Case Study

BIRPLAST*

Research to obtain and purify new primary circular materials from separation and chemical recycling of plastic waste

THE CHALLENGE |

With the current environmental crisis facing Europe, and in particular the Basque Country, in relation to the disposal of waste in landfills, it is necessary to research on technologies of recycling and reuse from waste. The BIRPLAST project aims to recycle very heterogeneous waste from different sources, end-of-life vehicles that are currently deposited in landfills, to transform them into resources, promoting their material recovery through their conversion into new plastics and other high value chemicals.

THE SOLUTION |

A first stage of ASR pre-treatment process, that allows the recovery of plastic fractions of interest for their material recovery in different chemical recycling processes: solvolysis of polyurethane foams present in ASRs using solvents and low toxicity catalysts, as well as chemical recycling for other plastic fractions.

BENEFITS |

New process for the recovery of plastics and metals in ASR from VFUs and scrap. New comprehensive service for the recovery of ASR.

Substantially improved existing products as a result of the project:

- Valuable metals (Cu, Al)
- Plastics
- Polyols

New ASR mechanical recycling process based on advanced separation techniques, which enables a greater recovery of materials in the VFU treatment. New chemical recycling of polyols from residual PU foams, as well as aqueous derivatives treatment from chemical recycling processes

* **BIRPLAST** is a consortium of 12 companies, led by Sener, Gaiker and Tecnalia, among others.

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ACTION CO-FINANCED BY THE BASQUE GOVERNMENT AND THE EUROPEAN UNION THROUGH THE EUROPEAN REGIONAL

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