



PPAI **E**XPO 2023

CONFERENCE



Sell Promotional Products & Have A Positive Environmental Impact – Your Clients Are Asking

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A World Without Trash



The background of the slide features a close-up, macro shot of a textured surface, possibly a piece of corrugated cardboard or a similar material. The texture is characterized by a series of parallel, wavy ridges and valleys that create a strong sense of depth and three-dimensionality. The lighting is dramatic, coming from the right side, which casts long, soft shadows and highlights the peaks of the ridges, giving the surface a golden-brown or tan hue. On the left side of the image, there is a solid, deep blue gradient that fades into the textured area. Overlaid on this blue section is the text 'Where is Your Waste Going' in a clean, white, sans-serif font.

Where is Your Waste Going

Where Waste Goes Domestically

50% of waste is landfilled

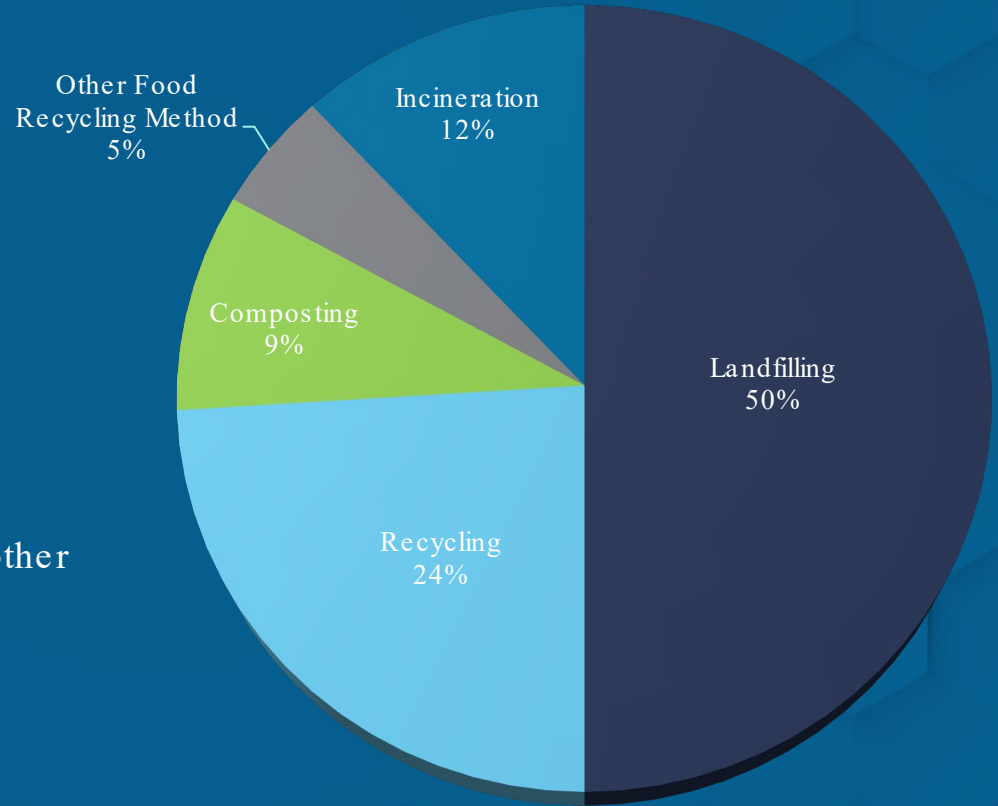
12% of waste is incinerated

24% of waste is recycled

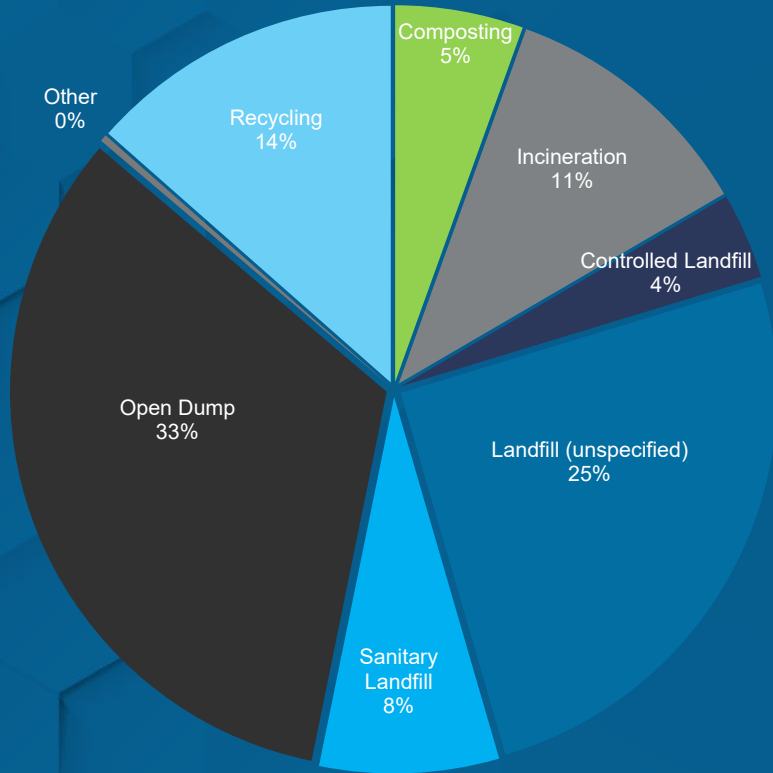
9% of waste is composted

5% of waste is donated or processed in other ways

- US EPA, 2018



Where Waste Goes Globally



11.1% of waste is Incinerated

33% of waste goes to Open Dumps

3.7% of waste is placed in Controlled Landfills

25.2% of waste is placed in Landfills (*unspecified*)

7.7% of waste is placed in Sanitary Landfills
(*with landfill gas collection*)

13.5% of waste is Recycled

5.5% of waste is Composted

0.3% Other means of disposal

- The World Bank, 2016

Landfill & Incineration

Over half of all trash ends up in landfills.

Over 3,000 active landfills in the U.S.

75 incinerators in the U.S.

Developing countries burn waste openly without any safeguards

Globally, landfills are the third largest human caused source of methane...

11% of estimated global methane emissions

Health, Social, and Environmental Problems

- Air, water & noise pollution
- Contamination of soil
- Groundwater contamination
- Habitat destruction
- Disease & cancers
- Human rights issues

Every year over 2 billion tons of waste is dumped globally.



Recycling

Collecting and processing materials that would otherwise be thrown away as trash and turning them into new products.

Recycling reduces the need for raw materials

75% of the American waste stream is recyclable, but we only **30%** gets recycled.

