

# Fibre to fibre recycling of textiles

## JBC



**Company:** JBC

**Product or service:** design, production and sales of clothing for the entire family: children, men and women

**Pilot:** recycled textile fibres in the I AM collection.

### Key facts:

- JBC has developed and produced post-consumer denim trousers for their boys', girls', men's and women's collections
- The material consists of 20% post-consumer cotton, supplemented with biocotton
- Sales of the collection started in October 2018
- In 2017 and 2018 the recycling of materials in this pilot achieved environmental profit. An indication of the profit in 2018 is:
  - Water savings: 5,485 m<sup>3</sup>
  - Energy savings: 9,955 kWh
  - Carbon reduction: 2.4 tonnes
- In 2018 and estimated 0.8 ton of discarded textiles were saved from the waste mountain

### Key findings:

- The selection of suppliers and finding high-quality post-consumer material proved a challenge
- Many efforts were geared towards creating a base of support within the organisation
- Customers also require a transparent story: it is a high-quality product, in spite of the application of post-consumer material
- A combination of pre and post consumer recycled material seems to be the most effective.

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Case study ●● jbc

# Overview of the company

## Intro

JBC is a family-owned fashion retail company, which was established in 1975. The company owns about 145 shops across Belgium, Luxembourg and Germany and a couple of online shops. Within the company, the I AM brand stands for the new sustainable fashion line. The company previously developed a coat from recycled PET bottles. [www.jbc.be](http://www.jbc.be)

## Products

Children's clothing and clothing for women and men. The focus is on young families with children.

## Mission, vision and strategy

JBC wants to offer honest fashion at honest prices: sustainable clothing with respect for people and the environment. The company wants to be leading the market here.

The company is committed to sustainability within the entire value chain, both socially and in terms of the environment. The company has been a member of the Fair Wear Foundation since 2015, and is committed to improving working conditions in the clothing industry.

JBC also endorses the Bangladesh Accord on Fire and Building Safety, which aims to promote fire safety and general safety in Bangladesh. JBC was the first Belgian company to participate.

The company wants to be proactive in the field of the circular economy, where the chain is closed by using materials and clothing waste to replace new material: there is no waste and fewer new raw materials are used.

I AM is a brand of JBC, focused on the development of sustainable fashion. Innovative sustainable materials are used in the creation of the I AM collection, such as Lyocell, biocotton, recycled polyester and bamboo.

The company considers transparency in terms of the origin of a product to be very important. This is why JBC has developed an I AM transparency tool, with which consumers can easily trace the origin of any I AM item of clothing: Trace your item. This therefore also applies to clothing developed in the ECAP pilot.

## Why ECAP?

ECAP – the European Clothing Action Plan is a project part funded by the EU LIFE programme. The project aims to achieve waste prevention, reduction of water and energy use as well as lowering CO2 emission in the chain. ECAP implements the F2F pilots to support businesses in their pursuit of circular textile and their efforts to reduce virgin raw materials. The pilots are intended to develop knowledge and an understanding of the use of recycled materials in new clothing. For JBC, this came down to a stimulus and an opportunity to develop and market new products for the I AM brand. This was prompted by the Ecolab I AM: taking steps in the field of recycling and closing the loop.

## Pilot JBC Post Consumer

The JBC pilot aimed to produce several circular denim products (garments) featuring as many post-consumer materials as possible at an affordable price.

The items had to fit in the boys', girls', men's and women's collection. The pilot also included communications focused on regular and potentially new customers.



“Our vision and message is: recycling is OK”

Owner of JBC

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Project supported by LIFE funding

## What we did

JBC was already active in the collection of old clothing with a partner company. The plan was to use more recycled materials in the future. The ECAP pilot provided an additional stimulus for this. The pilot was launched in October 2017. The collection was available in stores as of October 2018. The following activities were performed.

## Selection of products

The idea of T-shirts was abandoned due to limited availability of high-quality post-consumer yarns. Post-consumer materials were selected for the development and production of denim trousers. The risks of the pilot were also mapped out in this phase, including the origin of the collected denim trousers, customer acceptance, minimum order size, pricing and certification.

## Engaging supply chain partners

In the early stages, there was a cooperation with a potential supplier of recycled denim fabrics. The cooperation was terminated due to a lack of results and JBC had to start looking for another suitable supplier. Normally, the fabric supplier is situated further on in the supply chain and JBC is mainly in contact with a tailoring company that ensures the right fabric is purchased. In this pilot, there has been direct contact with the new raw material supplier. This proved an important factor in the success of the pilot. An existing supplier provided the tailoring. The recycled post-consumer material was collected via the fabric supplier in Turkey.

## Results

The jeans for men, women and children have been available in stores since late October 2018. Besides post-consumer denim, the design of the jeans also focused on other sustainable aspects.

