

ECODESIGN FOR PACKAGING

DECONSTRUCTING
THE MYTHS

P.4

PROCESS
OPTIMIZATION

P.10



As consumers become increasingly aware of and concerned about the environmental impact of current modes of production and consumption, they're pushing companies to do more, do better and do differently.

Well-designed packaging is ecodesigned packaging.
And that must become the new normal.

That's why the creative agencies and designers who work on companies' packaging process must take a step back to see the whole picture before jumping on the environmental bandwagon.

LG2's packaging design team and Éco Entreprises Québec's ecodesign and circular economy team have joined forces to create a handy guide. This guide is the result of analyses looking at all opportunities for integrating ecodesign into the creative design process.

DECONSTRUCTING THE MYTHS

DECONSTRUCTING THE MYTHS

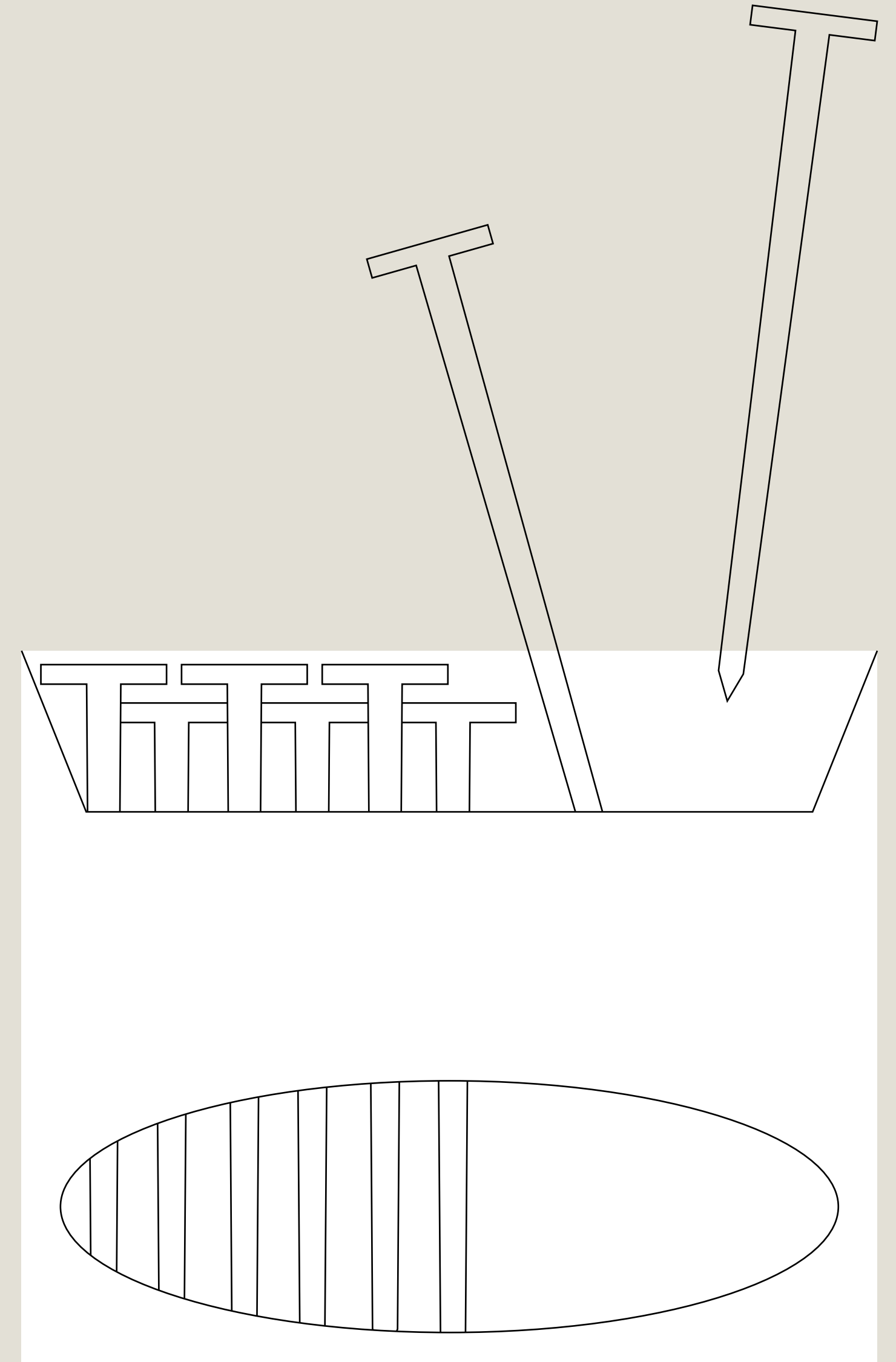
**01 PACKAGING
HAS A PURPOSE!****No packaging, no products!**

Packaging does a lot for a product. It's used to protect, transport, preserve, sell and convey required and helpful information to consumers.

The goal is to think about each packaging function, rather than to simply avoid using it.

Packaging's environmental footprint is just the tip of the iceberg of a product's environmental footprint and the global production and consumption system. Yes, we need to rethink packaging, but we also need to keep in mind that actions and changes need to be made on other levels to reduce our impact.

Packaging is important to the prevention of loss and waste of perishable products such as food and pharmaceuticals. In fact, food waste often has a bigger environmental impact than the packaging itself.



DECONSTRUCTING THE MYTHS

02 IS BULK THE SOLUTION TO PACKAGING?

Even when dealing with products in bulk, packaging is always part of the process—for delivery, handling, distribution and even when consumers bring it into a store.

