waving home

An Insertion That Instils a Sense of Belonging in the Occupants of a North Sea Oil Rig

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An Insertion That Instils a Sense of Belonging in the Occupants of a North Sea Oil Rig

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abstract

One could argue that home is composed of moods and experiences that can be tied to the dwelling, but it also belongs to places and contexts; places that have gained significance over time, by events. A person relating to home, to a place, touches her most inner and personal layers.

The importance of home shows itself in that it is mostly linked to positive emotions; like security, belonging, expectations and freedom. Negative emotions linked to the home is usually about the threat against, or the lack of positive emotions. This project studies the concept of home when one’s home really is elsewhere.

In an accommodation platform, Floatel, workers live weeks on end, having left their homes on land to work for the oil industry in the North Sea. Some work physically to extract crude oil from the seabed, some washes oily overalls, others work in the background to ensure that the ship stays in a safe position. All play roles in a big machinery that balances and tame nature.

Life in this place is in many ways drawn to extremes. Everyone is incredibly bound and dependent on the other’s function. Meanwhile, the insight of other’s being is almost non-existent, and opportunities as well as places to break away from everyday life inadequate.

Only one location is currently what is being offered, to even get a grain of possibility for temporary residents to understand the context they are in: The Dirty Coffee Shop. In this small space work and leisure hours coincide, and ultimately an understanding of the other’s situation can emerge.

Through the system from an architectural reference, the Dirty Coffee Shop is developed into a coherent structure that transitions between open and intimate spaces, introducing previously closed off areas of the platform for new groups. Which ultimately enhances the feeling of connection on the site.

acknowledgements

I would first like to thank my supervisor Kengo Skorick of Chalmers Architecture. He brought structure into my process and pushed me beyond known paths, and at the same time he allowed the thesis to be my own work.

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I would also like to acknowledge my contact person at Floatel International, Morten Olsson, for introducing me to their business and for letting me use one of their ships as a study object.

Finally, I must express my very profound gratitude to my boyfriend Lars for providing me with unfailing support and continuous encouragement through the process of this thesis, and my son Olov for the experience of us growing side by side. This accomplishment would not have been possible without them. Thank you.

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introduction: interest in home

BACKGROUND

This thesis began with an interest in home. In an essay written in my bachelors, I sought to collect literary sources different interpretations of the meaning of home. In the process, I found that the notion of home is associated with mostly positive emotions. When it is linked to something negative, it often involves the loss of a home.

AIM

Due to increasing demands on mobility of the individual, together with brutal circumstances around the world, there are more people than ever put in a situation where they are left without their home. This thesis aims to investigate if one can create the feeling of home with architecture, when the primary home is somewhere else, and for the moment not accessible.

DELIMITATIONS

The process of writing the essay proved that the definition of home is wide. In order for the thesis not to lose focus in such a broad concept it studies a specific situation and location. The aim of the thesis is to create a specific design proposal to see if architecture can mediate a feeling of home.

MATERIAL AND METHOD

As a starting point of the design process the thesis studies a reference, that with the help of its architecture could give users a sense of belonging to a place which for them is temporary. The finds in the study of the reference is combined with the finds and problems found in the study of the specific site and situation. The study of the site is limited to information provided by Floatel International, the company maintaining it. The information contains pictures, drawings and conversations. In addition to that the study contains literary depictions of similar situations and personal experience.

With support from the findings of the different studies a design proposal is formed.

scheme of design process

BACKGROUND:
ESSAY – THE NOTION OF HOME

The notion of home is linked to many positive emotions, when linked to negative emotions it is usually about when a home is not accessible
.

MASTER THESIS: WAVING HOME

Can one through architecture create a notion of home when one's true home is elsewhere?

INSPIRATIONAL PRECEDENCE: A STRUCTURE THAT PROVIDES A SENSE OF BELONGING

Reference: London Bridge Caravanserai. Transitions between public *(background)*, private and a privatised public *(foreground)* space creates a sense of belonging to a wider context.

FIND: A SENSE OF BELONGING CREATED THROUGH FOREGROUND

A coherent structure, a foreground, in a surrounding context, a background, is a tool to create a sense of belonging.

STUDY OBJECT: A HOME AWAY FROM HOME

Study Object: Accommodation platform Floatel Superior. A place, home away from home, where private life and work is closely interlaced.

FIND: BREAK ROOMS CAN WORK AS A TOOL FOR INTEGRATION

The site is segregated, and a place called the Dirty Coffee Shop helps the users to understand their context.

SKETCH PROCESS: COMBINING FINDS FROM INVESTIGATIONS IN A DESIGN PROPOSAL

STEP 1: PLACEMENT OF BREAK ROOMS

Study of drawings, zones and pathways

STEP 2: STRUCTURE, SPACE AND CLIMATE PROTECTION

Searching and testing structural and material ideas.

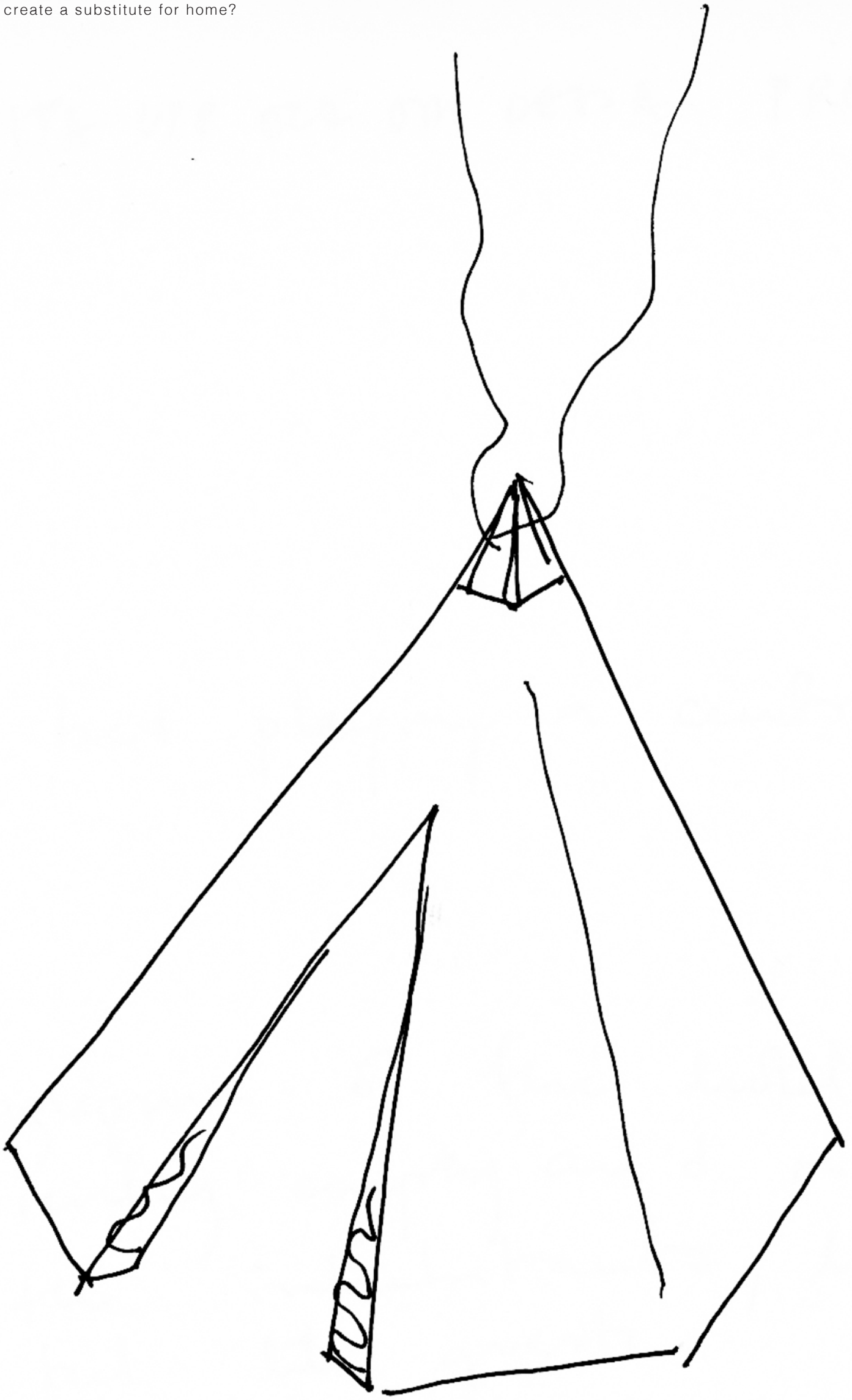
STEP 3: SCULPTING A STRUCTURE OF BREAK ROOMS.

Transitions between open and intimate spaces

DESIGN PROPOSAL: A COHERENT STRUCTURE OF BREAK ROOMS

DISCUSSION

Can one through architecture create a notion of home when one's true home is elsewhere?

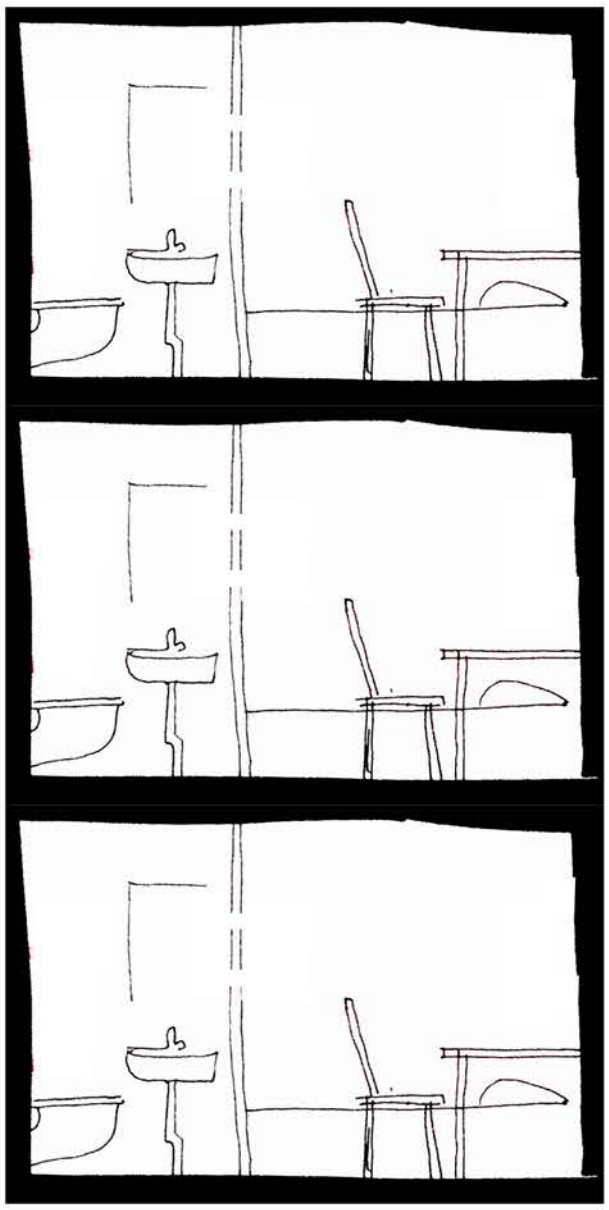


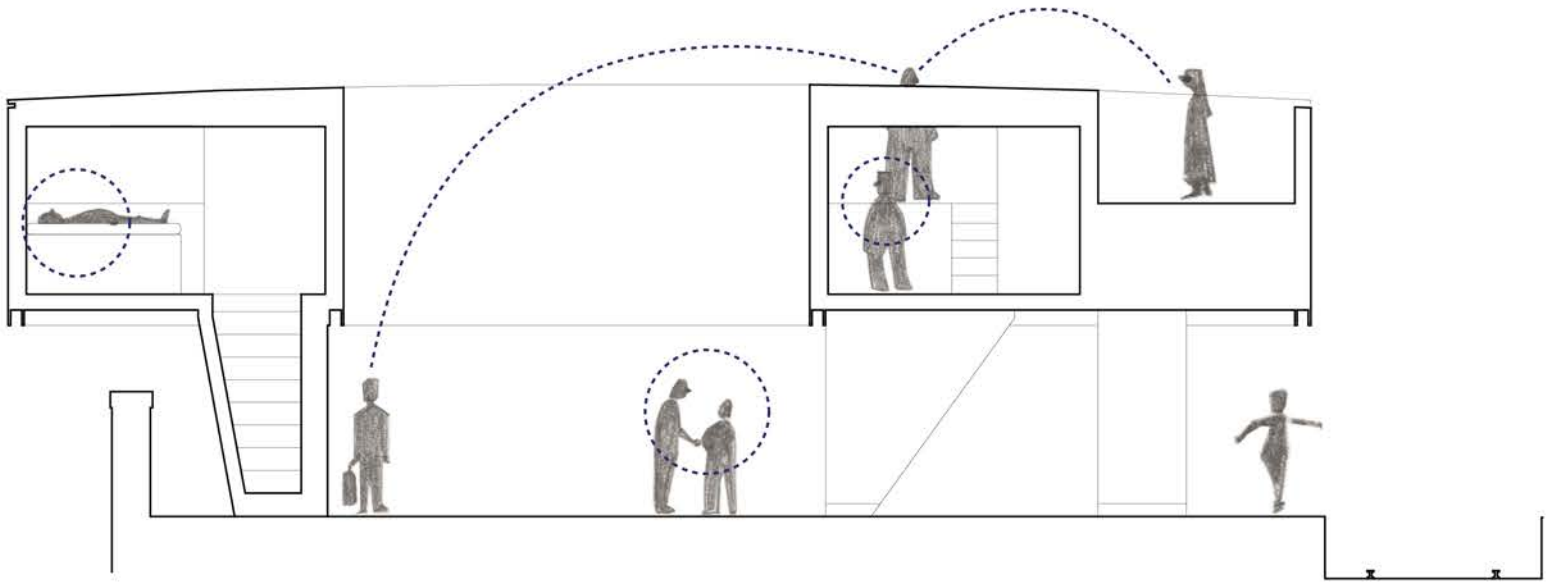
this project originates in the question of how the feeling of home can be created when a persons true home really is elsewhere?

how do one create a substitute for home?

One could argue that home is composed of moods and experiences that can be tied to the dwelling, but it also belongs to places and contexts; places that have gained significance over time, by events. A person relating to home, to a place, touches her most inner and personal layers.

The importance of home shows itself in that it is mostly linked to positive emotions. When negative emotions are associated with the home, it is often about homes that has been destroyed, disappeared or fallen into a destructive context. This project originates in the question of how the feeling of home can be created when a persons true home really is elsewhere.





CROSS SECTION 1:100

fig.01

fig.02

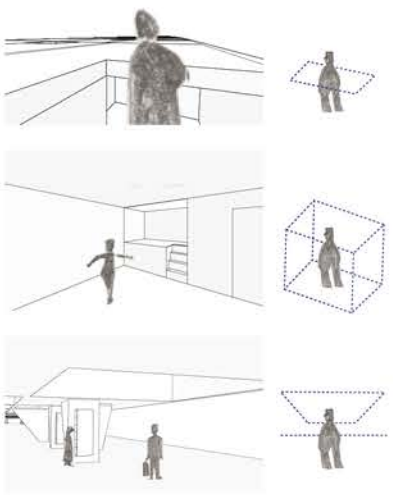
section through the caravanserai with stairs leading from the railway platform to private rooms, and from private rooms to balconies – creating a foreground in the view over the city

a structure that provides a sense of belonging

Just as the concept of home is not only about the dwelling, it is not only about the spatiality and architecture. In order to find a answer to how a home can be built, this project initially began by studying a architectural reference that primarily provides an opportunity for users to create a connection to a site which for them is new.

London Bridge Caravanserai, a master thesis by Nina Lundvall, is a design that provides room for temporary accommodation and short stays at a train station in London.

The walls of the private rooms creates beams in a ceiling above the railway platform. Individual staircases to the rooms form the pillars that hold up the whole construction. The roof over the railway platform, alternatly opens up in voids to the sky, alternatly forms a ceiling containing the overnight rooms.



SEMI-PUBLIC/
SEMI-PRIVATE
ROOF LANDSCAPE

PRIVATE ROOM

RAILWAY
PLATFORM

Through the placement of intimate spaces in a public, and quite rough site, the users is provided with a transition consisting of three levels; from an open and public railway platform, to a intimate and private room, and further up on a balcony where the users are overlooking a semi-public/semi-private roof landscape. This landscape creates a foreground to the surrounding city, which in its extension, instills a sense of belonging.

This sense of connection to the site could only be created by users being led between open and intimate spaces, towards the experience of stepping up to a continuous structure. This discovery has come to shape this master thesis.

the structure and its three levels;

the railway platform, the private

rooms and the roof landscape

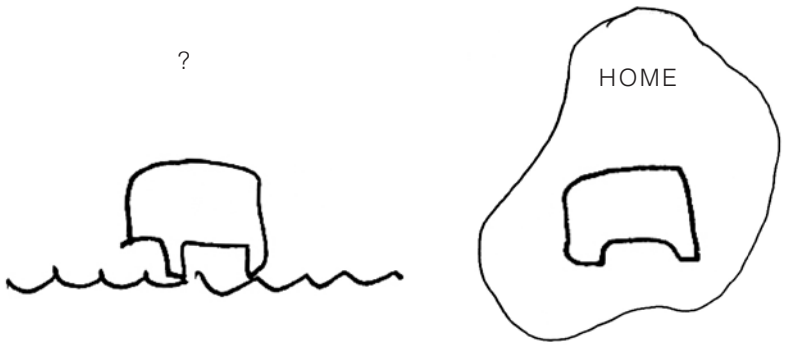
fig.03

home away from home

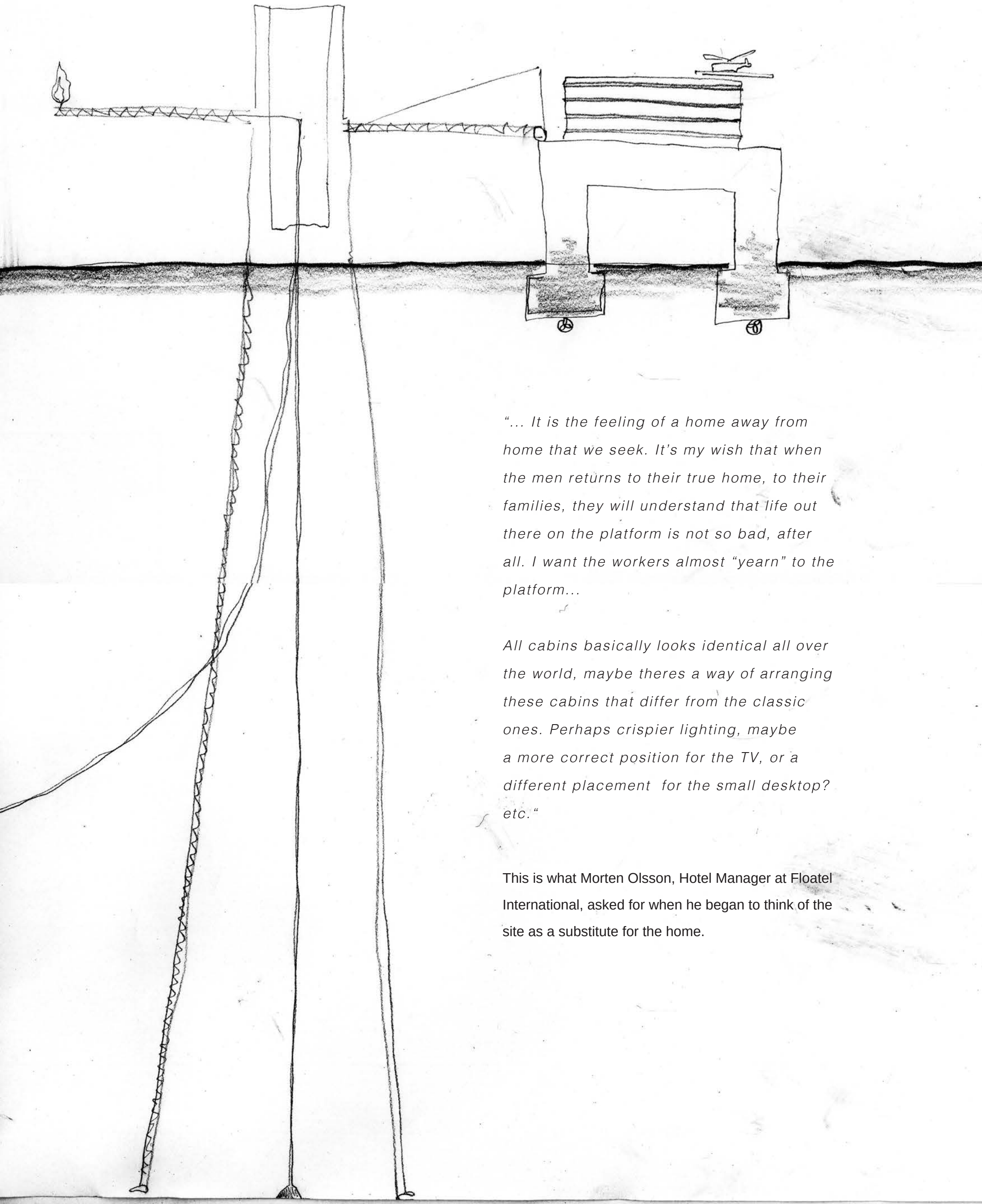
With the question of how a home can be created when one’s home really is elsewhere, I chose to study an object where people spend half of their time far away from their homes, families and friends.

In an accommodation platform, a floatel, workers live weeks on end, having left their homes on land to work for the oil industry in the North Sea. Some work physically to extract crude oil from the seabed, some washes oily overalls, others work in the background to ensure that the ship stays in a safe position. All play roles in a big machinery that balances and tame nature.

How do one create a feeling of home on this site, when home back ashore actually is a few weeks away and the longing is immense?



Life in this place is in many ways drawn to extremes. Everyone is incredibly bound and dependent on the other’s function. Meanwhile, the insight of other’s being is almost non-existent. Opportunities as well as places to break away from everyday life are currently unsatisfactory.



"... It is the feeling of a home away from home that we seek. It's my wish that when the men returns to their true home, to their families, they will understand that life out there on the platform is not so bad, after all. I want the workers almost "yearn" to the platform...

All cabins basically looks identical all over the world, maybe theres a way of arranging these cabins that differ from the classic ones. Perhaps crispier lighting, maybe a more correct position for the TV, or a different placement for the small desktop? etc."

This is what Morten Olsson, Hotel Manager at Floatel International, asked for when he began to think of the site as a substitute for the home.

explorations of architectural precedence

The following pages present three explorations that were made to better understand how the architecture of London Bridge Caravanserai creates the possibility for a user to feel connected to their context.

It was the transition between open and intimate spaces that created the opportunity to experience a foreground against a background, the studies were chosen based on that specific thesis. The first two surveys studies the composition of the foreground, the roof landscape. The third survey studies the transition between open and intimate spaces.

ITERATIVE EXPLORATION ONE

Exploration number one used the same number, namely forty, private rooms/cells as in the Caravanserai. The cells were stacked into rows to form a horizontal landscape. The first variation contains only the cells and their balconies stacked monotonous after one another. The dynamic is then increased suggestively in each row by varying the rotation and the relative positioning of the cells, as well as adding larger and smaller cavities in between. The exploration continued until they could be perceived as a dynamic whole, from a perspective point of view.

In summary, one can say that a unit that was rhythmically repeated with a certain variation created a dynamic whole that could be perceived as a foreground. In this dynamic anatomy, the groups of cells that were separated with larger voids was important to create a sense of belonging within the foreground.

ITERATIVE
EXPLORATION TWO

In exploration number two the variation that was perceived as the most dynamic in the exploration one was used, but multiplied by ten to get the same amount of cells on board the accommodation platform, namely four hundred.

