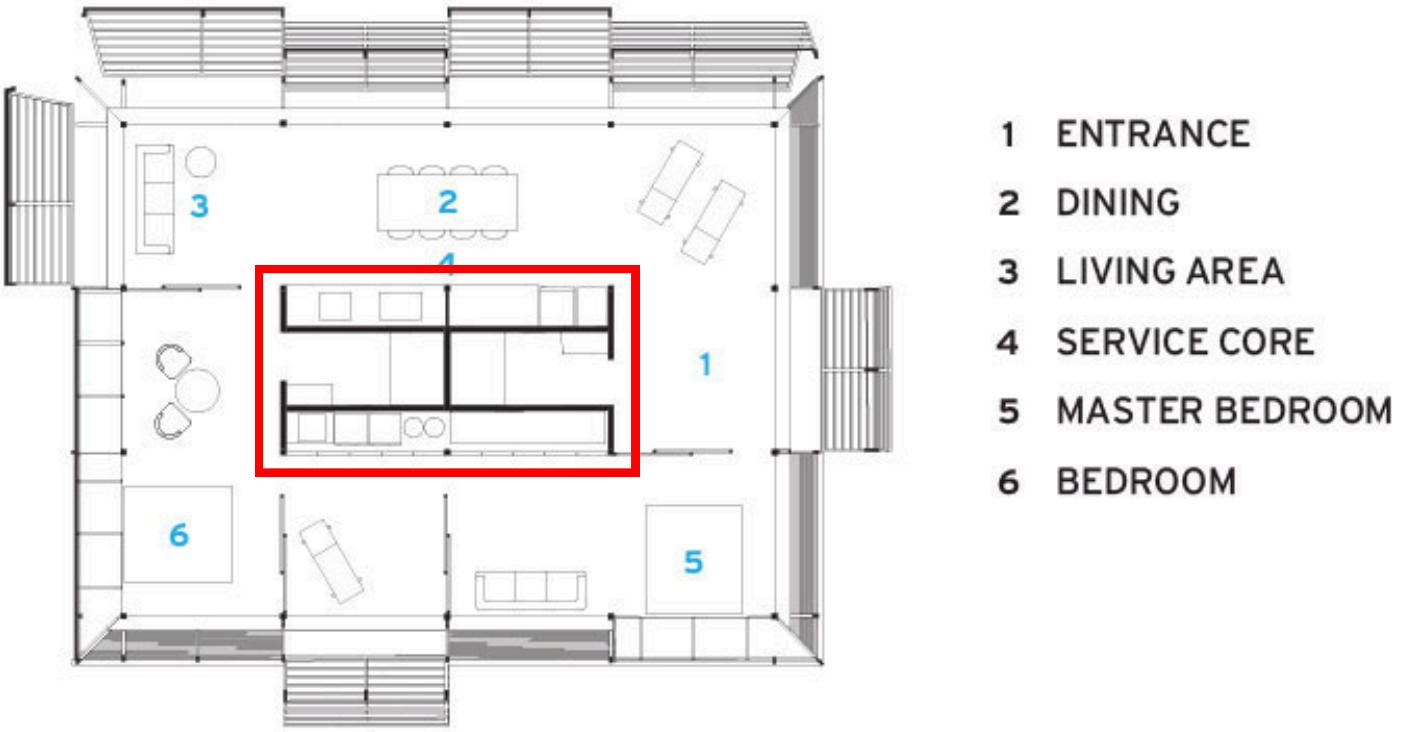


CONFLUENCE LIVING



Group 11
Lars Berends
Finley Jones
Bregtje Kirsten
Melvin Romijn
Marco De Wilde
Eralda Santinho Pratis

NO FOOTPRINT HOUSE

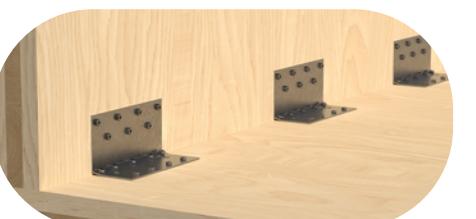


Key takeaways from this reference:

- Central service core
- Overhangs or louvers to block out sunlight when it is unwanted
- Sustainable materials
- Connection with the outdoors through flexible/open facades

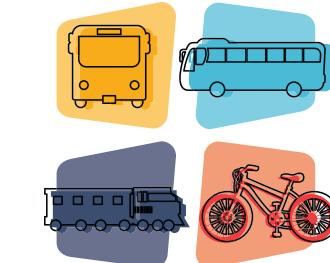
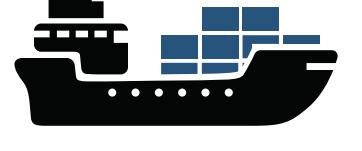
PRINCIPLES

- Combination of CLT load-bearing structure and timber frame facade elements.
- Dry connections.
- Concrete pontoons
- Modular core
- Phased just-in-time delivery with temporary storage nearby.
- Building operation on water and on quay.
- Prefab transportable elements



Transport principles

Reduce CO₂ by combining sustainable construction with smart logistics



For local transport of materials and equipment.

