

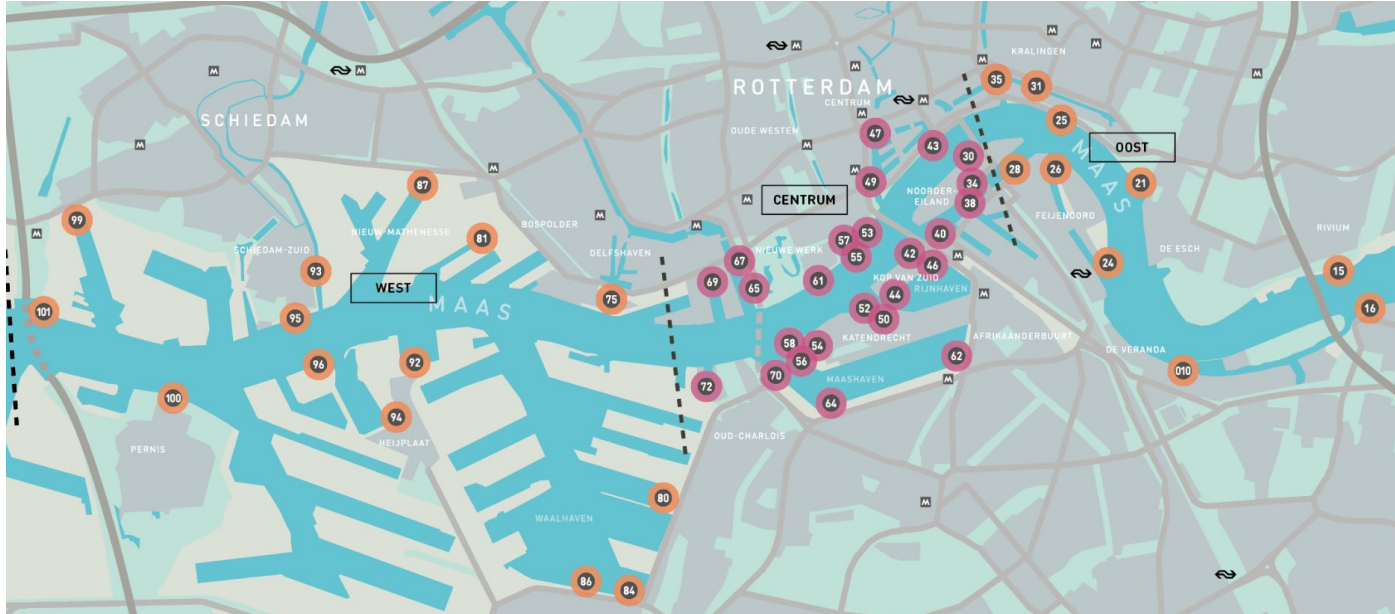
# Urban Furniture 2

David, Samuel, Leticija, Kevin, Solkyu

# Content of the design

- Display of data regarding the watertaxis (schedule, booking, etc.)
- Weather + wind shelter.
- Interaction between stops.
- Offering games to make waiting more fun (Quiz, pong, catch the light, jump'n'run games, etc.)
- Inclusion of insects, plants, groups of people
- Educational aspect: Raising awareness of an issue by monitoring and displaying sth./ providing (historical) info about the area.
- Actuation sensors integrated in the cavities of the voronoi structure.

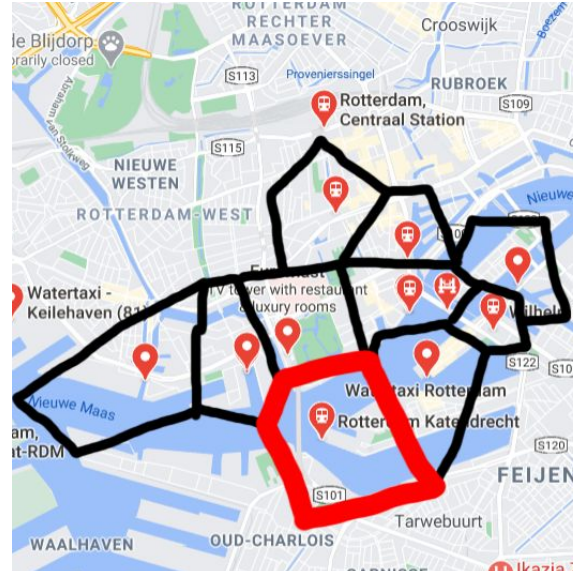
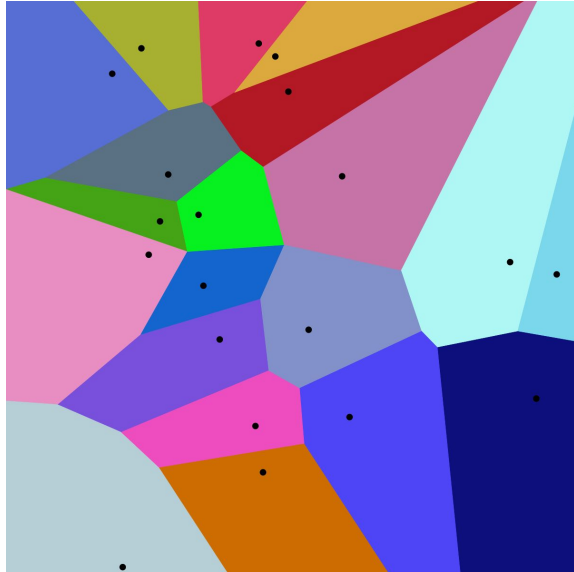
# Location



