B Beauty

Navigator

THE PACKAGING EVALUATION GUIDE

INTRODUCTION PACKAGING EVALUATION TOOL

Understanding what sustainable packaging really means is key to ensuring brands can make informed choices. Although definitions of sustainable packaging can vary, as an example, the Sustainable Packaging Coalition defines sustainable packaging as packaging that is beneficial, safe and healthy for individuals and communities throughout its life cycle; meets market criteria for performance and cost; is sourced, manufactured, transported, and recycled using renewable energy; optimizes the use of renewable or recycled source materials; is manufactured using clean production technologies and best practices; is made from materials healthy throughout the life cycle; is physically designed to optimize materials and energy; and is effectively recovered and utilized in biological and/or industrial closed loop cycles.

The purpose of this document is to provide a B-Beauty packaging guide that brands can refer to when considering packaging selection. This guide includes a list of criteria and questions to make sustainable and conscious choices throughout the packaging development process.

HOW TO USE

The perfect universal packaging does not exist. For each new product, several criteria are important to consider in order to identify the best sustainable packaging for the specific product, including its application, distribution, etc.

- In the “Tool” section, you will find the different criteria to consider. For each criteria , a few questions are highlighted to guide the thinking and selection process. Some examples of Best Practices and Worst Practices are shown in the last two columns. In the “Packaging Development Phase” column, you can filter the information relative to the stage of development you are in..
- An explanation of the different development stages can be found in the “Packaging Development Phase” section. From concept through to distribution, the packaging you choose will have an impact on how sustainable it will be.
- Definitions of terms are provided in the “Definitions” tab, to ensure clarity and alignment throughout the beauty industry.
- The “Materials” tab highlights the most common materials used in the beauty industry, including pros and cons of each material.

NOTES

This document aims to guide users on how to select the most optimal packaging for their requirements. While this document provides an extensive overview, the list of questions is not exhaustive. The Best and Worst Practices reflected in the document are based on the Working Group' experience, and should be used as guidelines rather than a unique source of truth.

The scope of this document targets only the most common packaging, and does not cover innovative packaging such as grass paper, mycelium-based materials, etc.

	CRITERIA	CATEGORY	PACKAGING DEVELOPMENT PHASE	QUESTIONS TO CONSIDER	BEST PRACTICES	WORST PRACTICES
1	Aesthetic	Aesthetic	Concept generation	1. Does the packaging follow eco-design* principles? 2. What environmental claims are on the design?	Representative of eco-design principles Clear and transparent environmetal/social messages (educational/inspirational tool)	Over-packaging design Unclear/Missing environmetal/social messages
2	Material type	Technical / Sustainability	Concept generation	1. What is the principle component of the packaging?	PE HDPE LDPE PP PET Glass Aluminium Steel Paper Cardboard Bamboo (only if reusable) Wood (only if reusable)	PS PVC PVdC Waxed & siliconised paper
3	Size	Technical / Sustainability	Concept generation Research Development	1. Is the packaging filled to the maximum? 2. Is the packaging oversized for aestitics (e.g.: double wall jars, bottles with empty bottom...) 3. Is the box optimized to the content? 4. Is the packaging detectable in sorting facilities? Is the packaging large enough to be detected? Is the label too large to detect the below container? 5. Is the packaging design to be multi-dose?	Container size appropriate for market/product category Multi-dose packaging and/or material/type of single-dose packaging that is recyclable & recycled content Reduced labels size Reduced box size (no empty spaces)	Over-sized packaging (aesthetic need) Single-dose, non-recyclable and/or with no recycled content Full-body labels (prevents proper recycling in selection stream)
4	Cost/Taxes	Cost	Concept generation Research Development	1. Is the packaging made with materials with reduced EPR-taxes? 2. Does the packaging contain recycled material? 3. Is the packaging biodegradable or compostable?	Materials with advantages in EPR systems: recycled biodegradable/compostable Materials/Packaging system with reduced EPR-systems taxes: Paper Aluminium Glass Easy recyclable plastic (PET, HDPE, PP) Multi-material/Laminated	Materials not easy to recycle with high EPR-systems taxes: laminated/multi-material flexibles black/coloured plastic
5	Environmental impact (CFP, WFP, certification)	Sustainability	Research	1. Does the packaging have verified environmental certificates? 2. Is an LCA for the packaging available? 3. Is the carboard/paper FSC certified?	Low-carbon emission materials Low-impact materials/processes supported by verified LCAs FSC-certified paper Certified recycled content	High-impact materials Not FSC-certified paper Unverified "green" claims
6	Social impact	Sustainability	Research	1. How far is the packaging production site? 2. Does the packaging production support local communities? 3. Does the supplier have social certifications?	Local production Material/packaging production process not harmful for workers Supporting local communities Supports women's / underrepresented communities entrepreneurship Certified social audits (SEDEX, BSCI, etc.)	Un-audited/uncontrolled production overseas Material production in harmful/unverified working conditions High waste production/emissions/poor waste management