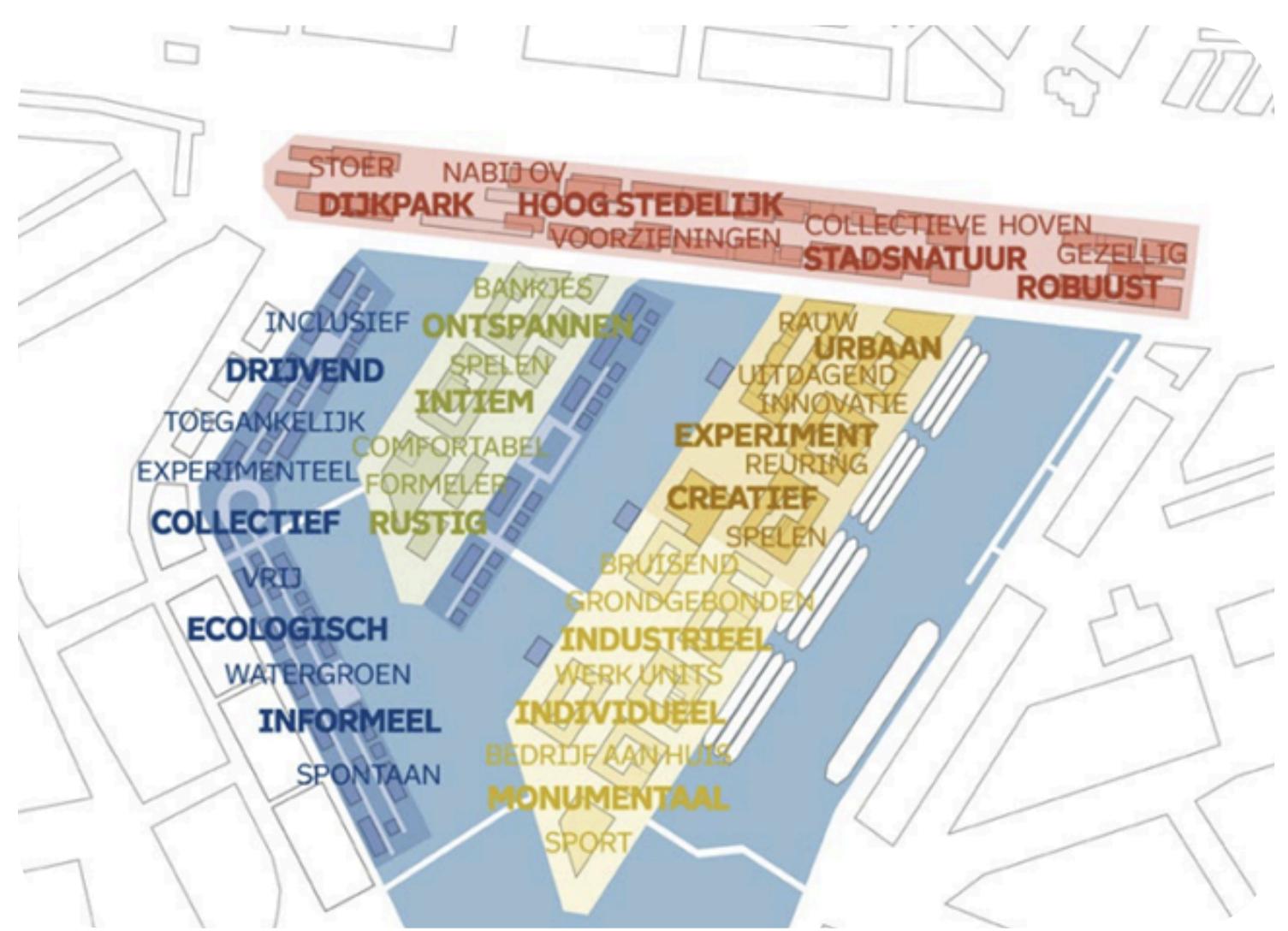
Transport of large elements

Local suppliers & contractors

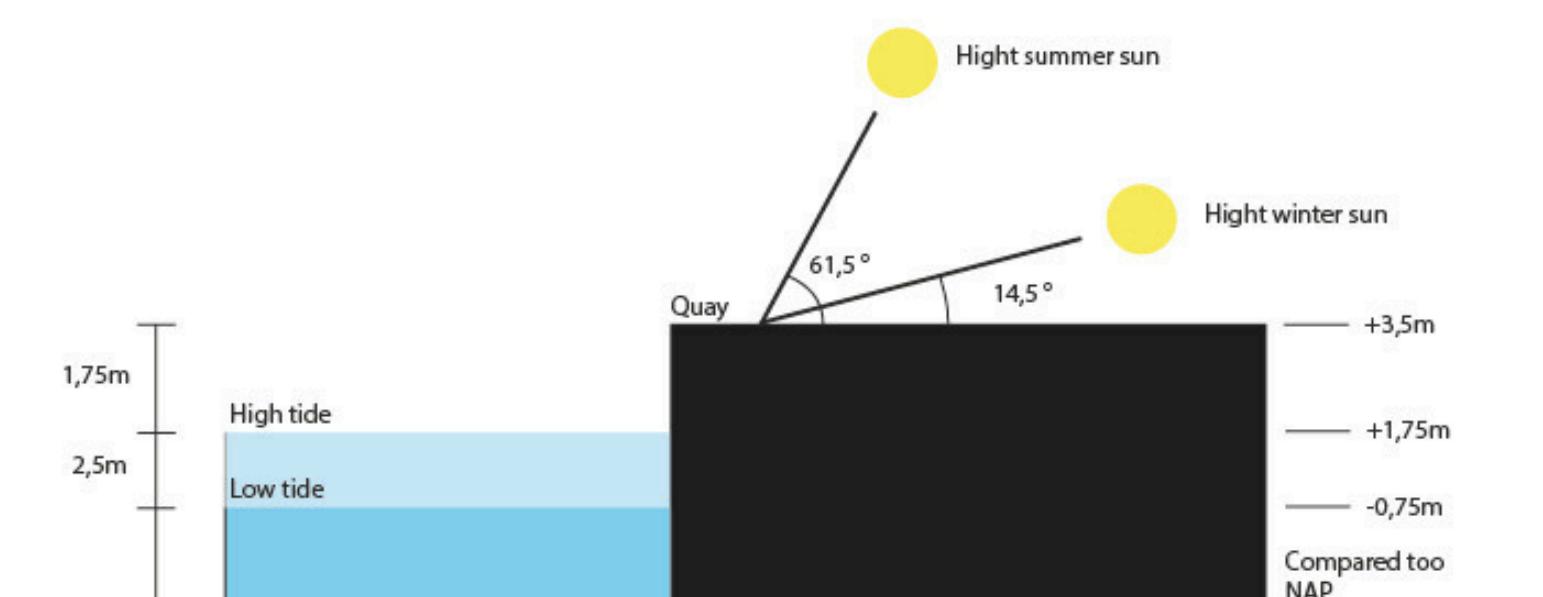
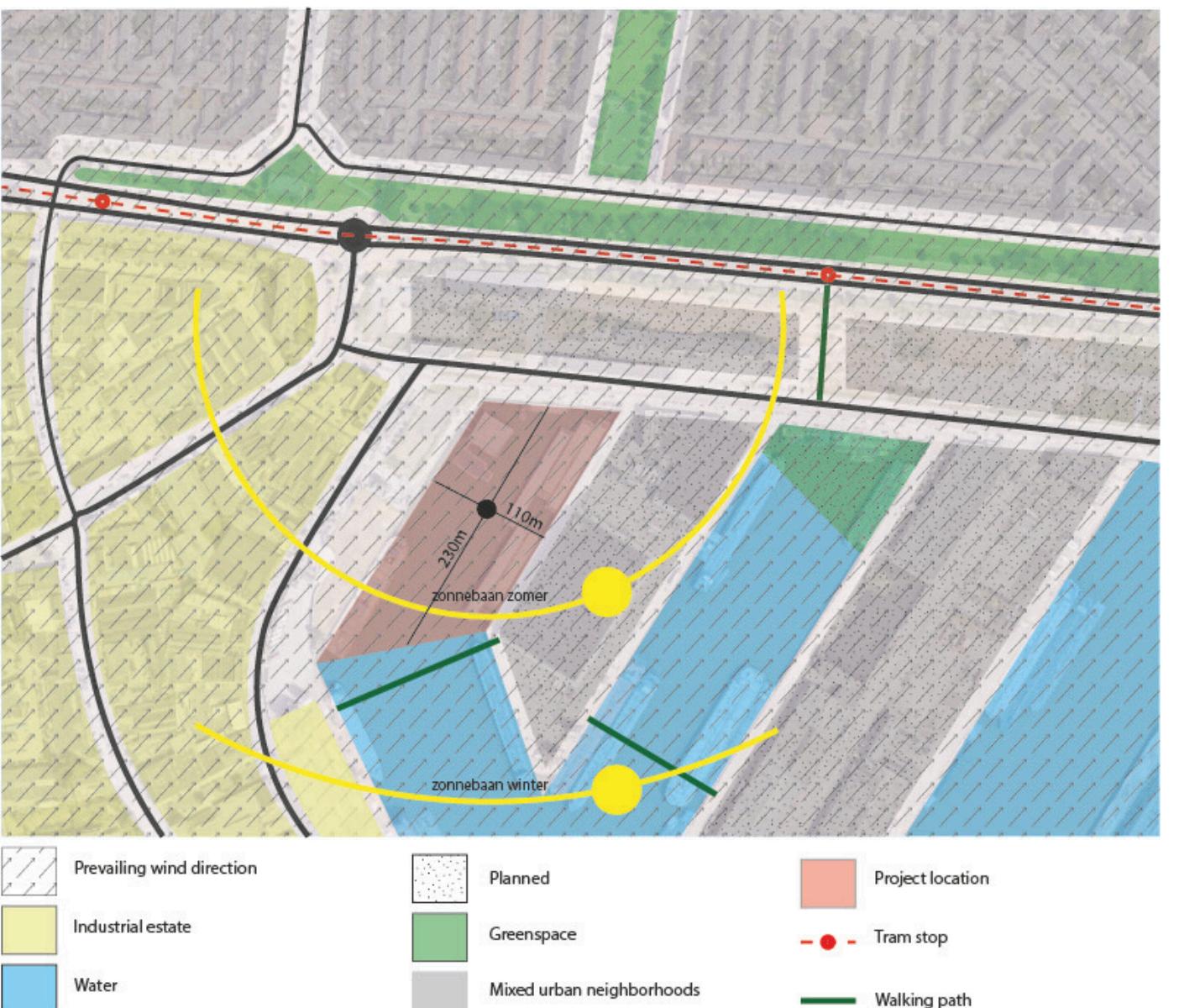
Encourage workers to use bikes or public transport.

