



# CIRCULAR ECONOMY AND COSMETICS SECTOR

**120 BEST PRACTICES**  
OF COSMETICS COMPANIES



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*March 2018*

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# PREFACE

## The circular economy for producing and consuming differently

Bravo and thank you! Finally, a White Paper dedicated to the circular economy that focuses firstly on the need to design new production methods, and secondly on promoting sustainable consumption. Too often, the circular economy is reduced to just a question of waste, while ignoring essential challenges linked to the products and services themselves. Indeed, the circular economy implies firstly a sense of sobriety as the starting point of an economic model: sobriety in the use of natural resources, sobriety in terms of consumption.

Eco-design of products while encouraging the sustainable use of resources is also becoming an essential key factor for sustainable manufacturing. Producers are being empowered and encouraged to eco-design their formulas and packaging, while striving to optimise industrial processes and manage production waste. In this way, a virtuous loop is taking shape. Similarly, accompanying consumers in the shift to greater sobriety contributes to this global movement of making everyone accountable. A product with a reduced environmental footprint can also reflect the increasingly real expectations of consumers.

Do Think Tank since 1992, OREE strives to promote the circular economy amongst local companies and communities. As such, many tools are available to help the territory's actors question themselves and their practices. A member of the OREE Board of directors, the FEBEA fully supports this approach with useful and relevant contributions to our efforts.

*"Innovation, adaptation, anticipation"*, those were the opening words from FEBEA Chairman Patrick O'Quin in the 2016 management report. This White Paper perfectly incarnates these three terms while bringing to light the FEBEA's maturity relative to the challenges of the circular economy.

**F** for Facilitator  
**E** for Energy  
**B** for Blanc (i.e. Livre Blanc or White Paper)  
**E** for Ensemble (Together)  
**A** for Accompaniment

It's time to start reading... and to get moving.

Very sincerely

**Patricia Savin**

*Chairwoman of the OREE*



## EDITORIAL

There's more to buying a cosmetic product than simply washing and protecting your skin. It's part of taking care of yourself in order to feel well in mind and body, building up self-confidence and feeling that all is right with the World.

Cosmetic brands have a special responsibility when it comes to safeguarding the Planet's resources.

Can well-being be offered to consumers  
without considering that of the Planet?

Innovation, transparency and naturalness are the challenges of today and tomorrow as a response to new consumer trends.

Many companies have long been involved in a Circular economy initiative; this White paper is proof of this.

This compendium is intended to provide everyone with best practices: first steps for some, more extensive initiatives or tackling new fields for others.

Circular economy managers are "evangelizers" within organisations. Such people are passionate, with motivation that builds on personal convictions. Their behaviour is expected to be exemplary. Initiators of innovations, they must convince for the long-term, but without imposing. They are often viewed as a roadblock, without clear solutions that go one way or another.

This White paper is dedicated to such people; it is intended to help the "standard-bearers" of the Circular economy within companies to convince and implement.



**Virginie d'Enfert**

*Director of Economic, Environmental  
and International Affairs*

FEBEA

## WHAT IS THE CIRCULAR ECONOMY

According to the ADEME<sup>1</sup>, the Circular economy is defined as an economic system of exchange and production that, at all stages in the lifecycle of products (goods and services), is intended to **increase the efficiency of resource use and to decrease the impact on the environment**, while increasing well-being. **This means doing more and better with less.**

This approach includes seven pillars, in three action domains<sup>2</sup>:



Schéma ADEME 11

<sup>1</sup> ADEME : Agence de l'Environnement et de la Maîtrise de l'Energie

<sup>2</sup> ADEME computer graphics: <http://www.ademe.fr/expertises/economie-circulaire>

# Three challenges for the cosmetics sector

The challenges for the cosmetics sector are concentrated on three axes:

- ❖ **Eco-designing products while encouraging the sustainable use of resources:**
  - available natural resources are limited, and preserving biodiversity is a major concern of our sector,
  - the eco-design of formulas, products and packaging serves to reduce negative impacts based on the lifecycle approach.
  
- ❖ **Manufacturing sustainably** while limiting the use of resources and encouraging collaboration between companies within a given territory, with one party's waste becoming the raw materials for another.
  
- ❖ **Promoting responsible consumption** is a challenge since this involves convincing consumers to adopt the right gestures. For example, 80% of the environmental impact of a wash-off product (shampoo, shower gel...) is linked to the consumer use phase, i.e. the quantity of water and energy used when washing hair or taking a shower. Correct sorting in the bathroom must also become commonplace for everyone.

In its 3 chapters, this White paper presents 120 best practices implemented by companies in the cosmetics sector, collected by the FEBEA from its Members in 2017.

These best practices, while not exhaustive, are marked with the following symbol:



Also, a best practice being applied by one brand doesn't mean that other brands aren't applying it as well.

# ECO-DESIGNING PRODUCTS WHILE ENCOURAGING THE SUSTAINABLE USE OF RESOURCES

Eco-design is intended to **limit environmental impacts** from the design of an item or service, throughout its **lifecycle**.

There are two major aspects for cosmetic products:

- ❖ **Eco-design of formulas** , intended to:
  - encourage the sustainable use of resources with a low environmental impact,
  - concentrate formulas,
  - reduce the number of ingredients,
  - use green chemistry,
  - encourage biodegradable ingredients in wash-off products.
  
- ❖ **Eco-design of packaging** , intended to:
  - limit the environmental impact of materials,
  - reduce the size and weight of packaging,
  - offer refills,
  - improve recyclability.

## What is a Lifecycle Analysis (LCA)?

A Lifecycle Analysis (LCA) lists and quantifies, throughout the life of products, the physical flows of materials and energy associated with the activity in question. It assesses the potential impacts, then interprets the obtained results according to its initial objectives. Its strength is based on a twofold approach:

➤ a **"lifecycle" approach**

Whether for an item, a service or a process, all steps in a product's lifecycle are included in the inventory of flows, from the "cradle to the grave": extraction of energy and non-energy raw materials needed for the product's manufacturing, distribution, use, collection, reuse and elimination through the end-of-life sectors, as well as all transport phases.

➤ a **"multi-criteria" approach**

An LCA is based on several analysis criteria that look at the flows, both incoming (materials, energy: water, petrol, gas) and outgoing (waste, gaseous emissions, released liquids).

In the cosmetics sector, an LCA covers the product / packaging couple.

*Source : ADEME*



### PIERRE FABRE DERMO-COSMÉTIQUE : KLORANE, ECO- DESIGN AT EACH STAGE OF THE LIFECYCLE

For its haircare ranges, the Laboratoires Klorane consider each step of the lifecycle of products:

- packaging eco-design with integration of recycled plastic, reduced weight of the tubes, jars and caps, usage of certified paper and cardboard, and the elimination of jackets and instructions,
- biodegradable formulas,
- active plant ingredients extracted using green chemistry processes,
- use of short circuits for the plant harvest (for local plants), extraction of the active ingredient, packaging manufacturing (bottle for shampoos) and manufacturing of the finished product within a radius of under 50 km,
- product manufacturing in a plant using an experimental High Environmental Quality (HQE®) initiative and certified ISO 14001 (Environmental management systems),
- help with the right sorting gesture for packaging in the bathroom provided on the brand's Internet site.

# 1. ECO-DESIGNING PRODUCTS

## 1.1 ENCOURAGING THE SUSTAINABLE USE OF RESOURCES

Distinguishing between natural and synthetic products is easy enough:

- **natural ingredients**<sup>3</sup> come from plant and mineral sources,
- **synthetic ingredients** are created and/or transformed by human intervention.

Authorised ingredients are subject to very strict regulations; their effects and potential impacts are carefully studied by manufacturers. **The marketing of cosmetic products is governed by a strict regulation, i.e. Regulation (EC) N° 1223/2009 on Cosmetic Products.**

### Regulation (EC) N° 1223/2009 on cosmetic products

This regulation provides users with a guarantee of the high quality and safety level of the products, since it is based on three principles:

- safety of the raw materials and finished product,
- quality of the manufacturing techniques,
- market surveillance by the Public authority.

### ❖ USING NATURAL INGREDIENTS

More than a market trend, consumers are expressing growing demands for “natural” products, or ones made from ingredients of natural origin. Faced with the rarity of resources, manufacturers are striving to obtain supplies sustainably, i.e. while ensuring that the ingredients are regenerated via the natural processes of ecosystems at a faster rhythm than the one at which they are harvested, for fear of definitively using up the resource.

These initiatives are part of the **Nagoya Protocol**<sup>4</sup> on access to genetic resources and benefit-sharing, as adopted by the 10<sup>th</sup> meeting of the 2010 United Nations Conference of the Parties on the Convention on Biological Diversity (CBD) that took effect on 12 October 2014.

French companies, aware of the importance of finding balance between the sector’s needs and social and environmental issues, have been able to anticipate in order to implement responsible channels.

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<sup>3</sup>Cf. ISO 16128 Standard "Guidelines on technical definitions and criteria for natural and organic cosmetic ingredients and products"

<sup>4</sup> Nagoya Protocol: <https://www.cbd.int/abs/>



#### DSM : SHORT, SUSTAINABLE AND FAIR SUPPLY CHAIN FOR ALPINE PLANTS

For more than 20 years, DSM Alpaflor® has developed the biological farming of alpine plants including edelweiss so as to preserve alpine biodiversity, by involving various partners (from the botanist to the mountain cooperative and including an agronomic institute and farmers) in a short supply chain for purposes of total traceability. All Alpaflor products are certified organic and fair (according to the *Fair for Life*<sup>5</sup> guidelines).

#### GROUPE L'OCCITANE: EVERLASTING (IMMORTELLE) AND SHEA BUTTER

L'Occitane en Provence was the first brand to develop a large-scale planting programme of everlasting (immortelle) in order to guarantee its supply and preserve wild everlasting.

To build sustainable partnerships, 5 to 7 year supply contracts have been signed in order to provide producers with guaranteed prices and volumes, while offering the visibility needed for their activity.

Since the 1980s, the Groupe L'Occitane has been developing a certified fair channel that now represents a direct purchase of several hundred tonnes of shea butter from women's cooperatives in Burkina Faso, while respecting traditional know-how. This channel involves more than 10,000 women and impacts more than 200,000 people. The butter is purchased at a price twice as high as a conventional butter export price.

The objective is 100% organic and fair butter in 2018. A project to secure the harvest is in place thanks to the set-up of 33 shea butter tree parks. These parks will be the subject of actions so as to maintain their biodiversity.

#### GROUPE PANTHER: IN VITRO CULTIVATION OF ACTIVE INGREDIENTS

A good many SMEs strive to give preference to organically sourced ingredients. Some, like the **Groupe Panther**, use suppliers that carry out *in vitro* cultivation of the active ingredients for cosmetics, in order to minimize the collection of resources from the natural environment. Specifically, Panther works with Naolys, a company from Bordeaux with an international patent for its innovative biotechnology. It derives its energy needs from renewable sources and produces "just-in-time" active ingredients, only when ordered by customers in an effort to reduce wastage.

<sup>5</sup> *Fair for Life* is a label that provides producers and actors involved in fair trade with independent certification of their compliance with criteria such as refusing to use forced labour and child labour, freedom of association, safe and decent working conditions, etc.

### L'ORÉAL : QUINOA BRAN IN BOLIVIA

In Bolivia, L'Oréal has set up a partnership for responsible sourcing of quinoa bran, that had previously been considered as residue. It contains saponins and polyphenols, thereby making it interesting as a renewable raw material for cosmetics. By supporting this sustainable production, the Group is encouraging training in agricultural best practices for local farmers, contributing to the efforts against soil erosion through the planting of legumes, shrubs and the region's native grasses, while enabling a transfer of scientific knowledge and know-how to its various local partners.

### LVMH : SUSTAINABLE CHANNELS

The Group's Maisons regularly undertake audits of their channels such as the ones performed in 2013 on its rose, jasmine, orange and bergamot channels in order to assess the compliance of their practices with the Nagoya Protocol.

They are also developing ethnobotany. In 2015, Guerlain became the Group's first Maison to be certified "Biodiversity and Climate Commitment" by the Ecocert control and certification institution.

The Maison has set up several sustainable channels, for example involving vetiver in India, lavender in France and sandalwood in Asia. It has also set up a research centre devoted to orchids, one of its emblematic raw materials. The Orchidarium is the only one of its kind in the world.

It includes a fundamental research laboratory in Strasbourg and an experimental garden in Geneva. This is in addition to the sustainable development partnership established in 2009 for 10 years with the Chinese Tianzi reserve, where almost 10,000 orchids have been replanted since 2009.



## LABORATOIRES EXPANSCIENCE: RESPONSIBLE SOURCING FOR AQUALICIA®

The Expanscience Laboratories are implementing a responsible management policy in all of their procurement channels for plant raw materials.

Aqualicia® is a biomimetic active ingredient, extracted from seeds of the *Acacia macrostachya*. When setting up its channel in Burkina Faso, Expanscience applied a strategy suited to local considerations. This channel includes objectives for production and the protection of local traditional knowledge, as well as the environment. With the support of local partners, Expanscience undertakes to promote, amongst other things:

- empowerment of the local populations.
- training in farming best practices, forestry practices, as well as oversight of a women's collective.
- financing for organic certifications,
- economic development of avocados that are not exportable to South Africa.
- help with school attendance for more than 1200 children in Burkina Faso since 2011.
- creation of a nursery and planting of more than 3500 seedlings (eucalyptus, baobab, acacia, moringa...) each year since 2013.