	CRITERIA	CATEGORY	PACKAGING DEVELOPMENT PHASE	QUESTIONS TO CONSIDER	BEST PRACTICES	WORST PRACTICES
7	Material origin	Sustainability	Research	1. Is the packaging made of fossil materials? 2. Is it bio-based? 3. Is it based on renewable or non-renewable sources? 4. Does it include recycled content?	Renewable origin Post-consumer recycled Bio-based	Fossil fuels (coal, crude oil, natural gas) Non-Renewable
8	Recycled content	Sustainability	Research	1. Does the packaging contain recycled material? 5. What is the % of recycled content?	High percentage of post-consumer and post-industrial recycled material (no compromise on safety)	No content of recycled materials
9	Manufacturing process	Technical / Sustainability	Research Development	1. Is the packaging production process optimized (energy, water, waste)? 2. Is the use of colours/additives reduced? 3. Does the supplier have ISO/GMP certification?	Energy efficient production process Energy Management certified (ISO 50001) Use of renewable energy/fuel Recycling of scrap (process metal) Reduced use of additives (colour, materials properties) Quality certified (ISO9001, etc.) Good Manufacturing Practices certified (GMP) (ISO, etc.) Environmental Management certified (ISO 14001, etc.)	Production process based on fossil energy/fuels Innefficient managment of scrap (process metal) High use of additives (unnecessary for pack functionality, eg. metal coatings, paint, etc.)
10	Logistic	Technical	Research Development Distribution	4. Is the secondary packaging necessary? Can information be conveyed by other means? 5. Is the tertiary packaging optimized to the content? 6. Does the pallet contain as many pieces as possible? 7. Can tertiary packaging be reused for several cycles?	Light weight tertiary packaging Reduced empty space within boxes Reduced need for protective filler Optimization of pieces per pallet. Minimise packaging Reusable tertiary packaging Naked products or uneccessary secondary packaging or leaflets on use, additional info, QR instead etc. Minimise practices that result to smaller quantities of product in tertiary/secondary packaging (POS).	Oversize/heavy tertiary packaging Excessive use of protective filler Unnecessary empty spaces on pallet
11	Longevity	Technical / Sustainability	Research Development Distribution	1. Is the packaging design for a single use? 2. Is the packaging able to be reused/refill? 3. Can the packaging easily be damaged/broken? 4. Is the packaging resistant to chemcical/water/air?	Strong Break-resistant Durable Design to be reused Chemical-resistant	Fragile Single-use Inert
12	End of Life	Sustainability	Research Development Distribution	1. Is the packaging able to be reused/refill? 2. Is the packaging recyclable or designed-to-be-recycled? 3. Does the packaging structure facilitate recycling process?	Reusable Refillable Recyclable Design-to-be recyclable Design-to-be-reused Mono-material (facilitates recycling)	Single-use Materials that are not widely recyclable (laminates, black plastic) Non-compatible component materials (PET and PS, PE and PVC)
13	Safety	Regulatory	Research Development Distribution	1. Has the packaging been tested for migration of harmful substances? 2. Does the packaging have all the certificates of conformity with the Cosmetic Regulation? 3. Has safety-in-use been tested?	Compliant with all Cosmetic Regulations No migration of chemicals to product Break-resistant/Not harmful for consumer in use	Contains substances not permitted by Cosmetic regulation Hygh risk of break in use/High risk of danger for consumer