When the number of cells increased the dynamics of the roof landscape suddenly disappeared, which instead felt like a big scary carpet – the foreground had become so vast that it had become the background. Only when the landscape were bent vertically the same sense of belonging as found in the grouping of cells in survey number one showed up.

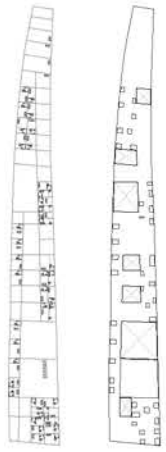
ITERATIVE
EXPLORATION THREE

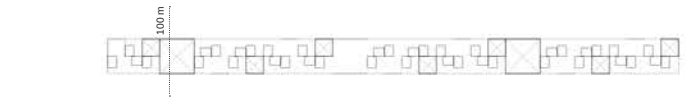
In study number three, the composition of the smaller elements in the private cell are being examined; the entrance, the intimate room and the private balcony.

The compositions who gave the very best sense of belonging to a foreground were those who through their private balconies also gave the opportunity to, completely, look away at the surrounding context, the background.

INSPIRATIONAL PRECEDENCE: London Bridge Caravanserai by Nina Lundvall
INSPIRATIONAL FEATURE: A both 'calm and stimulating' roof landscape

Left: perspective from the inspirational precedence
Middle: perspective from 3D-model of inspirational precedence
Right: drawings of inspirational precedence, level 1 and top level
Components:
- 40 cells fit inbetween beams in a slab
- 40 personal balconies
- 1 large hole
- 2 large holes with roof
- 6 medium sized holes
- unknown number of medium sized holes with roof





ROOF LANDSCAPE 1-13
Adding roof to one large hole

40 L-shaped cells in 4 groups
39 half-personal balconies (+1 personal balcony)
1 surrounding beam
7 medium sized holes
2 large holes
7 medium sized holes with roof
1 large hole with roof

ROOF LANDSCAPE 1-12
Removing every second large hole

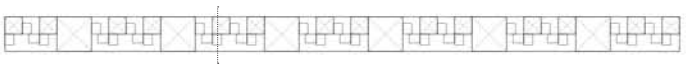
40 L-shaped cells in 4 groups
39 half-personal balconies (+1 personal balcony)
1 surrounding beam
7 medium sized holes
3 large holes
7 medium sized holes with roof

ROOF LANDSCAPE 1-11
Mirroring every second group

40 L-shaped cells in 7 groups
39 half-personal balconies (+1 personal balcony)
1 surrounding beam
7 medium sized holes
6 large holes
7 medium sized holes with roof

ROOF LANDSCAPE 1-10
Adding roof to half of the medium holes

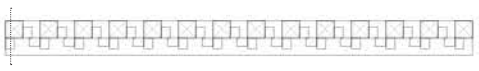
40 L-shaped cells in 7 groups
39 half-personal balconies (+1 personal balcony)
1 surrounding beam
7 medium sized holes
6 large holes
7 medium sized holes with roof



ROOF LANDSCAPE 1-9
Adding large holes

40 L-shaped cells in 7 groups
39 half-personal balconies (+1 personal balcony)
1 surrounding beam
14 medium sized holes
6 large holes

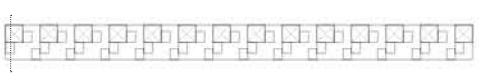
+ adding large holes breaks the units into smaller groups



ROOF LANDSCAPE 1-8
Shifting units: grouping balconies

40 L-shaped cells
40 half-personal balconies
1 surrounding beam
14 medium sized holes

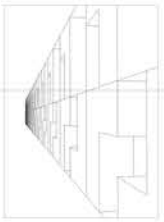
+ shape offers interesting meetings of balconies
+ creates shortcuts between units

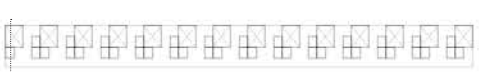


ROOF LANDSCAPE 1-7
Adjusting shape of unit to quadrant for easier assembling.
Shifting units back to rythm of ROOF LANDSCAPE 1-5

40 L-shaped cells
40 personal and half-personal balconies
1 surrounding beam
14 medium sized holes

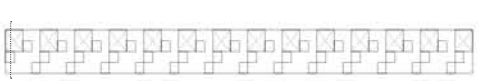
+ the quadrant shape makes it easier to assemble
+ shape offers interesting meetings of balconies





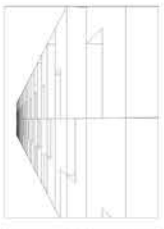
ROOF LANDSCAPE 1-6
Shifting units: grouping balconies

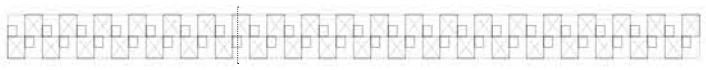
40 L-shaped cells
13 joint balconies (+1 extra)
1 surrounding beam
14 medium sized holes



ROOF LANDSCAPE 1-5
Shifting units and decreasing number of holes

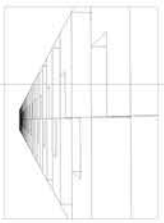
40 L-shaped cells
40 balconies
1 surrounding beam
14 medium sized holes

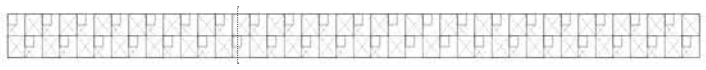




ROOF LANDSCAPE 1-4
Adjusting shape of units to match shape of reference' units

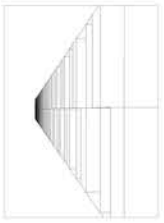
40 L-shaped cells
40 balconies
1 surrounding beam
40 medium sized holes

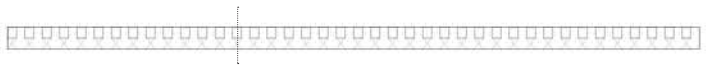




ROOF LANDSCAPE 1-3
Adding holes for the notion of emptyness

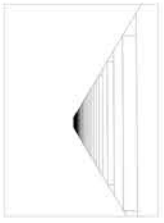
40 l-shaped cells
40 balconies
40 holes
1 surrounding beam
40 medium sized holes





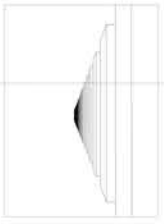
ROOF LANDSCAPE 1-2
Adding beam as frame

40 l-shaped cells
40 balconies
40 holes
1 surrounding beam



ROOF LANDSCAPE 1-1
Repetition of cells

40 l-shaped cells (dimensioned after cells a Floatel Superior
40 balconies
40 holes



Cell with quadrant shape

Cell with shape similar to unit in the insp. precedence

fig.05

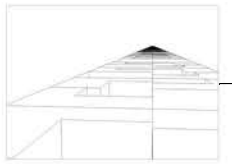
Cell on Floatel Superior (1.9x4.8 m) + balcony

ITERATIVE EXPLORATION, PART 1: SINGLE UNIT STUDY AS ORGANIZATION OF MONOLITIC LANDSCAPE, 40 UNITS
Using the perspective as view of judgement

exploration 1: rhythm of roof landscape, 40 cells

exploration 2: rhythm of roof landscape, 400 cells

ITERATIVE EXPLORATION, PART 2: SINGLE UNIT STUDY AS ORGANIZATION OF MONOLITIC LANDSCAPE, 400 UNITS
Using the perspective as view of judgement



ROOF LANDSCAPE 2-1
Organization of units in ROOF LANDSCAPE 1-13, investigation of lenght

ROOF LANDSCAPE 2-2
Organization of units in ROOF LANDSCAPE 2-1, horizontal bending

ROOF LANDSCAPE 2-3
Organization of units in ROOF LANDSCAPE 2-1, vertical bending

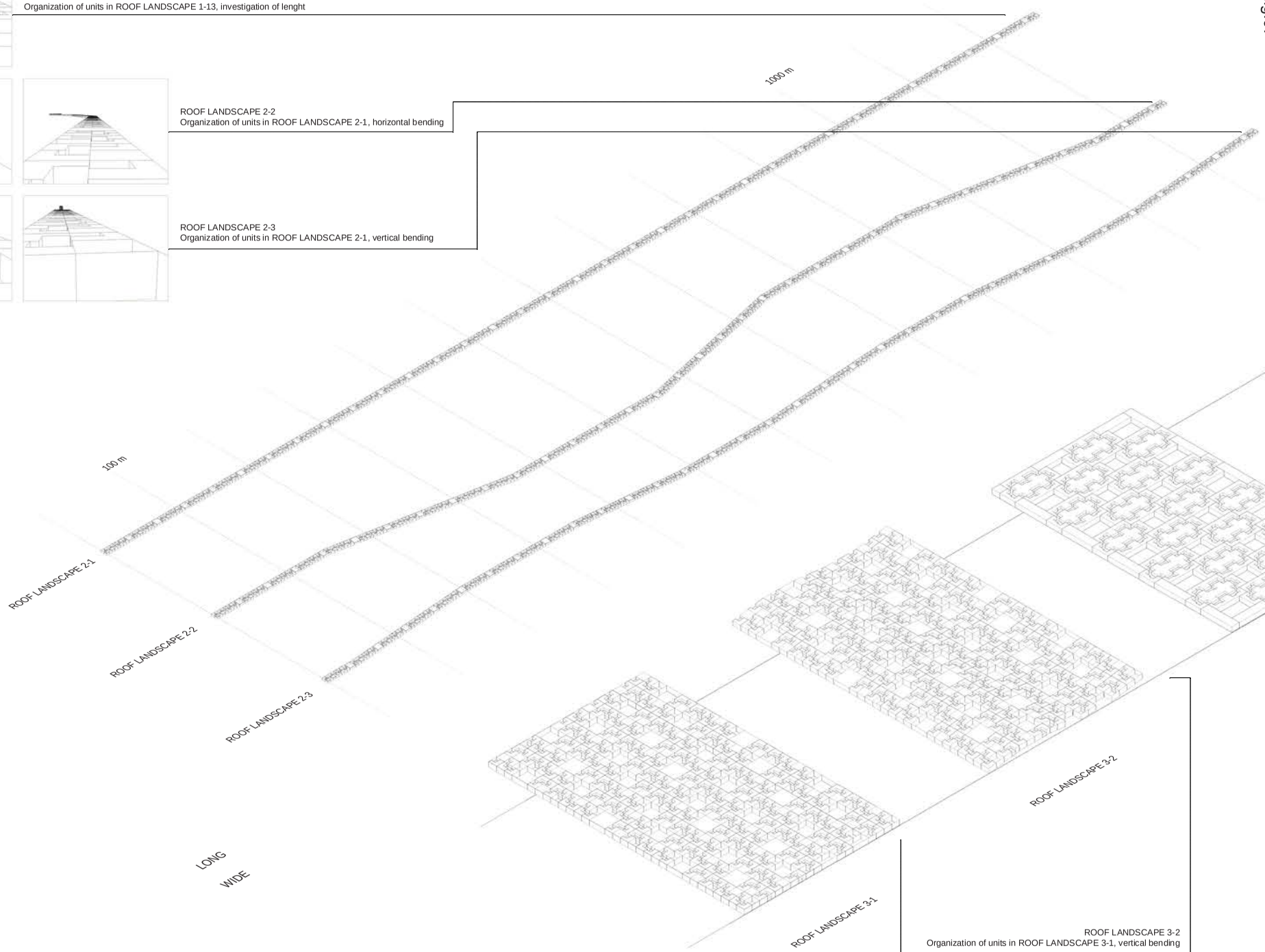


fig.07

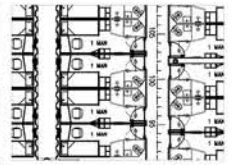
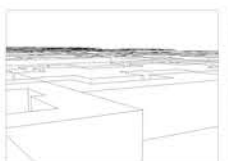
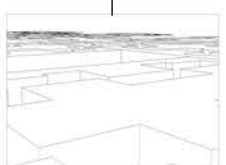


fig.06

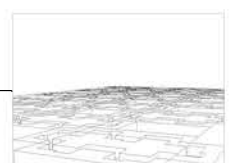
INSPIRATIONAL PRECEDENCE: London Bridge Caravanserai by Nina Lundvall
INSPIRATIONAL FEATURE: A both calm and stimulating roof landscape
Adjusting number of cells to match number of cells at Floatel Superior
Right: Still from information film from Floatel Superior
Left: drawing of cells att Floatel Superior

ROOF LANDSCAPE 3-4
Same organization of cells as ROOF LANDSCAPE 3-3 without outer border/beam

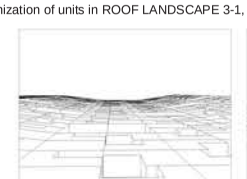


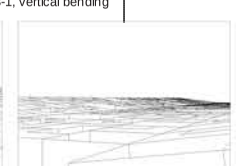


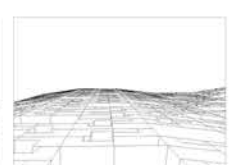
ROOF LANDSCAPE 3-3
Shifting cells to create shortcuts between balconies, and to create groups of cells

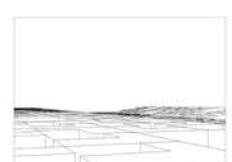


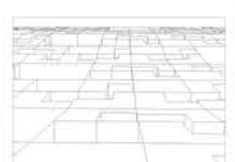
ROOF LANDSCAPE 3-2
Organization of units in ROOF LANDSCAPE 3-1, vertical bending

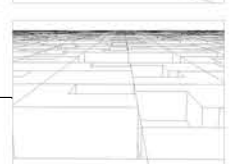












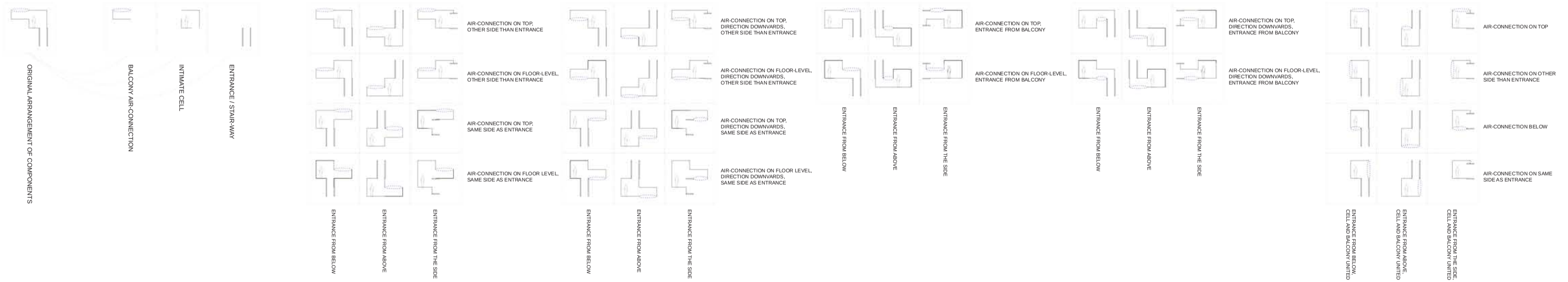
ROOF LANDSCAPE 3-1
Organization of units in ROOF LANDSCAPE 1-13, investigation of width

exploration 3: creating transitions through arrangement of components

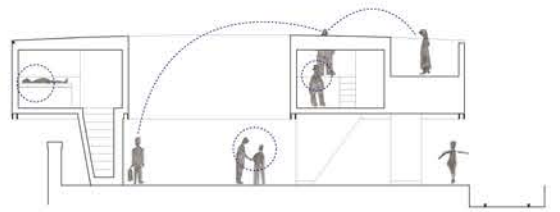
ITERATIVE EXPLORATION, PART 3: STUDY OF COMPONENTS IN SINGLE UNIT
Using section as view of judgement

INSPIRATIONAL PRECEDENCE: London Bridge Caravanserai by Nina Lundvall
INSPIRATIONAL FEATURE: A transision of spaces; from public, to intimate, to spacious

Left: spacious landscape
Middle: intimate space, inside cells
Right: public space, below cells



ITERATIVE EXPLORATION, PART 4: STUDY OF COMPONENTS IN SINGLE UNIT
Using section as view of judgement



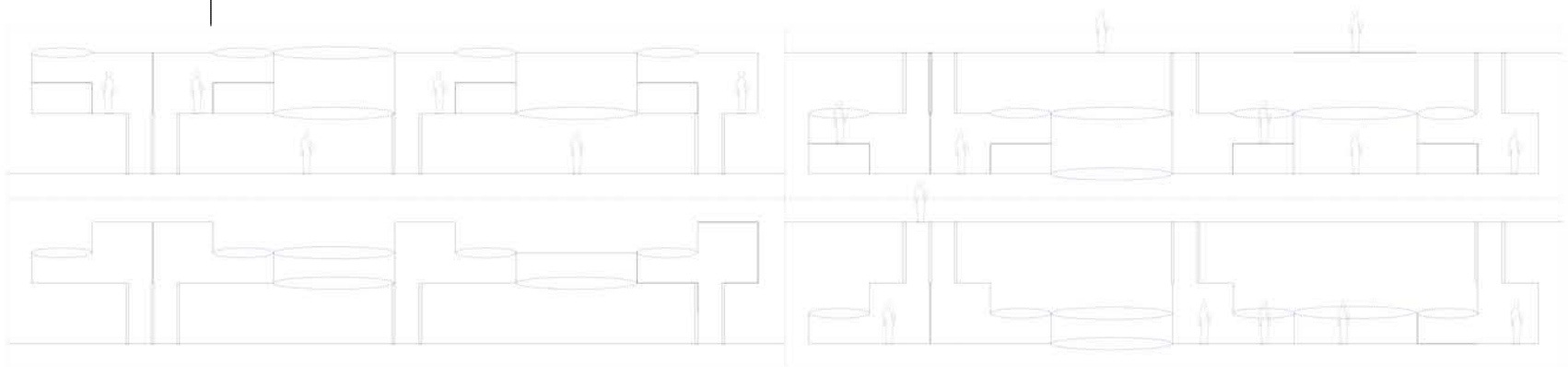
INSPIRATIONAL PRECEDENCE: London Bridge Caravanserai by Nina Lundvall
INSPIRATIONAL FEATURE: A transision of spaces; from public, to intimate, to spacious

Left: section of the inspirational precedence

PRINCIPLE OF ORIGINAL ARRANGEMENT OF UNITS

Arrangement of units gives the impression of a monolitic roof/beam punctuated by air-connections and voids (with ceiling).
The structure appears to be standing on feet (stair-ways).

From underneath:
unit/stair-way — air-connection — unit/stair-way — emptyness/void — unit/stairway



Comment: This exploration was left unfinished

conclusions of explorations

FOREGROUND – A

To create a sense of belonging a coherent structure is needed as a foreground to the context.

OPEN/INTIMATE – B

Transitions between open and intimate spaces creates a opportunity to experience a foreground and a background.

REPETITION – C

A unit that rhythmically repeats itself in a certain variation form a dynamic entity. The whole becomes a clear foreground.

GROUPING – D

Group formation can create a sense of belonging within a larger whole.

SCALE – E

The foreground can be so large that it obscures the background and becomes counterproductive.

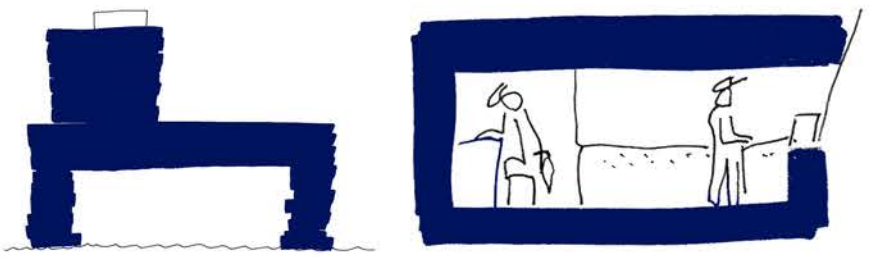
LOOK AWAY – F

Where there is a possibility to gaze out over a foreground, but at the same time look away completely towards the background, is where the most intense sense of connection to place are being created.

who are searching for a home away from home?

A home is created by a situation and the experience of a human being. In order to better organize and gain insight into *who* needs a home in this situation, a schematic representation of the residents on the platform was created.

Below is a detailed description of the people on board, the rooms they are staying in, divided by the working group they belong to:



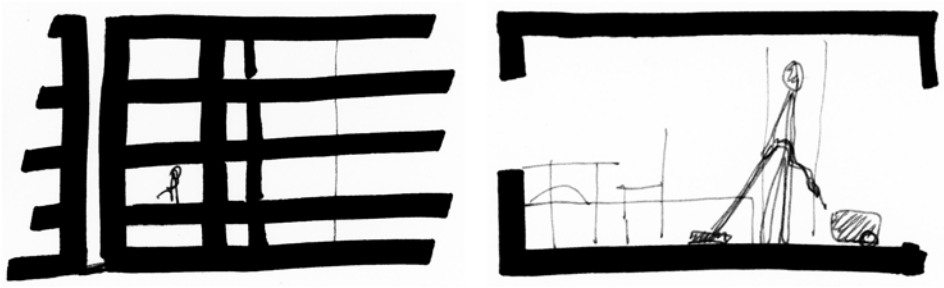
the bridge controllers spend their days of looking into instruments to control the platform

bridge controllers

EL (elevation on platform): +52.200 - 48.400
At the top of the platform, with a panoramic view of all that occurs onboard, is the Bridge Room located. For those working here are the captain and chief mate, watch-out and position holders. Each watch is composed of four hours that overlap, where some are on watch for four hours while others have four vacant hours, except the captain who is on duty around the clock. During their work they fend off weather and sea, and ensures that the platform stays stable and safe, next to the oil rig. If a heavy storm approaches, or if the oil rig needs to be evacuated, the crew cuts loose from the oil rig and sails to a safe distance.

The bridge controllers spend their days looking into instruments to control the platform. Someone is concentrated to keep an eye out, and regularly they look across the platform and oil rig to ensure that everything is as expected and that no potential hazards are emerging.

Although they have an incomparable view of the surroundings and the sky, the beams from the sun is something that disturbs the work at computer screens. Most of the sunlight is therefore filtered trough blinds. The environment in the Bridge Room is characterized by distinct group work and dense concentration.



the cleaners work alone, but

among others belongings

and stuffy smell of sleep

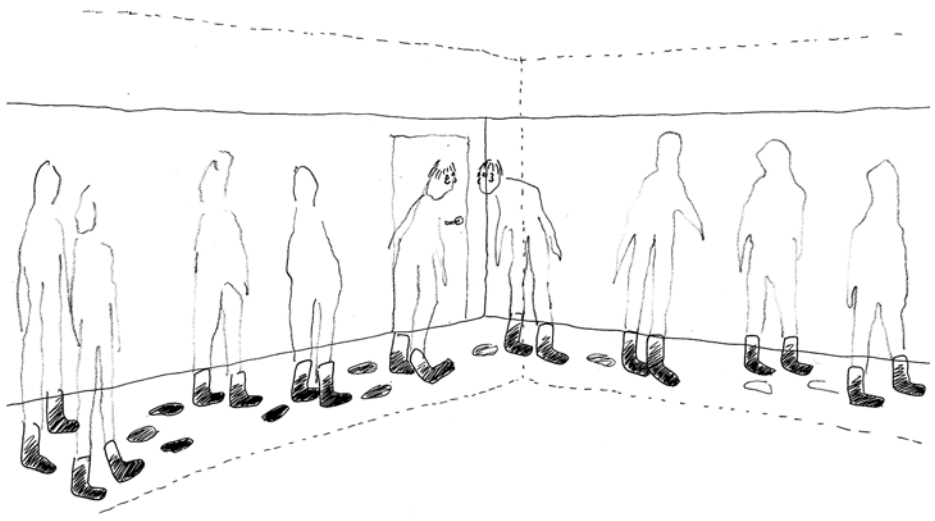
cleaners

EL (elevation on platform): +52.200 - 28.700
At the Floatel most people do not have to think about making their bed or to wash their dirty working clothes, because after a twelve hours shift on the oil rig there is not much time left to eat, call home and socialize before it is time for the needful sleep.