Avoid or limit crane ships and tugboats (high CO₂ emissions).

M4H ROTTERDAM



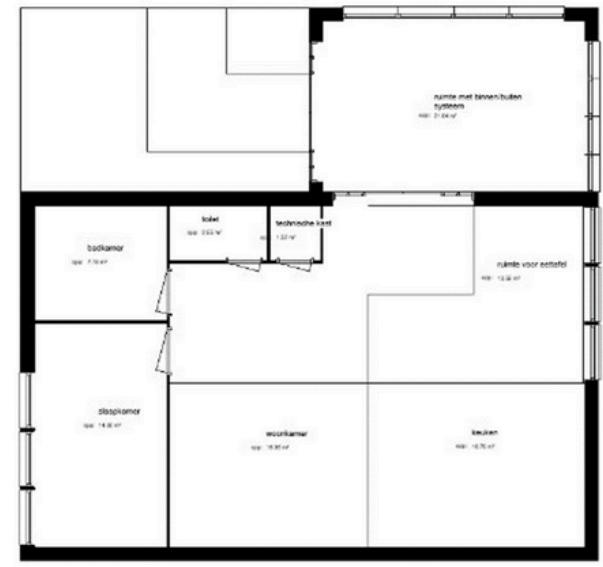
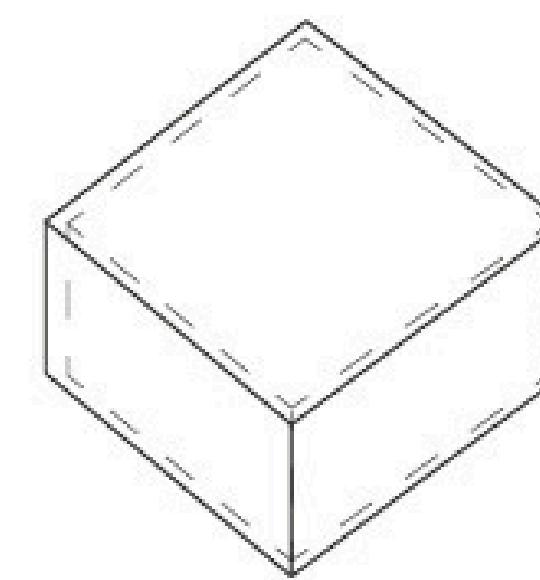
Merwehaven in Rotterdam is the location of this project. It will become a sustainable neighborhood right in the harbor, with a strong focus on sustainability and community.



