



# RECYCLING OF POLYESTER FABRICS – A MARKET NICHE

---

ROBERT KUKUŁOWICZ  
TEL. 602-201-880  
ROBERT.KUKULOWICZ@USEWASTE.EU

Warsaw, March 2025 r.





## LESS EMISSIONS, ZERO WASTE

We are a Polish R&D start-up that is changing the face of the textile industry. We are developing technology that eliminates waste through textile-to-textile recycling.

**Together with LPP, we are creating the future of closed-loop textiles.**





## WE ARE STARTING A REVOLUTION

We aim to eliminate waste in the textile industry. We have started with polyester. With textile-to-textile recycling, which we can introduce on a large scale, we will transform a linear production system into a circular one, giving textile waste a new life.



## READY-MADE SOLUTION

We are designing a turnkey industrial line for recycling post-consumer polyester fabrics with a capacity of 1,000 tons per year, whose main products will be raw materials:



TEREPHTHALIC ACID  
(PTA)



ETHYLENE  
GLYCOL



# RECYCLING POTENTIAL POLYESTER

100–150  
mld

pieces of clothing per year  
are produced by the global  
fashion industry

<1%

of the world's textile fiber  
production comes from textile  
recycling, and most of the clothes  
are incinerated or sent to landfills  
at the end of their life

71 mln  
tons

of conventional petroleum-  
derived polyester is produced  
annually. Polyester is the most  
widely used textile fiber in the  
world, and its production is  
growing every year.

<2%

of the recycled polyester currently  
used comes from textile-to-textile  
recycling. The rest is made from PET  
bottles, which disrupts their circularity.  
Textiles should be created from  
textiles.



NEW LAW  
THE NEED TO  
CHANGE

The closed-loop economy is a central pillar of the Green Deal strategy.

**It emphasizes recycling and reuse instead of destruction and disposal.**

Fashion is one of the industries that the European Union is paying particular attention to: the EU is introducing a series of regulations that, through the introduction of **Extended Producer Responsibility**, will change manufacturers' approach to, among other things, textile waste management and **impose requirements for the use of recycled materials.**

16

The EU's Sustainability Acts will affect textile manufacturing companies.

2027

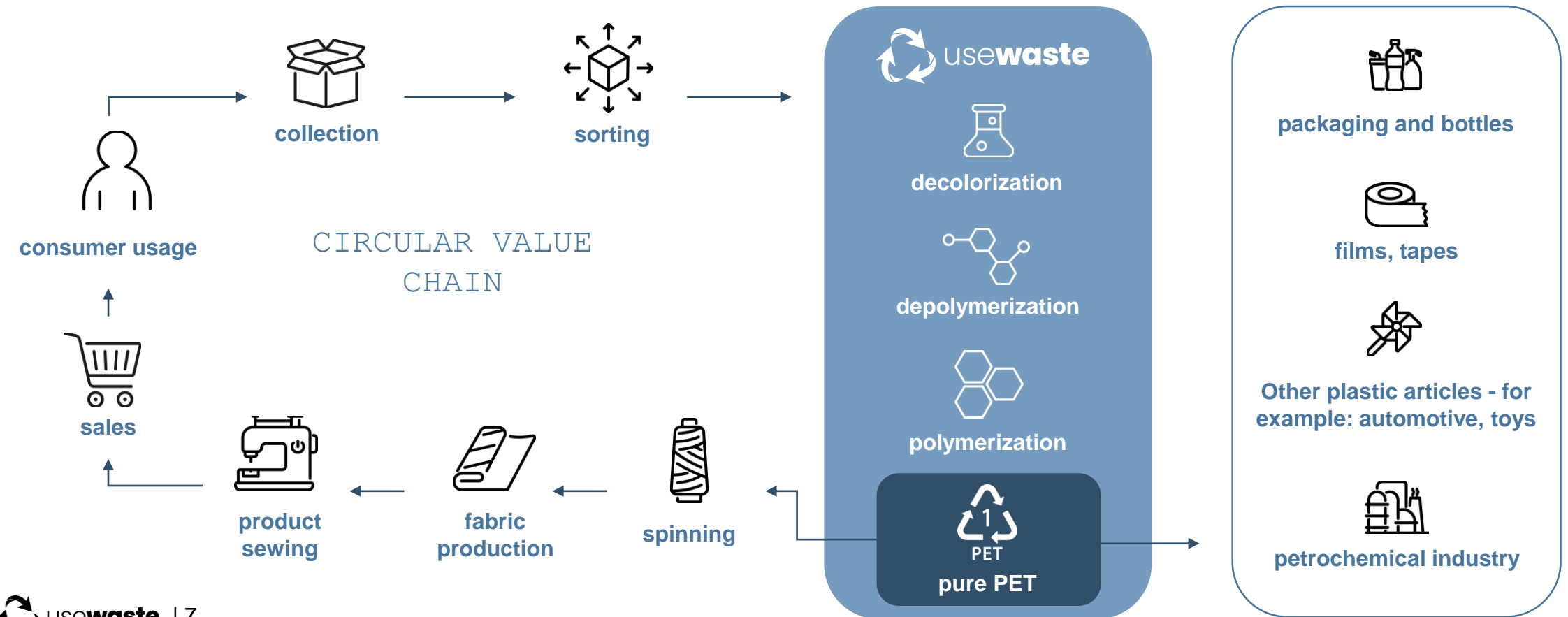
Ban the export of plastic waste outside the EU, followed by a ban on incineration and landfilling of reusable or recyclable waste.