Instead it is the cleaners' responsibility to go through the 440 cabins each and every day – making the beds, vacuuming and scrubbing the floor. The fact that the premises are kept clean from dirt and oil is incredibly important when so many people are staying in such a small area. If, for example, the flu breaks out, it could force a temporary shutdown of the entire production resulting in a loss of income.

The cleaners work alone, but among others belongings and stuffy smell of sleep. They move systematically from cabin to cabin, from floor to floor. In the cabins, they move in a different way than those who sleep there; they bend under the small desk to pick up a piece of paper that landed next to the paper bin or they step up on the chair to wipe the dust off the ventilation filter. If an opportunity emerges to take a rest on their shift, it would be on someone else's bed.

In the accommodation levels daylight finds its way down four stories through the narrow shaft, and a cleaner who cleans from floor to floor moves symbolically closer to the light.



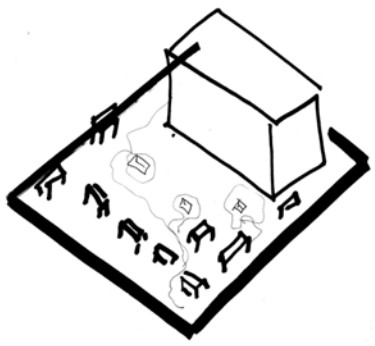
oilers

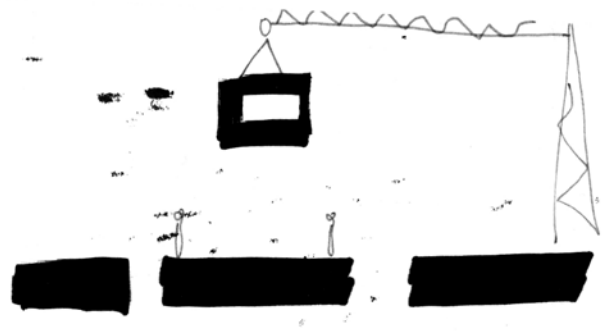
EL (elevation on platform): +52.200 - 28.700
Workers at the oil rig are guests and represents the largest number of occupants. Their main function is to keep the production at the oil rig up and running, they work in two shifts between 06:00 and 18:00. On board the accommodation platform the oilers are off work, resting and eating to prepare themselves for the next shift.

sailors

EL (elevation on platform): +52.200 - 31.950
Transportation to the platform is done with helicopter, from about 05:00 at dawn until 20:00 at dusk. The supply of food and supplies for up to 440 people needs to be constantly restocked. The sailors working on deck, loading incoming goods and discarding disposable waste. They also make sure that the platform is kept stainless and that wires and winches are replaced if they are worn out.

In the North Sea, there are few days of scorching summer heat. Because of the relatively shallow waters at this specific location in the Atlantic Ocean the waves are also harder and stronger than in many other places on earth, On deck the sailors are exposed to strong winds and splashes of water, their place of work is cold and wet. Altough they have a panoramic view at an infinite horizon, they keep focusing on their duty, it is like the platform had walls.



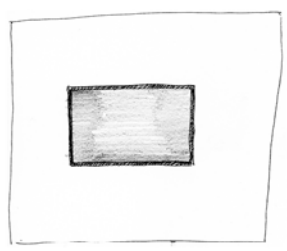


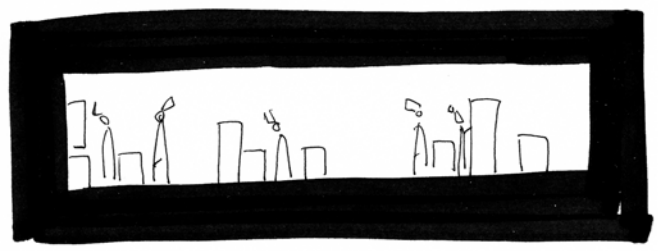
the sailors are exposed to strong winds and splashes of water, their place of work is cold and wet

chefs

EL (elevation on platform): +52.200 - 31.950
Life onboard of the Floatel consists of work and leisure, some work when others have a few hours off. Meals are served thereafter; 00:00 to 03:00 refreshments are served, 05:30-07:30 breakfast, 10:00 snack, 11:00-13:00 lunch, 15:00 snack, 17-19 dinner, and on top of all these dishes, fruits and sandwiches are always available. Serving food at all these times, and supplying a range of foods that has to appeal to a big variety of nationalities and personal preferences is a huge job.

In the galley, eight people are working in shifts to prepare food to all 440 on board. The galley is placed in the center of the platform, without any contact or view of the daylight or the surrounding sea. The only time the chefs have an opportunity to receive some sunlight is when the daily food transport arrives trough a hatch on deck.





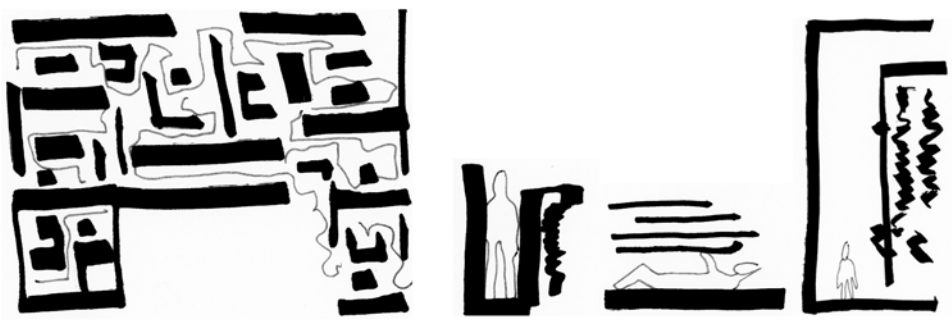
the galley is placed in the center of the platform, without any contact with daylight or the surrounding sea

engineers

EL (elevation on platform): +31.950 - 0

The accommodation platform is an advanced machine that is constantly kept in motion. The fact that a dozen propellers are running ensures that the Floatel stays on a firm and safe position next to the oil rig. Therefore, machines and connecting parts are really bulky, adding a great deal of space to the construction.

The machinists ensures that the machines are running constantly. They work alone among these huge machines in a dark, maze-like environment. They climb narrow ladders, over huge engines and under leaking pipes. The temperatures oscillate between hot steam to cold steel. The machinists are the only ones who are able to get down to the water level.



the machinists work alone among huge machines, in a dark, maze-like environment. They climb narrow ladders, over huge engines and under leaking pipes

a segregated site

how will the residents on the platform feel connected to a place they do not know?

The axonometric view shows the teams working in different locations. These places are at large only accessible to one specific group.

The question is: How will the residents on the platform feel connected to a place they do not fully know, where most of the people staying are unknown to each other and has a duty that the others are not familiar with?

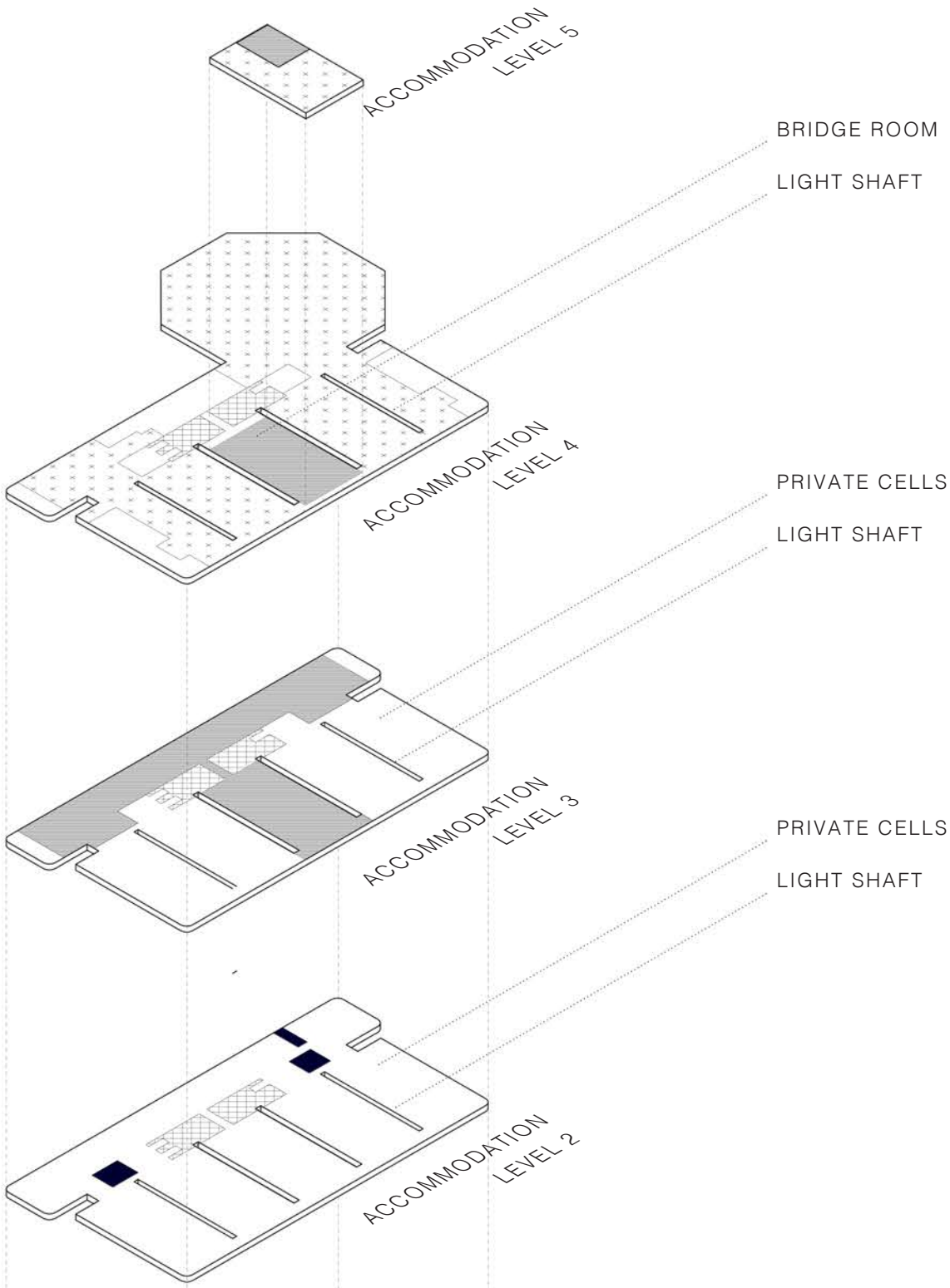
BRIDGE CONTROLLERS

CATERING (CLEANERS AND CHEFS)

EVERYONE

SAILORS

ENGINEERS



ACCOMMODATION LEVEL 5 (EL +52.200)

Spaces connected to certain groups: Sailors: deck Bridge Control: helideck control room

ACCOMMODATION LEVEL 4 (EL +48.400)

Communal spaces: muster stations, stairwells, elevators

Spaces connected to certain groups: Sailors: deck Bridge Control: bridge room, OIM-office, workstations

ACCOMMODATION LEVEL 3 (EL +45.100)

Communal spaces: private cells (TOT 71), heli lounge waiting room, stairwells, elevators

Spaces connected to certain groups: Bridge Control: computer room, local instr. room, DP back-up room, ward, crew dayroom

ACCOMMODATION LEVEL 2 (EL +41.800)

Communal spaces: private cells (TOT 130), stairwells, elevators

ACCOMMODATION LEVEL 1 (EL +38.500)

Communal spaces: private cells (TOT 130), stairwells, elevators

MAIN DECK (EL +35.200)

Communal spaces: private cells (TOT 109), client office, muster stations, stairwells, elevators

Spaces connected to certain groups: Sailors: main deck, hatches, stairways leading to cranes and, decks and pontoons below, dirty coffee shop Oilers: bridge to oil rig

TWEEN DECK (EL +31.950)

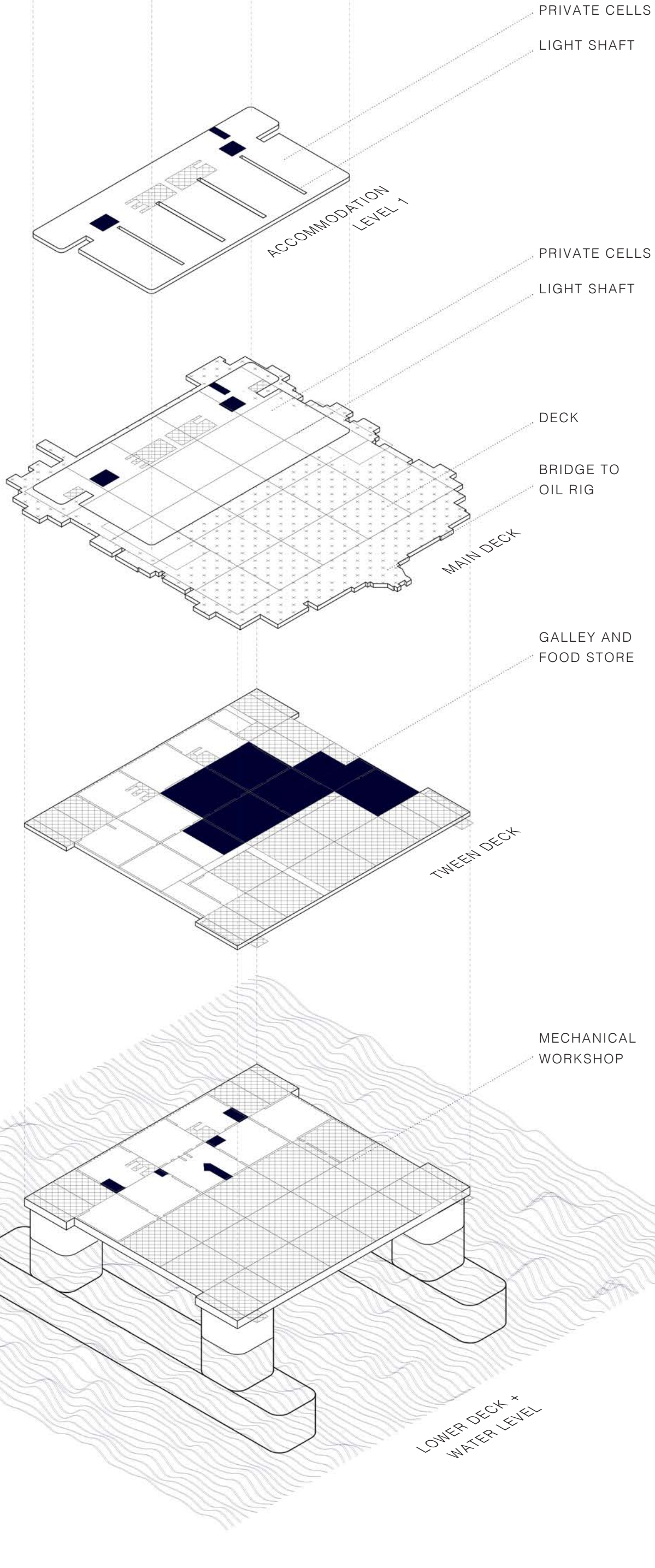
Communal spaces: mess room, change rooms (men and female), leave locker room, stairwells, elevators

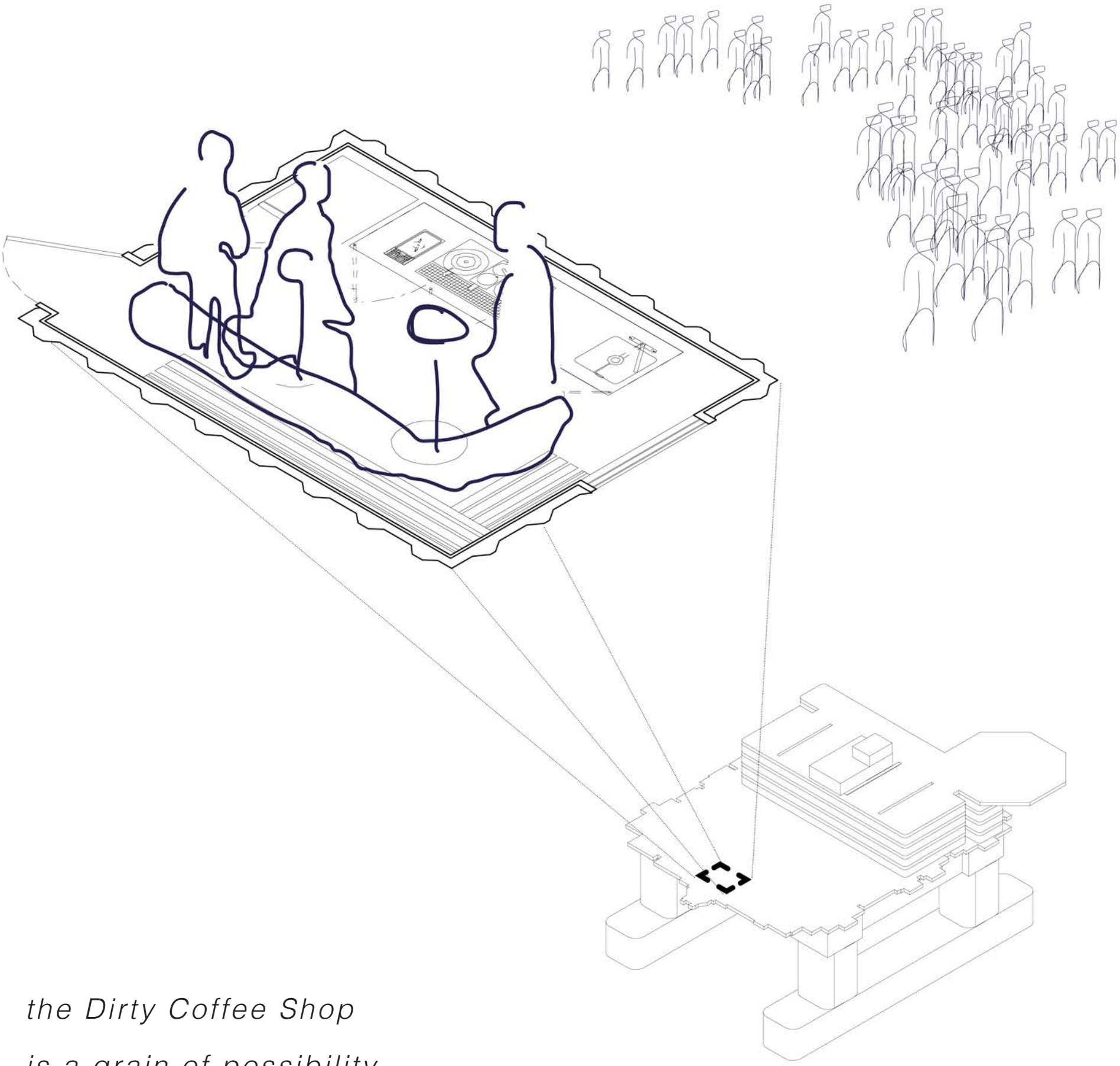
Spaces connected to certain groups: Catering Staff: change rooms (men and female), dayroom (smokers and non-smokers), detergent room, storage rooms (general, dry, catering, freezer, cold), garbage room, galley (preparation, hot and cold, scullery), laundry room (receiving, washing, ironing) Engineers: transformer rooms, engine rooms, anchor winches

LOWER DECK (EL +28.700)

Communal spaces: reception rooms (smokers and non-smokers), coffee bar, kiosk, theatre room, reading rooms (smokers and non-smokers), internet café, gymnasium, sauna (male and female), games room, stairwells, elevators

Spaces connected to certain groups: Catering Staff: cleaning lockers, kiosk Engineers: change rooms (men and female), engine control room, workshops, engine rooms, anchor winches





the Dirty Coffee Shop

is a grain of possibility

for the temporary residents

to help understand

the context they are in

a grain of integration

During the study of the site, a find was made that came to change the focus from the private cells to the common ground as place for the notion of home:

On deck there is a small room for sailors to have their break. Because the sailors can go there without taking off their dirty overalls, it is called The Dirty Coffee Shop. The Dirty Coffee Shop happens to be situated near the bridge that oil rig workers passes each and every day on their way, back and forth to work.

When two hundred oil rig workers ends their shift, a large flow of people pass the bridge over to the accommodation platform and down to the dressing rooms. Since the placement of the Dirty Coffee Shop is next to this large flow, an oil rig worker who is keen on avoiding the mess in the looker room can stop by here. The oil rig worker can share a coffee break and listen to what the sailors has been doing during the day. Perhaps there is rumours about a saffron and fish delivery – are they going to be served the chef's reputable boulliabaisse? Thats something to long for!

The Dirty Coffee Shop is a grain of possibility, that is currently being offered for temporary workers and residents to help understand the context they are in. In this small space, work and leisure hours coincide, and ultimately an understanding of the other's situation may emerge.

break rooms can be used as a tool to create a sense of belonging

home; a place where to invite and to be invited

A home is something that can work as a social tool. It can help to communicate things that words can not convey. A pile of pillows on one side of the sofa might tell a story about a person who usually relaxes in front of the TV. To invite someone is a way to communicate.

If each working group, which each individually knows precisely their specific field onboard, has a break room next to their workplace, it will increase the connection their own space. Especially when the space is not only linked to work but also rest. If this break room is open to outsiders, in this case, the other working groups, an understanding of new unknown parts of the platform may increase. To get to know the place one are situated in is a key to create a connection to it.

A home is something that can communicate other things than words.
E.g. a pile of pillows might tell the vistor how the host, the home owner, relaxes when at home.

INTEGRATION – G

In this case, break rooms can be used as a tool to create a sense of belonging.

summary of research in terms of design

ARCHITECTURAL PRECEDENCE:
A STRUCTURE THAT PROVIDES
A SENSE OF BELONGING

FOREGROUND – A

To create a sense of belonging a coherent structure is needed as a foreground to the context.

OPEN/INTIMATE – B

Transitions between open and intimate spaces createds a opportunity to experience a foreground and a background.

REPETITION – C

A unit that rhythmically repeats itself in a certain variation form a dynamic entity. The whole becomes a clear foreground.

GROUPING – D

Group formation can create a sense of belonging within a larger whole.

SCALE – E

The foreground can be so large that it obscures the background and becomes counterproductive.

LOOK AWAY – F

Where there is a possibility to gaze out over a foreground, but at the same time look away completely towards the background, is where the most intense sense of connection to place are being created.

