

**Living in a world with(out) oil**

**Turning oil tanks into dwellings in a post oil world**



Oil tanks



# The era of oil





(Getty Images, Schmidt)



(Own, 2018)



(Getty Images, Schmidt)



(Own, 2018)



(A. Jadhav, Reuters)



(Getty Images)



(L. Jackson, Reuters)

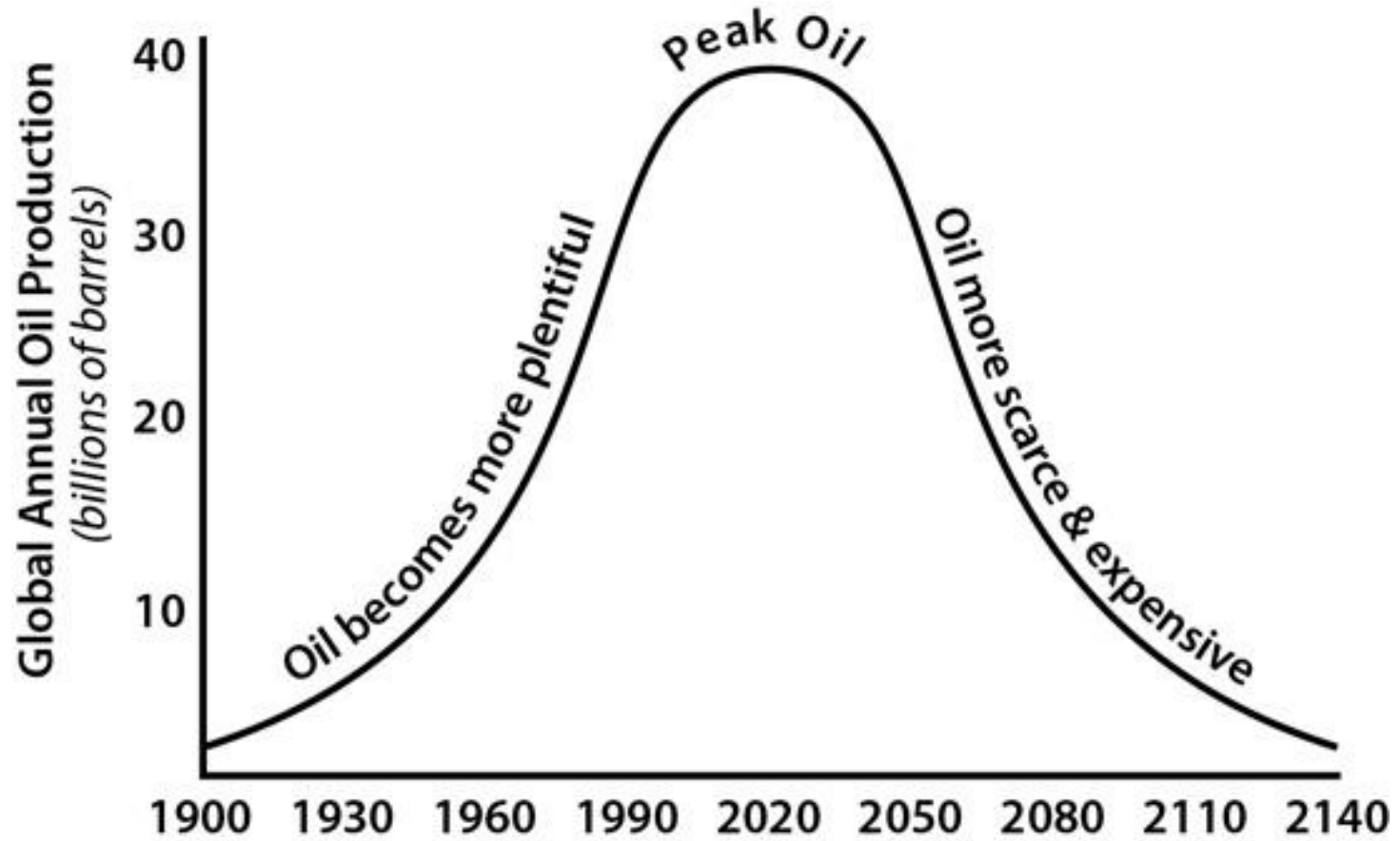


(J. Yu, Reuters)



(L.C. Pan)

# Peak of oil



(The Hubbert Curve)

# We are running out of oil



(A. Moir in SMH)

Demolish





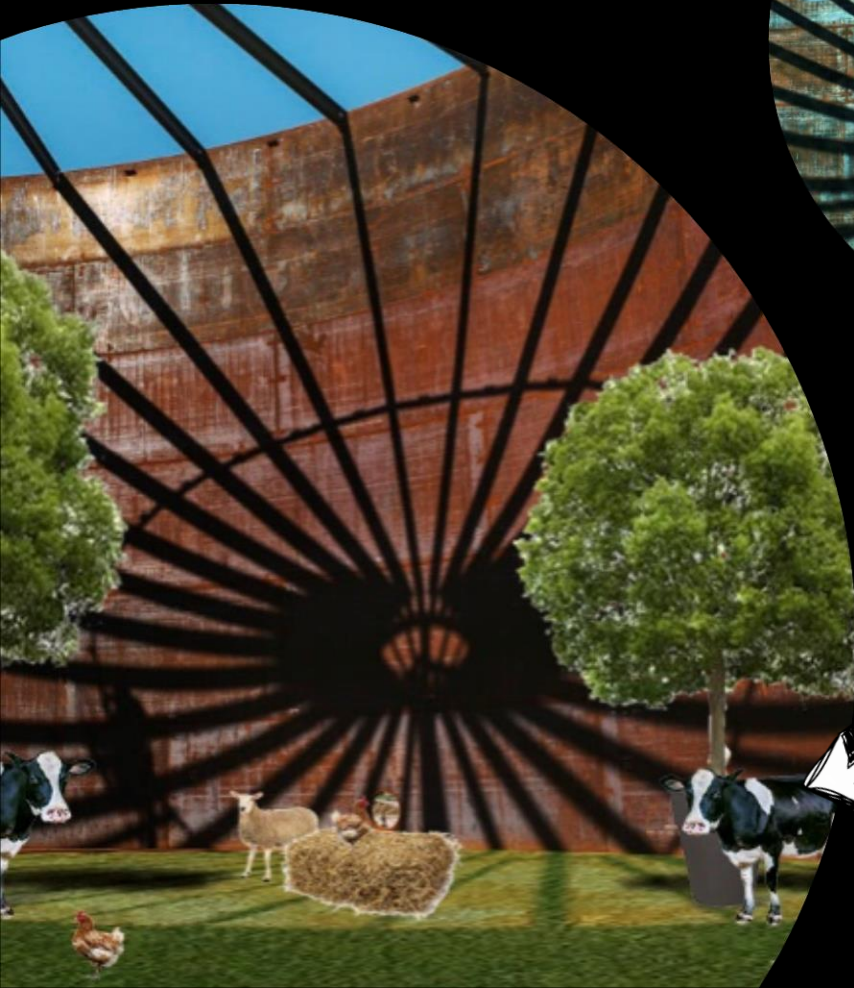
Indoor garden



Sports hall



Swimmingpool



Petting zoo

# Concepts





# How to redesign oil tanks into dwellings in a post-oil world?

# Method: research by design

“Creative design seems more to be a matter of developing and refining together both the formulation of a problem and ideas for a solution, with constant iteration of analysis, synthesis and evaluation processes between the two notional design ‘spaces’— **problem space and solution space.**” (Cross and Dorst, 2001)

“If research in the humanities is fundamentally based on knowledge involving evaluation and interpretation, architectural research has the same possible objectivity as the humanities, and therefore, the risk run by bringing in experiments, tools and methods from the practice of architecture should not be alarming as long as the use of these **is done systematically, and new insight is expressed and communicated in a way that is useful to others.**” (Hauberg, 2011)

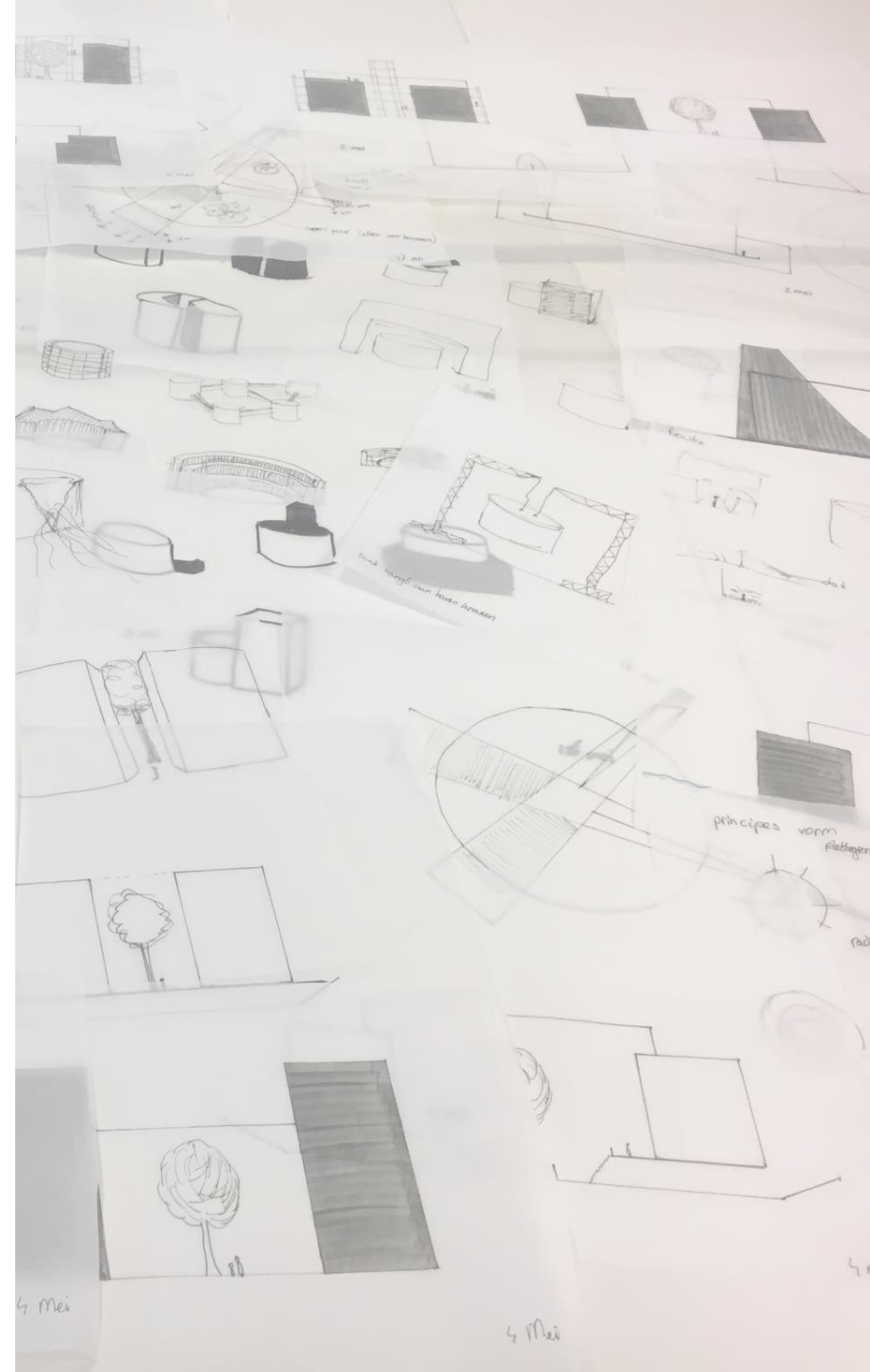
“Research through art and design is a material-based research, development work and action research: practical experiments in laboratories **resulting in reports and step-by-step diaries**, clear about what is being achieved and communicated through the activity of design process.”(Hauberg, 2011)

