Bags
9. Metal Bottle Caps
10. Other Plastic/FOAM Packaging
Recycling

Mountains of US recycling pile up as China restricts imports

PRI's The World
January 01, 2018 - 3:30 PM EST
By Jason Margolis

Why the world’s recycling system stopped working

China’s refusal to become the west’s dumping ground is forcing the world to face up to a waste crisis

By Eric Roston
Updated on June 11, 2018, 3:36 AM EDT

Recycling
The Crisis After China’s ‘No’

Quicktake

Bloomberg
“Recycling validates waste”

- Leyla Acaroglu, *System Failures: Planned Obsolescence and Enforced Disposability*
Recycling
Natural Resources

Earth Overshoot Day
1969-2018

Source: Global Footprint Network National Footprint Accounts 2018
Reuse of products can reduce material demand and prevent waste, which are important aspects of EU waste policy and essential for achieving a circular economy.”

- European Environment Agency, June 25, 2018
Political Responses

CalRecycle Packaging Reform Workshop
October 10, 2017

CalRecycle’s Essential Components for a Statewide Policy for Packaging

- Comprehensive
- Flexible
- Consistent process
- Transparent with robust public participation
- Specific and enforceable goals and metrics
- Recognizes prior innovations and efforts
- Addresses pre- and post-consumer life of packaging
Business Values

Reuse System Design

PCR Market → Recycled Content → Recycled Content → Recondition → Recovery → Secondary User

Resources → Manufacture → Supplier/Pooler → Reposition → Primary User

FIND YOUR WOW
Business Values

Warehousing
Business Values

Unit Loads
Business Values

Retail Labor & Display
Business Values

Quality, Shrink and Sustainability

Sustainable Packaging Playbook 2016
A guidebook for suppliers to improve packaging sustainability

Protect the Product
Does the packaging protect the product?

Best Practice  Design packaging that meets product protection
International Safe Transit Authority (ISTA) standards
while using the minimum amount of packaging.

Tip  Review the damage history of your products with your buyer and address any issues.

When eggs were moved to reusable plastic containers (RPCs) from cardboard containers, damage rates decreased,
preventing 37 million eggs from being thrown out in the first year through this easy drop in display solution which folds flat when not in use.
Business Values

100% reusable, recyclable or compostable plastic packaging by 2025

follow their lead

Unilever  evian  ecover  Walmart  amcor
PEPSICO  M&S  L'ORÉAL  Mars
The Coca-Cola Company

FIND YOUR WOW
Business Values

The Global Risks Report 2019
14th Edition

Top 5 Global Risks in Terms of Likelihood

---|---|---|---|---|---|---|---|---|---|---
1st | Asset price collapse | Asset price collapse | Storms and cyclones | Severe income disparity | Severe income disparity | Income disparity | Interstate conflict with regional consequences | Large-scale involuntary migration | Extreme weather events | Extreme weather events | Extreme weather events
2nd | Slowing Chinese economy (w/ifo) | Slowing Chinese economy (w/ifo) | Flooding | Chronic fiscal imbalances | Chronic fiscal imbalances | Extreme weather events | Extreme weather events | Extreme weather events | Large-scale involuntary migration | Natural disasters | Failure of climate-change mitigation and adaptation
3rd | Chronic disease | Chronic disease | Corruption | Failing greenhouse gas emissions | Failing greenhouse gas emissions | Unemployment and underemployment | Failure of national governance | Failure of climate-change mitigation and adaptation | Major natural disasters | Cyber-attacks | Natural disasters
4th | Global governance gaps | Fiscal crises | Biodiversity loss | Cyber-attacks | Water supply crises | Climate change | Data collapse or crisis | Large-scale terrorist attacks | Data fraud or theft | Data fraud or theft
5th | Retrenchment from globalization | Global governance gaps | Climate change | Water supply crises | In-migration of population | Cyber-attacks | High structural unemployment or underemployment | Major natural catastrophes | Massive incident of data fraud/theft | Cyber-attacks

Economic | Environmental | Geopolitical | Societal | Technological
Announcement: Moody’s: Climate change is forecast to heighten US exposure to economic loss placing short- and long-term credit pressure on US states and local governments

28 Nov 2017

New York, November 28, 2017 -- The growing effects of climate change, including climbing global temperatures, and rising sea levels, are forecast to have an increasing economic impact on US state and local issuers. This will be a growing negative credit factor for issuers without sufficient adaptation and mitigation strategies, Moody’s Investors Service says in a new report.
Powerful Investors Push Big Companies to Plan for Climate Change

This spring, Wall Street seems more accepting of climate science as shareholders demand plans to reduce risks.

By David S. Rivnay on May 3, 2018

Climate Changed
BlackRock Wields Its $6 Trillion Club to Combat Climate Risks

By Emily Chasan
December 6, 2017, 7:00 AM EST

BlackRock Inc., the world’s biggest asset manager, is telling companies that now is the time to start reporting clear information on climate risk to their businesses.

Vanguard seeks corporate disclosure on risks from climate change

By Ross Kerber
Getting Started with Reuse

“Four Enablers for a Circular Economy”

Reusable Packaging “Essentials”

- Systems approach
- Asset utility
- Asset management
- End-of-life renewal
- Performance metrics
  - Cycles, Turns, Dwell

Business Model

- Durability & lifespan
- Fit for purpose
- Value-added features
- Part repair
- Return efficiency

Product Design

- Suppliers & users
- 3rd-party providers
- Closed & open loops
- Data sharing
- Standardization

Collaboration

- Retrieval
- Reconditioning
- Repositioning
- Consolidation
- Transportation

Reverse Logistics

Four Enablers for a Circular Economy: Philips
Getting Started with Reuse

Technology Is the Real Enabler for Reusable Packaging

**Product Design**
- Material science
- 3D printing/speed to market
- Sensor functions
- Intelligent assets

**Product Tracking**
- Supply chain visibility
- Inventory management
- Predictive analyses

**Reverse Logistics**
- Connected networks
- Big data analytics
- Cloud computing
- Sharing platforms

**Business Model**
- Consolidation hubs
- Fleet efficiency
- Route optimization
- Autonomous vehicles

**Collaboration**
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**Technology Is the Real Enabler for Reusable Packaging**

Getting Started with Reuse

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Getting Started with Reuse

- Engage supply chain partners up front to determine shared objectives.
- Research the whole supply chain to study all packaging impacts, including end-of-use.
- Seek to optimize and measure impact at every step and deliver a net gain.
- Volume (trips), pool speed (cycle time), and turns (reuse over time) are critical variables.
- Asset management requires everyone’s participation.
- Technology advancement is a game-changer for reusable packaging in a circular economy.
Key Takeaways

1. Today’s environmental, political and business climates are requiring more material reuse solutions

2. Reusable transport packaging systems can deliver performance, cost-savings and sustainability through entire supply chain

3. Four essentials: Business model, product design, collaboration and reverse logistics

4. Technology is enabling reuse to breakthrough new levels
For more information

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