



# Arpe<sup>®</sup>

Making, printing and  
designing microfiber  
products in **Barcelona**



## Creativity & EcoDesing

Barcelona, 31st January 2019

## 1991

- Family run company.
- Founded by our parents.
- We produce a patented technical cleaning cloth for the automotive industry.

## 2002

- Montse Pera (Graphic Designer).
- Joan Pera (Textile Engineer & Business Graduated).
- Started to work in ARPE.

It was necessary to change our strategy



**Threats:**

- Strong International competitors
- Pressure to decrease prices
- Customer begin to wash and re-use our cleaning cloths

**Weaknesses:**

- One Customer: 95% of our sales
- Sales only in Spain

**Strengths:**

- Young motivated staff
- Highly specialized product
- A Graphic Designer (Montse Pera)
- New factory opened in 2003
- Well positioned customer in the automotive industry  
distribution agreement with them.

**Opportunities:**

- To find new distributors
- To explore new markets
- Become a distributor in the automotive industry
- To export our products
- New textile printing technologies



# Our business idea in 2005 was:

Apply design through the digital textile printing on cleaning cloths







**DÜSSELDORF**



Promoting Success™

**ORLANDO**



Objet et textile publicitaires

**LYON**



**PARIS**

**International fairs**

**2015:**

- PIMEC Award as the most competitive small company in Catalonia
- European Promotional Gift Award 2015

**2016:**

- PIMEC Award to Company values
- Promotional Gift Award 2016
- ISO 9001 y ISO 14001

**2018:**

- Award to the innovative trajectory 2018 of the Fundació Tèxtil Cotonera





**Our products grow:**

Towels, cleaning cloths, soft sleeves, cushions, soft pouches, travel items, bibs...

**Travel Pack**



**Ecofriendly Towels**



**Cleaning cloths & soft sleeves**



**AdCushion**



# Microfiber towels that care for the environment

## Microfiber towels ARPE VS. Cotton towels

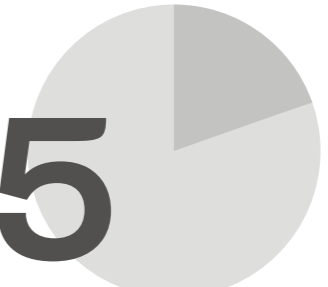
Summary of the comparative study made by LEITAT TECHNOLOGICAL CENTER







## A good product



**x5**   
Faster drying

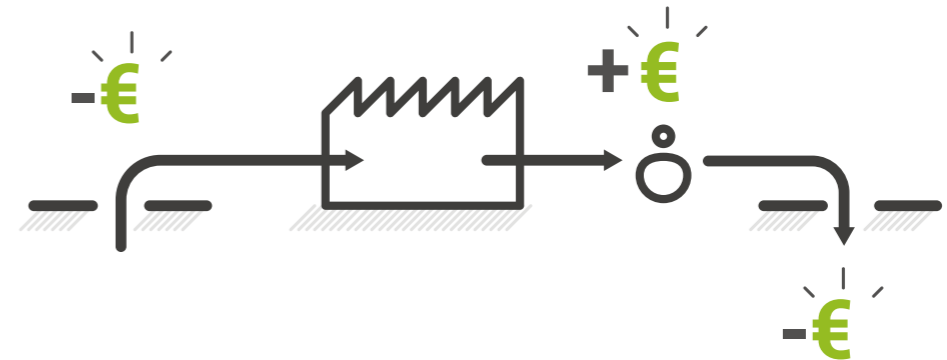
**-66%**   
Energy savings  
in the wash

**-60%**   
Less volume.  
Transport savings.

Are you ready for  
the coming future?

### **Extract, manufacture, discard**

An inefficient model that does not take advantage of new opportunities to capture value and generate business.