	CRITERIA	CATEGORY	PACKAGING DEVELOPMENT PHASE	QUESTIONS TO CONSIDER	BEST PRACTICES	WORST PRACTICES
14	Eco-design	Sustainability	Development	1. Is the packaging designed to be reused/refill? 2. Has the weight of the packaging been reduced? 3. Are there components that can be eliminated? 4. Is the packaging mono-material or does it have components of different materials? 5. Is the packaging material on the list of materials compatible with recycling? 6. Is the colour of the packaging compatible with the sorting process in recycling systems?	Reduced use of raw materials Lightweight (no compromise on safety, functionality and longevity) Elimination of unnecessary component(s) (box, inner, leaflet) Easy emptying, cleaning, and drying - No residual product Mono-material No direct printing Easy detachable parts Compatible component materials in the recycling process Transparent/light colours (plastic) NIR-detectable black plastic Mono-flexible films Recyclable labels Suitable for post-use treatment to enable refill/resue	High packaging/product weight ratio Superfluous elements (unnecessary for safety/funtionality) Difficult to empty completely (tight neck, content level not visible, rigid) Multi-material Laminated Direct printing Welded parts of different materials not easily separable Black (not NIR-detectable) / Opaque colored plastic Complex laminated film (aluminium layers)
15	Compatibility (Nature of the product)	Technical	Development	1. Does the packaging provide a good oxygen/water barrier? 2. Is there contamination possible between the packaging and the product? 3. Is the product staying stable along the full shelf life (visual, chemical and physical properties)? 4. Is it possible to easily finish the product within the shelf life?	Protect the product from air/humidity Prevent water losses Mantain product chemical/physical properties Avoid cosmetic product waste	Water/oxygen leakage Change in product aspect/chemical/physical properties High quantity of product residues
16	Compatibility (Packaging elements)	Technical	Development	1. Has the compatibility of container and closure been tested? 2. Does the coupling of the components allow the correct closure to be maintained? 3. Is there a seal to guarantee the safety of the packaging before purchase? 4. Has the label adhesive been tested?	Compatibility of container and closure Leakproof design Color/Labels resistance Compatibility of product and packaging Intermediate seal - seal before use Internal linings (aluminium)	Leakage due to incompatibility of container and closure Incompatibility of container material and label adhesive Defect in varnish
17	Machinability	Technical	Development	1. Has the packaging been tested to be machinable? 2. Is the packaging filling process efficient from a waste/scrap perspective?	Designed to be efficiently machinable Minimum scrap/waste during/after packing phase	Difficulties in handling during the packing phase High number of scraps

PACKAGING

The European Directive 2004/12/EC defines packaging as all products made of any materials to be used for the containment, protection, handling, delivery, and presentation of goods, from raw materials to finished products, from the producer to the user or the consumer, including non-returnable items used for the same purposes. Effective packaging makes a positive contribution towards achieving a sustainable society by, e.g.:

a. Meeting consumer needs and expectations for the protection of goods, safety, handling, and information.
b. Efficiently using resources and limiting environmental impact.
c. Saving costs in the distribution and merchandising of goods.

SOURCE: European Directive 2004/12/EC on packaging and packaging waste

https://www.iso.org/obp/ui/#iso:std:iso:18604:ed-1:v1:e

RECYCLABILITY

Packaging is recyclable if it can be collected, sorted, reprocessed, and ultimately reused in manufacturing or making another item. A package is recyclable only if there is a substantial likelihood that it can do all those things in most communities where an item is sold. Recyclability is affected by a number of factors. The first consideration is the availability of recycling programs for a package: are the majority of people able to take this package to a drop-off recycling location or put the package in their curbside recycling bin? Another consideration is the technical recyclability—the likelihood that it will be properly sorted into the correct bale at a Material Recycling Facility (MRF) and whether it's able to be reprocessed successfully.