## PHYTOMER : SUSTAINABLE ALGAE

Phytomer primarily uses cosmetics active ingredients manufactured from ingredients of natural origin, whether plant-based (such as algae or other plants) or biotechnological on the basis of marine micro-organisms.

For ingredients of plant origin, the company works closely with local farmers in order to ensure sustainable and responsible harvesting (respect for sites, seasons and reproduction periods).

The rarest or the most fragile algae are cultivated either on ropes in the open sea or in laboratories (photo-bioreactors) in order to guard against any risk of shortages.

Nearly 80% of Phytomer's sourcing is local thanks to a network of partners: farmers, start-ups, researchers, etc.

PIERRE FABRE  
DERMO-COSMÉTIQUE :  
THE DESERT DATE RANGE FROM  
LABORATOIRES KLORANE

The active ingredient of this haircare range is produced from desert dates coming from a certified organic farming source that involves production groups of approximately 170 women, who receive additional earnings through this activity.

Also, through their *Klorane Botanical Foundation*, the Laboratoires Klorane are participating in the "Green Great Wall" action by planting desert date trees, a project identified by UNESCO - from approximately a dozen projects promoted around the world - as an emblematic example of sustainable development education.



PIERRE FABRE  
DERMO-COSMÉTIQUE :  
BRAZILIAN GINSENG BY  
RENÉ FURTERER

The Pfaffia (Brazilian ginseng) used by René Furterer comes from Brazil. Its cultivation is certified as organic farming and controlled by an association of small farmers in an effort to improve their living standard. The above-ground part of the plant is used as cattle feed, but testing is now in progress in an attempt to derive greater value from this co-product and thus to create new economic opportunities for the producers. This channel is certified as fair trade according to the Ecocert *Fair For Life* guidelines, in support of projects to pass on agricultural know-how to new generations that are very attracted to more urban activities, thereby creating a risk of agricultural desertification.

## ❖ PREFERENCE FOR LOCAL INGREDIENTS

Collecting ingredients from near the production location is a good way to reduce the final product's carbon footprint. This means less transportation, while supporting the local economy. Several companies in the sector have committed to a sourcing initiative for ingredients within their vicinity, ideally on a national scale but at least within Europe.



### GROUPE L'OCCITANE: PROVENCE LAVENDER

L'Occitane en Provence is committed to preserving the fine lavender from Haute-Provence (protected designation of origin), which is threatened with disappearance. As such, it finances an endowment fund that is working to find ecological solutions to combat the illness that is destroying it.

### GROUPE ROCHER : LA GACILLY

55 ha of organic farming at La Gacilly produce more than 12 tonnes of plants for the brand's needs, but also to contribute to agronomic and cosmetic research. 9 excerpts are produced from the 7 emblematic plants cultivated at La Gacilly.

### GUERLAIN : USHANT BLACK BEE

Guerlain's long-standing commitment alongside the Association Conservatoire de l'Abeille Noire Bretonne de l'Île d'Ouessant earned it the "coup de cœur" patronage trophy awarded in 2013 by the Ministry for Ecology, Sustainable Development and Energy. In 2015, the Maison gave itself a new challenge to support the cause of bees. It decided to support the Observatoire Français d'Apidologie, in order to help it reach its objective: training 30,000 new beekeepers in Europe and creating 10 million new bee colonies by 2025.

Honey from the black bee is used in the composition of the *Abeille Royale* range.



PIERRE FABRE  
DERMO-COSMÉTIQUE :  
SHORT SUPPLY CHAIN  
IN-HOUSE CROPS

[delete me]  
For crops of oats (A-Derma and Klorane), calendula (Klorane), nasturtium (Klorane), cornflower (Klorane), acanthus (René Furterer), lemon balm (René Furterer), sweet clover (Galénic), flax (Klorane), magnolia (Klorane) and apple blossom (Elancyl), Pierre Fabre Dermo-Cosmétique has chosen to raise crops on its own lands in Southwest France, as close as possible to its extraction facility for plant-based active ingredients in Gaillac and its production plant for dermo-cosmetic products in Soual.

PIERRE FABRE  
DERMO-COSMÉTIQUE :  
THE MAGNOLIA RANGE  
BY KLORANE

For this range, the leafy boughs of magnolia are locally sourced. Magnolia leaves have been identified by biomimicry for their brilliance effect on hair. Despite the fact that the plant is of Chinese origin, botanical prospecting has been carried out in order to test local sourcing channels. This ornamental plant is widely used in the green spaces of communities, but its use is very spread out.

The group is working with the largest magnolia nursery operator in France, based in the Toulouse region, enabling it to add value to the cuttings that are carried out each winter, for use as raw materials.



## ❖ OPTING FOR ORGANIC INGREDIENTS

Making the “organic” choice can be part of the eco-design rationale by applying the following principles:

- using as many ingredients as possible that come from organic farming,
- favouring renewable resources over ingredients coming from synthetic chemistry or petrochemical manufacturing,
- favouring transformation processes with the lowest impact on the environment.

Many brands have their products certified by institutions using the Ecocert guidelines for ecological and organic cosmetics, or the European Ecolabel guidelines.

ISO 16128 Standard defines guidelines on technical definitions and criteria for natural and organic cosmetic ingredients and products.



### GRUPE CLARINS: SUSTAINABLE AND LOCAL SOURCING

Clarins has undertaken, whenever possible, to use plant extracts obtained through methods that protect the environment and respect local populations. Ingredients produced through organic farming and plants that are locally cultivated or produced through fair trade are preferred, provided that they are equally efficient.

### LABORATOIRES EXPANSCIENCE: ORGANIC SOURCING FOR THE SOLINE® BIO ACTIVE INGREDIENT

Soline® Bio is an active ingredient made from sunflower oil, for which Expanscience has set up sourcing for sunflower seeds produced through European organic agriculture. The use of molecular distillation by means of a physical extraction process serves to limit the environmental impact of its manufacturing.

### MELVITA : THE ORGANIC TRADEMARK OF THE GROUPE **L'OCCITANE**

Since its founding in 1983, Melvita has been one of the top French brands for natural and organic cosmetics. Its beauty products comply with the Ecocert guidelines for ecological and organic cosmetics.

PIERRE FABRE AGRONOMIE CERTIFIED AS A "HIGH ENVIRONMENTAL VALUE OPERATION" AND AWARDED THE "BIO SUD-OUEST FRANCE" LABEL

As part of the *Botanical Expertise Pierre Fabre* initiative, Pierre Fabre Agronomie, in charge of the organic farming of 150 ha in Southwest France, has been certified as a "High Environmental Value operation", in confirmation of the overall agricultural holding's compliance with thresholds of environmental performance relating to biodiversity, phytosanitary strategy, as well as management of fertilization and water resources.

Its crops have also been awarded the "Bio Sud-Ouest France" label that recognises local production and sourcing, and that promotes regional organic operators.



## THE CASE OF PALM OIL

In its products, the cosmetics sector uses palm oil primarily in the form of derivatives of palm oil or palm kernel oil.

As part of their sustainable sourcing efforts, many cosmetics companies have committed to guaranteeing the sustainable traceability of their palm oil sourcing. Their supplies of palm oil and derivatives are certified according to the Principles and Criteria of the RSPO (*Roundtable on Sustainable Palm Oil*).

Some go even further than RSPO certification, in order to guarantee sourcing without deforestation or exploitation.

They select the suppliers with which they choose to work in order to ensure the traceability of the palm oil and its derivatives right through to the refiners.

Finally, some companies assess and communicate their progress with regard to the sustainable sourcing of palm oil and the accountability of their supply chains, while adjusting their objectives at each step.

### LVMH : PALM OIL

The Maisons use palm oil derivatives and have adopted an objective of using 50% palm oil derivatives produced from palm oil certified by the RSPO (*Roundtable on Sustainable Palm Oil*).

In late 2017, Bvlgari took measures to ensure that all palm oil derivatives used in the composition of its products are obtained through sustainable sourcing.



## ❖ PREPARING CHARTERS OF PREFERRED INGREDIENTS

To guide formulators and also in order to provide the public with transparency, companies are proposing list of ingredients that can be included in a charter. This type of charter is intended to explain the conditions under which claims of naturalness can be promoted. Many of them go beyond the requirements of the prevailing regulations.



### MUSTELA : A NATURALNESS CHARTER FOR ITS PRODUCTS

Since 2010, Expanscience has been developing a naturalness charter that builds on the definitions of natural contained in the Ecocert guidelines. This is a technical document that defines the concepts of "natural ingredient", "natural origin" and "synthetic origin".

This formulation charter enables Mustela to guarantee that 95% of ingredients are of natural origin, on average, and up to 98% for the Crème change 1 2 3 and the very sensitive skin range.

### LABORATOIRES EXPANSCIENCE: ECO-SOCIAL DESIGN OF ACTIVE INGREDIENTS

To ensure the eco-social design of their active ingredients, the Laboratoires Expanscience have been developing a sustainability matrix since 2012.

This matrix assesses and scores active ingredients according to 7 concrete criteria such as the sourcing traceability and its CSR maturity, the nature of the raw material, the process for obtaining it (nature of the steps, additives, solvents...), transportation and storage.

The objective of this matrix is to measure the socio-environmental impacts of the development of these ingredients.

As part of a continuous improvement initiative, this tool – applied to 100% of the catalogue of active ingredients – serves to define criteria that are subject to improvement, and are intended to ensure the quality and performance of the active and sensory ingredients.

## 1.2 CONCENTRATE FORMULAS

Increasing formula concentrations makes it possible to **use less product while achieving the same results**. For an equal volume of the active substance, this mechanically serves to reduce the necessary quantity of packaging. Of course, such an initiative requires greater efforts to inform consumers, so that they don't use the same quantities as they would with non-concentrated products.



### GRUPE ROCHER : A CONCENTRATED SHOWER GEL

The Groupe Rocher has developed a new and ultra-concentrated formula shower gel: its 100 ml can be used 40 times, which is the equivalent of a classical shower gel of 400 ml. By means of its valve, a single squeeze distributes enough product for a shower. As such, the smaller bottle requires half as much plastic for its packaging, which also serves to reduce greenhouse gas emissions relative to an equivalent standard product.



## 1.3 REDUCE THE NUMBER OF INGREDIENTS

To save on resources and improve the environmental profile of their products, some companies limit the number of ingredients in their formulas.



CHANEL : SOLUTION 10, RECONCILING THE ART OF THE FORMULATION AND THE ART OF THE ESSENTIAL

Reducing the average number of ingredients is an important objective for the eco-design of cosmetics formulas. However, the number of ingredients needed to formulate products always seems to be subject to increasing constraints: need to cover more functions with more active ingredients, more complex conservation of the formulas due to the elimination of parabens... Despite these demands, the Chanel laboratories successfully developed SOLUTION 10. Consisting of only 10 ingredients (of natural origin for the vast majority), this product's composition is as simple as the development of its formulation was complex.

L'ORÉAL : A SHORT LIST OF INGREDIENTS FOR THE BIOLAGE R.A.W. RANGE

In late 2016, the Matrix brand of professional products launched a new line called Biologie R.A.W. All of the formulas were developed from a short list of ingredients, while excluding sulphates, silicones and parabens. Some R.A.W. products consist of 100% natural ingredients.



## LVMH : CHA LING

Cha Ling products are prepared in the LVMH advanced research laboratories, based on a demanding charter for respecting the environment. The formulas are concise: they include few ingredients, most of which come from natural raw materials, all of which offer irreproachable traceability.

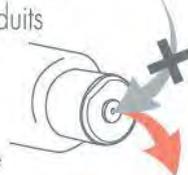
PIERRE FABRE DERMO-  
COSMÉTIQUE : STERILE  
COSMETICS

The use of sterile cosmetics technology by the A-Derma Dermatological Laboratories and the Avène Dermatological Laboratories guarantees products containing a minimum number of ingredients that are useful for the skin.

COSMÉTIQUE  
**STERILE** INNOVATION MAJEURE

**Des formules libérées du superflu et préservées intactes tout au long de l'utilisation grâce à une association unique au monde :**

- **Stérilisation brevetée\* des formules :**  
Stérilisation tout au long de la fabrication  
Conditionnement des produits en atmosphère stérile
- **Packaging breveté\* parfaitement hermétique**



**D.E.F.I. DISPOSITIF EXCLUSIF FORMULE INTACTE**

Assurant le maintien de la stérilité tout au long de l'utilisation  
Interdisant toute contamination des formules

- **Sélection rigoureuse et limitée aux ingrédients essentiels**

**Résultat :** votre soin reste stérile et protégé tout au long de l'utilisation et peut se passer absolument de toute forme de conservateur. Ainsi, les soins COSMÉTIQUE STERILE contiennent uniquement les actifs essentiels pour votre peau.

\* Brevets déposés



## 1.4 USE GREEN CHEMISTRY

Certain environmentally neutral transformation processes can represent more sustainable alternatives. In this regard, green chemistry is of fundamental importance.

“Green chemistry” or “sustainable chemistry” is the application of sustainable development principles to the world of chemistry, with the aim of creating materials that have a minimum impact on the environment and on health. The 12 Fundamental principles of green chemistry recommend the use of renewable resources and low-energy processes.

This notably includes:

- preventing pollution at the source by avoiding the production of residues,
- use of renewable resources instead of fossil products,
- reduced number of derivatives,
- design of biodegradable products.



### ECLAÉ : EXTRACTION BY MACERATION

For its supplies of extract of *Dunaliella salina* of Camargue, Eclaté (Groupe Salins trademark) uses a gentle maceration-based extraction method.

