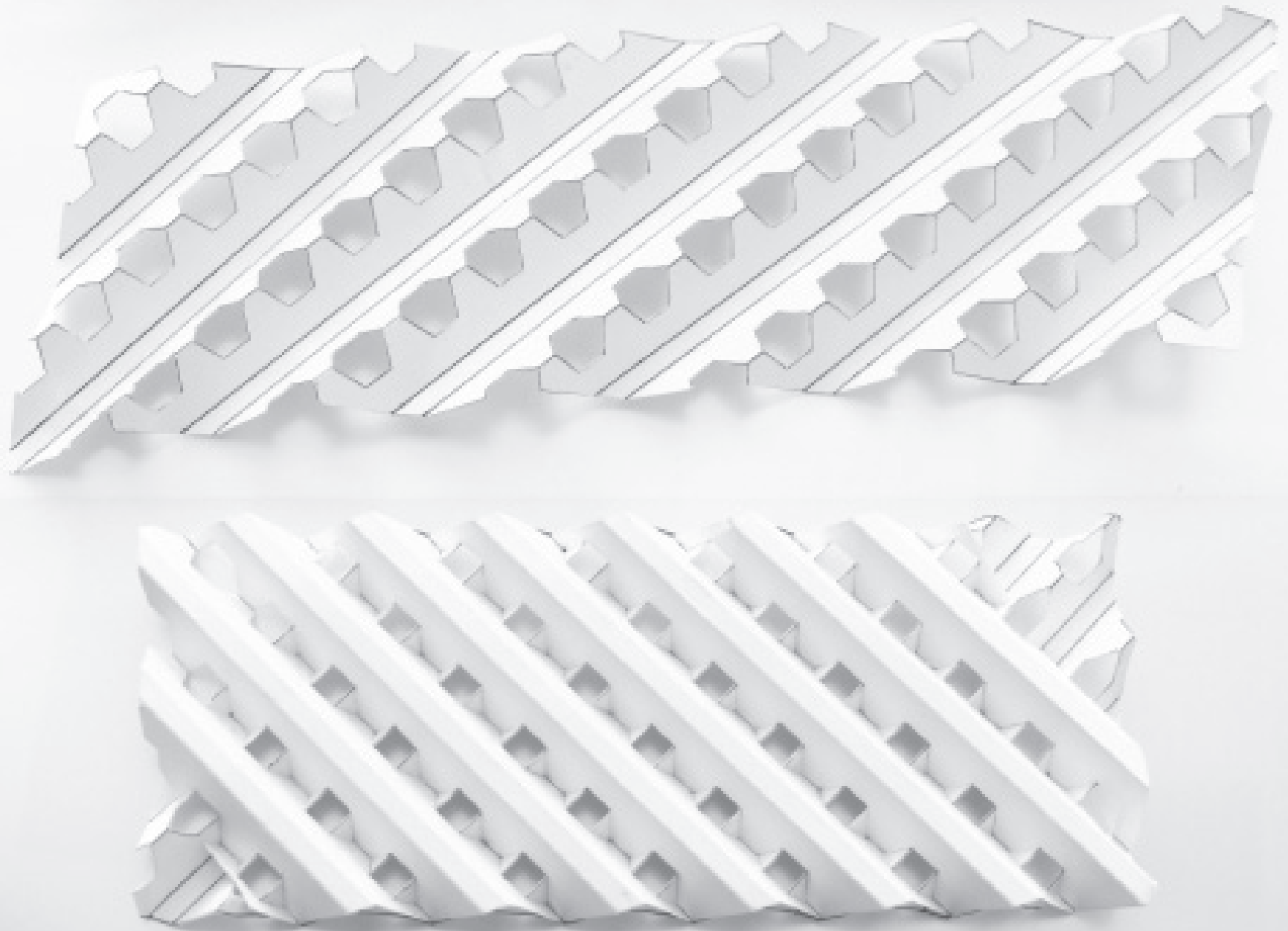


## Future of Lightweighting Entry



### Abe Laboratory cross corrugate construction

Abe Laboratory has designed an entirely new form of structure [tentative name: ECCS (Enhanced Cross-Corrugated Structure)] that has never been seen before. The idea came from the coupling method of Edo Sashimono-shi (carpenters in Japan). The conventional sandwich panel structure is formed by stacking wave corrugated boards in the cross direction. On the other hand, ECCS is formed by directly joining them. Each board can be combined tightly by notching the part where the vertices of the wave overlap. It might be easy to understand if you imagine the notch structure of a log house.

By using ECCS as a core for a conventional sandwich panel, we can make very light, yet stiff structures. The finished structures have horizontal and vertical continuous spaces that are effectively available for plumbing for gas, water and electricity. These unique structural and functional characteristics even allow for a sound effect. It is capable of molding not only flat panels, but also curved ones.

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