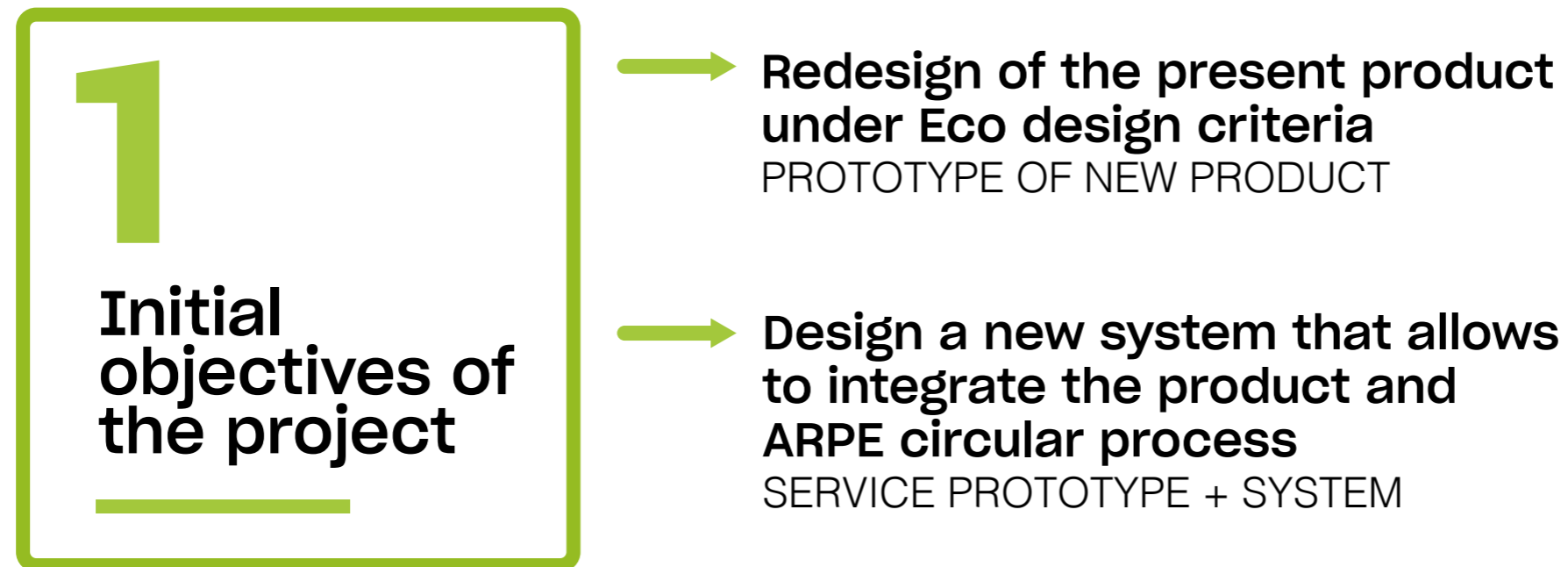
### **There is another way to do business and succeed**

The circular economy proposes a new way of conceiving the economy, moving from a linear model based on exploitation, consumption and waste to a regenerative and restorative model based on cycles.



# Arpe, circular

Eco design of a towel and the implementation of a circular production and consumption system based on the return and valorization of the out-of-use towels.



