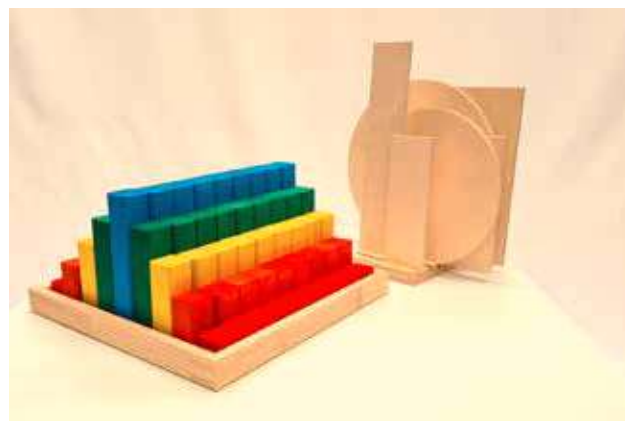
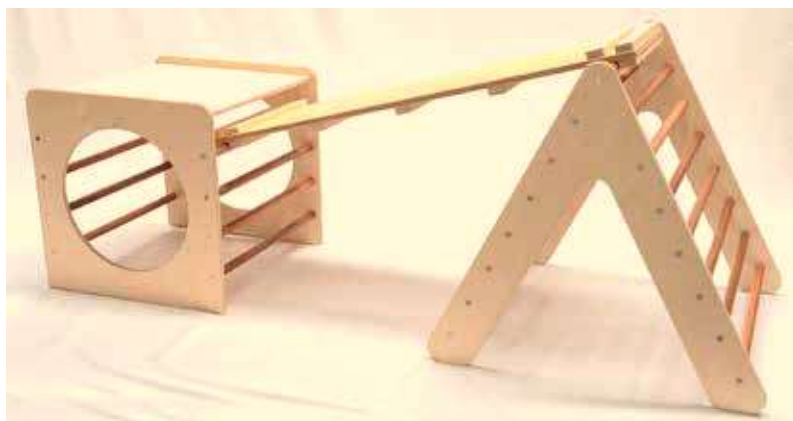


Business success for creative wooden toys



AGAINST THE HUGE backdrop of plastic toy products readily available on the shelf, a number of Australian businesses have developed a niche market and found success by making toys today using a material that was once traditionally used in making them - wood.

Shannon Ley from Milton Ashy says his customers buy his wooden toys as gifts for someone close, something unique and of high quality. "They want a timeless keepsake, so they tend towards more traditional designs and colours. In our range, the rocking horse and aeroplane are the most popular designs. The vast majority of customers choose the personalisation option," he tells AWISA Magazine.

Chloe Mortimer from the Wooden Toy Company tells AWISA Magazine, "We pride ourselves on quality. We use quality timber where available and we have refined our manufacturing process, always looking to improve our toys and our process. When we create new toys, we consider the overall development of children and where our toys can help progress their development. The most popular toys are the climbing range which includes the Climbing Cube, Large Pikler and Climbing Ramp. It is great for families with children of different ages as you can use the Cube with the Large Pikler put them together."

Chloe and husband Leon established their wooden toy business when the imposition of the Covid health restrictions effectively shut down their exhibition stands business that comprised a full workshop and qualified tradespeople. While taking time out to consider what to do, they noticed their own desire for locally made wooden open-ended toys. As they already had the machinery and had made toys for their children before, they started to look at the concept of supplying quality wooden toys to consumers, retailers, and childcare centres across Australia.

"When we decided to create the business, our team worked incredibly hard to move from initial concept to building stock and a functioning website within four weeks. It was a journey that all our staff were onboard with, which made the whole process of pivoting easier," says Chloe.

Using the same principles as they did for making exhibition stands, they have adapted multiple manufacturing methods to creating wooden toys. "The biggest challenge in our manufacturing process has been standardising materials. We've used trial and error when purchasing materials to ensure that we can achieve consistent results in our toys. Unlike overseas toy makers, we don't have a large scale operation where we can complete a process perfectly with high labour usage. To mitigate this, we will pay for a higher quality timber that requires less handling and labour to process it. We then use this material across multiple products to ensure that we can standardise the manufacturing of the timber and achieve consistently high quality toys."

Shannon Ley's business has a longer story. When he went shopping for gifts for his friends' children, he noticed the lack of premium quality baby gifts. Having had an itch to get into business on his own for a long time, and a desire for a career change at that moment, he "connected the dots", and started to make prototypes in his brother's shed. With on-going success, he moved to a shared workspace and then his own workshop. Because of the high cost of local manufacturing, he decided against wholesale, and developed the business around selling direct to the customer online. His customers understand that if he did not care about quality and service, he would just outsource to the lowest international bidder of acceptable quality. He says proudly, "The amount of positive customer feedback we get, it blows me away." ▶

The Wooden Toy
Company

high-quality, labour-intensive toys

► Drawing on his knowledge from working in automotive engineering, has helped Shannon in 3D CAD modelling, implementing lean manufacturing principles, navigating Australian Standards compliance through to robust design principles. Without the engineering experience, it would have been harder, he points out, to achieve the successful combination of aesthetic and technical requirements in a way that does not compromise either.