STUDY OBJECT:
ACCOMMODATION PLATFORM

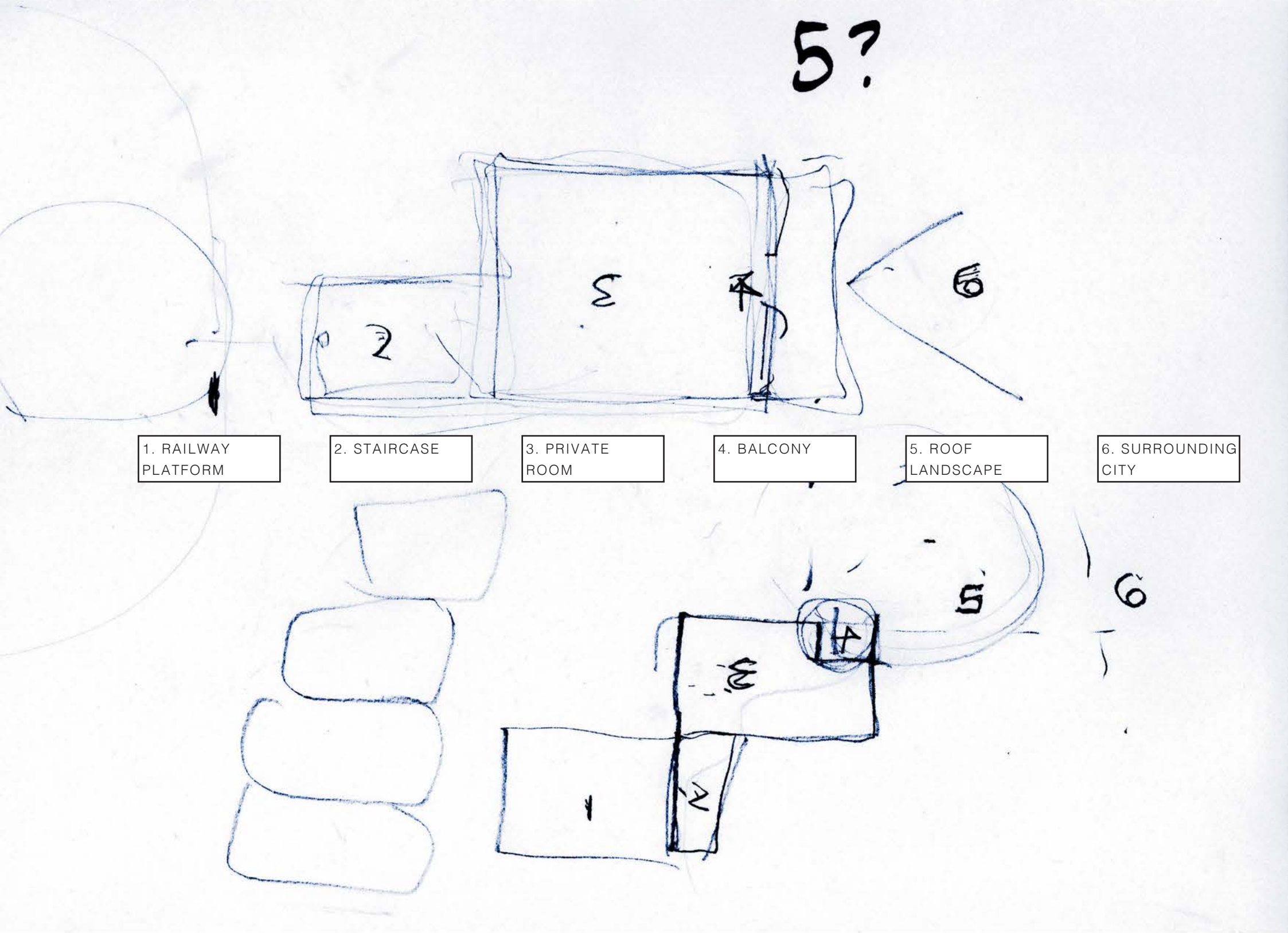
INTEGRATION – G

Break rooms is a tool to introduce unknown parts of the platform to new groups.

to create a sense of belonging

a coherent structure is needed

as a foreground to the context



Sketch of the architectural precedence (the London Bridge Caravanserai), made during a discussion with my supervisor about the structure's different levels of foreground, middleground and background.

step 1: placement of break rooms

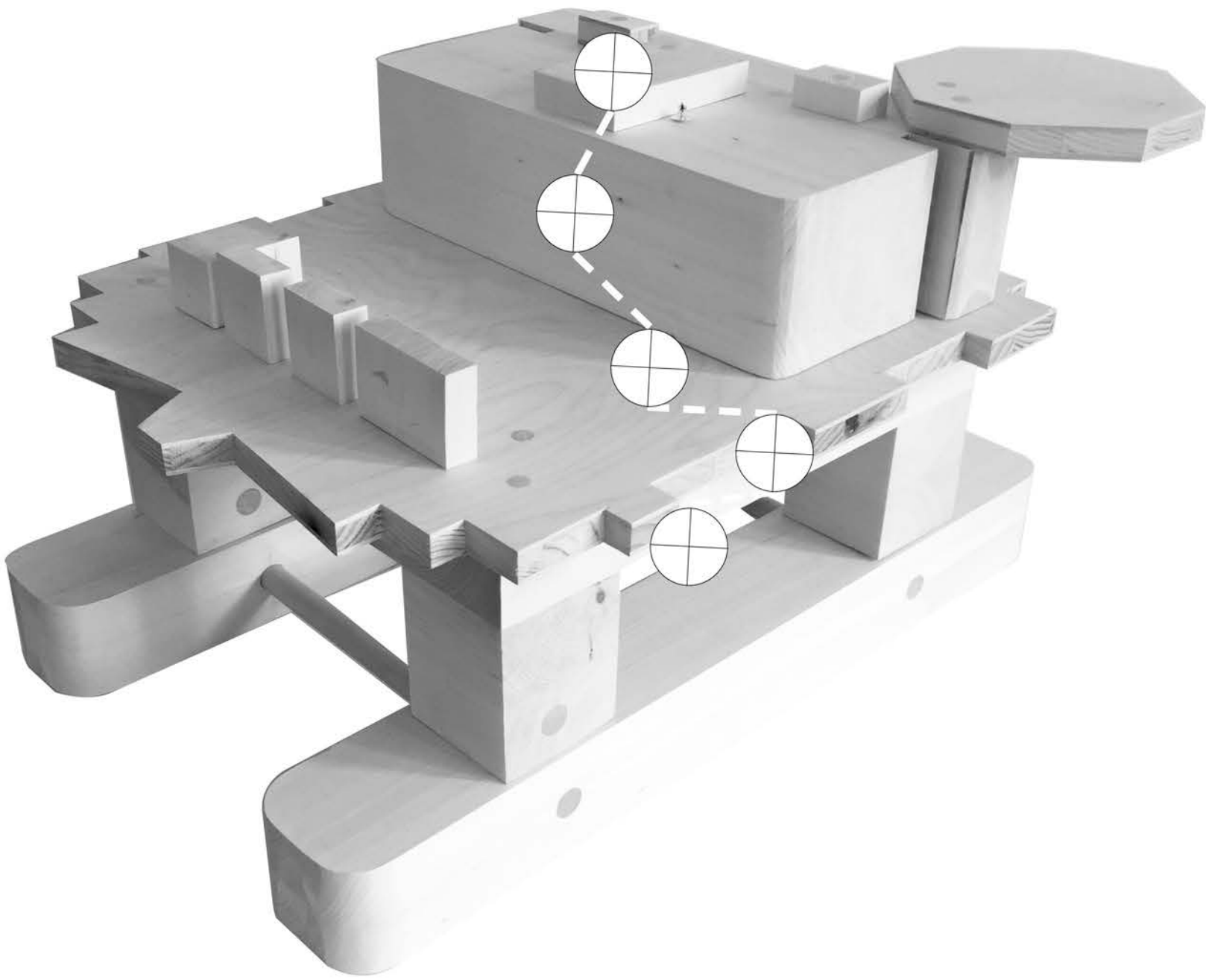
Five break rooms was to be placed, one for each working group on the platform. To find the best locations to position the break rooms a study of the of platform was mad by analysing its drawings. The two main criterias for the placement was an efficient flow from the workplace, and a chance of relaxing with an outlook facing away from the platform, against the sea and sky. The break rooms were placed so that they were directly connected to the various zones.

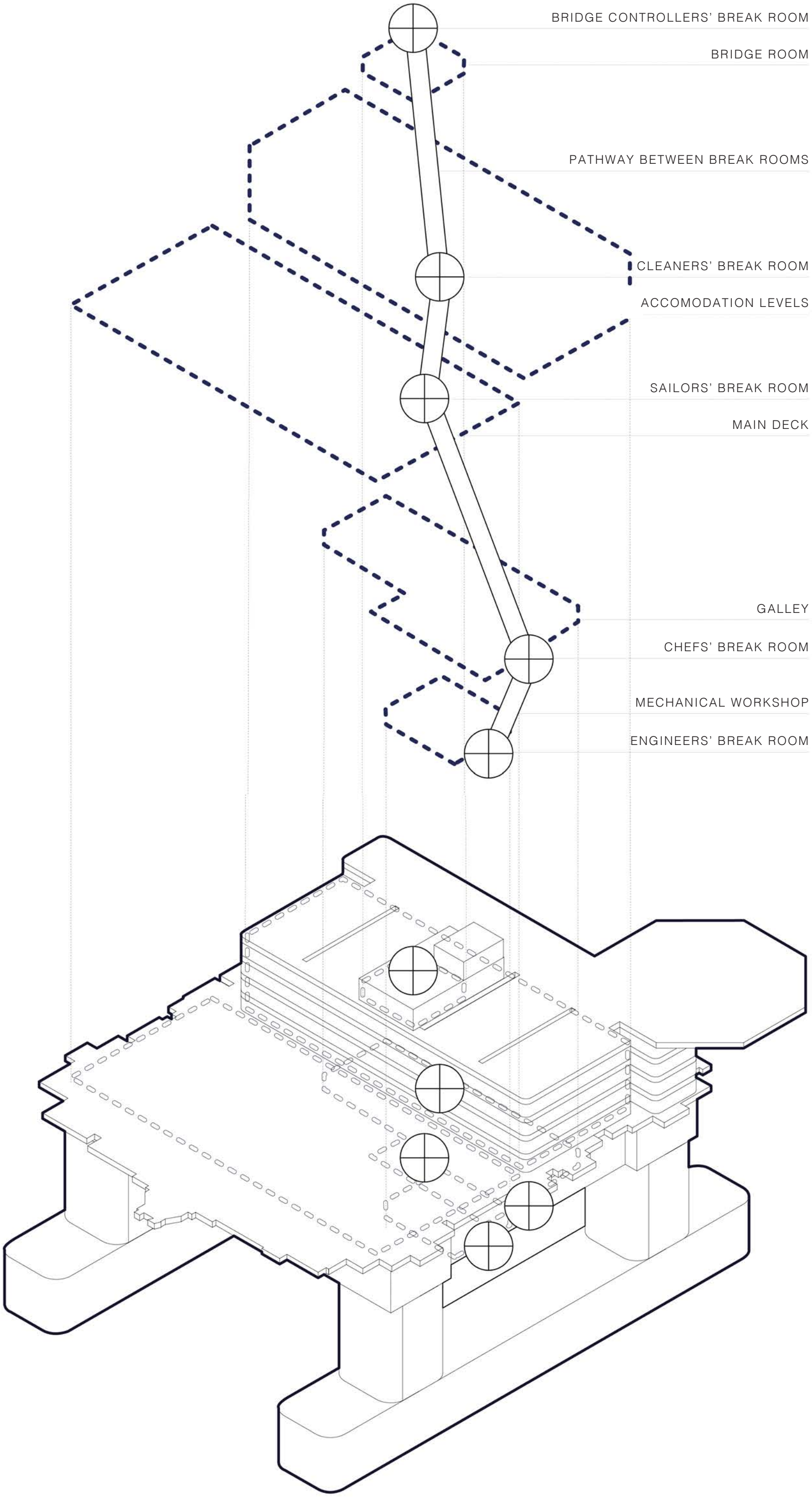
LOOK AWAY – F

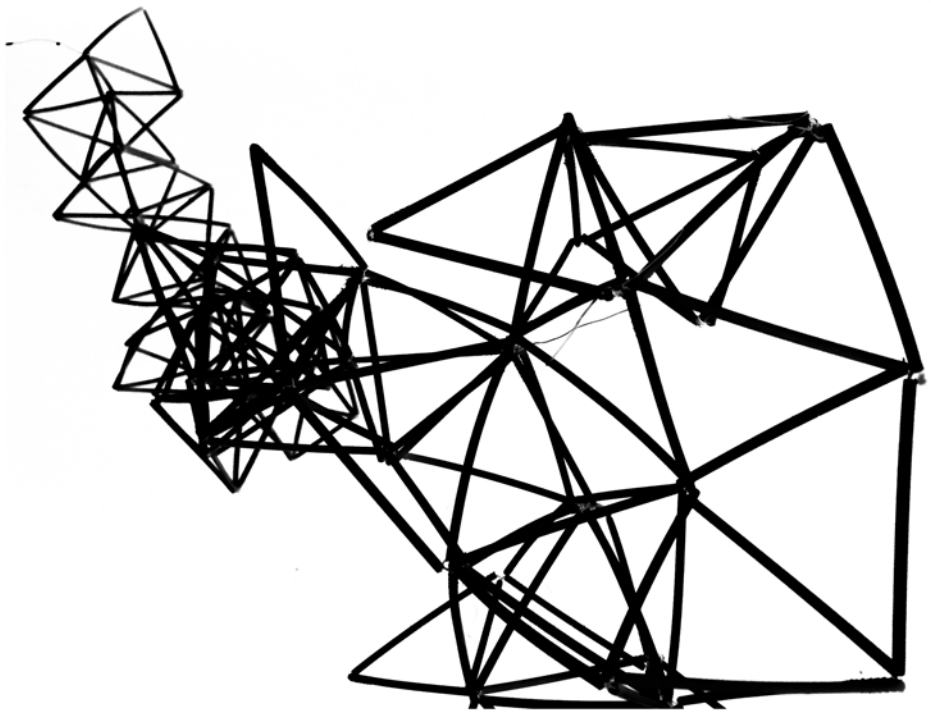
FOREGROUND – A

INTEGRATION – G

To create a sense of belonging, it was required that the break rooms were connected in a coherent structure. Therefore schematically adding pathways between each break room, these pathways made it possible to open up the break rooms, making it accessible to other working-groups.




BRIDGE CONTROLLERS' BREAK ROOM
BRIDGE ROOM
PATHWAY BETWEEN BREAK ROOMS
CLEANERS' BREAK ROOM
ACCOMODATION LEVELS
SAILORS' BREAK ROOM
MAIN DECK
GALLEY
CHEFS' BREAK ROOM
MECHANICAL WORKSHOP
ENGINEERS' BREAK ROOM



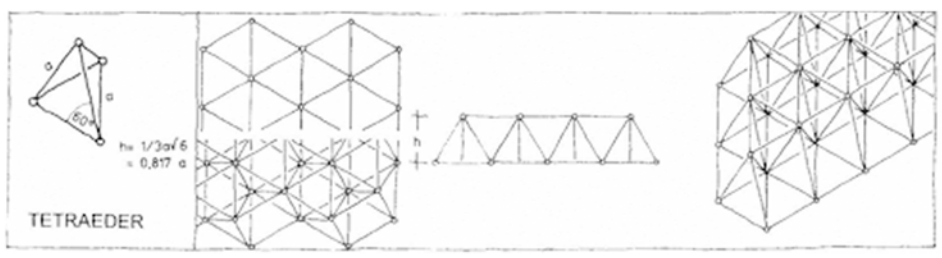


fig.08

step 2: structure

In step one of the sketch process, the coffee rooms had been placed and tied together by schematic pathways. In step two a study was initiated to find appropriate construction designs and materials for building the break rooms and their appurtenant escape alleys.

The break rooms were positioned on the outside of the platform and would in some way be attached to it. Large parts of the construction on the platform was unknown, and the design principle that was selected had to cope with long spans with few and attachment points.

REPETITION – C

Materials and construction would in some way be composed of smaller units that were repeated in a varying rhythm to create a dynamic foreground.

A space frame proved to be the best solution since it is able to spread in three dimensions, being efficient enough to create long spans only by a few fixing points. Such a structure caused as little problems as possible in the placement of the break rooms, meaning no compromises needed to be applied.

REPETITION – C

FOREGROUND – A

Through repetition and dissemination a maze-like structure evolved that opens and closes alternately. The space frame made it possible for guiding the visitor between open and intimate spaces. In that way a person visiting was able to get the experience of standing in a foreground.

The choice fell on a space frame made of paper. The paper is more environmentally friendly compared to metals and plastics, and provides a soft and natural feel in relation to the painted steel of the platform. Paper was chosen over wood because it was easier to transport by helicopter to the platform.

fig.09
Paper Tower - Shigeru Ban

Model of sheets mounted on space frame

fig.10
Sail Boat Interior

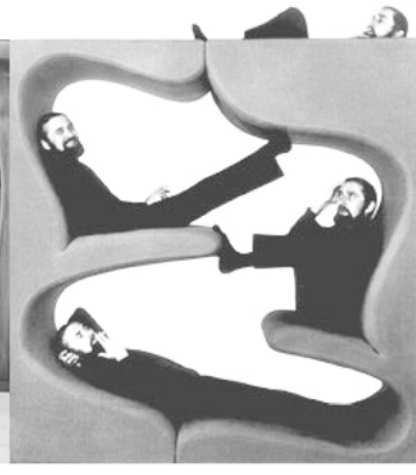


fig.11
Living Tower – Verner Panton

step 2: space

OPEN/INTIMATE – B

GROUPING – D

SCALE – E

LOOK AWAY – F

By covering the space frame with boards, intimate spaces for break rooms is achievable. The platform is in constant motion due to waves and wind. Inspiration comes from the interiors of recreational boats where the floor and walls form furniture that change depending on the ship's tilt. Another inspiration is Verner Panton's furniture of varying seating position that also forms walls.

With a space frame which is able to move in many different angles a variation of seating surfaces could be created depending on the needs and situation of the various break rooms.

fig.12
Space Buster - Raumlabor

Plastic vibrating in wind

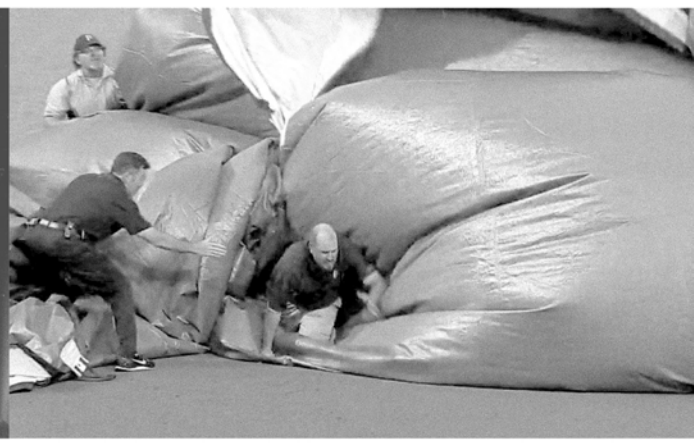


fig.13
Tarpaulin breaking free

step 2: climate protection

A plastic sheet is often used in places where one seeks the feeling of being outside yet remaining the benefits of an inside climate. E.g. avoiding rain at an outdoor cafe, a boat’s spray hood protecting from splashes of waves, or a temperate awning next to the camping wagon.

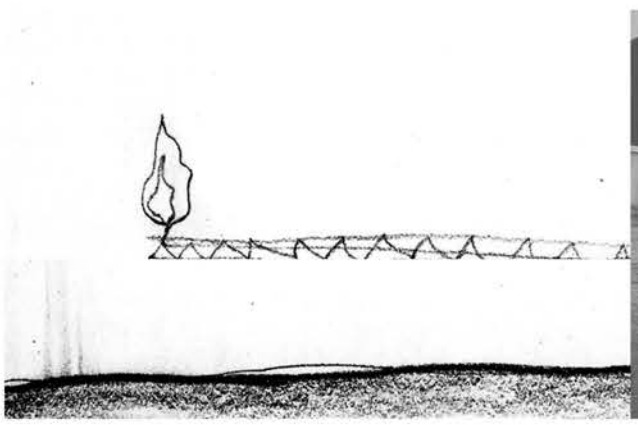
The plastic canvas vibrates in the wind, occasionally creating a powerful sound.

If you ever watched a tarpaulin breaking free, you may understand the fabric’s way of interfering with its surroundings. The fabric accentuates forms and materials through touching it, making you discover something you had not noticed otherwise.

FOREGROUND – A

LOOK AWAY – F

Similarly, a sheet of plastic is used in this intervention; to create a sense of being between inside and outside, where the wind and the waves make the plastic sheet accentuate the platforms odd corners.



Waste gas being burned off at an off-shor oil rig.

fig.14
Michael Rakowitz creates inflatable ‘paraSITE shelters’ for homeless

fig.15
Large inflated tent covering a tennis hall. The structure is withstanding the winds of an unprotected field.

At an off shore oil rig a gas flare used for burning off flammable gas that can not be transported to land. Therefore vast amounts of such associated gas are commonly flared as waste or unusable gas. The heat of the flame can be used to inflate the structure.

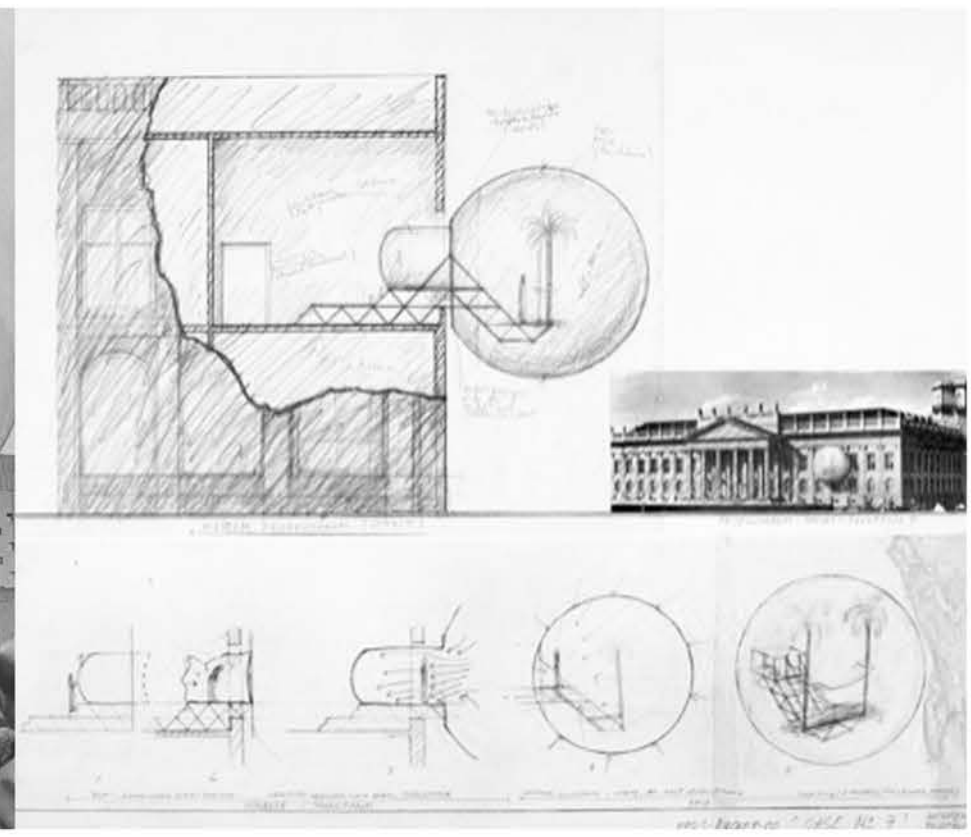
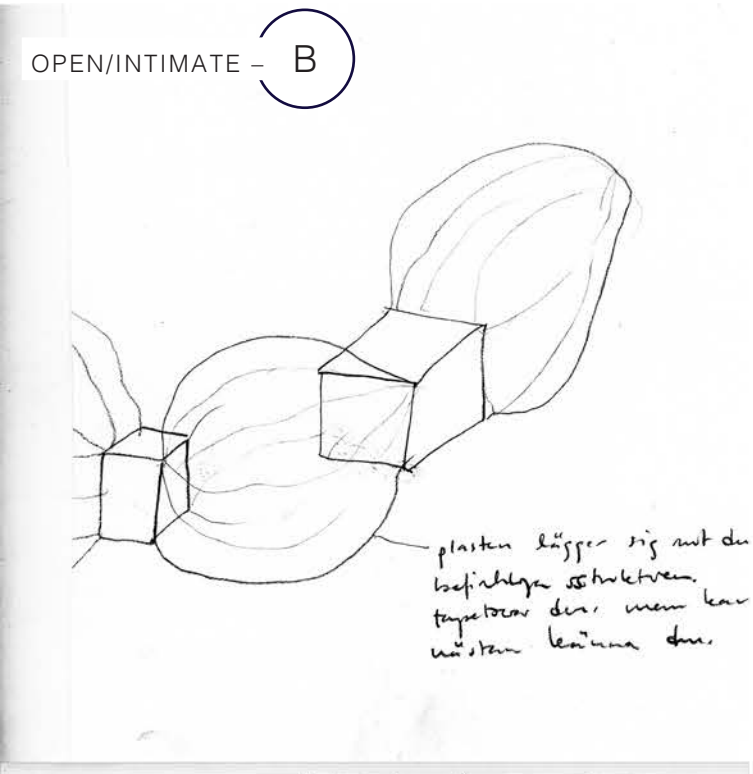
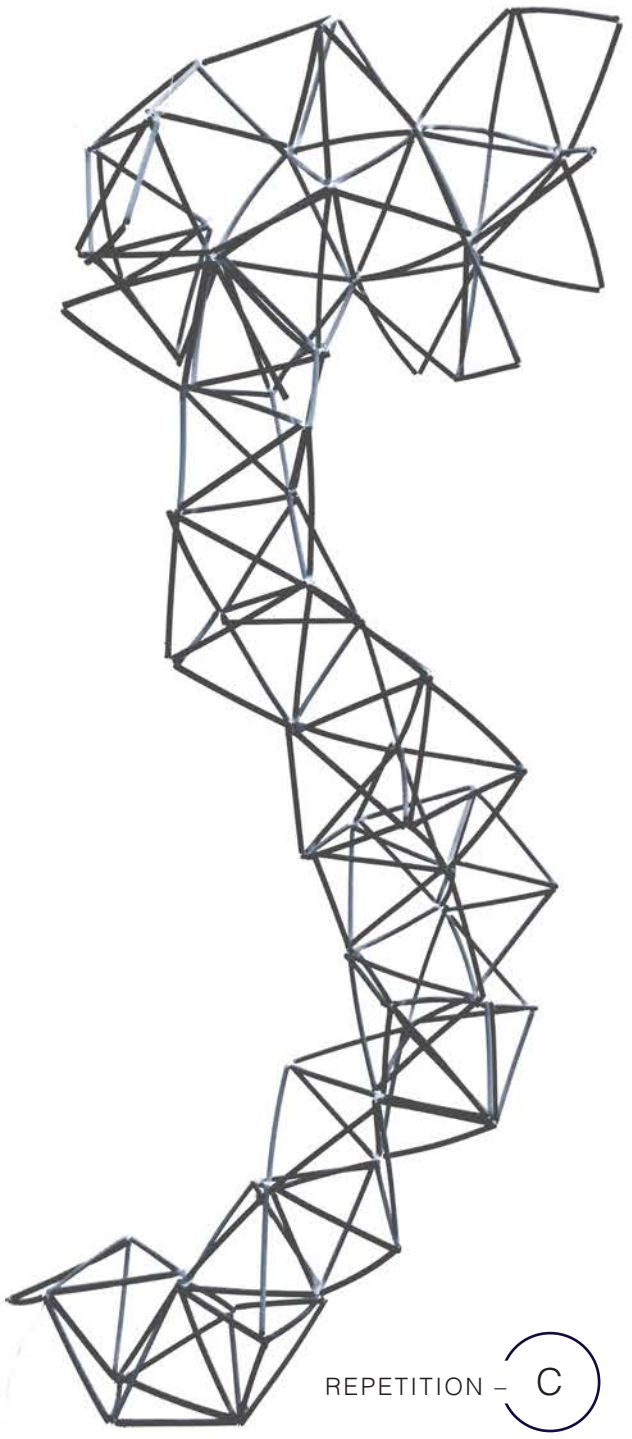


