

# Separate end-of-life textile collection, sorting and solutions – learnings from Finland



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LOUNAIS-SUOMEN  
JÄTEHUOLTO

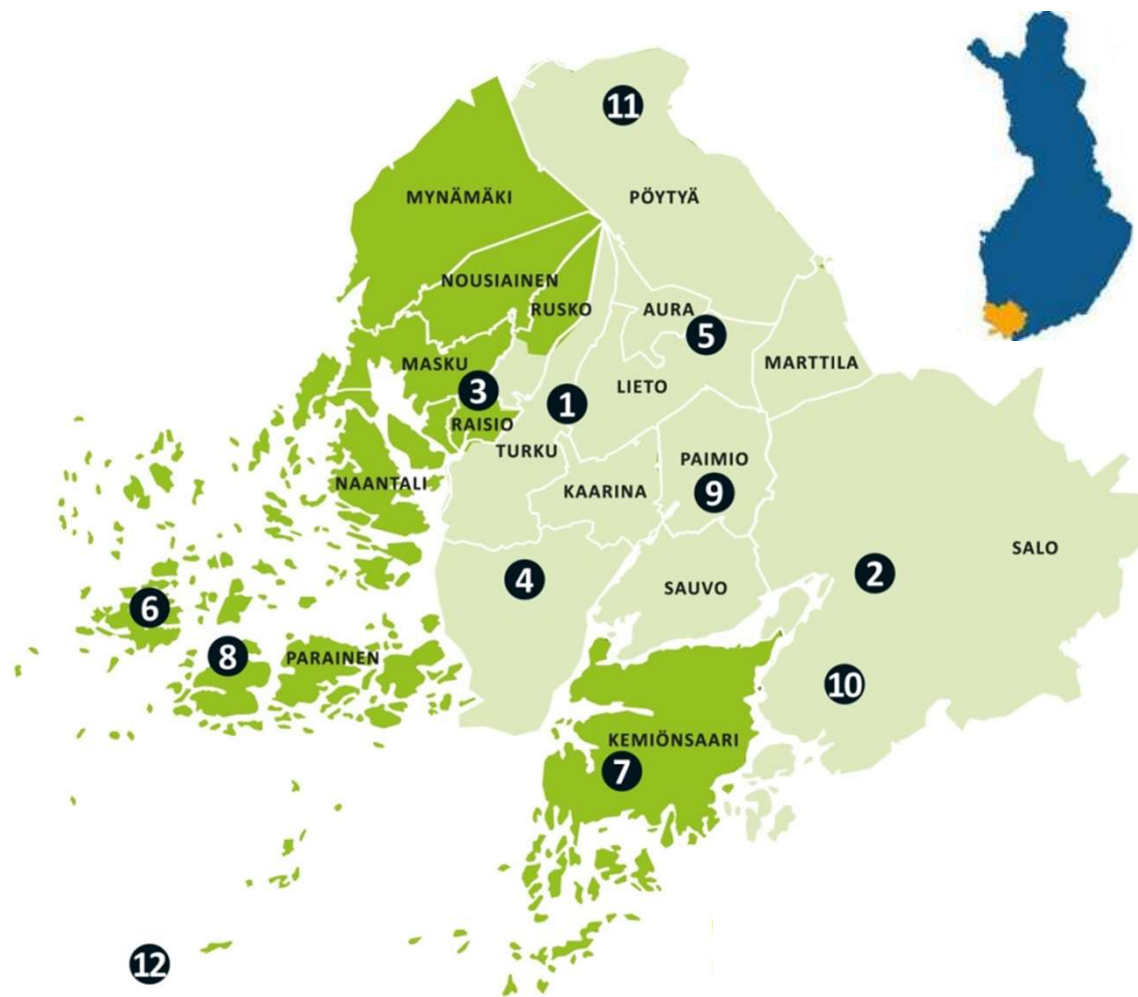
**18** municipalities

**440 000** residents

**40 000** summer cottages

**158** employees

**27.8 M€** turnover



**EKO**  
PARTNERIT

**N**  
Lounavoima

**KIERTOMAA**



## Nationwide municipal collection

- Separate collection requirement for household end-of-life textile since 1st January 2023.
- Nationwide network of 25 municipal waste management companies covering 95% of the population,
- Local collection, pre-sorting and re-sell.
- LSJH provides solution - quality check, combining into large streams and supplying raw material continuously into mechanical, chemical and thermal processes.