Bulk sales require different business models, which means rethinking supply (frequency, types of container), packaging, warehousing, marketing and logistics including stock rotation, conservation, loss, contamination, waste, cleaning/washing, etc.

For consumers, that means new ways of consuming: Returning containers and packaging and bringing in their own, making sure they're clean for eating and having the right storage conditions at home.

The rules of ecodesign apply to sustainable bulk packaging as well: We need to ask the right questions, make compromises and not be fooled by shiny new ideas.

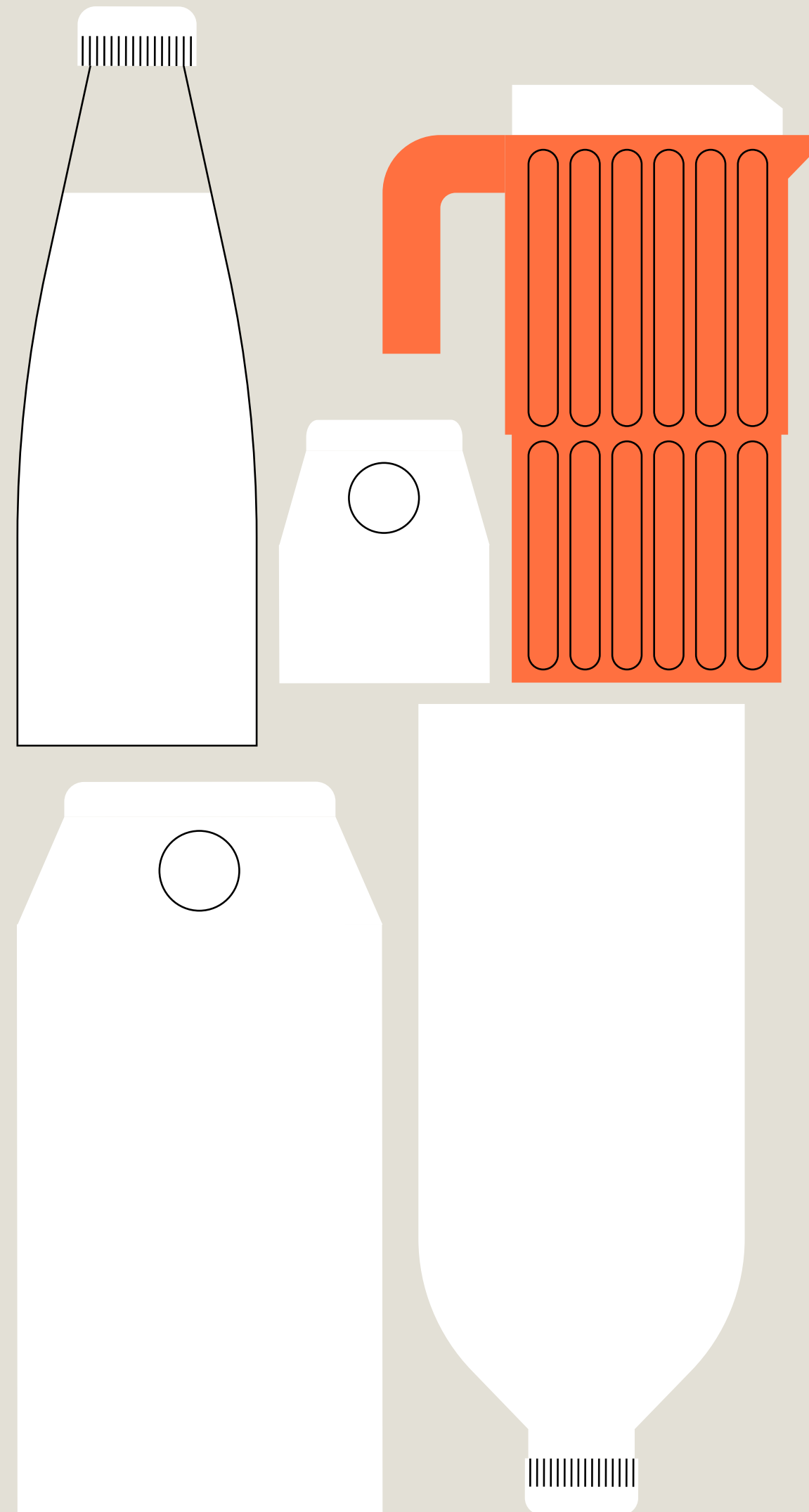
Remember: even after repeated use, all good packaging must (eventually) come to an end. So reusable packaging that can be recycled is an even better option!

03 STANDARDIZED CREATIVITY: IT CAN BE DONE!

Creativity doesn't stop at designing new packaging. Sometimes, the desire for a product to stand out or be unique makes things even more challenging for the packaging industry. So how can we ensure creativity while taking a shared approach to improving packaging's environmental performance, from design to end-of-life management?

First, we need to prioritize earmarked approaches or packaging standards, with respect to both choice of material and the end product.

The best example of the collaboration between creation and standardization is the canning industry for a host of food products.



04 MY MATERIAL IS BETTER THAN YOURS!

For starters, you need to know your product and what it takes to protect and preserve it before you decide how to package it.

Then there are the materials, their properties and life cycle: where they're from, how they're produced, their end-of-life scenario, etc.

Production, distribution and marketing methods also influence the choice of packaging materials. It's all about making compromises and choosing the right combinations.

Each material has its upsides and downsides. So what about plastics?