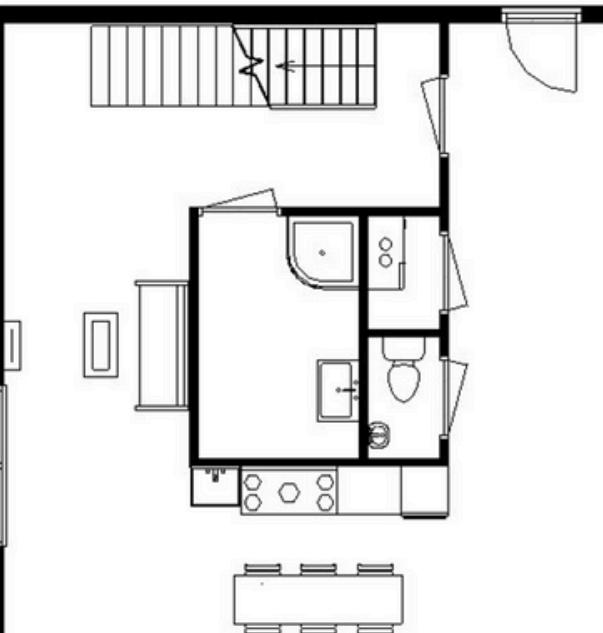
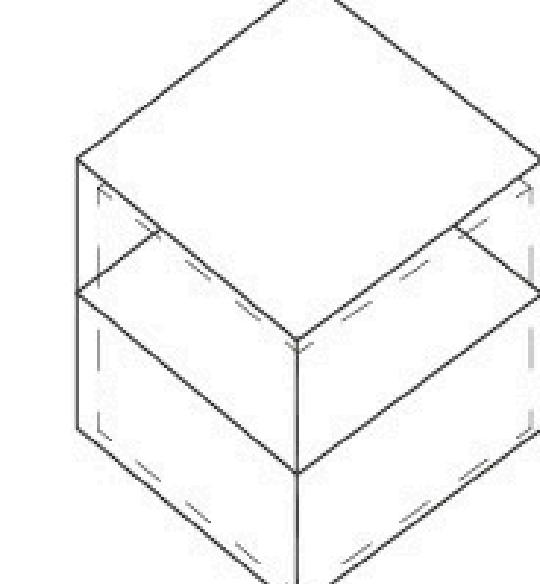
Demands based on,
Tidal Dynamics: The structure needs to adapt to a 2,5m tidal range,
Winter Sun: Capture low winter sun to maximize passive heating and natural light during colder months,
Summer Sun: Architectural elements provide shading from the high summer sun to prevent overheating and ensure comfort.

DESIGN DRAFTS

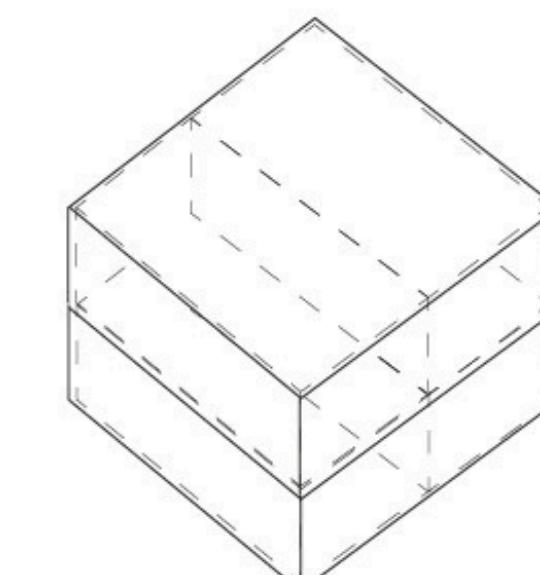
1. Floating bungalow



2. Floating family home



3. Floating apartment block



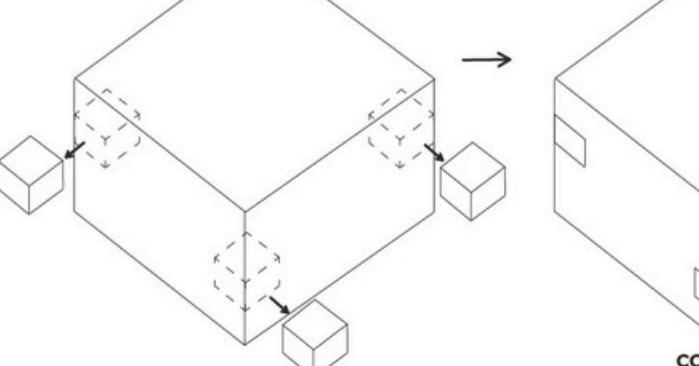
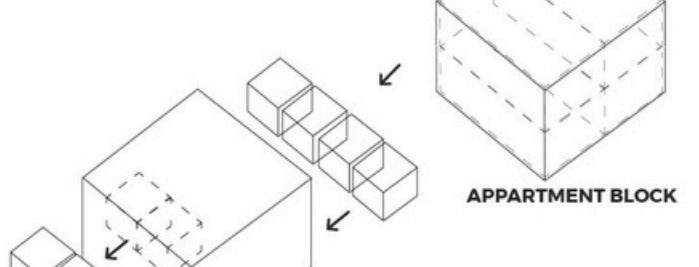
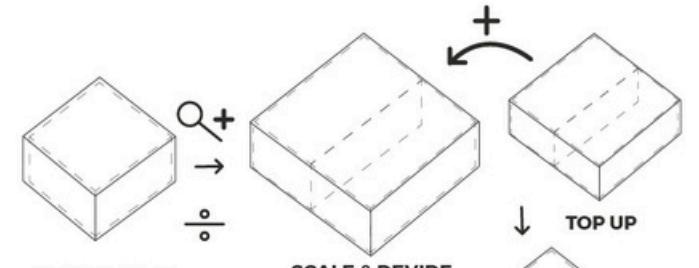
TARGET AUDIENCE



