



European Project Semester

PROJECT OUTLINE

Project dates: September – December 2023	
Title: Polymer Recycling Logistic Management Software	
Project activity areas: <i>Polymer recycling</i> <i>Environmental foot print evaluation</i> <i>Software programming</i> <i>Database</i> <i>Material Science</i>	Keywords: <i>Recycling, Programming, Polymer science, Logistics, Modelling, Life Cycle Assessment</i>
Tutor's name and coordinates Client – End-user: Technacol ENIT Technical Supervisor + contact: <i>Mathieu CHARLAS: mathieu.charlas@technacol.com</i> <i>Cédric BELER: cedrick.beler@enit.fr</i>	Project origin <i>Definition of a tool that allows a better traceability of recycled plastics</i>
Project technical background: <p>Today's trend to increase the amount of recycled plastics in engineering parts implies to have better control of the traceability of the recycled plastics. Thus, we would like to develop an IT solution to organise the information collection and process.</p> <p>A large quantity of recycled plastic is really hard to procure. Though, it is necessary to mix the sources of plastic waste to supply recycling facilities. Each plastic source has an history to tell (previous use of the plastics...) and each recycling site has a wide range of manufacturing parameters that have to be recorded to maintain a high-quality product (molten viscosity...). Thus, we can imagine a real network of sources and recycling sites to supply one single application. The distances of the different sites have a very high incidence on the environmental footprint of the recycling (it makes absolutely no sense to recycle in Europe a plastic that has been collected on the other side of the globe). Then, our IT device shall also be able to collect that information to be able to provide the final customer with technical guaranty (physical and mechanical performances) and with a certified environmental footprint (as minimised as possible).</p>	
Studied topics: <ul style="list-style-type: none">• Material science• Programming• Database• Life-Cycle-Assessment• Logistics	