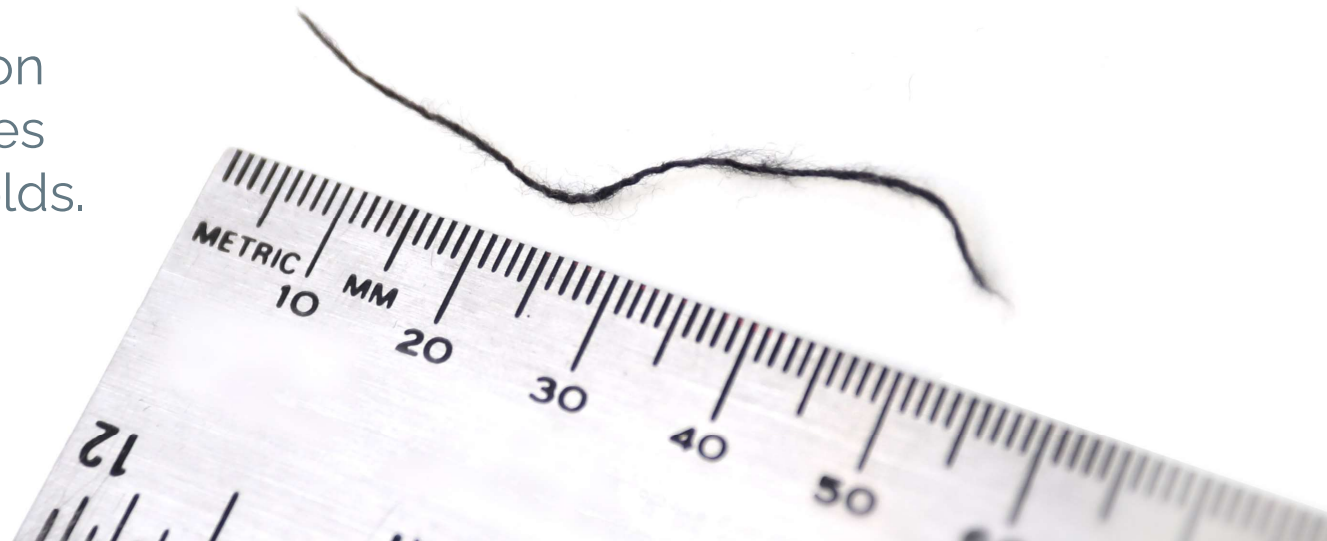
## Our mission



To enable textiles circularity by supplying customized quality textile raw materials to companies who can utilize recycled materials.