Floating community

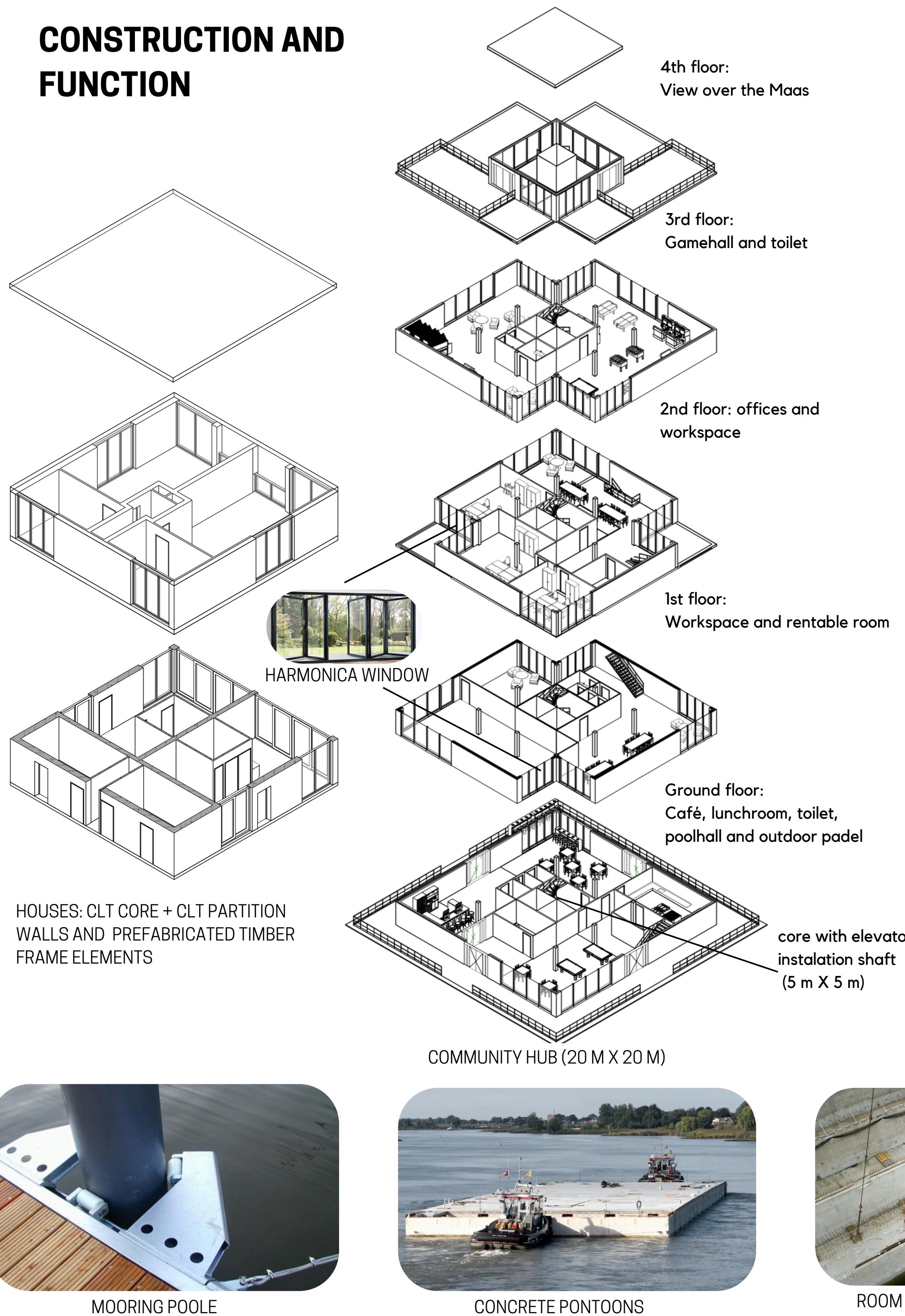


Couples

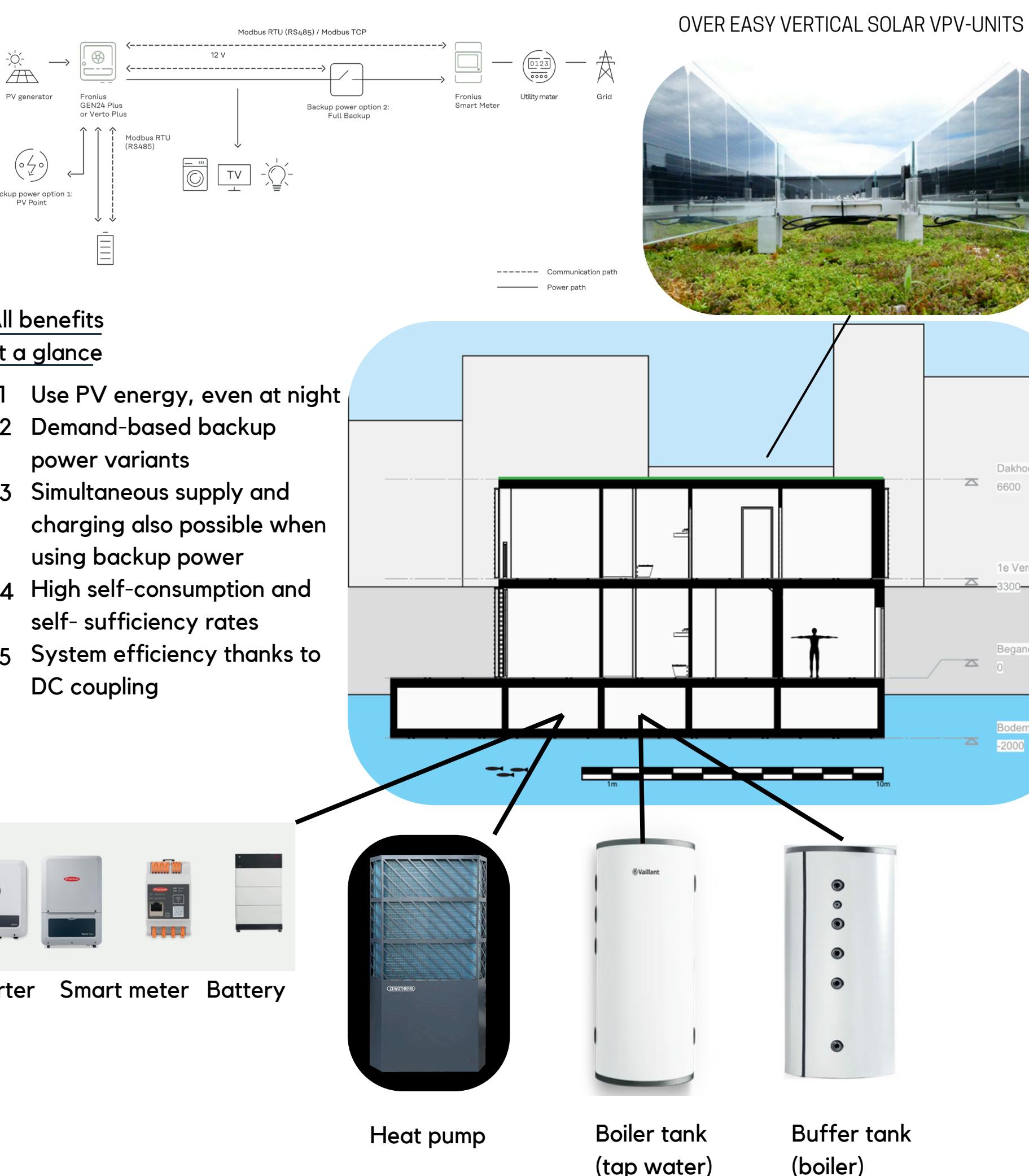


The municipality of Rotterdam aims to create a modern and diverse neighbourhood. We believe that a variety of residents will help achieve this goal. This means our designs must be able to accommodate multiple target groups.

CONSTRUCTION AND FUNCTION