### GROUPE L'OCCITANE: LIMITING WASTED ENERGY

Groupe L'Occitane strives to limit wasted energy insofar as possible in all of its manufacturing processes, which means:

- using cold processes for certain galenical products such as shower gels, transparent shampoos or toning lotions,
- favouring emulsifying products that are used cold,
- selecting all-in-one: fat and water phases heated together,
- considering the cleanability index of materials.

### L'ORÉAL AND CHIMEX :

#### GREEN CHEMISTRY AND EFFLUENT REDUCTION

In 2016, the use of ingredients based on green chemistry principles represents 17% of the volume of raw materials used by L'Oréal.

Chimex, a L'Oréal subsidiary, has developed *pro-Xylane* (active ingredient with anti-ageing properties), for which the production has an environmental factor (kg of waste per kg product) of 4.9 instead of 6.6 in 2009. Overall effluent production (sub-products) has therefore been divided by a factor of 18 relative to 2003.

#### LABORATOIRES EXPANSCIENCE: LOCAL INSTALLATION

On its Épernon site, Expanscience has set up an installation dedicated to plant extraction and molecular distillation, a "green" process that makes it possible to extract specific molecules without the use of solvents that are harmful to people and the environment, by enabling the use of co-products. This equipment avoids the need to collect these natural active ingredients from their environment, thereby ensuring their sustainability.

#### LABORATOIRES EXPANSCIENCE: INNOVATIVE CULTIVATION AND EXTRACTION PROCESS

In partnership with the PAT (Plant Advanced Technology) company, the Laboratoires Expanscience have patented, for their eco-designed active ingredient Neurovity©, a new cultivation and extraction technique that does not harm the plant and that enables its replacement after extraction. Aeroponics are used for the cultivation of the plants needed to produce the active ingredient. This above-ground cultivation method, using no phytosanitary products, avoids any damage to the plant and guarantees optimal reproducibility.

#### LABORATOIRES PIERRE FABRE : EXTRACTION WITHOUT SOLVENTS

The Laboratoires Pierre Fabre have developed a new patented extraction technique using fresh plants, without solvents. *Green Native Expression* uses a thermomechanical action to deconstruct the plant's cell walls while neutralizing the enzymes responsible for the deterioration of molecules, and while using the water naturally present in the plant as a vehicle for obtaining the extract. In this way, active native substances result in a 100% original extract.

#### PHYTOMER : EXTRACTION AND MANUFACTURING OF MARINE ACTIVE INGREDIENTS

For the manufacturing of its marine active ingredients, Phytomer uses innovative processes, without chemical solvents: aqueous or enzymatic extraction, or using supercritical CO<sub>2</sub>.

## GROUPE PANTHER:

### SUPERCRITICAL CO<sub>2</sub> EXTRACTION

In its transformation processes, the **Groupe Panther** uses extraction via supercritical CO<sub>2</sub>. This term refers to the state of material submitted to a temperature and pressure above critical thresholds, i.e. respectively with temperature and pressure beyond which the material leaves its liquid phase. By running supercritical CO<sub>2</sub> through a material and then decompressing it, the extract or targeted molecule can be retrieved in a solid or liquid form. Released in gaseous form, the CO<sub>2</sub> itself can be reused. Also, by adding a co-solvent, the spectrum of the extracted molecules can be increased. Technologies also exist that exclude the use of a co-solvent.

Extraction by supercritical CO<sub>2</sub> is notably used to isolate and very accurately extract one or several molecules, while ensuring their integrity. Indeed, the low temperatures used (on average between 40°C and 60°C) cause no damage to heat-sensitive molecules.



## 1.5 ENCOURAGE BIODEGRADABLE INGREDIENTS IN WASH-OFF PRODUCTS

A substance's biodegradability is its ability to break down into organic matter under the effect of the action of micro-organisms (bacteria, fungus, yeast, algae, etc.). Such organic matter consists primarily of biomass, carbon dioxide and water. The petrochemical origin up a substance does not necessarily imply no biodegradability, and inversely, a natural ingredient is not systematically biodegradable. The degree of biodegradability is commonly measured in units of time needed for the process to reach its conclusion. This degree, as well as the products of biodegradation, vary according to several parameters:

- the environment in which the process is taking place (aerobic: in the presence of oxygen, anaerobic: without oxygen),
- the type of micro-organism causing decomposition.

There are a certain number of standards for measuring biodegradability, whether originating with the OECD (Organisation for Economic Co-operation and Development) or the European Union<sup>6</sup>, notably in order to establish criteria for awarding the Ecolabel ecological label or uniform standards for biodegradability tests. Ecocert has also prepared its own methodology with scientific criteria that condition which guideline applies to a given product.



### L'ORÉAL : AN ECO-DESIGN TOOL FOR FORMULAS

All products manufactured by the Group have been analysed in order to classify them according to their consumer benefits. After having defined 143 product categories and having reviewed more than 40,000 formulas in 2014 and 2015, an eco-design tool was created in order to improve the environmental profile of the formulas, with equivalent consumer benefits. Rolled out in 2016, this tool is used by all teams of formulators. In 2015, L'Oréal raised the average biodegradability rate of shampoos to 91%. Amongst the new products launched in 2016, certain formulas have biodegradability levels above 98%, for example *Kérastase Aura Botanica* fundamental care or essential concentrate, shampoos and conditioners in the new *Biolage R.A.W.* range, the *Garnier Ultra Doux 5 plantes* shampoo or the *Lancôme Absolue* precious oil.

<sup>6</sup> A few examples : Directive 67/548/EEC : Classification, packaging and labelling of dangerous substances, REACH Directive, Biocidal Products Directive; Easy Biodegradability tests OECD 301A, 301 B, 301F, etc.

## LABORATOIRES EXPANSCIENCE: BIODEGRADABILITY OF THE FORMULAS

Special attention is devoted to the environmental profile (biodegradability and ecotoxicity) of the raw materials used in the composition the formulas. As such, all of the latter used in the *Mustela* cleansing products are biodegradable according to the OECD methods, 302B (inherent biodegradability) or 301F (ready biodegradability).

## PIERRE FABRE DERMO-COSMÉTIQUE : SHAMPOOS WITH BIODEGRADABLE FORMULAS

Pierre Fabre Dermo-Cosmétique has chosen to measure the biodegradability of its wash-off products using the official OECD analytical method 301b (CO<sub>2</sub> evolution), which guarantees that no component of the formula will hinder the biodegradation process.

At Ducray, 95% of the shampoo formulas are biodegradable. Its *Extra Doux* shampoo is a good example of this, since its formula is more than 80% biodegradable without efficiency loss.



## THE CASE OF MICRO-PLASTIC BEADS

The micro-plastic beads used in wash-off cosmetics products are not a major contributor to the plastic debris found in the marine environment and navigable waterways. A study in 2012 estimated the potential contribution of the European cosmetics sector at between 0.01% and 1.5% of the total amount of marine plastic waste\*.

*\*Gouin et al, 2015, "Use of Micro-Plastic Beads in Cosmetic Products in Europe and Their Estimated Emission to the North Sea Environment"*

### **Commitment of French industry**

Since 2013, well ahead of the requirements of French law\*\*, French companies have committed to voluntary initiatives to stop using micro-plastic beads, and have reformulated their products with the help of totally biodegradable natural alternatives.

Manufacturers have therefore implemented processes to develop substitution materials, used alone or in association, such as powders from fruit pits or micro-beads made from cellulose.

The sector has followed the October 2015 recommendation of Cosmetics Europe, *"to discontinue, in wash-off cosmetic [...] products placed on the market as of 2020: the use of synthetic, solid plastic particles used for exfoliating and cleansing (i.e. microbeads) that are non-biodegradable in the marine environment"*.

Proof of the industry's commitment, an inquiry\*\*\* by Cosmetics Europe in 2016 demonstrates the efficiency of the voluntary actions, with an 82% reduction in 2015 relative to the use of plastic micro-beads in wash-off products used for exfoliating and cleansing, compared with 2012.

*\*\*Law 2016-1087 on the reconquest of biodiversity, nature and landscapes of 9 August 2016 (Article L541-10-5 - III of the Environmental code*

*\*\*\* <https://www.cosmeticseurope.eu/news-events/reduction-use-plastic-microbeads>*

## 2. ECO-DESIGNING PACKAGING

Packaging is of fundamental importance in the cosmetics world. Not only is it essential for protecting the products and keeping them in line with the most demanding health standards for as long as possible, while maintaining their efficiency, packaging also has many other major sociological functions.

According to an expert from our industry, *“Packaging is the leading identity link between a brand and its consumer (...). It must respect the identity of the brands while equally meeting the user’s expectations. Its design must combine sensory, rational and emotional aspects while including sustainable and societal criteria, which is an omnipresent requirement connected with our environmental policy”.*



### LVMH : THE GUERLAIN 3RS

The objective of Guerlain is 100% eco-designed products by 2020. The Maison has already cut down 35 tonnes of cardboard per year by rethinking its perfume boxes so as to reduce their size by 15%. Its shopping bags are now entirely recyclable. All of its jackets are labelled FSC (*Forest Stewardship Council*) and Bee bottles can be refilled indefinitely via the perfume fountains installed in its shops. The *Orchidée Impériale* crème, launched in 2017, was designed while applying the 3R rule: Reduce, Recycle and Reuse.

The packaging was prepared with marketing experts and developers in order to combine design, execution quality and respect for the environment. The container size was adjusted to the capacity, and its weight reduced by 60%. The size of its box was reduced by 40%, and it is now 100% recyclable. In all, these efforts enabled the Maison to decrease the project's carbon footprint by 58%.



## 2.1 LIMIT THE ENVIRONMENTAL IMPACT OF MATERIALS

As an essential component of an eco-design initiative, materials are chosen for having the smallest possible environmental footprint: renewable, natural, recycled or recyclable materials, requiring fewer resources, paper and cardboard coming from sustainably managed forests and that respect biodiversity, discontinuation of instructions or printed inside the packaging, plant-based inks used for the printing of packaging...



### SMEs COMMIT TO RESPONSIBLE PACKAGING

Many SMEs attach great importance to the sustainability of their materials: just like **SFPP**, whose glass bottles and cardboard jackets have become the standard.

The VSE **Janakpur**, that provides other laboratories with development assistance (formulation, regulations), has worked with the beauty brand **Maison Jean d'Estrées** to develop the *Sonature* range that totally breaks with traditional luxury codes. Limited in size, the packaging is made of recyclable paper.

The **Groupe Panther** markets bottles primarily made of PE\*, PP\* - and more rarely PET\* - and increasingly uses recycled cardboard, for example for the jackets of its products or for its outer packaging (all of which is already made of PCR\*\* cardboard).

**Phytosolba** uses recyclable packaging whenever possible. For example, the company plans to replace its plastic jars with aluminium.

\*See definition page 42

\*\*See definition page 32

## ❖ RECYCLED RAW MATERIALS

Recycled Raw Materials (MPR) or Secondary Raw Materials (MPS) or even *Post-Consumer Recycled* (PCR) materials all come from the recycling of waste that can be used in order to partially or totally take the place of new raw materials.

By definition, their use serves to reduce the need for standard new raw materials. According to the FEDEREC (Fédération professionnelle des entreprises du recyclage), the production of one tonne of recycled material avoids an average of 80% of greenhouse gases and requires half as much energy as a tonne of new raw materials.

The use of recycled raw materials has limits based on the availability of these materials, as well as requirements related to safety (ensuring the absence of contaminants in the recycled material) and traceability.

Secondly, the physical characteristics of recycled plastics differ from primary plastics. Their colour (grey) and rigidity can vary according to the quality of the collection and sorting. This can make their usage uncertain.



### GROUPE CLARINS: RECYCLABLE AND RECYCLED MATERIALS

Clarins uses 63% recyclable materials, 74% at Thierry Mugler Parfums and 82% at Azzaro.

The company also uses recycled materials. Continuous effort is being devoted to expanding their use in packaging. As such, all of its glass jars and foundation bottles include 25% recycled glass. The *Huile Embellissante Solaire* bottle contains 30% PETR (PET certified as recycled after use).

### GROUPE ROCHER : BOTTLES CONTAINING PET PCR

88% of PET bottles contain PET PCR (*Post-Consumer Recycled*), meaning that it comes from recycled raw material channels. Thanks to these measures, amongst others, 233 tonnes of new plastic weren't needed in 2016.

### HEAD & SHOULDERS RECYCLES BEACH PLASTIC

The plastic collected on beaches or along fresh waterways comprises a very uneven collection of rigid plastic (PET, PE-LD, PP, PS, PE-HD). TerraCycle, a company specialising in the recycling of waste not handled by traditional recycling operators, has worked with local associations to organise the collection of plastic waste from beaches. The collected and sorted PE-HD plastic is washed, shredded and reduced to flakes, for the manufacturing of bottles of Head & Shoulders.

As such, since June 2017, Head & Shoulders has marketed a recyclable shampoo bottle, for which one quarter of its packaging is made up of this recycled plastic. Engineers designed a new packaging structure made up of three layers. The final packaging is grey, which is quite unusual for consumers. Parent company Procter & Gamble has as its objective to market a half-million packaging containers including 25% beach plastic in 2018. In all, this involves the use of 2,600 tonnes of non-virgin resin each year.

