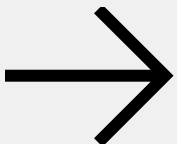

SUSTAINABLE
PRODUCT &
PACKAGING
DESIGN HANDBOOK

BUSINESS
FOR GOOD



STARTING POINTS:

- Find a designer or research an educational source with a depth of experience and knowledge in sustainable packaging design to assist you in creating packaging.
 - Ex. Sustainable Packaging Coalition, Cradle2Cradle, Design and Source, EcoEnclose, Dexigner, & Healthy Materials Lab: The New School, Parsons
- Start an open dialogue with your current or new packaging provider regarding eco-friendly alternatives.
- Do research on sustainable companies in your industry and/or product area and the packaging vendors, sources, materials, and alternatives they've used.
- Use the tips in this handout.

The best opportunities for cost-saving, revenue generation, and innovation are:

The best opportunities for cost-saving, revenue generation, and innovation are:

- Size of the packaging
- Material it's made out of
- End of life
- Addressing the most common design mistakes

Common mistakes that make companies miss out on savings & sustainable innovation are:

1. Overpackaging
2. The product takes up more space than it needs to
3. Not optimizing packaging; too much or too big of a package for small products
4. Not optimizing transportation, storage, and selling process of products
5. Materials that can't be easily recycled or reused
6. Inks, adhesives, decorations, & dies that make products bad for us & planet
7. Mixed-material products because they are harder to recycle because you can't take them apart to recycle
8. Not making products pre-measured or concentrated
9. Not testing in use before production to ensure it's functional, healthy, and safe, as well as environmentally sustainable
10. Not asking questions and working with suppliers to ensure product is safe
11. Not looking at each step of production and only the end of life when evaluating footprint
12. Not considering chemical recycling and mechanical recovery
13. Not educating consumers on the sustainable innovations made
14. Not using FTC guidelines to name and label appropriately
15. Not using certified materials or getting new materials certified (ex. Cradle2Cradle)

Principles to keep in mind for sustainable design:

- The product and packaging still need to do what is required:
- Protect the item
- Perform technically
- Market the product to customers
- Have a good appearance for customers to purchase
- Display important regulatory information and price

In addition, consider the following:

1. Sourcing: How was it sourced?
2. Material Health: What is this made of? Can it be made better, healthier, & safer?
3. Optimization: Can this packaging be optimized? Can we reduce waste?
4. Recovery: Where does it go at its end of life? Can we do better?

Make sure you address the following categories:

- Functionality
- Safety
- Health
- Materials that minimize the impact on the environment

Things to do:

1. Generally, you want to reduce the amount of raw materials used
2. Reduce the number of components
3. Reduce the size of your packaging as much as possible
4. Reduce the product's energy requirements
5. Increase the useful life cycle, so it has a longer use
6. Minimize the environmental impact over the entire life cycle of the product
7. Sustainable product development requires a holistic analysis of the total product development and lifecycle using a lifecycle analysis (LCA). This helps evaluate the product during each stage of its useful life from raw material to disposal.

Selecting materials: safe, healthy, materials avoid costs later

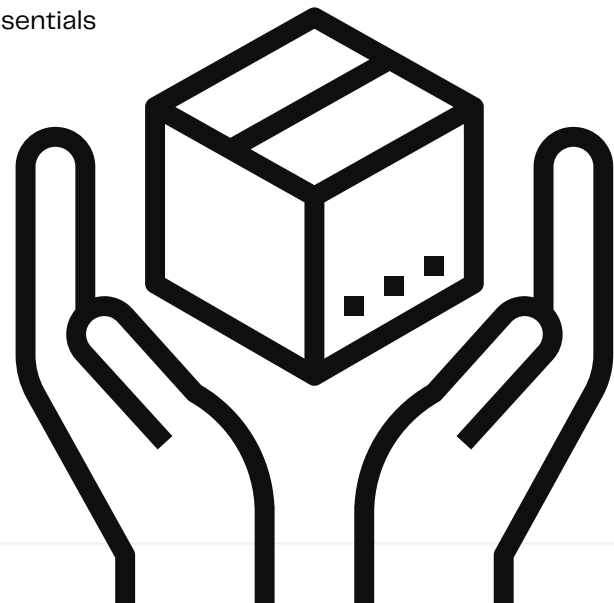
- Investigate similar sustainable products being used in your industry already to see what materials they used and why
- Investigate technology used for sustainable product design and packaging, such as Trayak (COMPASS)
- Use certified materials or get new materials certified (ex. Cradle2Cradle & Parsons Healthy Materials Lab)
- Ask questions:
 - What is the health of the material(s) we're using for this product?
 - Is it something that can be toxic (make someone very sick or cause death)?
 - Are there materials in here that are not necessary?
 - Is it something that causes other severe problems?
 - Can it be made with safer solvents or additives? Can it be nontoxic?
 - Even if it is legal, is it healthy and sustainable?