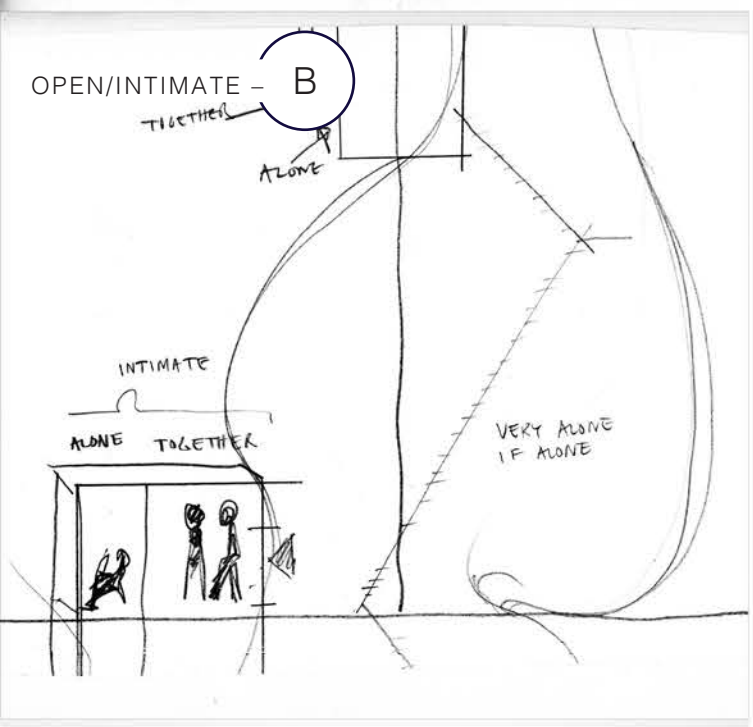
fig.16 fig.17
Haus Rucker Co created a space for relaxation and play with an inflatable structure on the façade of an existing building. This is also an example of how a space frame at certain points can penetrate the inflated plastic.



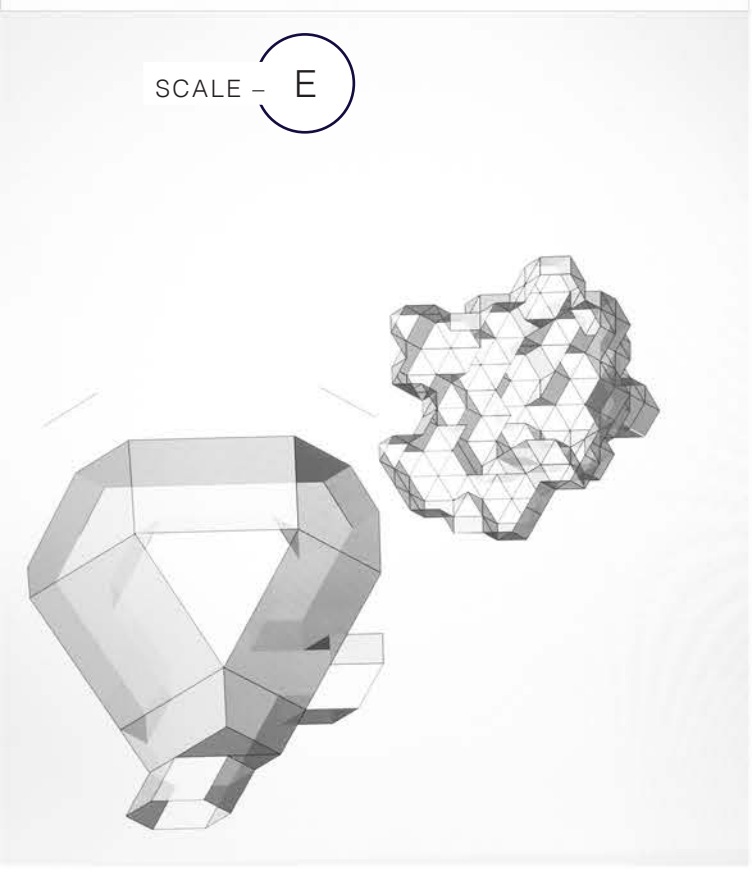
Left: Adding a note on the system of air-locks needed in a pneumatic structure.

Right: Modelling space frame with sticks





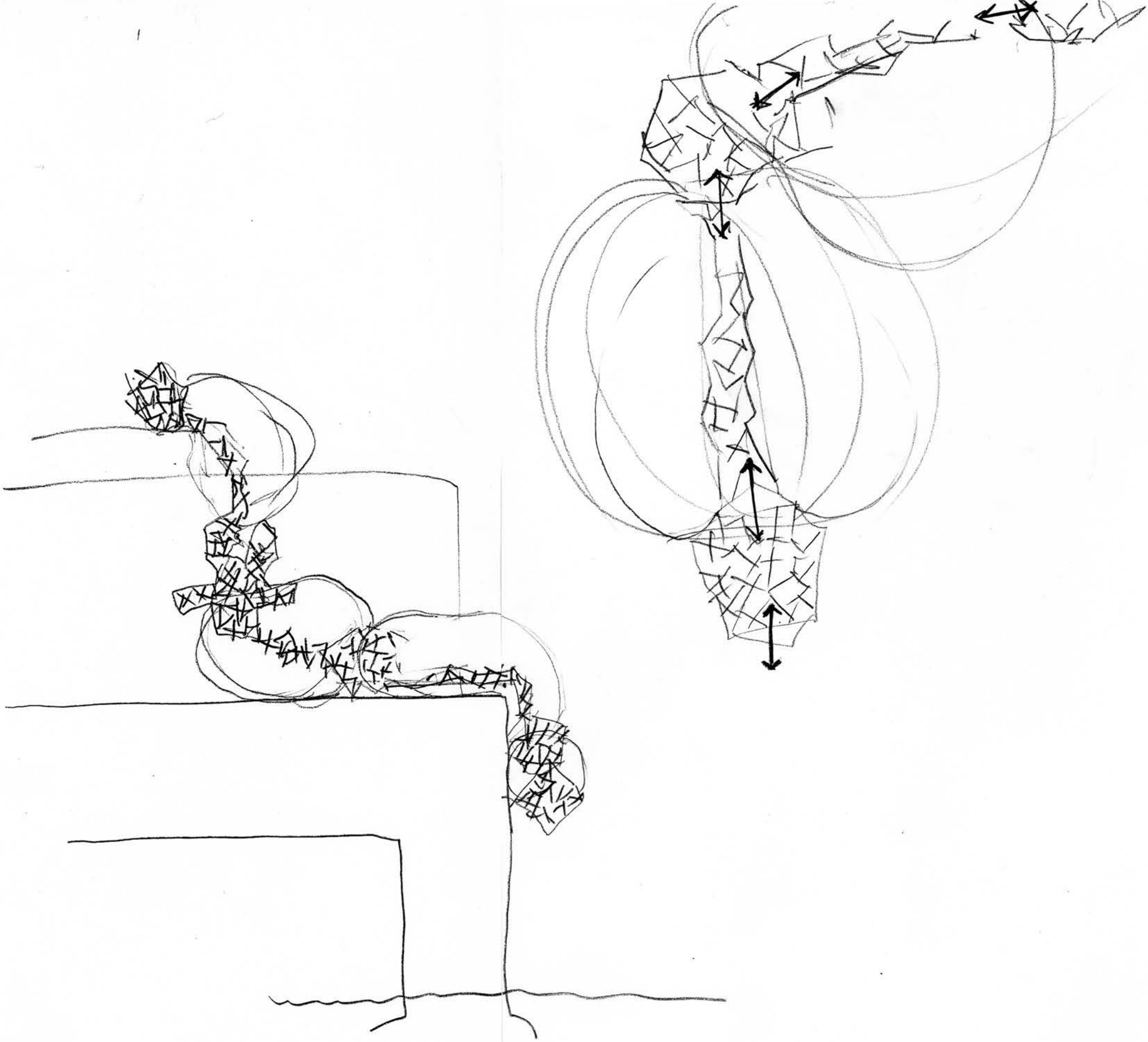
The break room as an intimate space and the bubble as an open.



Using Rhinoceros to model space frame and break rooms in different scales

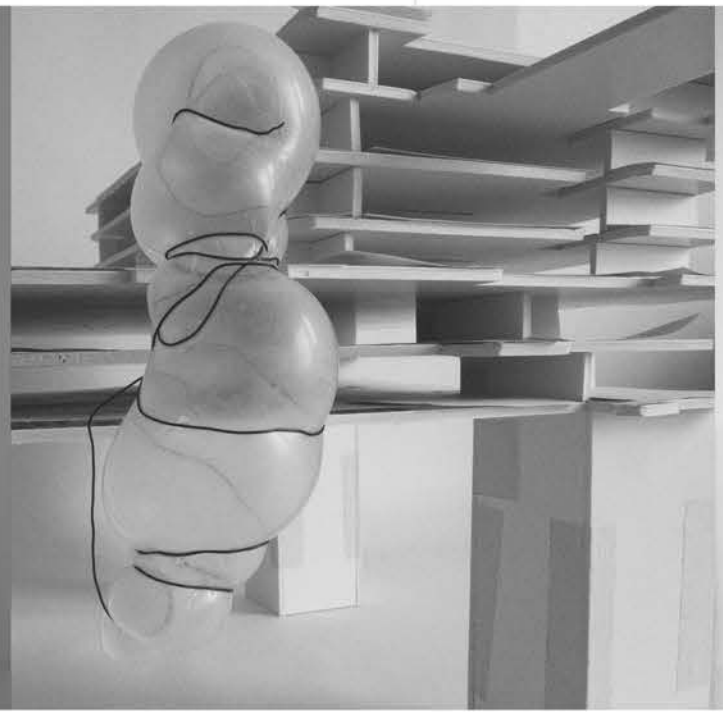
step 3: sketches of structure

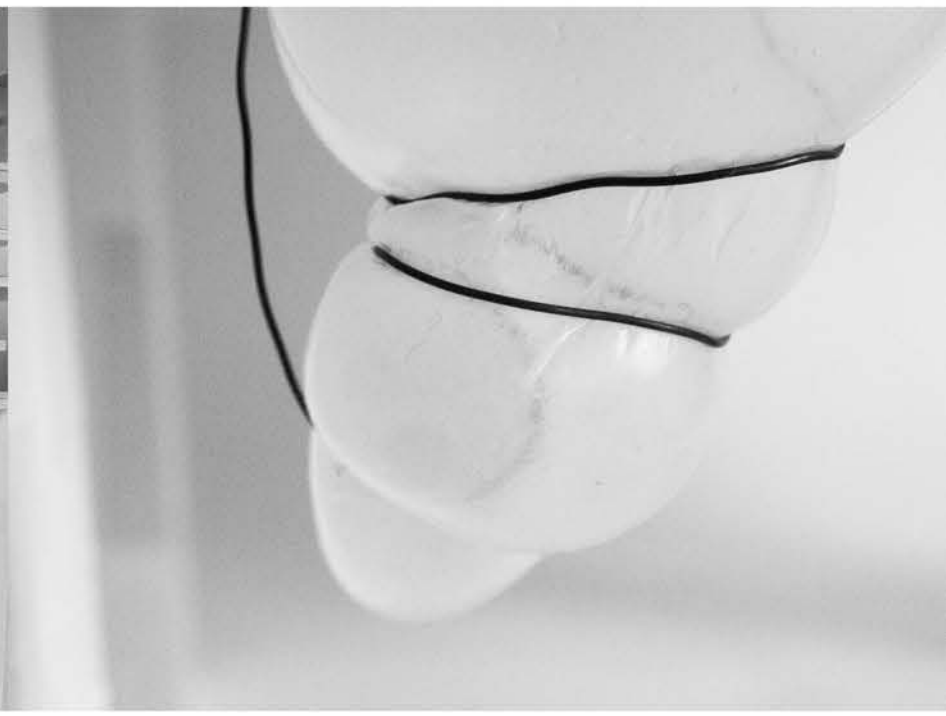
The images on this page show important moments in sketching to develop a comprehensive structure for the construction.



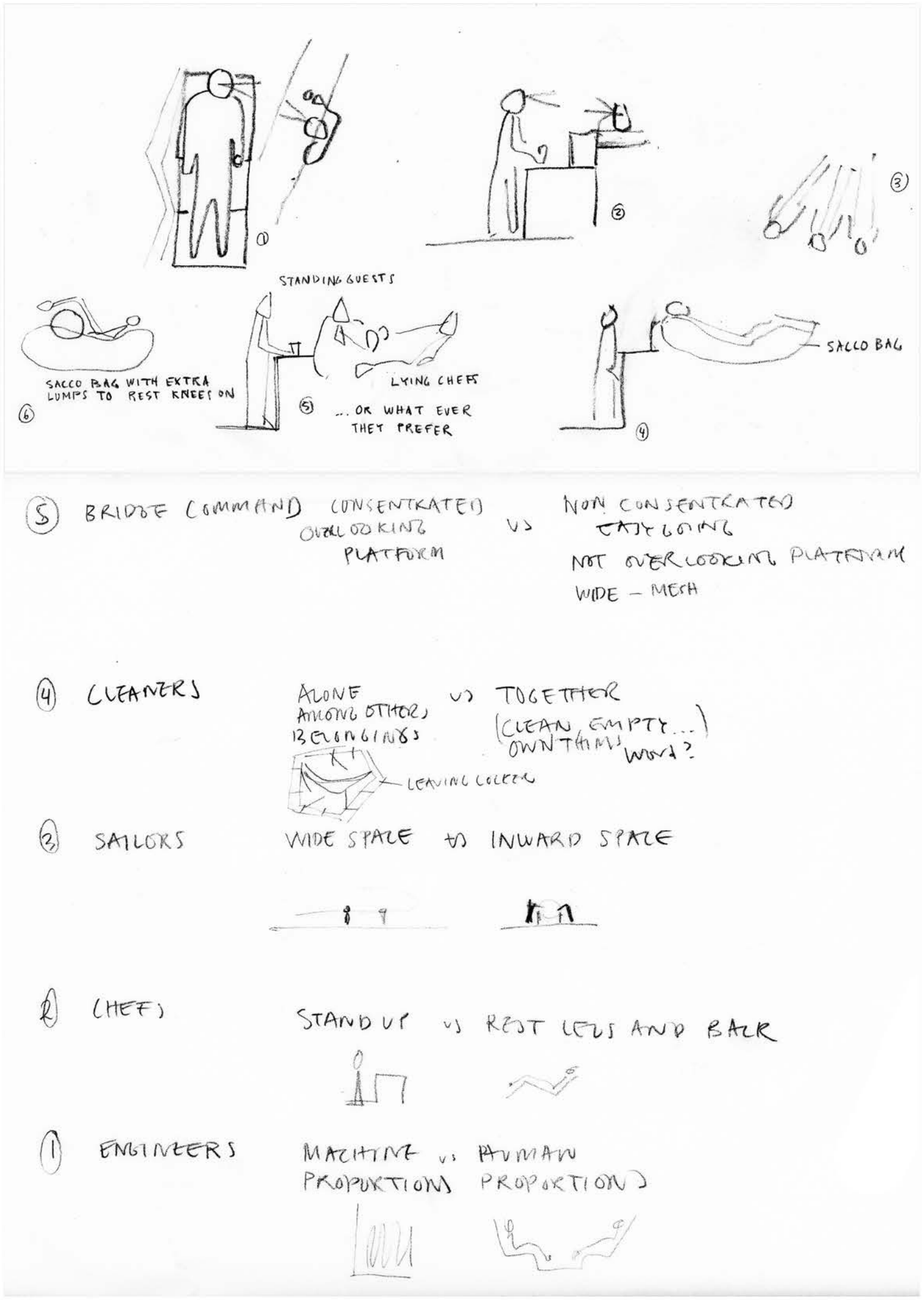
Above: Sketch describing the whole structure; space frame and inflated plastic, with the break rooms forming air-locks

First model sketch of plastic as climate protection





First model sketches of inflated plastic

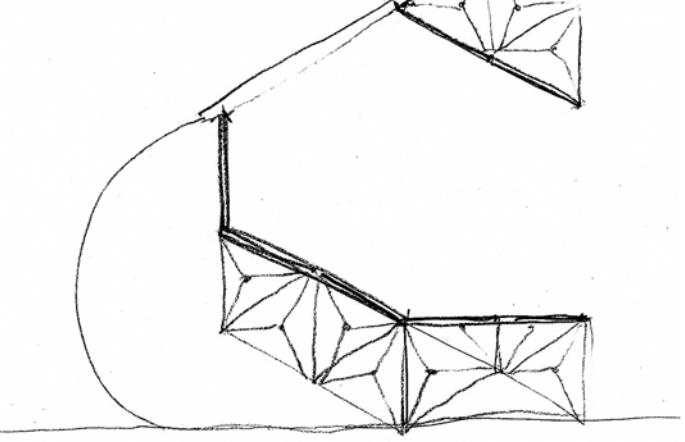


Schematic notes on what a break means for the different workinag groups

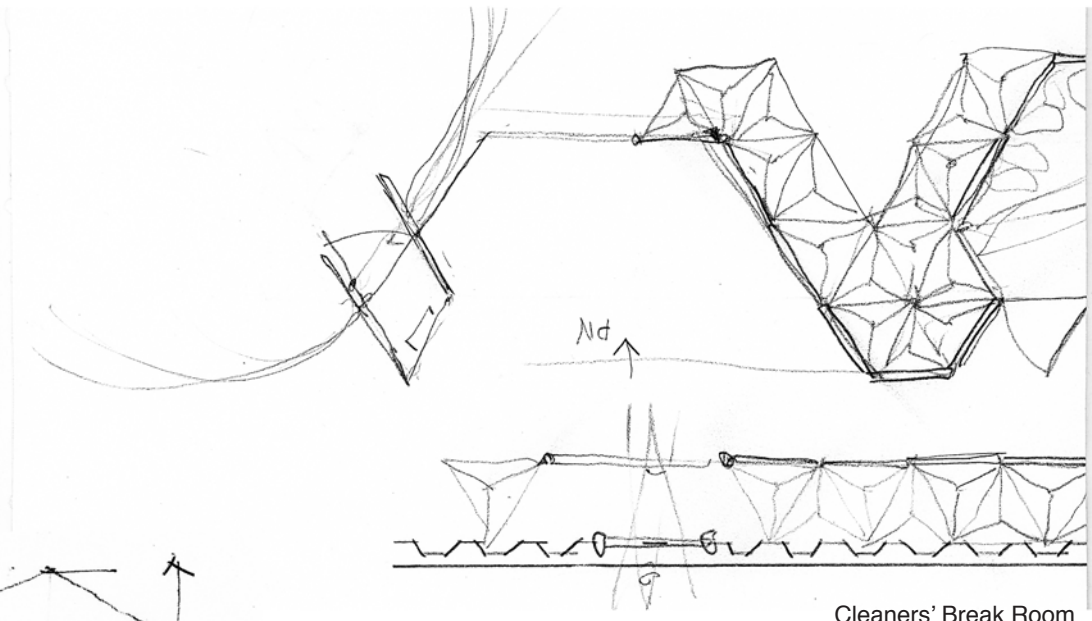
Sketch on how a chef and visitor interact

step 3: sketches of break rooms

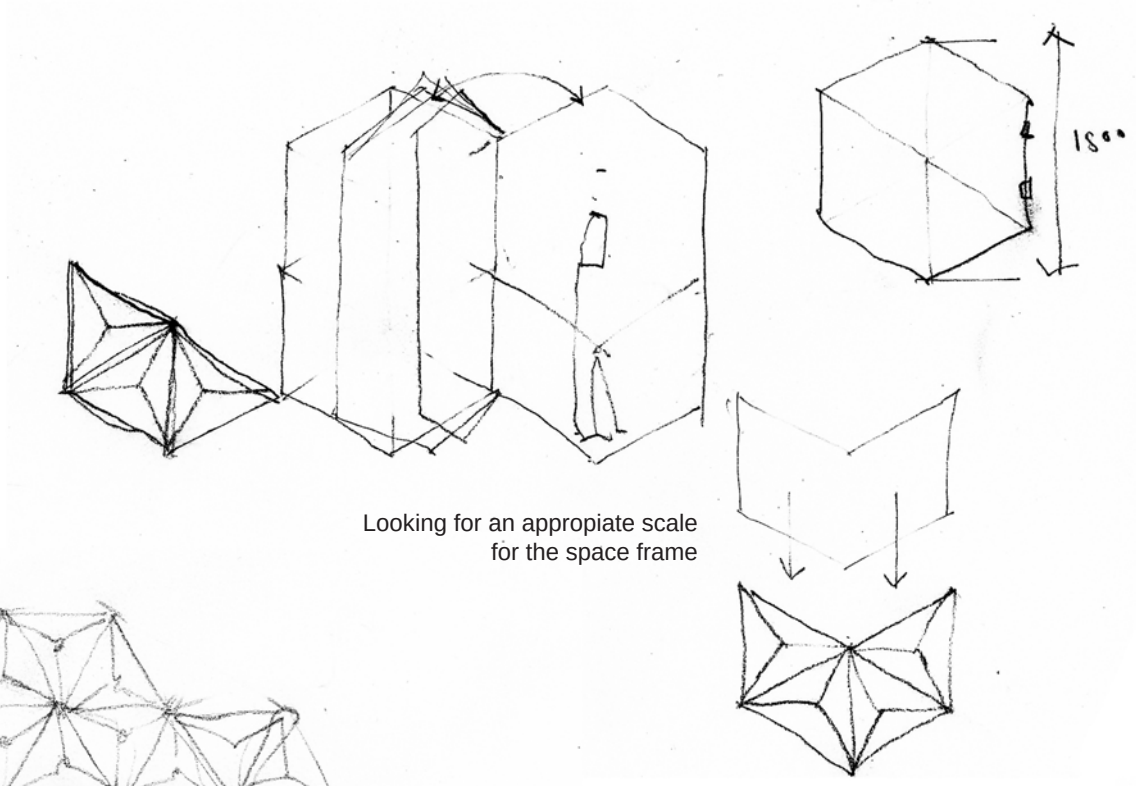
The images on this page show important moments in sketching to develop a comprehensive structure for the construction.