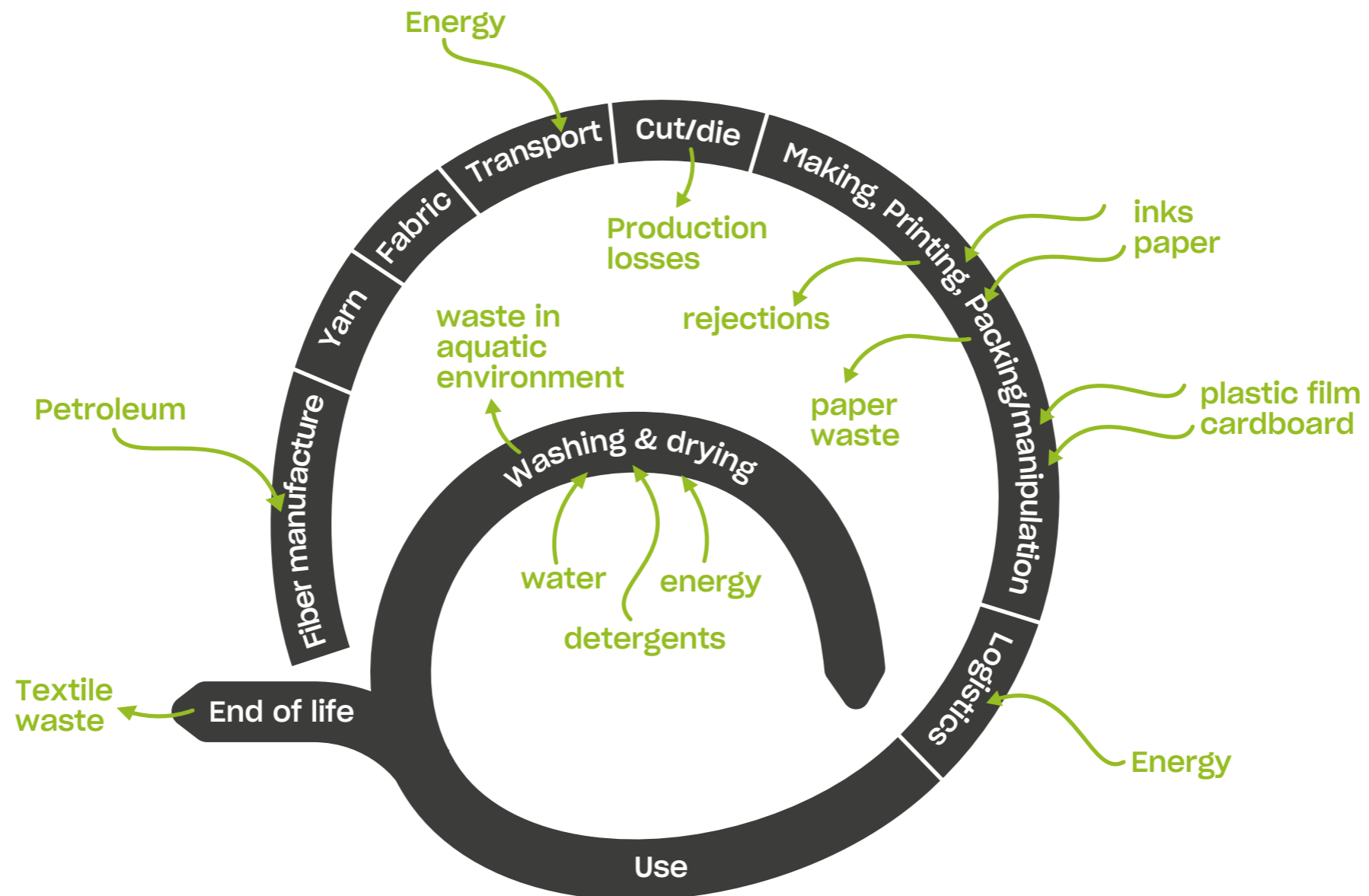


## PHASE 1:

# Analysis & Research

- 2 user experience investigations
- 2 observations on the premises of the client's conditions of use
- 10 experts and users interviews
- A research of technical literature on circular economy in the textile industry
- A workshop of strategic analysis ARPE business

# Life cycle



# Insights (learning)

## Perceived in PHASE 1:

- Possible symbiosis between ARPE's products and clients. For example, the towel waste and the automotive industry
- Present business model offers improvement opportunities in terms of environmental impact
- the plant-generated waste is relatively high and with potential for improvement
- Microfiber waste in aquatic environment has a relevant and still quite unknown impact. Problem to be addressed
- Microfiber towels represent, as a starting point, an important environmental improvement over cotton towels
- It is important to accompany the product with training and advice to adapt the maintenance processes of the towel
- There are acceptance barriers for microfiber towels, lack of knowledge of their advantages



## PHASE 2:

# Opportunities and circular strategies definitions

- Review the product's pattern design. New design proposal in order to make the most of the materials.
- Use of recovered products from the gyms as industrial cleaning products.
- Develop new products from the production waste.
- Look for new usages for the current products.
- Remove the plastic usage from the packaging and create new options from the reused materials.

## PHASE 3: Prototypes, tests

### Results:

- New towel pattern design which reduces the waste. New functionalities incorporation, for example: pockets or strings to hang the towels with the material which, so far, was thrown away.
- New textile packaging development (from the towel waste) for the travel pack, elimination of the PVC usage.



**Eco-Circular gym towel**  
with pocket and headrest flap.



**Textile Packaging** for the travel  
pack manufactured by Arpe

- Industrial cleaning cloth production from out of use towels through a take-back system to recover the textile waste sold to collectivities (DIR).
- New product development, polar blanket, with textile basis made of recycled polyester from PET bottles waste.