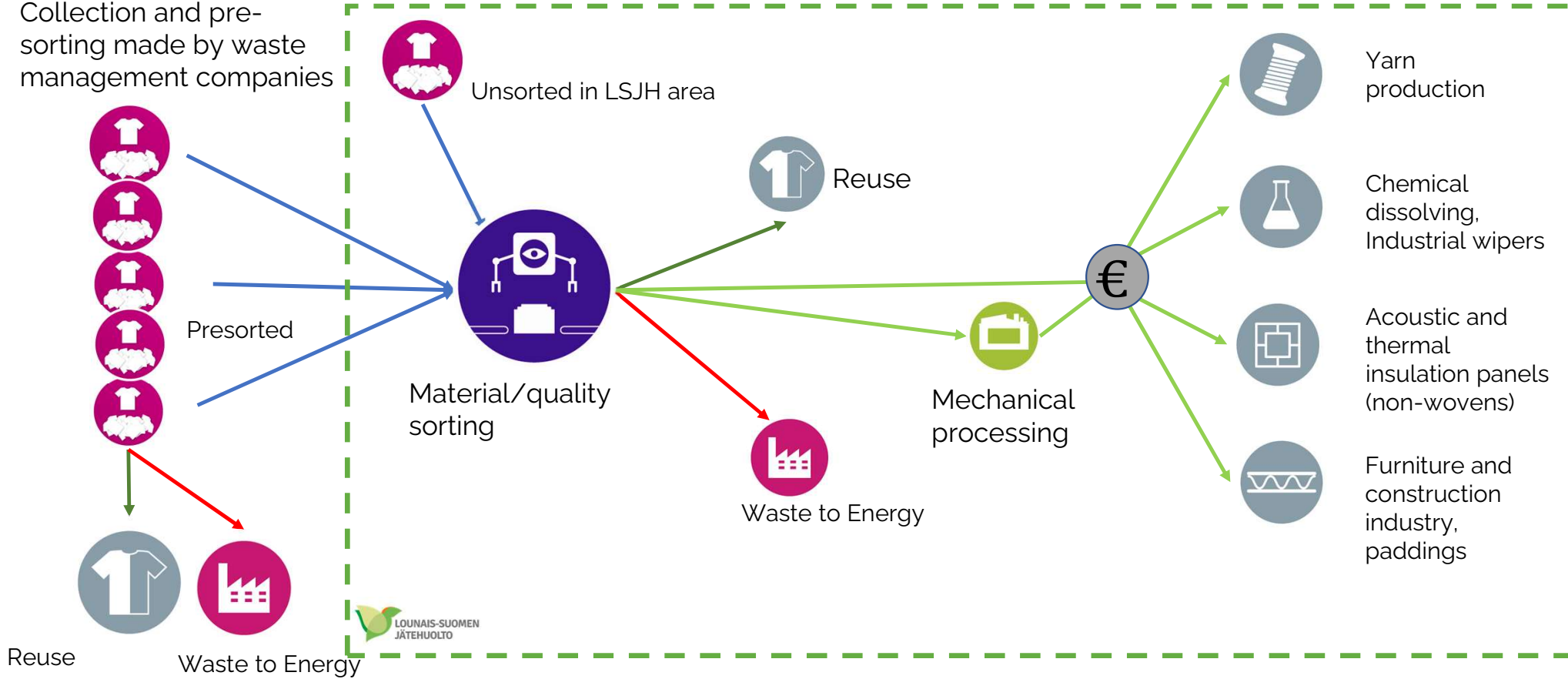
## Our vision

To find the best circular solution for all end-of-life textiles collected from households.



# Municipal waste management delivers a wholistic solution for end-of-life textiles collection from households

Collection and pre-sorting made by waste management companies



# Enabling textiles circularity

From collection and sorting into feedstock



## Nationwide collection & sorting

We have an existing infrastructure for collection from households through local waste management companies, including presorting.

## Products

We provide customized sorted textile raw materials for different industry uses, which can be processed into the right required form.

## Product development

Our experts help you with product development and creating new production processes using our partners & networks.

# Our products

Our textile raw materials are sorted for quality, material purity, texture, content and color to meet our clients' specific needs.



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## Materials

CELLU  
COTTON  
DENIM  
LINEN  
WOOL  
MMCF  
KNITTED  
SYNTH  
MIXED  
PES



## Customized options

COLOR  
MATERIAL  
NO HARD PARTS  
NO ELASTAN  
STRUCTURE

## Packaging options

BIG BAGS  
BALES  
BALES ON PALLETS  
WEIGHT: 300–400 kg

# Material categories

## 2022

### Sorted

- nationwide 743 tn
- LSJH 252 tn

### Re-sell

- nationwide 859 tn (30%)
- LSJH own store 20 tn (3%)

Raw-material 627 tn recovered (30%)