# Research by design: my experience

Experimenting

Defined problems: daylight,  
privacy and construction

Continuous process



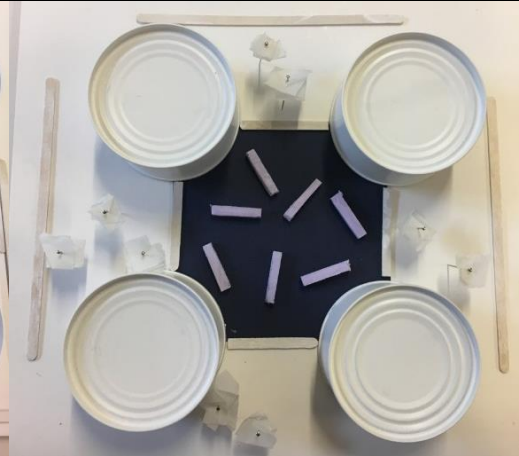
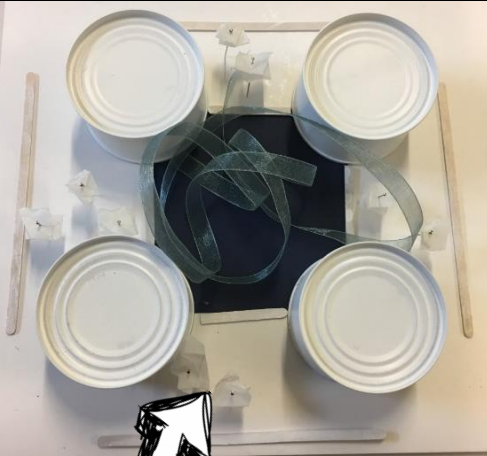
My design



# Rotterdam Harbour



# Concepts



Pond



Square



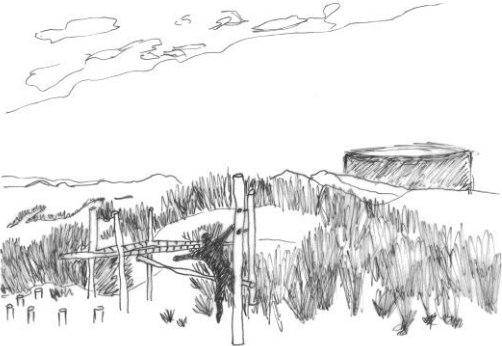
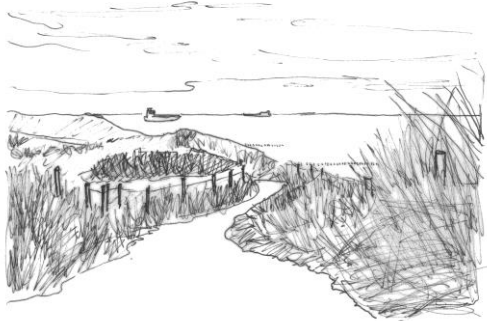
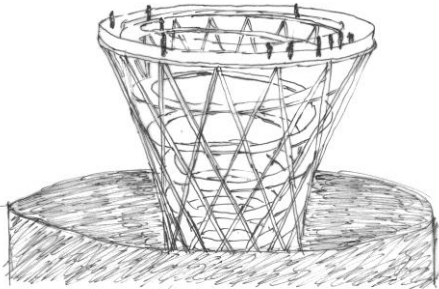
Pond



# Location

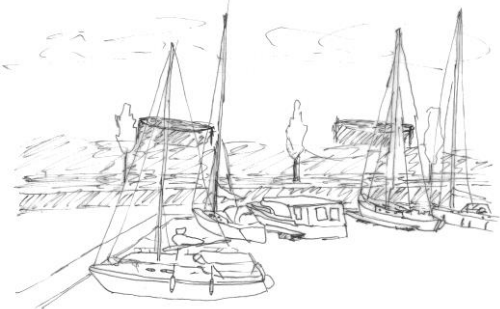
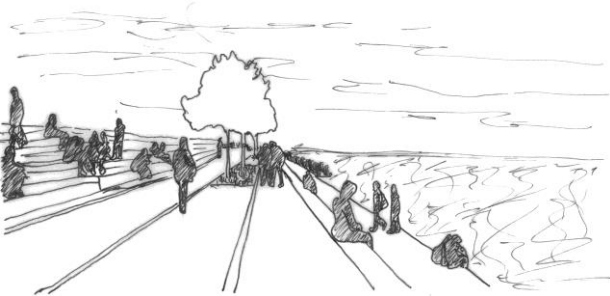


