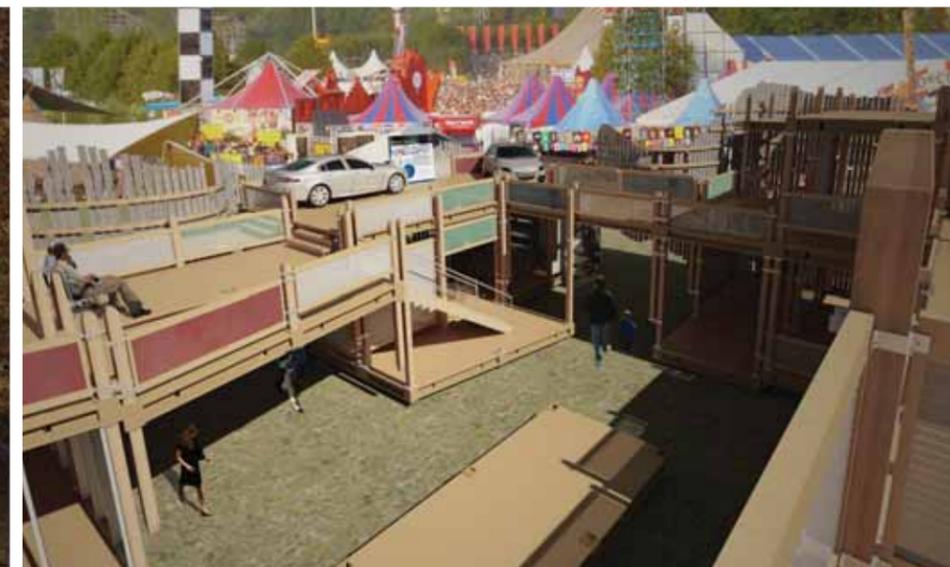


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Movable festival structure, individual
2nd Masterstudio
2013

summerlabb



Summary

Summerlabb is an initiative founded by Double2productions. It is a temporary exhibition that moves from festival to festival during to summer with all kinds of ecological innovative projects. Summerlabb tries to show young people that science is not boring. So the design question was to develop a sustainable (looking), movable, flexible, curious making and cheap project. It was a really hard task to solve and fulfill all the wishes. The pavilion designed exist completely from reused materials like doors, planks and timber I-beams. By re-using wood it became possible to make something that is cheap, looks sustainable and can be formed in every design that was asked.

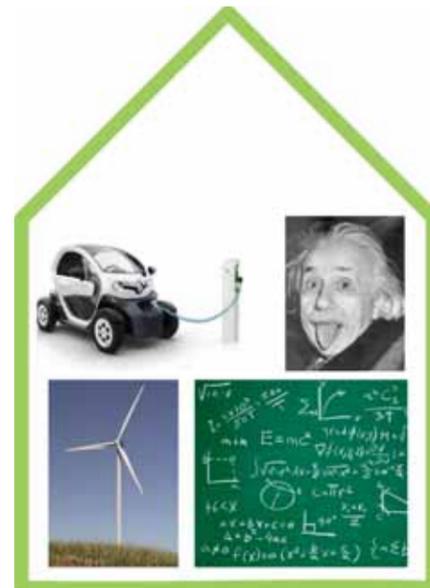
The pavilion is flexible in certain ways, it is like a large IKEA package. Each festival the owner can decide which parts to build and which not. Floors, columns, walls and the curtain wall are easy to construct on site. The largest version fits on 8 trucks.

Concept

Summerlabb is an exhibition about science and innovative projects, the pavilion is the skin around this exhibition. By designing an innovative and sustainable skin it has becomes possible to integrate both exhibition and building. The biggest problem of science is that it has a boring image. So Summerlabb wants to show their visitors that science isn't boring at all. Therefore the building needs to attract people. It should be curious making, this attraction should be achieved on several scale levels.

With the re-using of timber the building gets its sustainable image – since people associate wood with sustainability. But it is also easy to re-use without wasting too much energy, it is light, has endless esthetic possibilities and there is a lot of CO₂ stored in used timber. So the pavilion becomes a storage for CO₂.

The pavilion should be flexible as well, so every time people see the pavilion it is different. Also for practical matters, every festival has different scales and visitor amounts.



Attract people from a distance

Attracting people is the biggest goal of the Summerlab pavilion. From a distance, this can be achieved by height. Pavilions lower than 4 m will not be visible through the crowd. The pavilion attracts due to shape and height. Also in the opposite direction, the pavilion has an assessable rooftop, so visitors have a nice view over the festival. And people on top, attract new people on the ground.