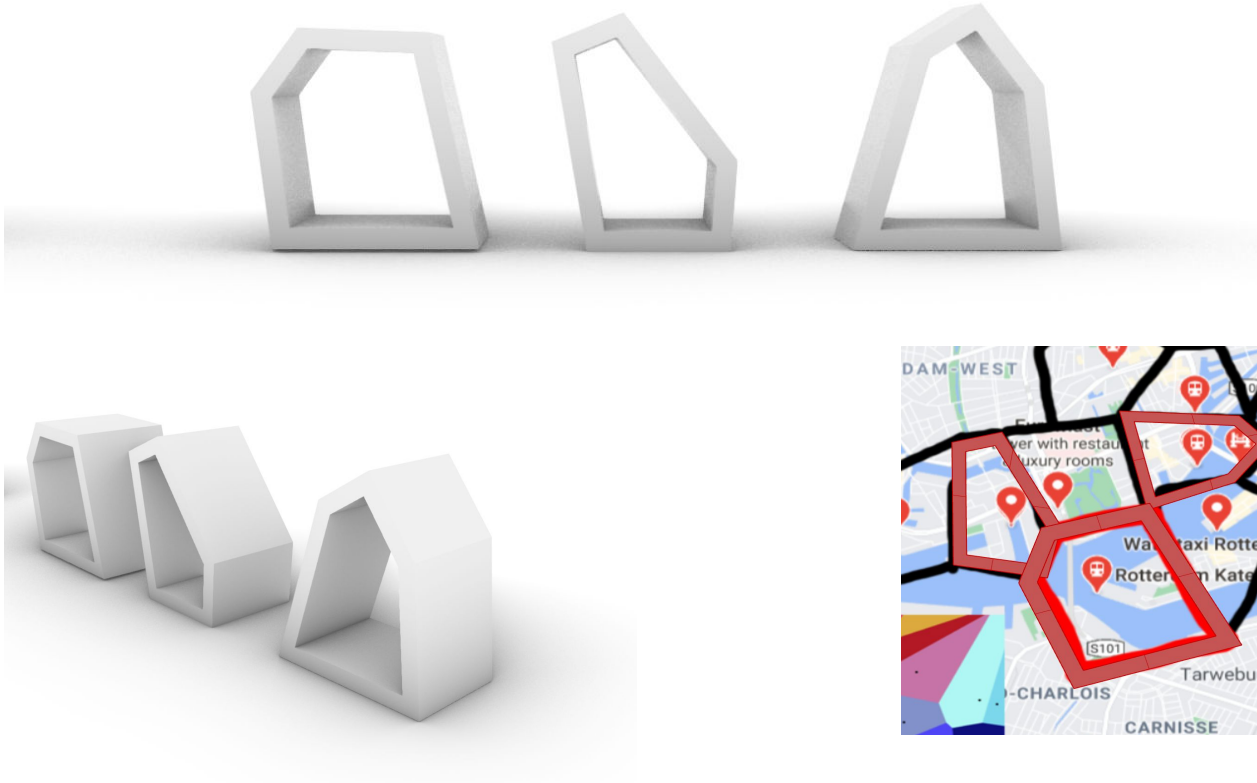
Rotterdam - water taxi stops

Design ideas

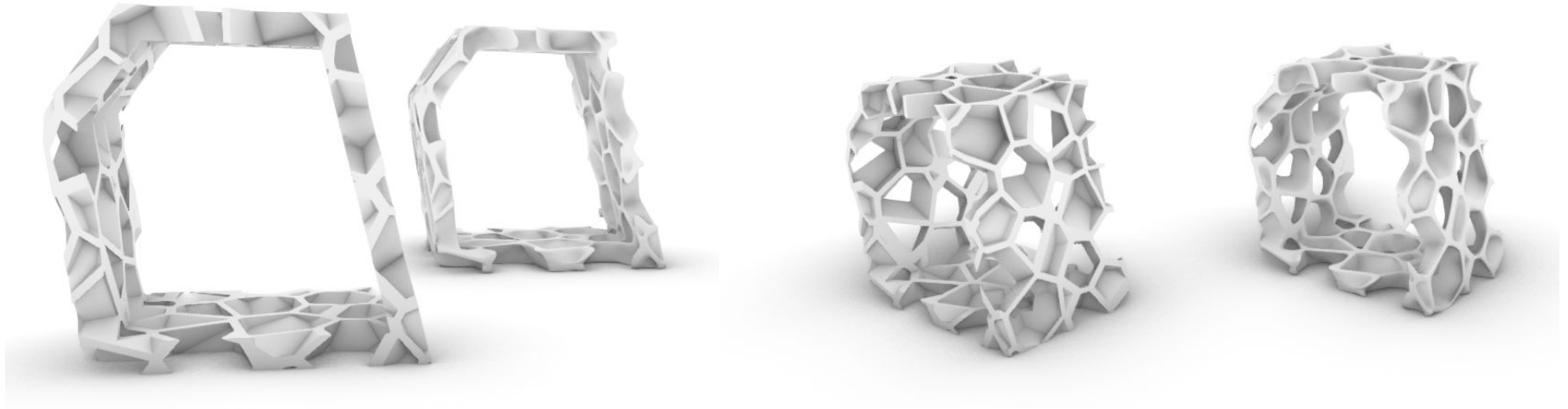
# Water taxis - Rotterdam- voronoi



# Design 