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# HOW GOING GREEN WORKS IN THE BLUE OCEAN

Inspired by the Blue Ocean Strategy and spurred by an environmental conscience, Koda is earning a good many green dollar bills by creating its own rules to its own game.



Koda now offers four varieties of bamboo wood achieved from different production processes. Horizontal or vertical strips are laminated together. Sandwich is an even stronger method for combining vertical and horizontal strips.



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Strand woven crushed bamboo panels are also increasingly popular as they are twice as strong as conventional bamboo panels.



1. Level collection designed by John Kelly for Koda's bamboo and eco-board range.

2. Natural bamboo has a pale blonde hue. Carbonisation can transform this into a deeper and richer tone. This process caramelises the sugar content in the grass to achieve the colour without adding dyes.

3. Using an advanced vacuum fibre separation technology, the strong ductile quality of the plant's stem fibre is retained and toughness increased. It is also fireproof.

"TO EXCEL ABOVE and beyond, I need to create a unique sandbox so that it becomes my game, played according to my rules," said Ernie Koh, marketing director of Koda Ltd, a company listed on the Singapore Exchange and a leading Original Design Manufacturer (ODM) in Asia.

What Koh wants to go beyond is the myriad regulations and certifications concerning legally sourced timber for furniture. In addition, there are concerns about the level of formaldehyde and percentage of recyclable contents in the packaging for example in California. Other countries specify a maximum lead content.

To fit into over 50 export destinations' sandboxes, Koda have been tediously adhering to the multiple specifications. But by adopting the Blue Ocean Strategy of creating

a new market space or sandbox, current market competition and constraints become irrelevant. Through this and by innovation, rules are rewritten.

"If there are any issues of meeting the rules and regulation, I have gone above and beyond it and made them a non-issue," Koh said.

The ODM/exporter decided two years ago that it would be more efficient to offer an environmental friendly range made according to its own standard, and one that would fit all markets.

Imagine a piece of chic designer-label wooden furniture made without wood. It would have no timber restrictions to overcome.

Sounds like sandcastles in the air? Hardly. If Cirque du Soleil's success as a circus could be achieved without the archetypal animal acts, Koda can also attain the look and feel of wooden furniture without the presumably key element. And it did. Folks from Koda's playground of innovation have recently launched the bamboo and eco-board collections that do not use any timber at all.

"All this time, there were talks of sustainable timber, FSC certification and trees being cut down. These are very valid concerns. To come out of this sandbox and create our own, we have to eliminate the use of wood altogether," said Koh, who spearheaded Koda's green project.

## NON-ISSUE 1: THE BAMBOO RESILIENCE

By making bamboo chic, Koda achieves its goal of being an environmental friendly ODM of contemporary 'wooden' furniture without timber. Bamboo has long been used to make rustic furniture, especially by the Indonesian handcrafters. To inject a more contemporary breath into it, Koda commissioned the Pinnacle Award-winning American architect, John Kelly, to design the Level collection. Debuted March this year, the eco-friendly collection looks like it's made of wood but not a single tree is cut in its production. Bamboo is used instead. According to a press release by Koda, the urbane collection comprises living, dining, study and bedroom furniture in compact sizes and shapes.

Environmentally, bamboo brings many wonders. "I visited bamboo forests and processing plants in China and researched extensively on the environmental impact of manufacturing furniture with bamboo. I came back with surprising results. I was amazed by what we can achieve with bamboo, which belongs to the grass family. The environmental

aspects are quite interesting," Koh shared. He added that the grass is one of the fastest growing woody plants on earth. Some species grow up to one metre a day. The yield is up to 25 times higher than that of timber. It can be harvested in three to five years versus 10 to 15 years for most softwoods and hardwood because it is capable of regeneration without the need to replant.

Bamboo is thus a wonderfully viable replacement for timber. In the manufacturing process, its stalks are crushed or split by machine into strips and kiln dried before being glue-bound into large boards of bamboo wood. Classic bamboo wood is made by laminated materials and milled squared-edge bamboo slats and is 20 percent harder than oak. According to Koda, the gas emission of adhesive in manufacturing its bamboo range is well below the US standard's allowance. Formaldehyde levels are lower than OSHA and Californian ceilings.

## NON-ISSUE 2: ZERO FORMALDEHYDE

"What if we can make wood-like furniture with neither timber nor formaldehyde as well?" Koh thought. Was he asking too much?

"If our products have no formaldehyde at all, we would be yet friendlier to the environment and won't have to bother ourselves with any rules or regulations in this area," Koh said and went about building yet another new sandbox with stalks of straw, wheat and paddy. Using these agricultural by-products, Koda manufactures its own eco-boards that are as good as wood, and better.

