



LIVING UNIT: A WOODEN SHELL

Posted on September 11, 2018 by martabuges



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The research for the Living Unit was initiated by OFIS, AKT II C+C and C28 along with contractor Permiz to develop self-contained wooden shell, flexible and adaptable on different locations, climate conditions and terrains.

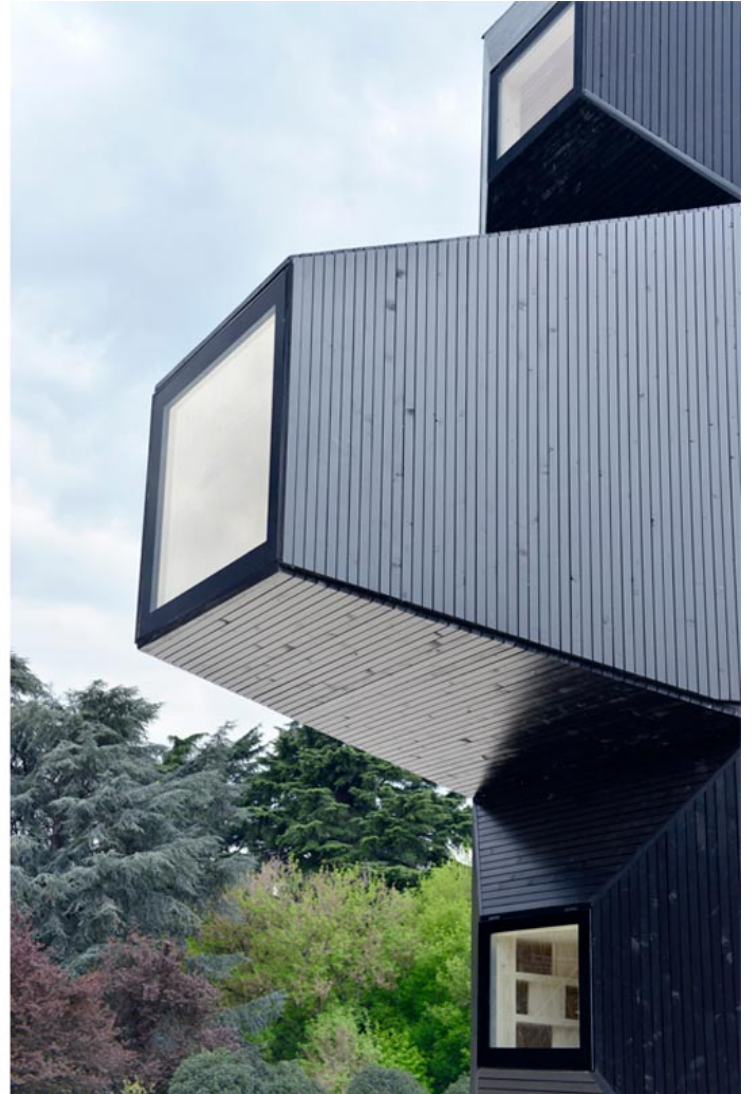
It can be used as holiday cabin, hide away, tree house or short-time habitation for research, tourism or shelter; its small size allows easy and different transport possibilities.



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The Living Unit was exhibited in the Salone del Mobile, in Parco Sempione, Milano, in April 2017

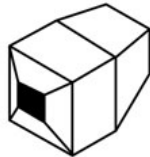
The basic unit (4.50m X 2.50m X 2.70m) offers accommodation (with kitchen, bathroom, bed and seats) and joins horizontally or vertically and upgraded to twins, triplets or similar. The basic unit contains habitation for 2 people with double bed, wardrobe, table with chairs and possibility to install bathroom, and kitchenette. If needed more cabins can be combined together creating a larger

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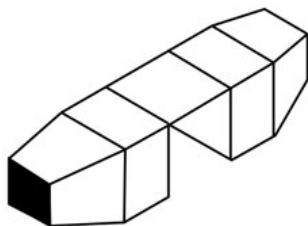
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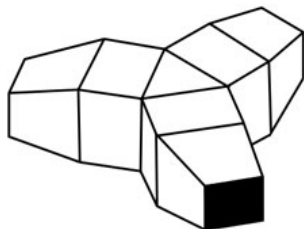
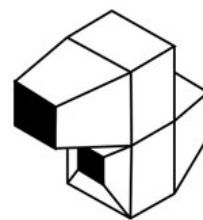
habitation that could inhabit 4-6 people.



