

# Fibre Recovery Reverse logistics



Rijkswaterstaat  
Ministry of Infrastructure and the  
Environment



From 2016 until 2019 nine fibre to fibre pilots have been implemented by the European Clothing Action Plan - ECAP. The fibre to fibre pilots were aiming to support the use of recycled post-consumer textile fibres.

Three workwear companies, a linen supplier and five fashion companies were involved in the ECAP pilots. They individually trialed the use of fibres from post-consumer textiles in new garments and shared the learnings from their experiences in case studies and factsheets.

## Key findings

- Implementation of a take back system is a real challenge due to labour costs and international trade restrictions
- Incentives seem necessary to move consumers to hand in their disposed clothing
- By delivering an integral b2b service, customers are more dependent and satisfied
- A lease construction provides more control over the logistics and take back of products
- More information is needed about the environmental impact of international transportation.

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Business  
models

Internal support

Quality of fabric

## Reverse logistics

Closing the material loop is a dream for many textile companies. But it is quite a challenge to implement a logistic system. It is possible to purchase postconsumer textile material, but often it is unclear where the clothing came from exactly. By taking its own products back, a company knows better which material it is using for recycling.

The pilot companies used different ways to obtain disposed clothing and textiles to recycle. The workwear pilots have set up a system to do this. Some fashion brands experimented on pilot scale, mostly in collaboration with textile collectors, with different results.

## Incentives for consumers

Two fashion brands facilitated a clothing collection point for consumers in their shops. The number of consumers who used this service was very different per shop, which was presumably related to regional differences. Also, the type of clothing seems to be at influence. For example, more luxurious clothes can carry precious memories. Ultimately, collection points seemed to be more successful when consumers received an incentive for turning in their old clothing. Incentives came in the form of discounts, goodie bags and the possibility to win a prize.

For online fashion brands it is even more difficult to take back their products from consumers, since they do not have physical shops.

## Collection process

In the case of business-to-business clients in the workwear sector, old garments were collected by providing every establishment of the client with large clothing bags. When full, they were taken to the main distribution centre of the client itself. From there, the workwear supplier collected and transported the bags of disposed clothes to the processing locations.

The fashion brands used both boxes and bags, which were provided by an external company that facilitates the collection and distribution of disposed clothing and textiles.

It is not clear what the environmental impact of the transportation is. More information is needed.

## The issue of international transport

The transportation from the disposed clothing and textiles to other countries for processing and recycling is an issue that keeps raising questions for the pilot companies. Due to wage and price differences it is economically just not feasible to bring the work to the Netherlands itself, which means that international transportation is imperative. International trade agreements and regulations make it impossible or expensive to import discharged clothes to producing countries. For example, the requirement to mutilate textile waste before it is imported demands more working hours.

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## Integral service

For the workwear companies and the linen service company, the take back system was easier to organise than for fashion brands. The business-to-business contracts made the companies at all times aware of the whereabouts of their products. Also, taking back the products after the using period was included in the contracts, the same as a washing and repairing service. By delivering all services related to clothing and textile the companies were able to build better, more independent customer relations.

Observation of the ECAP pilot companies:  
Collaboration would help organising take back systems.  
For example, creating hubs for collection and sorting would help.

## Best practice: Tricorp

Tricorp collaborates with Dutch aWEARness, who acts as a chain manager and has founded the Dutch Circular Workwear Association. The vision is that by collaborating and combining forces the workwear companies can make a real difference in the market. They can benefit from larger volumes by sharing both a take back system and knowledge. Moreover, they can provide transparency with a track and trace system.

As a part of the collaboration, Tricorp designs some of their products following the 'Saved by Design' principles. The fabric will be recycled into textiles. Dutch aWEARness also offers a solution for textiles that are not suitable for recycling into textiles: Cliff. This is a recyclable material out of bioplastic and textile fibres. [www.dutchawearness.com/circularworkwear/cliff](http://www.dutchawearness.com/circularworkwear/cliff)

## Leasing is controlling

A lease construction with multiple services for the textiles helps holding a grip on the organisation and the cost effectiveness of reverse logistics. One of the textile service companies offering a washing service is experimenting with the use of chips in the textiles. With this innovation, they would be able to track the product and to collect data about the number of times it is washed. This is an indicator for the need to replace the product.

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The European Clothing Action Plan - ECAP is €3.6 million EU LIFE part funded project. ECAP contributes to creating a more circular approach to reduce clothing waste and water and energy use during production.

### 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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The fact sheets were generated as a result of pilots carried out for ECAP by Rijkswaterstaat and the named organisations from 2016 to 2019.

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