1- Voronoi in Voronoi in Voronoi - VVV



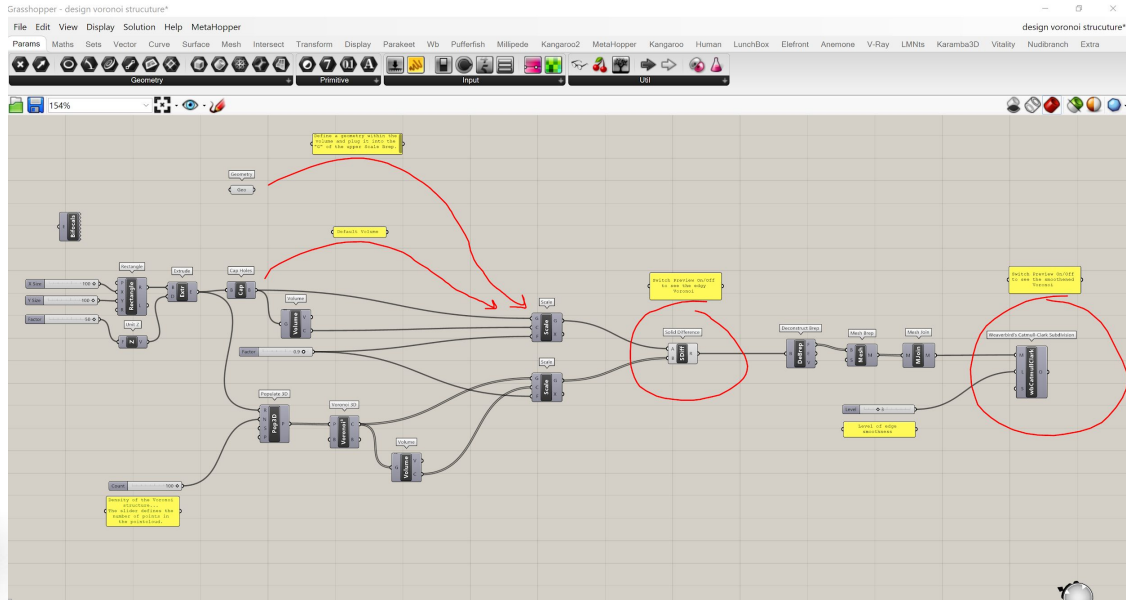
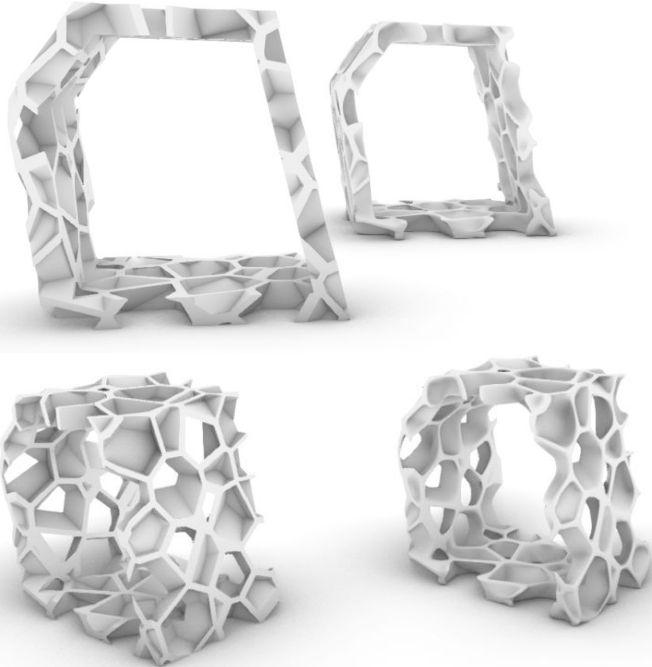
# Design 1- Voronoi in Voronoi in Voronoi - VVV



