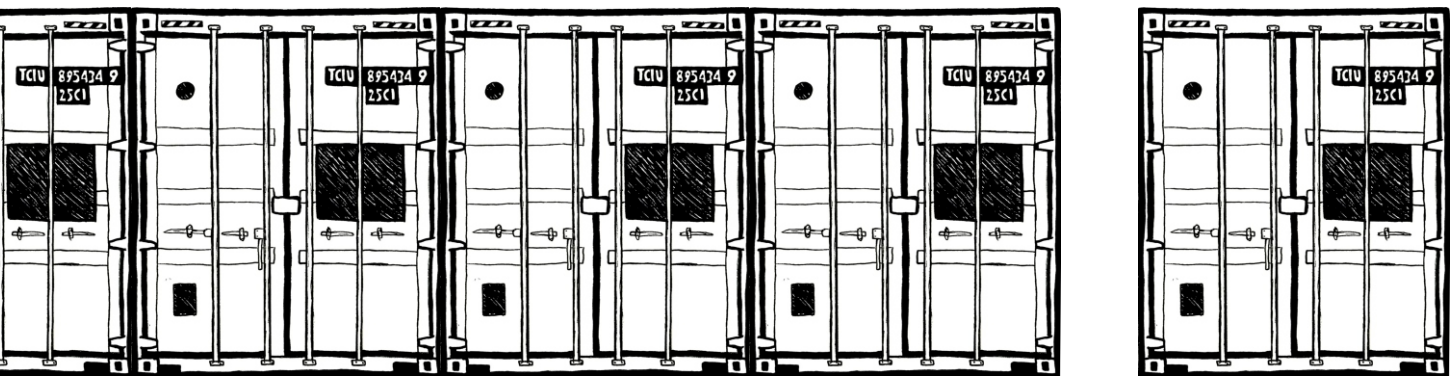
COMPACT CONTAINER

- Hotel Room in a Shipping Container



COMPACT CONTAINER
- Hotel Room in a Shipping Container

EMILIA FJÄDER

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Degree Programme in Design
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ABSTRACT | BACHELOR'S THESIS

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TITLE:	COMPACT CONTAINER - Hotel Room in a Shipping Container
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SUMMARY

My thesis is related to ALMACO Group's container hotel project. I have made an alternative interior plan for a hotel room which is in a shipping container.

Before I started with the design process I researched shipping containers and container architecture. I wanted to find out, why people have started to use containers in architecture and what has already been done with them. The hotel room is quite small, so I also searched for information, how to create a feeling of space. Furthermore, China plays an important part in my thesis, because the hotel will be built to the country.

During the design process, I have taken into account all the requirements and elements that have to be included in the design. The results are presented as 3D-pictures made with a computer.

KEY WORDS: Container, Container Architecture, Hotel, Design
FILING: Web-library Theseus.fi

ABSTRAKT | EXAMENSARBETE

Yrkeshögskolan Novia, Åbo Finland
Utbildningsprogrammet för Formgivning
Formgivare (YH), Inriktning Möbel

FÖRFATTARE: Emilia Fjäder
TITEL: KOMPAKT CONTAINER - Hotellrum i en container
HANDLEDARNA: Pia Litokorpi (ALMACO Group)
Tommy Nyman (YH Novia)
SPRÅK: Engelska
TIDPUNKT: Vår 2014
SIDANTAL: 152

SAMMANFATTNING

Mitt examensarbete anknyter till ALMACO Groups containerhotell -projekt. Jag har gjort en alternativ inredningsplan till ett hotellrum som är i en container.

Före jag började med planeringsprocessen satt jag mig in i ämnet containrar och i container arkitektur. Jag ville veta, varför man har börjat använda containrar i arkitektur och vad som är redan gjort av dem. På grund av att hotellrummet är ganska litet tog jag också reda på olika metoder för hur man kan skapa en känsla av rymd. Därtill är Kina en viktig del av mitt arbete eftersom hotellet byggs i landet.

Under planeringsprocessen tar jag hänsyn till alla krav och funktioner som måste finnas i ett hotellrum. Slutresultatet presenteras med datorgjorda 3D -bilder.

NYCKELORD: Container, Container arkitektur, Hotell, Formgivning
FÖRVARAS: Webbiblioteket Theseus.fi.