CHALLENGES

- Dependent on consumer behavior, manufactured goods, and facility infrastructure
- MRFs not in all states
- Lack of recycling awareness what can and cannot be recycled
- Raw materials are cheaper
- Plastics are not easy to sort
- Not all recycled plastics have a market demand
- Lack of infrastructure to manage textile recycling



Only 9% of plastic waste ever created has been recycled

Shipped overseas to countries who are unable to process the material fast enough



8 million tons of plastic waste ends up in oceans every year



Composting

Controlled, natural decomposition of organic matter.

Over 4,900 composting operations in the U.S.

- Over 6M tons of organic feedstock is produced annually in CA
- Over 25M tons of organic waste is composted annually in the U.S.

Challenges

- Acceptable and unacceptable
- Lengthy decomposing timeframes
- Mixed messaging on biofilms and bioplastics
- Contamination – toxins, hazardous waste, pesticides, feces, oils, auto wastes
- Commercial composting operations not available in all states



Donations

Americans generate 16M tons of textile waste a year; over **6%** of MSW.

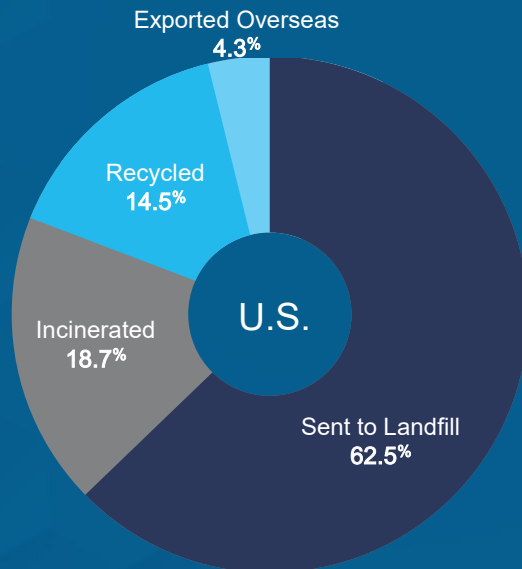
84% of donated clothes ends up in landfills.

Only 16% donated clothes are used.

Obstacles

- Increasing textile production & consumption
- Confusion as to what is donatable
- Not sure where its going
- Not sure where to take it

Every second, the equivalent of one garbage truck of textiles is landfilled or incinerated.



700,000 tons of used clothing gets exported overseas annually



92M tons of textile waste is created annually from the fashion industry

Product Destruction

Authenticated process where products are destroyed or disposed of, to prevent being resold or utilized illegally

Often these items can't be sold or donated

In fashion, most products cannot be repurposed into other products, and the industry's capacity for high-quality recycling remains extremely limited.

Reasons

- Brand protection
- Deadstock
- Proprietary information
- Overproduction
- Product returns
- Recalls
- Discontinued

**Landfilled
or
incinerated**



Electronic Waste

E-waste has been identified as the fastest growing waste stream in the world at present.

Over 63M tons of e-waste is generated annually worldwide.

Less than 20 % of electronic waste is formally recycled.