### L'ORÉAL : PCR RECYCLED MATERIALS

The Group used 7050 tonnes of PCR (*Post-consumer recycled*) materials. A few packaging examples resulting from this strategy :



BIOLAGE :  
Flacon composé de  
100% de PET-PCR



L'Oréal professionnel  
- MYTHIC OIL  
Pot composé de 25%  
de PET-PCR



KERASTASE  
Flacon composé de  
100% de PET-PCR



L'Oréal Paris –  
BOTANICALS  
Flacon composé de 100  
de PET-PCR

The Group's eco-design policy has led to the development of products that are increasingly replacing new fossil materials with bio-sourced or recycled materials, whenever the overall environmental benefit can be proven and that the quality is on a par with new materials.

### LVMH : LIFE 2020

With the launch of LIFE 2020, packaging eco-design has become a priority looking ahead to 2020, at which point all products marketed by the company must offer improved environmental performance. The Maisons in the Perfumes & Cosmetics business groups have committed to a 10% improvement of the Environmental Performance Index (EPI) of their products between 2013 and 2020.

PIERRE FABRE DERMO-COSMÉTIQUE :  
PET PCR IN KLORANE BOTTLES

Since 2011, 100% of the bottles of shampoo and make-up remover from the Laboratoires Klorane have contained at least 25% PET PCR (*Post-consumer recycled*).

❖ SUSTAINABLE PAPER AND CARDBOARD

Many companies in the sector use paper and cardboard that come from sustainably managed forests, based on the specifications of two major organisations, namely FSC (*Forest Stewardship Council*) and PEFC (*Programme for the Endorsement of Forest Certification schemes*).

Other companies go even further, choosing to work with *Imprim'Vert*® certified printers. This trademark now covers all of Europe. It certifies that printers manage their activities sustainably (limitation of waste, absence of toxic products, monitoring of energy consumption, etc.), while using paper whitened without chlorine or chlorine derivatives, i.e. *ECF* (*elementary chlorine free, chlorine free*) or that use plant-based ink.



GROUPE L'OCCITANE

The packaging for L'Occitane contains at least 20% recycled or renewable materials. 396 tonnes of recycled material were used in one year by the L'Occitane and Melvita brands.



## 2.2 REDUCE THE SIZE AND WEIGHT OF PACKAGING

In addition to proposing solutions that align with consumer needs (roaming, light formats), companies – working closely with packaging manufacturers – are adapting the size and weight of packaging in order to optimise the quantity of products per transport pallet and to limit the environmental impact of the logistics and distribution phase.



### CHA LING : REDUCED WEIGHT

The packaging of the Cha Ling Collection is economical in terms of materials, with refills often available. The *EvoClassic* bottles in this range have soldered caps (reduction of overall weight). The bottles are also made of recycled materials, while the walls of been thinned without decreasing the sturdiness of the packaging.



## CHANEL : MORE RESPONSIBLE BUNDLING WITH THE USE OF CED (DIRECT PACKAGING BOX)

A single box from the plant to delivery, thanks to an optimised process that provides environmental gains:

- reduced number of lorries and containers thanks to better filled boxes (50% lower CO2 discharges),
- reduction of packaging waste by the elimination of a packaging operation,
- improved worldwide traceability of our products: a single label is now placed on the parcel,
- reusable, recyclable and FSC-certified box.

and that improves ergonomics at the workstation

- within the distribution centre : reduction of the weight of the parcels. The maximum weight is 15 kg (instead of 25 kg). Heavy parcels are automatically palletized;
- on the production sites : involvement of representatives of the teams as well as of members of the CHSCT (Health, Safety and Working Conditions Committee) in an effort to improve this system and support the adoption of the new gestures.

The CED solution is therefore economical, ecological and respectful of the employees.



### GROUPE CLARINS: LIGHTER JARS

The 50 ml glass jars of Clarins were lightened by 12% at the time of their overhaul in 2012. The weight of the *Joli Rouge* pack was reduced by 15%. More globally, all jackets were lightened and are printed on both sides (notably the instructions for certain products).

### GROUPE L'OCCITANE: A WCR INDICATOR

For each new development, the formula / primary packaging and primary / secondary packaging ratios are measured using the *Weight Content Ratio* (WCR) indicator so as to optimise the packaging.

For the existing catalogue, actions are carried out each year in order to improve the packaging.

For example, for the 75 ml format, the rim volume was reduced by 13% by decreasing the diameter of the bottle. This change of the primary pack helped to optimise on the tertiary side, by increasing the products per pallet by 33%.



### L'ORÉAL : ASSORTMENT

Since 2007, L'Oréal has implemented a responsible packaging policy based on three pillars: Respecting, Reducing and Replacing. A global and systematic eco-design process has been implemented upstream for the packaging of finished products, and for the transportation packaging.



**KERASTASE**  
Reduction of the weight of the cap and bottle, i.e. a total reduction of 3 g for each finished product. Just the caps provide a reduction of 45 tonnes of plastic per year, across the range.



**BIO THERM**  
Weight reduction of the Bioscience 200 ml and 400 ml jars, i.e. a total of 10 tonnes of new materials unused each year.



**NARTA**  
Weight reduction of the aluminium jars: -4.7% aluminium per jar for total of 18 tonnes of aluminium/year unused across the Narta range.



**L'OREAL PROFESSIONNEL**  
Compressed aerosol, resulting in a considerable reduction of the quantity of aluminium per container: -38%

#### LABORATOIRE BIOGÉNÈSE APPLIQUÉE : OPTIMISING THE LOGISTICS

LBA has designed a new type of spacer so as to give it a double use, along the lines of a crayon box, for example.

In the luxury sector, even though adjusting the packaging is a delicate matter given the targeted market, LBA has successfully halved the size of its packaging, even the most sophisticated. Secondary packaging has also been eliminated. In time, the SME's brochures and instructions will be printed locally in order to avoid the transport of these documents, that can represent a considerable weight over long distances.

#### LABORATOIRES EXPANSCIENCE: RETHINKING THE PACKAGING

Committed to an eco-design initiative, the Laboratoires Expanscience use the 4R approach: "Reduce, Replace, Recycle, Rethink" for the development of all packs. As such, the packaging of their massage oil has been reviewed in order to lighten the weight of the bottle, while the crimping operation has been eliminated. The product is now manufactured on the industrial site in France, while all of the packaging is lighter and more recyclable. This operation reduced the use of plastic by 4.5 tonnes.



#### UNILEVER : COMPRESSÉ DEODORANTS

The *Compressé* deodorants launched by Unilever are twice as small as classical sprays, and contain half as much gas. They offer the same effectiveness and can be used the same number of times as a regular aerosol deodorant.

## 2.3 OFFER REFILLS

Some brands offer refillable packaging. The benefit of the packaging of these products is that they can be reused several times, which offsets their higher purchase price and the generally heavier packaging. Refills are part of a reuse and responsible consumption approach, provided that the packaging is refilled at least 3 or 4 times.

Similarly, bulk sales help to reduce excess packaging while providing the exact quantities desired by consumers. Such sales are reserved for certain types of products, given the health and conservation standards that must be observed.

Care must be taken to comply with cosmetovigilance rules, in order to ensure that consumers have access to information when obtaining refills.



### FLEXIBLE AND LIGHTER PACKAGING

Many brands are offering refills in the form of flexible packets that are presented upright in display units. Their manufacturing requires less plastic since they are much lighter (but still sturdy).



### GROUPE CLARINS: PERFUME FOUNTAIN AND REFILLS

On average, the **Source Mugler** bottle can be reused 5 to 6 times. Some very faithful and approving customers have truly developed a *resource reflex* (with encouragement provided by an economic bonus when making purchases).



Launched in 1992, the **Angel** perfume bottles ("*too beautiful to throw away*") can be refilled via perfume fountains. This kick-off was accompanied by the launch of client cards in order to strengthen the loyalty effect.

Each year, this initiative avoids the use of 2.2 million bottles, along with the associated boxes, spacers and cellophane.



Also, empty jars from the customized **MyBlend** range of beauty products can be reused at will by simply replacing the refill that consumers can order online.

Also, empty jars from the customized **MyBlend** range of beauty products can be reused at will by simply replacing the refill that consumers can order online.



## L'ORÉAL : REFILLS



### KERASTASE – FUSIO DOSE

- Refillable bottle
- 1 multi-use bottle replaces 20 single-use boosters



### SHU UEMURA

- Refillable without glue or magnet
- Easier refilling and cleaning
- Several sizes available

## LVMH : REFILLABLE PARFUMS CHRISTIAN DIOR

"Refills" are another way for LVMH to extend the useful life of its products. For example, Parfums Christian Dior has been developing this concept for many years. The Maison has started applying this concept to its premium ranges. Today, 80% of the serums and creams that it launches are refillable. Just for the Capture Totale cream, this means an annual savings of 600,000 litres of water and approximately 11.6 tonnes of waste. Parfums Christian Dior continued this initiative in 2016, marketing its new *DreamSkin Perfect Skin Cushion* cream in refillable packaging.

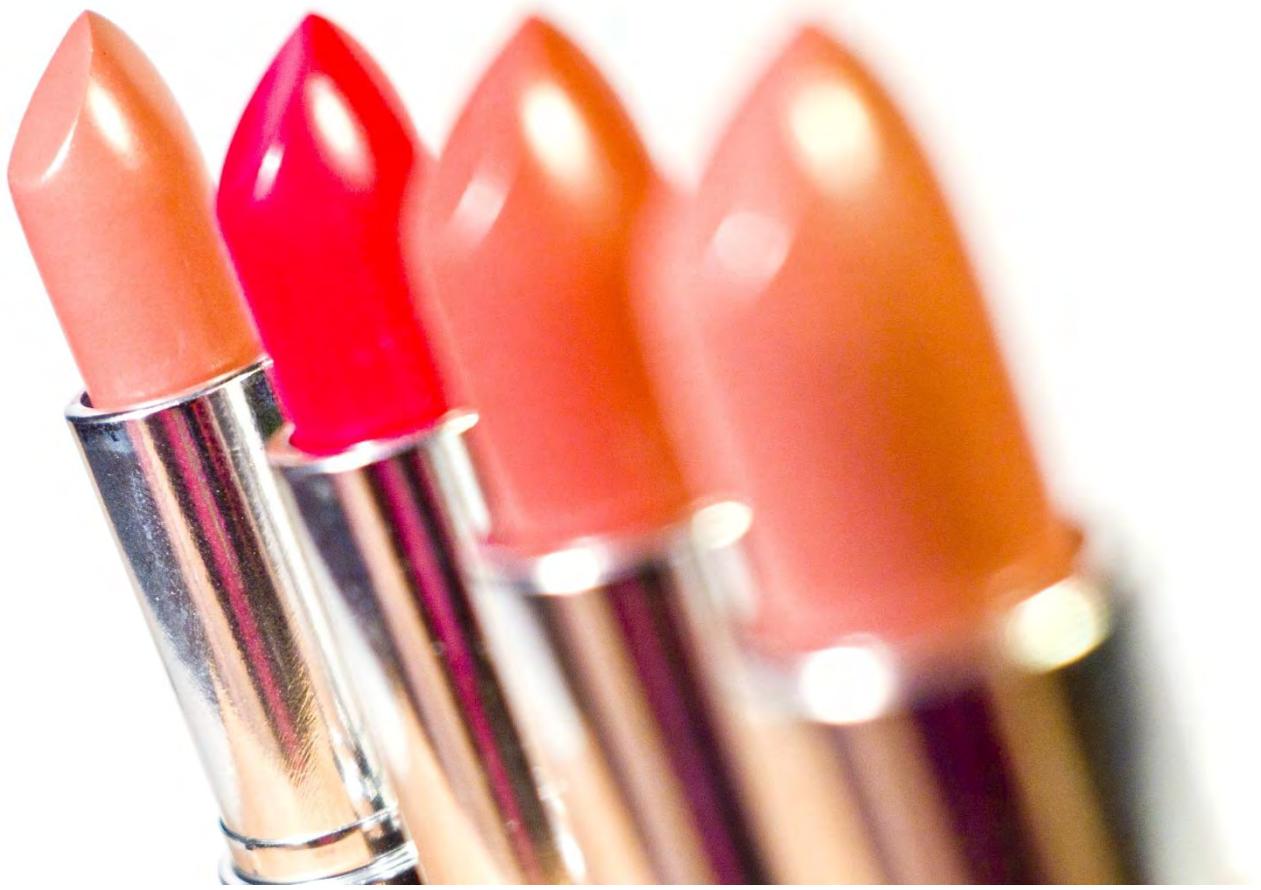


### LVMH : CHA LING

The Sino-French maison offers its *Best Seller* products in refillable formats made of porcelain. The porcelain is made from natural materials that can be recycled by the supplier. Three years of research and development were needed to develop this new packaging, so as to protect the content and the hygiene of the container. As the units are entirely poured and emptied by hand, many technical constraints (notably flexible spacers) had to be overcome, while working on the adhesion between the plastic refill, the bottle and the porcelain, a living material that shrinks by almost 14% during firing!

### PHYTOSOLBA

The SME provides professionals with 1 litre shampoo refills.



## 2.4 IMPROVE THE RECYCLABILITY

Improving recyclability is a strategic eco-design axis.

As part of a responsible packaging policy, eco-design choices should include recyclability as much as possible. Companies are seeking to replace traditional materials with recyclable ones, and to use materials that are compatible with existing recycling channels.



### GROUPE CLARINS

For all refillable Mugler and Eau Dynamisante perfumes, designers paid particular attention to recyclability: all elements of the packs can be separated for easier sorting.