# Design Script

Grasshopper script that allows us to preview the voronoi structure in designed objects.

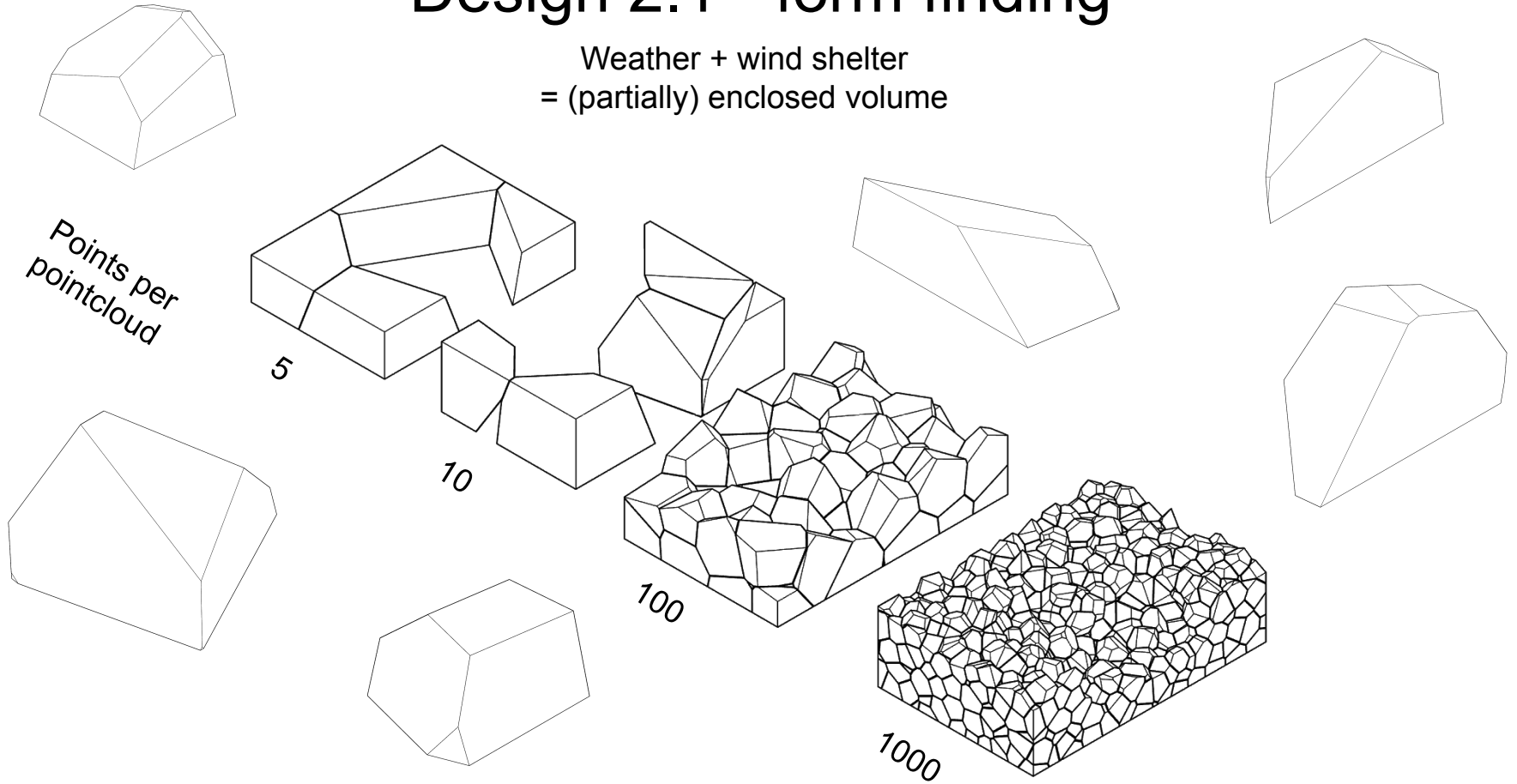
- 1 control over the number of points in a point cloud.
- 2 defining a geometry as the boundary of a voronoi structure.