SOURCE: https://sustainablepackaging.org/101-recycled-content-vs-recyclability

RECYCLED CONTENT

If a package contains recycled content, it means it was made of recycled material. Recycled material can be derived from two sources: post-industrial or post-consumer. ISO 14021 defines recycled content as "the proportion, by mass, of recycled material in a product or packaging. Only pre-consumer and post-consumer materials shall be considered as recycled content, consistent with the following usage of the terms:

Pre-consumer material: Material diverted from the waste stream during a manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Post-consumer material: Material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose. This includes returns of material from the distribution chain." For the purposes of the calculation, the term 'product' refers to the final product as delivered to the construction site and incorporated in the works.

PCR or post-consumer recycled content packaging utilizes materials that have already been produced and used before. These materials enter the recycling stream, are collected into bales and then either melted down or made into pellets, to be reused again into packaging or other items. The greatest benefit of using PCR materials is that they prevent other materials from ending up in the landfill.

SOURCE: https://www.greenspec.co.uk/building-design/recycled-content/

UNI EN ISO 14021 Environmental labels and declarations — Self-declared environmental claims - Type II environmental labelling

BIO-BASED MATERIAL

The term “bio-based” refers to material feedstock sourcing – the beginning of a package’s life cycle - and means that the material or product is (partly) derived from biomass (plants). The terms “bio-based,” “renewable,” and “biotic” are interchangeable. Tree fibre-based packaging materials are the classic example of bio-based packaging, and the realm of fibre-based packaging materials is complemented by novel uses of other bio-based sources of fibre such as wheat straw, kenaf, and bamboo. The other realm of bio-based packaging materials are bioplastics. Bioplastics can be made from an equally diverse range of feedstocks, including corn starch, sugarcane, and a wide variety of other sources like potatoes, algae, mycelium (mushroom “roots”), and food waste. According to European Bioplastics, a plastic material is defined as a bioplastic if it is either bio-based, biodegradable, or features both properties. The family of bioplastics is divided into three main groups:

1. Bio-based or partly bio-based, non-biodegradable plastics such as bio-based PE, PP, or PET (so-called drop-ins) and bio-based technical performance polymers such as PTT or TPC-ET.
2. Plastics that are both bio-based and biodegradable, such as PLA and PHA or PBS.
3. Plastics that are based on fossil resources and are biodegradable, such as PBAT.

SOURCE: https://www.european-bioplastics.org/bioplastics/

BIODEGRADABLE

The term “biodegradable” refers to a material’s ability to decompose via microbial activity. Biodegradability and compostability both refer to a package’s end-of-life. Most, but not all, biodegradable packaging materials are bio-based. The Sustainable Packaging Coalition views compostability as a more meaningful indicator of a package’s ability to undergo an environmentally beneficial process at end-of-life, and hence the SPC does not encourage marketing claims of biodegradability.

SOURCE: https://www.eea.europa.eu/help/glossary/eea-glossary/biodegradable

COMPOSTABLE

The term “compostable” refers to a material’s ability to biodegrade within a sufficiently short amount of time in the conditions of a composting operation. These specific conditions are described in standards, such as the European standard on industrial composting EN 13432 (for packaging) or EN 14995 (for plastic materials in general). Many biodegradable products are not compostable, and the terms should not be considered to be equivalent.

SOURCE: https://sustainablepackaging.org/101-biobased-biodegradable-compostable/

ECO-DESIGN

The integration of environmental aspects into the product development process, by balancing ecological and economic requirements. Eco-design considers environmental aspects at all stages of the product development process, striving for products which make the lowest possible environmental impact throughout the product life cycle.

SOURCE: https://www.eea.europa.eu/help/glossary/eea-glossary/eco-design

RENEWABLE RESOURCES

Any natural resource that is depleted at a rate slower than the rate at which it regenerates (e.g., paper, wood, cotton).

SOURCE: Sustainable packaging coalition

NON-RENEWABLE RESOURCES

Any natural resource that is depleted at a rate faster than the rate at which it regenerates (e.g., virgin fossil-based plastic).

SOURCE: Sustainable packaging coalition

VIRGIN MATERIALS

Materials that have not yet been used in the economy. These include both finite materials (e.g., iron ore mined from the ground) and renewable resources (e.g., newly produced cotton).

SOURCE: https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/glossary

NON-VIRGIN MATERIALS

Materials that have been previously used. This includes materials in products that have been reused, refurbished, or repaired; components that have been re-manufactured; materials that have been recycled. Also referred to as secondary materials.

