

Reducing CO2 emissions: “waste is our fuel”

“One robot, many applications” is the main slogan of the division Recycling and Robotics at ETIA Ecotechnologies, the company which uses artificial intelligence and technical engineering for sorting solid urban waste, sorting iron and non-ferrous metals, plastics, and other materials to be recycled, via the production and storage of energy from waste recovery.

ETIA Ecotechnologies is a French subsidiary of the Norwegian group VOW ASA. One of its main activities is the manufacturing of intelligent robots dedicated to sorting and treating waste, but also the pyrolysis process for the recovery of waste into renewable or recycling materials and energies (fuel, combustibles, etc....)

Thanks to Biogreen process, the company, which is located in Compiègne (Oise) and managed by Olivier Lepez (President of ETIA), especially focuses on biocoal production for metallurgy (bio-

based reducing agent), hydrogen from non-recyclable plastics, and upgrading end-of-life tires to carbon black.

Henrik Badin, director and co-founder of VOW ASA in Oslo (Norway), also owns SCANSHIP, world leader company in the treatment of waste on cruise ships (70% share of markets)

ETIA Ecotechnologies robots, which are manufactured by its subsidiary ASCODERO Productique in Bray-sur-Somme (Hauts de France) can detect, differentiate and sort on most of the

end-of-life packaging (PET bottles, PP, PE, PS but also sensitive waste such as aerosols, batteries, aluminum beverage or steel cans, plastic films and Tetrabrik carton packaging) on moving mats

The smart arms of these sorting robots can grab up to 25 metal objects per minutes thanks to the ECOPICK 2.0 process combining optics and artificial intelligence with ultra-fast movable arms and data entry tools developed and manufactured by ASCODERO Productique.



Laurent Buisine, Sales Director at ETIA

Laurent Buisine, sales manager of the division Recycling and Robotics at ETIA, explains “our mission is the decrease of the carbon impact in industry”

VOW group’s mission (Holding of ETIA), is to reduce CO2 emissions in many sectors of activity. By expanding our robotic solutions, we contribute to better waste recycling, therefore to a decrease in carbon impact generated by their final destruction (landfill or incineration), explains Laurent Buisine, who closely works with Charles Lestoquoy (director of ASCODERO) and his team in the Somme. When the waste is not recyclable by mechanical or physical processes, the company ETIA then offers its patented processes and thermochemical recycling owners who will transform the constituent material of waste into new molecules of interest whose extremely diverse applications depend on the nature of waste and conditions implementation of the process.

The group, leader in its field, is now a partner of many major players in the industry and supports them in their decarbonization policy. “To be as efficient as possible in the implementation of solutions mechanical or thermochemical recycling, it is necessary to have a material perfectly defined and constant over time. The value of the solutions that we offer within the division Recycling and Robotics by ETIA is that they allow preparing waste for its second life by orienting it in a controlled manner towards the solution generating the maximum of added value to the operator”.



2. Waste treatment hierarchy Value proposition of the group

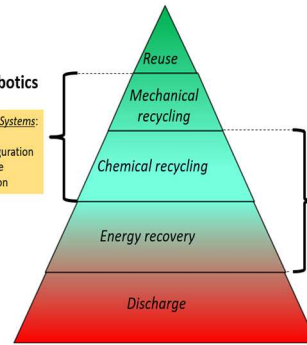


ETIA – Recycling & Robotics

- Intelligent Robotic Sorting Systems:**
- Machine learning
 - Optimal vision & robot configuration
 - Multi purpose gripping device
 - Metal and packaging detection



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ETIA – Biogreen PYROLYSIS

Thermochemical recycling of waste to produce:

- Biogenic and renewables (biochar, RcB)
- Solid fuels (bio coal, biocoal)
- Liquid fuel (Py-Oil, bio-oil)
- Gas & Molecules (SNG, CH₄, H₂)



VOW

An unrivaled level of performance

These robots, which have been tested in France and in Spain in laboratories and at ETIA Technologies customers, achieve a level of performance unparalleled so far and are already of interest for the major recycling and industrial waste treatment in France as abroad, for a budget compatible with a return on fast investment

ETIA Ecotechnologies also created ASTRID program (systemic analysis for waste sorting), a unique tool for capturing and operational data management relating to circulating waste streams in the sorting units and centers of waste, collecting in real-time for all objects sorted information useful for monitoring recycled tonnages

The purpose of ASTRID is both to provide the user a real-time logbook detailing the quality and quantity of waste, but also to assess the performance of one of the line

components (sensor, sorter, separator, etc....)

A varied and innovative offer

ETIA proposes its French and European customers a complete range for the recognition of intelligent sorting and flow:

- ECOPICK 2.0, a complete robotic solution for intelligent sorting of packaging household manufactured in Barcelona by PICVISA, its Spanish partner
- AIRSS, an intelligent and modular robotic solution developed by ETIA's subsidiary ASCODERO. This robot is perfectly adaptable to sorting industrial waste (metals, wood, minerals, industrial polymers, etc....)
- ASTRID, a manager of qualitative and quantitative recognition of waste circulating in the sorting centers

In ASCODERO factory in Bray-Sur-Somme, 16 professionals including several technicians from the office studies created the porticos, metal parts intended for tools associated with system robots AIRSS, already operational with several customers. These gantries can process both polymers in end-of-life as metal waste, DIB or DAE. This type of waste is generally bulky and / or heavy, the Robotics solution is a real plus for the health of operators by avoiding accidents and pathologies like TMS (Troubles Musculo-squelettiques)

ETIA Ecotechnologies will present its advanced solutions to reduce emissions and waste management during POLLUTEC 2021 in Lyon Eurexpo. You will have the opportunity to meet Laurent Buisine from 12th to 15th October

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