

Reusable Supply Chain Packaging and the Circular Economy



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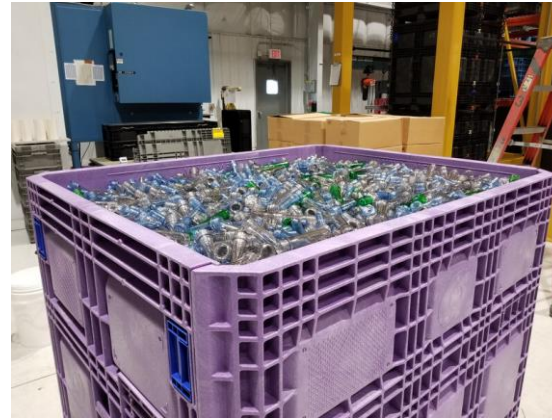
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Reusable Packaging: Defined

Reusable assets that move, store, handle and stage product in the supply chain and circular economy, across all industries. Designed to travel in a loop.



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The Move to a More Circular Economy



Source: Coda Plastics

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Why Reusable Packaging for the Supply Chain?

1. Drives sustainable supply chains and a circular economy
2. Reduces waste
3. Cuts automation downtime
4. Optimizes labor
5. Keeps plants and equipment clean
6. Optimizes transportation

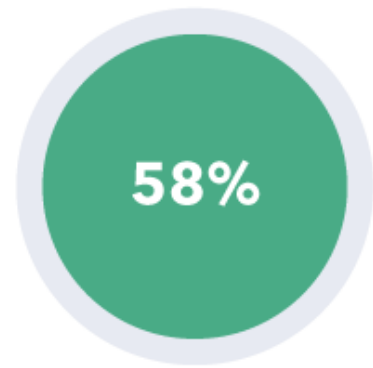
Why Now?

Today's consumer cares about buying from sustainable brands and that includes the supply chain

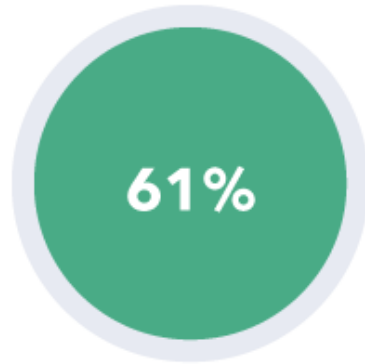


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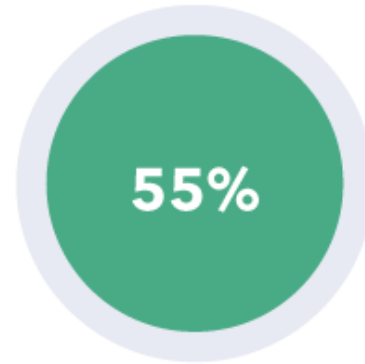
% who agree that they would pay more
for eco-friendly products



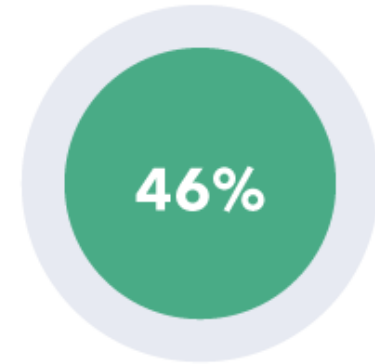
Gen Z
(16-21)



Millennials
(22-35)



Gen X
(36-54)

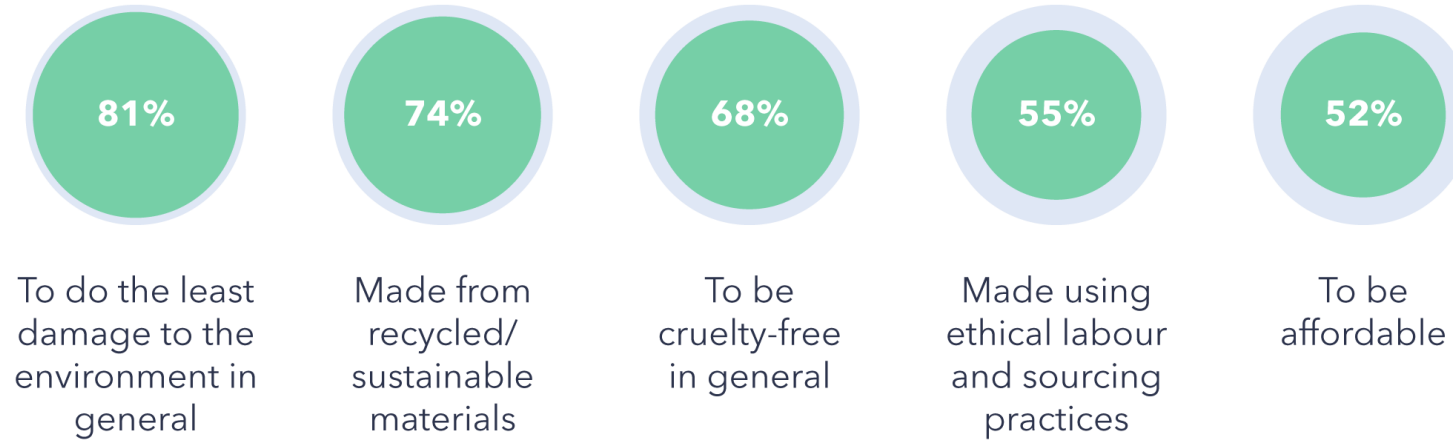


Baby Boomers
(55-64)

Source: GlobalWebIndex Q2 2018 Base: 111,899 Internet Users aged 16-64

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% of Eco-Conscious Consumers who say they expect the following from an eco-friendly product



Eco-Conscious Consumers are defined as those who say that concern for the environment affects their day-to-day purchase behavior.