TIIVISTELMÄ | OPINNÄYTETYÖ

Novian ammattikorkeakoulu, Turku
Muotoilun koulutusohjelma
Muotoilija (AMK), Suuntautumisvaihtoehto Kalustemuotoilu

TEKIJÄ: Emilia Fjäder
NIMIKE: KOMPAKTI KONTTI - Hotellihuone kontissa
OHJAAJAT: Pia Litokorpi (ALMACO Group)
Tommy Nyman (Novia AMK)
KIELI: Englanti
AIKA: Kevät 2014
SIVUMÄÄRÄ: 152

TIIVISTELMÄ

Opinnäytetyöni liittyy ALMACO Groupin konttihotelli -projektiin. Olen tehnyt vaihtoehtoisen sisustussuunnitelman hotellihuoneeseen, joka on kontissa.

Ennen suunnitteluprosessin aloittamista perehdyin kontteihin ja konttiarkkitehtuuriin. Halusin saada selville, miksi kontteja on alettu käyttää arkkitehtuurissa ja mitä konteista on jo tehty. Hotellihuone on melko pieni, joten otin myös selville eri metodeita, joilla saa luotua tilan tuntua. Lisäksi Kiina on tärkeässä osassa työtäni, koska hotelli rakennetaan kyseiseen maahan.

Olen ottanut suunnittelussa huomioon kaikki tehtävänannossa luetellut vaatimukset ja toiminnot, jotka pitää löytyä hotellihuoneesta. Esittelen lopputuloksen tietokoneella tehdyin 3D -kuvin.

AVAINSANAT: Kontti, Konttiarkkitehtuuri, Hotelli, Muotoilu
SÄILYTYSPAIKKA: Web-kirjasto Theseus.fi

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1 PREFACE


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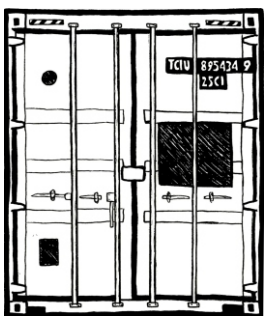
Shipping containers have many uses. In addition to the transportation of goods, they can be used in architecture. The rather new construction material is used in; hotels and public places, homes and small apartments, emergency shelters and other temporary accommodation rooms, as well, inside buildings as interior elements.

In my thesis, I will work with a container hotel project in which I will design interior for a hotel room made of a shipping container. I got the assignment from ALMACO Group, which is working with the project. I do not work with the company on the project, but make my own, alternative plan for them. I will see, what it is like to work with a real design assignment.

In the beginning of the project I will research shipping containers and the new container architecture. I want to find out, why people have started to use shipping containers in architecture as well as see what have already been done of the containers. I will also search for information of different methods of creating space, because the hotel room is quite small. Moreover, China plays an important part in my thesis, because the hotel will be built to the country.

After gathering enough background information, I will start with the design process. I take into account all the elements that my employer wants to be included in the design and come up with smart and creative solutions for the hotel room. First I will make a ground plan and then design all the furniture that comes into the room. I will also introduce the chosen materials, motivate the color and lighting schemes and in short, present the whole interior plan. One of my goals is to become better in using CAD-programs in which I draw the hotel room and furniture using a computer. In the end of my thesis, I will show the result with these 3D-pictures.

2 CONCEPT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Here is the concept I got from ALMACO Group:

DESIGN CONCEPT FOR THE CONTAINER HOTEL IN CHINA

The aim of this project is to design a hotel room based in a 20" container. There are a few elements listed below which have to be included in the design. Architectural drawings of a container will be also supplied. The design must be creative, sustainable and affordable.

As a designer you will understand how the design of furnishings, function and space can improve, and how users experience the space. Interior designers understand how each detail of a design affects the overall concept. The design challenges in this project will be technical considerations related to issues such as layout, occupancy, materials, electricity and legal requirements when designing a public space. Interior design is broader than interior decorating, which focuses primarily on furniture and finishes.

Required room functions:

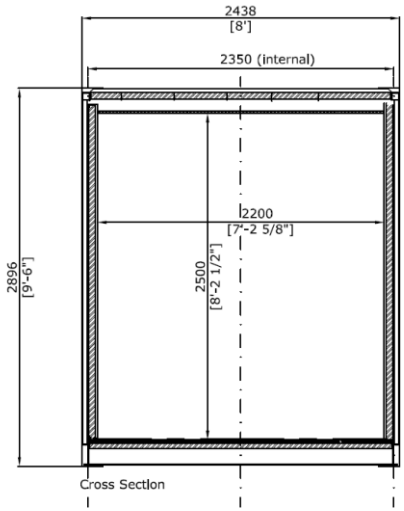
SLEEPING AREA
Bed measurement: L:1900 W:1500 H:600mm
Reading lights
Power outlet for mobiles/tablets etc.

