

Walking on Sunshine

An Interview with Bekind Solutions
Founder Mr. Tan Lee Tuan



Founded in March 2017, Bekind Solutions is a local start-up with a calling to develop, curate and market affordable innovative products for the elderly. Their Smart Walking Stick collection has gained traction in the market place and can be found at reputable hospitals, rehabilitation outlets and retail outlets in Singapore. Prime Magazine sits down with Bekind Solutions Founder Mr. Tan Lee Tuan to talk about the genesis of his company and his company's innovative product line: The Smart Walking Stick.

GOOD AFTERNOON, MR TAN. TELL US A LITTLE ABOUT YOUR COMPANY, BEKIND SOLUTIONS. WHAT PROMPTED YOU TO START THE COMPANY?

TAN LEE TUAN: I had worked in the marine engineering field in the private sector for about 12 years. These included stints in ST Marine Submarine Division and also Rolls Royce. Later in my career, I got the opportunity to move into furniture design work and moved to China to work for a period of about three years. Upon my return to Singapore, I didn't really have a plan. But I kept praying about it and also read a book by Pastor Rick Warren titled "The Purpose Driven Life". After a while, it became clear to me that my calling was to help the elderly.

From then on, I started observing the elderly more diligently and I also volunteered at St. Luke's ElderCare. I was able to observe the available gaps through which I could help the elderly. After a while, I observed that there were many gaps in terms of elder care. At the same time, from what I saw, I also believed that more design work could go into the development of elder care products. I then realized that the best way for me to help them was by utilizing my background in engineering and design to develop a good and affordable product for them

And as a startup, keeping operational costs low was another major factor for me. From all these considerations, I decided that focusing on walking sticks would be a good way for me to both meet the elder care gaps I have observed and also keep startup costs low.

THAT'S VERY INTERESTING. TELL US ABOUT SOME OF THE BASIC FEATURES OF THE SMART WALKING STICK LINE YOU HAVE DEVELOPED.

TLT: We developed this CarbonQuad product line mainly for the elderly and have considered the major issues or problems that they may face during daily movements and commutes. Let me go through the features.

Many elderly users are frail and when they are walking, they are required to continually lift and lower the walking stick as they walk. Therefore, it helps them if the walking stick is light and strong. With that in mind, we used carbon fibre as the main material to make our walking sticks very light, making it easier for elderly users to move around. Most walking sticks in the market are made with aluminum alloy and steel. Our decision to manufacture using carbon fibre makes it a lot lighter than other quad sticks.

Folks who suffer from leg or hip injuries are usually recommended to use a quad stick during their recovery period. A quad stick is a walking stick with a four legged base. However after their recovery period (six to nine months), they would recover the confidence to go back to using a normal walking stick. With that in mind, they normally end up having to buy a new walking stick as common mass market quad sticks are usually fully welded at the base. At AgeGracefully, we have developed our walking sticks with bolted interchangeable bases. As such, there is no need to buy a new walking stick. Each stick comes with a quad base and a rubber tip. When the user no longer needs a quad stick, he or she can simply remove the quad base and insert the rubber tip to the stem and use it as a normal walking stick for the next phase of recovery.

For our quad bases, we have the small and medium quad bases. The medium quad is double the size of the small quad and therefore, more stable. People who need to use a broad base quad stick usually transfers about 30-40% of their bodyweight onto the stick. Hence they need a sturdier walking stick. Whereas a person using a normal walking stick usually only transfers about 10-15% of his/her bodyweight. And because our bases are interchangeable, clients can just buy a new base if they require more support, instead of a whole new walking stick.

Another feature of our walking sticks is the anti-trip design. As a medium quad base can be quite big, the centre (where

the stem is attached to the base) needs to be off-set to the side, so that the base does not get in the way when walking. For an elderly who might be a bit forgetful, if he/she was to use the wrong hand to hold the medium quad stick, the foot could get stuck in the high curvature of the quad base (a common design) and he/she may trip and fall. However, for our medium quad base, the platform is set lower so that instead of potentially inserting the foot under the curvature and tripping, usually the user just ends up kicking the base. Hence, with a simple design solution, we have solved a common problem encountered by many quad walking stick users.