# Location

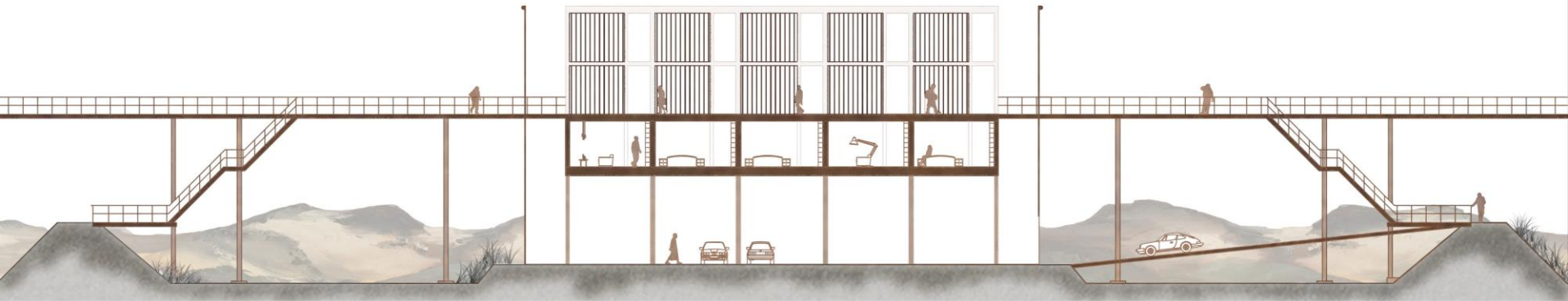




# Location



# Urban design



# The raised street



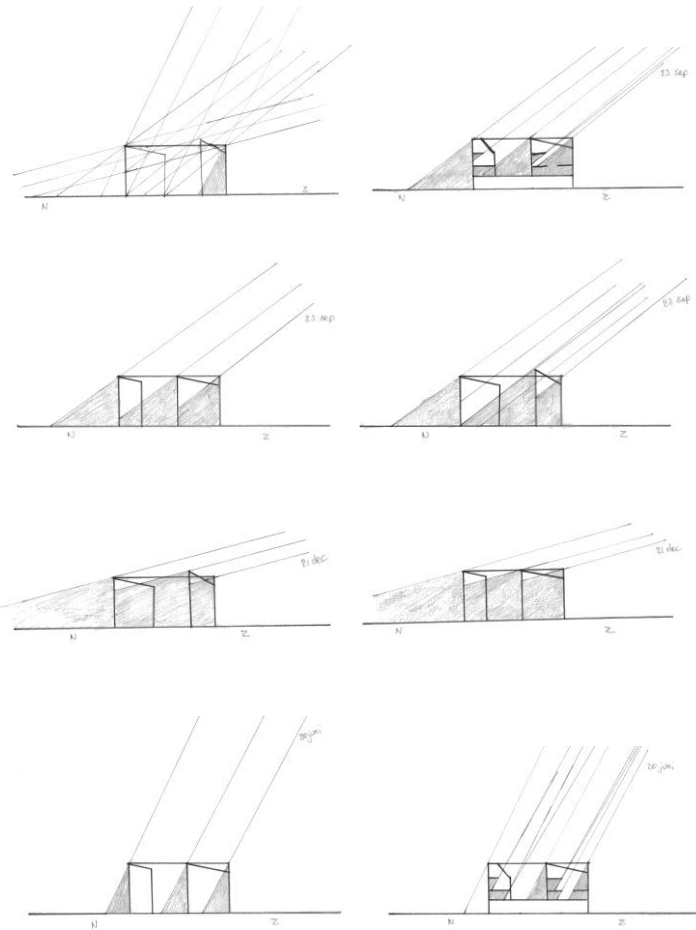
# The raised street



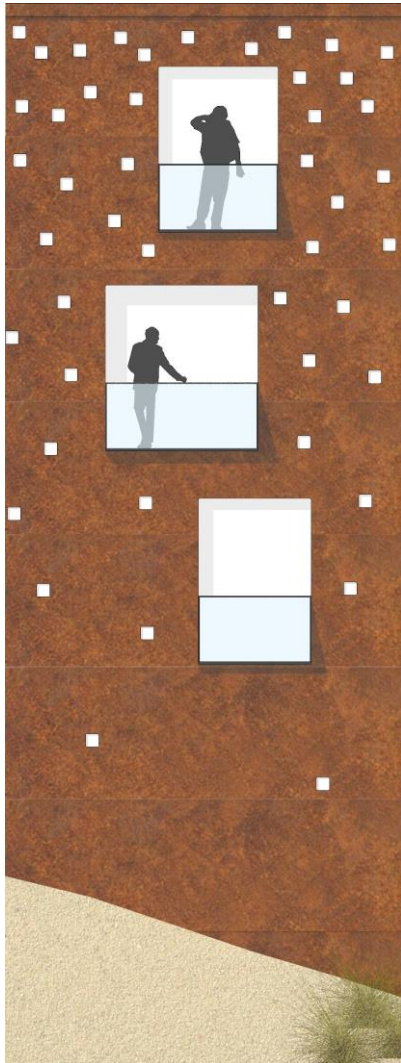
# Daylight and Privacy



# Daylight



# Facade

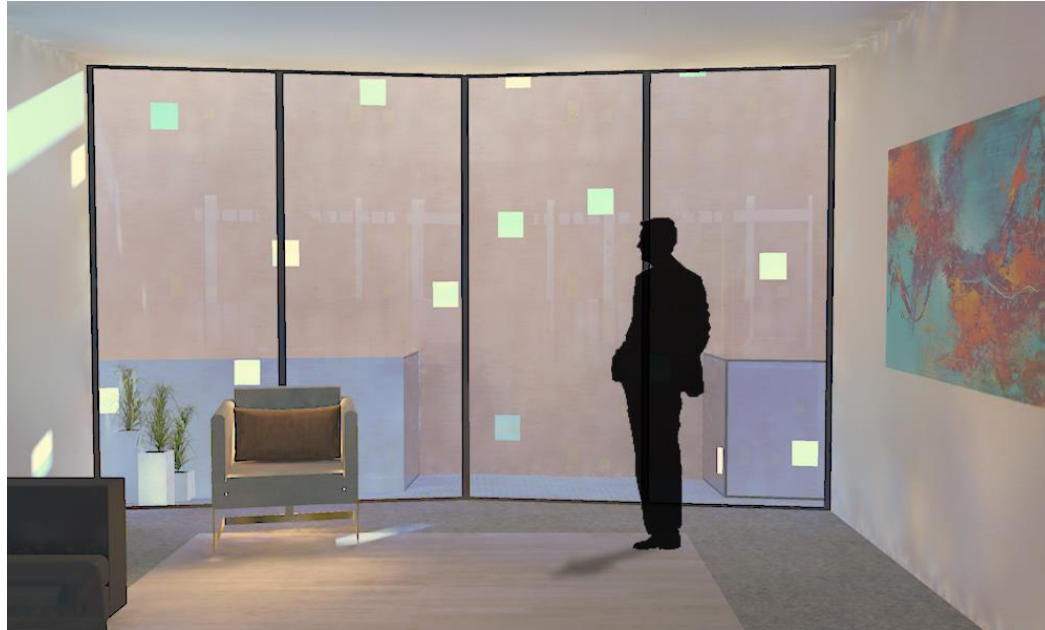


# Interior

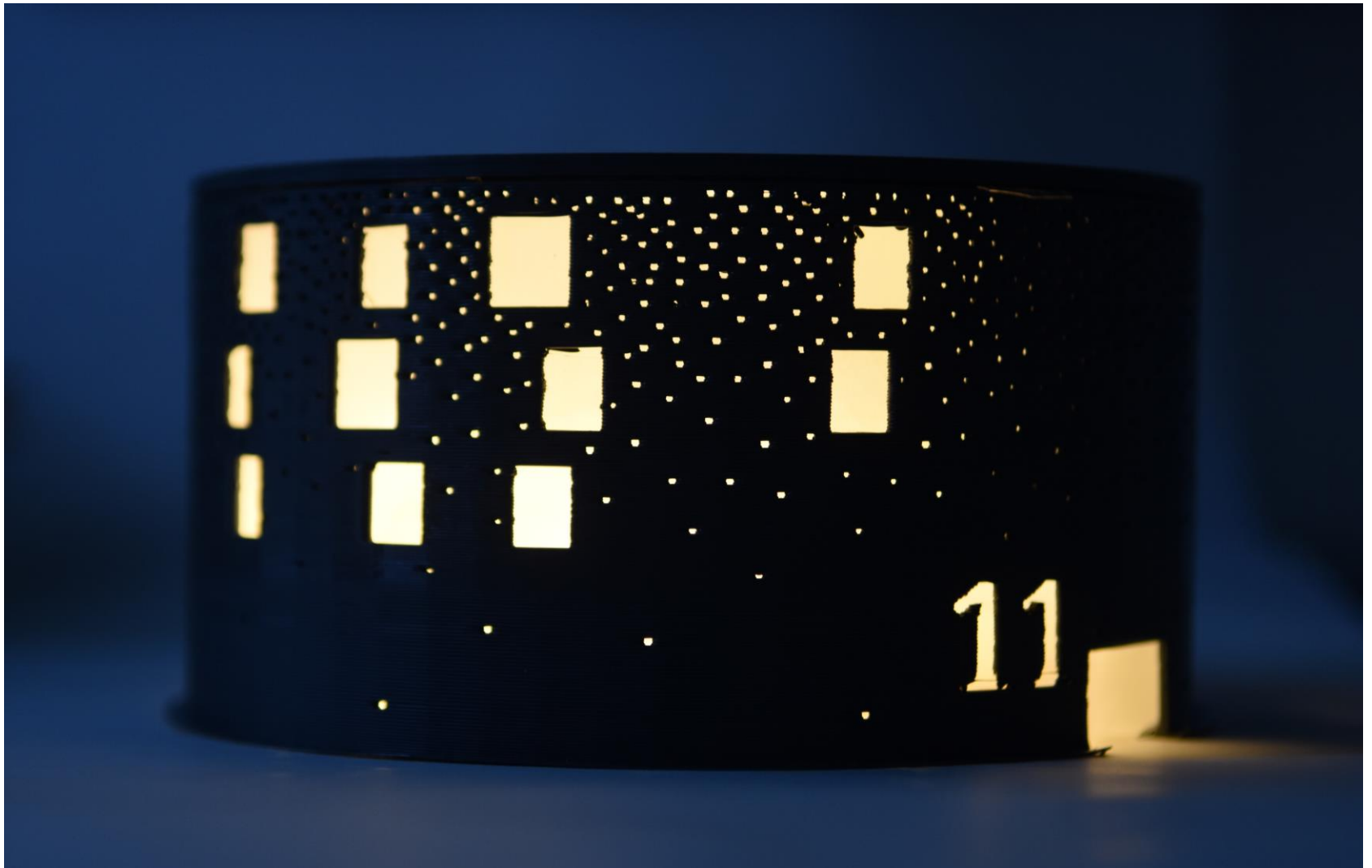




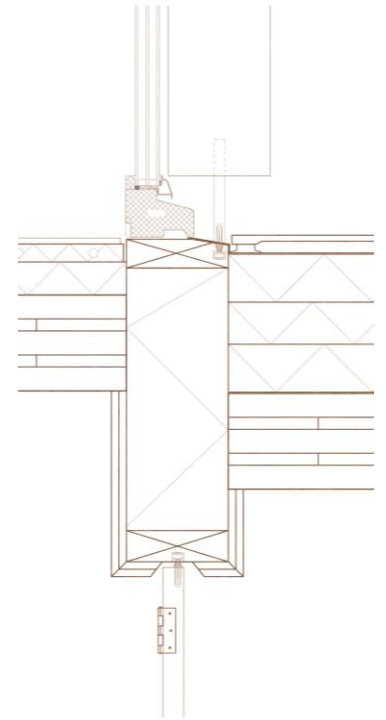
# Interior



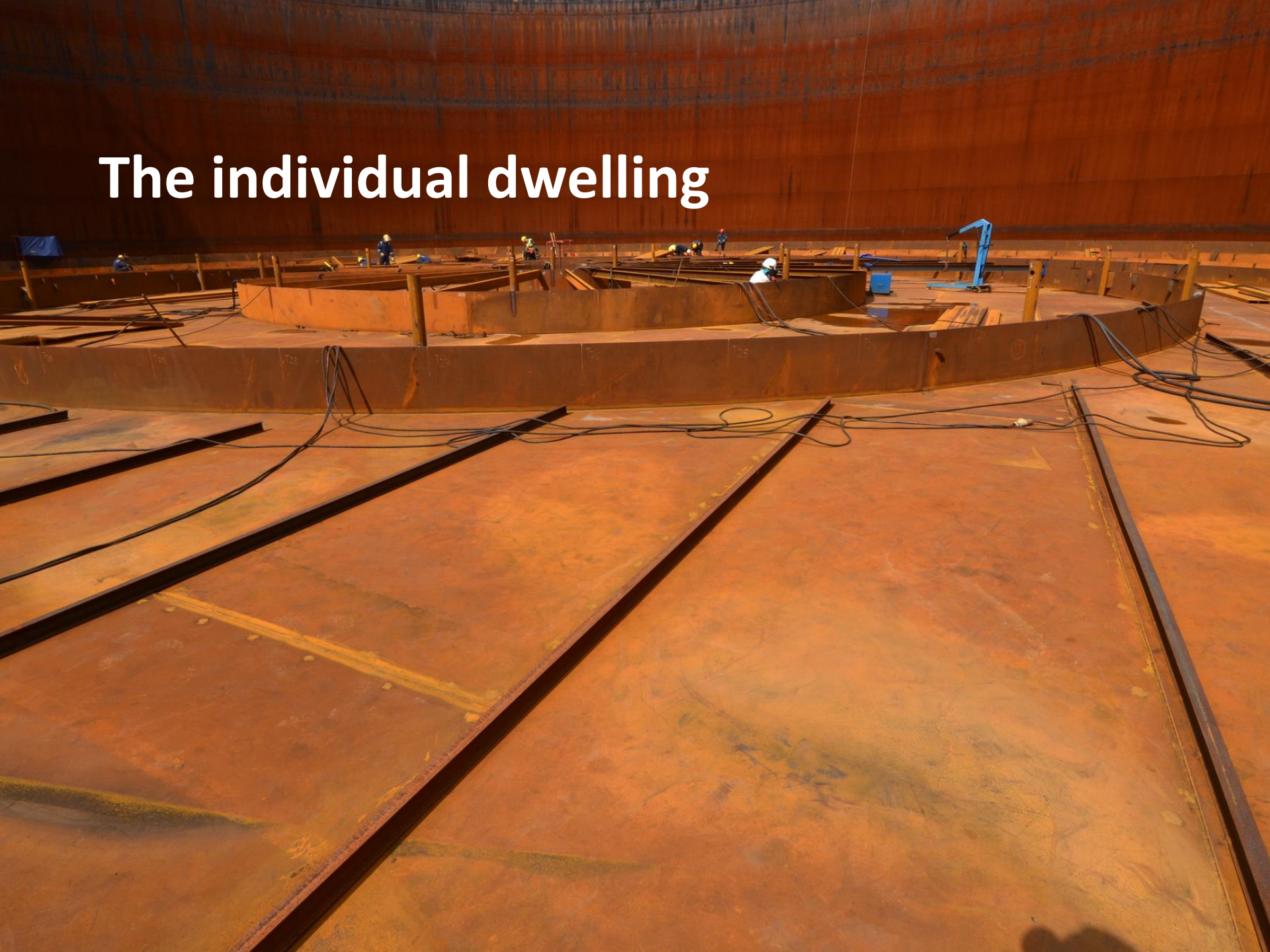
## Tank at night



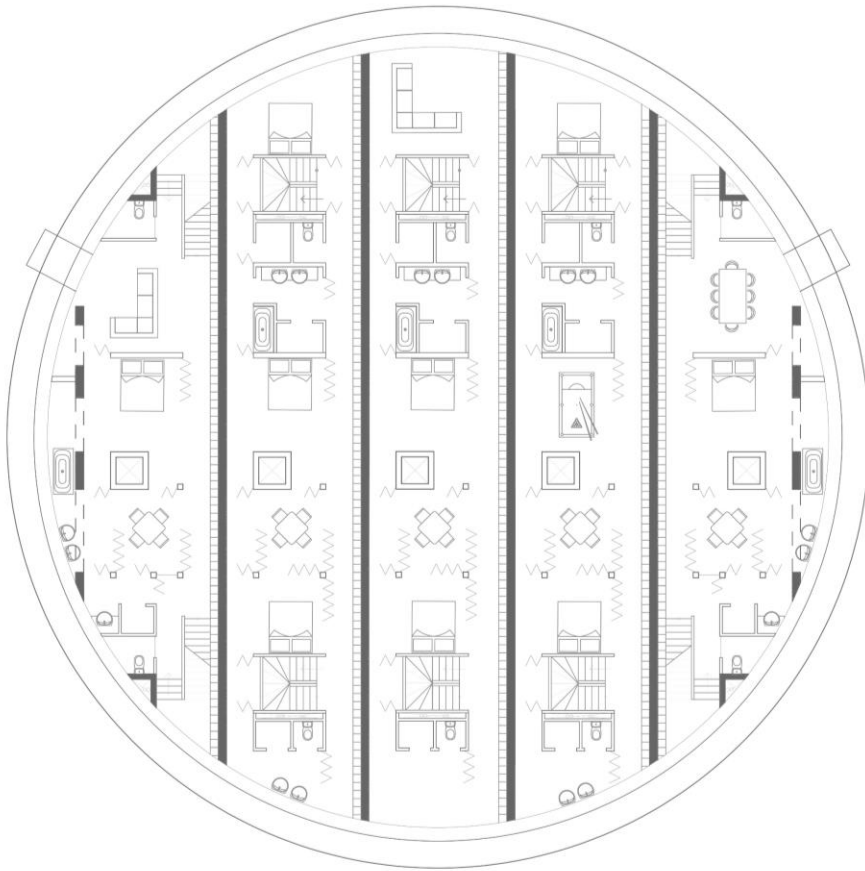
# Facade at street side



# The individual dwelling

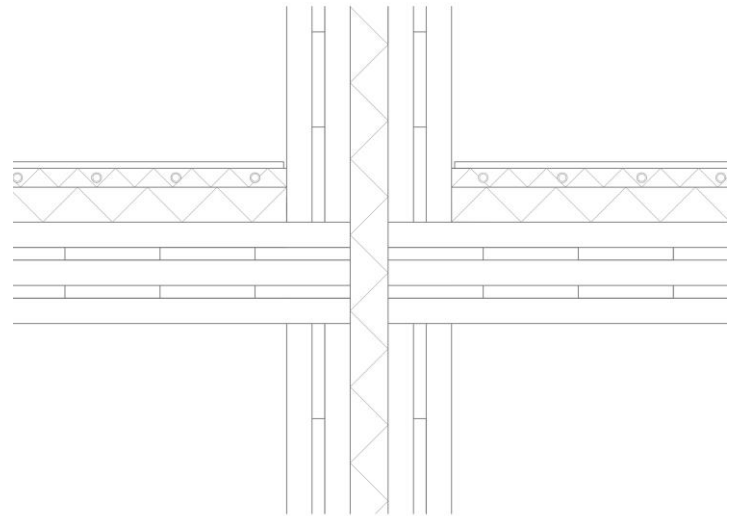


# Structure



Current foundation  
Max load 137.9 kN/m<sup>2</sup>

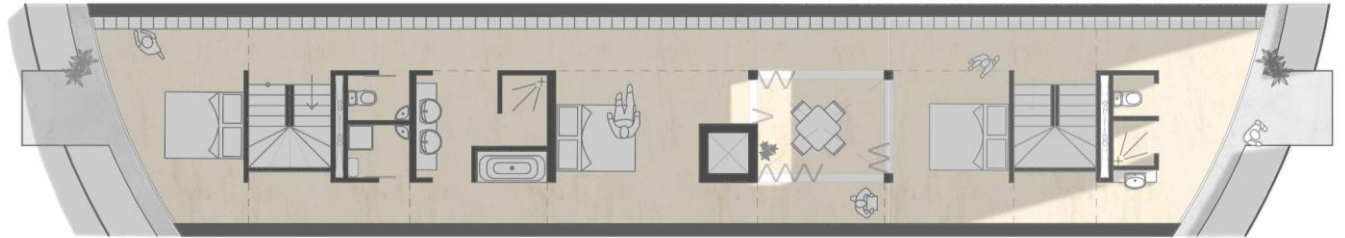
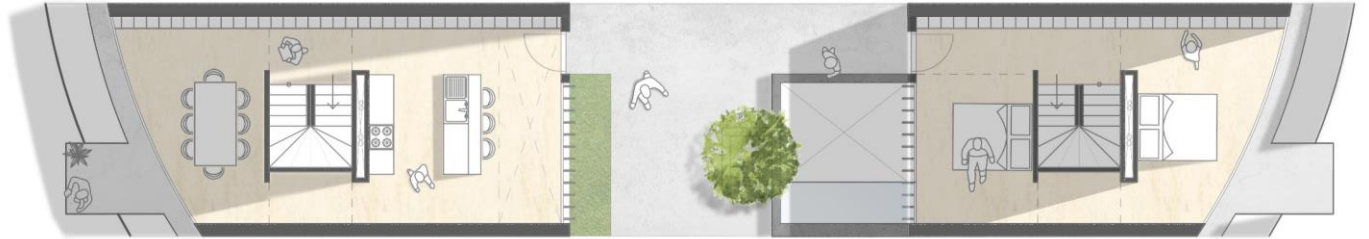
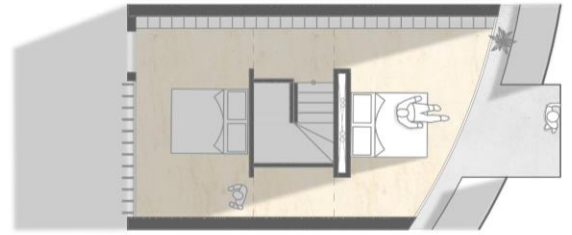
Therefore line loads and wooden  
construction