SOURCE: https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/glossary

MONO-MATERIALS VS. MULTI-MATERIAL

These terms are mostly used when referring to plastic films. Mono-materials films contain predominantly one material type, either PE (LDPE, LLDPE, HDPE), PP, PET, aluminum, paper or other. For plastics, this should be seen to mean >90% of one polymer type as this is the upper threshold when the other elements such as adhesives, additives and inks are included. This definition applies equally to paper and aluminum foil flexible packaging although the actual percentage may vary depending on the recycling process. Multi-materials films contain more than one layer of material where no material type is > 90% and the other layers are made of different materials. Mono-material films are more easily recycled as they are all one material type and recyclable level. Multi-material however could have some recyclable materials as well as non-recyclable layers, this mix makes it near impossible to recycle. Note that some mono-material films do not offer the same barrier level as multi-materials.

SOURCE: https://guidelines.ceflex.eu/

REUSE

Reuse is any operation by which packaging, which has been conceived and designed to accomplish within its life cycle a minimum number of trips or rotations, is refilled, or used for the same purpose for which it was conceived, with or without the support of auxiliary products present on the market enabling the packaging to be refilled; such reused packaging will become packaging waste when no longer subject to reuse. Based on this, reusable packaging has been defined as packaging that allows either the business or the consumer to put the same type of purchased product back into the original packaging, is designed to be returnable and/or refillable, is free of chemicals of concern, and accomplishes a minimum number of reuses by being part of a system that enables reuse.

SOURCE: Directive 94/62/CE on packaging and packaging waste

https://sustainablepackaging.org/wp-content/uploads/2022/04/Guidance-for-Reusable-Packaging.pdf

COMMON MATERIALS	DESCRIPTIONS	COMMON PACKAGING USES	PROS	CONS
Glass	Glass is made from sand, soda ash, limestone, and other recycled glass content (known as cullet) (https://feve.org/about-glass/)	Bottles, jars, vials	- Glass is made from naturally occurring materials (that tend to be abundant) - Transparency, heat resistance, chemical resistance - It is inert and impermeable (contents cannot absorb external smells or tastes) - Available with high percentage of recycled content - Durable enough to reuse	- Glass is heavy, relative to other materials - Manufacturing glass is energy intensive - Glass can be rather fragile
Aluminum	silvery-white metal	Cans, bottles, jars, tins, tubes, caps	- Lightest metal, strong, flexible, corrosion resistant, versatile in shape and strength - Available with high percentage of recycled content - Highly recyclable - Durable enough to reuse	- High energy level needed for production - More costly
Cardboard/ Corrugated paper	Cardboard and "Corrugated Paper" are slightly heavier paper products. Cardboard features a grammage more than 600 g/m2, and as high as 1100 g/m2. https://www.comieco.org/glossario/	Often used as tertiary packaging: boxes or cartons sourced from wood-pulp	- It is easily recycled (rate in Europe is 86%) https://www.swiftpak.co.uk/insights/plastic-vs-paper-packaging-the-pros-and-cons - It is malleable, but can suitably protect its contents - It can easily adhere to printing and/or design uses - Biodegradable if no additives - Available with high percentage of recycled content - It is generally not very expensive	- Cardboard is susceptible to fire, water, and mold damage - It can only be recycled 5-7 times https://www.swiftpak.co.uk/insights/plastic-vs-paper-packaging-the-pros-and-cons - It comes from a naturally occurring source (trees), but paper production is one cause of deforestation (recommended to use FSC Certified paper and pulp to reduce impact)
Paper/ Paperboard	Paper is a thin sheet material produced by mechanically or chemically processing cellulose fibres derived from wood, rags, grasses, or other renewable sources. Paper has a grammage of up to 150 g/m2. Paperboard is a paper-based material with a grammage that lies between paper and cardboard, identified by a grammage in the 250 to 450 g/m2 range. https://www.comieco.org/glossario/	Labels, wrap, boxes, leaflets	- Highly versatile - Can be light- weight - Biodegradable (if not coupled with other materials) - Easy to recycle - Available with high percentage of recycled content	- Paper is not very durable in some cases - It can contribute to deforestation (recommended to use FSC Certified paper and pulp to reduce impact) - Sometimes coupled with plastic lamination to guarantee specific features.
Bamboo/Wood	Renewable materials, especially bamboo grows very quickly and regenerates fast	Cosmetic tools, lids, caps	- Renewable - Plastic-free - Quality	- Ends up in landfill - Not always compostable - High cost - Sometimes coupled with plastic lamination to guarantee specific
HDPE (plastic)	High-density Polyethylene	Bottles, lids, caps	- Strong and durable - High mechanical resistance, good rigidity and barrier to humidity and chemicals - Recycled HDPE plastic is used to make many products such as toys, trash cans, traffic cones and plastic "lumber" for playgrounds, decks, and outdoor furniture. - Recyclable	- Recycled HDPE not available with food-grade certification (safety issue)
LDPE (plastic)	Low-density Polyethylene	Films, labels, bottles, caps/lids, bags	- Soft, flexible, lightweight - Recyclable and PCR content available	- Recycled LDPE not available with food-grade certification (safety issue)
PET (plastic)	Polyethylene terephthalate	Bottles, pots/ jars, films, labels	- Lightweight, durable, versatile - Shock resistant, good mechanical properties and good impermeability to gases - High recyclability - Recycled PET available	- Is a major cause for microplastics in the environment
PP (plastic)	Polypropylene	Jars, caps/ lids, films, labels	- Fairly lightweight and durable - Good thermal resistance and high rigidity, it acts as a barrier to water vapor but not to gases - Recyclable	- Difficult to recycle (and often cannot be properly recycled) - Recycled PP not available with food-grade certification (safety issue)
Silicone (plastic)	Polysiloxane	Rubber-like substance often used for sealant, lubricant, cooking utensils, etc.	- Food-safe and highly resistant to external strain (e.g., temperature) - Durable and long- lasting - Less polluting when burned	- It is difficult to recycle - Comes from silica (naturally occurring, but not renewable)