Precious metals in e-waste - **gold, copper, silver, and palladium** found in computers, phones, and modems

Environmental Harm:

- Toxic
- Not biodegradable
- Air pollution
- Accumulates in the environment



Health Concerns:

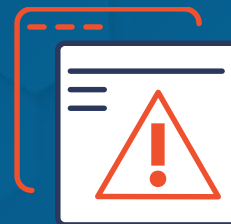
- Changes in lung function
- Respiratory issues
- DNA damage
- Increased risk of chronic diseases later in life (i.e., cancer and cardiovascular disease)



Dismantled by hand in developing countries, exposing workers to hazardous and carcinogenic substances.

Global Waste Crisis

NO LONGER A FAR-OFF THREAT



Climate Change

The earth is warming at an unprecedented rate.

Plastic Pollution Crisis

Plastic accumulating in our oceans and on our beaches has become a global crisis.

Textile Pollution Crisis

Textiles are responsible for water pollution, greenhouse gas emissions and landfill.





Waste Diversion

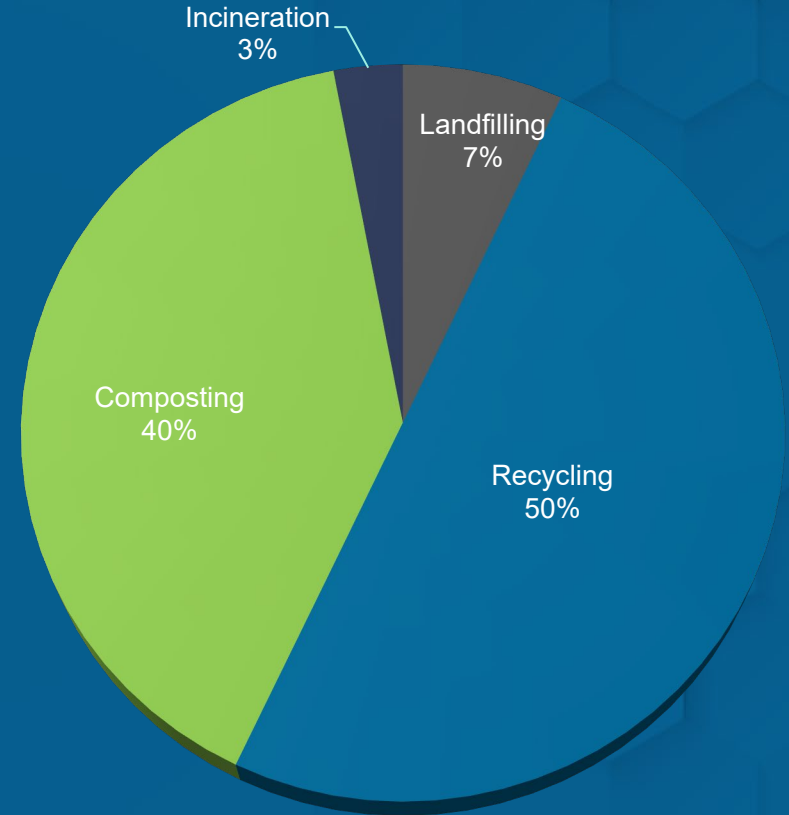
What is Waste Diversion?

The process of diverting waste from landfills and incineration.

- Recycling
- Composting
- Reusing
- Repurposing
- Zero Waste
- Refusing & Reducing



- National Waste



What is Zero Waste?

Zero-waste is both a goal and a strategy that aims to

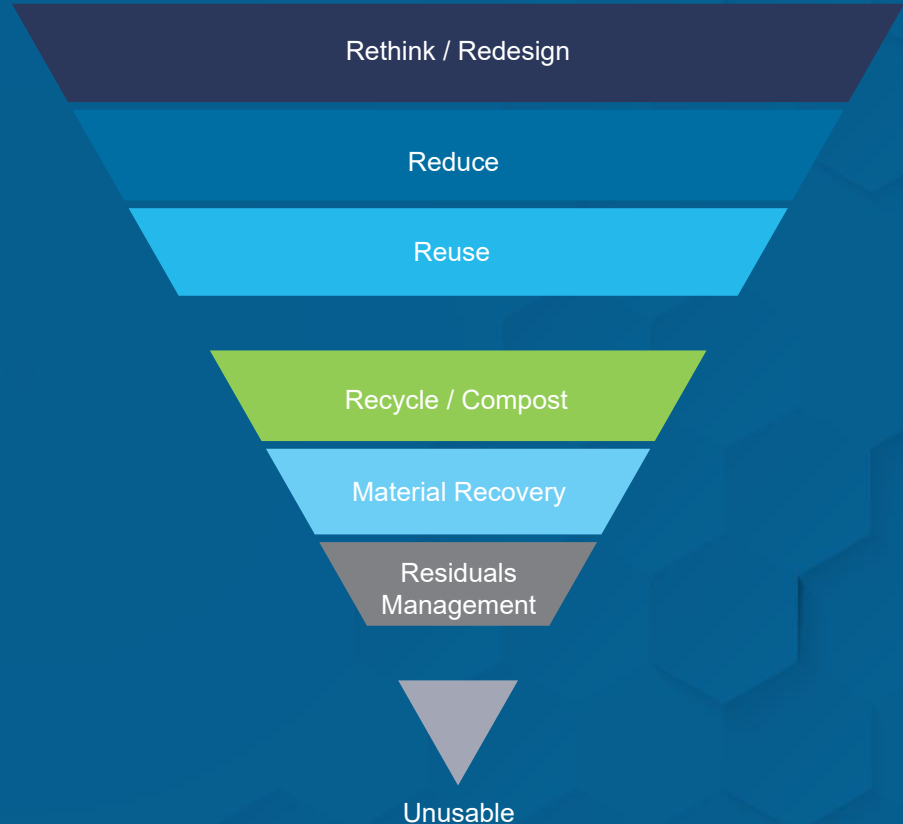
- Conserve resources through various practices such as composting, recycling, and improved product design
- Stop the incineration and landfilling of waste – practices that harm human health and the environment.