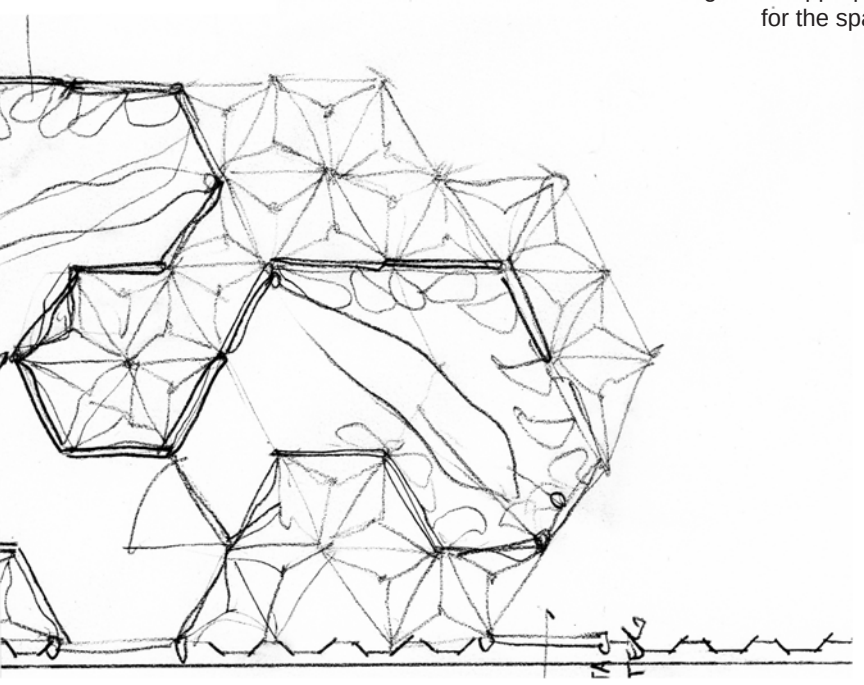
Meeting between inflated plastic,
window, sheet and space frame



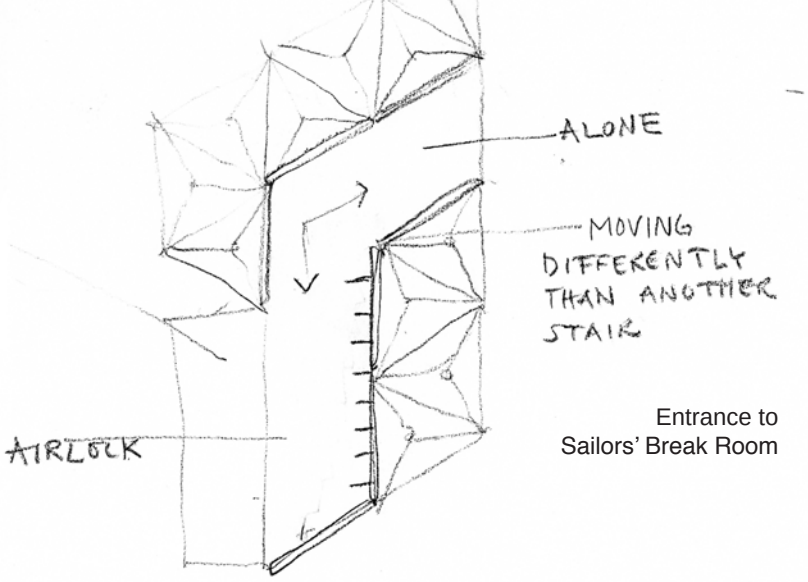
Cleaners' Break Room



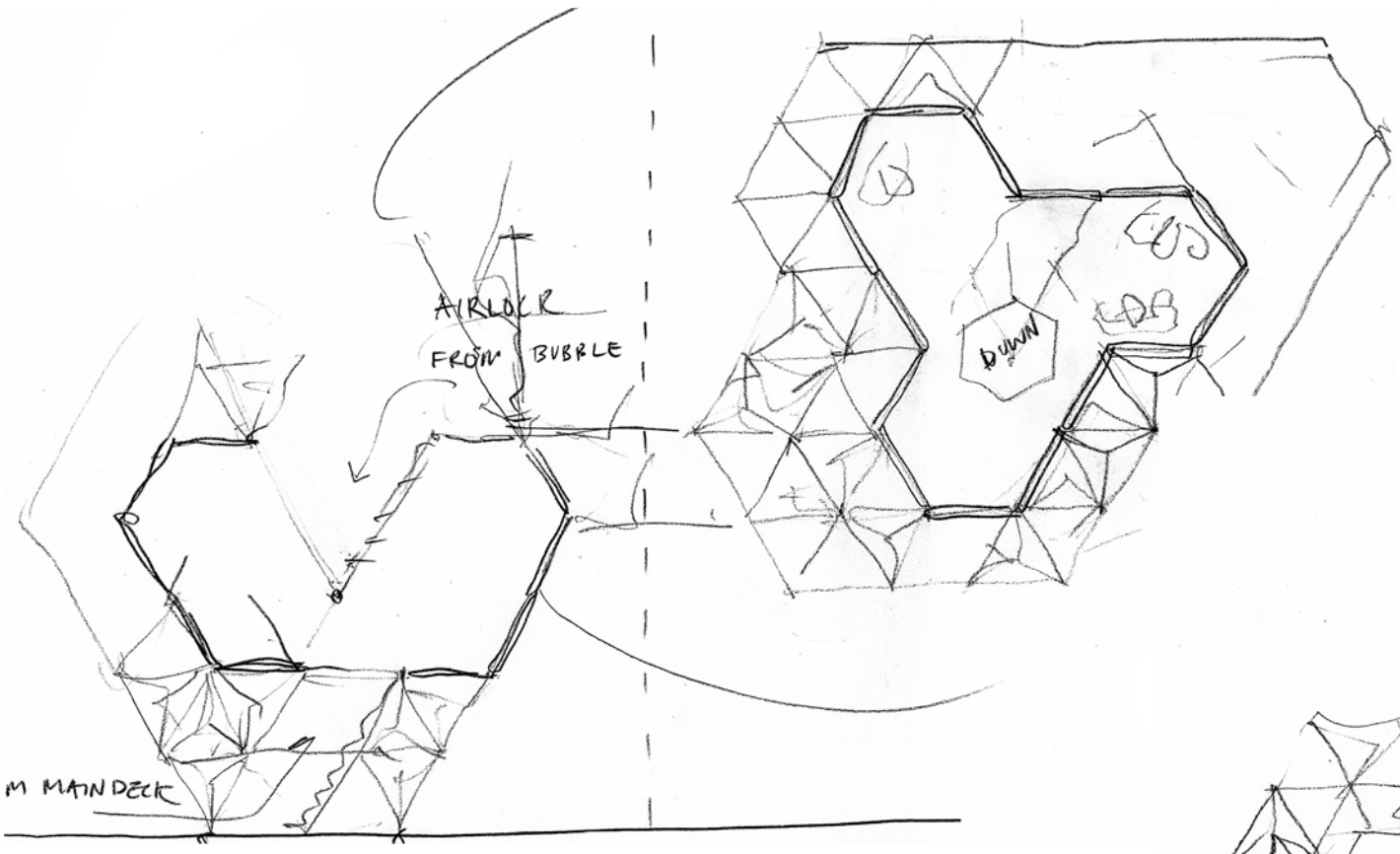
Looking for an appropiate scale
for the space frame



Cleaners' Break Room

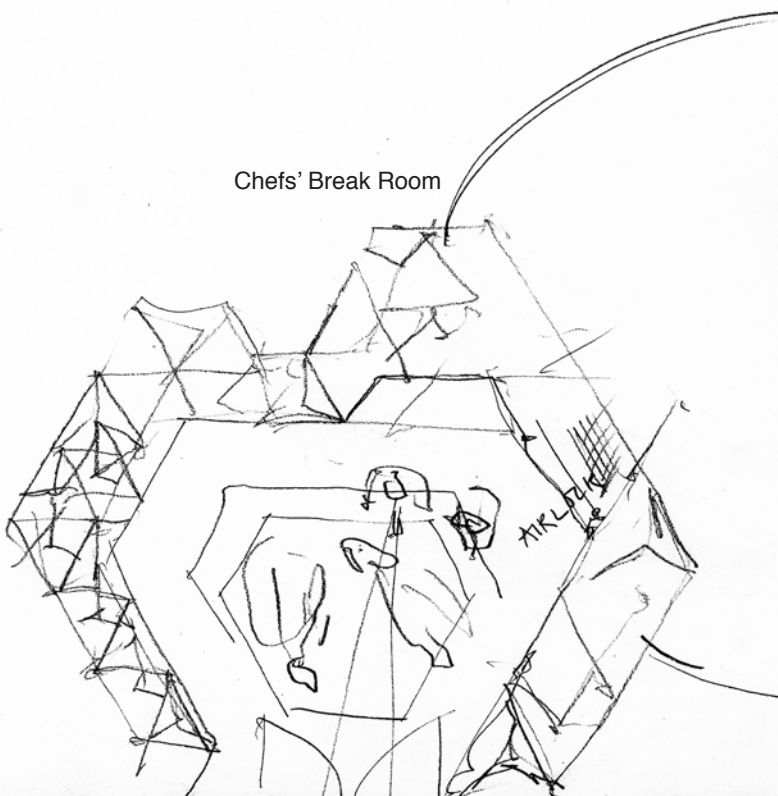


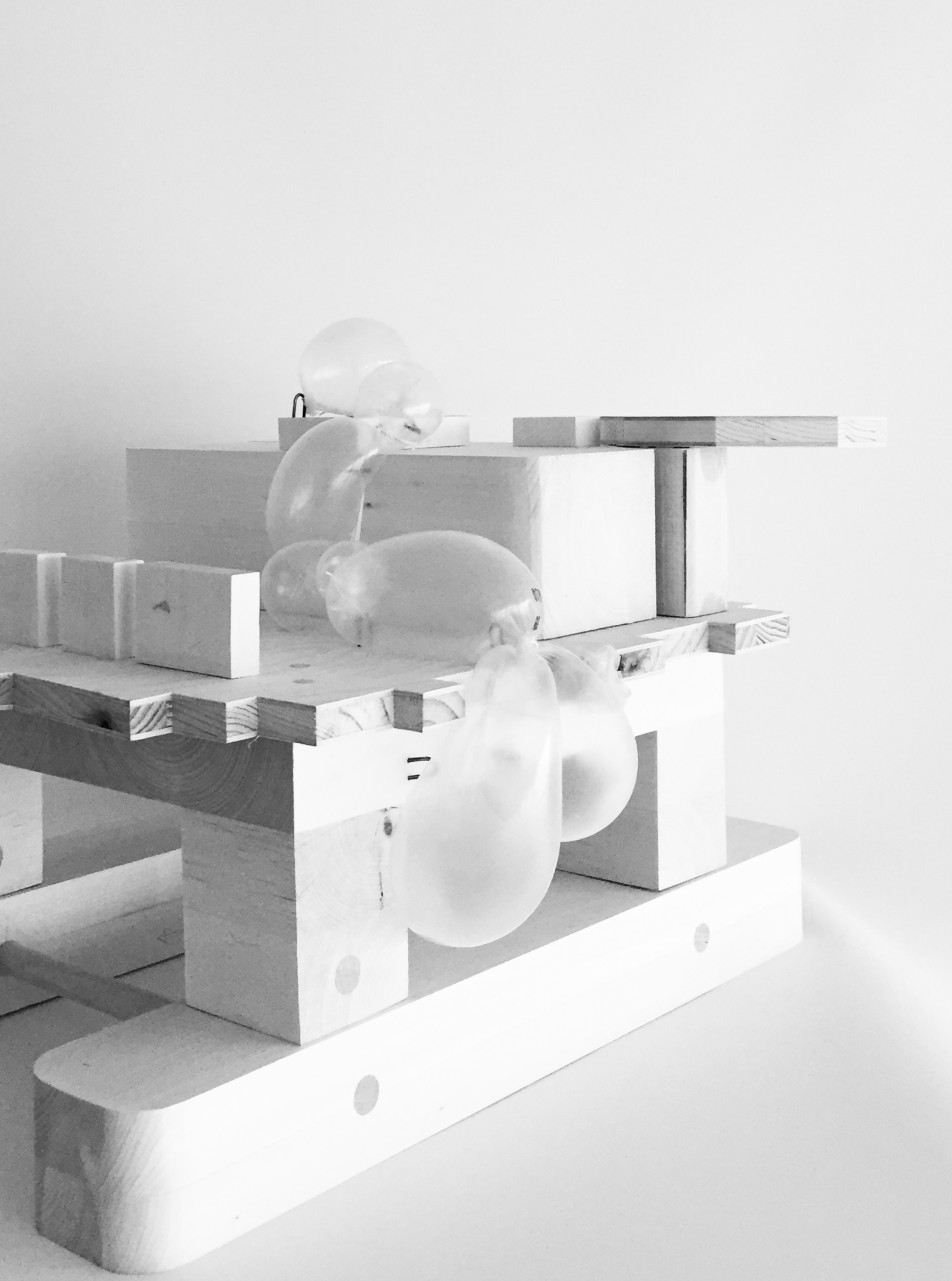
Entrance to
Sailors' Break Room



Sailors' Break Room

Chefs' Break Room





overview of design proposal

Inflated Plastic

At an off shore oil rig a gas flare used for burning off flammable gas that can not be transported to land. The heat of the flame is used to inflate the plastic weather protection.

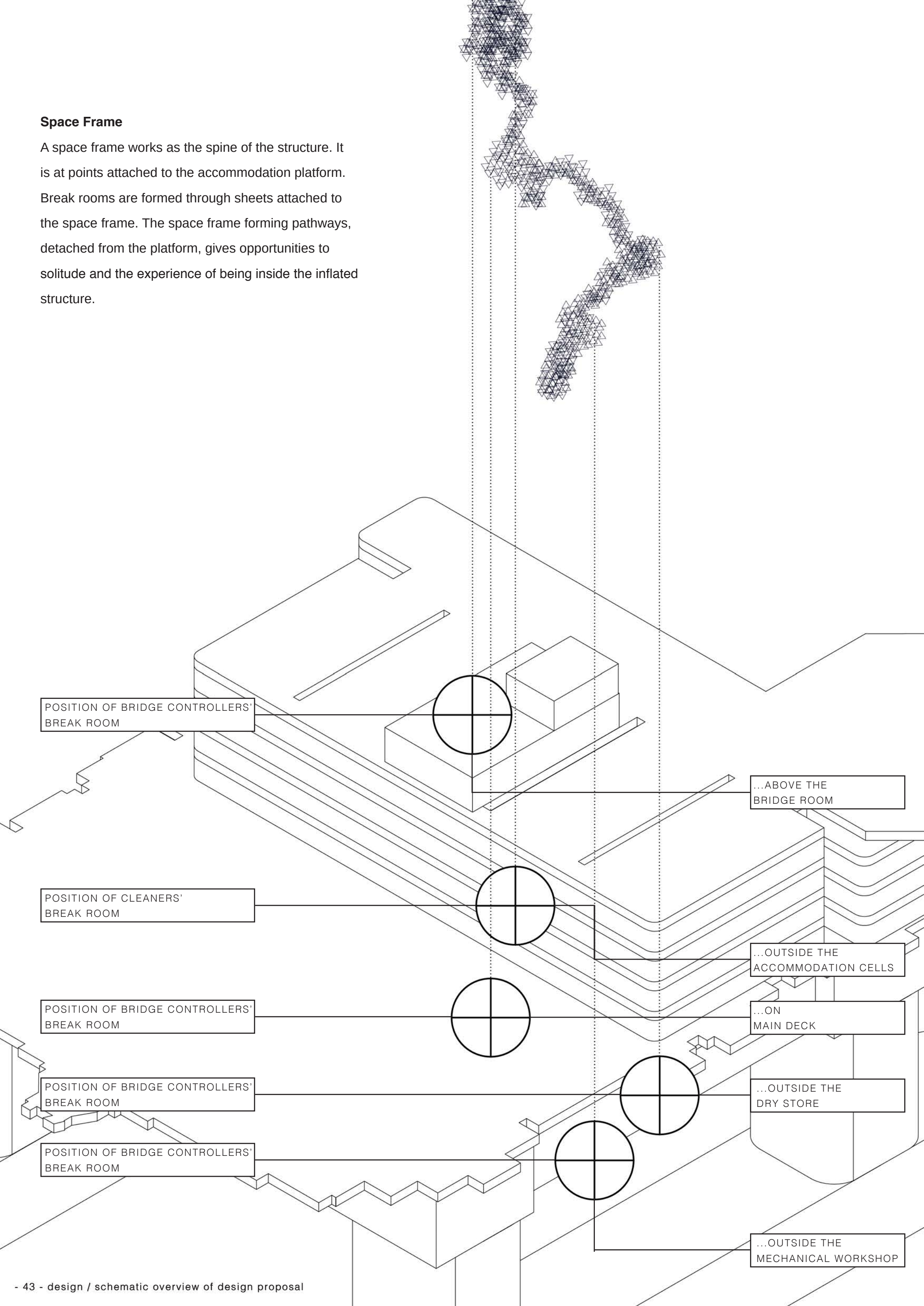
Break Rooms

The break rooms works as airlocks and entrances into the inflatable structure.

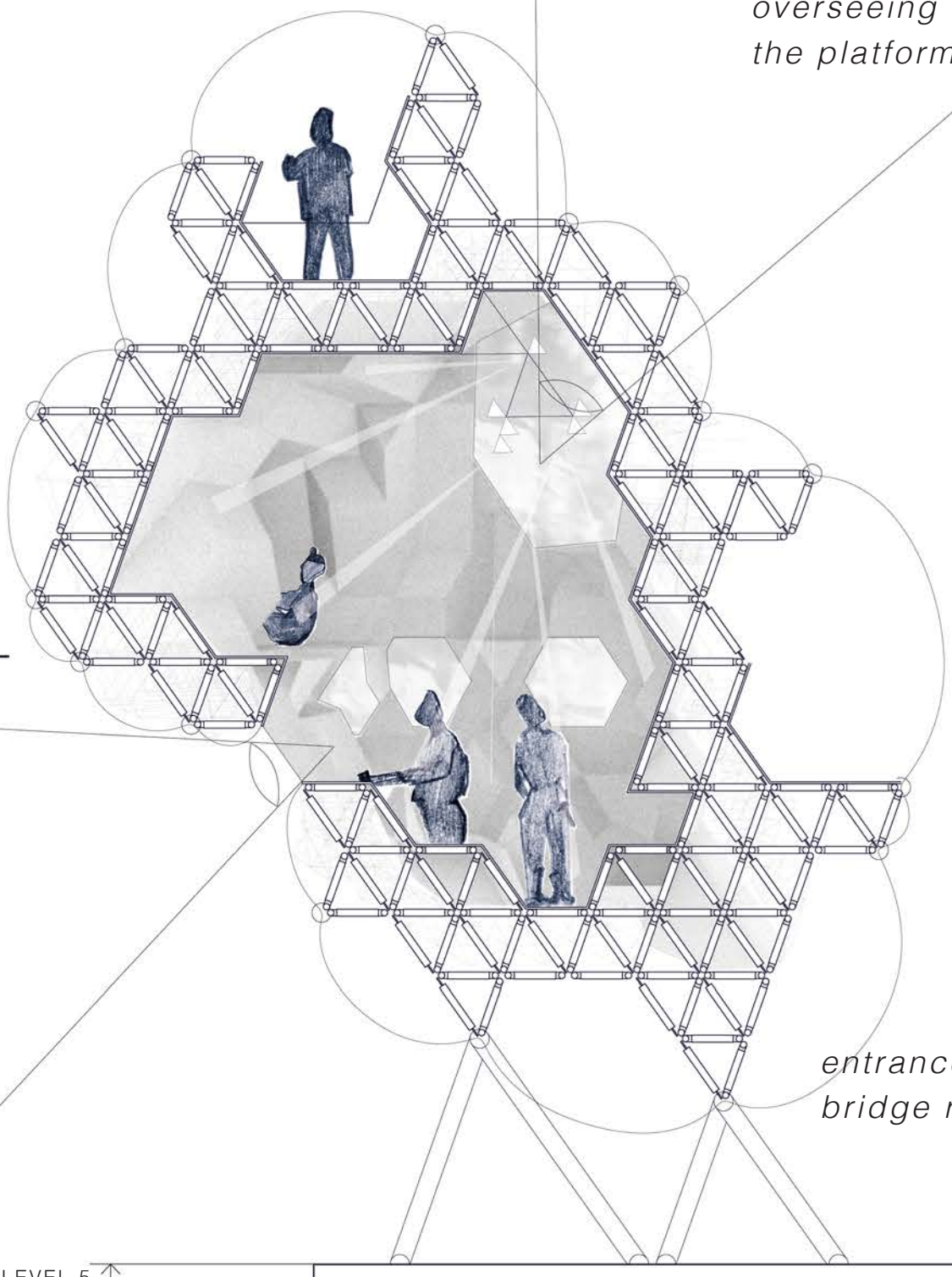
Break rooms are places where to, alone or together, take a rest. Each working group has their own break room in connection to their workspace. Pathways connects each break room, making them open to all onboard.