For our Anti-Slip Self-Standing Tip, they are manufactured using a rubber material from Germany and are anti-slip. The material grips the floor very well, even on a wet floor. It is also very soft, which promotes a natural walking motion and places less stress on the elbow.

Our walking sticks also come with a detachable sling. While most walking sticks do come with a sling, they are normally fully attached to the stick. When a person falls, there is an instinct to break fall. The problem with conventional sticks is: If a person is to fall on an uneven surface (such as a drain) or around objects (such as tables or sofas), the walking stick could get in the way of breaking fall, putting the user in an awkward position and causing more injury. With a detachable sling, the sling can be detached during a fall and the stick would not become a hazard.

WHAT ARE THE MORE ADVANCED FEATURES INSTALLED?

TLT: Most of our advanced features are installed in the handles of our walking stick. One of these is the LED Head Lights. Because the elderly may not be able to see well at night, we included these lights which can be adjusted to different angles, depending on their height. They can then use these to illuminate the path from the bedroom to the toilet, an outdoors walking path or any other poorly illuminated walkways. This will enable them to see the ground better and reduce the risk of falls.

Next, we have this Visibility Red Flashing Lights at the bottom of the handle. This safety flashing lights is primarily used to ensure that the elderly is visible to other walkway users, such as cyclists. They will be able to see the elderly from a distance and avoid colliding with them, making it safer for the elderly.

There is also an auto-fall alarm feature. After activation, the alarm will be triggered when a fall is detected, as in when the stick isn't vertical (the stick is self-standing). When the alarm is triggered, it emits a loud tone that attracts the attention of people nearby. Many a times, when an elderly suffer a fall, he/she is usually in a state of shock and is unable to project his/her voice loudly and audibly. The alarm is able to solve that problem. It can be deactivated once help has been rendered or when it is no longer necessary.

There has been a number of studies on how music therapy is able to slow down the rate of dementia in dementia

patients. Studies have shown that playing a dementia patient's favourite songs can help him/her with his/her illness. For that reason, we have incorporated an MP3 player/FM radio, with Micro-SD Card storage in the walking stick. The elderly can load their favourite music (in MP3 format) into the Micro-SD card and play their favourite songs or listen to radio on the go. The music provides some joy to them while they embark on their daily walks, making them feel less lonely. The music/radio also helps to prevent social isolation if/when the elderly stays at home alone.

A secondary benefit to the MP3 feature is that it creates a talking point for elderly users when they are using it among their friends. This helps to remove the stigma of using a walking stick. Furthermore, the music also helps to prevent the walking stick from being misplaced. One of my clients, Mr. Su related this story to me. His father used to regularly lose his walking sticks almost on a monthly basis before he started using our MP3 walking stick. Since his father started using our product, he never lost another stick again as he is constantly listening to his favourite radio station on his walking stick. He is always aware about bringing his stick along so that he could listen to the radio, including bringing it with him to the toilet and the coffee shop.

Further to the above features, other features that we have in our product line include the Umbrella, Chair and folding walking sticks. Bond; the Umbrella walking stick has a self-standing anti-slip tip which allows the umbrella to stand by itself. It can also be detached to enable the user to use the umbrella and the walking stick at the same time. As for the chair, it can seat up to 120kg, while the folding walking stick is an excellent choice for travelling.

THESE ARE VERY THOUGHTFUL DESIGNS. HAS YOUR COMPANY WON ANY AWARDS FOR THESE?

TLT: We have won a few awards for our designs. For example, in 2018, we won the ElderCare Innovation Award for our Bond; Smart Umbrella Walking Stick. We also won the Singapore Good Design award in 2019 for the CarbonQuad as well. As a preview, I can also tell you we have won the German Design Award 2020!

FINALLY, TELL US HOW THE COMPANY IS MOVING FORWARD AND WHAT CONTINUES TO MOTIVATE YOU?

TLT: We are constantly trying to innovate in small incremental steps as we make improvements in materials and designs to bring better products to our users. While we are developing new designs and thinking about incorporating new technology, we are also mindful that we want to keep costs down and maintain our products' affordability to the general public. As newer technologies become more mainstream and commercially viable, we will look into incorporating these features into our products. Ensuring that the common elderly is able to AgeGracefully through the use of good and economical products is very important to us. That is a key focus for Bekind Solutions: It is our calling to inject vibrancy into the life of the elderly. **PRIME**