90% or higher diversion from
landfills & incineration

The ZWIA Definition of Zero Waste:

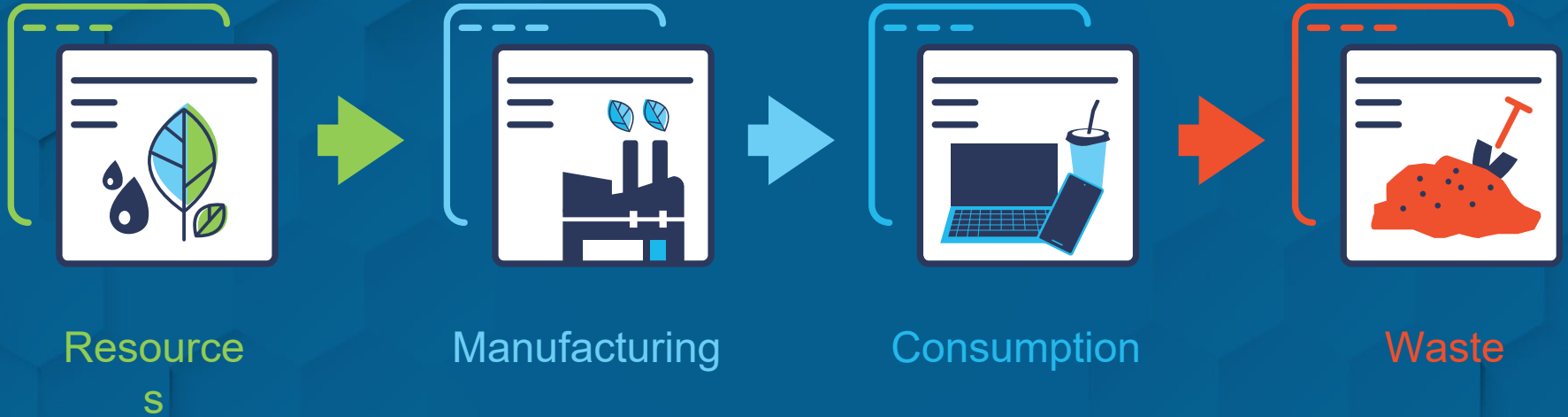
The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health.”

The Zero Waste Hierarchy 8.0



Linear Economy

Take-make-consume-dispose



Circular Economy

Based on 3 principles:

1. Design out waste and pollution
2. Keep products and materials in use
3. Regenerate natural systems

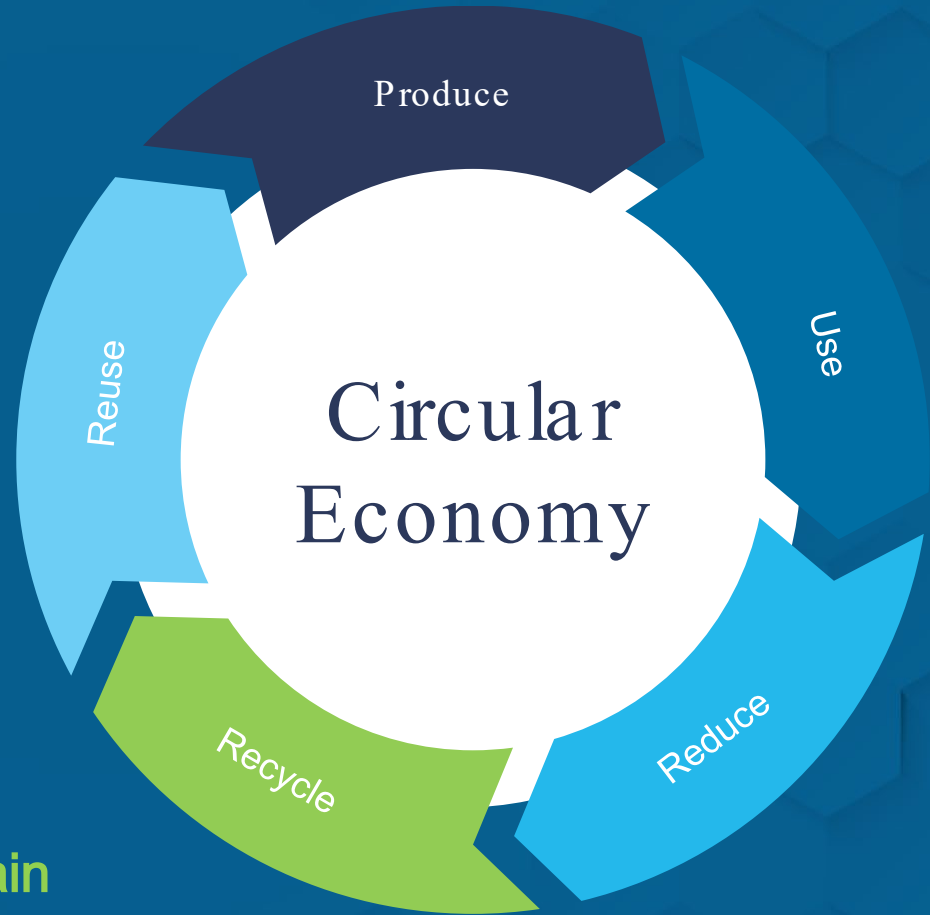
- Ellen McArthur Foundation

An economy that invests in -

- Advanced technologies related product design
- Design for durability, reuse, remanufacturing, and recycling
- Offers incentives for reusing products

These efforts lead to zero waste "closed loop" systems in which resources are not wasted.

Made-to-be-made-again



Benefits of Waste Diversion



ENVIRONMENTAL

- Climate change mitigation
- Air quality protection
- Water quality protection
- Litter reduction

SOCIAL

- Improved public health
- Worker protection
- Improved welfare
- Improved aesthetics

ECONOMIC

- Job creation
- Resource conservation
- Costs reduction
- Energy reduction

Companies who have Closed the Loop



Subaru

- Zero waste to landfill since 2005
- They recycle everything from waste oil to paint sludge and reuse packaging wherever possible.
- Ensures that 96% of the components in a Subaru vehicle are reusable or recyclable.



Unilever

- Zero waste to landfill since 2016
- Transforms tea waste into textile dyes.
- Reuses sludge to feed earthworms.



Proctor & Gamble

- Zero manufacturing waste to landfill since 2008
- Converts plastic waste from diaper production into pellets to make brooms and buckets.
- Transforms scraps from toilet paper and wipes into material for low-cost roofing tiles.
- Committed to tackling consumer waste by striving towards offering 100% recyclable or reusable packaging by 2030.



Mars, Inc.

- Zero manufacturing waste to landfill since 2016
- Uses leftover sweeteners as an energy source for manufacturing.
- Captures methane from disposable solid waste to generate alternative energy.
- Striving to make 100% of its plastic packaging reusable, recyclable, or compostable by 2025.

Companies who help others Close the Loop



- **Zero Waste Box** helps businesses and consumers divert difficult-to-recycle materials from landfill.
- **Loop** is a zero-waste platform that allows brands to offer their products to consumers in reusable containers (Unilever and P&G)



- **Common Threads Initiative** encourages consumers to donate or sell unwanted gear on the company's online marketplace.
- Consumers can send end of life items to the company, where they will be recycled into materials that make up 70% of new Patagonia products.





Reducing the Footprint

Where to begin...

- Sustainable products
- Sustainable packaging
- Eco responsible shipping
- Eco responsible printing
- Return to supplier
- Take back programs
- Consider B Corp certification
- Internal waste diversion program
- Consider TRUE Zero Waste certification



Sustainable Products

Inherently reusable, recyclable, and/or compostable, and do not contribute to environmental pollution of any kind.

Eco-friendly, durable or higher quality goods ensures people are likely to use repeatedly rather than throwing away.

Designing and choosing products with recycling and reuse in mind.



- Recyclable
- Recycled content
- Re-Earth (Compostable)
- Reusable
- Reduce or Eliminate



Recyclable

 Recyclable Materials **MUST** be easily recycled in any recycling program or service.

 Consider alternatives to **hard to recycle** products that are multilayered, composite, and mixed.

 Design for disassembly

What to consider for curbside recycling:

- ✓ If plastic – ONLY use 1, 2, or 5
- ✓ One material is best (no mixing)
- ✓ Metal is better
- ✓ Paper is good
- ✓ Focus on one color
- ✓ Limit the color black

Curbside programs easily accept:

- PETE (Polyethylene)
- HDPE (High density Polyethylene - color or natural)
- PP5 (polypropylene)
- Metals
- Wood
- Cardboard
- Paper



Aluminum Cups



Recycled Content

Recycled content products reduces waste sent to landfills and incinerators.

- ✓ Made from recycled materials
- ✓ Sustainably sourced and made
- ✓ Eliminates the need for virgin (raw) materials
- ✓ Protects ecosystems and wildlife

Understanding the difference:

POST-Consumer content

Truly re-cycled materials

PRE-Consumer content

Consists of scraps and rejects tossed out by the manufacturer.

