



ALTO developed for design and communication company "Ideias Intensas" and in collaboration with the President of the Association "Rota da Bairrada", Mr. Jorge Sampaio, a milestone for the nine municipalities of the region: Bairrada, Agueda, Anadia, Aveiro, Cantanhede, Coimbra, Aveiro, Oliveira do Bairro and Vagos. It was intended to put an icon in each city who marked the area of Bairrada, and was chosen a giant champagne cork, 3.00 m high and 2.00 m in diameter, with the inscription Bairrada on one side and the name of the municipe on the other, in addition it also has the Rota da Bairrada Association logo.

The cork was made of glass fibre reinforced plastic (GRP), cork covered abroad. This was placed on a foot, GRP also. The interior of the cork has light that allows it to illuminate the name of the municipality and the region. This reading is visible during the day and night.

The manufacturing process was hand lay up, as it produced only 8 corks. To this it was necessary to cut a model in expanded polystyrene, commonly referred to as styrofoam, which due to the final dimensions of this, had to be divided into 4 parts. These parts were manufactured from the 3D drawing of the cork and cut on a 5-axis robot that ALTO has.

After the union of the four parties, was given the finishing on the model and has been manufactured GRP mold. The pieces, "half-corks", were manufactured in this mold and then joined together. On the "cork" GRP finished surface was then applied a layer of real cork.

The critics to this project have been fairly good and have been disclosed in the media.



ALTO manufactured for the company in the Basque country "Afypaida" panels that make up the bodywork of an electric car named Hiriko. This name means, in Basque, mobility, that is the purpose of this car. This vehicle is intended to introduce a new concept of urban mobility. The Hiriko was inaugurated by the President of the European Commission Dr. Durão Barroso and has already been presented in Brussels.

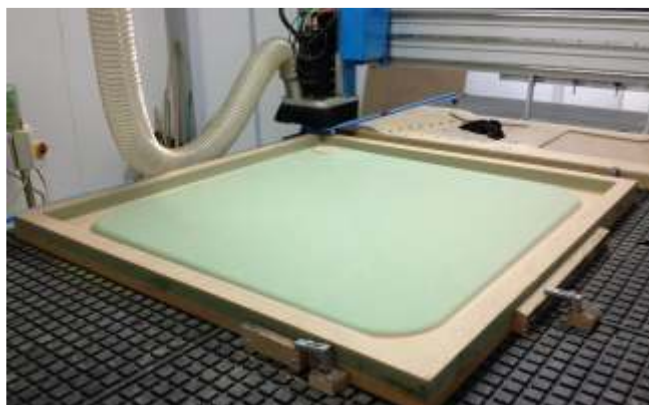
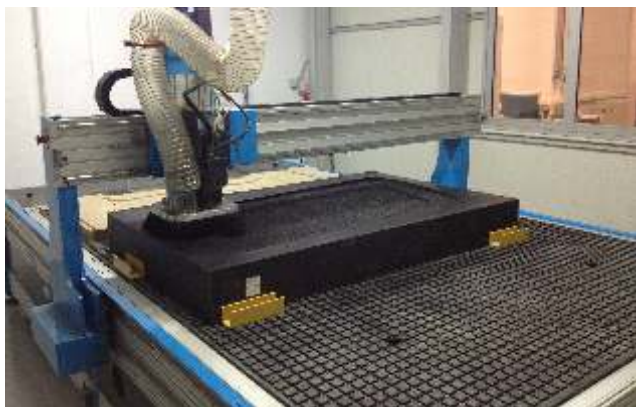
Exterior panels are manufactured in GRP and then painted.

Models and molds were manufactured in ALTO using the robot and 3 axis CNC machine. From the drawings of parts, ALTO designed 3D drawings required in the manufacture of models for manufacture of molds. Various models were produced from different materials, in polyurethane foam, MDF and other in high density polyurethane. Depending on the requirement of each piece were chosen the most suitable materials.



Following the acquisition of robot with 6 axes for cutting models for mold making in the year 2011, ALTO's capacity strengthened when we acquired a rotating shaft to the robot and a milling machine, with numerical control with a table of 3 x 2 metres and a maximum height of approximately 0.35 m of machine working space. To higher heights it is possible to produce the models by layers. There is no any limitation when the towards any dimension.

Taking advantage of this ability, other companies have subcontracting ALTO for the production of models. These can be supplied with raw finishing or with high-quality paint finishing.



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