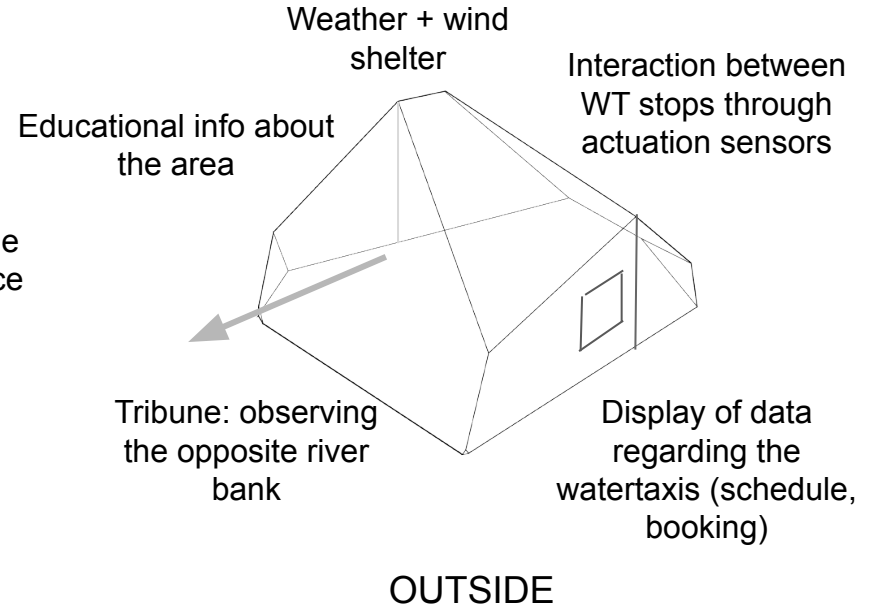
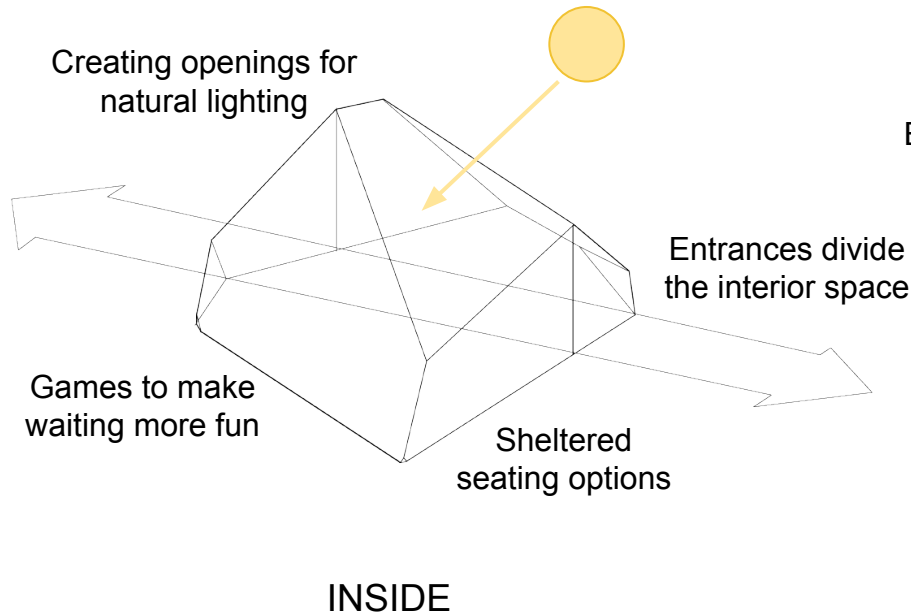