Making a difference in the marketplace

Circular & Co. Coffee Cup



Cotopaxi Luxon 18L Daypack



Soma X Parley Bottle with Ocean Plastic Sleeve



Patagonia Synchilla Snap-T Fleece Pullover

Re-Earth - Compostable

Specifically manufactured to break down in a compost system at the end of its useful life.

Questions to ask:

- Does the material come from nature?
- Will the material easily decompose without the aid of industrial-strength composting facilities?

Bioplastics - Not yet

- Need high temperature industrial composting facilities to break down
- Very few cities have the infrastructure needed to process them
- As a result, bioplastics often end up in landfills

COMPOSTABLE MATERIALS

Wood, bamboo, hemp, jute (vegetable fiber), cork, wheat straw, linseed, linoleum, cotton, soy, wool, flax, corn, coffee grounds



Reuse - Donating

- ✓ Donate misprints or defects to companies for upcycling or recycling (not just shipping to other countries) and educate the end user
- ✓ Consider the end of life for textiles and solutions for waste diversion
- ✓ Partner with textile recycling organizations
- ✓ Partner and Donate to Non-Profits

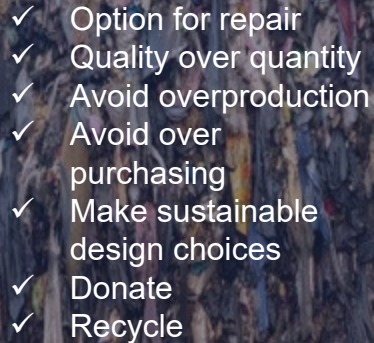
These organizations need free wearable clothing.

- LGBTQ+ communities
- Refugee organizations
- Churches
- Homeless shelters
- Transitional living programs
- Youth shelters
- Hospitals
- Domestic violence centers
- Prisons

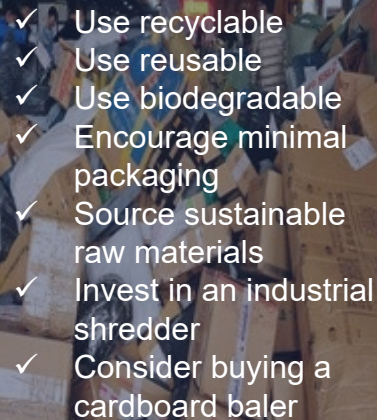


Reduce


Apparel Waste

- 
- ✓ Option for repair
 - ✓ Quality over quantity
 - ✓ Avoid overproduction
 - ✓ Avoid over purchasing
 - ✓ Make sustainable design choices
 - ✓ Donate
 - ✓ Recycle

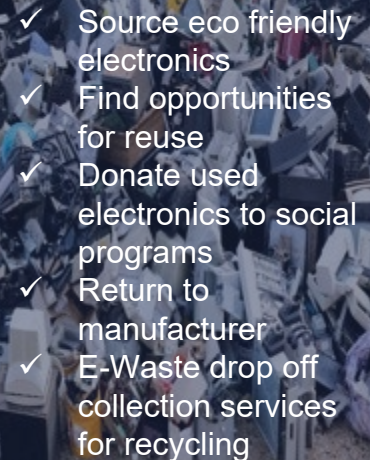
Packaging Waste

- 
- ✓ Use recyclable
 - ✓ Use reusable
 - ✓ Use biodegradable
 - ✓ Encourage minimal packaging
 - ✓ Source sustainable raw materials
 - ✓ Invest in an industrial shredder
 - ✓ Consider buying a cardboard baler

Plastic Waste

- 
- ✓ Avoid single use plastic
 - ✓ Recycle
 - ✓ Upcycle
 - ✓ Only use PETE, HDPE, PP5
 - ✓ Avoid plastic packaging
 - ✓ Design with circularity

Electronic Waste

- 
- ✓ Source eco friendly electronics
 - ✓ Find opportunities for reuse
 - ✓ Donate used electronics to social programs
 - ✓ Return to manufacturer
 - ✓ E-Waste drop off collection services for recycling

Repurpose



Zanker Recycling process porcelain toilets into tiles “Toilets to Tiles”



rPlanet Earth is a package manufacturing company that specializes in reusing post-consumer packaging. Closing the loop on single serve PET.



Sustainable Packaging

Where to start...

