



The Japanese construction company Daito Trust, together with the architects from Mount Fuji Architects Studio, ventured for the first time to build a wooden structure using the BIM process. At 60 meters in length, it is not only one of the largest wooden roof structures in Japan, but a new wood material was even specially developed for it. It is called Cross Laminated Wood (CLT). The CLT panels used are massive: 2.30 meters high, 11.80 meters long, 270 millimeters thick and weighing up to 3 tons each. A total of 128 CLT panels were used to build the roof. The slope of the roof required the panels to be installed diagonally. Here, a manufacturing accuracy of at least 2 mm was needed. This also made determining spatial ideas and data management extremely complex. This is where a 3D construction surveying process helped. According to Daito Trust, this reduced labor time by 80 percent compared to manual calculations and ensured the precision of the assembly process.

The video explains how the process succeeded overall, the challenges that had to be overcome, and why the concrete body that supports the roof also has a wood grain pattern.