### SHISEIDO

For its future developments, Shiseido is working to promote the separation of end-of-life materials with regard to complex items (covers for cosmetics and perfumes) in order to improve recyclability, but without hindering quality during use.



## VARIABLE RECYCLABILITY OF PLASTICS

The plastic families most widely used in cosmetics packaging are:

- polyethylenes (PE) used in tubes and bottles,
- polyethylene terephthalate (light and dark PET) with very transparent properties, ideal for bottles containing formulas that are high in oils.
- high-density polyethylene (HDPE), used for bottles,
- very rigid polypropylene (PP), primarily used in caps and pumps.

Plastic packaging with an available recycling channel at the present time in France include bottles and vials made of PET, HDPE and PP.

## KEY COSMETICS PACKAGING FIGURES (CITEO\*)

- A recycling channel is available for nearly 80% of cosmetics packaging. 53% are recycled in France.
- The eco-contribution of the cosmetics sector amounts to approximately €16.5 million ("cosmetics and other products").
- This finances collection and sorting for almost 1,032,410 inhabitants, i.e. the equivalent of the cities of Marseille and Reims.
- The recycling of packaging from cosmetics products served to avoid 52,981 tonnes of CO2 emissions, the equivalent of 29,681 cars.

*\*Resulting from the merger of Eco-Emballages and Ecofolio in September 2017 - Figures from 2017*

## 2.5 ECO-DESIGN OF POS (POINT-OF-SALE) ADVERTISING

Point-of-sale (POS) advertising is one of the specific features of the cosmetics sector. This term covers advertising and visual media, as well as display units and sales furnishings. Their manufacturing requires a certain quantity of resources. In 2016, ECR (*Efficient Consumer Response France*<sup>7</sup>), working with the FFPS (Fédération Française de la Parfumerie Sélective) and the FEBEA, published a White Paper\* containing recommendations for improving the usage rate of POS elements, reducing operational processing costs, and increasing their recyclability.

Many single-brand and multi-brand experiments are in progress in order to improve the recyclability of POS materials, their collection for recycling purposes and reducing their overall environmental impact.

\**Cycle de vie des éléments de PLV dans le secteur de la parfumerie sélective* – [Guide de bonnes pratiques ECR / FEBEA / FFPS: https://institutducommerce.org/publications/542-Cycle-de-vie-des-elements-PLV-dans-le-secteur-de-la-parfumerie-selective](https://institutducommerce.org/publications/542-Cycle-de-vie-des-elements-PLV-dans-le-secteur-de-la-parfumerie-selective)



### CHANEL : RECYCLED MATERIALS

Chanel uses POS materials made of recycled and recyclable PMMA (polymethyl methacrylate), called Greencast. This project was developed by the Milan-based company, Madre Perla. In 2016, 70% of the Chanel POS is primarily made with Greencast recycled PMMA.

Within its *Make-up Experience Display* (MED) system, POS materials can be disassembled, glue is replaced insofar as possible by pegs for easier assembly and disassembly, while optimising the transportation volume. A single palette is used for all transportation of the POS materials. In its POS materials, Chanel uses solvent-free clean varnish. Since 2016, 100% of the POS materials have been eco-designed.

<sup>7</sup> Active exchange and reflection network promoting collaboration, sharing of experiences and best practices, that includes decision-makers from manufacturers, distributors and logistics service providers in the sector of large-scale distribution of food and non-food products

#### CYCLEAPP PROJECT: APPLICATION FOR COLLECTING, SORTING AND RECYCLING POS MATERIALS

Working with the Happy Blue Fish company, Chanel has developed a smartphone application for easier collection and recycling of end-of-life POS materials. The test project has been in progress since March 2017, within 13 points of sale in the city of Lyon.

Designed in collaboration between Chanel, Marionnaud, Le Printemps, Les Galeries Lafayette, La Poste, Nouvelle Attitude and Paprec, this project proposes a solution for end-of-life handling of the POS materials that are displayed each day in perfume shops. The aim is to collect them at the point of sale, and then to sort, recycle and add value to them, while ensuring the traceability of the collected elements.

This shared project is now in progress with certain of the sector's brands and trademarks.

#### GROUPE CLARINS: SUSTAINABLE POS

The Groupe Clarins is very involved in the area of sustainable POS materials. Several actions have been carried out successfully:

- decor simplification for greater recyclability,
- elimination of film wrapping for sheaths and posters,
- flat delivery of display units for reduced volume,
- 100% of the packaging articles, POS and printed materials made with wood fibre labelled FSC or PEFC.

#### L'ORÉAL : ECO-DESIGN OF POS MATERIALS

Since 2015, the Group has used an overall eco-design process for its POS materials. A set of eco-design rules has been prepared, covering the various steps in the lifecycle of POS materials (design, production, transport and end-of-life). L'Oréal works with its suppliers to apply these rules, so as to provide the market with better designed POS materials:

- optimisation of the weight of POS elements by ensuring their overall technical performance,
- use of FSC or PEFC certified wood / paper / cardboard,
- use of a minimum volume of recycled or renewable materials,
- elimination of electronic elements for short-lived POS materials; use of LEDs for permanent POS materials that include lighting,
- for multi-material POS elements, separability of the elements for easier recycling.

PIERRE FABRE DERMO-COSMÉTIQUE :  
BEST PRACTICES FOR THE DESIGN OF POS MATERIALS

Pierre Fabre Dermo-Cosmétique performs analyses of the use of the POS materials sent to its distributors, as well as analyses of the adequacy of the marketing request with the desired objective, thereby only producing elements that will be truly useful. This practice served to very significantly reduce the volume of produced POS materials.

It is also rolling out an eco-design training programme for POS materials intended for the Creation and Development departments, in order to facilitate



# CLOSE-UP

## Eco-design



### GROUPE L'ORÉAL: A RESOLUTELY ECO-DESIGNED PRODUCT

The *Aromachologie* shampoo illustrates the many facets of eco-design:

- **Sourcing of components in Europe and packaging in France**
- **Formula**
  - o more than 93% natural,
  - o more than 98% biodegradable,
  - o using a cold manufacturing process.
- **Packaging**
  - o with no jacket,
  - o large volume: 500 ml,
  - o with an eco-refill that results in a 78% reduction of material,
  - o made with 100% PETR (recycled polyethylene terephthalate),
  - o fitted with a pump that delivers the right amount of product.
- **Recyclability:**
  - o a 100% recyclable bottle,
  - o a pump that can be screwed off for easier selective sorting,
  - o availability of TerraCycle containers in the shops: 3 packages returned for a 10% reduction.

### L'ORÉAL : ASSESSMENT OF THE OVERALL ENVIRONMENTAL IMPACT

The L'Oréal commitment *Sharing Beauty With All* is for 100% of its new products to be improved by 2020. To meet this ambition, the Group has created an environmental and social appraisal tool, for all phases of the product's lifecycle. This tool completes the eco-design process and enables the designers (formula, packaging, development, marketing...) to simulate the possible options in order to select the most relevant ones. The tool relies on a multi-criteria footprint methodology and a detailed analysis of each footprint.

All products manufactured by the L'Oréal Group were analysed and ranked according to their environmental benefits. 143 categories were defined and 40,000 formulas were examined between 2014 and 2015, leading to the launch in early 2016 of a new eco-design tool used by all formulator teams. Eco-toxicity, water use, eutrophication, renewability of raw materials and the impact of transformation processes are notably some of this tool's criteria.

# MANUFACTURING SUSTAINABLY

## 1. OPTIMISING INDUSTRIAL PROCESSES

### 1.1 CONTROLLING ENERGY AND WATER CONSUMPTION

Control of energy and water consumption on industrial sites is one of the levers for optimising environmental impact. Constantly monitoring these flows is essential as part of carrying out a continuous progress initiative.



#### LABORATOIRES EXPANSCIENCE: REDUCED CONSUMPTION

The new installation of the Epernon site served to double the production capacity and to drastically reduce electricity and water consumption (annual reduction of more than 10,000 m<sup>3</sup>), while sharply decreasing production costs. Dedicated to R&D and already ISO 14 001 certified, the site is targeting zero aqueous releases by 2020. Its consumption of electricity, gas and water are expected to drop respectively by 30, 50 and 50% between 2010 and 2020.

#### GROUPE ROCHER : WOOD BOILERS

The two main logistics distribution sites for cosmetic products located in Brittany have now been fitted with wood boilers, thereby warming the 950 employees with the use of renewable energy. In 2016, these new boilers avoided the emission of 1,608 tonnes of CO<sub>2</sub>.

### MELVITA : A THERMAL SOLAR INSTALLATION FOR INDUSTRIAL USE

In 2012, Melvita inaugurated a new eco-plant: cistern to recover rainwater, internal effluent treatment centre using phytopurification, green roof, skylights... The production tanks are washed from a 6000 L reservoir heated to 50°C by a system of thermal solar panels. As a result, a significant reduction of the site's gas consumption and of its transportation needs to supply the plant with propane (annual reduction of 22 MWh PCI of propane (1,700 kg) and 8 MWh of electricity).

### AMONGST SMEs

Sometimes, the measures to be implemented do not require large investments.

**Phytosolba** has chosen energy contracts that give preference to green energy.

For better energy management during production, **Phytomer** has notably installed variable speed compressors or heat exchangers on this equipment. All consumed energy comes from renewable sources: wind turbine, solar, aerothermal, geothermal, hydrothermal, marine and hydroelectric energies, biomass, landfill gas, gas from wastewater purification stations and biogas...

**Eugène Perma** is overhauling its outdoor lighting, as well as its logistic and production sites, with the installation of LEDs, leading to an energy reduction of up to 50% during the first year. The company also stops heating its premises on the legal dates.

**Azur Fragrances** has installed timers on the switches in transit areas.



## ❖ ENCOURAGING RENEWABLE ENERGIES

### DSM

DSM's Alpaflor® production site uses exclusively renewable electricity (primarily of hydroelectric origin). All of its production sites have objectives for reducing emissions of CO<sub>2</sub>, Volatile Organic Compounds (VOC) as well as waste, and must decrease their use of water and electricity.

### GRUPE L'OCCITANE : ENERGY OBJECTIVE

The Groupe L'Occitane already uses 28% renewable energy, and plans to attain 100% in several phases:

#### **Step 1 : France**

For this step, the objective has been attained:

- 100% of the company-owned shops in France operate with the use of 100% renewable energy,
- all of the Group's industrial sites are also supplied with 100% renewable energy.

#### **Step 2 : the main subsidiaries**

- The Groupe L'Occitane is studying the use of electricity from renewable sources in order to supply the sites and shops of its main distribution subsidiaries (excluding transportation),
- the latter represent 80% of the Group's electricity consumption.

#### **Step 3 : roll-out of the initiative to the other distribution subsidiaries**

### GRUPE ROCHER : RENEWABLE ENERGY

As part of its objectives for 2020, the Groupe Rocher has committed, since 1 January 2017, to obtaining 30% of its supplies from renewable energy in order to cover the electrical consumption of all of its operational sites in France, while reducing energy and water consumption by 10% relative to 2015.

### L'ORÉAL : TOWARDS CARBON NEUTRALITY

Between 2005 and 2016, the Group reduced its CO<sub>2</sub> by 67% and increased its production volume by 29%. Thanks to projects using various technologies suited to the location of the sites (for example, biomethanization and solar panels) and the purchase of green electricity and gas, renewable sources provided for 45% of the needs of the L'Oréal plants and facilities in 2016. The Group has 15 sites, 5 plants and 10 distribution facilities that have attained carbon neutrality.

### LABORATOIRE BIOGÉNÈSE APPLIQUÉE

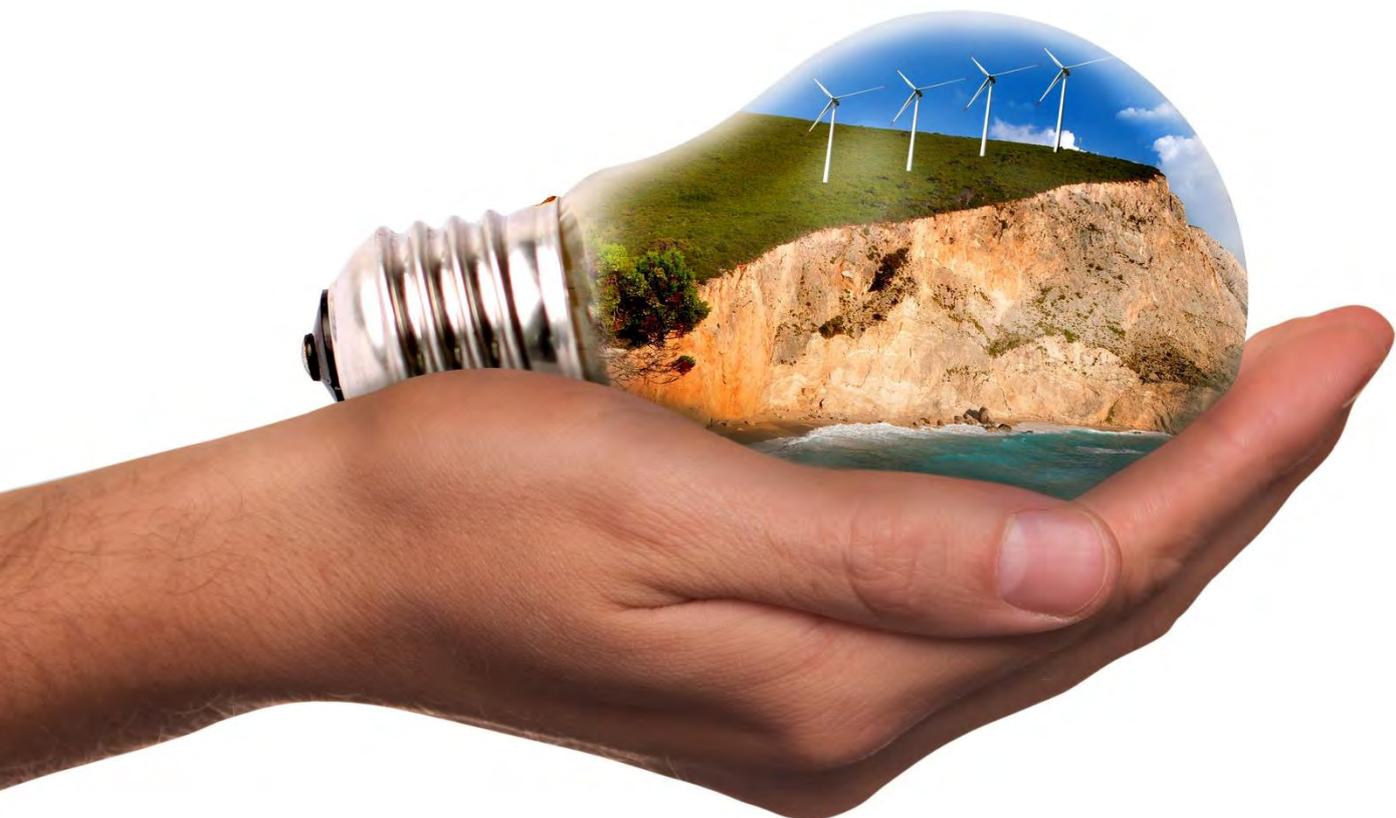
LBA works with the Laboratoire Laurence Dumont, a subcontractor in Agen that specialises in organic perfumes and hair removal. This subcontractor's involvement in favour of the environment and sustainable development was decisive. Its production site is notably covered with photovoltaic panels.