CONCEPT GENERATION

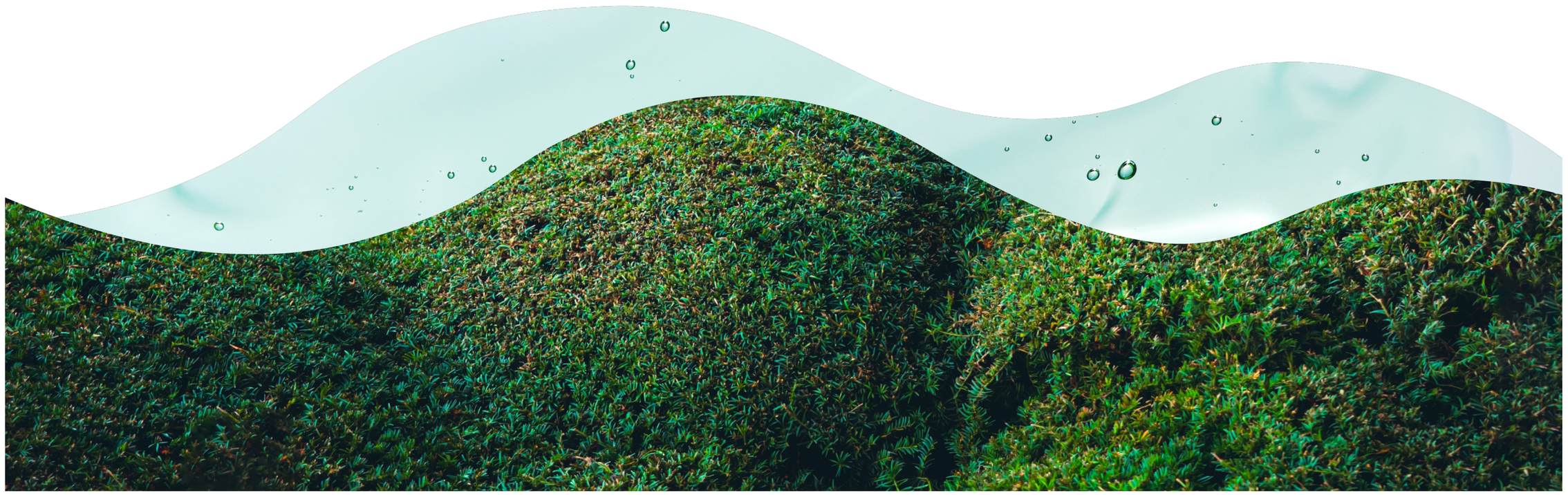
PACKAGING RESEARCH

PACKAGING DEVELOPMENT

PRODUCTION ASSEMBLY

DISTRIBUTION

GO TO MARKET



PACKAGING DEVELOPMENT PHASES

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PACKAGING DEVELOPMENT PHASE	DEVELOPMENT PHASE DESCRPTION
Concept Generation	Objectives of the project and the characteristics that the product must fulfil are established. Marketing needs and technical requirements for protecting the product or using it efficiently are made known and discussed. Aesthetic and design wishes are expressed to guide the subsequent search for materials. Special marketing campaigns related to the sale of the product, different distribution schemes (e.g., e-commerce) or additional services related to the use of the product to ensure that the chosen packaging meets the requirements. All phases of the packaging life cycle must be considered.
Research	The market to find one or more packaging options to be evaluated and explored. Developer must take into account the principles of eco-design and, at the same time, the specific requirements of the project.Eco-design principles must be applied at all stages of the packaging life cycle: Raw materials extraction: The origin of the raw material is evaluated in terms of renewables or non-renewables resources, recycled or virgin materials, material safety, addition of further additives, energy-intensive extraction/production processes. Production of packaging: The production phase can be evaluated in terms of reduction of materials in use (size and weight), supplier production process (resource use efficiency), supplier distance. End of life phase: Designing the end of life of a packaging aims to extend the technical life of the packaging, design an appropriate reuse system if is it possible and, finally, assure proper waste management. Reuse or recycle of packaging reduces the environmental impact of the product by avoiding the use of virgin materials and the emissions of hazardous substances into the environment. To promote recycling, packaging should be design so that it can be easily disassembled so that the different component can be disposed of properly. If reuse or recycling is not possible, a packaging system should be designed for disposal in an incineration with energy recovery. The option of landfill disposal should be avoided.