The problem with plastics (because there are so many types) is not just the material, but their use. Plastic is durable, but is mainly used for short-term single-use purposes.

The goal is not to avoid plastic altogether, but rather to think about solutions that address more than just their material properties. Some plastics, for example, can be repeatedly reused and successfully recycled.

DECONSTRUCTING THE MYTHS

05 RECYCLING COMMUNICATIONS ARE NOT ALL CREATED EQUAL.



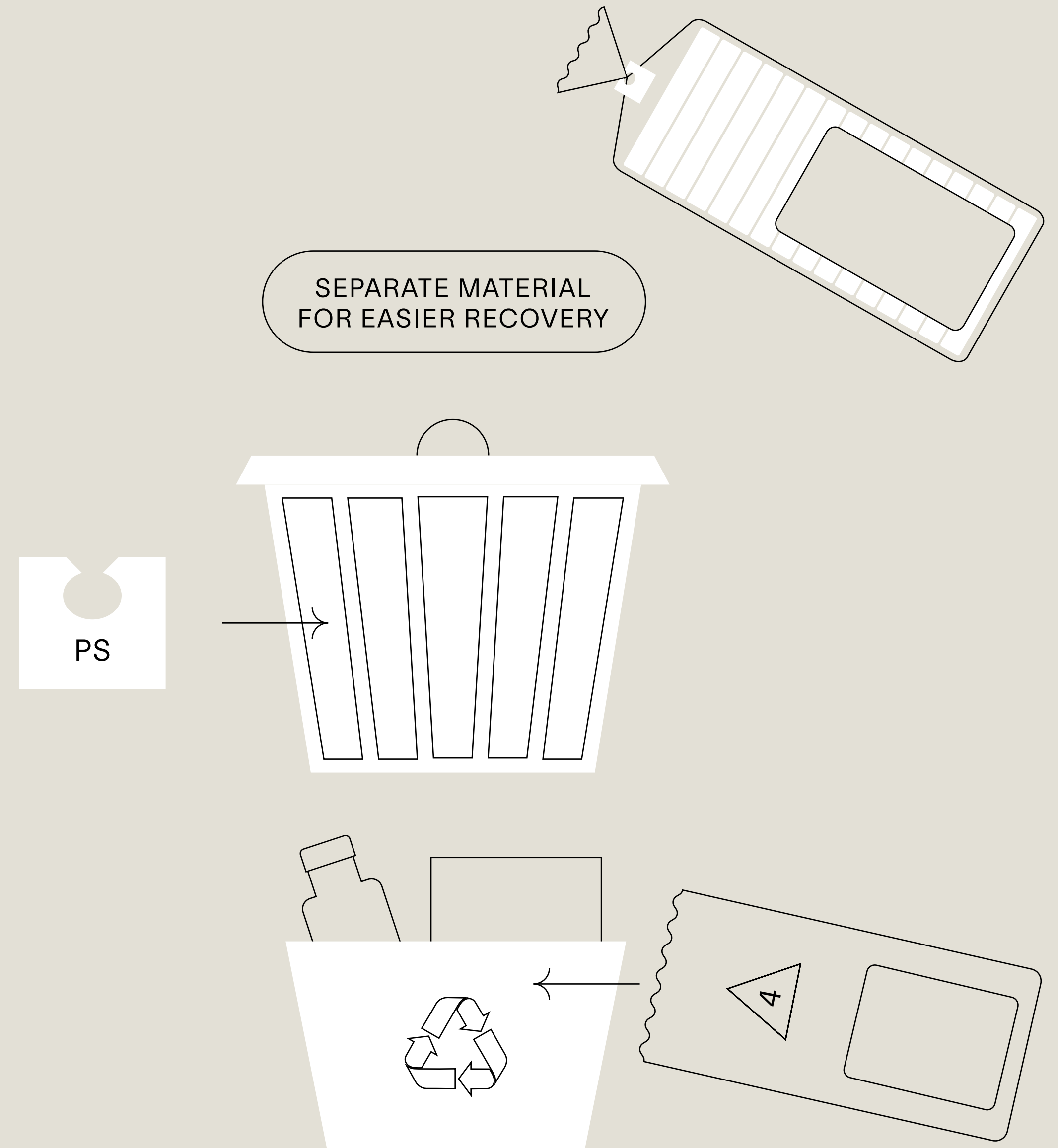
Don't use the recycling logo without any supporting information. Since the logo is self-declared and not verified by any third party, it doesn't actually indicate a packaging's recyclability and doesn't provide enough information about the sorting process and the stages of the material, from collection on through to packaging.

In recycling, clear, effective communication is key. That's why it's not a good idea to create new visuals, icons or logos when referring to recycling. It's also important to avoid any forms of greenwashing and misleading descriptions such as ecological, green, good for the planet, biodegradable, environmentally friendly, non-polluting, preserves nature, etc.

The identification code (a triangle with a number) must be used to identify the type of plastic resin used and to facilitate proper processing by waste management and recycling facilities. This code should not be used alone as a means of suggesting the packaging is recyclable. Moreover, ASTM¹ standards specify that the symbol should not be placed near the recycling logo or near the term "recyclable."

But design does play a key role when it comes to the instructions for managing every aspect of packaging. This can be thanks to a short phrase, an intuitive pictogram or a simple message. It can also be used as a strategy for communicating a company's brand image and values.

It is also important to ensure that any sorting instructions included apply in the provinces and/or territories where the packaged product is sold. Otherwise, it's important to point out that recovery and recycling regulations vary across Canada and that the packaging in question may not be accepted in some regions.



