



# OUR COMMITMENT TO A CIRCULAR ECONOMY



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The effect of global warming and the depletion of natural resources are seriously calling into question the current development model.

The reality of global warming is gradually making us more aware of the threat to our civilisation but also more widely to the entire living world. Therefore, we are faced with three major challenges, as the UNEP highlights<sup>(1)</sup>:

- ◆ Reducing greenhouse gas emissions to contain the rise in temperature to 2°C by 2100;
- ◆ Preserving the oceans, rivers and biodiversity from pollution (atmospheric, agricultural, industrial, chemical, etc.) caused by human activity;
- ◆ Preserving natural resources.

Given this urgency, the European Union and the French Government have taken action by respectively presenting the European Strategy for Plastics and the Roadmap for a Circular Economy. These two strategies are based on the same observation: the linear “manufacture, consume, throw away” model depletes our resources, generates pollution, in particular in the oceans, and threatens biodiversity. “We need to work towards a different economy, in which we use resources sparingly, in which products have a longer life, in which we limit waste and in which we manage to make new resources from our waste”.

They open the way towards a new, more circular economy and one which is more environmentally-friendly and in which the various stakeholders (public authorities, manufacturers, farmers, consumers, etc.) are interconnected.

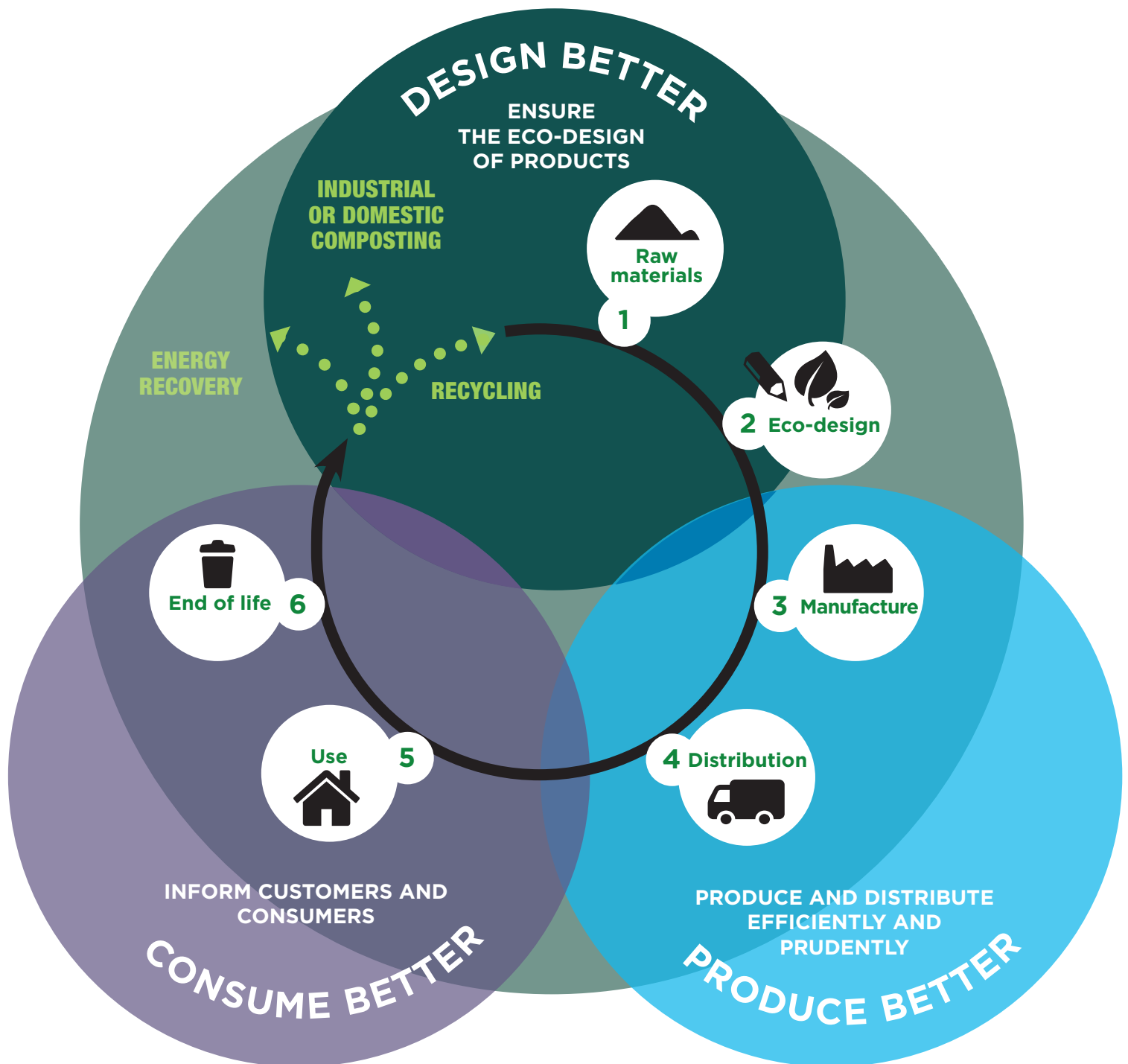
Aware for the past 40 years of the need to take environmental issues into account, SPHERE, a family-owned French group, a European household packaging leader and a producer of bioplastic resins, has directed its action towards the circular economy by:

- ◆ Innovating and developing new sustainable and renewable materials;
- ◆ Integrating an eco-design approach;
- ◆ Applying an environmentally responsible industrial policy.

**TODAY, AS THIS DOCUMENT  
SETS OUT, SPHERE IS REAFFIRMING  
ITS COMMITMENT AND  
STRENGTHENING ITS AMBITIONS  
IN FAVOUR OF A CIRCULAR  
ECONOMY THAT IS RESPECTFUL  
OF THE ENVIRONMENT.**

(1) UNEP annual report - United Nations Environment Programme.

(2) Source: Circular Economy Roadmap 2018.



# 1-ENSURING THE ECO-DESIGN

Given the drawbacks of fossil polyethylene (PE) - greenhouse gas emissions and persistence - for the environment, a new, more responsible economy has been formed over the past few years. It is becoming stronger today and aims to end using virgin fossil raw materials in favour of sustainable and responsible alternatives.

## CONTRIBUTING TO PROGRESS IS CENTRAL TO SPHERE'S STRATEGY WHICH IS CHARACTERISED BY:

### Continuous investment in Research and Development

◆ For the past twenty years, SPHERE has devoted 5% of its turnover to Research and Development in new plant-based biomaterials that are biodegradable and compostable in land and marine environments and in a production facilities that improves the processes and the performance of its products.

◆ SPHERE is backed by 20 years of research and 200 registered patents.

### An industrial strategy directed at using raw materials that is in line with the issues of the circular economy

#### ◆ Recycled plastic

For over twenty years, this raw material has been used to make bags and packaging products. In 2017, recycled plastic pellets represented 37% of the raw materials represented by the Group. This proportion has doubled in twenty years. Real expertise is required to combine these secondary raw materials as their quality and safety factors may be very different. Finished products made from recycled polyethylene are recyclable, just like those made of virgin materials.

#### ◆ BIOPLAST® biodegradable resins

Since 2005, the company has developed a range of products using

a plant-based and compostable material, based on GMO-free potato starch produced in France and Europe: BIOPLAST®. In 2017, this material represented approximately 15% of the Group's production.

The products using this material can be collected with organic waste (apple peelings, out-of-date food leftovers, garden waste, etc.) for organic industrial or domestic recycling.

#### ◆ Biobased PLANT ORIGIN resins

Since 2011, SPHERE has also been using plant based polyethylene, a material derived from sugar cane resulting in a reduced or even zero, carbon impact. The products using this material represented approximately 10% of the Group's production in 2011.

They can be recycled with fossil polyethylene plastic or sent to incineration centres to produce energy (district heating).



# OF PRODUCTS



## An eco-design policy for better products

### ◆ Choice of materials and reduction of quantities used:

Since 1983, SPHERE has reduced the thickness of its bags by more than 30%, reducing the consumption of materials while improving performance. In 2011, SPHERE replaced conventional plastic with plastic made from plants for all refuse bag ranges of its national brands and in 2016 for a large supermarket retailer.

### ◆ Reduction and selection of additives and pigments:

SPHERE chose in 2007 to mainly use environmentally-friendly water-based inks, thus also reducing the use of solvents by 70% over the last ten years (2007/2017).

SPHERE has also chosen not to add any plasticisers to the

production of biodegradable and compostable bags using BIOPLAST®.

