



From Back Streets to Snowy Peaks

An area of Tokyo known for its fine craftsmanship has taken on a daring project that might just wind up on the medal podium of the 2018 Winter Olympics.

A skilled Ota craftsman fine-tunes the mechanics of the Shitamachi Bobsleigh.

When the Jamaican bobsleigh team bursts from the starting line at PyeongChang 2018, they'll be pushing a sleigh made by a group of small factories with big dreams in Ota, Tokyo.

The largest of Tokyo's 23 wards in total land area, Ota has a population of over 700,000. It offers historic monuments, colorful markets and seaside parks, and is the site of the Tokyo International Airport at Haneda, the fifth busiest in the world.

Above all, Ota is renowned as the manufacturing "heart" of Tokyo, with a century old tradition of *monozukuri* craftsmanship. It has long been home to highly skilled artisans, working and living together in the *shitamachi* (literally, low city)—a term that has become synonymous with lively, tight-knit

communities. In the early 20th century, small family-run *machi koba* factories proliferated in Ota, operating out of buildings with garage-like rooms at street level and living quarters above. These workshops typically specialized in one type of product, like hand-crafted chisels or knives. But whatever they made, they made to very exacting standards, often using proprietary techniques.

In the 1960s and 1970s, Ota produced innumerable parts for cars, cameras and other exports—earning worldwide recognition for superior workmanship and fast turnaround. There are still around 3,500 small factories in the area—80 percent with fewer than nine employees. But with manufacturing know-how and skills honed over generations, and close teamwork, they continue to out-perform even highly automated

competitors, with some firms boasting the world's overwhelming share of high-precision parts for certain industries. Local residents quip, "Fold your blueprint into a paper plane and send it to Ota. You'll have a finished product the next day."

No one is more passionate about the *shitamachi* work culture than Junichi Hosogai, President of Material Inc., a mid-sized industrial manufacturer in Ota. "I started my business in a room the size of ten tatami straw mats—about 16 square meters," he says. "Things were hard, but I could always count on the community. Whatever I needed, I got from folks nearby: jobs, information, expertise and even soy sauce for my lunch," he explains. "This *nakama mawashi* (sharing business with colleagues) is the essence of the *shitamachi* spirit."

Hosogai is now spearheading the ambitious "Shitamachi Bobsleigh" project that could vault Ota into the limelight at PyeongChang 2018. The project was launched in 2011 by the Ota City Industrial Promotion Organization to publicize local manufacturing at a time when factories were reeling from overseas competition, a lack of successors and low demand following major natural catastrophes. But when the call for participation came, 30 firms signed up to build an Olympic-worthy bobsleigh—from scratch, and for free.

The choice of a bobsleigh might seem ill-advised, considering that local manufacturers had never built one before and would be competing against champions like Ferrari and BMW. But Hosogai feels the project was perfect for the group. "First, engineers are always excited when they have a problem to solve," he says. "Having zero experience actually motivated us to transcend short-term business objectives and reach for a higher goal." Second, the project was a chance to work with carbon fiber reinforced plastic (CFRP), which complements the traditional metalworking skills and opens up new opportunities in aerospace, defense and other industries. And finally, of course, bobsleigh is one of the most thrilling events of any Winter Olympics. "It's the ultimate venue for promoting Ota," Hosogai says. "The whole world will be watching."

The road has been daunting, to say the least. At the outset, the project team received design specs calling for nearly 200 parts. In true *shitamachi* fashion, each participant selected the parts it felt most qualified to handle—and together, the team completed Japan's first-ever bobsleigh prototype in just ten days. "That's Ota collaboration," Hosogai says with pride.

The synergy has paid off. In December 2012, the sleigh carried a two-woman team to victory in the All Japan Bobsleigh Championships. Then, in July 2016, the Jamaica Bobsleigh Federation selected the Shitamachi Bobsleigh to compete at PyeongChang 2018—30 years after Jamaica's legendary debut at Calgary in 1988. The sleigh will be piloted by four-time World Cup medalist Jazmine Fenlator in the women's division. Says Fenlator, "The craftsmanship from all who participated with the Shitamachi Bobsleigh project is the best in the world."

With just months to go, Hosogai reflects on the huge outpouring of support his team has received: the mom-and-pop factories that made parts without pay; the international experts who tested the prototypes; the sponsors and individuals who donated funds; and the gifted athletes of Jamaica who will, hopefully, ride the sleigh all the way to the victory podium. "Shitamachi Bobsleigh is the sum of efforts by an entire community that we call 'Ota, Inc.,'" says Hosogai. "Individually, our expertise is limited. But together, we can do anything."