¹ ASTM International (2021). D7611/D7611M-20 – Standard Practice for Coding Plastic Manufactured Articles for Resin Identification.

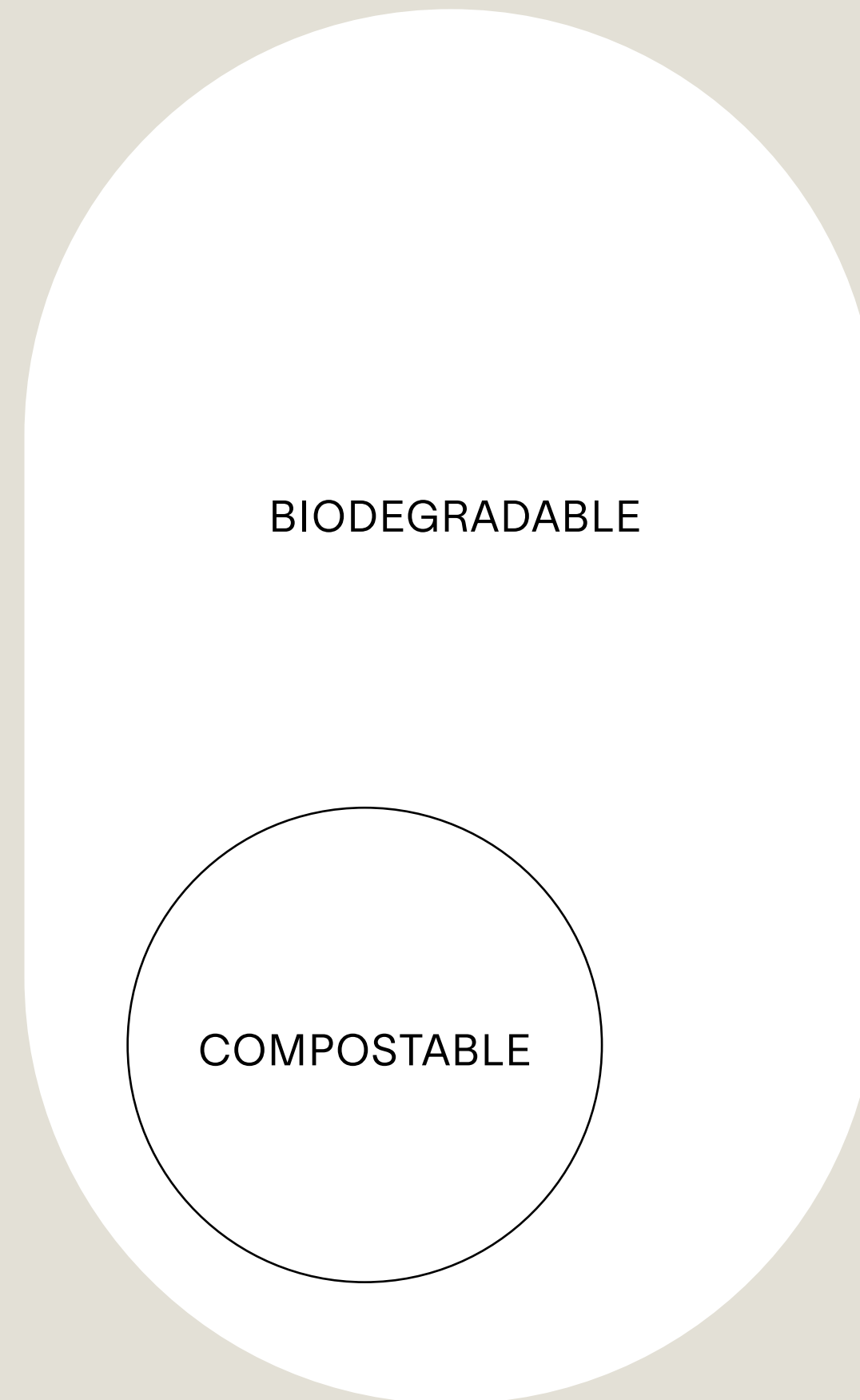
DECONSTRUCTING THE MYTHS

06 THINK ABOUT PACKAGING BEYOND RECYCLABILITY.

Recycling of packaging is certainly a consideration in terms of design, but there are other stages of packaging's life cycle that must be thought through. We must think about the packaging's entire life cycle, because it will have a full life before it is no longer used.

That said, a focus on recyclability is certainly a step in the right direction. As the saying goes: "Garbage in... Garbage out..."

The design choices we make will influence the recyclability of the packaging. This applies to materials, pigmentations, formats, barriers, coatings, additives and labels as well as adhesives and inks.



07 COMPOSTABLE PACKAGING IS NOT A MIRACLE SOLUTION.

The terms "biodegradable" or "compostable" on packaging can be confusing and may be a form of greenwashing. Here's why:

- 01** A self-declared environmental claim by a company with no independent third-party verification raises doubts about the actual biodegradability and compostability of the packaging. And companies are not obliged to affix such a declaration to its packaging.
- 02** A claim backed by a certification program may not always reflect reality, since certification is based on laboratory analyses conducted under specific, controlled and ideal conditions.

Unlike recycling, composting and biomethanization stream (the latter being a process where organic material is microbiologically converted to biogas under anaerobic conditions) are intended to produce quality compost from organic and putrescible materials, and not to manage plastic packaging.

Keep in mind that compostable plastics are biodegradable, but not all biodegradable plastics are compostable.