### ◆ Adjustment to bag shapes and sizes:

After having launched bags in 2009 for tall bins, in 2016 SPHERE developed new dimensioned 5 litres, 25 litres and 40 litres bags to adapt them to the new refuse bin formats. This has resulted in a significant saving of material.

### ◆ Packaging optimisation:

SPHERE has changed the packaging of its national brands for its refuse bags: from dispensing boxes to shrink film and today to printed paper labels. The Group is providing assistance to its customer-retailers to also change the packaging of their refuse bag ranges.

### ◆ Product life cycle assessments:

In 2011, an ACV study was conducted with PWC on the range of plant based polyethylene refuse bags resulting in certification of the environmental gains made through this innovation .

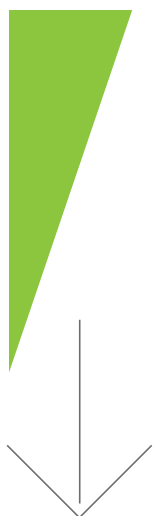
### ◆ A continuous quality requirement:

Since 1993, SPHERE has had the NF Environnement accreditation mark. The Group is also certified by several quality and environment marks in Europe.



# 1 - ENSURING THE ECO-DESIGN

## SPHERE IS LOOKING AHEAD TO CHANGES IN THE PLASTICS INDUSTRY BY STARTING TO DEVELOP NEW, MORE ENVIRONMENTALLY-FRIENDLY MATERIALS THROUGH:

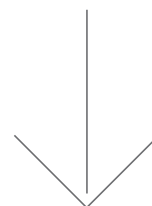


### Investment in Research and Development to develop materials which have a managed end of life.

For several years now, SPHERE has directed its research towards developing a biomaterial that is hydro-biodegradable and broken down by micro-organisms in seas, lakes and rivers while being resistant to rain water. No residue remains which could have harmful effects on the marine environment, including in the event of ingestion by aquatic animals.

This innovation should allow a range of specific products to be produced that limit the pollution caused by accidental discharges into the environment and especially aquatic environments by certain specific products (in particular on the Asian coasts, regions in which a lot of plastic film is released into the environment).

In the past ten years, progress has been made in the bioplastics sector. SPHERE aims to develop new, patented applications. SPHERE is specifically targeting an increase of 25% per year (for the next five years) of its production of BIOPLAST® biodegradable resins.

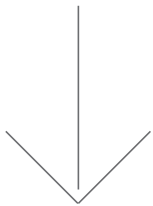


### Support to initiatives in favour of the separate collection of bio-waste.

SPHERE offers local authorities biodegradable bags and compostable materials to enable the collection of bio-waste and to promote finale use through domestic home or industrial composting.



# N OF PRODUCTS



## **Strengthening of the extension of plastic sorting.**

SPHERE includes a significant proportion of recycled materials in its products, a complement to an overall ecological offering. The Group assists its customers with the selective collection of household waste by making collection bags available and recovering them in order to process and recycle them for reuse in its production.



## 2 - PRODUCING WITH EFFICIENCY

SPHERE has always invested in production facilities that benefit from state of the art technologies. The Group develops an industrial policy based on a circular economy, sound management of the value chain and an anti-waste policy.

**THE PRODUCTION AND TRANSPORT STAGES OF THE FINISHED PRODUCTS REPRESENT APPROXIMATELY 10% OF THE ENVIRONMENTAL IMPACTS OF THE PRODUCT'S LIFE. SPHERE ACTS WITHIN ITS PRODUCTION UNITS, THROUGH:**



◆ **A “zero waste” policy:**

100% of production waste from the factories is reused as raw materials into the manufacturing process for the production of its finished products.

◆ **Systematic sorting of waste:**

Waste cardboard, paper and plastic from head office and the Group's factories are managed via the appropriate sorting channels.

◆ **Optimised logistics:**

SPHERE's production units are located near to where the products are used, thereby reducing the carbon impact and promoting the economic development of Western Europe.

◆ **Environmental quality certification of the factories:**

To date, 75% of the Group's industrial sites are ISO 14001 or ISO 9001 certified.

◆ **Environmentally-responsible transport policy:**

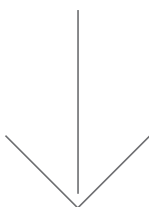
The Group mainly uses the services of certified carriers, signatories of the ADEME charter, “CO2 Objective”, equipped with EURO 6 vehicles, which optimise their itineraries and loads and train their drivers to adopt ecological driving habits.