# Flexibility



# A dwelling

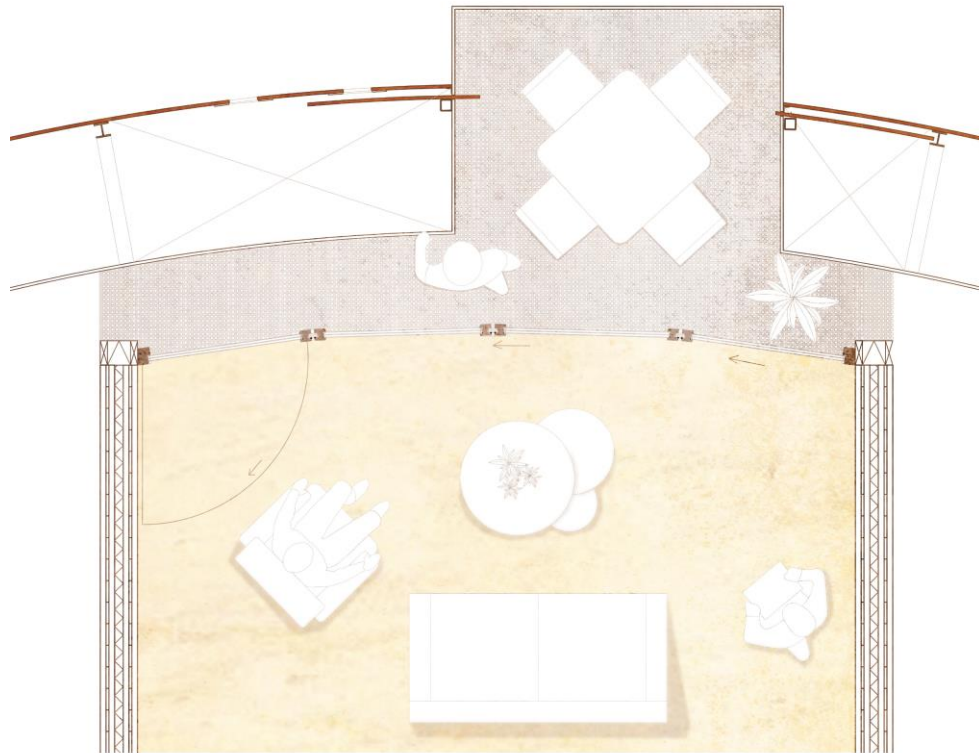


# A dwelling

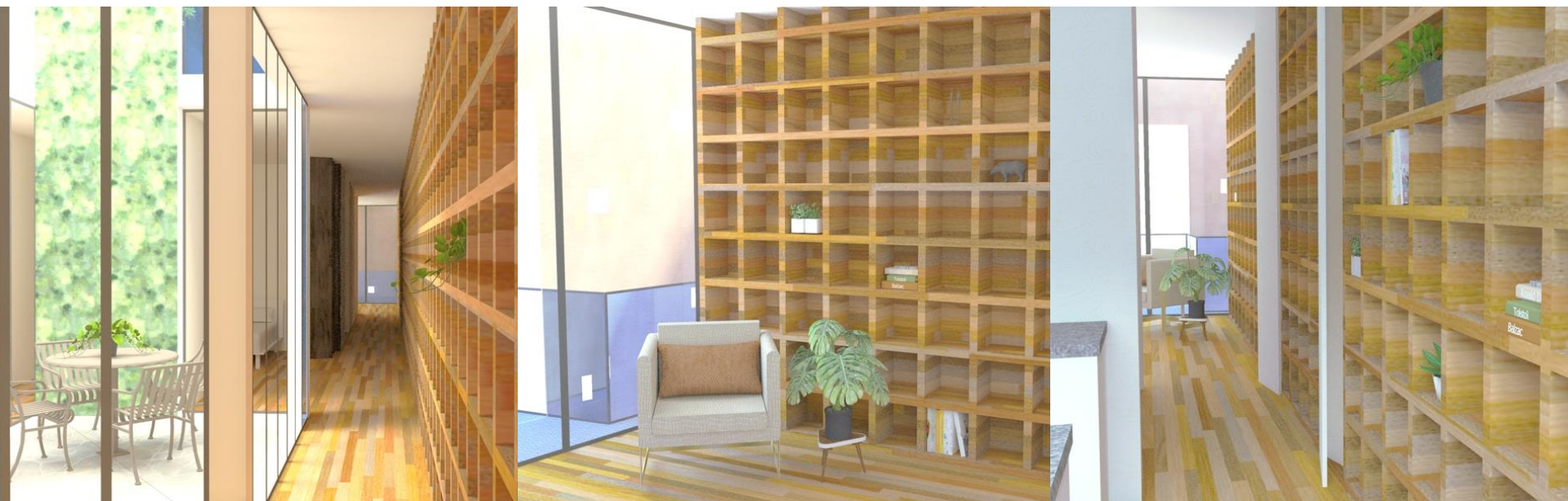




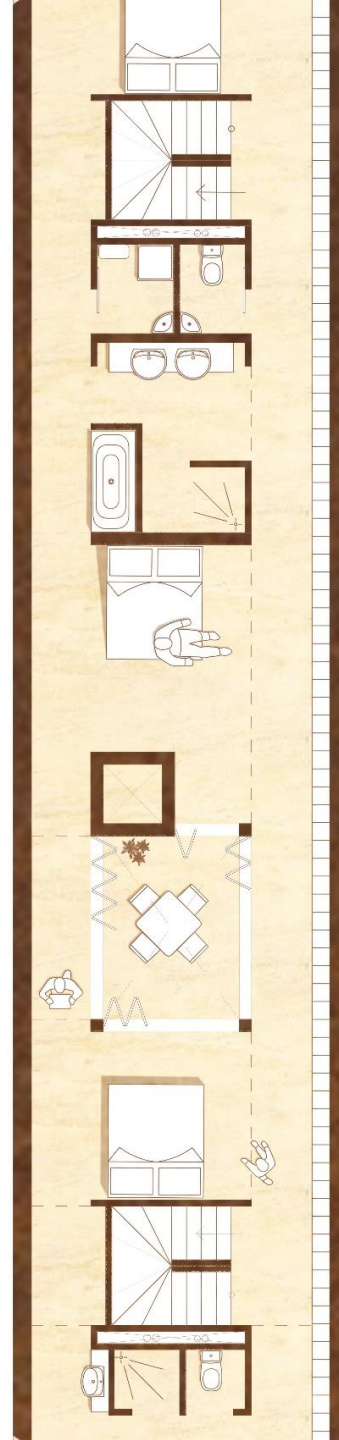
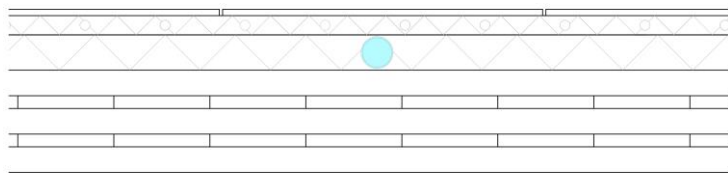
# Opening doors