- Reduce the number of materials your products require
- Use recycled materials
- Consider biodegradable packaging
- Biodegradable packing peanuts
- Recycled or biodegradable bubble wrap

Innovative Packaging Options

- **Mushrooms** – Biodegradable packaging made from mycelia and oats (IKEA)
- **Wool** – Sheep wool-based insulated packaging (WoolCool)
- **Eucalyptus** – Bio-film made from the wood pulp extracts of eucalyptus trees (Rhythm 108 – NatureFlex)
- **Coconut Husk** – Reusing coconut husks as packaging alternative to plastics (Whole Tree)



Eliminate
the use of ALL
non-recyclable
packaging



Eco Responsible Shipping

Time to swap

- Second run and recycled boxes
- Relabel and reuse boxes
- Reusable shipping bags and containers



Eco Responsible Printing

- Switch from plastisol ink (PVC based) to water based biodegradable ink
- Use substrates and coatings that are biodegradable
- Use misprints for test prints and shop rags
- Recycling ink cartridges



Biodegradable Laminates

Cellogreen: Cellogreen is a film product made from the organic compound cellulose, which is biodegradable and recyclable.

Polylactic Acid (PLA): Polylactic Acid is a polyester that comes from starch or sugar cane. However, decomposition of PLA may take a longer time than other alternatives depending on the environmental conditions.

Oxo-Biodegradable Plastic: Oxo-Biodegradable Plastic is composed of conventional plastics such as polyethylene, polypropylene, and polystyrene. In order to make this sustainable, additives are included to break down the chemicals in plastics.

Return to Supplier

The return of goods to a supplier due to -

- Defects
- Damaged inventory
- Short-shipped
- Unit price overcharged

Partnering with suppliers that allow for a return of goods -

- Enables quality management
- Helps manage inventory
- Fosters stronger relationships
- Lessen the impact on disposal to landfill



Take Back Programs

An initiative by a manufacturer or retailer, to collect used products or materials from consumers and reintroduce them to the original processing and manufacturing cycle.

Types of Take Back programs

- Plastic Take Back programs
- Apparel Take Back, Buyback, or Exchange programs
- Electronics/E-Waste Buyback programs

How to implement a Take Back program

- **Collection** – return with prepaid label &/or collection carts
- **Initiatives** – collection drives, awareness campaigns, and collection centers
- **Awareness & Responsibility**



Apparel Recycling Companies



100% GRS-certified CirCot (“circular cotton”), recycled fabric; nothing virgin.
“We want to change the way people think about promotional merch.”



A startup that specializes in repurposing and recycling branding merchandise



Tee-Cycle T-shirts; turning old shirts into new ones; 100% recycled material

FOR DAYS

Recycling clothing. All brands welcome in any condition.



Clothes the Loop program

Internal Waste Diversion

- ✓ Conduct a deep dive into waste generation points and throughout office buildings and facilities
- ✓ Conduct a Waste Audit to gain an understanding of what the waste stream is made up of.
- ✓ Develop a waste diversion program where materials are reduced, reused, or recycled.
 - Source Separated Recycling Program: Paper only recycling container, cardboard baler, organics container, etc.
- ✓ Consider vendor partnerships that recycle specialized commodities: Pallets, pallet straps, stretch film, bubble wrap, cardboard, etc.

