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# SmartSort



Improved sorting of plastic, metal and glass at waste collection sites

## What is SmartSort?

SmartSort offers a characterization solution for plastic, metal and glass waste that uses very high frequency radar waves and a learning system based on artificial intelligence.

Installed on the containers at various waste drop-off sites, SmartSort is embedded in the Cliiink® recycling incentive system developed by Terradona. Users who sort their waste correctly receive points that can be converted into vouchers to make purchases from local merchants.

## Applications

This technology covers various forms of waste sorting, including:

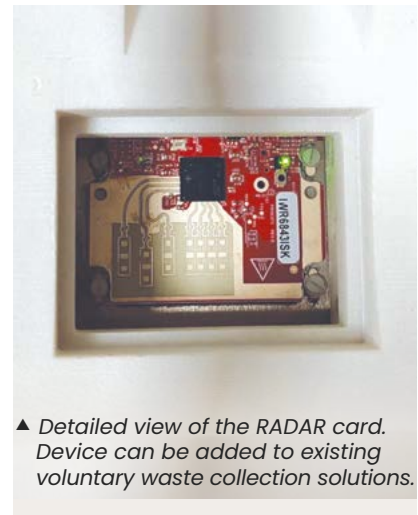
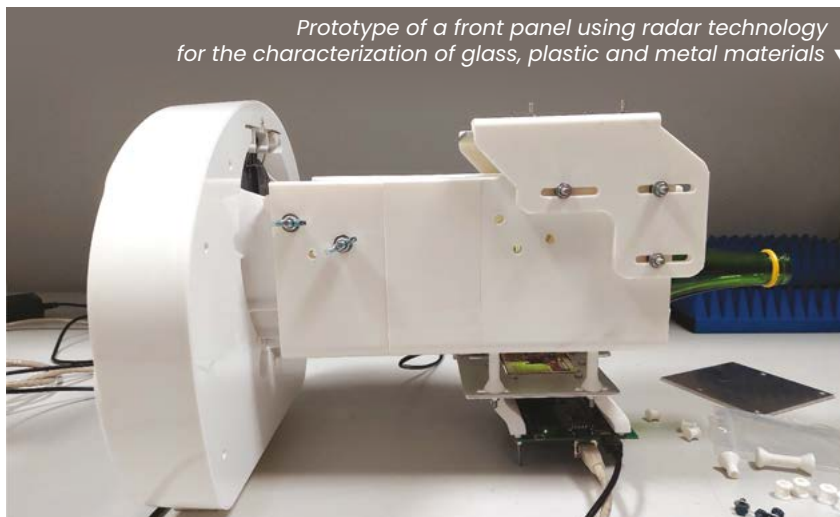
- voluntary drop-off points
- public and private waste disposal solutions
- waste reprocessing plants

Work performed in the frame of the IRT Nanoelec consortium.



## What's new?

- On-the-fly waste characterization and differentiation
- a technology that can be adapted to new materials by detecting their electromagnetic signature and using adaptive AI algorithms
- a robust system that can handle waste sorting environments: shocks, bad weather conditions, etc
- easy to install
- battery operated with an autonomy of six to twelve months
- material recognition rate close to 90%, even when dirty
- a target recognition rate of 95% thanks to the learning process
- can easily interface with applications to incentivize sorting



## What's next?

- Currently being integrated by Terradona, our industrial partner, with a dedicated low-power radar card and an automatic database for waste recognition training as well as improvements to the AI algorithms.
- CEA has tested and adapted the technology to go beyond waste sorting in order for it to be used with other materials and fields of application.

## Interested in this technology?

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