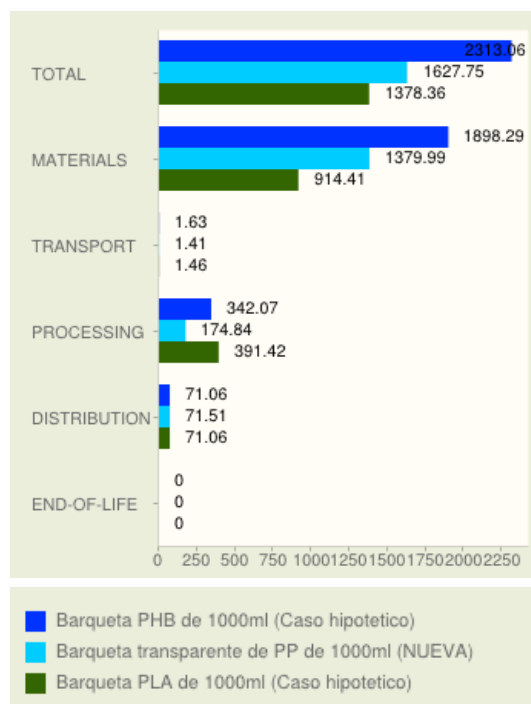




## Bio-based plastics Case study SME#2 VIDUCA S.L.U

**VIDUCA S.L.U, company located in Alcoy, Alicante (Spain) and specialized in the injection and thermoforming trays for markets mainly food, has applied LCA to go tool for the environmental improvement of manufacturing process and environmental improvement of 1000 ml tray packaging.**

The company, **VIDUCA S.L.U** decided to join the training programme of LCA to go with the support of ITENE. The main drivers to join this training were the interest to measure the impact reduction achieved with the new injection line, as well as the implementation of environmental effects assessment as a part of the new product development.



The LCA to go tool was used in order to define main environmental improvement strategies for polypropylene trays, aimed at the minimization of its carbon footprint.

Based on different strategies for environmental improvement recommended by ITENE, as well as the results of the LCA to go tool, it was estimated a potential carbon footprint minimization of about 15% for the tray produced from bio-based Polylactic acid.

Since the renewable materials had higher density, the strategies were focused on optimize the quantity of material by using Ashby comparative index. From “Materials Selection in Mechanical Design” (Michael F. Ashby). With them the thickness and consequently the weight of the package, was reduced considering Flexural Modulus values.

These results conducted to the best option for an improvement of environmental profile of the 1000 ml Tray, using a bio-based Polylactic acid polymer.

Ms. Sira Navarro and Mr. Hector Gomar, Quality Dept., as well as Mr. Vicente Blanes, Production Dept. at VIDUCA S.L.U attended the training and collaborated in the ecodesign process.

After session, all of them concluded that the tool had an intuitive interface, and consequently made it easy to generate comparisons between alternative products at an early stage of design process.