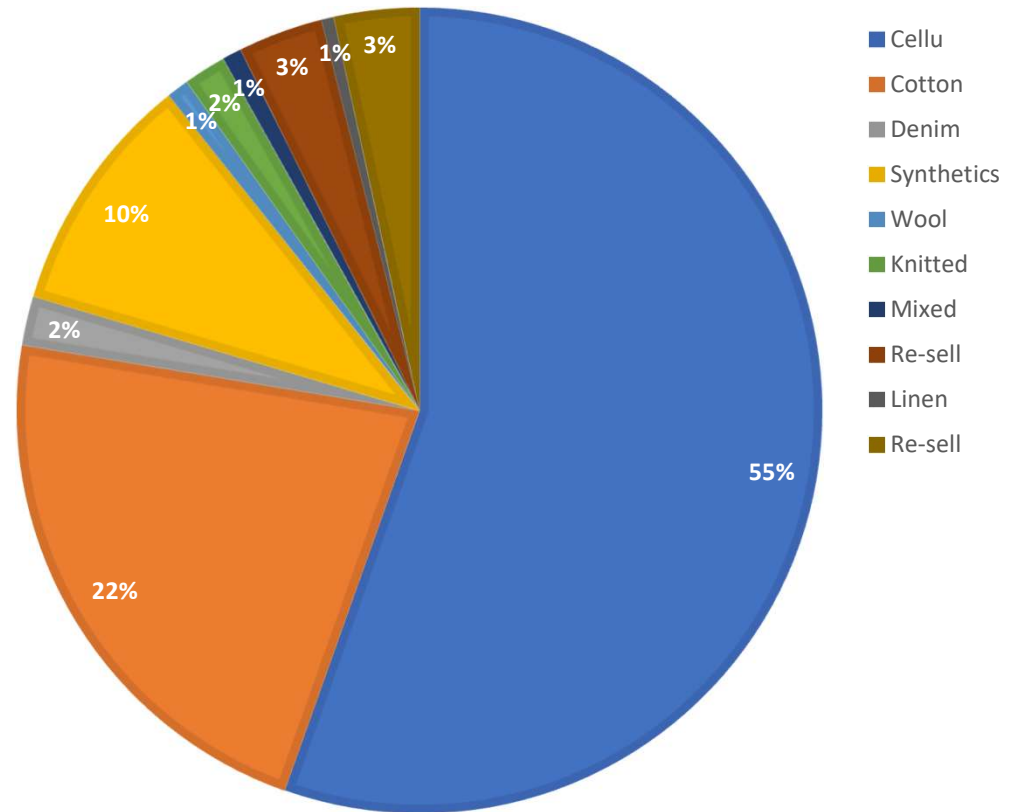
### Collection

- nationwide 0.35 kg/person
- LSJH 0.5kg/person

## 2023

To date sorted +20%

PRODUCT DIVISIONS 2022





## 2015

- Collection of end-of-life textiles trials started in Turku region

## 2021

- Collection with 10 partners covered 3.2 million Finns
- Process for sorting, quality check and identification
- Mechanical opening line in Paimio started operating

## 2022

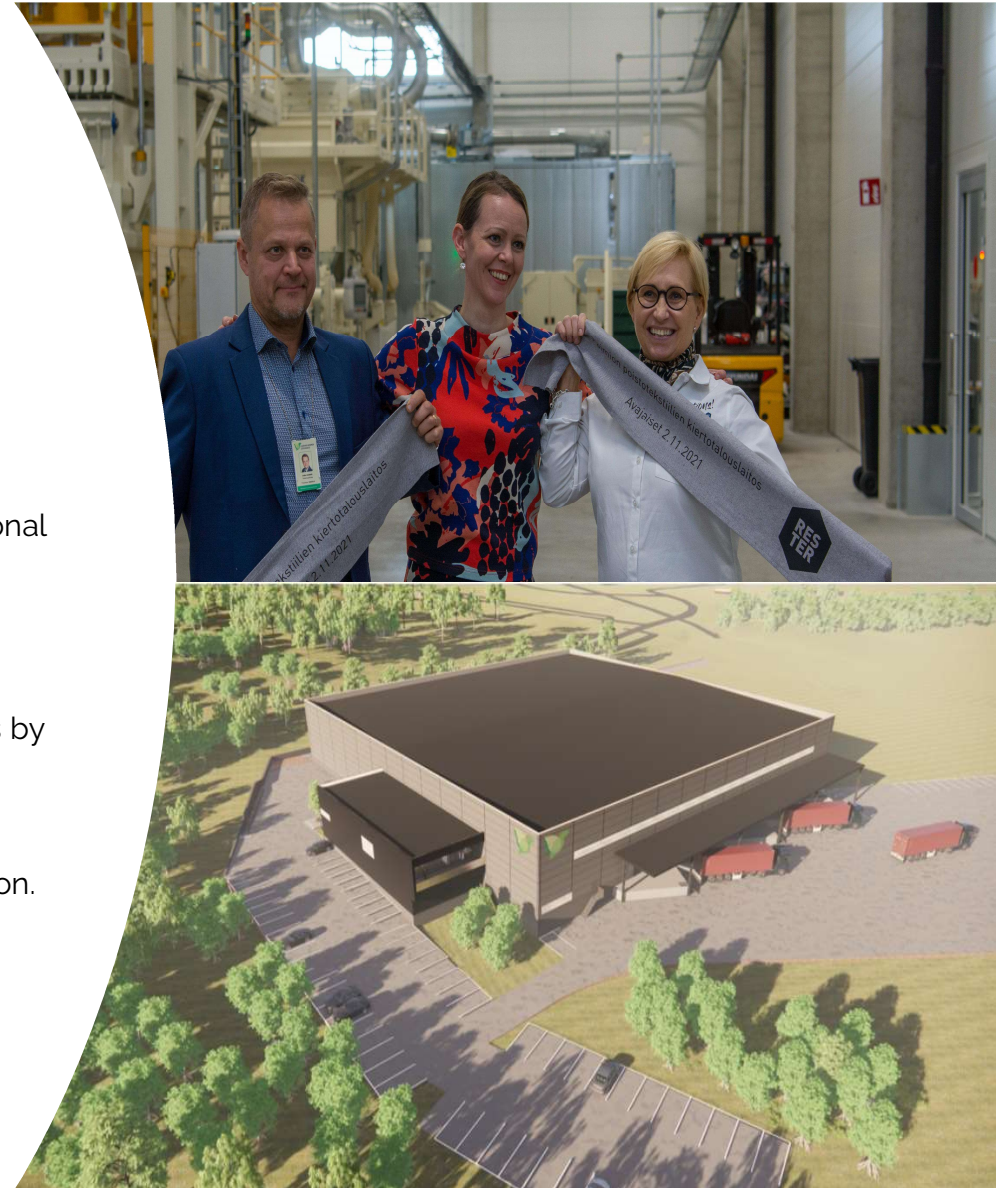
- Additional municipal waste companies join our network – creating national collection coverage for 4.5 million Finns
- Recycled fibre production at mechanical opening line Paimio