The manufacturing process started off pretty rudimentary and has evolved a lot over the years, he says. "I think getting to this point has been down to two things. Firstly, as cliched as it sounds, always trying to find a better way of doing everything, and secondly, developing our own jigs, fixtures and even a few machines in-house. Most of the secret sauce lies in the latter, 99% of which cannot be bought off the shelf. One key criterion for improvement has always been that it must improve both quality and also efficiency, without compromising safety."

His manufacturing process closely adheres to lean manufacturing principles. "While components are made in small, frequent batches, we hold no completed inventory. Instead, we paint, personalise and assemble every toy to order. This enables us to have well over 100 design and colour combinations, while typically holding less than 100 toys worth of inventory. We ship over 99% of orders within two business days, and do almost no production scheduling or inventory projections."

Echoing Chloe's sentiments about employing quality staff, Shannon says that in making products that are special to customers, he can attract staff "who care about their work, rather than people who have unwillingly submitted themselves to being human robots. The quality of the product is very dependent on the people making it, so this helps enormously."

The workshop, says Shannon, is definitely not a general-purpose woodworking shop but is laid out and set up to do one job only. He describes how the layout follows the flow of material from planks to blank bodies, to toys packed and ready to ship. "A lot of effort has gone into minimising unproductive work, such as time-consuming tool changes, so we have three table routers with different bits for edge finishing, two drill presses set at different heights and two spindle sanders for different diameters. Much of the quality and efficiency comes from custom jigs and fixtures, for example for holding work pieces while drilling. I have also had to custom make a few machines where something off the shelf didn't exist exactly as we needed it. This has largely been an iterative process, the result of always trying to find a better way. Our tools and equipment tend to fall into two categories, very common, easy to get equipment from the major brands, or completely custom-made in-house. Spare parts or replacements are easily available if something breaks, or if we made it in-house, we can easily fix it or make replacements."

In describing their workshop, Chloe points to the flatbed CNC machinery. It is a KDT 2 series production flatbed CNC with a 9 drill head and V12 tool spindle with auto load and unload features. There is a panel saw, a KDT KS132K, and a Makita brand drop saw. For sanders, there are Carbatec horizontal and vertical belt sanders. She adds, "We have made some of our own tools, our own double bevelled sanders for finishing blocks. We sourced specialised sanding equipment for finishing from the US such as the Quickwood Sanding Flap Wheel. The Quickwood is a favourite because it does a great job and it saves so much time."

Are any of the toys or components handmade?

There are components that are hand-made and other



Shannon Ley



Milton Ashby toys



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components are made using computerised equipment, says Chloe. "Any toys we make that have panels are designed in a CAD program on our computer, and then cut out on our CNC and hand finished. Everything is designed in CAD, and we design everything ourselves. We then make jigs from the CAD designs to create the toys. Using jigs ensures that everything is made to a high standard even when it is a handmade component. The flatbed CNC machine is used to cut out the components for products, like the Pikler triangles or Climbing Cubes."

Shannon says that while there is a lot of hand-work that goes into each of the toys, 'handmade' can be a dubious claim. "Not much gets made these days without significant involvement of machines. So, my approach is to show how they're made and let the customer define it as they wish." Yes, he uses a CNC router to cut the bodies and some small parts, adding, "It not only helps overcome the labour cost disadvantage of local manufacturing, but is a lot safer than having someone operate a bandsaw. Quality is more consistent and enables us to make shapes we couldn't otherwise make. Manufacturing locally would be a lot harder without our CNC router."

European Beech is Shannon's wood of choice. "I searched long and hard, and it's the only timber I could find that is readily available and which has the right physical and mechanical properties for making toys. I love it because it is strong, relatively easy to work with and doesn't splinter too easily. I would love to use an Australian timber, but unfortunately we cannot find one that has the right mechanical properties. We mainly use the one supplier of timber. They are the closest and have never run out of Beech, so we keep going back. Reliability of supply is super important for us, so we have a couple of backups if need be."

Chloe and Leon gave a lot of consideration to finding timber that met the right price point to keep the toys affordable, and

was good quality timber that would not splinter. The Redgum they wanted to use made the bigger blocks too heavy for the children, and in the first batch of toys made from Radiata Pine plywood, the grain was prone to opening up and the timber would splinter. "We found when using plywood, particularly for our climbing range, that we need to use hardwood plywood like Birch ply, that is a dense timber. We use good quality Birch ply and Victorian Ash, so long as there are no wounds in the grain. Once processed, the short grain will become brittle and any small splinters brush off and don't appear again. Along with the practical needs for children's toys, we also take the environmental impact of our timber into consideration. The Birch ply that we use is FSC certified and the Victorian Ash is PEFC certified. We have to go through this trial and error again at the moment due to the war in Ukraine, because some of our current timbers come from Russia and supply has been affected."

Looking to the future, Chloe says, their business in terms of Australian made toys is quite competitive in pricing. "When we first started the business, the toys were initially aimed at the high-end of the domestic market and commercial markets, so were priced accordingly. We also set up a wholesale and retail market, in the first few months. In order to keep retail costs under control we have had to remove the wholesale market. This has forced us to go to a direct-to-consumer model for our next range of toys."

Shannon says manufacturing high-quality, labour-intensive toys locally is definitely not cheap. "We overcome this in three ways. Firstly, we're priced at a premium relative to mass market offerings, and we give our customers much more. Secondly, we sell largely direct to the customer online - cutting out the middleperson helps a lot, albeit it does introduce its own challenges. And lastly, high costs force us to be super-efficient on the shop floor." ■

The Wooden Toy
Company