Space Frame

A space frame works as the spine of the structure. It is at points attached to the accommodation platform. Break rooms are formed through sheets attached to the space frame. The space frame forming pathways, detached from the platform, gives opportunities to solitude and the experience of being inside the inflated structure.



unfiltered light and a view of sky, a break from overseeing the platform

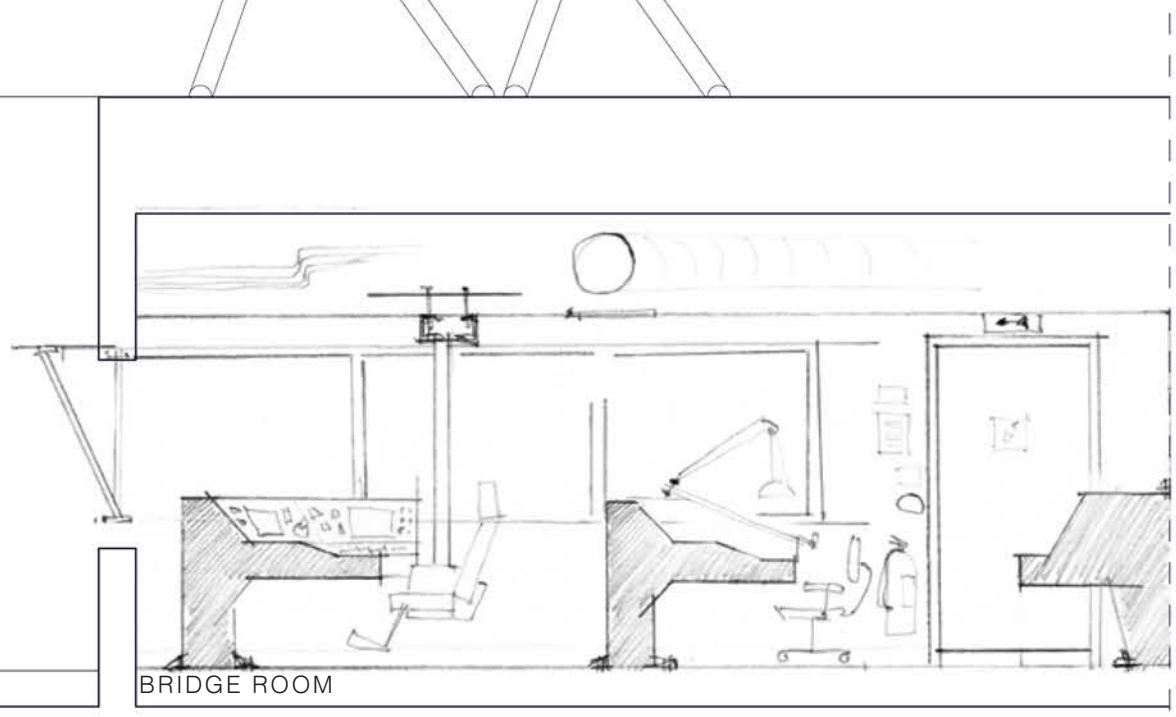


PLAN CUT

same view over the platform and its surroundings as in the bridge room

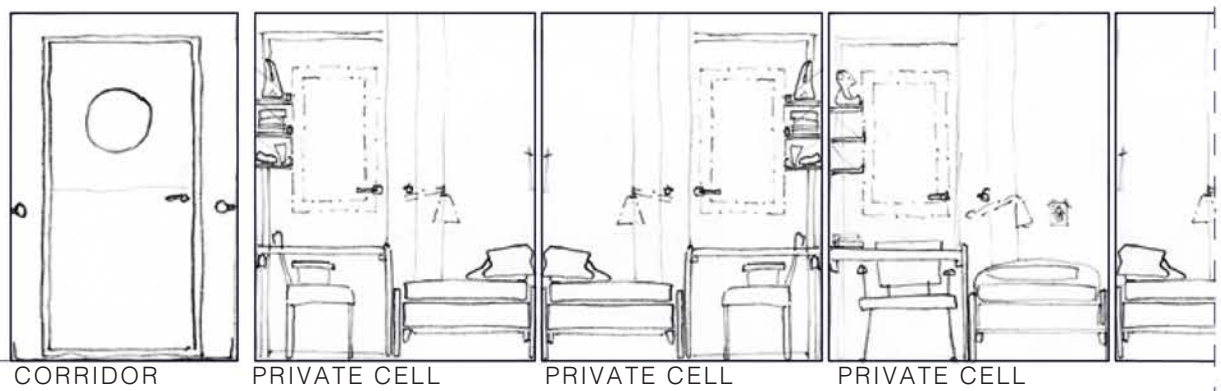
entrance from bridge room

ACCOMMODATION LEVEL 5
(EL +52.200)



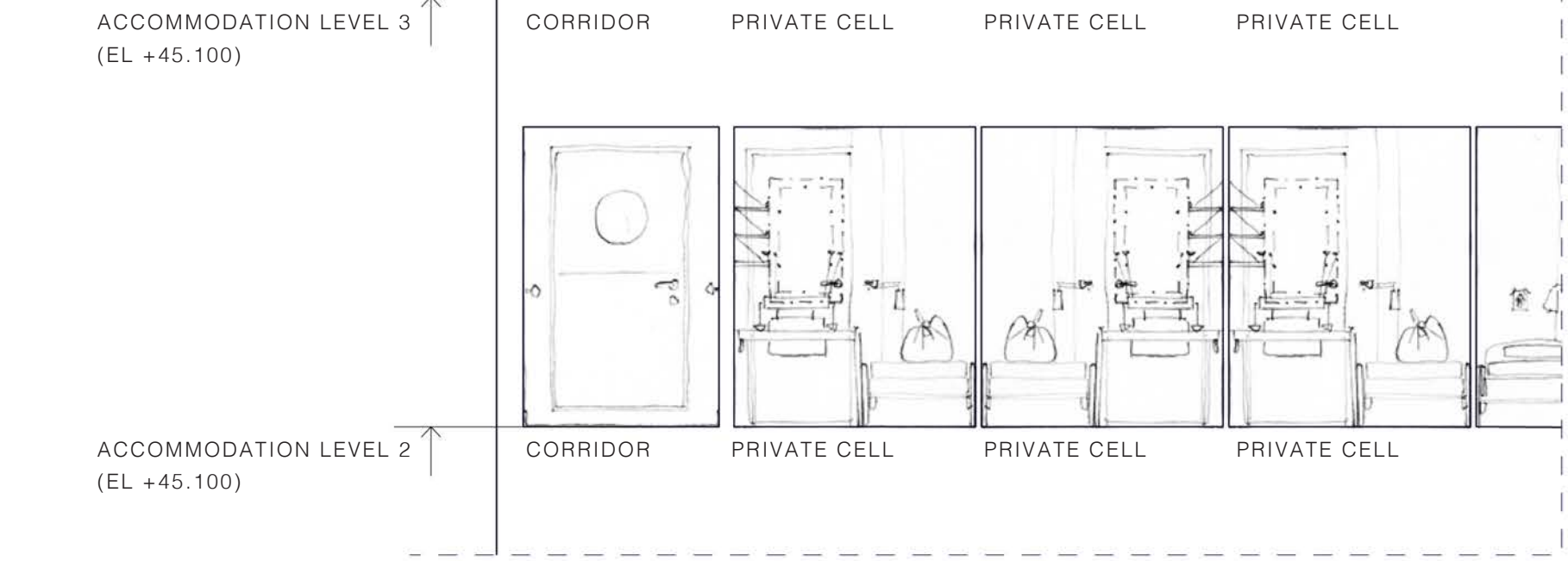
ACCOMMODATION LEVEL 4
(EL +48.400)

BRIDGE ROOM



ACCOMMODATION LEVEL 3
(EL +45.100)

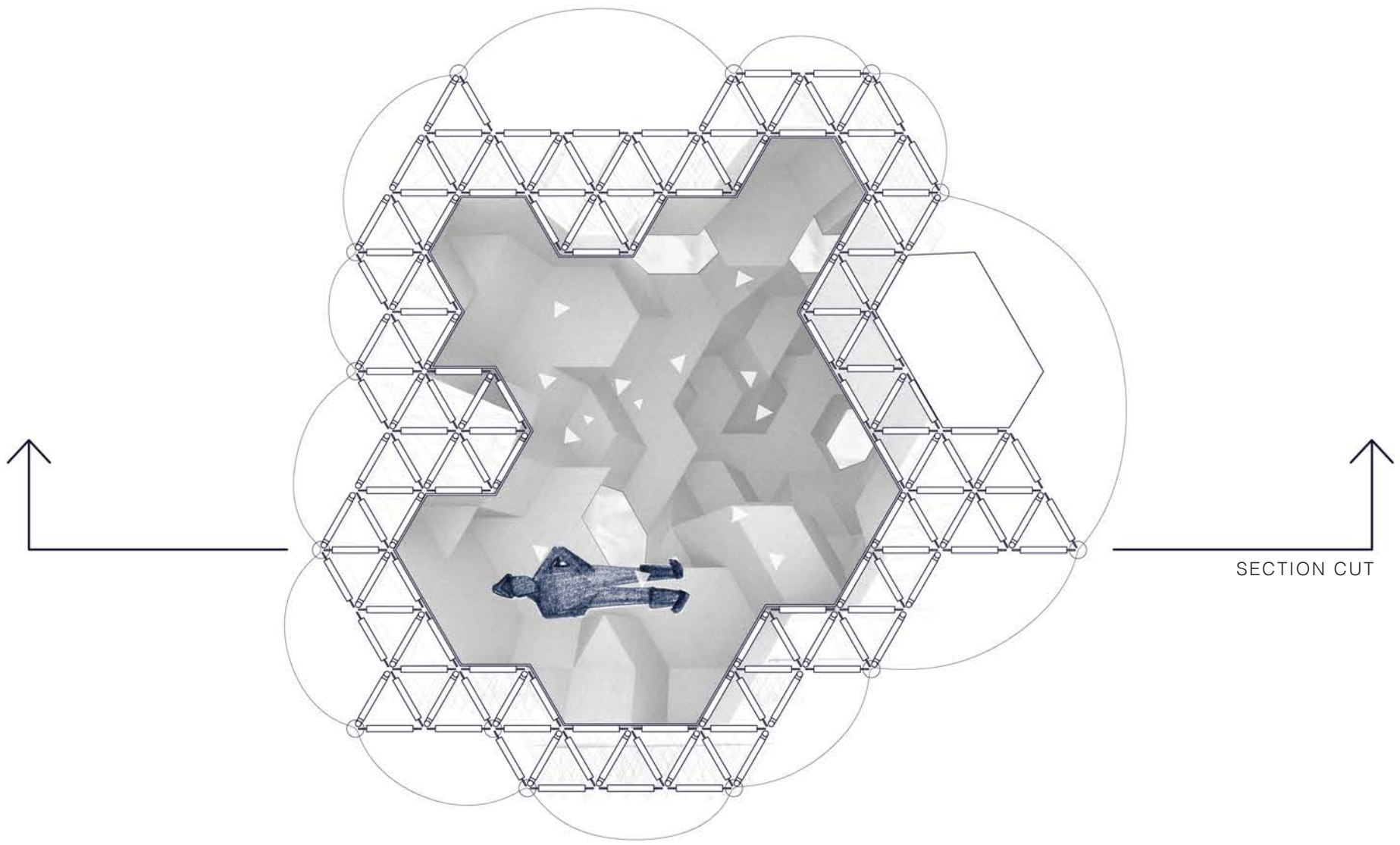
CORRIDOR | PRIVATE CELL | PRIVATE CELL | PRIVATE CELL



bridge controllers' break room

On the bridge, the men are working in front of computer screens and instruments, and sunlight is filtered through sunscreens to avoid the workers of being blinded, ultimately preventing workflow. Prisms are often used at sea to transport and spread the daylight to the dark gloomy spaces below deck. The prisms together with the constant movement of the waves creates a fascinating play of light.

The bridge break room has prisms that creates a playful light-show, that occasionally dazzles the visitor. As a contrast to the constant outlook forwards the Bridge Controllers are offered a clear view of the sky. The visitor can, however, have his coffee and get the same view ahead as the bridge controllers have day-to-day.



the cleaners' break room has the shape of a large light shaft

ACCOMMODATION LEVEL 4
(EL +48.400)

ACCOMMODATION LEVEL 3
(EL +45.100)

CORRIDOR

ACCOMMODATION LEVEL 2
(EL +41.800)

CORRIDOR

ACCOMMODATION LEVEL 1
(EL +38.500)

CORRIDOR

CORRIDOR

MAIN DECK
(EL +35.200)

PLAN CUT

entrance from the private cells

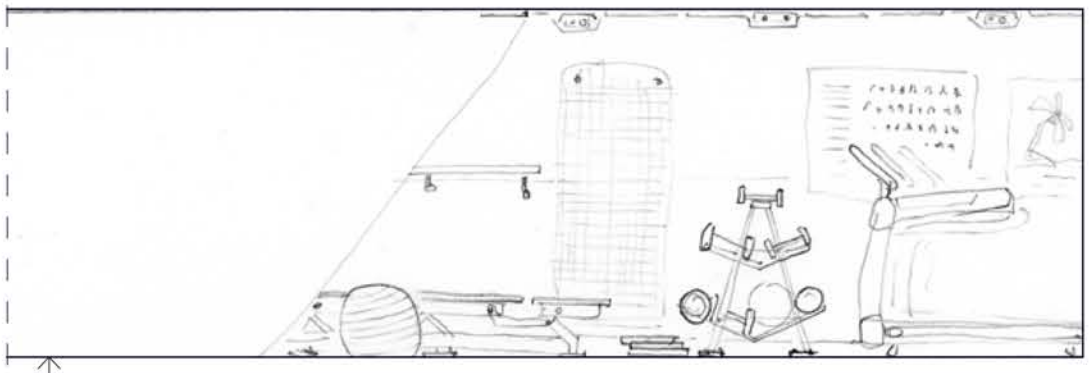
TWEEN DECK
(EL +31.950)

GALLEY

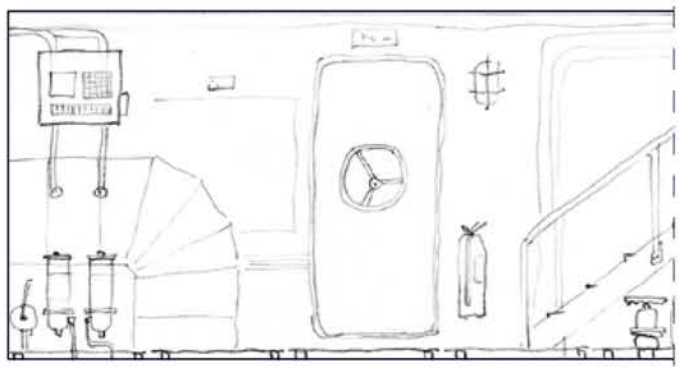
ENGINE ROOM

TWEEN DECK
(EL +31.950)

GALLEY



ENGINE ROOM



LOWER DECK
(EL +28.700)

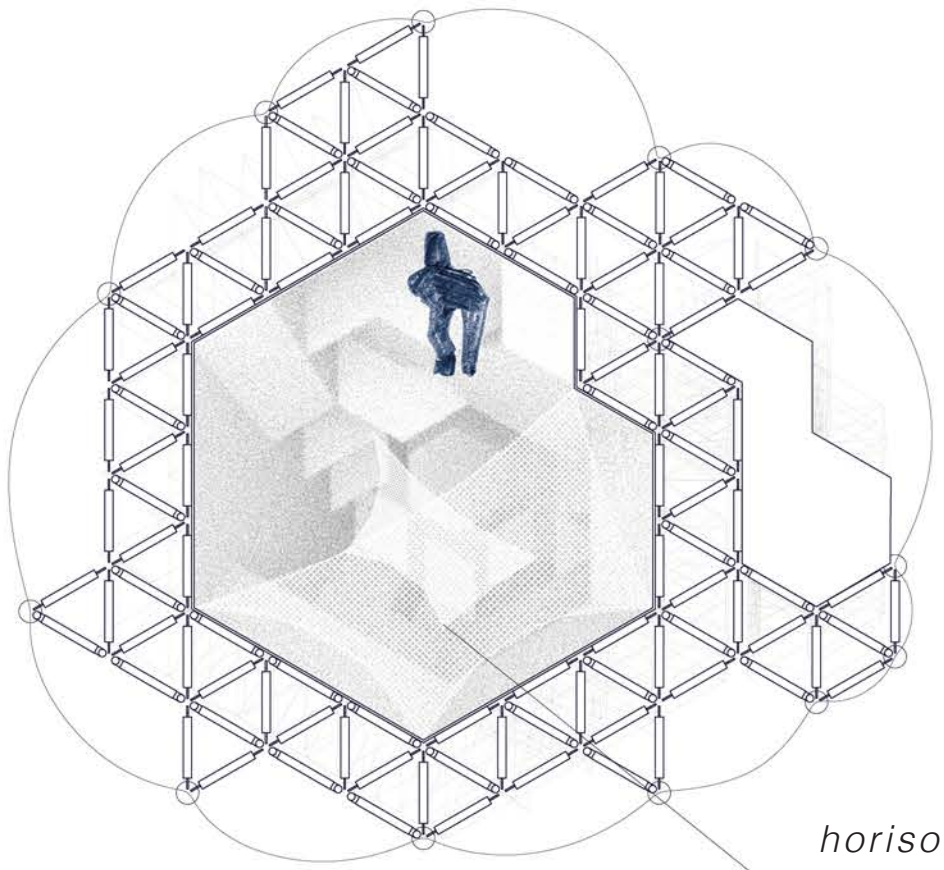
GYMNASIUM

ENGINE ROOM

cleaners' break room

The cleaners moves from cabin to cabin from floor to floor. Daylight finds its way through a narrow, four-story deep shaft. When they systematically move upward they are also symbolically approaching light. If they would take a break during their shift, they may take a rest on someone else's bed.

The cleaners break room has the shape of a deep shaft, which offers a wandering closer to the light and horisontal hammocks for recumbency.



