

Dual Innovation Approach in Creative Merchandise and Upcycling

Our technology represents a unique combination of **technical** and **process innovation** within the embroidery and fashion industries, addressing two distinct use-cases.

First, **technical innovation** enhances the design process for embroidery businesses by integrating AI-powered frameworks, significantly reducing the time and cost associated with traditional merchandise customization and design work of embroidery files.

Second, **process innovation** enables fashion companies to adopt scalable upcycling practices by leveraging existing embroidery machine infrastructure, which has traditionally been used only for merchandise. By automating the upcycling process and eliminating the need for manual labor, we offer a cost-effective solution to repair and upcycle clothing at scale, thus addressing the industry's sustainability and waste management challenges.

Product Offering: Re:Customize offers an **AI-powered embroidery software** that accelerates the design process, enabling scalable merchandise and upcycling processes within the fashion industry. This allows fashion companies to upcycle clothes cost-effectively and aesthetically solely using embroidery machines. We employ advanced AI-models, including text-to-image and processing technology to a market in need of innovation and with €1,79 billion worth of embroidery machines sold annually. This approach tackles a key issue in fashion: **enhancing emotional durability through individualization**. Our software leverages and repurposes the existing machine infrastructure of the embroidery industry, with 7.16 million embroidery machines in use, for a scalable upcycling process to reduce textile waste. As noted in Chapter 2.6 on Product Verticals, while our long-term vision includes expanding our technology to incorporate textile printing and other applications, our initial focus during the first year of launch will remain on embroidery to ensure a streamlined and effective market entry.

Industry Context and Ecological Impact: Each year, 92 million tonnes of textile waste end up in landfills, with 64% of it still reusable, therefore not lacking physical attributes **but emotional durability**. By offering a scalable and cost-effective solution, Re:Customize helps fashion companies implement sustainable practices to reduce this waste. In doing so, we address both environmental regulations, such as the upcoming **2025 Extended Producer Responsibility (EPR)** legislation, and consumer demands for more sustainable and personalized products. Additionally, with around **7,16 million embroidery machines in use globally**, producing an estimated 300 million embroidered items annually, the potential for upcycling through these machines is immense. By repurposing the embroidery industry infrastructure and extending the lifecycle of garments by 9 months, Re:Customize could facilitate 20-30% reductions in CO2 emissions within the fashion industry.

Product and Development Status: We are in the MVP phase, having secured funding from the **AWS First** and the **U:Seed Program**, as well as **Winners of the Deep Tech Creativity Award** and Finalists (Climate Launch Pad and Social Impact Award) of multiple awards. We have begun pilot projects with several companies and fashion brands to test our software in real-life production and upcycling settings. Our pilot-product launch is scheduled for summer 2025.