



“The exciting thing for us is that architects truly appreciate form – and they’re attuned to the quality of materials.”

In 2001, drawing on expertise gleaned from two decades in the professional yacht racing industry, Toby Whitfield and Jaime Marina founded the composites manufacturing company, mouldCAM.

“The engineering of a raceboat in the high-end marine game is second only to the aerospace industry in creating very strong and light structures,” says Whitfield. “So our maritime background gave us a solid grounding in advanced composites.”

In the early days, armed with four of the world’s largest CNC (computer numeric control) routers, mouldCAM worked with high-end boating industry clients to optimise their products. Its work in three-dimensional CAD (computer aided design) optimised lead times for luxury UK boat builder Fairline, while mouldCAM’s precision CNC tooling for Danish Yacht reduced the weight of the vessel, enabling it to reach its target speed.

mouldCAM became an important name in the maritime industry, while riding the wave of professionals in other fields seeking its specialised expertise. By fabricating materials applicable across an array of disciplines, mouldCAM has had the unique ability to work with and provide specific products for industries as diverse as architecture and animatronics. Its list of custom projects includes the construction of full-size aeroplanes used as props for film, the production of parts for V8 supercars, turbines for the renewable energy sector, simulators used by the military and civil aviation industries, as well as the development of architectural responses with the Royal Melbourne Institute of Technology (RMIT).

The business had been primarily engaged in a consultation and supply sense, crafting specialised products to order. However, when

the effects of the Global Financial Crisis hit Australian shores in the late noughties, the local boatbuilding industry folded.

“We had to begin creating our own market, so we started to develop the idea that was already seeded – to target architects and builders,” says Whitfield.

Having experimented with built projects previously, mouldCAM shifted its focus squarely towards the building and construction industry in 2009, with architects approaching the business seeking engineered material solutions to complex structural forms.

“People came to us out of a sense that they were inhibited in the materials and the technology available to them, so we started to apply our knowledge of advanced materials and three-dimensional design to inform our approach to these complicated shapes,” Whitfield says.

Casting its collaborative consultative efforts under the new name, ShapeShift Design Technologies, saw what had begun with mouldCAM as a fabrication and supply business evolve to become a leading force in the field of advanced composites, offering highly researched, tailored design and engineering solutions.

mouldCAM remains as the large-scale machinery and technology behind the operation, while another branch of the company, ShapeShell, represents the compartmentalisation of its detailed research and development into a more tangible end user offering, with a clearly defined catalogue of construction products for builders and specifiers.

The expansion of the company has led to the development of major manufacturing and engineering facilities in Australia and Asia, as well as the US, Europe and the UK.