# Interieur



# Flexibility: utility shafts



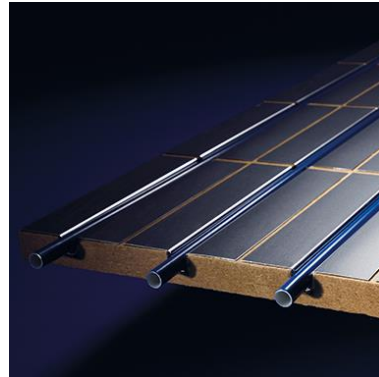
# Sustainability



# Oil free materials



Expanded Cork



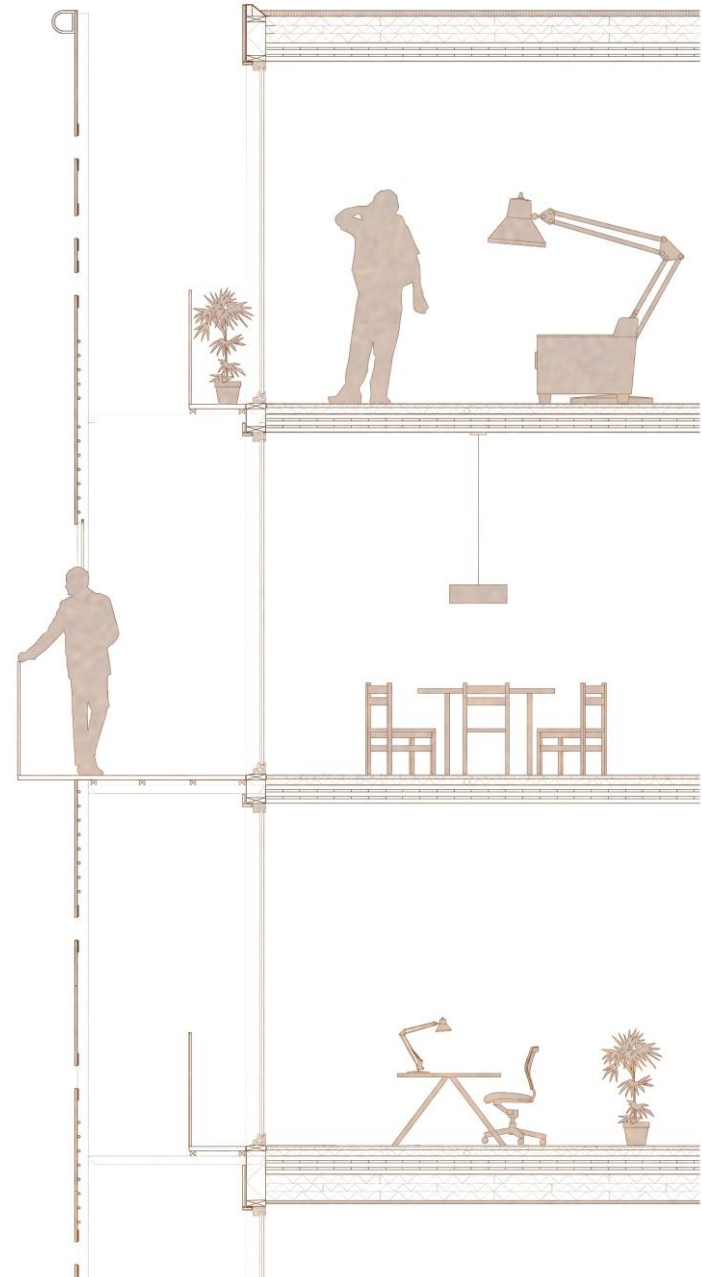
Wood fiber



Hemp



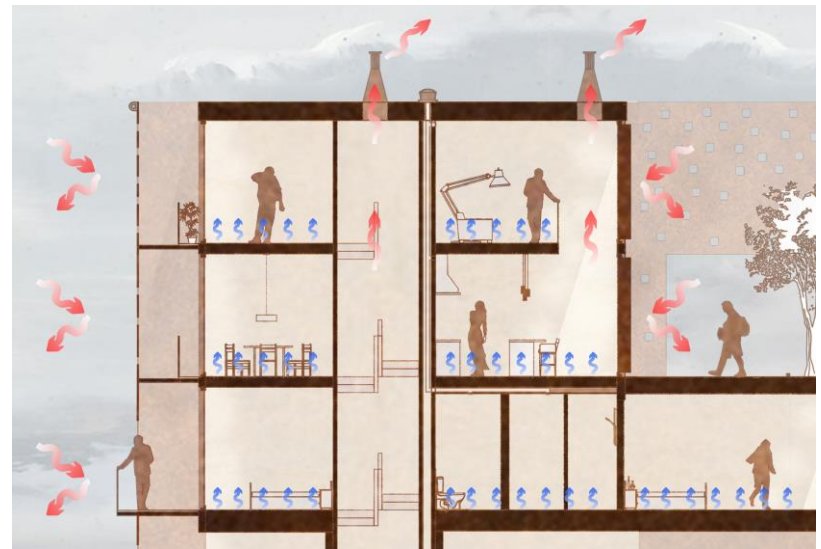
Silicone



# Climate

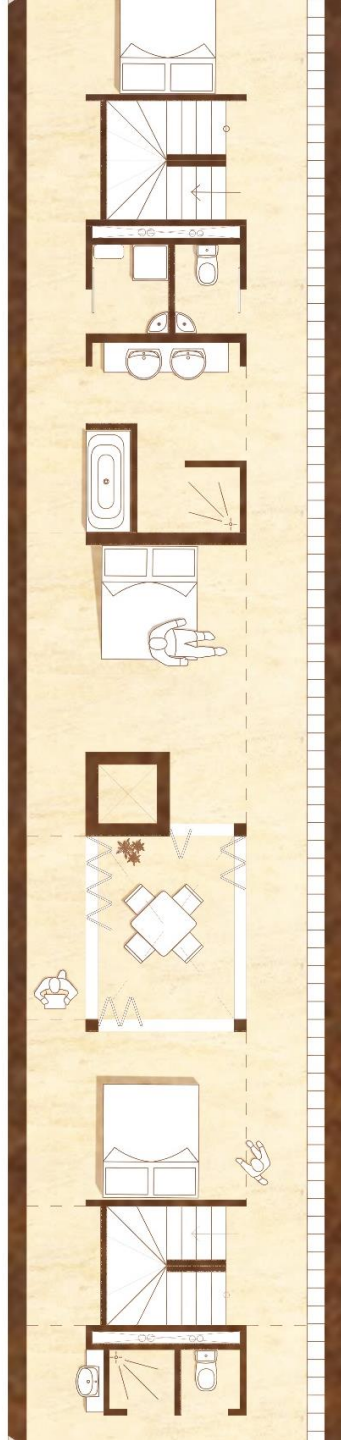
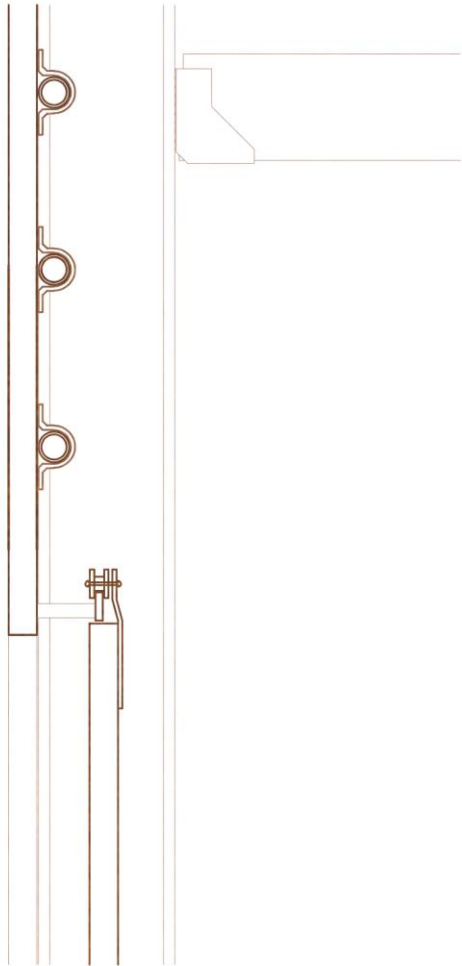


Winter



Summer

# Climate

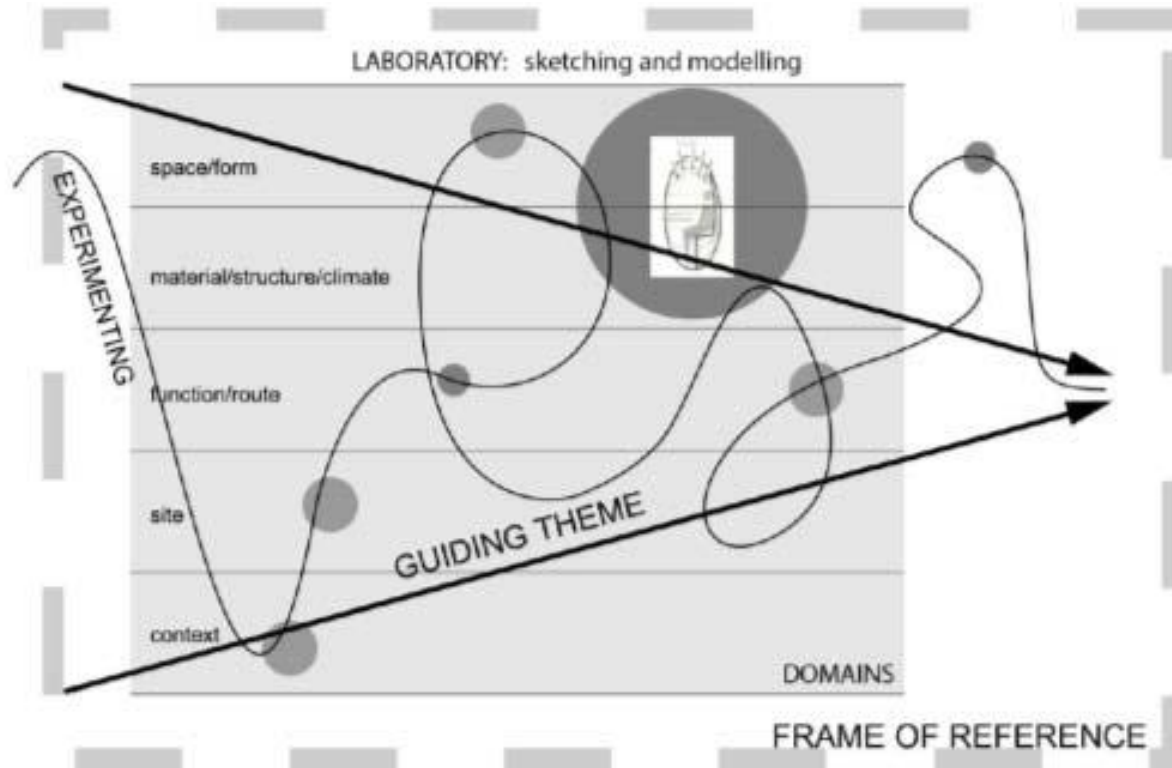


# Discussion





# Research by design



(van Dooren, 2014)

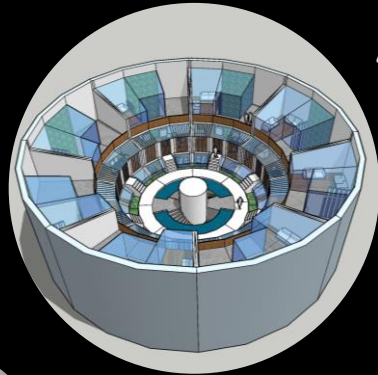


Dunes

Stacking



Floating dwellings

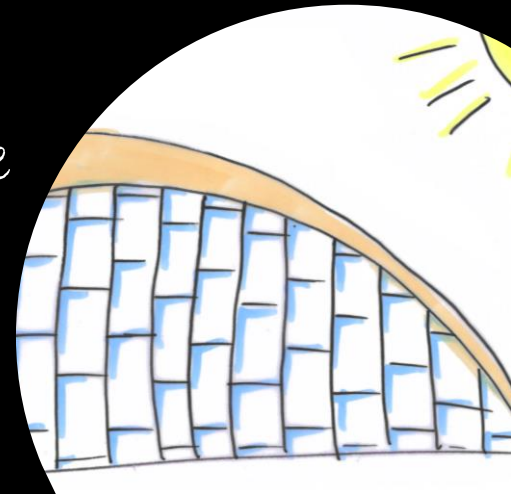


Cans



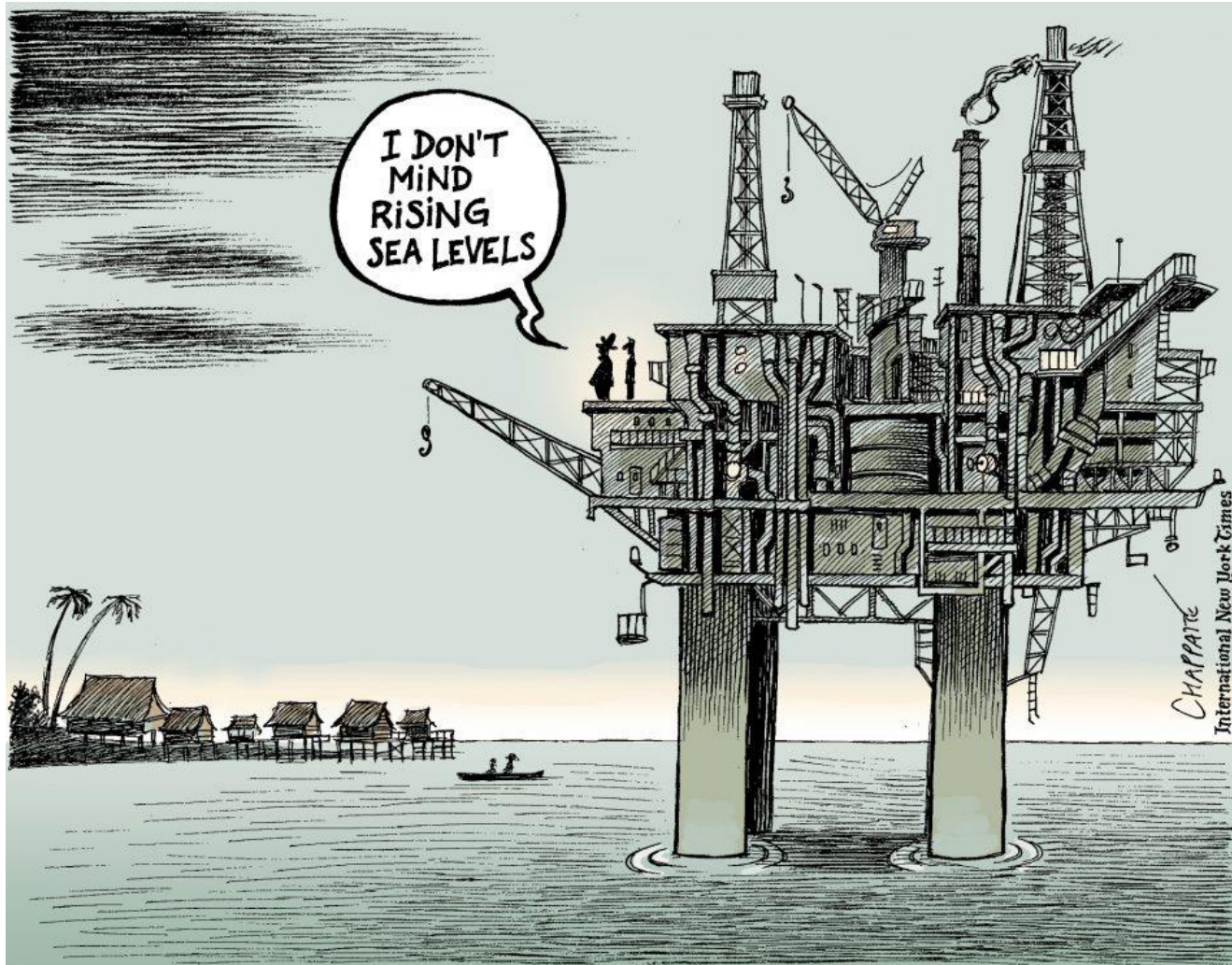
Tree houses

On his side



# Concepts

# Discussion: re-purposing oil tanks



(Chappatte, 2014)