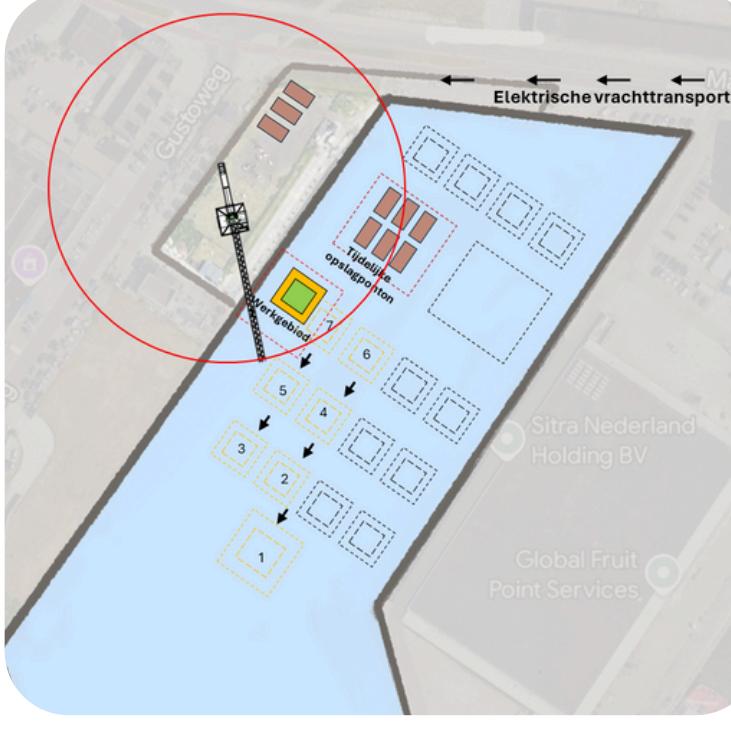
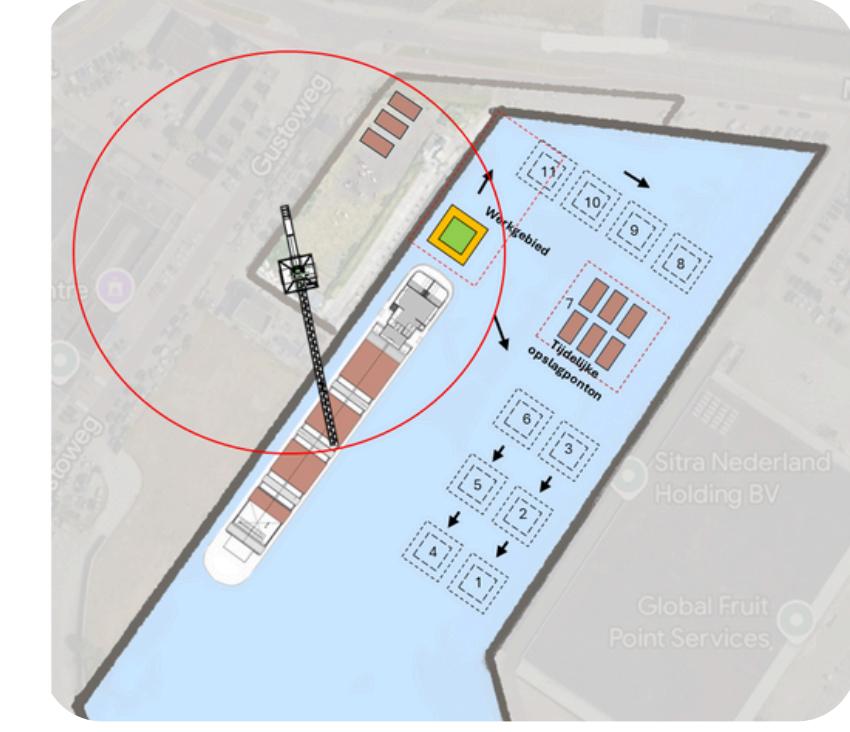


INSTALLATIONS (smart grid)

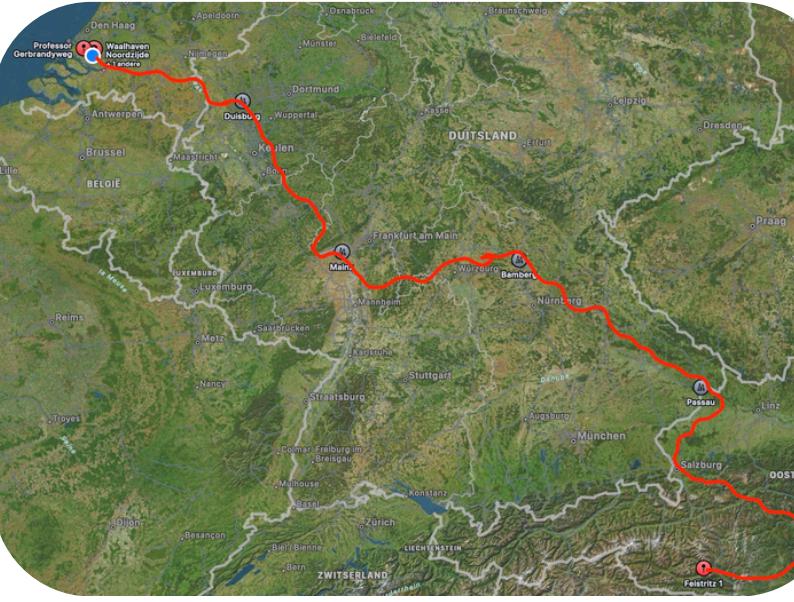


BUILDING METHOD

Material delivered by electric inland vessel
Concrete pontoons connected
Mooring piles installed
Prefabricated CLT homes assembled
Homes slid into final position
Cycle repeats