2030

Textiles placed on the EU market will have to contain recycled materials - 30%.

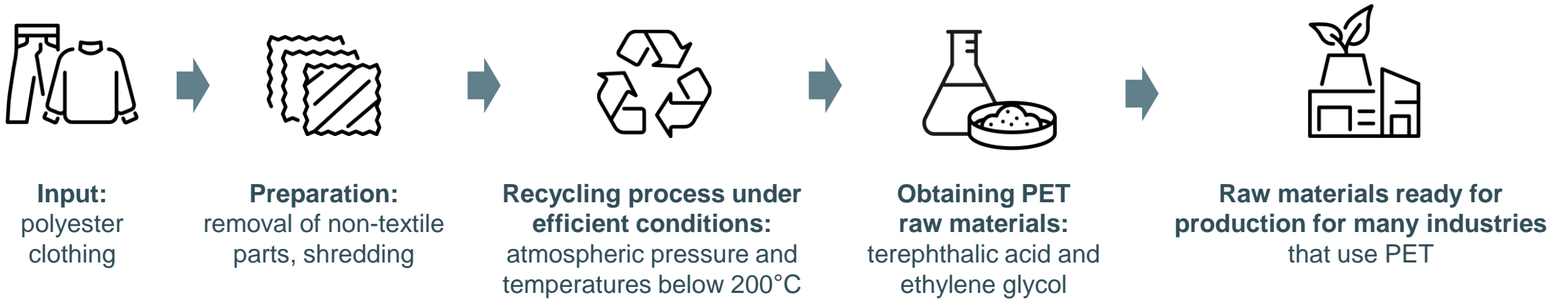
# RECYCLED VS. CIRCULAR

# THE BIG DIFFERENCE



# USE WASTE P.S.A. SOLUTION

---





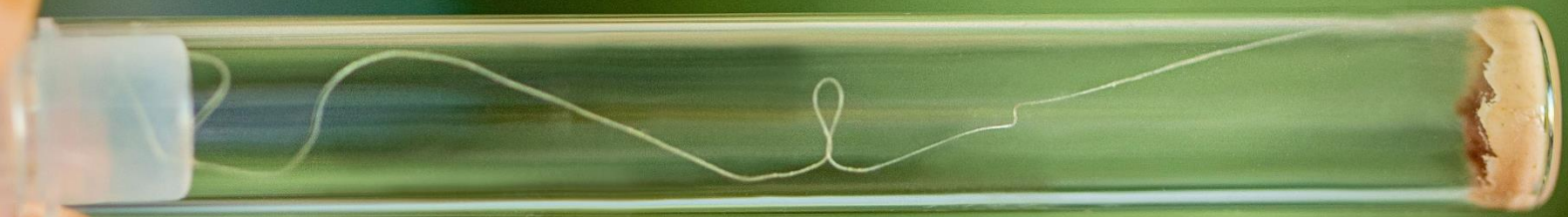
# USE WASTE SOLUTION



TEREPHTHALIC ACID



ETHYLENE  
GLYCOL



The chemical textile recycling process we have developed allows us to extract virgin raw materials from polyester. The first success and completion of Phase I of the research was the production of polyester thread. Our method can not only revolutionize the fashion world, but also provide recycled raw materials for many other industries.