Packaging Optimization: Saves money on packaging costs and transportation costs

- Redesign it to use the least amount of material while still doing the essentials
- The goal is to create the least amount of waste in production

Questions to ask:

- Can this be made with less material and still be effective?
- Can this material be made with less waste?
- Can it be made with less energy?
- Can you redesign this with less packaging or so it doesn't need packaging at all?
- Who can I work with?



End of life/recovery:

- Think about what happens to it at the end of this product's life (when you're done using it).
- Things to ask:
 - Does it go into a landfill? Where does it go?
 - How are the resources going to be used or recovered?
 - How are the costs of that paid for?
- Big things to look for:
 - Reusable
 - Recycled/Recyclable
 - Composted
 - Biodegradable
- If you're using new materials try to use materials that are easily renewable OR recycled content wherever possible.
- Measure against footprint before making a choice: It may be great to recycle, but only if the overall footprint is smaller.
- Check out programs like Terracycle and Loop.

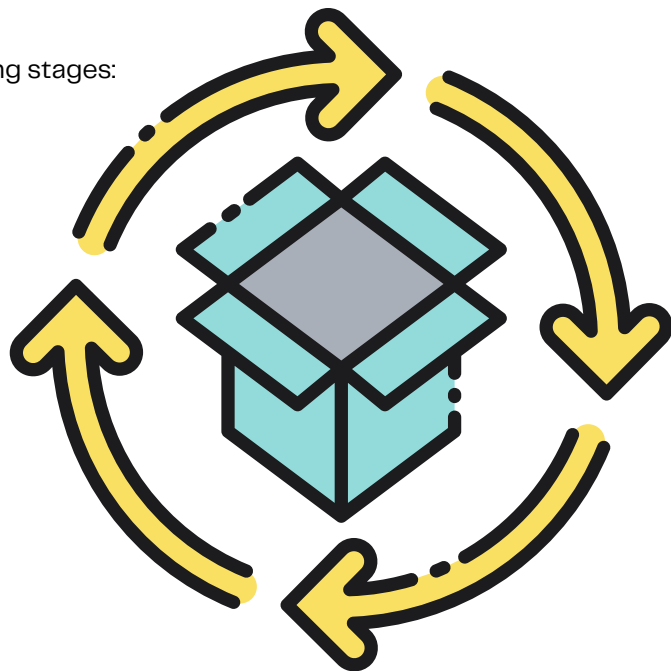
Resources to help you find eco-friendly packaging options:

1. Sustainable Packaging Coalition: Courses and resources on sustainable packaging
2. Cradle2Cradle
3. Green Packaging Group
4. Eco-Enclose

Consider doing a product life cycle estimate and/or assessment: A professional life cycle assessment may be done by an independent third-party.

For an estimate, look at inputs and outputs at each of the following stages:

- Raw Materials
- Manufacturing
- Distribution
- Use By Consumer
- End of Life



RECAP

The goal is to create a product that is:

Reusable and has a long use life
Made of safe and healthy materials
Quality
Packaged in the most optimal manner
Shipped and transported with the least
environmental impact
Disposable in an eco-friendly manner
Best for people, planet, and profit

Tips

- **EFFECTIVE** use of every part of the product and packaging
- **REPURPOSE** materials
- **MULTIPURPOSE** items for use (ex. same box for shipping and returns)
- **REDUCE** package sizes
- **KEEP BOXES** light and small
- **USE THE SPACE TO COMMUNICATE** with customers by directly printing on it instead of including additional flyers, etc.
- **MATERIALS** that are healthy, safe, and environmentally friendly

CONTACT US

businessforgood.pro
team@businessforgood.pro