The term "biodegradable" is being increasingly questioned, both nationally and internationally, with many people raising issues about its use. The term has even been banned by some.

The similarity between recyclable plastics and plastics that are labelled "compostable" confuses the public and can lead to accidental contamination in both recycling and composting systems, which is yet another problem.

Ultimately, compostable packaging is not an easy alternative to single-use plastic, nor a way to reuse materials from which plastic is made. That's why we need to think twice!

To learn more about compostable packaging, see the [report by Éco Entreprises Québec](#).

DECONSTRUCTING THE MYTHS

IN AN IDEAL WORLD, PACKAGING:



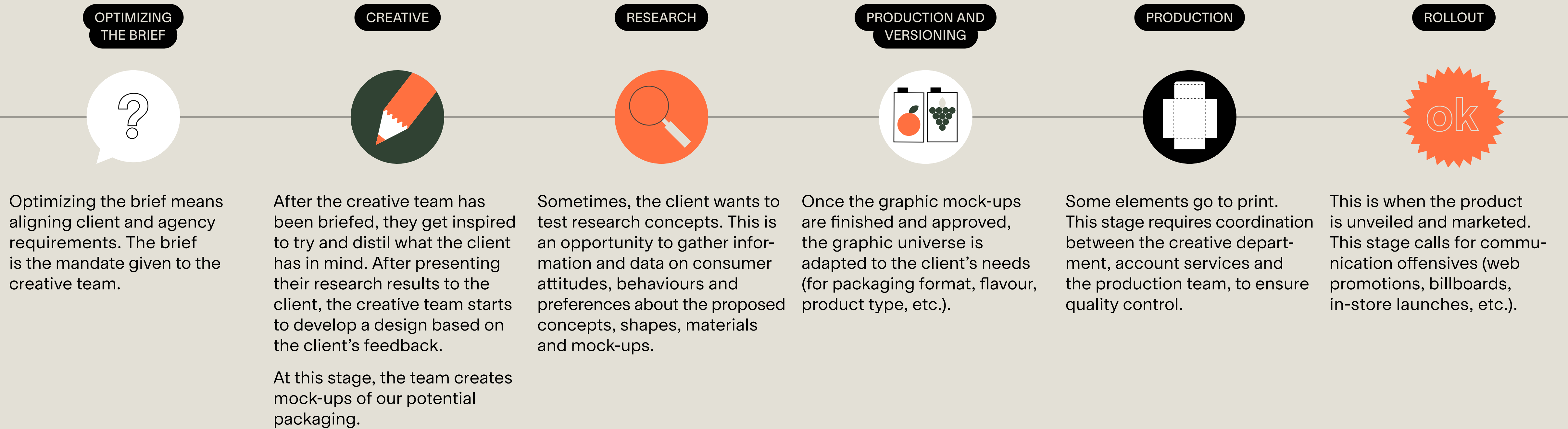
08 THERE IS NO SUCH THINGS AS PERFECT UNIVERSAL PACKAGING!

Packaging has to be adapted to meet standards, regulations, specific requirements and more. It often requires juggling numerous criteria and making compromises. That's why packaging designers need to take their time: Ecodesign takes patience, requires new ways of exploring the world of possibilities and the willingness to do away with new ideas that aren't that environmental or relevant. What's more, ecodesign requires tact, consistency and a good dose of humility.