Insert your  
idea here

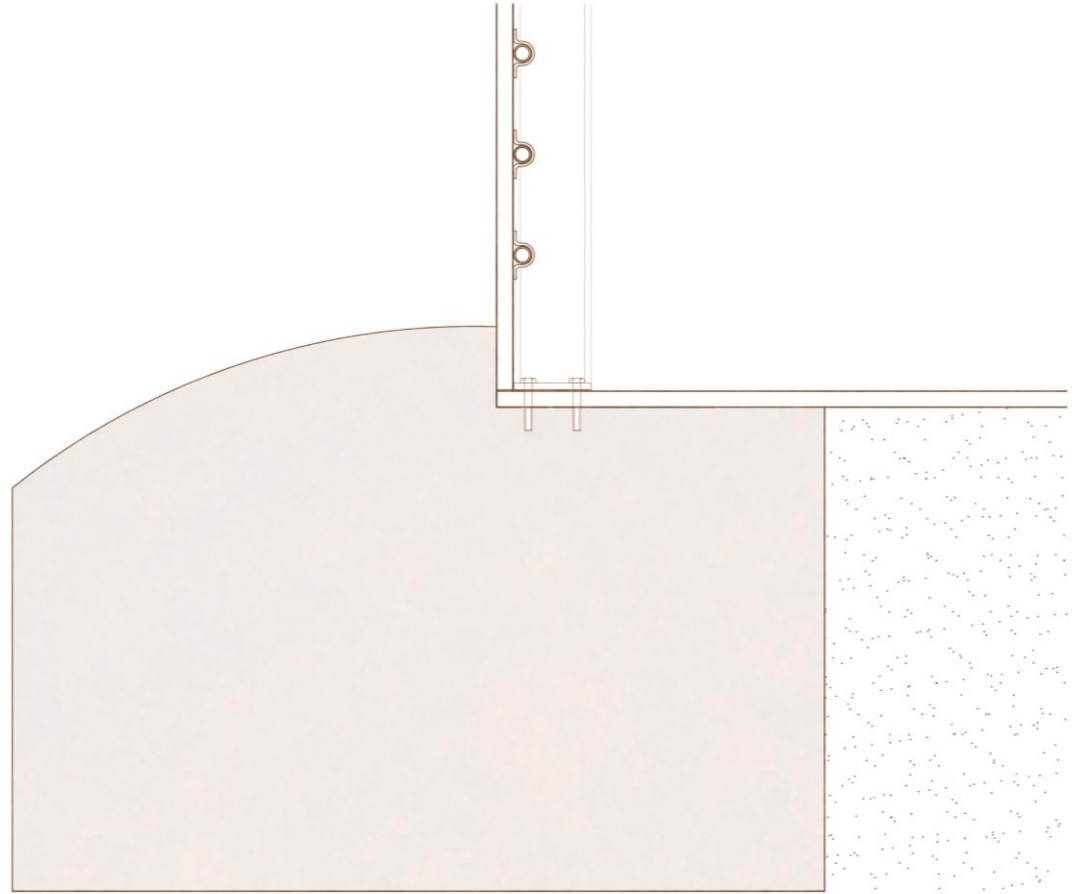


**Living in a world with(out) oil**

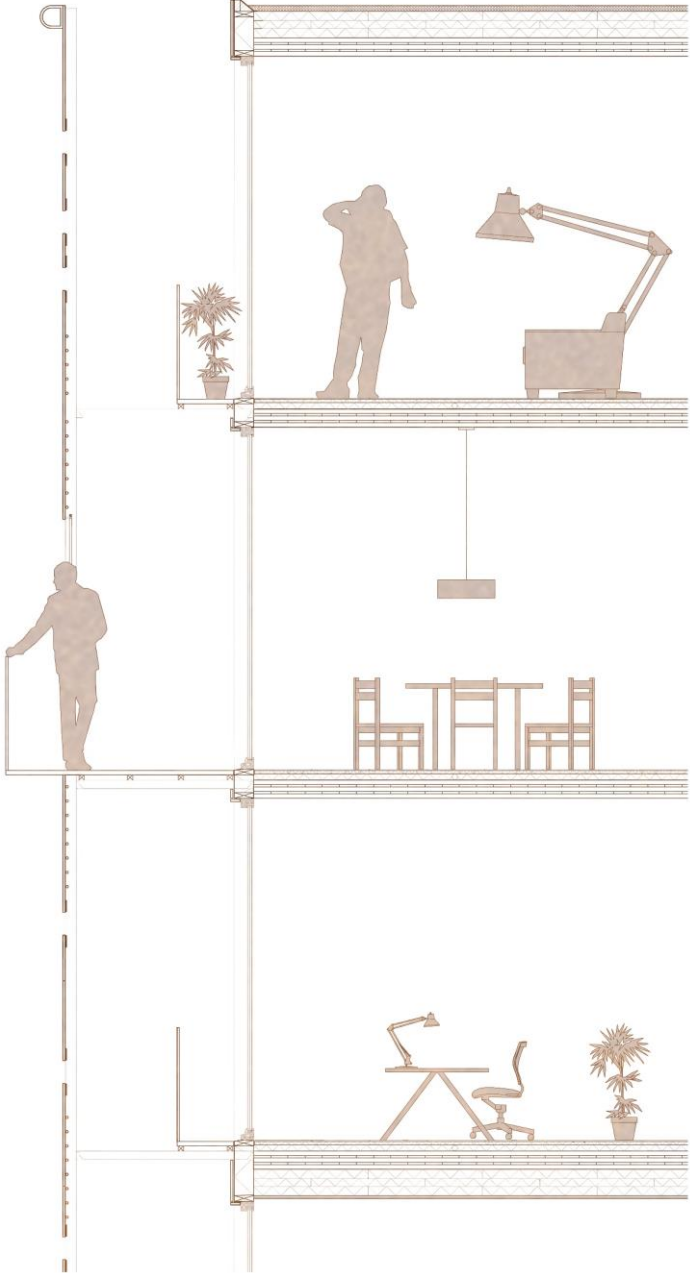
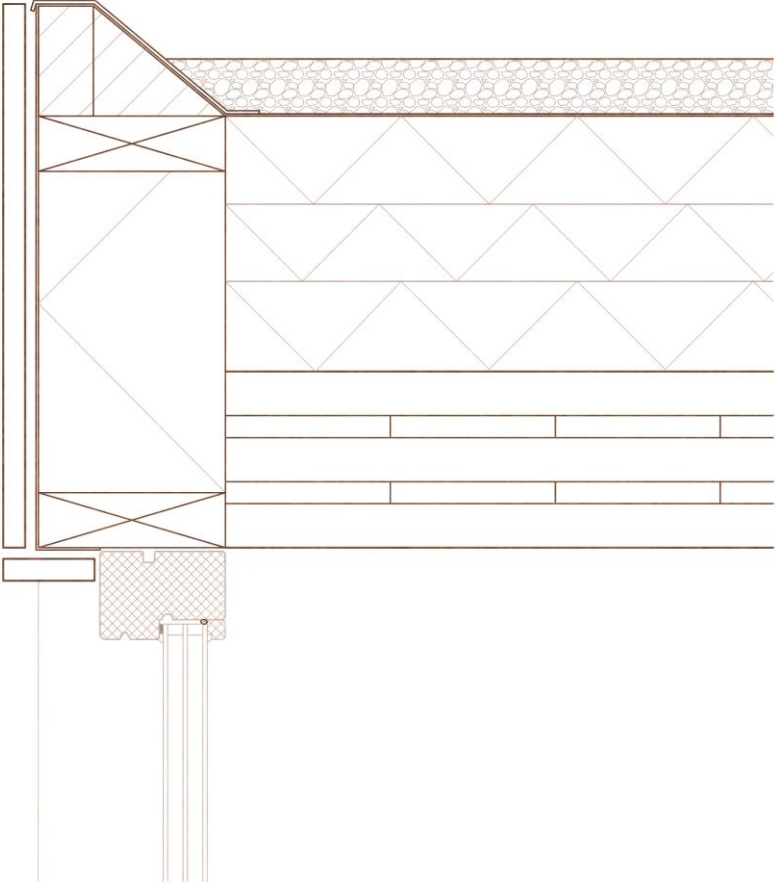
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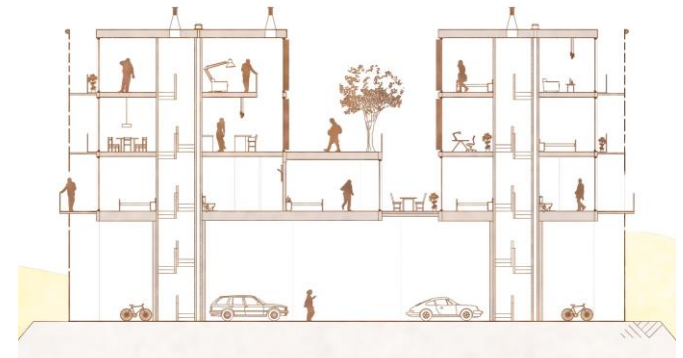
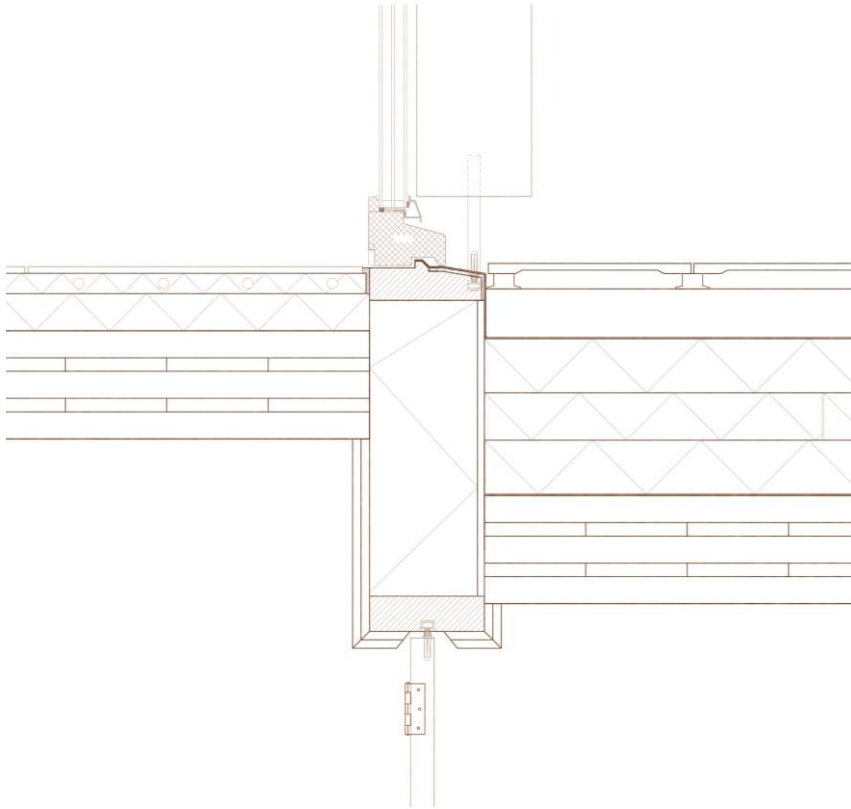
# Foundation



# Details: roof

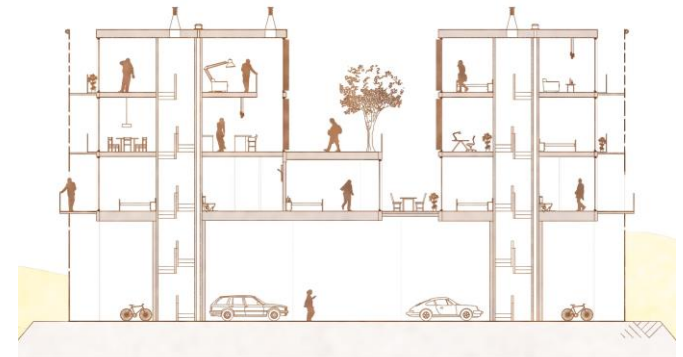
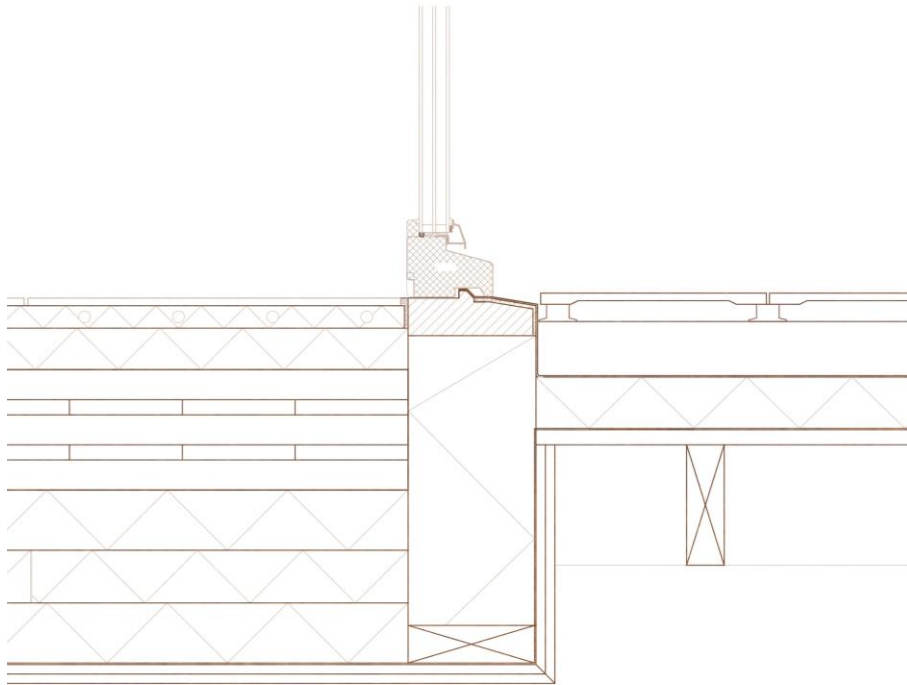