## 2023

- Legal separate collection requirement of household end-of-life textiles by municipal waste management
- Move in the autumn to larger sorting facilities in Turku
- Concentrating on core function of collection & sorting, and its automation. Fibre opening only until the end of the year.

## 2025

- Topinpuisto automated end-of-life textile refinement plant
- Estimated annual sorting & processing capacity to cover Finland, the Nordics & Baltics



# Our strengths

- Since 2015 worked to recover and separate textiles from mixed waste streams and created partnership model with other waste management companies
- Existing infrastructure and national network for collection
- High quality material based manual sorting facility with professional sorters
- Value chain development and networks within textile and other industries. Customer and partners in Finland, Nordics and Europe
- Participation in different international projects and consortiums i.e. tExtended, Telavalue, Sustafit
- Active member of different textile forums sharing knowledge & experience
- Our products have Finnish Social Enterprise and Key Flag certificates. In process of getting GRS certification.



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# Current and future solutions

- Mechanical yarn and nonwoven production processes
- Industrial scale chemical recycling, currently in laboratory or piloting phase (natural & synthetic)
- Local production chains in the Nordics & Baltics
- New product developments using recycled content
- Market demand and shared value



Kemiallinen prosessi, Infinited Fiber Company



Mekaaninen prosessi, Jokipiin Pellava Oy



Eristeet ja pehmusteet



Täyteaineet, Nordic Upstream Oy





Suomalaisilta kerätty tekstiilijäte loistaa nyt kansainvälisillä näyttöslavoilla  
fafi.fi • 2 min read

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# What we have learned so far



**Communication** Keep it simple and constant—defining reusable and end-of-life textiles

**Collection** Balance between quality and quantity. Quality (indoors) vs quantity (outdoors)

**Quality sorting** No short-cuts – key to quality & right material content in applications  
Automatic material sorting cannot replace manual pre-sorting  
No textiles circularity or demand of feedstock without quality sorting

**Waste logistics** Use existing collection infrastructure and local pre-sorting hubs are needed

**Fiber opening** Standard quality is hard to achieve with heterogenous material quality and market demand.  
Fiberization only one solution, more are needed for different qualities & materials

**Market demand** No established market- gap between supply and demand.  
Long supply chains, commitment & profitability. Uncertainty due to EPR who is responsible (finance & operational)

**Legislation & finance** EU Textile strategy is a positive push, but we need systematic change, incentives, new product development, level playing field and finances.



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Thank you!



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