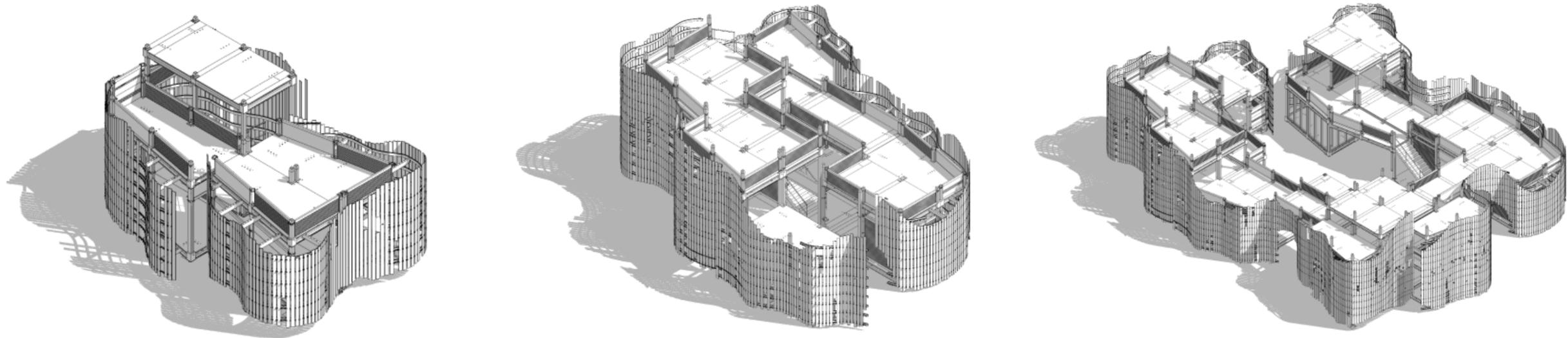


A different feeling from nearby

When the festival visitors come nearby the pavilion they'll experience other elements of the building. The planks are weathered and are full of scarves. Just behind the curtain of planks there will be an exciting space, between festival and exhibition. Special light effects may be placed here. Since the planks are not placed straight to each other, but with little spacing in between it becomes possible to get some glimpse of the exhibition from the outside.



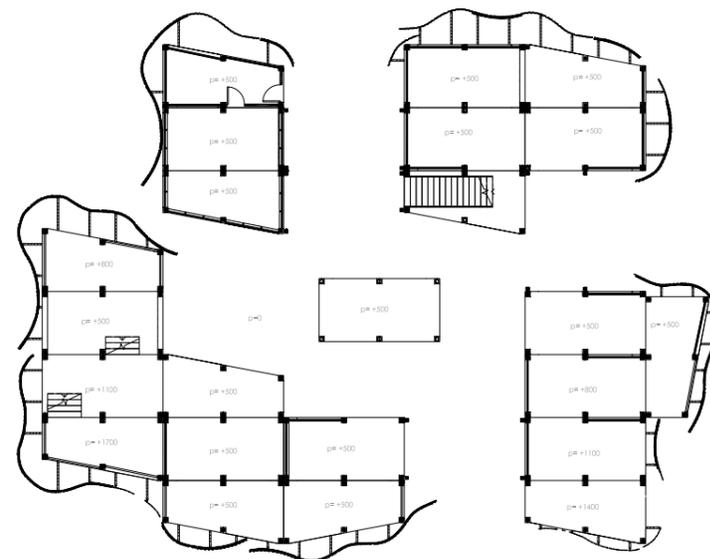
Diverse setups of the pavilion:

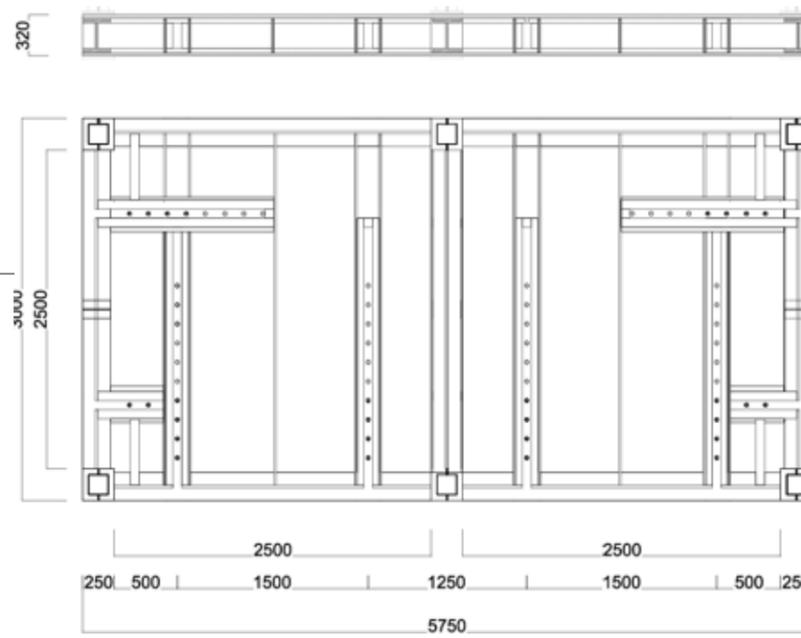
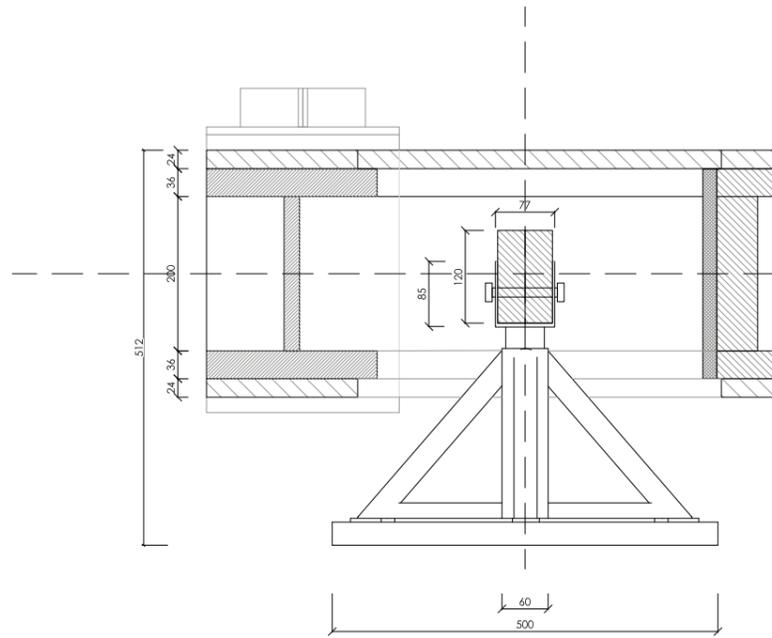


Floorplan

The ground floor level of the large variant is shown on the right. At ground floor the pavilion is open, it blends with the festival. The structure may look like an enclosed fortress, but it is actually very open due to the large amount of entrances, also the grass in the middle enlarges the effect of continuing the festival inside (in a different setting). The grass field forms the 'dancing area'. This area is enclosed by the chambers, which give each stand a cozy feeling. The pavilion will be at its best when the exhibition will be like a scatterplot, so also outside the pavilion.

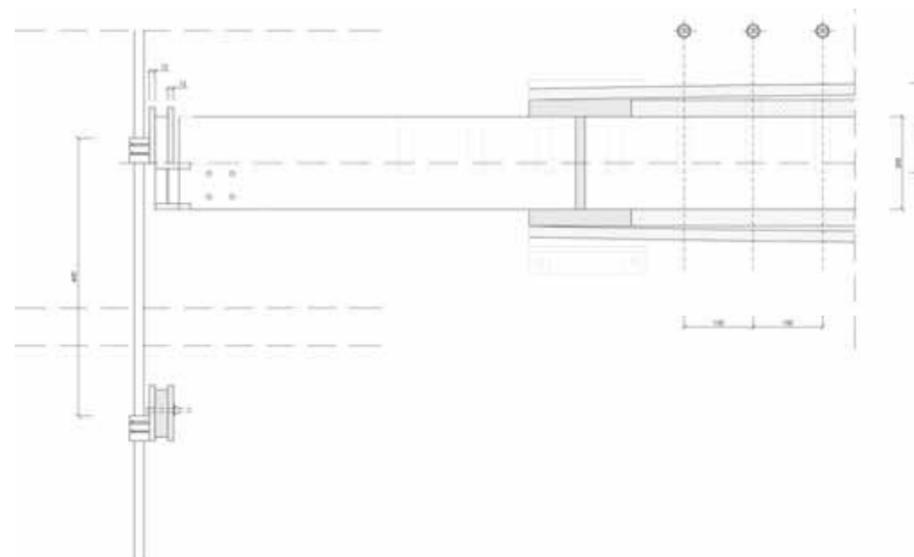
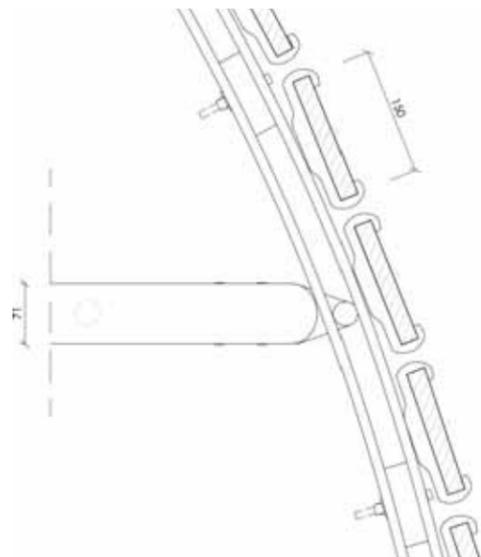
Via split-level floor plans it has become possible to make a trip along scientific stands. This trip is rewarded in the end with a view over the festival from the highest level. The split-level helps to minimize the limits of walking up a stairs, and it also increases the attractiveness of the façade.