# Details: street

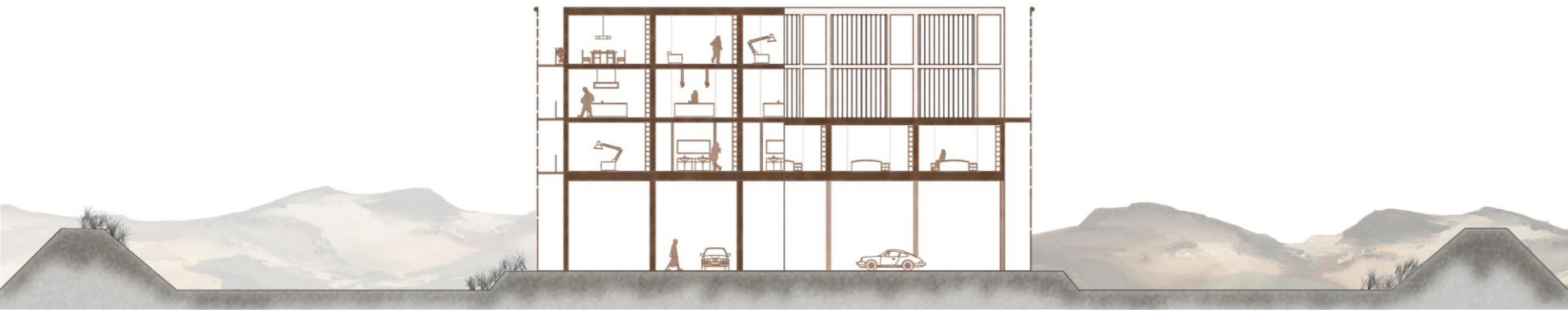




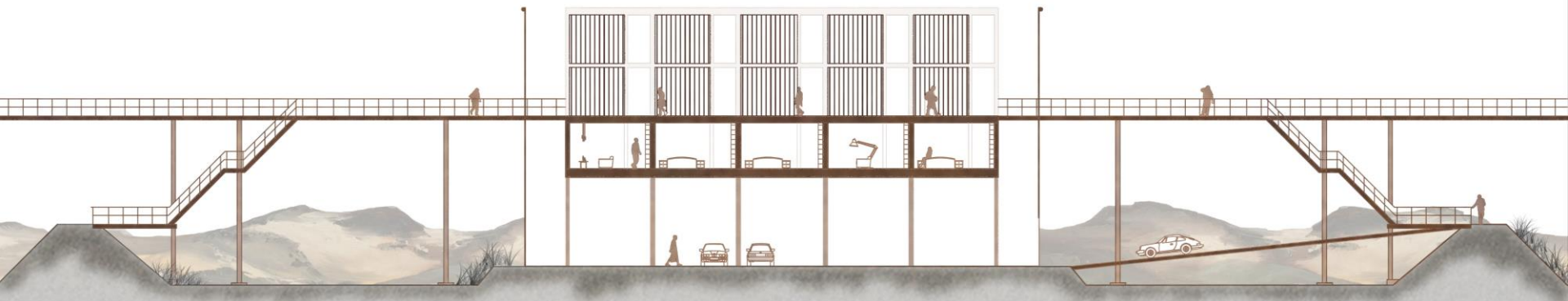
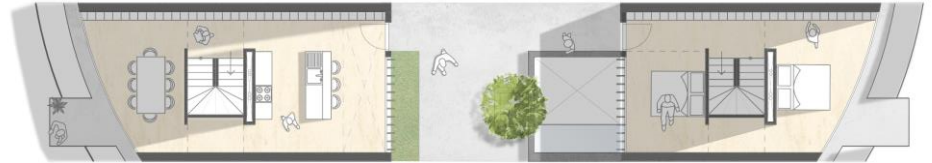
# Details: garage