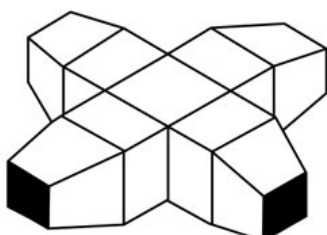
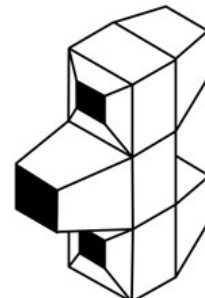
1 UNIT



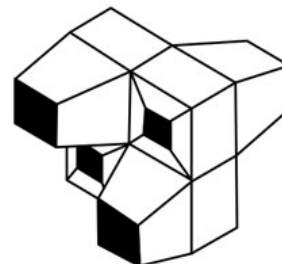
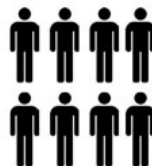
2 UNITS



3 UNITS



4 UNITS



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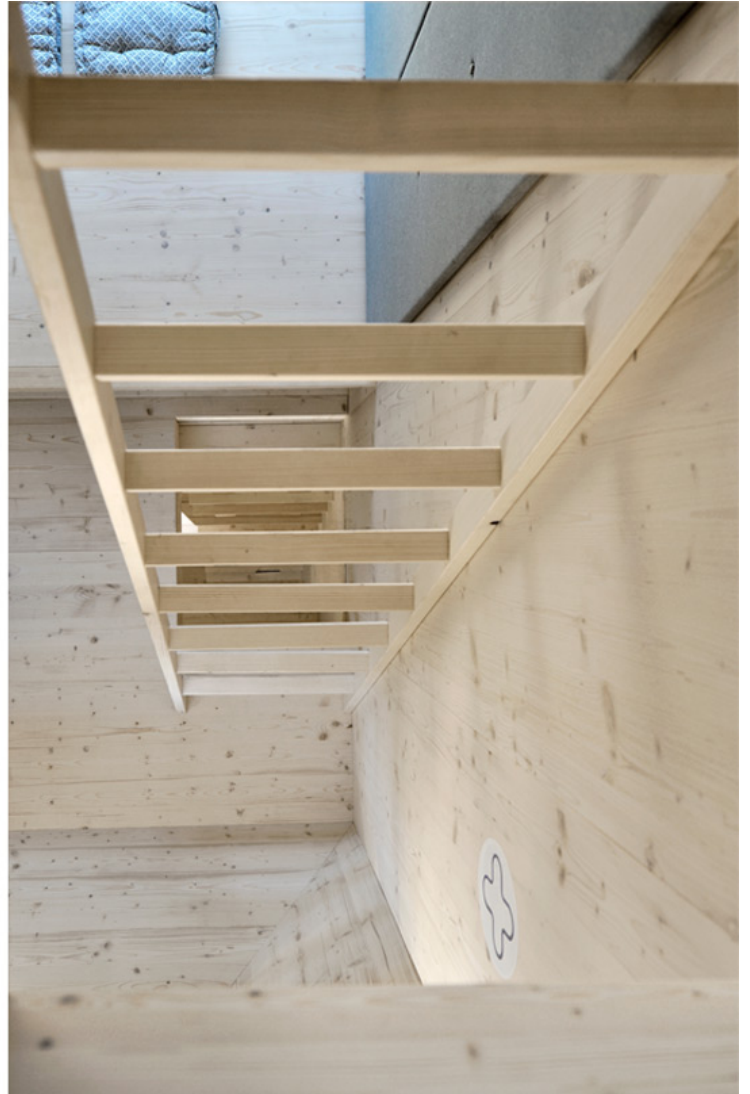
The interior treatment is changeable and flexible. Unit furnishings can be used in various site contexts.

The Living Unit is a modular pod of timber; two sides feature pyramidal juts; the front being more prominent than the rear-facing one. The truncated tips of the pyramids are fully glazed, adding storage spaces internally whilst displaying the inherent structural strength of the system.

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The prefabricated structure is made of timber frames, which are reinforced by plywood boards on both sides, encouraging low technology self-build possibilities. The thickness of the structural envelope is only 120mm including the structural joists and the plywood, mobilising every part of the surface as a structural stress skin and enabling a rigid system in the plane described by the ply.

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The Living Unit served as a Library under the Tree tops on Ljubljana Castle in summer 2017

The vertical loads are transferred to the ground through two continuous vertical strips on each side of the entrance door, whilst the lateral loads are counterbalanced by a system of four concrete blocks. The wind forces acting perpendicularly to the long side of the unit, together with the accidental loading applied to the two cantilevering platforms, was considered the worst loading combination. In the other direction, lateral stability is provided by the stress skin walls, which act as rigid diaphragms. Corner haunches have been added to the internal framing to enhance the rigidity of the system.