Foundation and floorplates

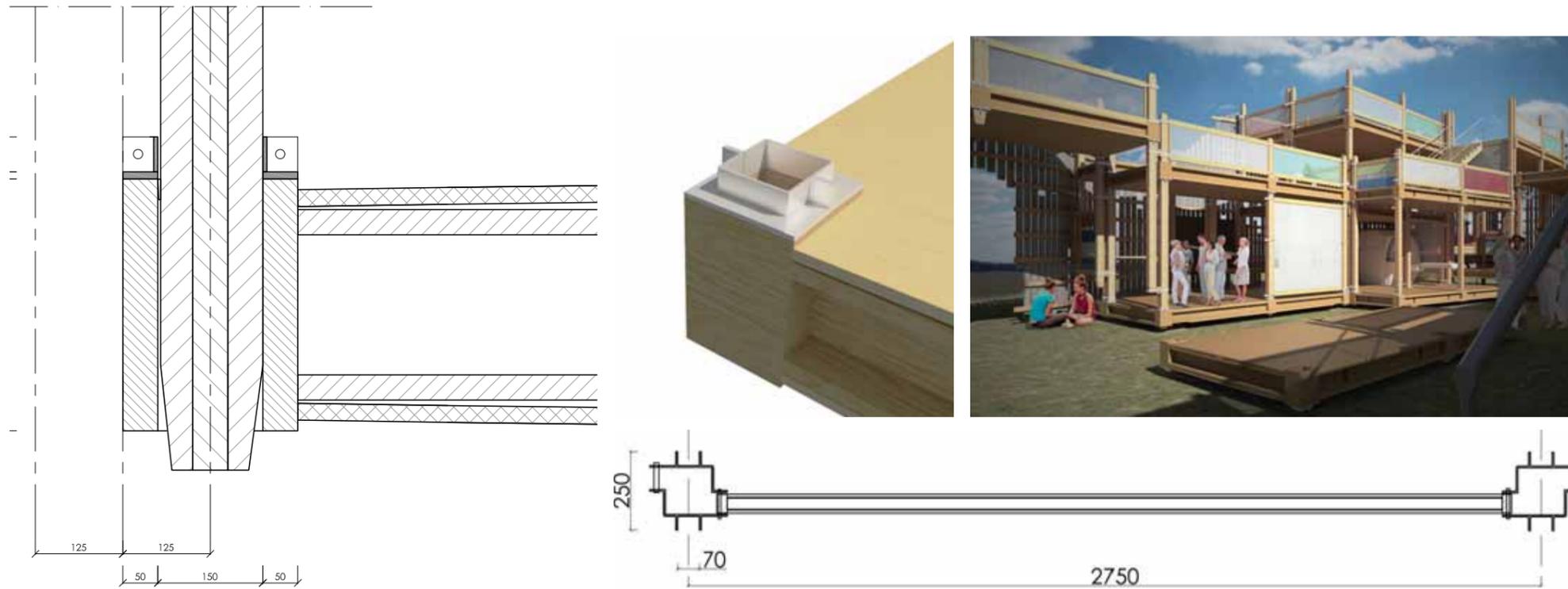
The foundation of the pavilions is build up by caravan standards. These standards can hold up to 4000 kg and are very cheap. With these standards it is possible to build a pavilion of two stories packed with people. The floor plates are put on top of these caravan feet. The plates are complex timer elements, build up by four timber I-beams, connected with underlaymentp plates to form a stiff floorplate. Within the timber floor there are some chambers, in these chambers there is room for the telescope beams needed to hang the façade. The surface of the floors is curved, too transport rainwater to the sides.