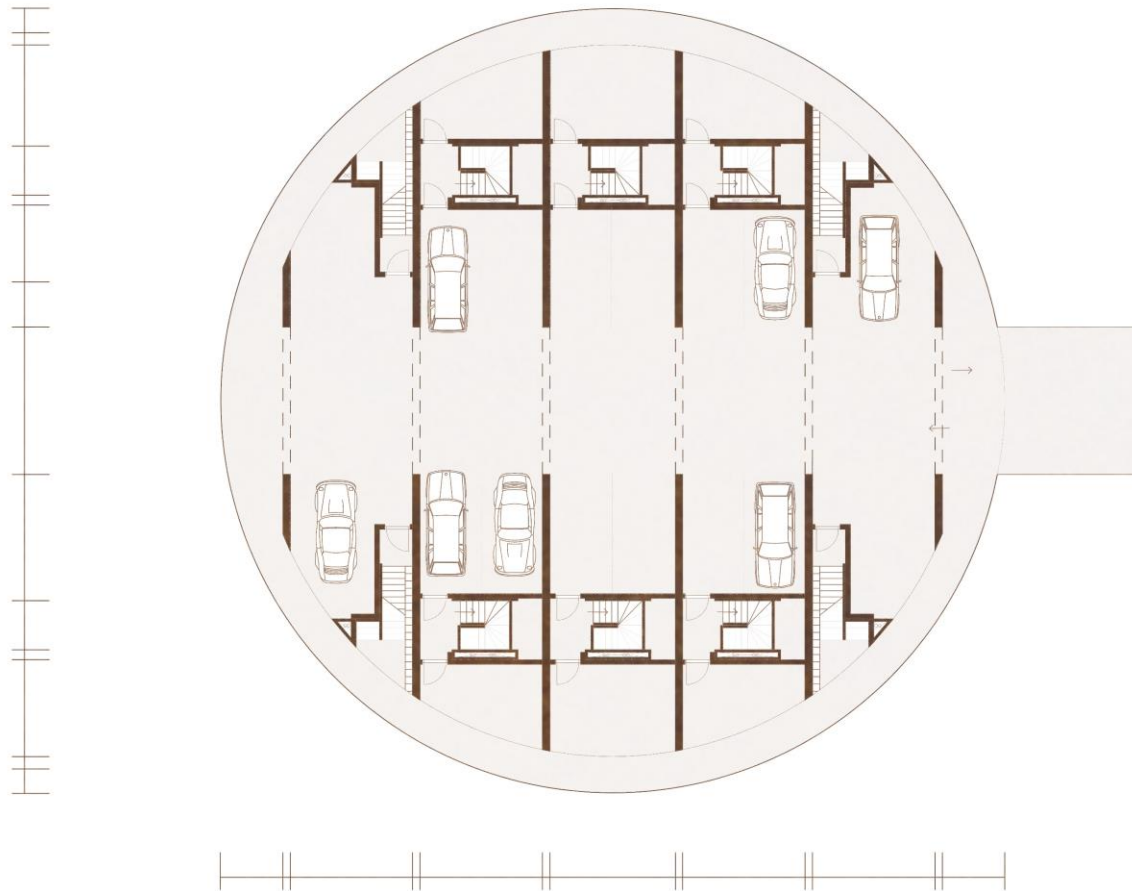
# Facade at street side



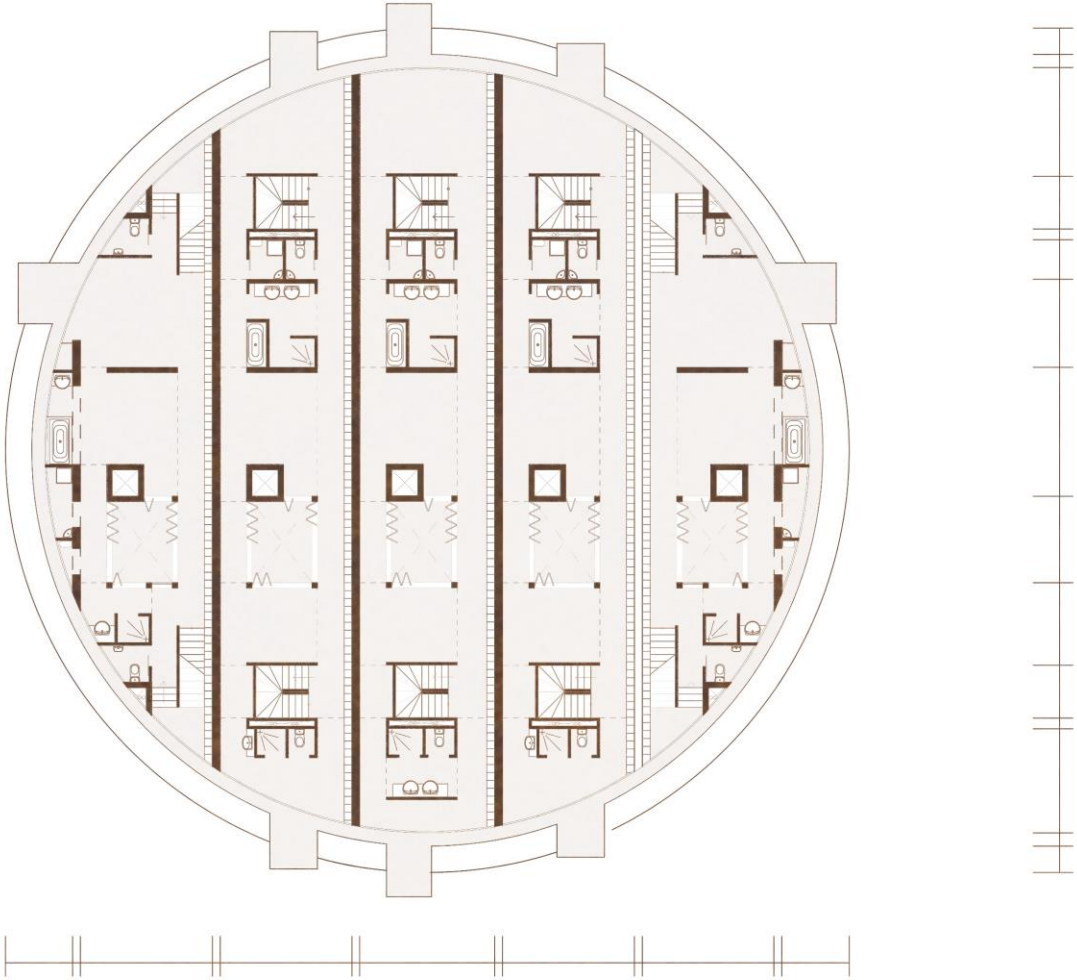
# The raised street



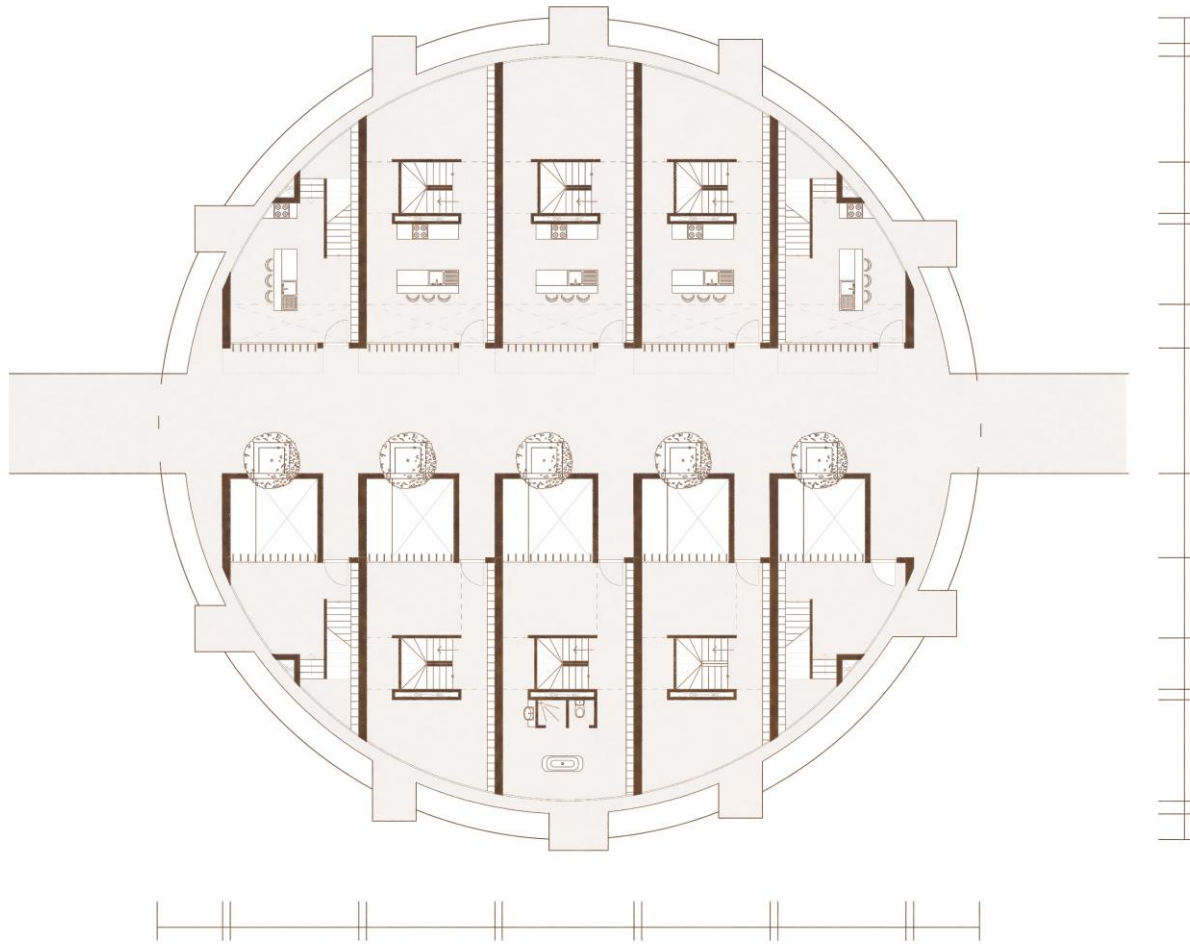
# Plan 00: garage



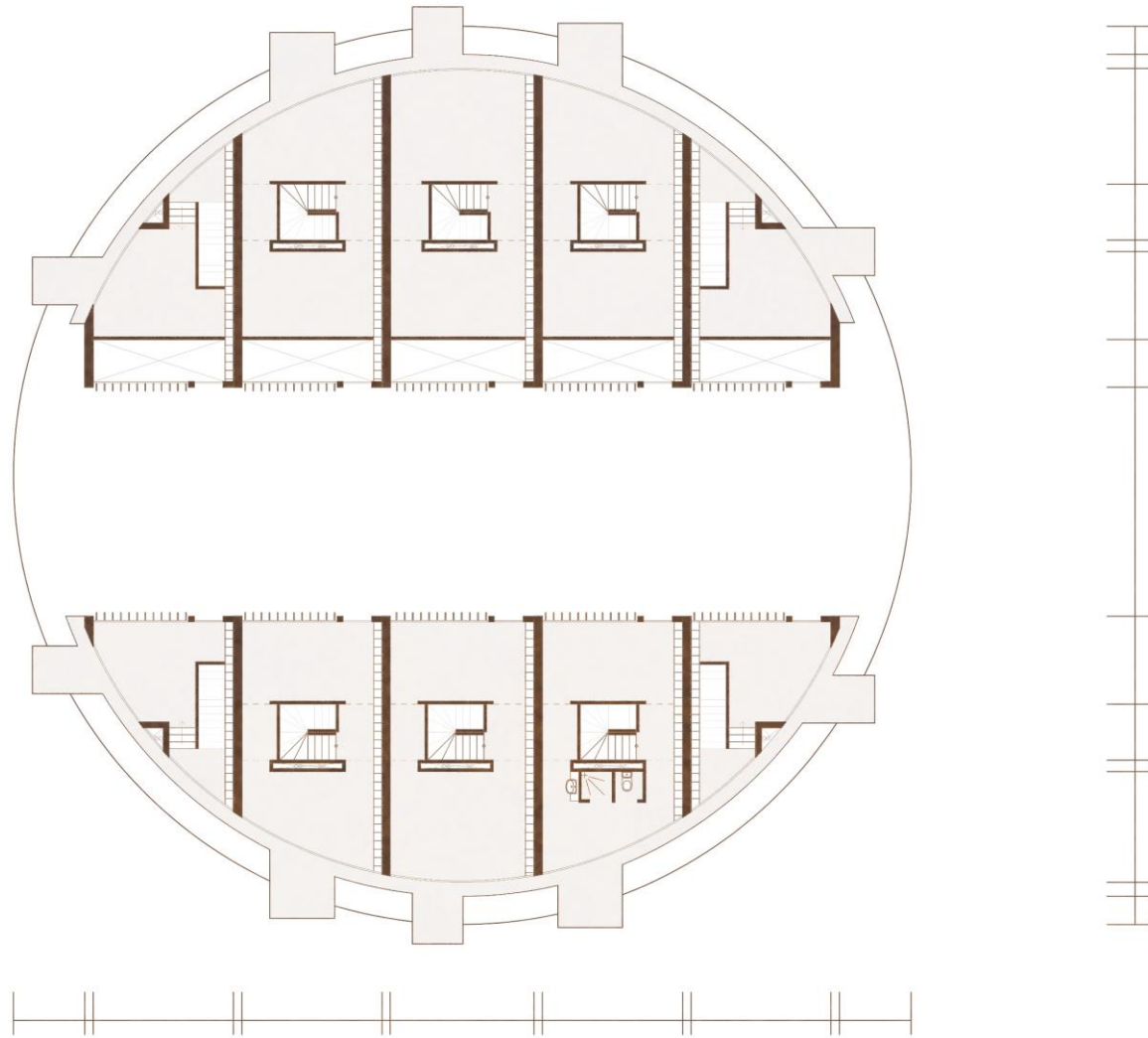
# Plan 01



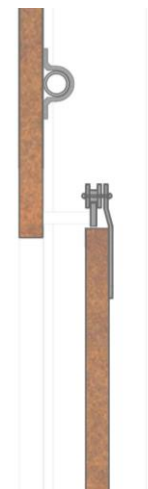
# Plan 02: street



# Plan 03

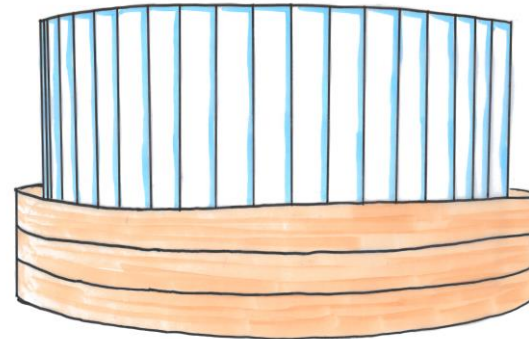
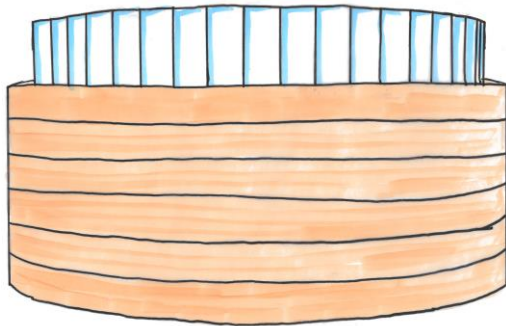
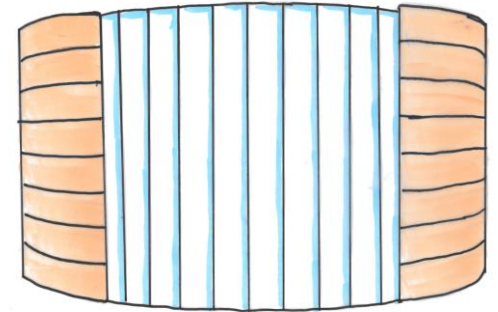
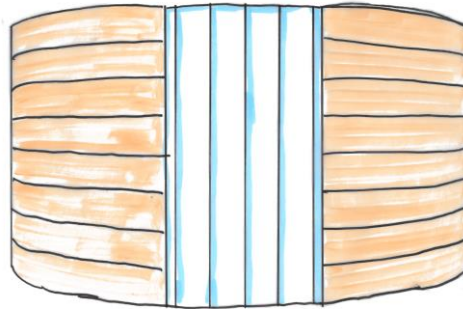
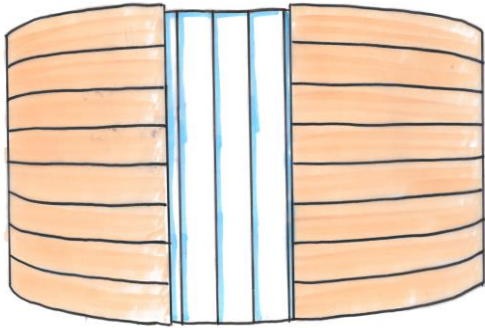


# Opening doors





# Tank openings



# Cleaning

Bas Fuhring van:



# Interieur



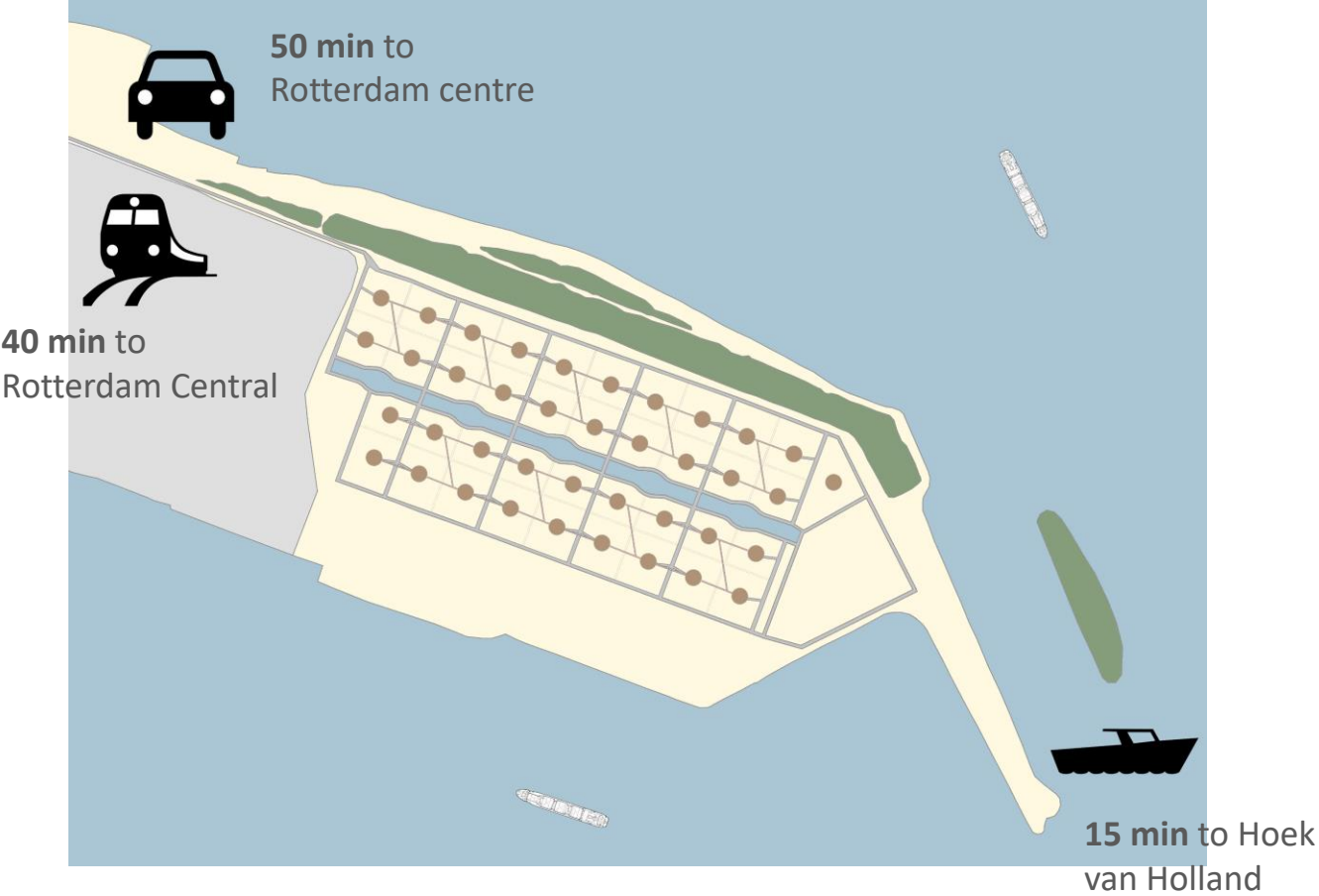
## Facade at street side



# Impressions



# Location



# Location

