

people to know

INSPIRED INNOVATION

For Nic Goldsmith, a veteran designer of tensile structures, innovation is not a matter of choice, but rather a matter of course.

DO YOU REMEMBER the exact moment when you realized what you wanted your career to be?

Not everyone experiences such a moment, but for those that do, it's generally unforgettable.

For architect Nic Goldsmith, it came on the way home from a visit to the museum in the early 1960s, when he was eight. Goldsmith and his father were walking home from the Museum of Modern Art in New York, and his father took him down Park Avenue.

"At the time, Park Avenue, which had been developed by Cornelius Vanderbilt shortly after the building of Grand Central Terminal, was one continuous urban development of stone-clad buildings standing like a series of grey flannel suits marching up the street," he recalls. "As we turned the corner, my father pointed to two crystalline glass towers and said, 'This is Modern Architecture.' The buildings were the iconic Seagram Building by Mies van der Rohe and the Lever House by Gordon Bunshaft of SOM. I stood looking up at them in awe and knew at that moment that I wanted to be an architect, showing a new way forward and pioneering innovation."

Years later at Cornell University, Goldsmith's desire for innovation manifested itself as an interest in the work of designer Buckminster "Bucky" Fuller (known for his geodesic domes); the inventor of the tensile structure, Frei Otto; and the Mexican concrete shell master, Felix Candela. These designers were somewhat outside the Corbusian orthodoxy (following Le Corbusier's work) that the school promoted at the time. Along with a few other students, Goldsmith started making lightweight structures, for independent credit, which they then built in the university gym in the middle of the night after all the sport programs were completed. They even designed and built a steel scaffold and tensile membrane roof for a concert series in the university stadium for the rock band, Deep Purple.

By the time Goldsmith graduated, the group of ambitious students had completed six structures and Goldsmith wanted to learn more about how the masters of this technology worked.

"So I packed up and moved to Stuttgart, Germany, where Professor Frei Otto had an institute specialized in the development and research of lightweight structures (Institute for Lightweight Structures)," he says. "There, I was asked to participate in design work at his small private atelier, where I worked for almost three years on a series of incredible projects, from a new Parliament Building for Riyadh, Saudi Arabia to a steel mesh structure for a new aviary at the zoo in Munich, Germany. It was an incredible experience to be able to work with such a master, and it gave me knowledge and courage to continue my passion going forward."

Goldsmith returned to the U.S. in 1978 and joined one of his former classmates in developing a small practice specializing in tents and lightweight structures. Based in New York and originally called Future Tents Ltd., the outfit soon became

known as FTL and developed projects both for the tent rental industry and other more architectural projects, from canopies to park pavilions.

"As in every career, there are times of slow continuity punctuated by big leaps forward," Goldsmith explains. "One of our first projects was attempting, against all odds, to win a competition to design and build a series of canopies that encircled the White House Ellipse to shelter tourists. From that project, we were invited to develop a temporary performance facility for the National Symphony Orchestra in Washington, which we have continued to develop over the 30 ensuing years."

In the 34 years since the practice started, Goldsmith stresses how FTL has continually tried to incorporate the notion of applied technology as a foundation for innovation. In 1978, the firm developed the first rental tent system in the U.S. for Anchor Industries, using a tensile structure technology of higher prestress in the fabric, fewer poles and the elimination of ropes.

"In 1998, we developed the first integrated photovoltaic system on a tensile fabric structure, which we developed for the Cooper-Hewitt National Design Museum and the Smithsonian Institution," he says. "And the Sun Valley Pavilion (see "Cool Concert Venue," p. 42) demonstrates the first use, in the U.S., of a tensile membrane integrated with a cable net and wood roof. This approach uses hybrid systems that rely on tension rather than the more conventional construction approaches of framing."

And Goldsmith and FTL will continue to strive for firsts.

"Bucky Fuller once said, 'You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete,'" he quotes. "Today, innovation is required to solve the enormous problems we have created in our world and allows us to create a better tomorrow; we really have no choice."

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▼ Nic Goldsmith at FTL's offices in New York.