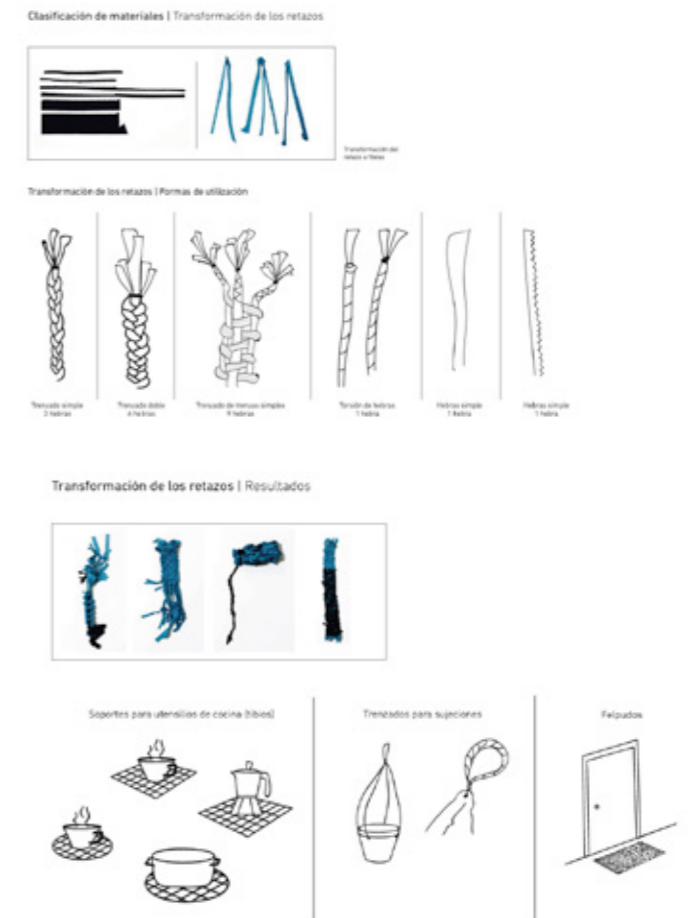
**Eco-Circular Cleaning cloth**



**Polar blanket**  
recycled PET



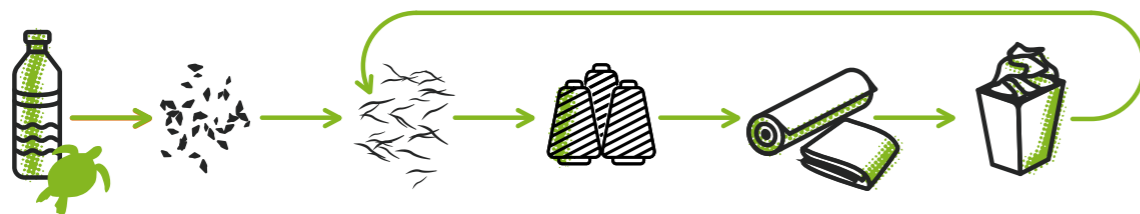
- **Servitization:** Replace the product selling with the provision of a service to collectivities (DIR)
- Examples of braid and finishings from production wastes. Accessories for hanging products or decoration.



## PHASE 4: Results

### Circular ecofriendly polar blanket

Fully customizable blanket, made of recycled yarn from PET bottles. Sustainable and Made in Europe product.



~~RESIDUE~~ RESOURCE

# Circular Towel

Eco-designed towel focused on collectivities and commercialized through a take-back system.  
 Out-of-use towels are transformed into Eco-designed cloths for the industrial cleaning.

## Results:

(2018-2020)  
**-168**  
 ton CO<sub>2</sub> eq.



Take-back system



Eco-cleaning cloths manufacture

Potential savings in waste  
**1.722**  
 m<sup>2</sup> / año



Pattern redesigning

Potential savings of Polyester

**300**  
 kg/año



Take-back system



waste recycling



Filled Felt production



# Textile packaging for the travel pack

New textile packaging development for the travel pack from textile waste eliminating the PVC usage.







**Arpe** Barcelona<sup>®</sup>

**Thanks for your attention!**