



The National Stadium and Horyu-ji Temple

Kuma Kengo, Architect

In the fall of 1964, my father took 10-year-old me to the Yoyogi National Gymnasium, which was the Olympic swimming arena. Overwhelmed by the incredible beauty of the building, I asked who designed it. I was told that it was an architect named Tange Kenzo. That was the first time I learned about the job of an architect, and on that day, I decided that I would become one. Up until that day, I had dreamed of becoming a veterinarian as I was a well-behaved child who loved cats.

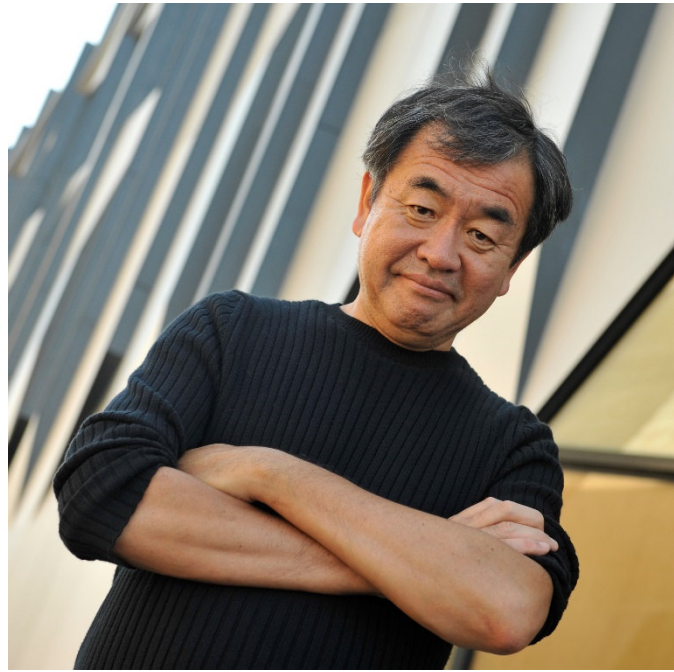
Together with Taisei Corporation and Azusa Sekkei Co., Ltd., Kengo Kuma & Associates was chosen to supervise the design of the National Stadium (Japan National Stadium), which is to become the main venue for the second Tokyo Olympics, so I thought about what was different

between 2020 and 1964. 1964 was at the peak of industrialization and the period of rapid growth in Japan. The aim of the times was to create something tall and big, using the hard, cold materials that had played a main role in industrialization: concrete and steel.

To contrast the low and small Tokyo from before 1964, lined with low-rise wooden buildings, Tange Kenzo demonstrated how awesome something tall and big could be by suspending the roof with tall concrete support columns that appeared to reach for the heavens, and at the same time, proved that Japan was at a comparable industrial level to the West. He came to be known as “Tange of the World.”

In complete contrast to 1964, Japan in 2020 is facing negative growth, a decreasing birthrate, and an aging population. Tall and big is a very embarrassing idea, with people beginning to believe that it destroys the environment, imposes inconveniences on others, and is criminal.

However, in such times, there are still things with a joyful form that are appropriate for the times, and I pondered on whether or not architecture that hinted at this joy was possible. I thought that a stadium that symbolizes the times and its sentiment would need to be as low as possible, completely opposite from tall concrete support columns, and would need to be made mainly of wood rather than concrete.



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Using trees is an effective measure against global warming as they take in carbon dioxide from the air, and it is said that the use of trees improves forest environments, prevents flooding, and leads to improvements in the marine environment. It is also indicated that wood architecture protects humans from stress and offers emotional stability.

However, is it even possible to create a stadium from wood that is both small and low, and that must also seat many tens of thousands of people?

Horyu-ji Temple, which represents traditional Japanese wooden architecture, offered a major hint in answering this difficult question. Horyu-ji Temple was built in the seventh century, and is the oldest wooden building in the world. The secret to its longevity are the stretched-out eaves and the large shadows that are produced underneath. These eaves offer durability by protecting the wood from rain and direct sunlight, and the shadows they create offer a sense of security to people, playing a role in adapting the architecture to the land.

Our design also features a profile with five layered eaves, similar to a five-storied pagoda. Doing so not only gives longevity to the wood, but the five shadows also adapt the building to the forests of the Outer Gardens of the Meiji Shrine. Additionally, the building is segmented into five parts, giving a more intimate and human scale to the building. We also made each piece of wood into something thin and delicate like the rafters on the eaves at Horyu-ji Temple. This design is in contrast to recent Western rugged wooden construction.

In traditional Japanese wooden construction, an ingenious plan was devised to give a sense of a small and simple presence no matter how big the building was through the careful combination of pieces of thin wood – called small diameter wood or small trees. As they used timber from forest thinning, use of these small trees was a brilliant response and was a forest-friendly method. Traditional Japanese wooden construction, which can also be called small wooden construction, is an extremely ideal response to the global environment, while also visually adapting the architecture to the environment.

As a proposal, I hope that this Stadium will not only simply symbolize the times in 2020, but will come to demonstrate to the world the excellent environmental techniques that have been refined in Japan. If the 1964 Olympics demonstrated that Japan had caught up with the rest of the world, then perhaps the 2020 Stadium will become the perfect stage for demonstrating that Japan has a deeper, more meticulous affection, a greater relationship with the forest, and a deeper connection with the environment than any other country in the world.

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