Facade

The curtain wall that works as a skin around this building is made of wooden planks. The round shapes are there to make the building attractive from several angles and to prevent the forming of a certain direction. This neutrality is needed to place Sumrabb on very various locations. The curtain also minimizes the modular appearance of the floor plates.

The façade is build up by 2.5 meter wide panels with a variable height. The height of the planks is adjustable. The round shape is gained by using flexible horizontal planks. On site the wall is shaped after the settings of the wooden beams in the floor package, while on transport these panels can lay flat. The curtain wall gains its stiffness in a very simple way, the bolted connection can be tightened, and therefore make the façade stiff.



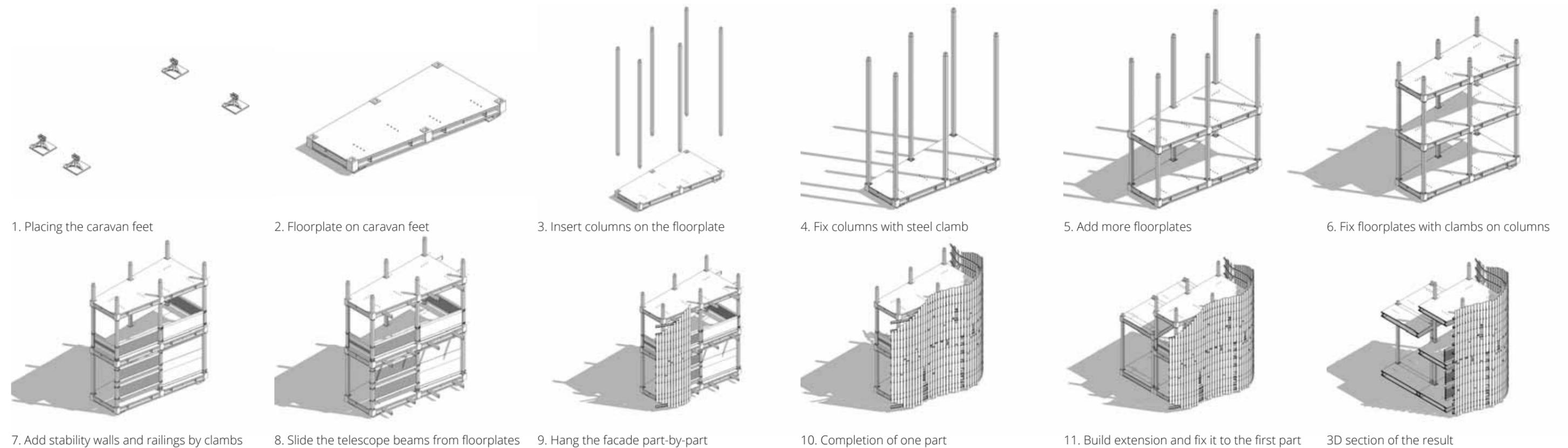
Columns & Filling walls

The columns are placed into the six gaps in the floor plates. On top and below these gaps two steel elements are clamped around the column. So the column is fixed on the floor plate. The top and bottom of the columns are tapered, this makes life easy on the construction site. The columns also need to be smaller than the gaps for the construction, so after placing the columns they need to be fixed with little wood scatters. Below the floor plates it is of great importance that the columns don't touch the ground. This wouldn't be durable, but it also increases the effect of a floating building.

The filling walls are re-used door panels. From a distance these panels look like coloured elements, but from a shorter distance it becomes clear that these panels are actually doors.

Building the structure

The building method was part of the design since day one. The global steps to build the pavillion are stated below.



1. Placing the caravan feet

2. Floorplate on caravan feet

3. Insert columns on the floorplate

4. Fix columns with steel clamb

5. Add more floorplates

6. Fix floorplates with clamps on columns

7. Add stability walls and railings by clamps

8. Slide the telescope beams from floorplates

9. Hang the facade part-by-part

10. Completion of one part

11. Build extension and fix it to the first part

3D section of the result