# Design 2.1 - form finding

Weather + wind shelter  
= (partially) enclosed volume



# Design 2.2 - division of spaces



# Design 2.3 - visualization



# Design 3 - pairs



Connect stops in pairs or more which have direct visual sightlines that connect them

# Design 3.1 - continuous surfaces that change height

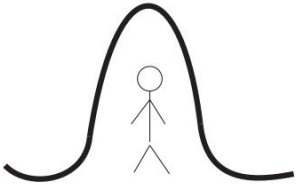


[https://www.archdaily.com/913594/loop-fahr-02/5c926217284dd1e494000e45-loop-fahr-02-photo?next\\_project=no](https://www.archdaily.com/913594/loop-fahr-02/5c926217284dd1e494000e45-loop-fahr-02-photo?next_project=no)

# Design 3.1 - sketch + idea

## sections

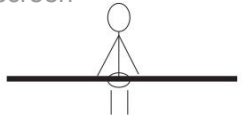
Shelter with  
roof



Curve for laying  
down

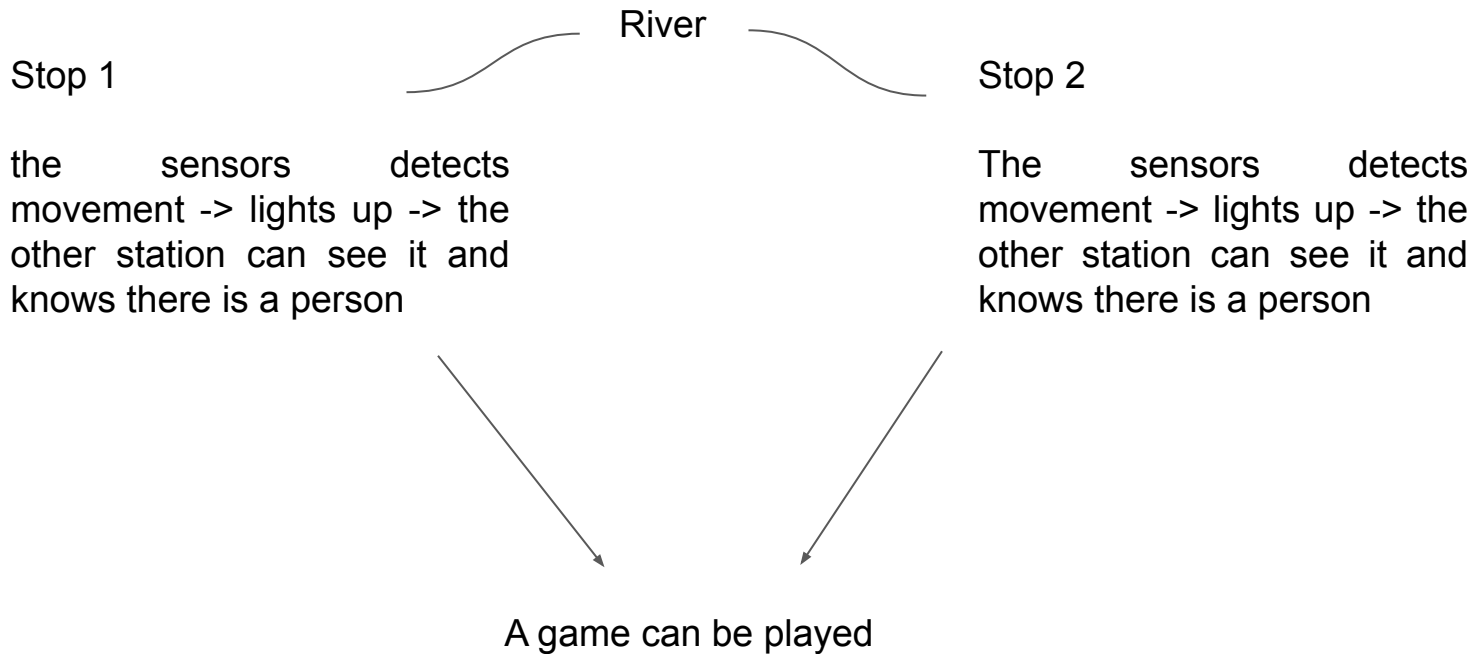


Flat sitting surface or place for  
screen



The bottom light of the furniture changes colour according to the air quality

# Design 3.1 - sketch + idea



# Design 3.2 - parasitic design (uses existing, inclusivity)





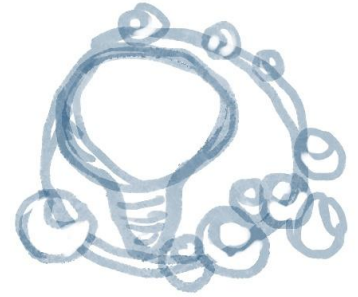
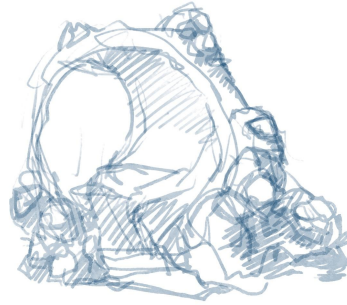
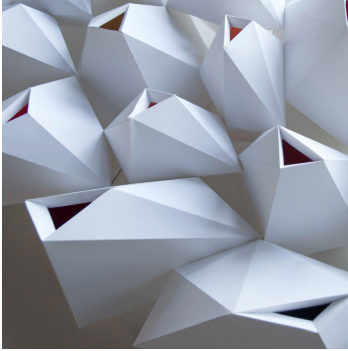
# Design 3.3 - modular voronois that together are a voronoi



# Using openings



# Design 4.1 - big cell + smaller cells



# Design 4.1 - big cell + smaller cells



Smaller cells can be

..... A Bird's nest

..... Dog's digging hole

..... Insect's nest

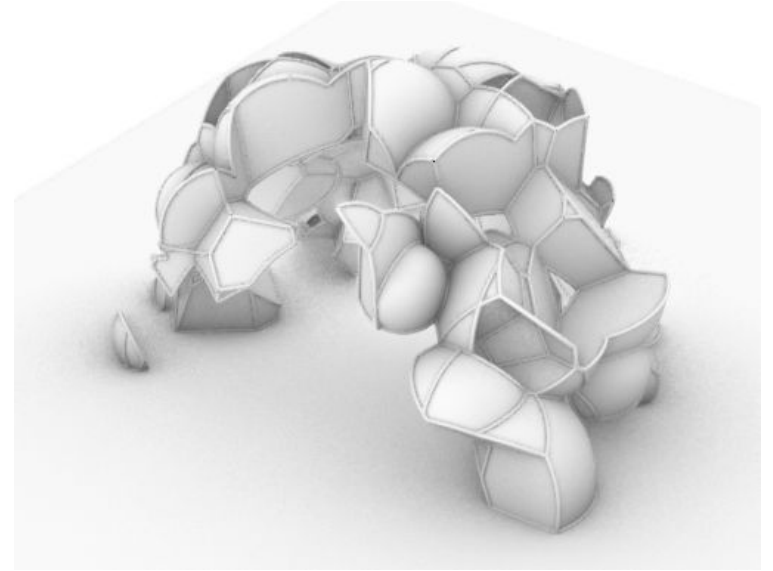
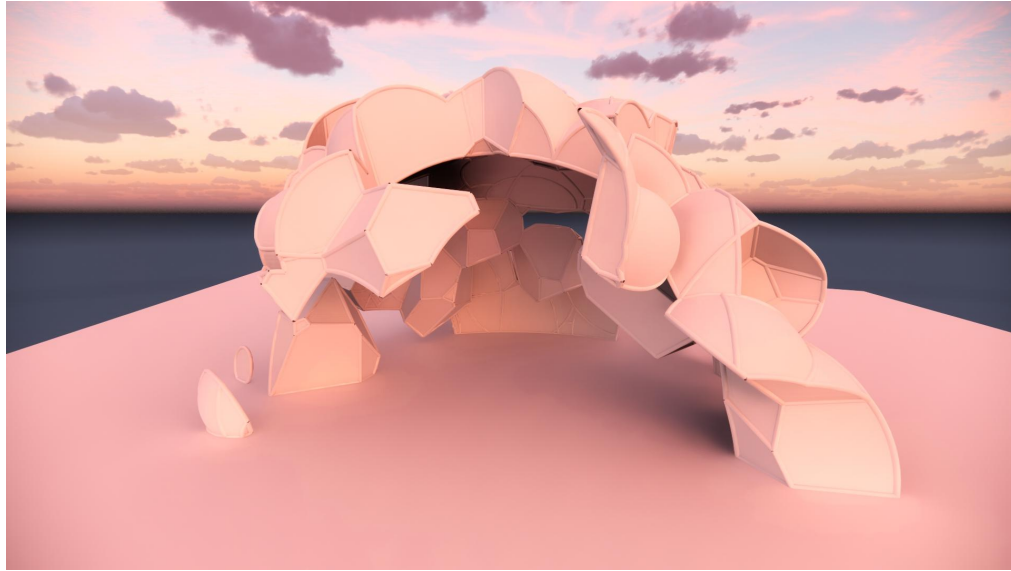
..... Planting pot