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In a way these are rather simple and sustainable constructions using local materials and workmanship.



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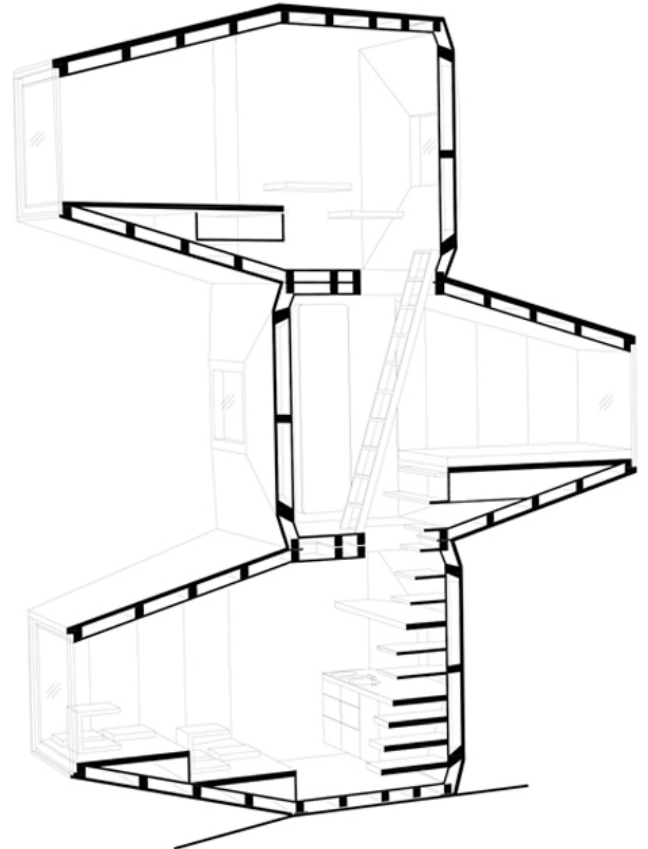
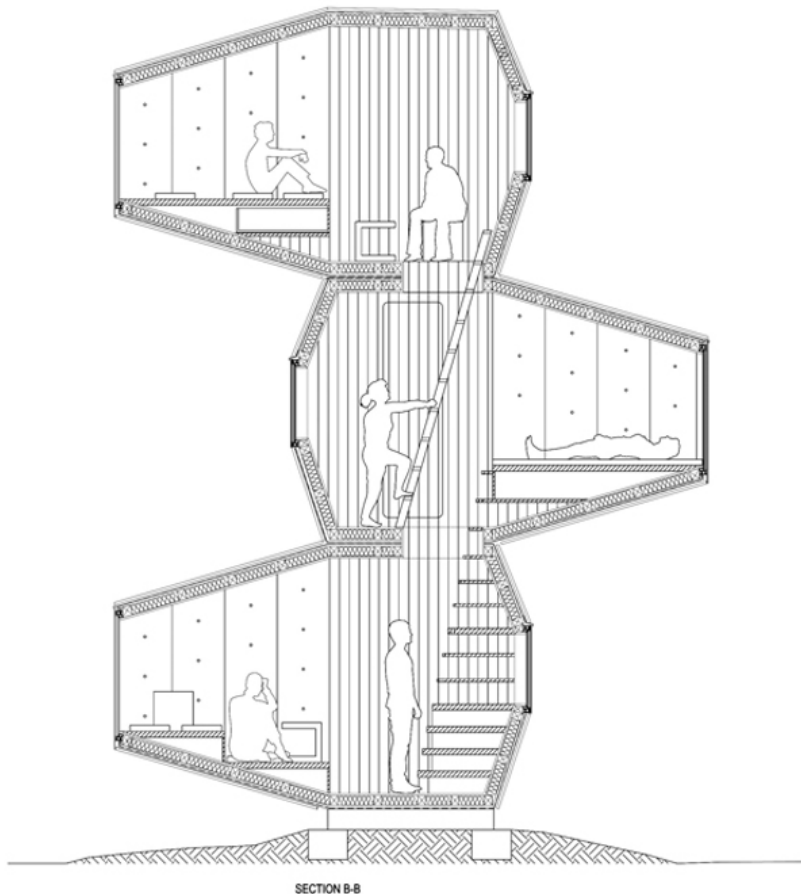
The Living Unit in London

Thanks to their compact dimensions, the units can be transported virtually anywhere using a reasonable sized truck. Placed into position by a mobile crane and fixed to the ground by either steel anchors or removable concrete cubes in place of permanent foundations. Each unit is easy and fast

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to build, expand and adapt to the evolving use or to the changing landscape.



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