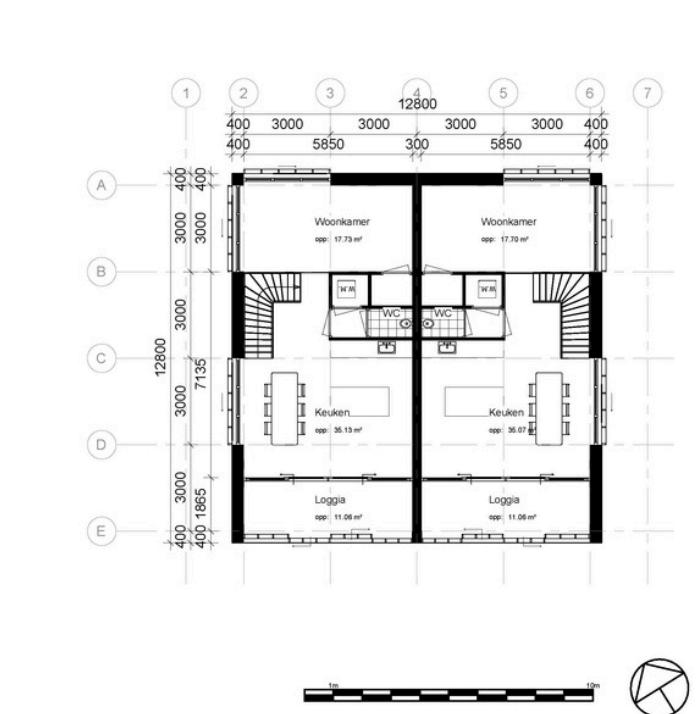
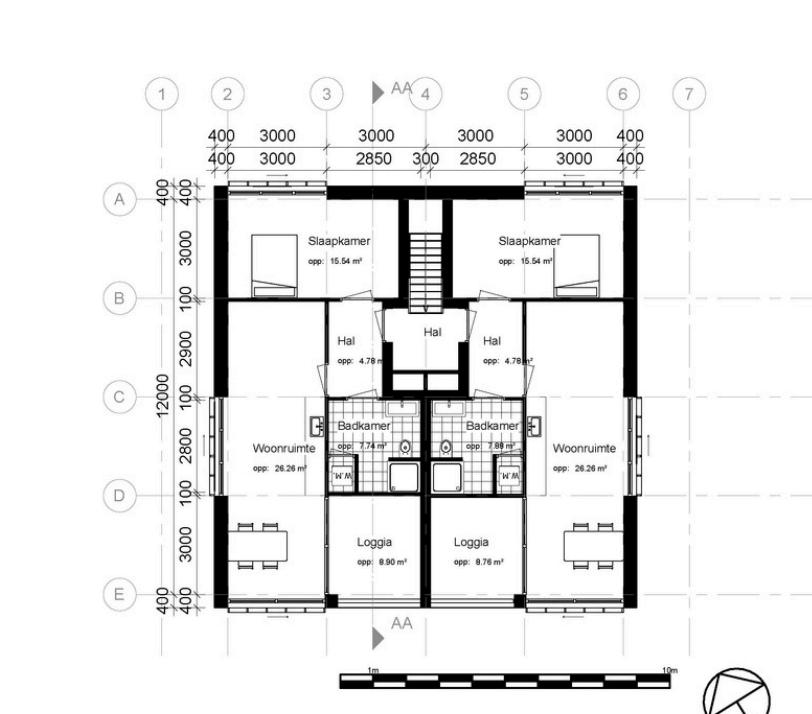
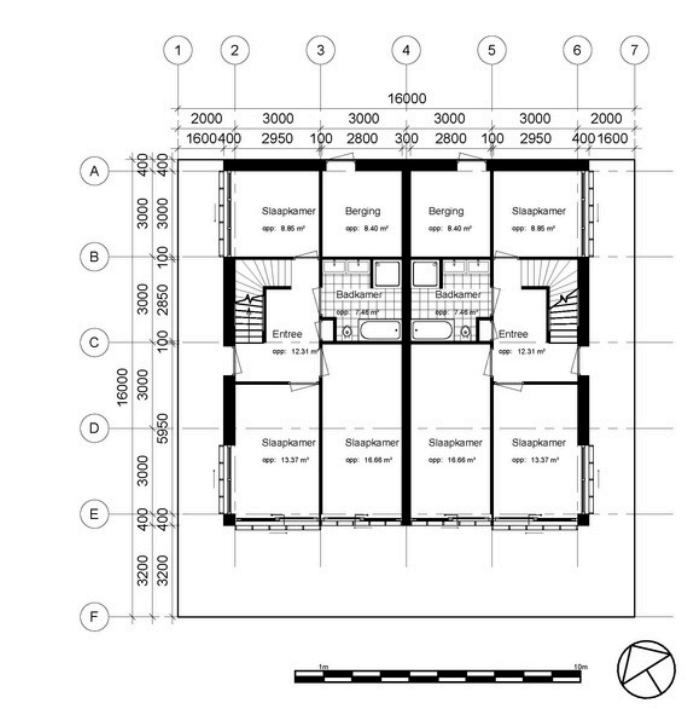
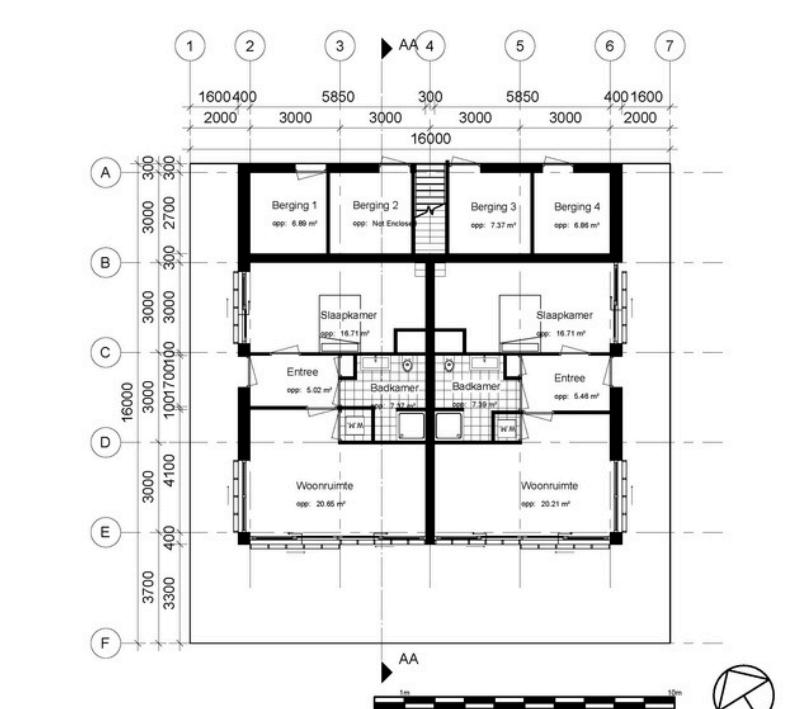