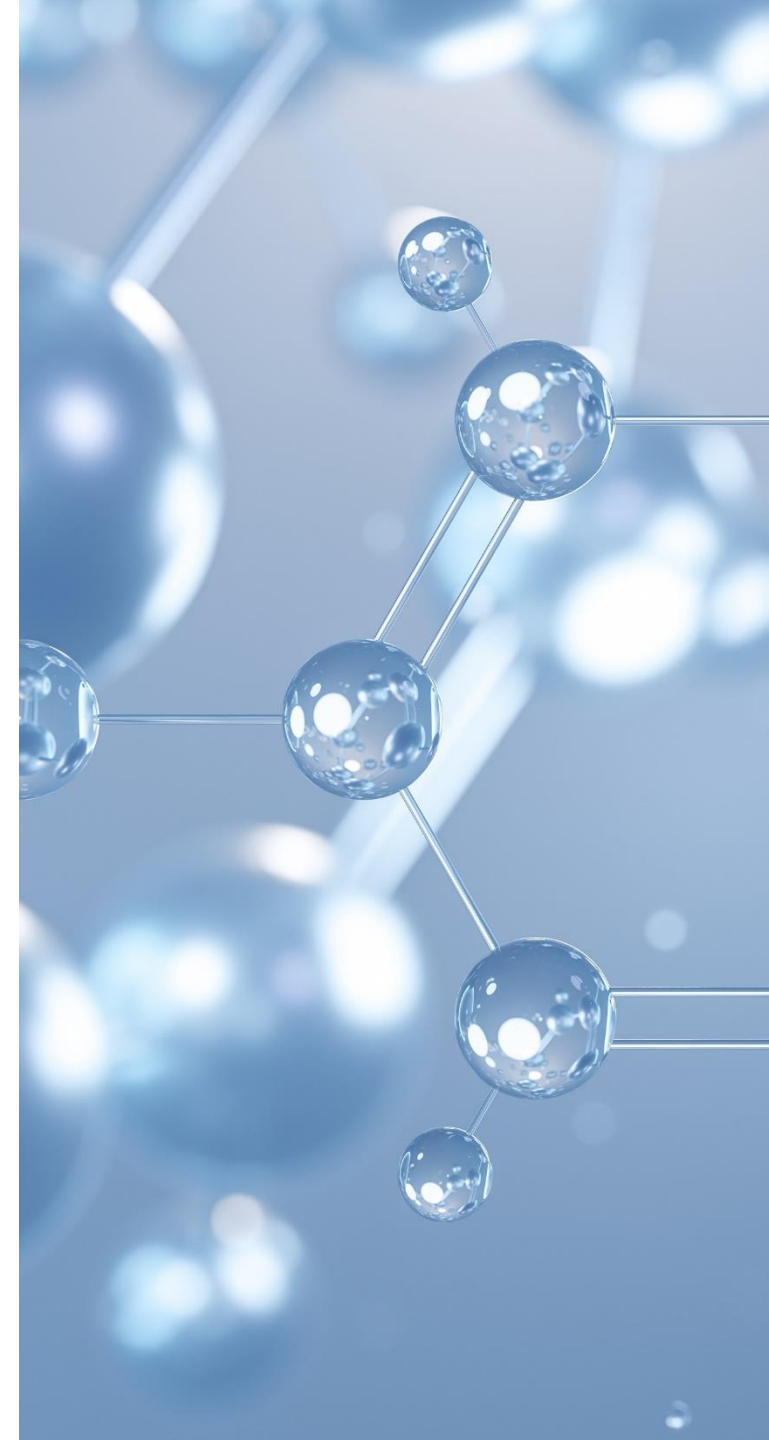
# BASIC DATA

---

Based on laboratory scale testing, 1 ton of polyester fabrics (100% polyester - description on the label) will yield:

- 0,76 tons of terephthalic acid (PTA)
- 0,16 tons of ethylene glycol
- 0,08 tons other substances (dyes, zippers, cotton threads, etc.).

The purity of the obtained terephthalic acid is >99%.





# INDUSTRY COOPERATION LOOKING FOR PARTNERS



We are an ambitious team of innovators - scientists who specialize in developing technologies for chemical processing of plastics.



Our mission is to turn waste polyester into circular raw materials that will be used not only in the fashion industry.



We are looking for a partner with whom we will jointly implement the technology for chemical recycling of polyester fabrics on an industrial scale.





THANK YOU FOR  
YOUR ATTENTION

ROBERT KUKUŁOWICZ  
MANAGING DIRECTOR

---

[www.usewaste.eu](http://www.usewaste.eu)

Tel.: +48 602-201-880

Mail: [robert.kukulowicz@usewaste.eu](mailto:robert.kukulowicz@usewaste.eu)