AI4 WASTE

FOSTERING AWARENESS AND INNOVATION IN ADULT EDUCATION

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TOOLKIT

Case Study #5

AI-DRIVEN TEXTILE WASTE MANAGEMENT- SWATCHLOOP

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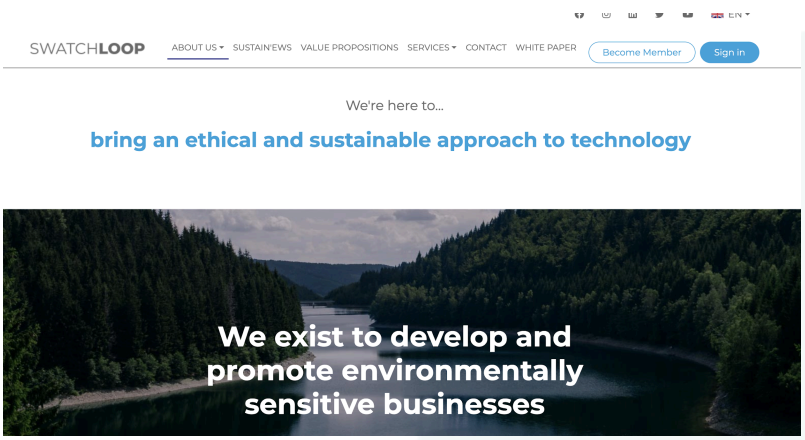
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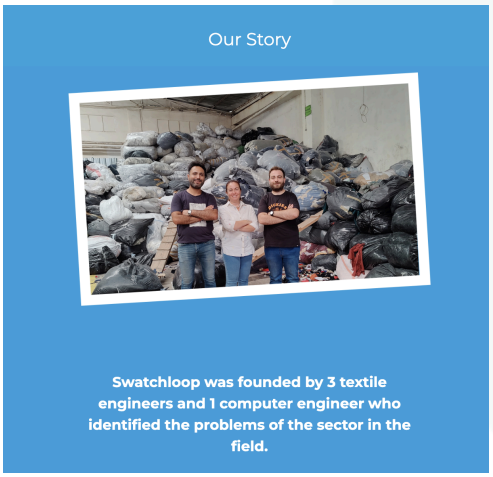
SUMMARY

Case Study #**5** of Aı-Drriven Textile Waste Management in Türkiye- **Swatchloop**



A Turkish SME has developed an AI-powered platform named Swatchloop, focusing on textile waste management. The platform offers digital classification of textile waste, end-to-end tracking, real-time recycling analytics, and a Digital Product Passport to enhance transparency. This innovation supports fashion brands in adopting circular economy practices by efficiently managing and reducing textile waste.

Swatchloop providing an innovative, AI-powered platform designed to revolutionize textile waste management and recycling processes. The platform focuses on helping fashion brands and textile manufacturers reduce their environmental impact by efficiently managing waste and promoting sustainable practices across the supply chain.





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Case Study: SWATCHLOOP – AI-DRIVEN TEXTILE WASTE MANAGEMENT

SwatchLOOP is a waste management platform that digitizes recycling processes, enabling process optimization, efficient recycling and transparent traceability. It technically identifies waste for more efficient recycling of waste and offers smart recommendations to ensure correct sorting and collaboration with artificial intelligence. It also provides data analysis with a digital passport, enabling sustainable and transparent tracking of all recycling processes up to the final consumer. In terms of the environment, it makes a significant contribution to reducing carbon emissions and water footprint by reducing raw material consumption as it enables efficient recycling and reuse of waste.

SwatchLOOP creates a Digital Product Passport (DPP) to waste for more efficient recycling processes and offers smart recommendations powered by artificial intelligence to ensure proper sorting. It also provides data analytics with the ability to track all recycling activities from the recycling company to the end consumer in a sustainable and transparent way**.**

Key Features

- **Digital Classification of Textile Waste:** The platform uses AI-driven technology to accurately classify textile waste at source, enabling efficient sorting for recycling or reuse. This automated process reduces errors and enhances the quality of materials for repurposing.
- **End-to-End Tracking:** The platform ensures full traceability of textile waste from production to recycling. Through its end-to-end tracking capabilities, brands can monitor the journey of materials at every stage of the process, providing transparency and improving accountability in waste management.
- **Real-Time Data Analytics and Recycling Reports:** It provides real-time analytics and detailed recycling reports, giving users insight into their waste reduction performance. This data-driven approach allows companies to make informed decisions, optimize processes, and measure their sustainability efforts.

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- **Digital Product Passport:** A standout feature of the platform is its Digital Product Passport, which records essential data on the materials used in products. This feature enhances transparency and facilitates compliance with circular economy regulations, ensuring that companies can track the lifecycle of their products and materials from creation to reuse or recycling.

- **Circular Economy Integration:** The platform enables brands, manufacturers and recyclers to transition toward a circular economy by promoting the reuse of textile materials and minimizing waste. The platform supports sustainability targets and helps companies reduce their carbon footprint while improving resource efficiency.

Commercial and Technological Collaboration Opportunities:

The company is seeking international partners for both commercial and technological cooperation. The company offers customized solutions to fashion brands and textile producers, helping them meet their sustainability goals through optimized waste management and material recovery.

On the technological side, the company is open to collaborations with companies involved in recycling technologies, AI, data analytics, and material science. These partnerships will focus on further enhancing the platform's capabilities and developing cutting-edge solutions for the circular economy in the textile industry.

By collaborating with the company; brands, manufacturers and recyclers can gain access to innovative tools that help them meet increasing consumer demand for sustainability while complying with environmental regulations. The platform's advanced technology and data-driven approach provide a unique advantage in improving operational efficiency, reducing waste, and fostering sustainable business practices.

Whether you are looking to adopt circular economy practices, optimize your waste management processes, or collaborate on advanced recycling technologies, the company is ready to partner with forward-thinking companies to drive innovation and sustainability in the global textile sector.

Advantages and Innovations

The company offers a groundbreaking approach to textile waste management through its AI-driven platform, providing unique advantages to fashion brands and textile manufacturers looking to adopt circular economy practices.

The platform uses advanced artificial intelligence to automate and enhance the classification of textile waste, increasing accuracy and efficiency. This reduces manual sorting errors and ensures that materials are more effectively processed for recycling or reuse.

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One of the platform's key innovations is its end-to-end tracking system. From collection to final recycling, the platform enables complete visibility of textile waste, helping companies precisely monitor and control their waste management processes. This enhances transparency and accountability, which are crucial for meeting sustainability goals.

It provides comprehensive data analysis and recycling reports, offering real-time insights into the environmental performance of companies. This data-driven approach allows for better decision-making, process optimization, and measurable progress toward sustainability targets.

The platform features a Digital Product Passport that tracks the lifecycle of textile materials from production to reuse or recycling. This innovative tool supports brands in achieving full material transparency and regulatory compliance, while also improving resource efficiency.

It promotes the integration of circular economy principles by enabling the reuse and recycling of textile waste. Brands can significantly reduce their environmental impact, lower production costs, and contribute to reducing the overall waste generated by the fashion industry.

In addition, the platform offers flexible, scalable solutions tailored to the needs of different fashion brands and manufacture.

Technical Specification or Expertise Sought

Company Seeking Global Partners experienced in various sectors in recycling and sustainability projects in green transformation

Stage of Development

- Already on the market

Sustainable Development Goals

- Goal 12: Responsible Consumption and Production
- Goal 17: Partnerships to achieve the Goal
- Goal 11: Sustainable Cities and Communities
- Goal 8: Decent Work and Economic Growth
- Goal 13: Climate Action

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