Source GlobalWebIndex July 3rd - July 10th 2018 **Base** 277 (UK) & 257 (U.S.A.) Eco-Conscious Consumers aged 16-64

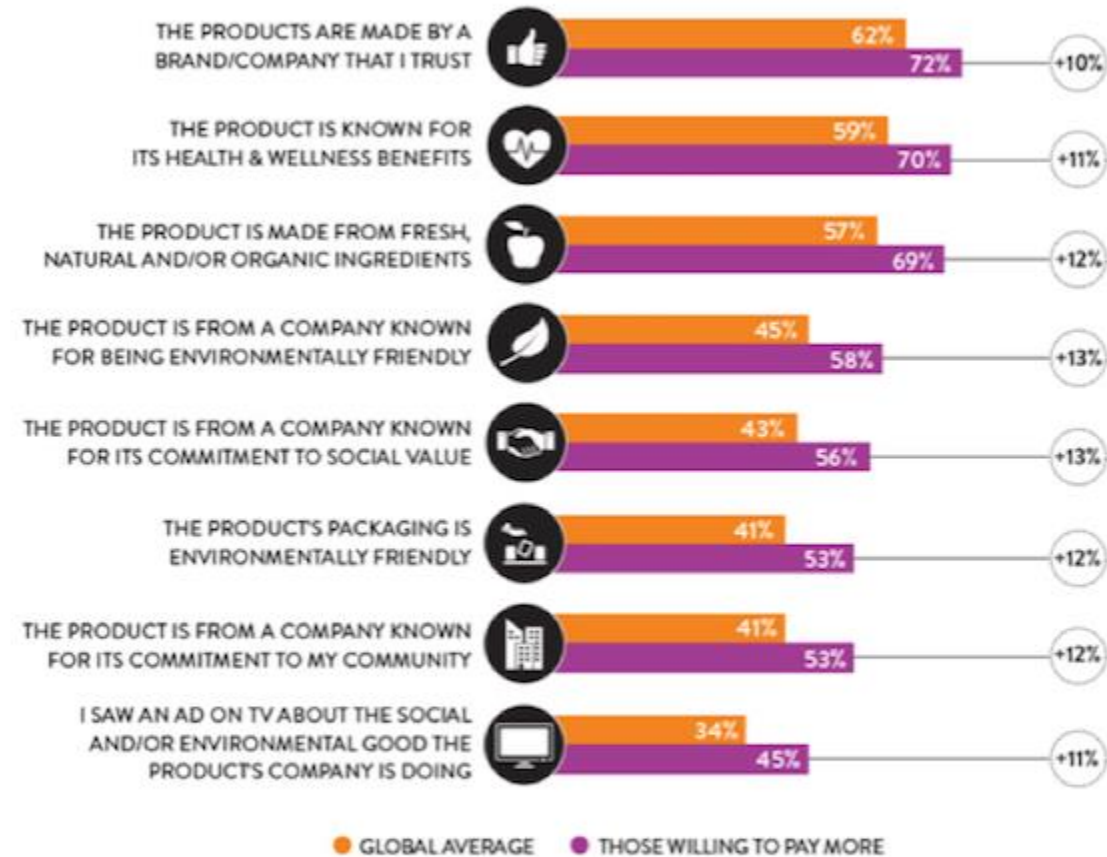


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TOP SUSTAINABILITY PURCHASING DRIVERS

Global Respondents vs. Those Willing To Pay More*



*Note: Key sustainability purchasing drivers were categorized as either "very heavy influence" or "heavy influence" by the indicated percentage of respondents

Source: Nielsen Global Survey of Corporate Social Responsibility, Q1 2015

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Typical Reusable Tote Application

Application:

- 60,000 reusable totes
- Made with recycled content
- Replacing fiber corrugated fleet
- 6 trips/year
- 8 year tote life
- 22 lb tote load
- 300 mile trip
- Separate backhaul trip
- 90% recycle rate at end-of-life



Reduce Energy
Usage by
31%



Reduce Solid
Waste by
79.5%



Reduce
GHG by
38.3%



Typical Reusable Pallet Application



Application:

- 3,000 reusable pallets
- Replacing wood fleet
- 4% replacement rate
- 6 trips/year
- 8 year pallet life
- 700 lb pallet load
- 300 mile trip
- Backhauled at time of delivery
- 90% recycle rate at end-of-life

