

# Finest Composite 3D digitalization of high-performance paddles

The micro-firm specialized in the production of high-performance equipment for kayakers has used reverse engineering to create a digitalized file of its "Wave" paddle blades, opening up the road to industrialization.



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## OUR CUSTOMER

**Corporate name**  
Finest Composite

**Turnover**  
76,000 euros

**Workforce**  
1 person

**Business activity**  
Finest Composite manufactures high-performance paddles and blades. The "Wave" blade was specifically created for use in kayak polo competitions. The blade design with its carbon-reinforced PVC foam machined on a digitally-controlled tool offers an excellent rigidity-to-weight ratio.

**A**lan Dollo, a French kayaker in the top national division, who completed a 2-year course in designing industrial products, followed by a professional-oriented degree in plastics and composite materials, has set himself a new challenge: successfully design and produce blades and paddles for kayak polo lovers and ranked sports people.

To that end, the kayak champion created his own firm, Finest Composite, set up near to the nautical center of Pau, within reach of the top ranked kayakers in the country, and a stone's throw from the Helioparc technopole (start-up services for new firms in the Pau area) and Cetim Sud-

Ouest. This proved to be the right decision as, after manually designing and producing his first ever competition blade known as "Wave", the young entrepreneur asked Cetim Sud-Ouest to digitalize his blade to improve quality and automatically reproduce the product on a digitally-controlled machine.

## From manual craft to industrialization

Thanks to reverse engineering, after a 3D digitalization of the blade, a file was produced in a standard CAD format.

"I was looking for a company able to reverse engineer my "Wave" blade model which I initially produced manually" explained Alan Dollo "While I was trying to find such a firm, I contacted the advisors at the Helioparc technopole in Pau, who suggested I should contact Cetim Sud-Ouest. Their teams were immediately prepared to listen to

my needs and showed real competences. Thanks to the reverse engineering approach, we converted a scatterplot obtained by scanning the blade into a file in STEP format (Standard for exchange of product model data), which can be used on any powered tool."

Thanks to this operation, Alan was also able to remove minor roughness defects, which were not visible to the naked eye, and optimize the epoxy resin and carbon thicknesses, with Cetim Sud-Ouest experts, in order to obtain a more effective product with consistent quality levels.

Our athlete has acquired a digitally-controlled milling machine and is now ready to launch small production runs.

## Cetim's asset

Cetim Sud-Ouest can boast its position as a leading source of expertise in metrology and advanced measuring and test technologies, offering its competences and skills in 3D measurements, contactless digitalization, 3D digitalization, dimensional metrology and non-destructive testing by tomography to all industrial operators.

