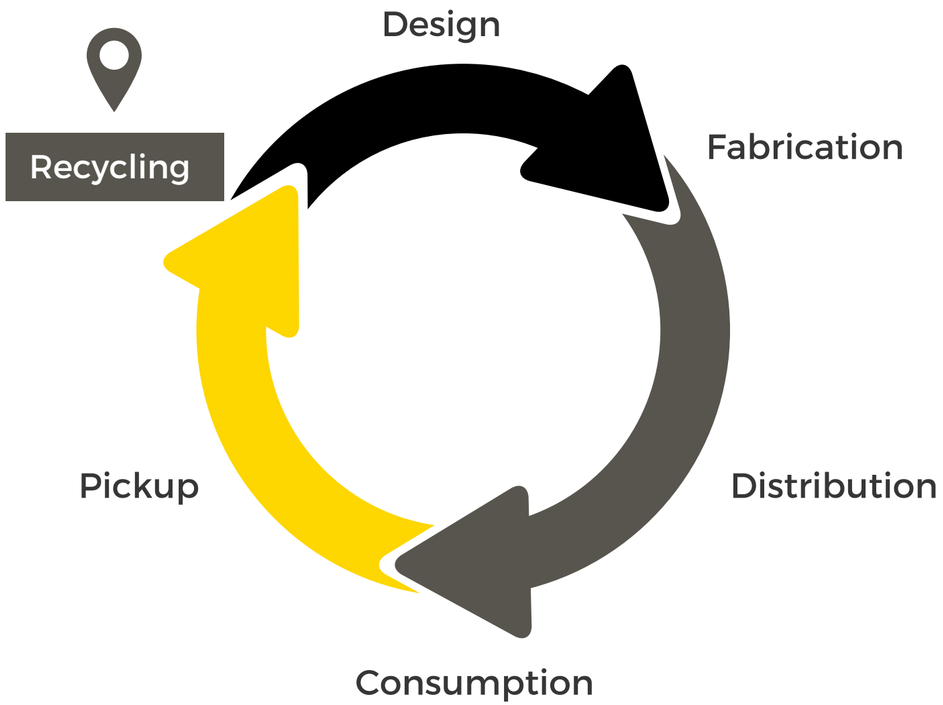
PICVISA

Accelerating the world's transition to the circular economy

#bettersorting

About us

PICVISA as a player in the circular ecosystem

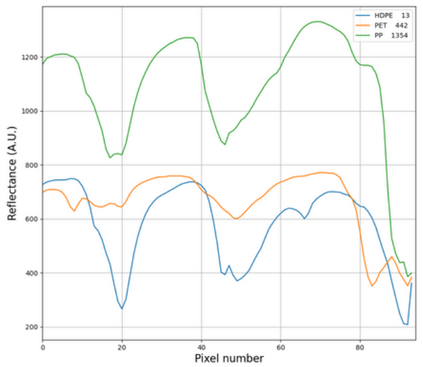


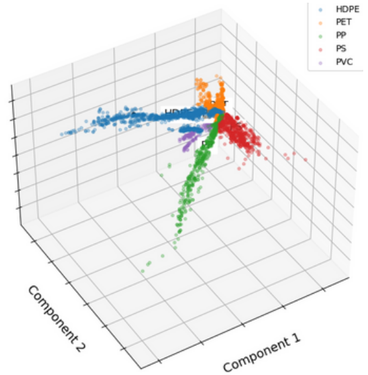
PICVISA is a technology company that offers solutions based on **Artificial Intelligence and Machine Vision**.

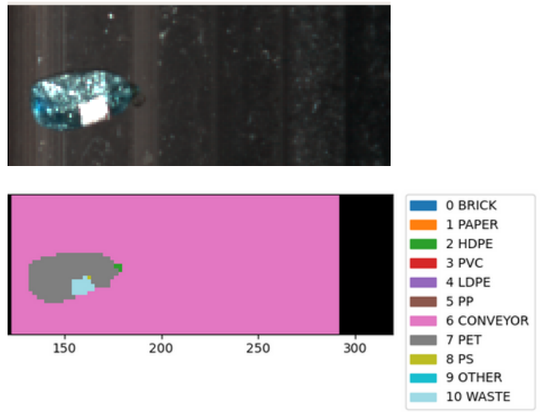
Our acquired knowledge and experience in AI and VI results in **optical and intelligent robotics solutions** oriented to enhance the **circular economy**.

Intelligent sorting

Our core technologies: deep learning and hyperspectral vision







Sofware & Hardware combination

With a combination of hardware and software, the system recognizes different materials, colors, textures, shapes and patterrns.

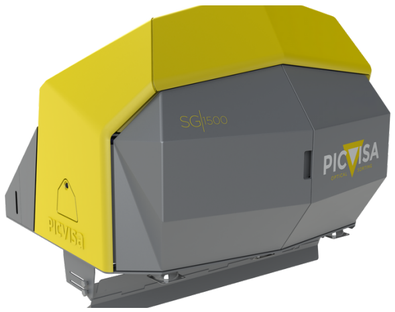
Database continuous improvement

The increasingly extensive participation in new projects makes it possible to obtain images in new environments and create much more robust models.