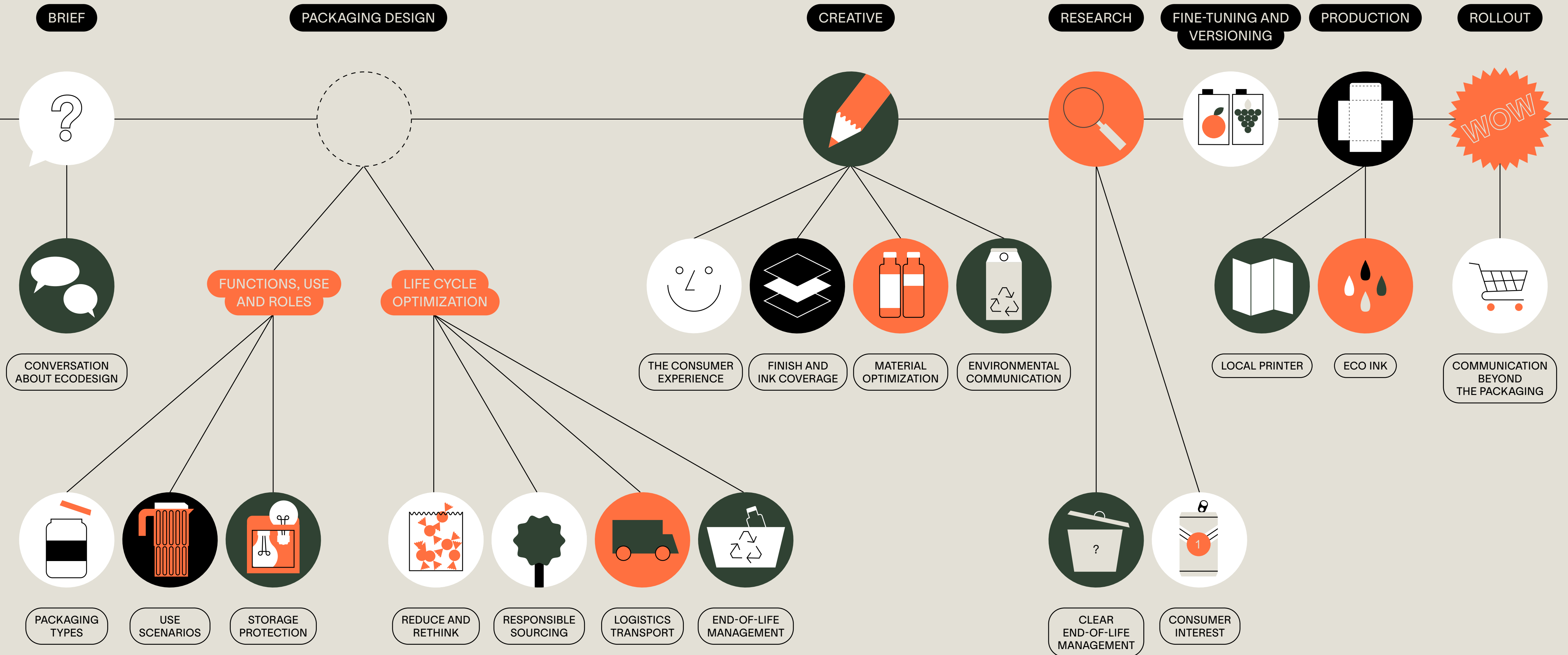
PROCESS OPTIMIZATION

In an ideal world, changes would be made as of the very first stages of creating a printed piece or packaging. But reality doesn't always work that way. A product's design can be improved to make it more eco-responsible at any stage of the process, no matter how big or small the improvement might be. Every change matters.

CURRENT PROCESS



OPTIMIZED PROCESS



OPTIMIZED PROCESS

01 BRIEF STARTING A CONVERSATION ABOUT ECODESIGN.

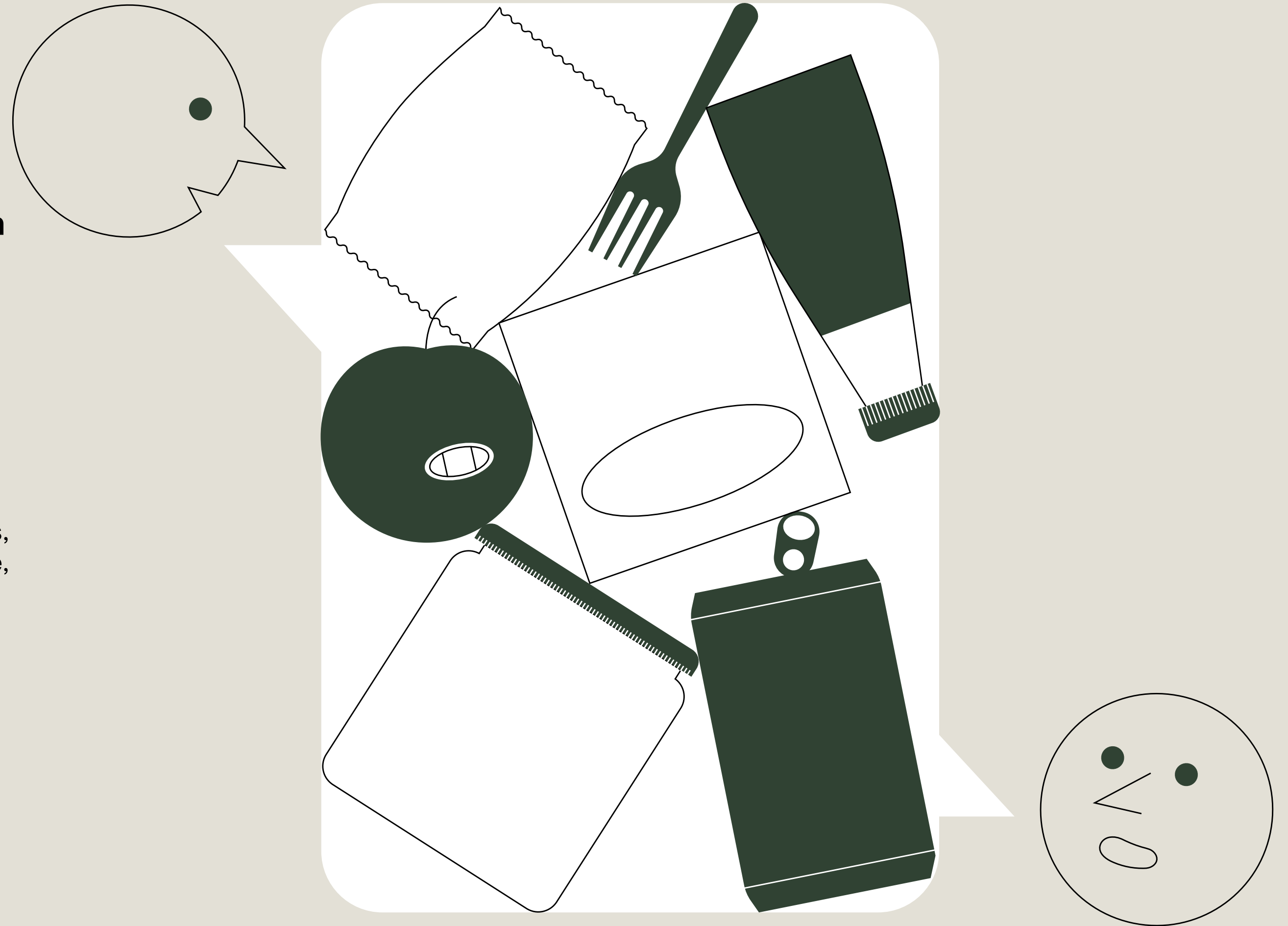


Your client will want to know about the benefits of ecodesign and taking environmental action. There are so many: from economic benefits such as reduced procurement, printing and transportation costs to regulatory benefits such as material bans and extended producer responsibility. With the value ecodesign generates, your client will be better positioned with consumers.