## Design for recycling

The jeans were designed in such a way that they can be recycled to the greatest possible extent. By positioning the trouser pockets and the zipper slightly higher than normal, large sections of the jeans can be recycled again at a later stage.

## Features of the jeans:

- 20% post-consumer recycled content in the main fabric complemented with biocotton
- Trouser pockets made of 100% recycled cotton
- Buttons and rivets have ECO finish-2
- The zipper tape is made of recycled materials
- The belt label / main label and size label and hangtag cord are made of 100% recycled polyester. The hangtag itself is made of FSC paper.
- The care label is made of biocotton; no recycling here

This choice of sustainable accessories ensures an even greater reduction in environmental impact, in addition to the choice of sustainable fabric.

## Communication

The December 2017 edition of the company's magazine on the I AM collection featured an interview with the designer about sustainability. In addition, a video was made (<https://www.youtube.com/watch?v=PvSLnheOqZg>), a press release was distributed and various messages were posted on social media. The company's staff were informed in the week of sustainability. Sales staff received additional information to assist them in selling the new products.



Tip:

The choice of sustainable accessories further reduces the environmental impact

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## Challenges

- Finding a reliable supplier of used denim
- Understanding the origin of the starting material and how can this be proved
- The reach check will only be possible when the product is finished. This is therefore a risk
- Limiting the biocotton footprint for water
- Minimum order quantity
- Finding a notions supplier who works with recycled material
- Completing the business case.

## Results and impact

What did we achieve?

- We found suitable and reliable suppliers for yarn, fabric and notions
- New denim trousers, made with 20% post-consumer denim and biocotton
- T-shirts did not work out. It proved difficult to find suitable post-consumer material. There was a quality problem due to short fibres and the requirement of 100% cotton in connection with recyclability after use
- The search for sustainable notions resulted in new eco-friendly solutions for zippers, fake leather labels, finish for rivets and buttons.

What we did we miss?

- An online database available with information on the material properties of recycled material, recycling methods, regulations and legislation
- A method to highlighting recycled material has been used.

Fabric composition	product	Number	Weight recycled content kg
20% post-consumer textiles (denim) and 78% biocotton and 2% elastane	Men's/women's trousers	3,000	497
	Children's trousers	4,300	290

Indication of environmental savings (source: Bossa )

	Per kg	Total ECAP pilot
Water	1,394 litres	5,485 m3
CO2	0.63 kg	2.4 tonnes
Energy	2.53 KWh	9,955 KWh
Waste	787 kg	post-consumer textiles

## Business case

- It is not yet possible to use denim that the company has collected itself
- Costs for fabrics with recycled content and production costs are higher
- The higher retail price for post-consumer clothing is an issue for customers
- Real success lies in high sales figures; this is not yet the case.

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## Next steps - long-term strategy of the company

In the future, JBC also wants to produce T-shirts and pullovers made of post- or pre-consumer recycled materials. This way, JBC intends to make its I AM collection more sustainable. The search for other packaging materials for shirts, for example (cardboard instead of plastic) forms part of this. In the long run, JBC also hopes to reduce the environmental impact with research into the options for waterless washing during the production process.

The company wants to use its own collected materials. The company is close to achieving the fiberising business case, but it still needs to further develop the practical implementation and the answer to the question as to whether the required transports are ecologically responsible.

In addition, the company wants to find a suitable partner which can spin yarn and weave fabrics, including washing with as little water as possible.

"I AM is the Ecolab of our company. This is where we seek options for making sustainable entrepreneurship commercial. If something works at I AM, we can expand it to the rest of the collection!"

Valérie Geluykens CSR manager JBC

## Success factors

- The family who owns JBC is clearly motivated to work sustainably
- An internal base of support is very important, also with your partners
- Perseverance and making ideas specific and practical
- Daring to make choices, evaluate and make adjustments where necessary
- Cooperation with reliable partners
- Open attitude in terms of marketing
- Mindset of customers
- Commercial success

## Lessons learned

- It was proven that circularity in the supply chain is possible.
- It is important to investigate possible risks in advance.
- Create a base of support in the entire organisation (management, marketing and sales)
- Find partners who can be fully trusted
- A combination of pre- and post-consumer recycled material seems to be the most effective
- The ecological footprint can be both positive and negative, e.g. transport of post-consumer material. Seeking the right balance is crucial
- Prepare well-researched communications with your customer. Why are you doing this? What does it deliver? How does it work?



Tip:

Start with a limited amount of products

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ECAP is €3.6 million EU LIFE funded project which aims to reduce clothing waste across Europe and embed a circular economy approach.

## ECAP mission

Cutting the environmental impact of clothing across the supply chain. Generating value for business through collaboration, measuring and sharing best practice

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Case studies were generated as a result of pilots carried out for ECAP by Rijkswaterstaat and the named organisations from 2016 to 2018.

