

# SENSOR HUB

## COLLECT PRODUCT DATA AND DEFINE THE BEST RECOVERY PATH

### An Innovation for Sorting used Clothing, Household Linen and Footwear (CHF)

The SensorHUB equipment, developed by CETIA and funded as part of a three-year collaborative program with Refashion, provides a concrete solution to the complexity of sorting. It represents a major step forward in strengthening the competitiveness of textile recycling sectors. SensorHUB is a unique innovation that integrates various technologies specifically adapted to the detection and sorting of CHF. These technologies enable more effective processing of complex items — such as multilayer garments — by identifying material composition as well as embedded elements, including those not visible on the surface, which are critical to successful recycling.

#### IDENTIFICATION

##### Capturing a wide variety of data

*SensorHUB is a detection and sorting unit that integrates multiple technologies on a single line, enabling the instant and automatic identification of non-reusable textiles and footwear. It detects key characteristics such as item type, number and location of trims (including those not visible), textile structure, color, and material composition. This enables SensorHUB to determine each item's recycling potential and direct it toward the most appropriate recovery pathway. SensorHUB is equipped with several sensors: X-rays (supplied by Brustia through a partnership with CETIA), 3D vision, 2D vision, hyperspectral cameras and NIR sensors, all combined with artificial intelligence algorithms developed and trained by CETIA.*



#### SORTING

##### To sort all type of CHF items

*Various ejection systems have been integrated into the sorting unit to provide flexibility to the solution. As a result, the equipment is capable of handling both soft items such as textiles and more structured items like footwear.*



### An efficient solution for optimized recycling preparation

As part of its mission to develop tools for industry stakeholders and producers, and thanks to CETIA's expertise, Refashion is now equipping the Textile sector with an operational system that facilitates the identification of collected textiles and footwear.

SensorHUB instantly and automatically detects all product characteristics, enabling their direction toward the most suitable recovery pathway or optimized recycling preprocessing.

SensorHUB meets the requirements and expectations of recycling professionals through a tailored and modular approach, adapted to the specifications of each recycler and the specific types of items to be processed.

SensorHUB also provides smart assistance to sorting operators. The platform addresses a wide range of sorting criteria, making decision-making easier and paving the way for a competitive economic model for advanced sorting and the preprocessing of CHF for recycling.

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**Re\_fashion**