What's more, you can get a sense of your client's needs starting with your first conversations, by talking about the aspects outlined on the following pages, including packaging life cycle, function, use and roles.

During the briefing stage, you can decide which creative ideas are essential and which are ideal/nice-to-have.

By including ecodesign in the briefing stage, agencies can become influential players that use their creativity to build a greener future and guide social change.



OPTIMIZED PROCESS

02 PACKAGING DESIGN FUNCTIONS, USE AND ROLES

HAVE YOU CONSIDERED YOUR PACKAGING'S FUNCTIONS AND ROLES?



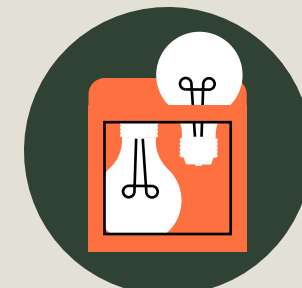
THINK ABOUT THE TYPE OF PACKAGING IN A MARKETING CONTEXT

- Are you striving for single-use, a short life, reuse or bulk?
- Avoid single-use compostable packaging if there is a reusable or recyclable alternative.



ENVISION THE PACKAGING'S USE SCENARIO

- Have you thought about the people factor? Who will use it? How will they use it?
- Think about how to open your packaging as well as how to hold and handle it.



THINK ABOUT PROTECTING AND PRESERVING YOUR PRODUCT

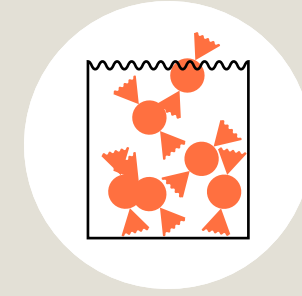
- Packaging is a barrier against humidity, light, gases, germs and bacteria. It prevents and reduces the risk of breakage, theft and product tampering.
- If the packaged product is damaged or broken due to lack of protection, the product is deemed “underpackaged.” And if the product’s need for protection was overestimated or if the packaging only increases the product’s visibility or attractiveness without enhancing protection or processing, it is deemed overpackaged.” The key is to use the right balance of material to serve the needs of the packaged product.

OPTIMIZED PROCESS

02 PACKAGING DESIGN LIFE CYCLE OPTIMIZATION

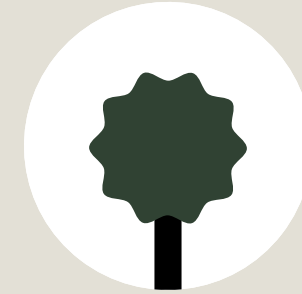
WHAT ACTIONS CAN YOU TAKE TO OPTIMIZE THE PACKAGING LIFE CYCLE?

For now, the packaging design stage often happens at the client's premises. That means that the creative agency's designer is usually briefed after the client has defined the container, type of material, shape, template, printing methods, location and colours. We suggest analyzing the opportunities for ecodesign—the choice of materials, shapes and formats, for example—by including them in the briefing step, rather than leaving them upstream, to ensure that the ecodesign makes an impact on the market.



REDUCE AND RETHINK PACKAGING AS OF THE DESIGN STAGE

- Strike a balance between under- and overpackaging.
- Reduce mass or volume.
- Limit excess headspace.
- Reduce or eliminate extra packaging components.
- Design with the entire packaging ecosystem in mind (primary, secondary and tertiary).
- Reduce label size.



CHOOSE RESPONSIBLE SOURCING

- Include recycled content.
- Choose material with reliable, transparent certification.
- Avoid toxic or hazardous substances (PFAS, BPAs, etc.).
- Reduce supply distances and choose suppliers or manufacturers based in Quebec.

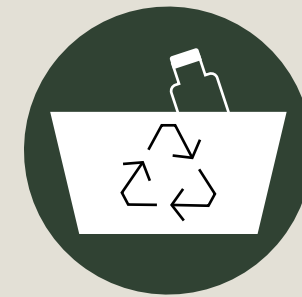
OPTIMIZED PROCESS

02 PACKAGING DESIGN LIFE CYCLE OPTIMIZATION

WHAT ACTIONS CAN YOU TAKE TO OPTIMIZE THE PACKAGING LIFE CYCLE?

**RETHINK PACKAGING LOGISTICS AND TRANSPORT BY OPTIMIZING:**

- The amount of primary packaging in secondary packaging
- Size of secondary packaging
- Palletization
- Minimizing weight and size

**CONSIDER END-OF-LIFE MANAGEMENT**

- Choose materials that are truly recyclable and widely accepted in Quebec's curbside recycling programs, and that have multiple end markets.
- Design packaging from a single type of material. If several components are needed, make sure they can be separated.
- Use wood fibres and avoid alternative fibres.
- Avoid using PVC, PLA and compostable plastic packaging (for more information, consult this report).
- Minimize the use of dyes, inks and glues.
- Reduce or avoid the use of pigments that contain carbon black.
- Avoid metallized or plasticized coatings.
- Favour transparent PET and avoid opaque or coloured PET.
- Avoid tiny packaging components.
- Think about packaging reuse.