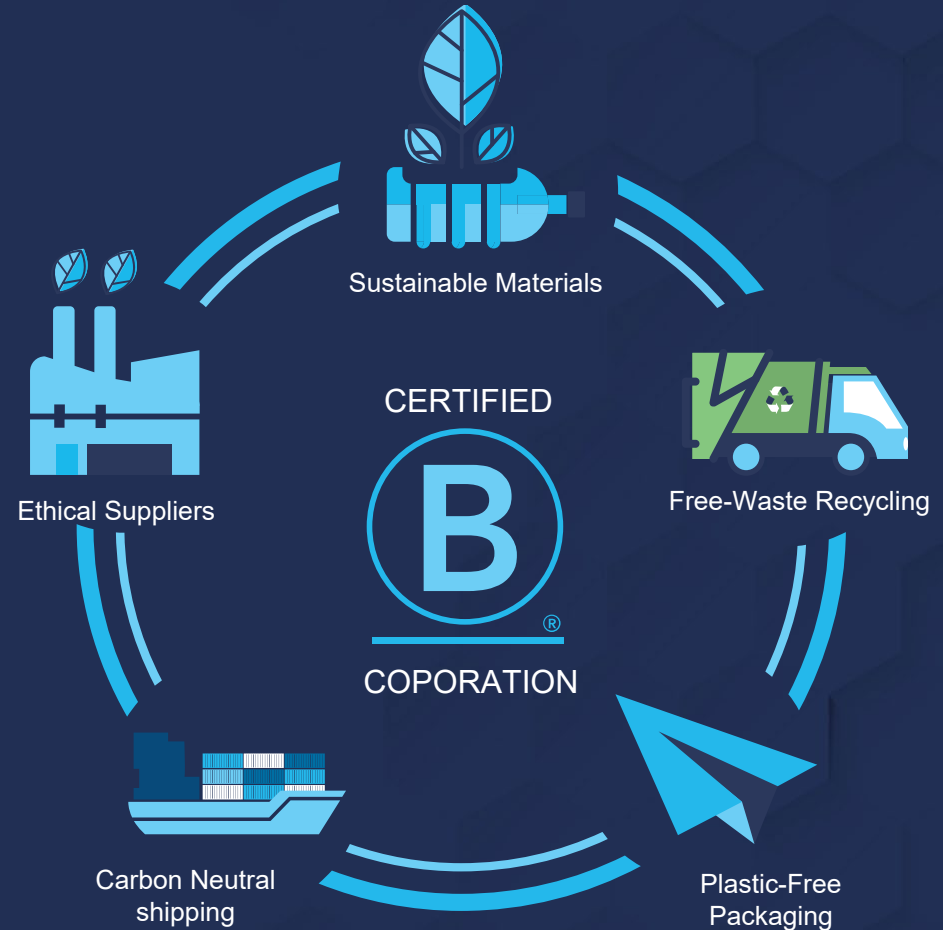


Become B Corp Certified

Certified B Corporations are leaders in the global movement for an inclusive, equitable, and regenerative economy.

Waste management is a significant component of the impact assessment.
More than 10 points are related to waste management

- Reduction of waste sent to landfills through methods of reuse, recycling, or upcycling
- Waste management programs, policies, and mission statements, assessments, tracking, reporting, reduction targets
- Supply chain, packaging, and end of life waste reductions



Become TRUE Zero Waste Certified

TRUE (Total Resource Use and Efficiency)

strives to change the way materials flow through society so that all products are eventually reused and diverted from landfill, incineration (waste-to-energy) and the environment.

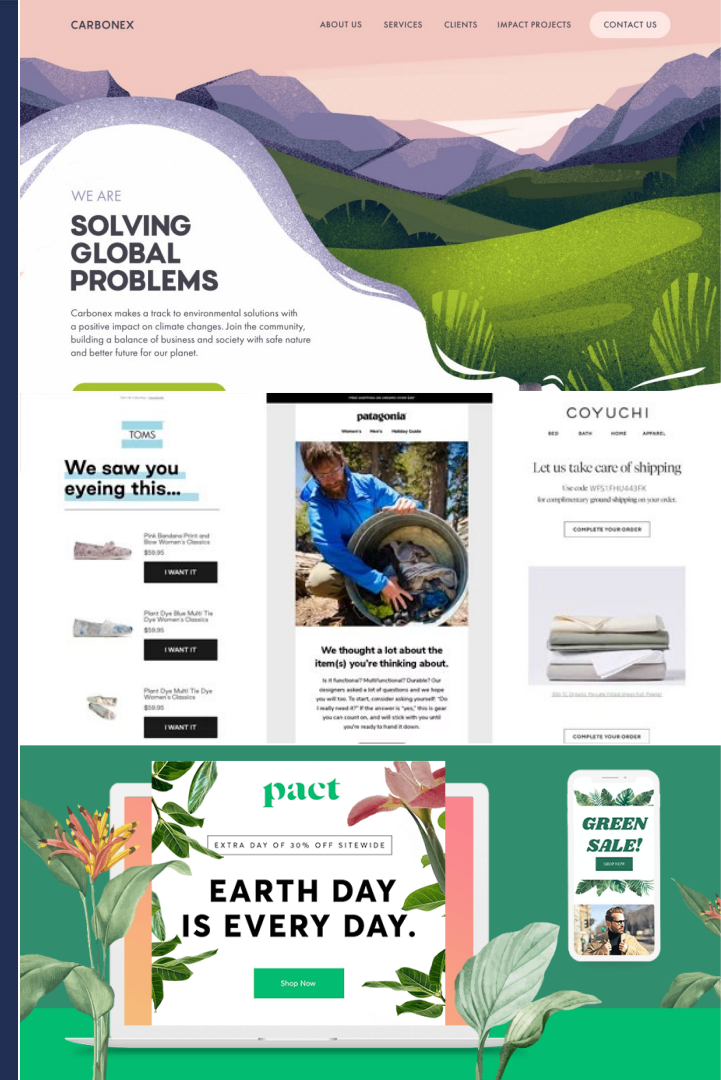
Administered by Green Business Certification Inc. (GBCI)

The TRUE certification program is an Assessor-based program that rates how well facilities perform in minimizing their non-hazardous, solid wastes and maximizing their efficiency in the use of resources.



Publicity

- ✓ Promote eco friendly products on the front of the website
- ✓ Easy to find information on the website
- ✓ Email campaign to generate awareness
- ✓ Create awareness by sending out Press Releases
- ✓ Start or update a Blog with eco friendly products
- ✓ Make videos for closed loop products or how to disassemble a product for recycling



Actionable Steps

- ☐ Introduce sustainable products
- ☐ Use sustainable packaging
- ☐ Switch to eco-responsible shipping methods
- ☐ Partner with zero waste and closed-loop companies
- ☐ Provide end of life solutions to consumers
- ☐ Educate end-users
- ☐ Build a dedicated Green Team
- ☐ Implement an internal waste management program
- ☐ Be a Certified B Corporation
- ☐ Be a certified TRUE Zero Waste facility

BE A LEADER...NOT JUST A
FOLLOWER



Questions & Comments?

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