Big cells can be

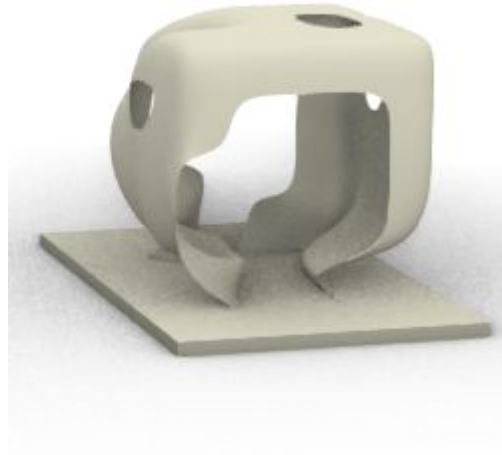
..... A Bench

..... Interactive gaming place

# Design 4.2 - big cell + smaller cells



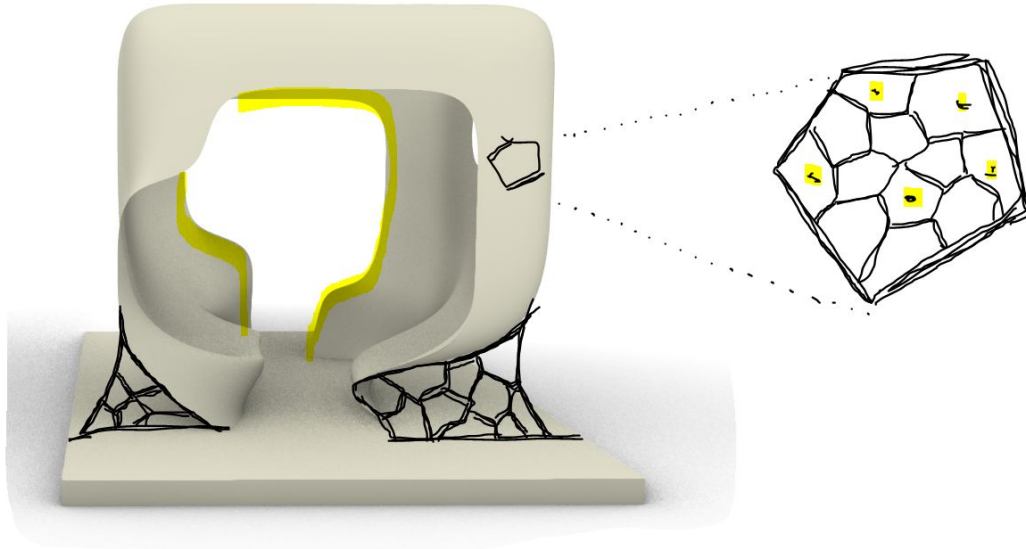
## Design 5.1 Interactive shelter (shape)



Form of bench follows from the shelter, creating one piece of furniture.

- Protection wind
- Openings
- Interactive possibilities

# Design 5.2 Interactive shelter



Voronoi structure

Sensors integrated in cavities of voronoi.


- Light indicates arrival watertaxi
- Possibility for games during waiting 'catch the light', against other stops
- Monitoring information i.e. weather, air or wind





# Conclusion


## QUESTIONS:

- Material ratio, stiffness
- Size of the printing line
- Maximum size of the design

 PF (woodflour filled, molding)

 UF (woodflour filler)

 PF (woodflour and mineral filled, molding)

 MF (woodflour filler)

## FURTHER STEPS:

- Choose 1 design or combine more ideas
- Elaborate 1 design
- Final decisions for sensors
- Splitting the team in 2 parts



- Shelter
- Componential logic?
- Visual connection
- Circle - you can go underneath, on top, space defining shape (maybe circle)?
- Interaction between stops
- Form reacting to structural requirements - parts that are denser and those which are more porous
- Willemskade - water taxi stop
- 5 people
- 5 components
- Sensors - visual ones, audio, movement?
- View platform (as opposition to shelter)?