"These are agricultural by-products that will be burnt and cause air pollution if discarded. When we buy and use them, we reduce pollution and on the other hand, farmers can get additional income," Koh enthused.

More importantly, these eco-boards contain zero formaldehyde because polyurethane ecological adhesive is used. Formaldehyde is absent right from the source. According to third party tests conducted, these eco-boards have a toughness and internal bond strength of that between the common particleboard and MDF.

"We're no longer just part of the furniture industry but agricultural as well. This way, we enjoy some tax benefits too," Koh revealed.

Choosing environmental friendly raw materials have more economic benefits still. By using water-based stain or finishing for surface coating, workers' health, in turn productivity, is improved. In addition, fire insurance costs lesser since water-based coatings are less flammable, according to Koh.

## NON-ISSUE 3: WASTE CONTROLLED

As master of his own game, Koh wanted Koda's green project to be as thorough as possible. Before bamboo and eco-boards went into production, Koh even sought to find out if the amount of waste discharged and energy used in these factories would exceed that of wooden furniture factories. "Only when the amounts are equal to or lesser then would I have achieved my goal. And I am pleased to say the results were favourable," Koh said.

In addition, during the drying process for the eco-boards, no wastewater is discharged. Koda's effort has turned agricultural waste to profit for all involved.

But for a moment during the two-year R&D for the bamboo range, Koh felt stuck. Should Koda launch a collection that is only partly or completely made of bamboo? How far should this greening effort go? Can peripherals like packaging be factored in too? Questions such as these dug deep into one's environmental conscience.

"We could have taken the shortcut and easier way by introducing just a range of furniture partly made by bamboo or with just bamboo legs and be quite successful. However, we believe a holistic approach will elevate us from the common playing field. This echoes the Blue Ocean Strategy of building one's own sandbox," Koh shared.

He continued that in terms of packaging, his one-fits-all standard, non-issue concept applies too. Rather than having to decide on the percentage of eco materials used in packaging, Koda goes all the way to use 100 percent recycled and recyclable honeycomb cardboard. No Styrofoam or plastic is used. The end-consumer will be able to take his purchase home, take the product out from its packaging, and fully recycle the packaging without having to sort out the recyclable from the non-recyclable. The glue used is either free of or low in formaldehyde.

Koh added that shipments will be packed as compact as possible. He also implores Koda's importers, distributors and retailers to use energy efficient ways to conduct their businesses when transporting or displaying Koda's products. "If everyone plays our part, we can achieve a little step forward," he said.

## THE GREEN SPECTRUM

Despite widely publicised discussions and growing concerns, environmental friendliness in furniture is not yet a primary or indispensable requirement. Markets are bigger in the US,

Europe and Japan, where consumers are more green conscious, Koh said. Notwithstanding that, many buyers and retailers are now at very different stages of the eco-shift.

"Most of my major customers with some form of corporate environmental policies embrace this new line (of bamboo wood and eco-boards). Nonetheless, we can accommodate needs from those who have just started to go green but are concerned about cost," Koh said. He added that the cost of producing a fully eco collection is 25 percent more than the wooden range. Including eco-friendly packaging, the difference can add up to some 35 percent. This disparity, however, "is narrowing very, very quickly," Koh revealed.

"Our customers can specify their shades of green within this 35 percent spectrum, and decide to which extent they want to be environmentally friendly. For example, they can choose to take a small step, with just a bamboo veneer on top of timber without water-based stains. Or, at the other end of the spectrum offers pure bamboo or eco-board collections sealed in 100 percent recycled and recyclable packaging. The latter will be for those who are willing and able to pay for it, and in the process make a statement with the gesture. We can work according to specifications for anything between these two," Koh explained.

## "NO TREE-HUGGER"

Koda's regular wooden range will still continue. However, Koh said that this line will benefit from the rub-off effect from the bamboo and eco-board initiatives. For example, Koh expects a gradual and eventual move away from solvents to water-based binding agents. It is also beginning to adopt leaner packaging practices for the wooden furniture. The use of metal will be minimised and stainless steel will be used wherever possible if needed.

From thought to process and the final product, Koh has been most concerned about being mistaken as a green hypocrite. To some cynics, no one can be entirely environmental friendly. Koh agrees without reservations but believes greening is not about being totally environmentally harmless.

"I'm not a tree-hugger. I am just doing my part to make a step forward when it comes to environmental concerns. It is not a big leap. Koda won't make loads of money from starting this initiative. But as a result, we can be profitable, and there is nothing wrong with that. Being environmentally responsible is still our primary concern," Koh said adding that Koda will continue to research and develop products along this line.