LOGISTICS



Bouwhub 010 stores materials and equipment, which are delivered in stages by inland vessels and electric lorries.

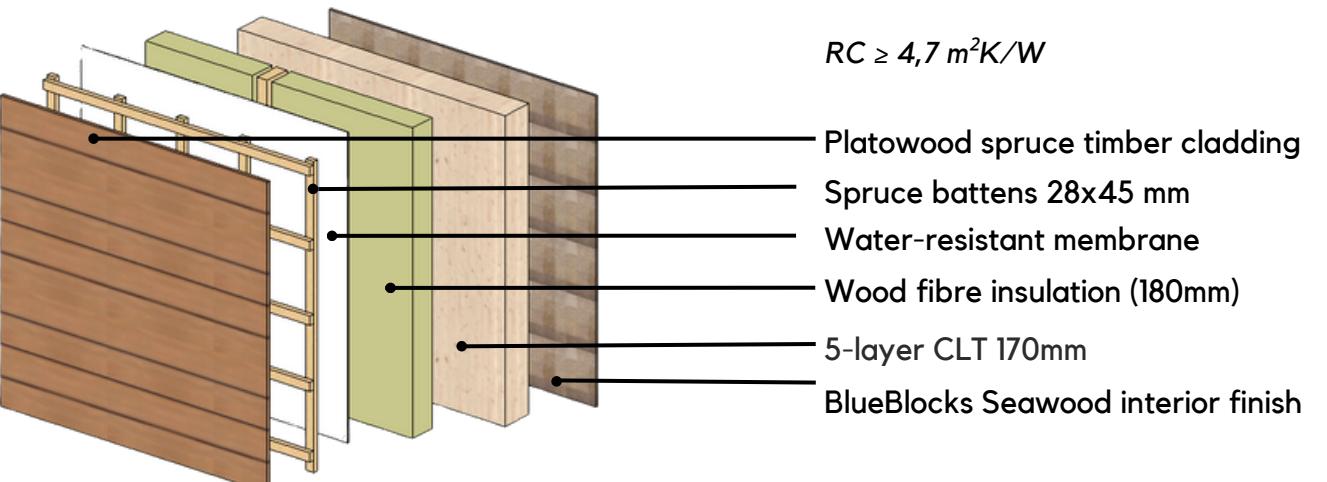
FLOORPLANS



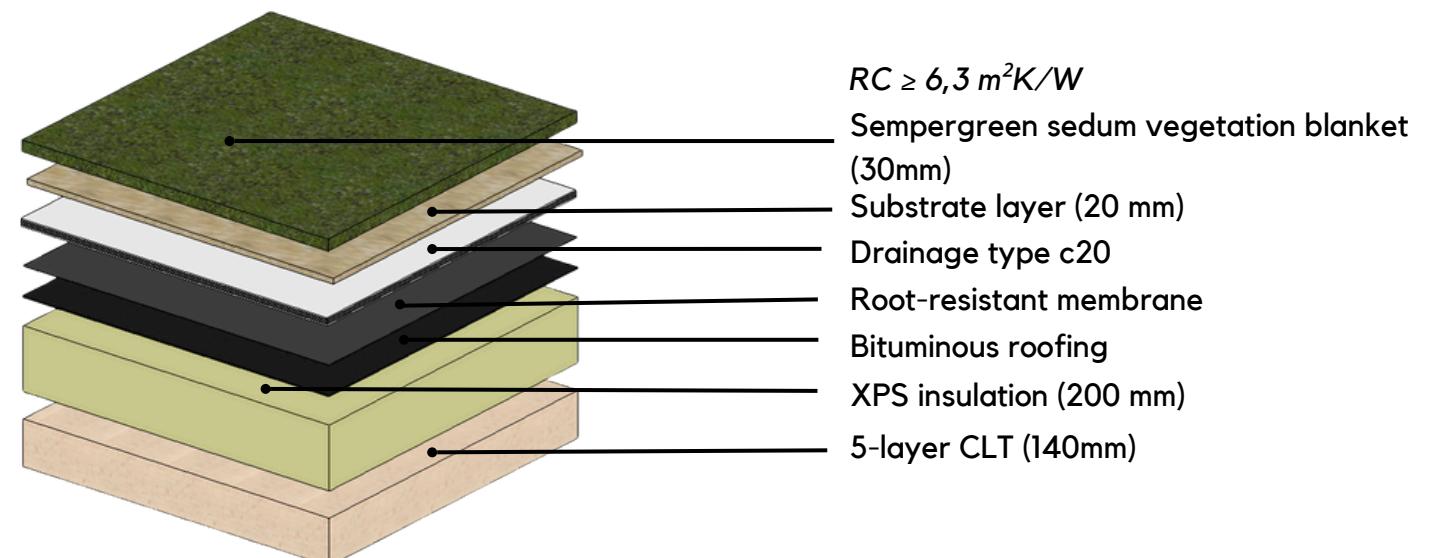
SLIDING LOUVRES



WALL CONSTRUCTION



ROOF CONSTRUCTION



RENDERS

