

dyeloop

Circular textile dyeing



The Problem

The textile industry has doubled global fiber production in just two decades—reaching over **108 million tons** by 2020. This rapid growth has led to extensive water consumption and pollution. Dyeing processes alone are responsible for up to **20% of global water pollution**, with over **280,000 tons of synthetic dyes released** into waterways every year.



The Challenge

Conventional wastewater treatment systems are often costly, complex, and ineffective in fully removing synthetic dyes. Despite growing environmental awareness, the industry lacked scalable, circular alternatives to toxic dyeing processes.



The Breakthrough

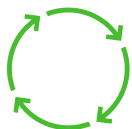
In response to this challenge, a team at the University of Coimbra developed **DyeLoop**—an outcome of the **CirRe-Dyeing** research project. The system enables the recovery and reuse of dyes and water from textile effluents, using eco-friendly extractants to reduce waste, costs, and environmental impact through circular design.



Scaling Up

With €1.4 million in EU funding, the team is now building and validating an industrial-scale prototype. A roadmap is in place for commercialization and the launch of a dedicated spin-off company, paving the way for a cleaner, more circular textile industry.

We're tackling the textile industry's water crisis by transforming dyeing processes into sustainable, circular systems.



70-90%
dye recovery



50% costs
savings



40-60%
reduction in
water usage

Join us as we shape the future of sustainable textile dyeing.



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