

LIFE POLITEX is a groundbreaking project aiming to revolutionize the textile industry by establishing the first industrial pilot plant for complete fibre-to-fibre recycling of polyester.

By converting post-consumer textile waste into high-quality recycled polyester fibres, we are paving the way for a true circular economy in textiles.



Coordinator



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Fibre to fibre full circularity
in the textile sector
through novel polyester
recycling technologies



The Challenge

The textile industry's current linear model, fueled by fast fashion, results in excessive water use, high CO₂ emissions, and massive waste accumulation.

With only a fraction of textiles recycled and most ending up in landfills or incinerators, the environmental impact is staggering. This unsustainable cycle calls for an urgent transformation in how we manage and reuse textile waste.

Our Innovative Solution

LIFE POLITEX introduces a comprehensive, closed-loop recycling process. Our approach begins with the collection and sorting of textile waste, followed by a chemical recycling process. Through advanced depolymerization, we break down polyester into its monomers (BHET) with up to 99% purity, which are then repolymerized into recycled PET (r-PET). This innovative method not only reduces waste and emissions but also creates a sustainable source of new textile fibres.

sorting



depolymerization



repolymerization



Project Overview & Impact

Coordinated by AITEX and involving key partners, the project is located in Spain, Portugal and Italy. **LIFE POLITEX** is set to demonstrate the industrial viability of fibre-to-fibre recycling. Over a 42-month period the project aims to:

Recycle up to
4,500 t
of textile waste per year



Reduce CO₂ emissions
1.908.215 t
per year by the end of the project



Reinstate up to
550 t
of high-quality r-PET into the market



LIFE POLITEX is not only a pioneering effort in textile recycling but also a model for sustainable innovation and circular economy practices across industries.