### LABORATOIRES EXPANSCIENCE: RENEWABLE ENERGIES

The Laboratoires Expanscience industrial site purchases renewable electricity coming from French sources (for each MWh of electricity consumed on the Epernon production site, the equivalent quantity of electricity of 100% renewable origin is injected into the grid by EDF).

The site is also ISO 14001 certified. For its part, the Paris head office is HQE® (recognised label certifying eco-built buildings) certified.

Since 2010, the laboratory has also been implementing an overall initiative to optimise its consumption of resources and to reduce waste on its production site. In 2017, the consumption of water, electricity and gas respectively dropped by 26%, 18% and 28.5% per 100 produced units.



## ❖ CONTROLLING WATER CONSUMPTION

### L'ORÉAL : REDUCING WATER CONSUMPTION

The Group has committed to a 60% reduction of its water consumption per finished product unit by 2020, relative to 2005. Two action axes are priorities: optimising consumption and developing recycling and water reuse projects on the production sites.

## ❖ ENVIRONMENTAL MANAGEMENT SYSTEMS

Many actors in the cosmetics sector have begun using renewable energies and limiting water and energy consumption on their production sites, through the implementation of Environmental Management Systems (EMS). To illustrate this, 77% of the representative companies in a Vigeo Eiris survey carried out in 2017 have implemented a management tool in order to reduce and control impacts on the environment, often including ISO 14 001 certification.



### CHANEL : THE COMPIÈGNE PRODUCTION SITE, AN ACTOR IN SUSTAINABLE CONSTRUCTION

The Chanel production site in Compiègne has been awarded CSR certification by the *Green Solutions Awards*, as a recognised actor in sustainable construction.

In 2016, the Parfums Beauté production site in Compiègne was recognised for its 12th and latest extension of the outstanding level of its High Environmental Quality (HQE®) certification. This prize was awarded after the fulfilment audit covering 4 topics: health, comfort, environment and energy. This was the first French industrial building to obtain this label.

In 2017, the Compiègne project received 2<sup>nd</sup> prize for sustainable buildings in the "Health & comfort" category as awarded by Certivea during the *Green Solutions Awards*.

### GROUPE ROCHER : A WELL-ESTABLISHED EMS CULTURE

The four main cosmetics production plants of the Groupe Rocher (three in Brittany, one in Cork in Ireland) are certified ISO 9001 (quality management), 14001 (environmental management system) and OHSAS 18001 (occupational health and safety management).

### SISLEY : AN HQE® SITE

At Sisley, the Health Safety Environment (HSE) managers from the various sites set environmental performance objectives for the various departments. For nearly a year, a similar initiative has been in place with its suppliers and subcontractors.

The Saint-Ouen l'Aumône site is implementing a High Environmental Quality (HQE®) initiative involving its offices and logistics warehouses.

The logistics platform will switch to LED lighting.

This site is also equipped with a photovoltaic roof that covers 100% of the electrical needs of the offices.

### LVMH : NEW LIGHTING TECHNOLOGIES

To optimise its energy consumption, LVMH relies on the LVMH Lighting programme. This has been implemented in order to develop the use of new lighting technologies, most notably LEDs (Light Emitting Diodes), within the Group. LEDs use 30% less electricity on average, require far less maintenance and provide lighting quality and reliability. In only a few years, the "LED culture" has spread throughout the company, building on constant information, awareness-raising and training actions.

In 2016, for example, LVMH organised three "LED Expos" in Paris, New York and Hong Kong. As LED technology is still quite recent and not entirely standardized, the Group also set up, in 2014, an e-commerce site ([lvmhlighting.com](http://lvmhlighting.com)) in order to supply the Maisons and their installers with the most innovative, efficient and economical equipment solutions.



## ❖ INDUSTRIAL AND TERRITORIAL ECOLOGY

Creating territorial synergies serves to reduce costs and increase the efficiency of industrial processes: for example, a company can arrange for its production process to use the recycled waste from another nearby company. Such an initiative, that combines notions of industrial and logistics processes with the circular economy, can be part of an Industrial and Territorial Ecology (ITE) initiative. This involves performing an in-depth and overall study of local flows (i.e. raw materials, intermediate consumption, energy, waste, personnel transportation) in order to identify potential synergies between geographically close economic actors. Several remarkable initiatives have already seen the light of day in France.



### AZUR FRAGRANCES : POOLING

Azur Fragrances has pooled its resources and means with another company in order to design extraction equipment for its production workshops.

### DSM : SHARED USE

The production from two relatively close manufacturing sites is pooled so that only a single lorry will be sent to the storage location, rather than two. Also, one of the production sites shares its energy and waste treatment infrastructures with another company's site. The latter company produces "waste" that is used as raw materials for the manufacturing of products.

### L'OCCITANE EN PROVENCE

The Provence-Alpes-Côte d'Azur region has launched 12 Regional Interest Operations (OIR) with the aim of working with the territories, sectors and companies in order to accelerate structuring projects that create wealth and jobs. It targets balanced development of the territory.

The Laboratoires M&L (French subsidiary of the Groupe L'Occitane in charge of product formulation and production) is the co-chairman of the OIR Naturalité that aims for the PACA region to become the reference territory in Europe in the field of neutrality, notably based on the circular economy.

## 1.2 IN-HOUSE EFFLUENT PROCESSING

Most companies, including SMEs, have implemented in-house discharge treatment systems: purifiers and treatment units, management of atmospheric emissions. Regarding aquatic releases, the most current measures consist of water pre-treatment basins. Industrial processes are becoming increasingly optimised with regard to reducing the organic load of effluents within the sector.



### DSM : WATER MANAGEMENT

During the production of its emulsifier Amphisol® K, DSM now adds value to the released water that contains phosphorus: this water is now transferred to a water treatment plant, in order to feed micro-organisms.

Also, the site that produces the Alpaflor® range reduced its water consumption by 40% in a single year, by changing processes but with an equal production volume. Since then, the site has made continuous improvements along these lines.

### GROUPE ROCHER : WASTE RECLAMATION

Across the Group, the share of waste reclamation, recycling and reuse was 96% in 2016. The sludge produced by the purification stations of the Group's industrial sites is composted.

### L'ORÉAL : EFFLUENT TREATMENT

L'Oréal re-processes the effluents on its sites, i.e. the output from the plant purification stations, in order to extract very high quality water. This water is then reused for the washing of production tools, or in cooling processes. At the end of 2016, L'Oréal has 10 recycling installations.

#### PHYTOMER : EFFLUENT TREATMENT

For the treatment of its industrial effluents, Phytomer has set up a totally natural system: filtering gardens. These installations involve using natural phytopurification processes notably for the purposes of purifying industrial effluents. Also serving as wetlands, they provide natural biodiversity refuges that are beneficial to the local ecosystem. In this way, a perfectly suitable habitat is provided for many species under threat from growing land urbanisation.

Phytomer has also implemented a glycol water system, in which glycol – a substance that prevents freezing – is added to water for use in the closed cooling systems of equipment.

#### PIERRE FABRE DERMO-COSMÉTIQUE : AIR / AIR WITH SPRAYER SYSTEMS

In its biggest plant, the laboratory replaced its cooling towers – relatively commonplace equipment on industrial sites – that are intended to cool liquids using gas; water is generally cooled using the ambient air, by means of air / air with sprayer systems. This action led to a consumption reduction of 10% on this industrial site used for the manufacturing of dermo-cosmetic products.



## 2. MANAGING PRODUCTION WASTE: PREVENTION, RECYCLING AND RECLAMATION

Many companies have adopted waste management and prevention initiatives. They serve not only to decrease the environmental impacts linked to waste processing, they also help to limit costs. Actions can be implemented in order to reduce the generation of waste at the source and, in parallel, to add value to the residual waste.

### 2.1 PREVENTING WASTE PRODUCTION AT THE SOURCE

Measures can be taken in-house in order to reduce scrap packaging and wastage.

One major difficulty for SMEs: Packaging suppliers often require companies to tolerate a margin of error on the delivered quantities. Known as "tolerance margins", they can be up to 25%, even on small volumes, thereby generating wastage.



#### L'ORÉAL : OBJECTIVE ZERO WASTE TO THE LANDFILL

Between 2005 and 2016, the Group reduced its waste production in its plants and distribution centres by 35%. L'Oréal has adopted a definition for the concept of "waste": "any solid waste coming from a site (production plant or distribution Centre) that is not a marketable finished product, even after reclamation".

By late 2016, four years ahead of the stated objective, 100% of the L'Oréal industrial sites had attained the "zero waste to the landfill" objective.

#### LABORATOIRES EXPANSCIENCE: WASTE REDUCTION

Since 2010, the laboratory has been implementing an overall initiative to optimise its consumption of resources and to reduce on-site waste. In 2015, the production of on-site waste dropped by nearly a fifth, excluding washing water.

## ❖ MANAGING OBSOLETE PRODUCTS

The management of stocks of obsolete products is specific to the cosmetics sector. This can involve unsold products, intact products but with defective or damaged packaging, or range renewals. To limit the destruction of products that have not been opened, used or exceeded their use-by-date, actions including product donations to associations or other such actions can be used.



### L'ORÉAL : ADDING VALUE TO OBSOLETE PRODUCTS

One of the L'Oréal commitments focuses on continuous improvement in manufacturing and packaging processes, so as to reduce production losses. This notably includes a programme to add value to stocks of obsolete products in order to avoid, insofar as possible, having to destroy them.

### PIERRE FABRE DERMO-COSMÉTIQUE : PRODUCT GIFTS

In early 2016, Klorane signed a partnership for its obsolete products with the Agence du Don en Nature (ADN), an actor of the circular economy that distributes new non-food products to the most disadvantaged, through 700 partner associations in France. As such, in two years, Klorane has distributed 133,000 basic necessity products, shampoos and washing gels for babies. With these gifts, Klorane wishes to provide people in need with a response to essential hygiene actions, that contribute to maintaining self-esteem.



## 2.2 REUSING

Reuse involves using the same object / materials several times. In practice, this is a less expensive technique (notably in terms of energy) than recycling.



### GROUPE ROCHER : REUSABLE TRANSPORT PACKAGING

The boxes used for sourcing of finished products and coming from cosmetics production sites are sorted on the French distribution site, then returned to the production sites for reuse.



## 2.3 RECLAMATION

The following examples of the reclamation of co-products and plant waste demonstrate that they can be put to use other than for energy.



### DSM

On its Alpaflor® site, DSM reuses the plants after extraction; they are composted in order to be used as natural fertilizer.

### GROUPE L'OCCITANE: RECLAMATION THROUGH SUSTAINABLE CHANNELS

**Shea butter residue**, known as cakes, is used as fuel in the transformation of nuts and shea butter, therefore providing a substitute for wood (pyrolysis). The developed techniques are totally pioneering, and serve to significantly reduce the environmental impacts of the entire shea butter sector in general.

For **the Argan channel**, the shells are used as fuel for the firebox, the pulp and solid cakes as cattle fodder, while the leaves can be used for certain cosmetics extracts.

For **the immortelle (everlasting) channel**, a compost workshop for the dregs has been set up for the fertilisation of land parcels.

For **the musk rose channel**, the seeds used for producing the musk rose oil are co-products of the Chilean herbal tea industry.