Development	Packaging functionality and product/packaging compatibility are tested, the type of distribution is decided and actions to improve environmental performance during use are evaluated. Tests can be carried out on production lines to highlight any problems. Packaging life-cycle stages to be considered are: Manufacturing: Criteria such as product residues after use and product protection are evaluated. These two levers aim to reduce product waste, that can be generated if the packaging is not sufficiently protective, and to reduce the likelihood of contamination of the recycling stream during the end-of-life recycling process. Distribution phase: The design of the distribution system aims to ensure that the product under study is transported in the most environmentally efficient manner. At this stage, the product and packaging must be considered together in their entirety. The criteria to consider are: total size and volume of packaging, mode of transport and its environmental impact, transport load, distribution logistic. Use phase: During the process of developing a product according to eco-design principles, the use phase of the product itself should not be neglected because we think that this phase of the product's life is the sole responsibility of the end consumer. The designer can think about how to avoid an excessive use of resources, such as energy or water. This can be achieved not only with product-specific features, but also with the correct packaging. In this sense, packaging can also be used as a means of communication to encourage more sustainable habits, to get the consumer used to the local recycling schemes and raise awareness of environmental issues associated to packaging.
Production assembly	Developers can help research alternative production techniques to reduce the consumption of energy or additional materials and to reduce the production of waste or by-products.
Distribution	If, in the development phase, the eco-design principles have been correctly applied, the distribution of new products should be efficient in terms of reducing the use of resource for transport and protective packaging (outer boxes, wrappers, pallets). This also reduces waste generated at the point of sale and helps clients to dispose of packaging correctly. An accurate tertiary packaging design ensures maximum protection of the product itself and an overall reduction in waste materials, because it reduces the amount of defective goods to be discarded before marketing. If vehicle loading is optimised, the impact in terms of greenhouse gas emissions during transport can also be reduced.

B Beauty Navigator

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