In house data and AI infraestructure

We offer an in house technology. Our short cycle between R&D means our customers benefit quickly from our enhancements.

Our market solutions

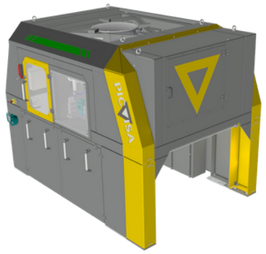


ECOGLASS

Optical sorter that allows the **automatic classification** and separation of various types of materials, Designed to work in **glass recovery**.

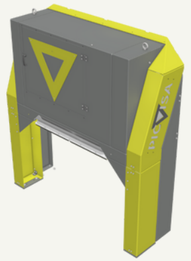
ECOPACK

Optical sorter that allows the automatic classification and separation of various types of materials, by **composition** (NIR), **colour** (VIS) .



ECOPICK

Artificial Intelligence (AI) based robot that recognizes and **classifies** a wide variety of objects on a **conveyor belt**.



ECOFLOW

Flow analyzer based on Artificial Intelligence that perfomrs **real time flow monitoring** on a conveyor belt.

ECOSORT TEXTILE

Optical sorter for automatic classification of textile by composition (NIR) and colour (VIS). Separation by lateral blowing.

Industry applications

MUNICIPAL & INDUSTRIAL WASTE

95% of the value of plastic packaging material is lost to the economy

TEXTILE

10% of the waste that arrives to a MSW recycling plant is textile.

C&D

Construction and demolition waste represents approximately 30% of the total waste generated in the European Union.

COFFEE CAPSULES

Every year, more than 7 billion coffee capsules are consumed worldwide; 90.000 are produced every minute and around **70% end up in landfills**.

I+D+i projects

LIFE PST SORT

Artificial intelligence for the detection of recyclable materials

R3BORN

Development of circular economy solutions in the plastic packaging value chain

circpack

Development of circular economy solutions in the plastic packaging value chain

VIDREBUIG

Optical glass separation solution contained in mixed urban waste streams

I PRO REC

Recovery of valuable materials contained in the flow of refusal of fragmentation of vehicles out of use

WISE

Waste Identification and Sorting Experience

Technology of recovery of plastic waste through robotics in urban waste treatment plants: Waste Identification and Sorting Expertise (WISE)

PlastiCircle

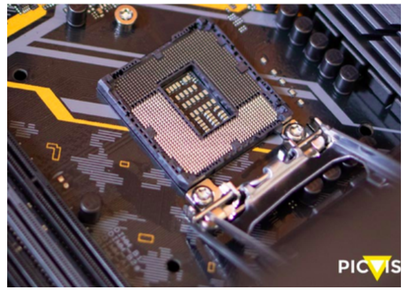
TOO VALUABLE TO WASTE

Treatment of plastic packaging waste for efficient recycling

SEPARA

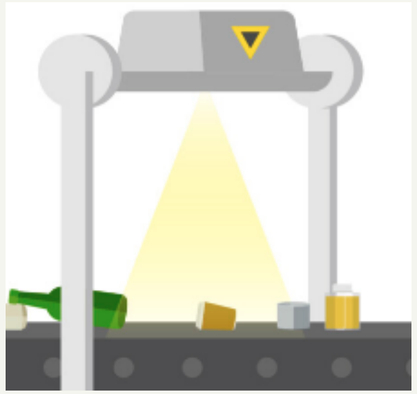
Promote the digital transformation of waste selection and treatment plants.

Challenges



HARDWARE

Remove high dependency on GPU where possible

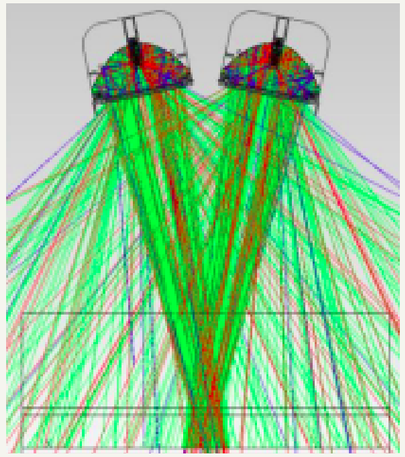


SENSORS

MWIR for sorting black plastics
Extended-NIR sensors (up to 2.2 nm)

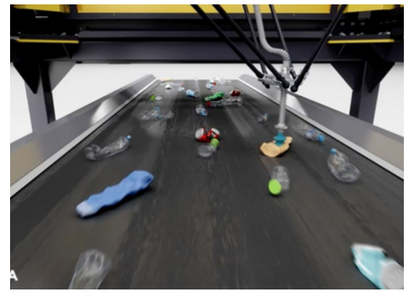
DEEP LEARNING

Self-supervised Multimodal Deep Learning
Object Recognition in Hyperspectral Images



LIGHTING

Use more efficient lights in the infrared range (LEDS)



3D

Optimize picking in robot-based machine for differents grippers (vaccuum, two-jaw...)

THANK YOU!