Reduce Energy
Usage by
71%



Reduce Solid
Waste By
72%

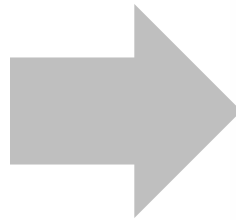


Reduce GHG
by
3.21%



Case Study: Cosmetic Packaging

- **Goal:** Waste reduction related to wood pallets and tier sheets
- **Result:** Better worker handling, streamlined automation and reduced waste



Environmental Analysis Pallet

ENERGY

Plastic Pallet:	189.37	Million BTU's of Energy Consumed
Wooden Pallet:	665.63	Million BTU's of Energy Consumed

SOLID WASTE

Plastic Pallet:	1.72	Tons of Solid Waste Produced
Wooden Pallet:	6.17	Tons of Solid Waste Produced

GREENHOUSE GAS

Plastic Pallet:	10.60	Tons of CO2 Equivalents Produced
Wooden Pallet:	10.96	Tons of CO2 Equivalents Produced

PROPOSED PACKAGING IMPROVEMENT OPPORTUNITY

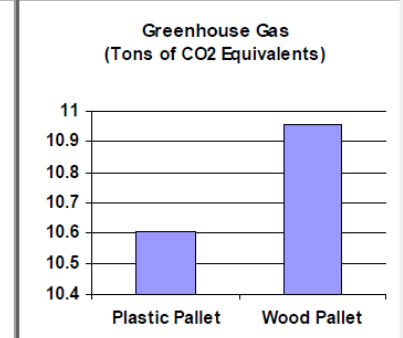
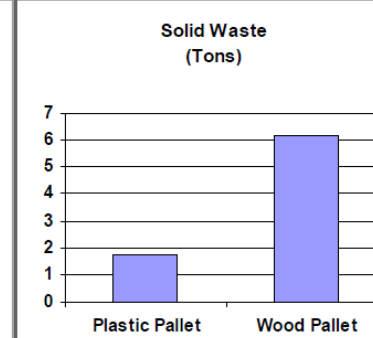
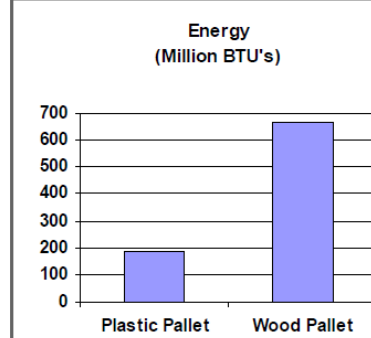
71.55% Improvement
476.27 Million BTU's of Energy Saved

72.09% Improvement
4.45 Tons of Solid Waste Saved

3.21% Improvement
0.35 Tons of CO2 Equivalents Saved

Pallet Environmental Results

Energy (million Btu)			Solid Waste (tons)			GHG (tons CO2 eq)		
	Plastic Pallet	Wood Pallet		Plastic Pallet	Wood Pallet		Plastic Pallet	Wood Pallet
Production:	78.25	662.67	Production:	0.31	1.15	Production:	3.72	12.81
Use:	42.16	30.10	Use:	0.05	0.04	Use:	3.45	2.46
End of Life:	2.41	-93.68	End of Life:	0.58	4.20	End of Life:	0.63	-7.11
Other Pkg:	66.55	66.55	Other Pkg:	0.79	0.79	Other Pkg:	2.80	2.80
Total:	189.37	665.63	Total:	1.72	6.17	Total:	10.60	10.96
Difference:	-476.27		Difference:	-4.45		Difference:	-0.35	
	Decrease in Energy			Decrease in Waste			Decrease in GHG	

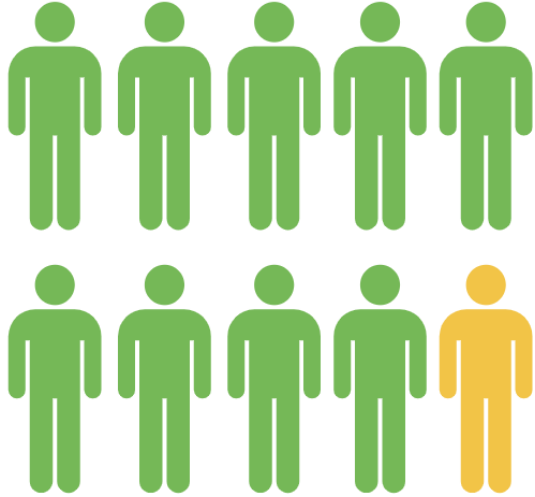


The Key to Getting Started – Holistic View of the Supply Chain

- Analyze
- Design
- Prove
- Implement
- Evolve



Now is the Time



2/3 of customers are willing to pay more for sustainable products.



88%

Percentage of customers who would stop buying a product if they learned of irresponsible business practices.



More than 3/4 of consumers expect businesses be supporting efforts to stop climate change.

BUSINESS TO THE RESCUE

71% of millennials hope businesses will take the lead on addressing key social and environmental issues.

Source: <https://onetreeplanted.org/blogs/stories/eco-friendly-brands>

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