OPTIMIZED PROCESS

03 CREATIVE WHAT ACTIONS CAN YOU TAKE AS A DESIGNER?

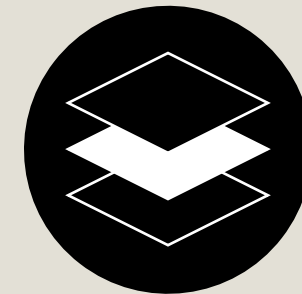


Whether or not the creative team was involved in decisions around packaging design, you can always make positive changes. Every action, no matter how small, is important and can make a difference to the big picture.



THINK ABOUT THE CONSUMER EXPERIENCE

- Visualize the product consumption experience, from purchase to end-of-life.
- Design packaging to minimize product loss and waste during use (make it possible to empty out contents, optimize package closure so that the product can be portioned out and fully used, etc.).
- Simplify handling and minimize risks to human health and the environment (that is, minimize risks of injury, breakage and contamination).
- Allow packaging to be reusable and refillable, according to context.
- Avoid unboxing experiments that encourage overpackaging.



ENHANCE FINISHES AND OPTIMIZE INK COVERAGE

The creative team can make choices about materials, format and finishes the same way they consider the packaging's end-of-life management:

- Reduce the use of non-renewable resources (mineral inks).
- Minimize ink coverage and print area.
- Optimize fonts and weights.
- Don't be afraid of white space: eliminate the unnecessary.
- Don't print on cut-outs or parts that aren't visible to consumers.
- Avoid metallic or plasticized stamps.
- Avoid dark pigments, such as carbon black, which makes package recycling more difficult.
- Use ink that is not water-soluble on labels.

OPTIMIZED PROCESS

03 CREATIVE WHAT ACTIONS CAN YOU TAKE AS A DESIGNER?



OPTIMIZE YOUR MATERIALS

- Suggest materials that have recycled content.
- Choose mono-materials whenever they meet the product's needs and properties.
- Use water-soluble adhesives.



DEVELOP ENVIRONMENTAL COMMUNICATION THAT IS CLEAR, HONEST AND FAIR

- Clearly identify the materials used in each packaging component.
- State the nature of the recycled and recyclable materials.
- Indicate the environmental certification of the material.
- Include sorting instructions for each component (for details, please see the [handy guide for communicating ecodesign packaging](#)).

OPTIMIZED PROCESS

04 RESEARCH HOW CAN WE INVOLVE THE CONSUMER?



It's possible—even common—to involve consumers in the research stage. Testing visuals, shelf impact, taste, etc., helps to ensure that products will be widely accepted.

Get consumers' input at this stage in order to ensure the ecodesigned product won't be rejected by shoppers and end up in a landfill, resulting in material and financial losses.



TESTING THE CLARITY OF PRODUCTS' END-OF-LIFE MANAGEMENT

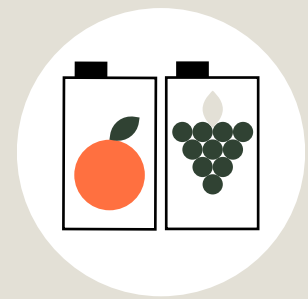
When the product or container reaches the end of its life, does the consumer understand how to dispose of it? Is the sorting information on the packaging clear?



TESTING CONSUMER INTEREST

Test certain aspects of eco-responsibility with consumers. For example, are they willing to pay more for an eco-responsible product? Would they buy the product if they can no longer see the contents through a window? Do they find the product attractive even if the colour of the packaging material is altered because of its recycled content?

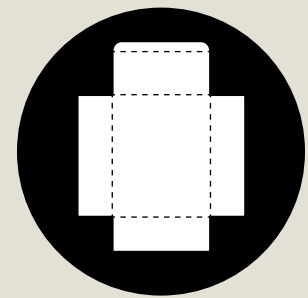
05 FINE-TUNING AND VERSIONING



Advice and actions from the creative stage can be applied at the finalizing and versioning stage, including consumer experience, environmental communication, ink coverage and finishes or choice of materials.

OPTIMIZED PROCESS

06 PRODUCTION HOW CAN YOU MODIFY YOUR USUAL PRODUCTION METHODS WITHOUT ALTERING THE FINISHED PRODUCT?



CHOOSE YOUR PRINTER

Choose a local printer (nearby regions, provinces or states) with proven knowledge, leadership and performance at managing their environmental footprint.

For more information on the type of questions to ask, visit this [section of the Éco Entreprises Québec portal](#).



INTEGRATE ECODSIGN PRINCIPLES

Complete your ecodesign approach:

- Use ecoinking to reduce ink coverage, visuals and fonts, but also to eliminate the unnecessary. For more details, see this guide prepared by [Citeo](#) (in French only).
- Choose vegetable-based, non-toxic ink and avoid metallic finishes.
- Opt for non-toxic, water-soluble adhesives.
- Minimize label coverage (size) and thickness.

OPTIMIZED PROCESS

07 **ROLLOUT** INTEGRATE ECODESIGN INTO THE ROLLOUT STRATEGY AND PROMOTIONAL MATERIAL.



You can move beyond packaging and refine your ecodesign efforts by applying the tips presented here to promotional material as well. And always think about reducing, reusing, recycling and keeping things sustainable.



4051 MOLSON STREET
SUITE 100
MONTREAL, QUEBEC H1Y 3L1
+1 514 281-8901



1600 RENÉ-LÉVESQUE BLVD. WEST
SUITE 600
MONTREAL, QUEBEC H3H 1P9
+1 514 987-1491