## LABORATOIRES EXPANSCIENCE: ADDING VALUE TO CO-PRODUCTS

Expanscience is studying the possibilities for adding value to plant co-products. This is the case for maracuja supplies, that provide a second life for plant waste: virgin maracuja is extracted from maracuja seeds not used by the food sector. As such, this co-reclamation process within the agri-food industry avoids the need to harvest other plant sources, while limiting the output of production-related waste. Example of the 100% used avocado:



100% of the avocado is used, and seven different substances are produced. This means complete use of the fruit, which is involved in the composition of pharmaceutical products and dermo-cosmetic products. Mustela is notably formulated from avocado cakes containing active avocado peroxide, a natural protector of baby skin.

This co-reclamation of the plant helps to limit the depletion of resources.

## PIERRE FABRE DERMO-COSMÉTIQUE : ADDING VALUE TO CO-PRODUCTS

The reclamation of agricultural co-products is carried out in three ways:

- use of a co-product to extract plant active ingredients such as apple pulp for Elancyl, residue from magnolia cuttings and olive water (after pressing) for Klorane,
- use of part of the plant for its own needs and reclamation of the other parts in another activity such as the use of flax straw as an insulating material for homes for Klorane, use of the shea butter residue as a fuel and compost, and use of moringa leaves in the food sector for René Furterer,
- production of domestic hot water via a biomass boiler that uses the pulp of Réhalba oats for A-Derma.

## ❖ BIOMASS AND CO-GENERATION

One of the renewable energies in industrial use is biomass. Biomass is generated on-site or in the vicinity, by transformation of food and local farming waste.

Energy generation by methanisation falls into this framework. Methanisation produces a damp material, rich in organic matter, i.e. digester sludge, that can be used as a natural fertilizer, and for biogas.

Gas plants can convert biogas into heat or electricity. After purification, it can also be injected into the natural gas grid. It's an efficient example of co-generation: simultaneous production of energy and heat, from the same process.

The heat can be transferred via a heat pump, which serves simultaneously to heat and also to lower temperatures.

All of these techniques generally require significant investments.



### L'ORÉAL : SYSTEMS OF BIOMASS AND CO-GENERATION PLANTS

The Group has biomass and co-generation power plant systems in Belgium, tri-generation in Spain, heating networks in Germany and Italy, as well as photovoltaic energy in China, the United States and Spain.

Fifteen industrial sites have already attained carbon neutrality.

### PIERRE FABRE DERMO-COSMÉTIQUE :

#### MEDICINAL PLANTS BOILER

The domestic hot water of the Group's biggest plant is produced via a biomass boiler that uses forest chips and sawmill residue, as well as plant pulp, which is the residue obtained after extraction of three active ingredients (one for urology, one for oncology, and one for dermatology), produced by one of the Group's other plants.

The ashes from this boiler are then used in agricultural compost.

This enables us to add value to 800 tonnes of plant pulp, to replace two-thirds of the gas consumption, and to avoid 1600 tonnes of CO<sub>2</sub> per year.

As such, for Réhalba oats from the A-DERMA brand, i.e. one of the three plants that are used, the cultivation, extraction of active ingredients and manufacturing of finished products are performed within a radius of under 50 km.

## 2.4 RECYCLING

Recycling practices are already well established within the sector's sites. Some companies even develop in-house reclamation channels.



### GROUPE **L'OCCITANE**: SORTING CHANNELS

For better waste management in connection with its production, the industrial sites monitor the quantities of waste per month for each type of treatment. In 2017, two additional sorting sectors were found: one for strapping and the other for label reams. Overall for the year, nearly 70% of the waste produced by the industrial sites was recycled. The objective is to raise this rate. Also, the share of buried waste is now zero.

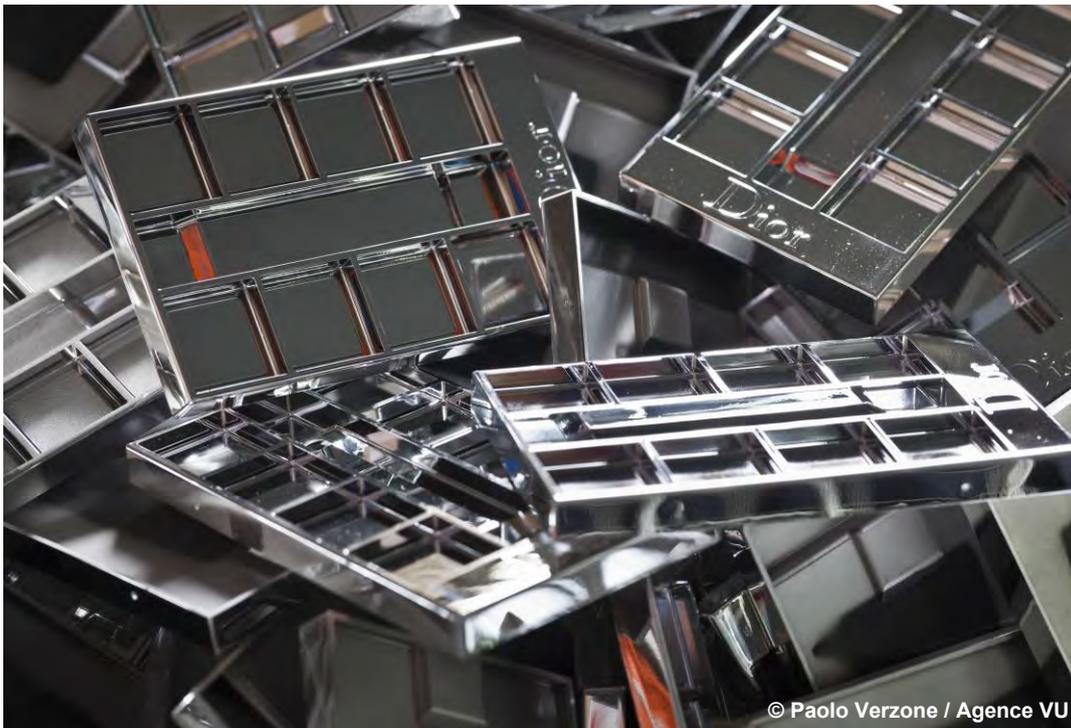


## CEDRE : REPROCESSING AND RECYCLING PLATFORM

The CEDRE (Centre Environnemental de Déconditionnement, Recyclage Ecologique) platform was created in 2009 with the support of LVMH, in order to ensure the secure destruction of the market value of commercial unsold products. All materials as well as used POS advertising are reclaimed. The material reclamation rate is on average 90 to 96% according to the nature of the products, the remainder through energy reclamation (co-incineration, methanisation...).

Open to any company, CEDRE is the leading platform in France in terms of volumes of material reclamation in the luxury and cosmetics sector.

In 2016, CEDRE processed and recycled 2,023 tonnes of very differing waste for LVMH. The Group's Maisons in Perfumes & Cosmetics activities, as well as Sephora and Louis-Vuitton, all submitted packaging materials, obsolete alcoholic products, advertising materials, testers used in stores and empty packaging returned by customers.



# PROMOTING RESPONSIBLE CONSUMPTION

As part of a complete circular economy initiative, making consumers aware of eco-gestures and sustainable consumption practices is essential. Firstly because lifecycle analyses indicate that for “wash-off” products, a large part of the environmental impact involves the consumption phase. Secondly, according to CITEO, while **87% of the French sort their packaging, only 44% do so systematically**. Unquestionably, the packaging of cosmetic and hygiene products is not particularly well sorted. Poorly identified sorting instructions, often cramped bathrooms... Sorting doesn't always come to mind in the bathroom.

## 1. ACCOMPANYING CONSUMERS

Cosmetic brands want to instill in consumers a desire to make responsible consumption choices. They are using various approaches to raise awareness and are making responsible offers more widespread, so that as many people as possible will have access to sustainable consumption products and methods: **better buying, better consuming, better throwing away**. Today, **consumer behaviour corresponds with an overall commitment**: understanding that resources are limited, actions with regard to generating waste, and improving living standards and well-being. By making it attractive and simple, sustainable consumption contributes to self-worth.

### 1.1 ENCOURAGING THE RIGHT SORTING GESTURES

Several brands have made efforts to raise awareness of sorting in the bathroom.

The FEBEA is part of the campaign.

In 2006, it worked with Eco-Emballages<sup>8</sup> to launch the **Keskistri in the bathroom** campaign.

Five videos inspired by beauty tutorials, that present a young woman in her bathroom accompanied by Mr. Butterfly, in order to provide accurate responses with regard to sorting bottles of shampoo and shower gel, aerosols, cardboard packaging and perfume bottles.

The 5 videos can be viewed here:

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<sup>8</sup> Renamed CITEO in September 2017 after its merger with Ecofolio



The videos have been watched more than 4 million times, resulting in 166,000 visits to the site [www.consignesdetri.fr](http://www.consignesdetri.fr). The campaign was widely reported in the press, on social networks, by communities and brand sites.

In November 2017, the FEBEA and CITEO repeated the operation with a new digital “**Kistri**” campaign, as a reminder that the vast majority of the packaging for cosmetics products can be sorted and recycled: just like a beauty routine, sorting must also become a day-to-day reflex!



To help consumers to properly sort their packaging, the CITEO **Info-Tri** logo can be placed on packaging.



## GROUPE CLARINS: AWARENESS-RAISING TRAILBLAZER

Back in 1999, Clarins eliminated plastic bags from its points of sale. In parallel, the Group regularly organises recycling actions in its shops in France.

## L'ORÉAL : ECO-GESTURES

The Group uses several approaches:

- gathering information on the environmental and social impact of products,
- assessing each brand's footprint,
- raising consumer awareness and making sustainable development attractive.

For example, *R.A.W. de Biologie* organised an operation to distribute 110,000 bookmarks as a reminder of suitable eco-gestures in the bathroom.

In addition, the Group designed *it bags* in collaboration with Eco-Emballages on the same topic. The Group also raises consumer awareness by means of its packaging that includes clear instructions.



**USHUAIA**  
Green point sorting info on the packaging, as well as a sentence indicating that this bottle is recyclable and should be placed in the sorting container



### L'OREAL PROFESSIONNEL - MYTHIC OIL

Multi-language sorting instructions



**USHUAIA**  
Green point sorting info on the packaging, as well as a sentence indicating that this aerosol container is recyclable and should be placed in the sorting container.

## LABORATOIRES EXPANSCIENCE: ENCOURAGING RESPONSIBLE BEHAVIOUR

The Laboratoires Expanscience are working in partnership with CITEO to raise the awareness of the general public by publishing sorting advice for the bathroom. As such, the *Mustela* 2016 Commitments charter encourages consumers to behave responsibly. Along these lines, Expanscience signed the Eco-Emballages Green Point Pact in 2012, it produced a brochure (reprinted several times) on sorting in the bathroom, and distributed sorting advice on the Internet site of the *Mustela* brands.

**mustela®**

### Guide du tri dans la salle de bain

Vous triez vos emballages de la cuisine, mais pensez-vous à faire de même pour ceux de la salle de bain ?

**EMBALLAGES EN VERRE**  
Bouteilles  
Pots  
Flacons en verre  
RECYCLAGE

**AUTRES EMBALLAGES**  
Emballages métal  
Bouteilles et flacons plastique  
Cartons  
RECYCLAGE

**DÉCHETS**

**MÉDICAMENTS**  
CYCLAMED  
Les médicaments non utilisés sont à ramener chez le pharmacien. Pensez à trier leurs emballages selon les consignes.

Document réalisé en partenariat avec : **ECO EMBALLAGES**  
Retrouvez toutes les consignes de tri de votre commune sur : [www.consignesdetri.fr](http://www.consignesdetri.fr)

\* Sauf si vous appartenez aux 51 collectivités qui testent le recyclage de tous les emballages en plastique.

## 1.2 RAISING AWARENESS OF WATER USE

A major lesson emerged from the efforts undertaken to determine the potential impacts of shampoos and their packaging on the environment: the consumption phase (hair washing, shower) causes nearly two thirds of the overall environmental impact, with effects on the depletion of hydric, mineral and fossil resources, eco-toxicity of fresh water and greenhouse gas emissions.

Controlling water use and avoiding wastage are some of the most important eco-gestures for raising awareness.



### HENKEL : SORTING INSTRUCTIONS

Henkel has included sorting instructions on its packaging since mid-2012, and more systematically since 2013, notably on promotional documents. The vast majority of the Group's websites (*Vademecum, Denvit, Teraxyl, Gliss, Saint Algue Syoss, Essence Ultime, Smooth'n Shine, Schwarzkopf Men, Scorpio, Diadermine, Perfect Mousse, Nectra, Kératine Color*) include clear sorting instructions and the Triman logo.

In connection with the Sustainable Development Week, Henkel also organised an exhibition on eco-responsible actions in the bathroom. 50,000 copies of a guide on daily water conservation were also prepared and distributed in 2015.

### L'ORÉAL : GARNIER SITE FULL OF ECO-ADVICE

The brand provides advice and simple eco-gestures for conserving water. During the beauty routine : don't run the water while shampooing, forget baths, take cold showers and have a pee at the same time! With the planet's future at stake, violating the biggest taboos is worth the effort. The advice doesn't stop there: fix leaks, put a water-saving nozzle on the tap (water consumption reduced by up to 50%, etc.).