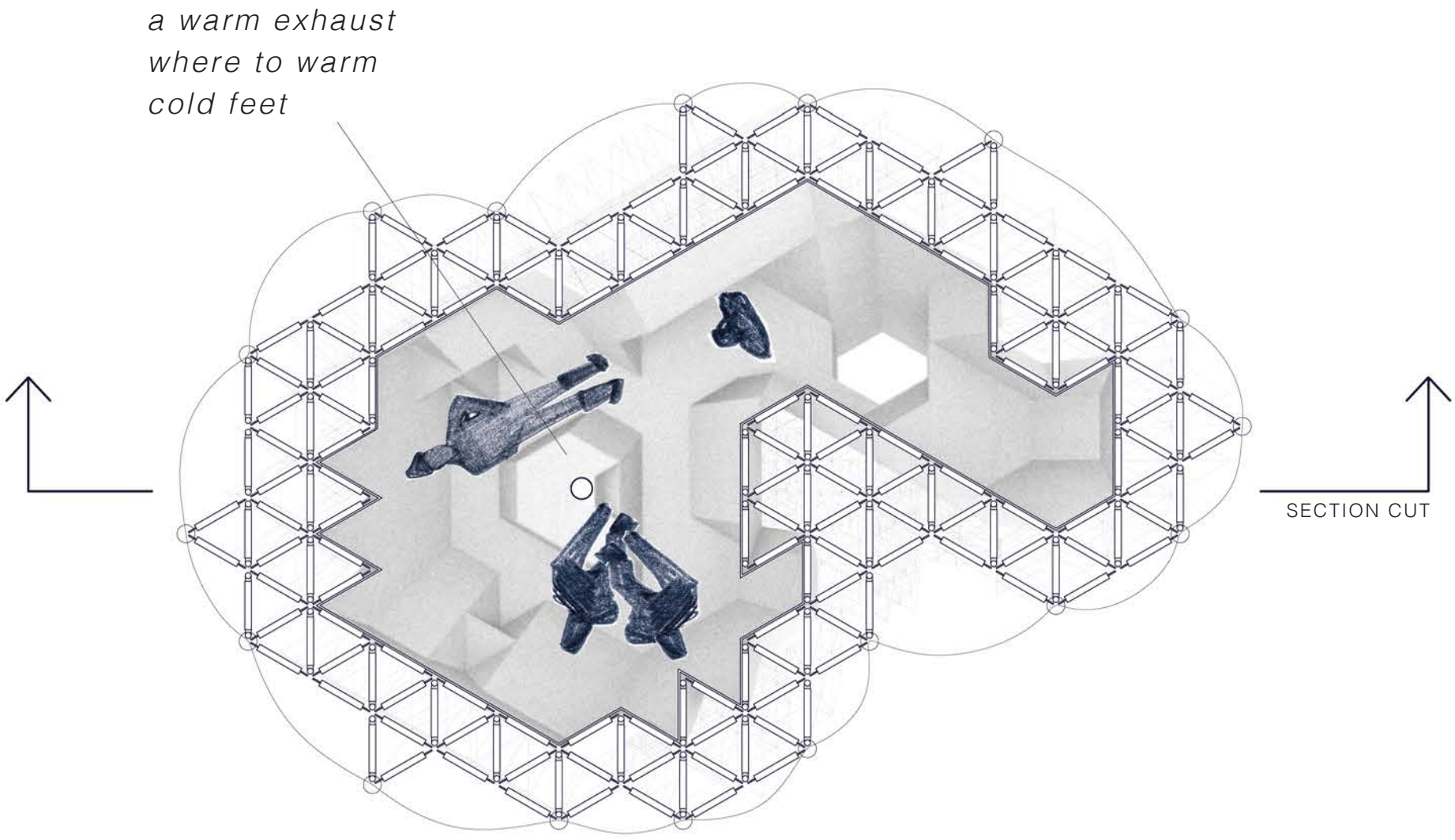
SECTION CUT

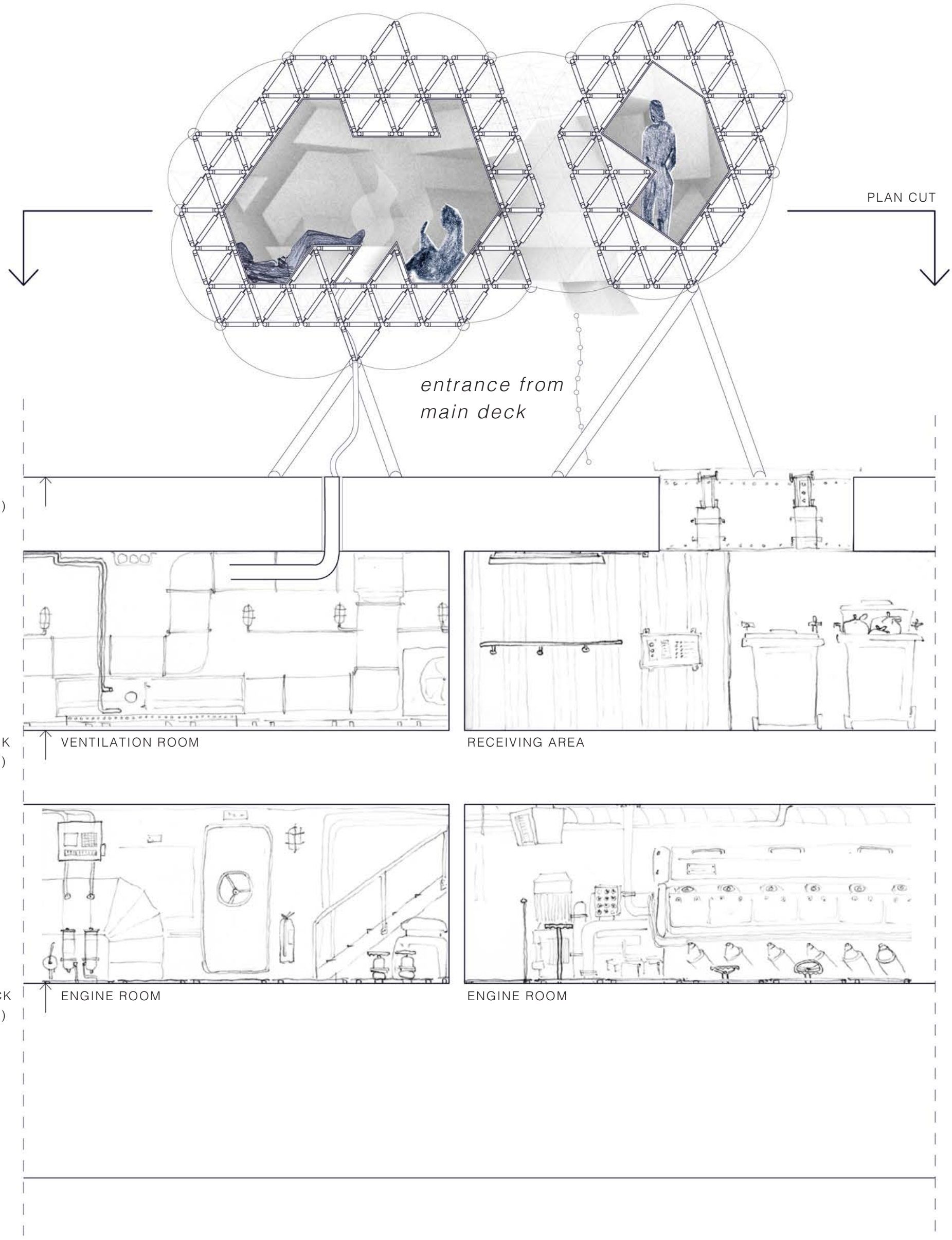
horisontal recumbency in hammocks

sailors’ break room

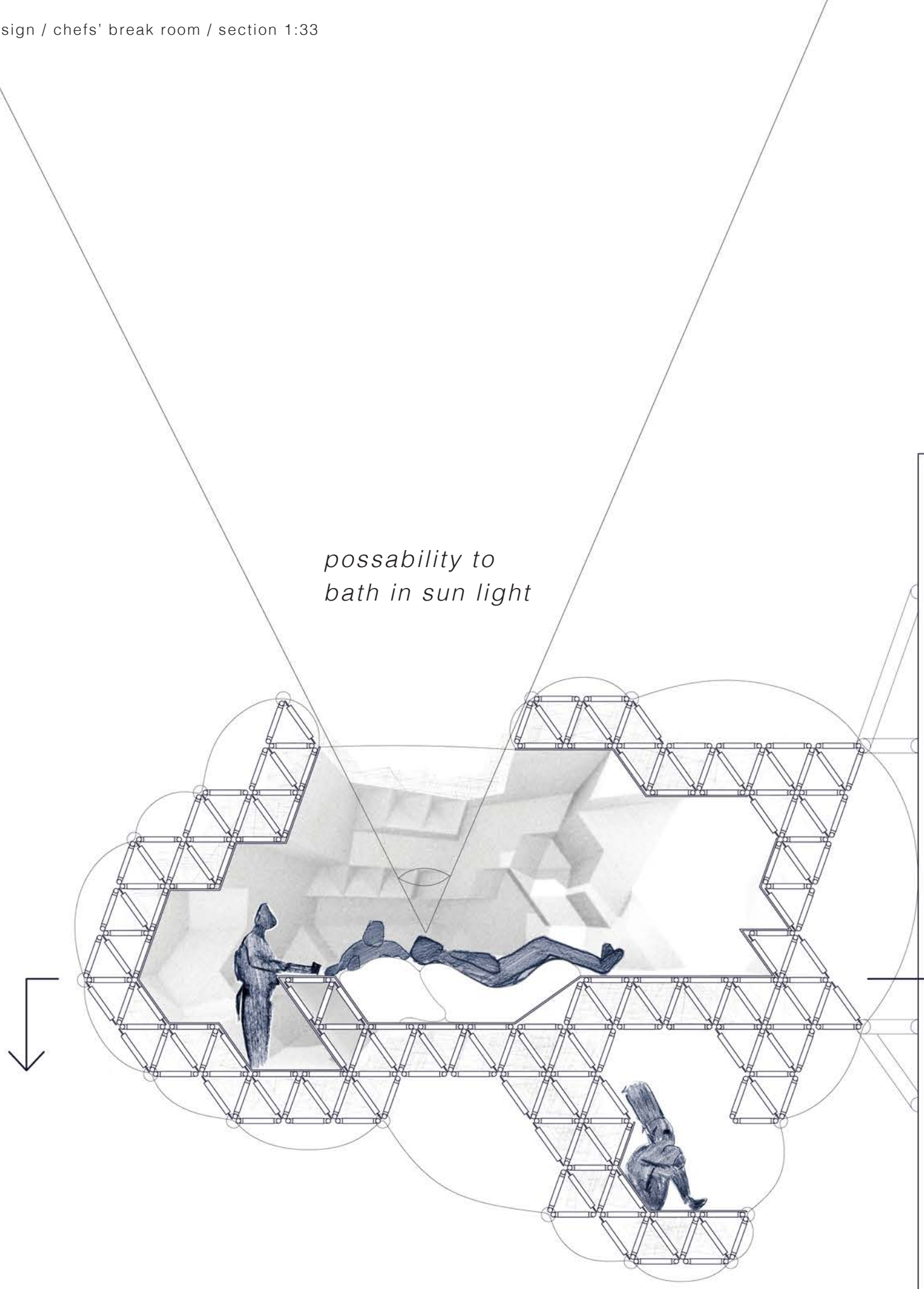
The sailors work outside, on deck. They are exposed the damp weather and cold wind. Surrounding them is a wide horizon.

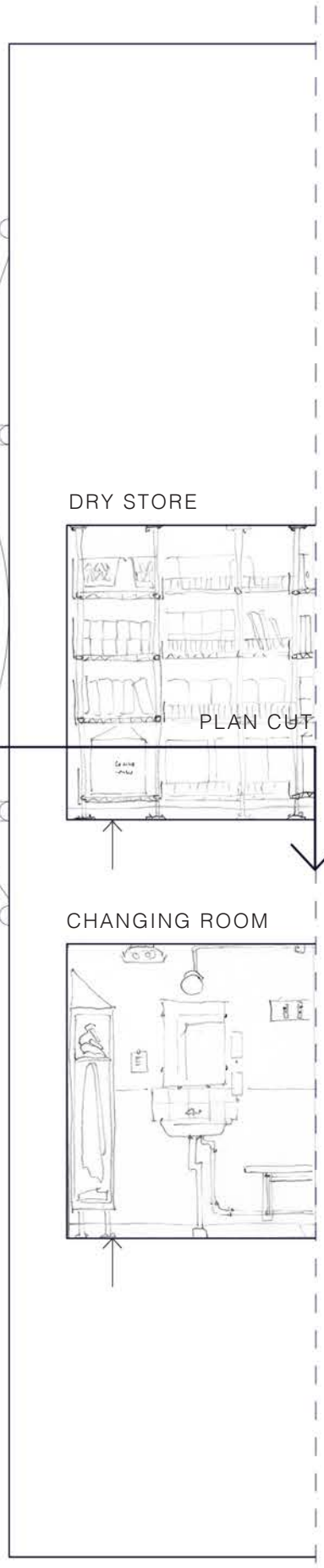
To the sailors’ break room one comes either from a ladder from deck, or from an open space with a 360 degree view above. The sailors’ break room is enclosed and introvert. A exhaust from the venitlation system makes it possible to warm cold feet and boots.




PLAN CUT
entrance from
main deck
MAIN DECK
(EL +35.200)
TWEEN DECK
(EL +31.950)
LOWER DECK
(EL +28.700)
VENTILATION ROOM
RECEIVING AREA
ENGINE ROOM
ENGINE ROOM

possability to
bath in sun light



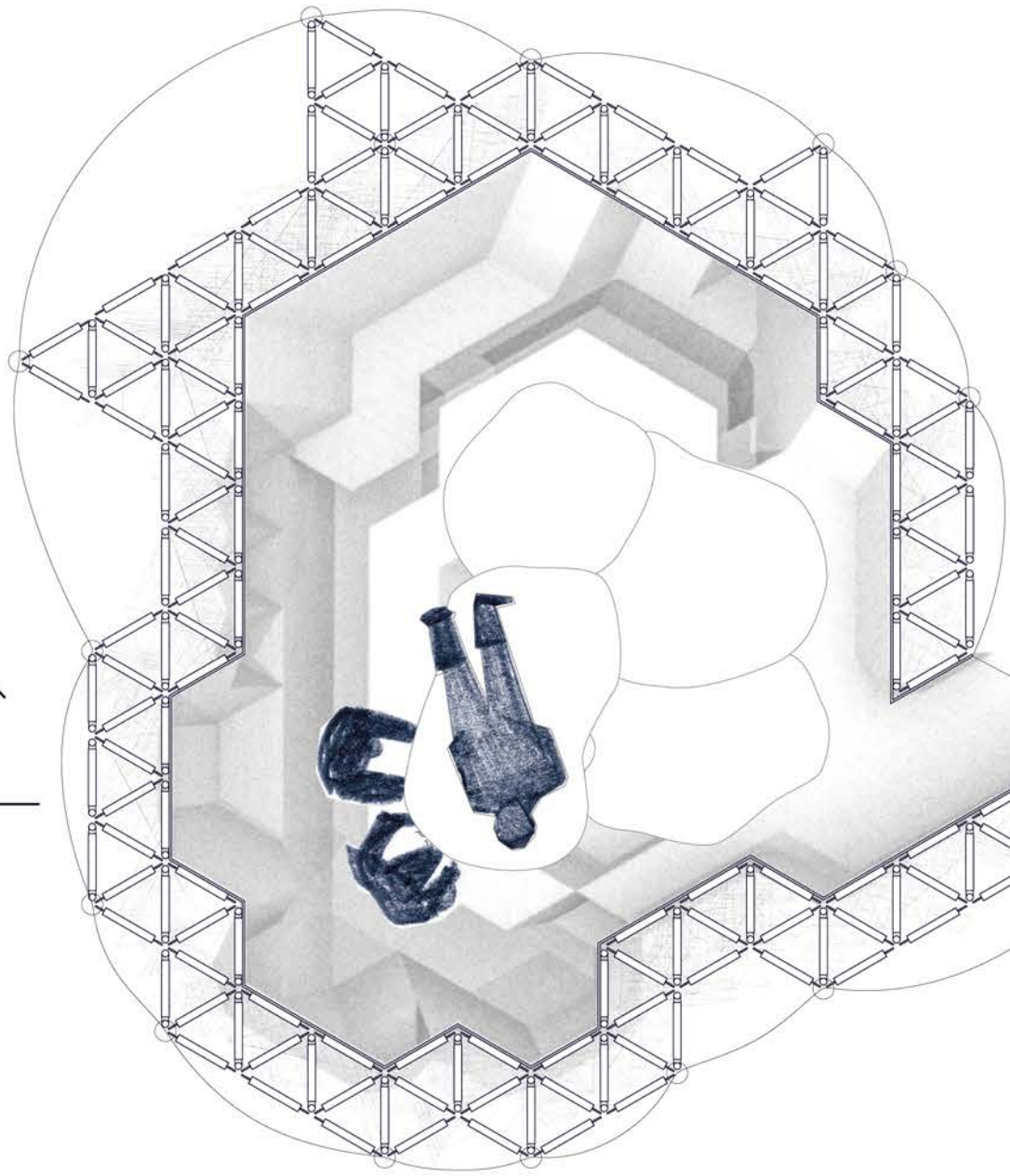


chefs' break room

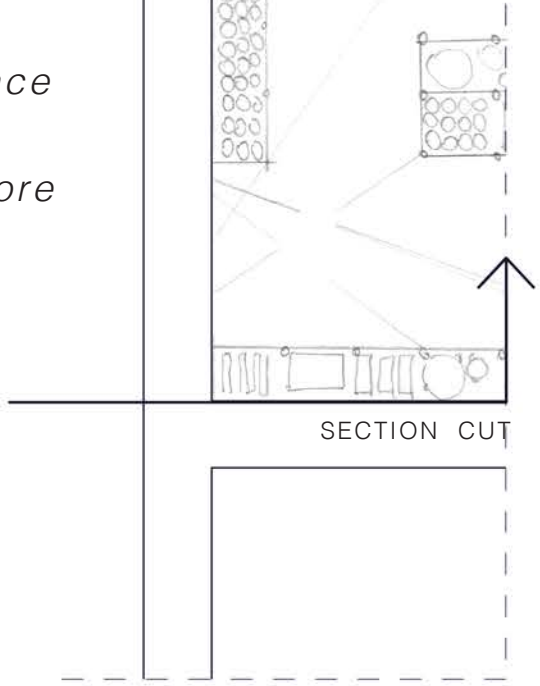
The chefs workplace; the galley, is positioned in the center of the platform without contact with natural light. The shift brings fatigue in feet and back. For several hours, they are forced to stand on a slippery and hard kitchen floor. They work in an environment with intense scents.

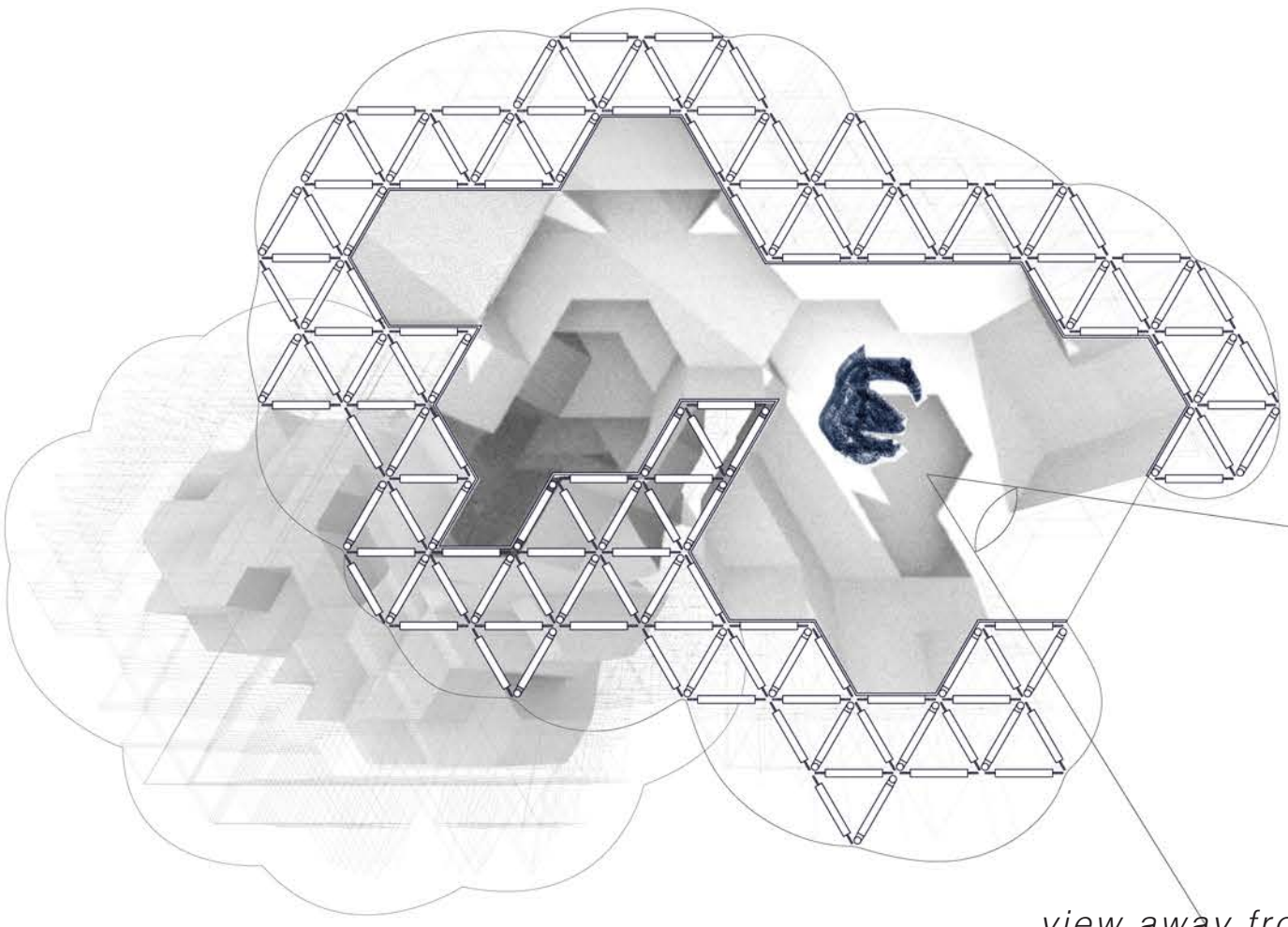
In the chefs' break room, sacks of coffee beans is being stored, all of which spreads an appealing aroma. As for sniffing coffee bean between sniffting two perfumes, the scent of coffee beans helps the chefs freshen up the smell and taste buds. Up on the sacks the visitor have a possibility to rest a sore back while bathing in light coming from above.

A visitor may not feel comfortable to lie down to rest the back. Just as chefs working at benches, visitors can drink their coffee in the same upright position while, unintentionally, taking part of the gossiping going on in the galley.

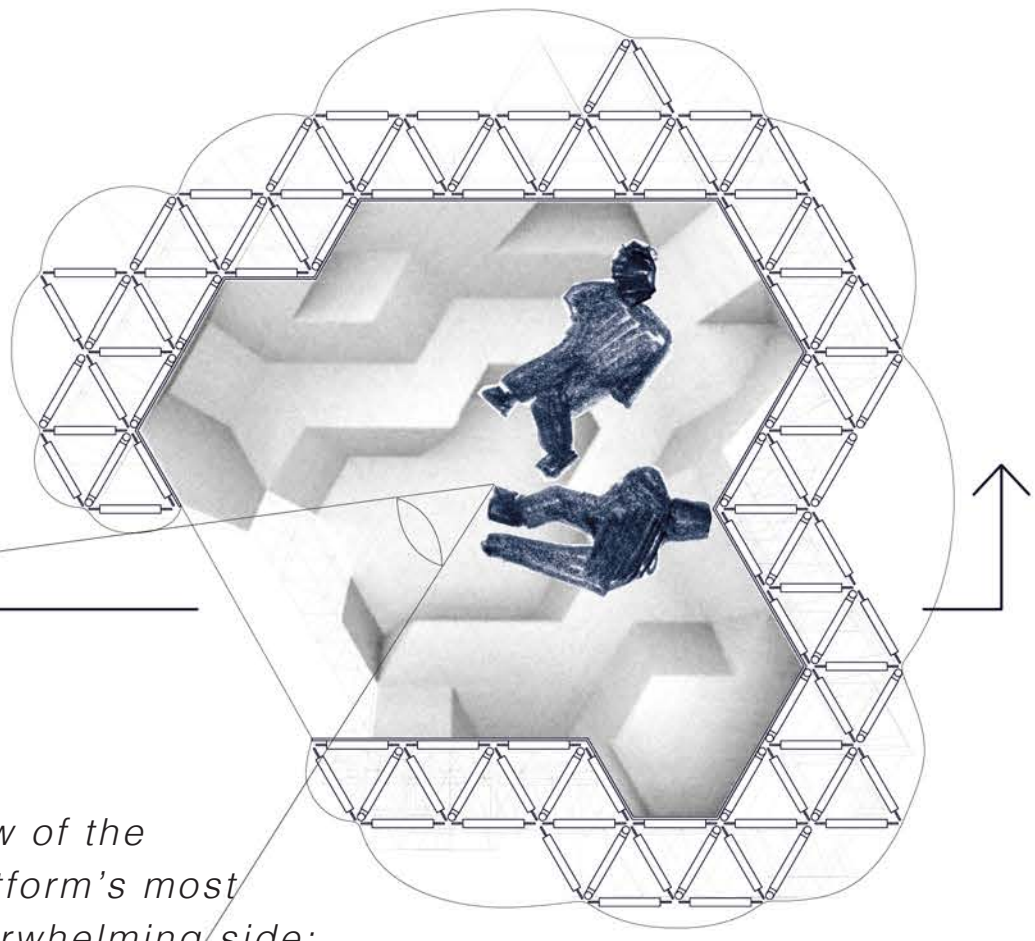


entrance from dry store





view away from the platform, towards the sea and open horizon



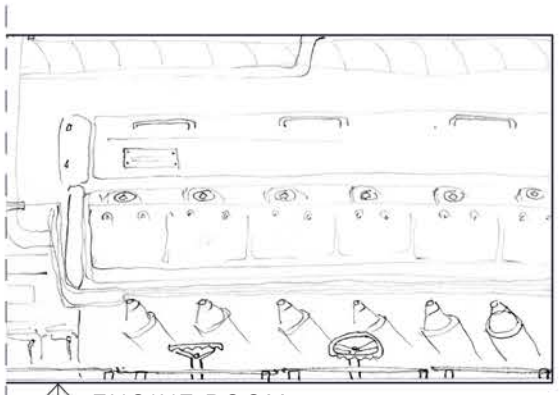
view of the platform's most overwhelming side: its underneath

engineer's break room

The machinists works alone in a dark maze-like environment. Each and every day they experience the relationship between the little man and the big machine. They move through uncomfortable places, down ladders and stairs to unknown areas.

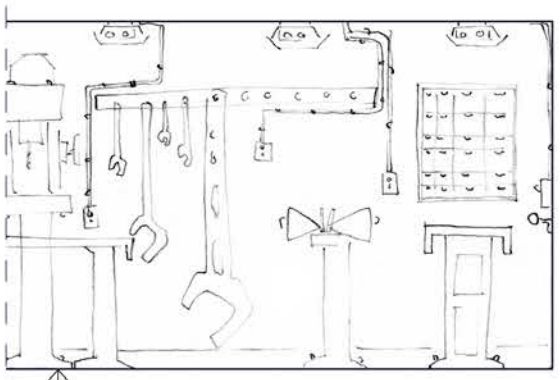
From their break room, the machinists gets an opportunity to shy away from from the big platform, in an environment that is shaped by human proportions. A visitor can through a dark staircase get down to the underside of the platform. This way, they can have a look at the massive machine in its most overwhelming angle.

MAIN DECK
(EL +35.200)



TWEEN DECK
(EL +31.950)

ENGINE ROOM



LOWER DECK
(EL +28.700)

MECHANICAL
WORKSHOP

entrance from mechanical workshop

discussion

This project originated in the question if one through architecture can create a notion of home when one's true home is elsewhere? To find and architectural answer a design proposal was made.

It should be said that all of my choices, that has been balanced against each other, has always been subjective; through my perceptions and through the dialogue I have had with others during the project. By using a reference and a site, the proposal became specific to that very site and situation. While the choices have been subjective, I have kept myself strictly to the discoveries I made during the research in the shaping of the design proposal. These findings are something I will bring into future projects where the same problem occurs or exists.

A continuation or further investigations would be to bring, the find of a foreground tha creates a sense of belonging and the find of inviting and being invited, to other projects that are in a larger or smaller scale, for example in urban planning or in furniture-/interior design.

Above all, my studies has proven that in the making of a home, it is required to look beyond the location of where one sleeps, and broaden the scope; towards our common areas.

list of references

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index of images

All images taken or drawn by author if no reference given

fig.01 copy of drawing by Nina Lundwall

fig.02 copy of drawing by Nina Lundwall

fig.03 model made from drawings by Nina Lundwall

fig.04 copy of drawing by Nina Lundwall

fig.05 drawing concessed by Floatel International

fig.06 drawing concessed by Floatel International

fig.07 still from commercial by Floatel International

fig.08
Heino Engel

fig.09 https://www.flickr.com/photos/41845311@N06/sets/72157622486930046/detail/?page=7 Available at 2016-08-21

fig.10 https://se.pinterest.com/pin/474074298248300439/ available at 2016-08-21

fig.11 picture – http://hivemodern.com/pages/product228/vitra-verner-panton-living-tower Available at 2016-08-21

fig.12 picture – http://www.brooklynstreetart.com/theblog/2013/05/07/museums-go-outside-to-play-with-the-public-and-with-ideas/ available at 2016-08-21

fig.13 http://www.ooyuz.com/geturl?aid=7316354 available at 2016-08-21

fig.14 http://libarynth.org/design_considerations_for_inflatable_structures available at 2016-08-21

fig.15 http://sverigesradio.se/sida/artikel.aspx?programid=110&artikel=5631899 available at 2016-08-21

fig.16 http://blogs.walkerart.org/design/2015/10/23/the-edible-playable-and-wearable-architecture-of-haus-rucker-co available at 2016-08-21

fig.17 http://dreamingofmycity.blogspot.se/2013/07/haus-rucker-co.html available at 2016-08-21