◆ **Controlled water consumption:**

Development of production process cooling systems in closed circuits and treatment of wastewater.

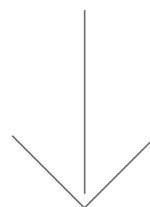


## SPHERE IS CONTINUING AND STRENGTHENING ITS COMMITMENT TO PRODUCE MORE SUSTAINABLY AND RESPONSIBLY WITH:



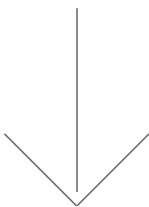
### **A strengthened “zero loss of granules” commitment.**

Establishment of approaches such as the Clean Sweep operation in its production units in France and in Europe.



### **Strengthening of factory certifications.**

SPHERE is undertaking ISO 14001 or ISO 9001 certification of all its industrial sites by 2020.



### **Strengthening of its carbon footprint reduction approach.**

SPHERE, supported by an independent consultancy, is setting up, for each of its sites by 2020, a carbon assessment and an action plan to reduce CO2 emissions.



# 3 - INFORMING TO CONSUME B

SPHERE has always pursued an educative, informative communications policy, openly discussing its activities in line with its values of high standards, commitment, boldness and cohesion.

## SPHERE HAS ALREADY LAUNCHED COMMUNICATION CAMPAIGNS DIRECTED AT ITS CUSTOMERS AND CONSUMERS, WITH:

### ◆ A “zero waste” policy:

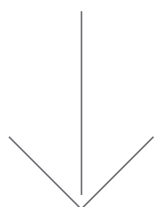
On-pack information about sorting: SPHERE has provided sorting information on its packaging since 2013 and has also launched a process of encouraging its customers to do likewise for products under their own brand.

### ◆ Assistance to retailers

in establishing their sustainable commitments.

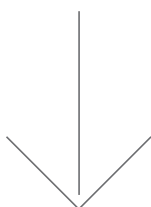


## SPHERE UNDERTAKES TO STRENGTHEN ITS COMMUNICATIONS WITH THE FOLLOWING INITIATIVES:



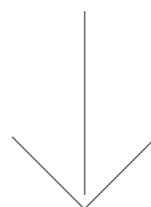
### **Educational, transparent communications about the new raw materials used.**

- ◆ The establishment of educational communication tools about the biodegradable and compostable BIOPLAST® material.
- ◆ Collaborative work with professional groups and public institutions for the purpose of clarifying the differences between “plant-based materials”, “biodegradable compostable materials”, etc., but also about the various existing marks and standards.
- ◆ As part of the Roadmap for the Circular Economy, SPHERE undertakes to include more recycled materials while ensuring their quality and traceability. Therefore, SPHERE is involved in several working groups in the plastics processing industry and authorities on this issue.



### **Educational communications about the various uses products' end of life.**

- ◆ A regular partnership with professional associations aimed at communicating to professionals and the general public through conferences and trade fairs.
- ◆ Support to government agencies and local authorities in their thinking with respect to the issues of collecting, sorting, recycling and composting household waste.



### **Communications to consumers and government agencies in favour of recycling and composting.**

- ◆ Promoting and publicising these new solutions through the establishment of partnerships with stakeholders (associations, municipalities, local actors, etc.).
- ◆ Work with institutional bodies for labelling to ensure that consumers have access to clear information about products.



# ABOUT SPHERE

SPHERE is a family-owned French group founded in 1976. It is the leading European company of household packaging, present in three markets: consumer, professional and local authorities, and producer of bioplastic resins.

Since its creation, SPHERE has always had the following objectives:

- ◆ Reduce the volume of virgin plastic used in its products and replace it with recycled materials;
- ◆ Develop new biodegradable and compostable materials;
- ◆ Use bio-based raw materials.

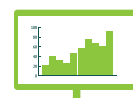
It has been involved for more than 20 years in the research and development of increasingly environmentally friendly materials.

With 15 production sites in Europe, of which 8 are located in France, the group has an annual production of 150,000 tonnes. In 2019, the group SPHERE expects to achieve turnover of circa 600 million euros with 1450 employees.

The SPHERE group markets and produces: refuse bags, fruit and vegetable bags, freezer bags, films and papers for food contact, aluminium trays and foil.



**Creation of the Group**  
1976



**Consolidated turnover**  
€600 m (2019 projection)



**Average workforce**  
1,450 employees