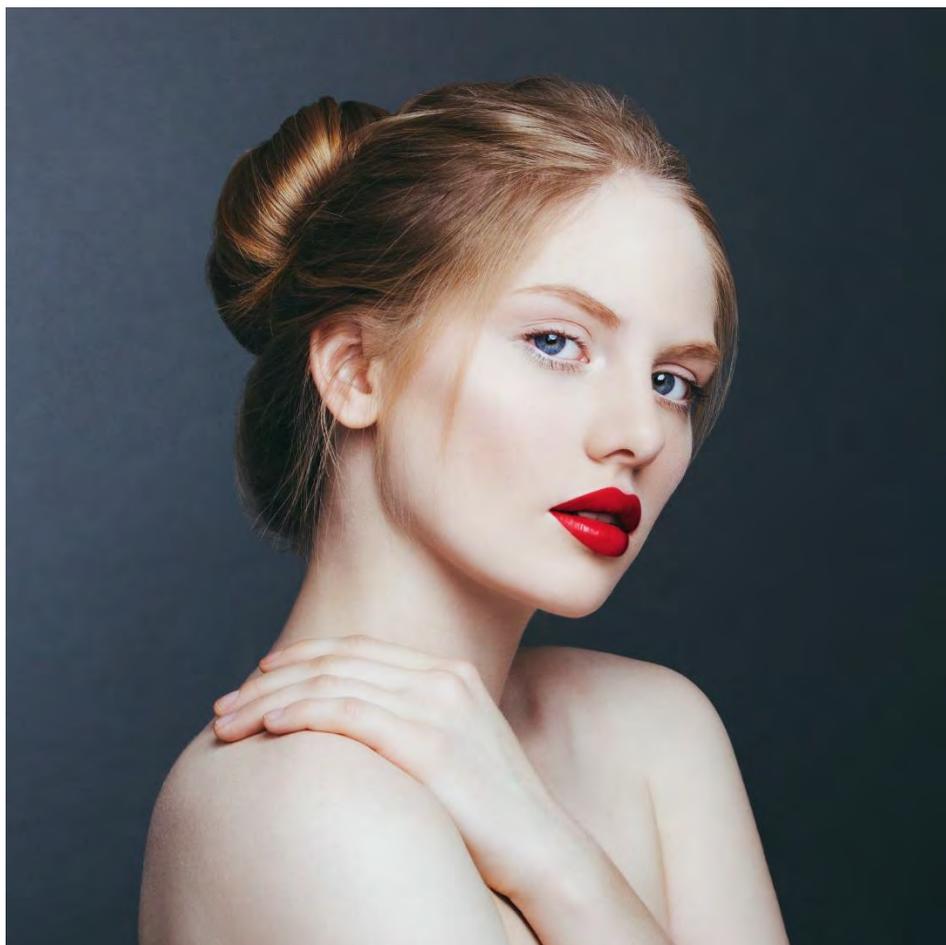
### 1.3 RECOMMENDING THE RIGHT AMOUNT

Informing consumers about the recommended amount of the product to use and providing packaging (pump bottle) that provides the right amount helps to reduce wastage.



#### GROUPE ROCHER : A BOTTLE FOR THE RIGHT AMOUNT

The new concentrated shower gel includes an innovative valve cap: one squeeze provides exactly the recommended amount, just enough for a full body wash. Its 100 ml can be used 40 times, which is the equivalent of a classical shower gel of 400 ml.



## 2. ENCOURAGING THE CLOSING OF THE LOOP

### 2.1 REWARDING STORE RETURNS

Some brands ask their customers to return the empty packaging of cosmetics products to the store. This effort can be rewarded by a treatment, a makeover or some advice. This enables companies to look after the end-of-life of certain kinds of specific packaging. It's also a good method for efficiently conveying a sustainable development commitment, and in particular highlighting the consumer's efforts.

Incentives can take the shape of a reward, including loyalty points or gifts.



#### GRUPE L'OCCITANE: PACKAGING COLLECTION AND RECYCLING

Working with TerraCycle, L'Occitane en Provence has been using a collection recycling system for packaging (Doypack® type) in its French company-owned shops since 2014. Returning 3 empty containers to the shop means a discount on the day's purchases. In 2016, the programme was extended to Australian shops. Since the launch, nearly 52,600 units have been collected and recycled.



#### L'ORÉAL : PACKAGING RETURNS

Kiehl's customers are encouraged to return empty packaging to the store. This packaging is then sent for recycling to the Bouchons d'Amour association. This association purchases equipment for handicapped people (notably wheelchairs) and participates in individual humanitarian operations, both in France and abroad. Each returned plastic bottle is rewarded by 5 fidelity points.

Similarly, various of the Group's brands (*Garnier, Biolage, Clarisonic, Kiehl's, Maybelline, L'Oréal Paris...*) have entered into a partnership with TerraCycle in Japan, Brazil, North America, Australia and France. Consumers are asked to mail in the packaging of their products at no cost. This packaging is then reused in the manufacturing of various day-to-day items.

### LVMH : "RECYCLE & SAVE" INITIATIVE

With the "Recycle & Save" initiative implemented at Sephora since the autumn of 2014, the company has been sensitizing customers to the recycling of perfume bottles. Consumers receive a 20% discount when purchasing a new fragrance. Since the launch, 600,000 perfume bottles have been recycled. The brand further notes that some customers also return empty bottles without taking advantage of the discount. Sephora's operation is a way to help consumers realise that they can also sort the packaging of their beauty products. The bottles collected by Sephora are then recycled through a channel set up by the brand a few years ago to recycle its tester bottles.



# CLOSE-UP

## Global initiative



### LABORATOIRES EXPANSCIENCE: AN IN-HOUSE ECO-DESIGN TOOL

The laboratory has designed a specific in-house tool called **EENOE** "Éco-concevons Ensemble Notre Offre Expanscience" ("Let's Eco-Design Our Expanscience Offer Together"), which is used to assess the improvement of its environmental performances.

Example for the eco-designed Mustela Baby, normal skin, eco-designed range:

### Mustela : Eco-design



# AND TOMORROW : THE BEATING OF A BUTTERFLY'S WINGS

Circular economy initiatives must be part of the company's overall strategy. It's the sum of small actions that must be viewed as a whole, and that all have the same aim: preserving the Planet's resources.

Beyond economic and environmental benefits for companies, the circular economy encourages a new method for the management of organisations: dismantling silos and promoting collaboration between trades, inverting the traditional hierarchical pyramid in order to grasp and encourage good ideas that can come from anywhere.

The circular economy is also a domain in which the competition stakes are shifting. It's becoming necessary to extend the loop and to collaborate with competitors in certain domains in order to promote new channels for ingredients or the recycling of materials. Economic efficiency and the need for greater influence weight within channels make it necessary to pool flows.

Many collaborative projects between competing brands are starting to see the light of day.

In any case, the subject is never closed. Progress is gradual but continuous, within the company and progressively outside of it: upstream with suppliers, downstream with points of sale, consumers and stakeholders in general.

While each committed company can measure the savings generated by a given individual action, it's easy to understand that major changes are taking place within organisations.

The question of the speed of collective implementation still exists, in order to establish a sustainable model in the medium and long terms.

On behalf of the sector, the FEBEA undertakes to encourage inter-brand collaborative projects and to disseminate tools and best practices to all companies in the sector.

Time is short.

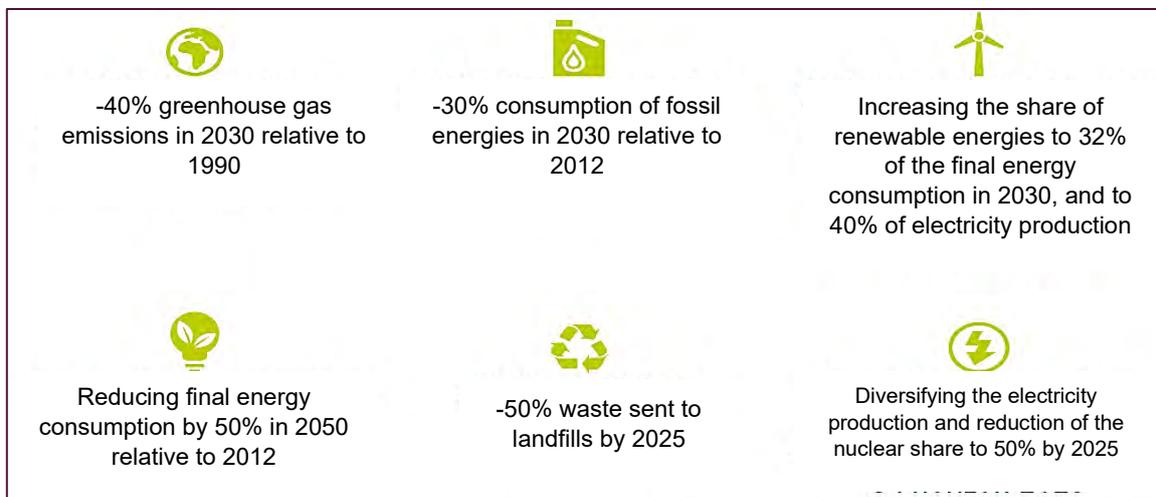
It's time to hurry, but with clarity, method and determination.

# APPENDIX

## 1. REGULATORY CONTEXT

### 1.1 FRANCE: ENERGY TRANSITION LAW FOR GREEN GROWTH

The TECV (Energy Transition Law for Green Growth) of 17 August 2015 and its various action plans are intended to involve all economic actors: citizens, companies, territories and public authorities, in an effort to strengthen the country's energy independence while reducing its GHG emissions. Several objectives have therefore been set:



One of the key measures involves combating wastage and **promoting the circular economy**, notably by targeting the progressive disconnection of economic growth and the consumption of raw materials, by developing sorting at the source (notably for food waste and corporate waste<sup>10</sup>), as well as recycling and reclamation channels (for example, in the building sector).

The law calls for sorting instructions to be extended to all plastic packaging by 2022, for the entire territory.

<sup>10</sup> 5 flows sorting decree : <http://www.ademe.fr/obligation-tri-5-flux>

A circular economy **roadmap**, jointly prepared with stakeholders, will be published by the Ministry for Ecological Transition and Solidarity in the spring of 2018.

This roadmap is part of the Climate Plan announced by Nicolas Hulot in July 2017. Its ambition is a 100% circular economy, with two clear objectives to be attained by 2025:

- 50% reduction of waste sent to a landfill,
- 100% plastic recycling.

For more info:

**Circular Economy – Ministry for Ecological Transition and Solidarity:**

<https://www.ecologique-solidaire.gouv.fr/leconomie-circulaire>

## 1.2 EUROPE ON THE ROAD TO THE CIRCULAR ECONOMY

The European Commission's new **Circular Economy Package** will encourage companies and consumers to adopt a more circular economic model, that includes a more intelligent use of resources. Its aim is to establish sustainable growth and to create new jobs while targeting several economic sectors.

This package includes ambitious measures that cover the complete lifecycle of products, from their design and production phases, through to their consumption, and ultimately better waste management once they arrive at the end of their useful life.

It anticipates the revision of Directives relative to

- packaging and packaging waste (Directive 94/62/EC),
- waste (Directive 2008/98/EC),
- eco-design (Directive 2009/125/EC),

The **EU strategy for plastics in a circular economy**, published by the European Commission on 16 January 2018, calls for:

- all plastic packaging marketed in the EU to be recyclable by 2030,
- reduced consumption of single-use plastics, while limiting the intentional use of micro-plastics.

For more info:

**European Commission site:**

[https://ec.europa.eu/environment/efe/themes/resource-efficiency/taking-europe-closer-circular-economy\\_fr](https://ec.europa.eu/environment/efe/themes/resource-efficiency/taking-europe-closer-circular-economy_fr)

**Circular economy package:**

<http://ec.europa.eu/environment/circular-economy/>

**Plastics strategy – roadmap:**

[http://europa.eu/rapid/press-release\\_IP-18-5\\_fr.htm](http://europa.eu/rapid/press-release_IP-18-5_fr.htm)

## 2. TOOLBOX

### **ADEME – Agence de l’Environnement et de la Maîtrise de l’Energie**

[www.ademe.fr](http://www.ademe.fr)

#### **Companies: reducing impacts**

<http://www.ademe.fr/entreprises-monde-agricole/reduire-impacts>

#### **VSE/SME winners at all costs**

<https://www.gagnantessurtouslescouts.fr/>

### **CITEO**

[www.citeo.fr](http://www.citeo.fr) **The sorting guide:** <https://www.consignesdetri.fr/>

**Recyclability of plastic packaging – Eco-design for better recycling – guide**  
from the CITEO, COTREP, ELIPSO and VALORPALST:

[www.ecoemballages.fr/sites/default/files/cotrep\\_guide\\_recyclabilite\\_2017\\_web.pdf](http://www.ecoemballages.fr/sites/default/files/cotrep_guide_recyclabilite_2017_web.pdf)

### **CNE - Conseil National de l’Emballage**

<http://www.conseil-emballage.org/>

### **Ellen Mac Arthur Foundation**

<https://www.ellenmacarthurfoundation.org/fr/economie-circulaire/concept>

### **IEC - Institut de l’Economie circulaire**

<https://institut-economie-circulaire.fr/>

### **OREE**

<http://www.oree.org/>

ELIPSE, the Orée’s industrial and territorial ecology digital platform

<http://www.referentiel-elipse-eit.org/>

# ACKNOWLEDGMENTS

The FEBEA expresses its thanks to the members of the "Circular economy" working group for their participation in the production of this White paper. It also thanks its members that have contributed by responding to the questionnaire and relating their experiences.

Finally, the FEBEA wishes to thank Niels Chognot, FEBEA apprentice, for his precious efforts.

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This document is published by the FEBEA.

The FEBEA, Fédération des entreprises de la beauté, is the only professional association representing the manufacturers of cosmetics products operating in France.

It has more than 300 members, 82% of which are VSE/SME. Its members represent virtually all of the sector's turnover.



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