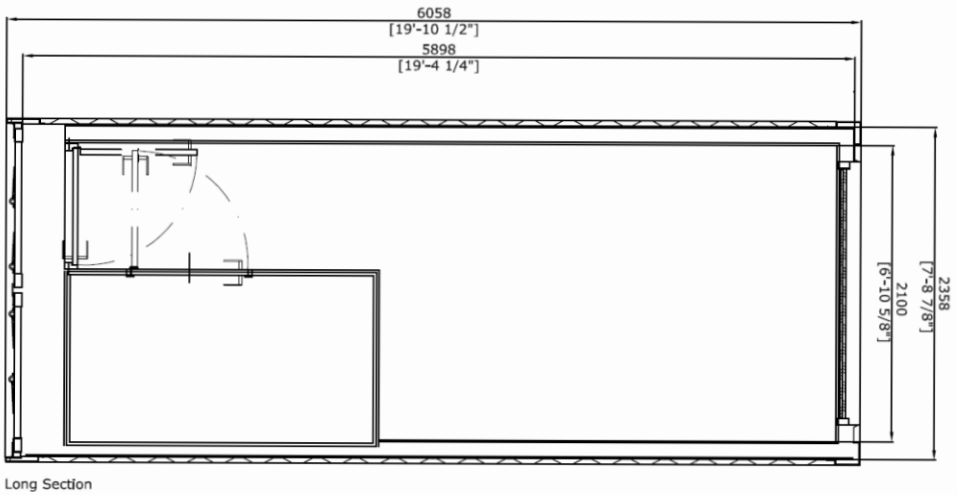
LOUNGE AREA
TV
Opportunity to dine (room service)
Power outlets (TV, internet, kettle etc.)
View

STORAGE
Wardrobe
Luggage storage
Safe
Minibar

VANITY UNIT
Place & power outlet for the hairdryer

20' HIGH CUBE
CONTAINER





PICTURE 1: CONTAINERS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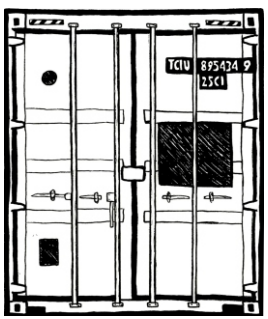
ALMACO
GROUP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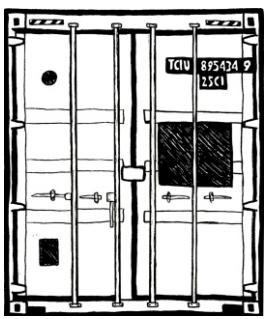
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ALMACO Group supplies accommodation and food handling areas for owners and builders in the marine, offshore and construction industries. In the marine industry they focus primarily on cruise ships and passenger ferries, in offshore market on offshore rigs and vessels and in the construction section mainly on hotels and resorts. The company builds and modernizes cabins, wet units, hotel rooms, public areas, kitchens, bars, cold stores and refrigeration machineries.

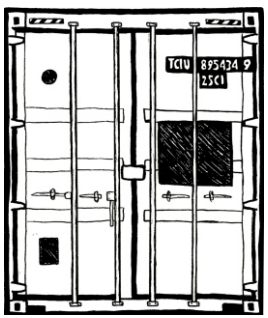
ALMACO was founded in October 1998 in Kaarina, Finland, and their first bigger order was a modernization project for an Asian cruise ship owner. During the last 15 years, ALMACO has worked with different companies and ship yards around the world and expanded in other countries. Nowadays they have offices in USA, France, Italy, Germany, China, Singapore and Brazil. (ALMACO)

PICTURES 2, 3 & 4: ALMACO


RELIABILITY
THROUGH
EXPERIENCE

4

CHINA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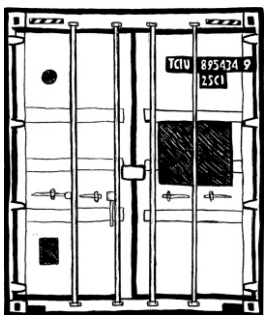
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China is one of the largest manufacturers in the world and an important trading partner for the American and European countries. China's industry has developed fast during the last years and, therefore, China has also become one of the leading countries of economic growth. The rise in standard of living can be seen as new skyscrapers in the big cities, like Shanghai. (Bloomberg).

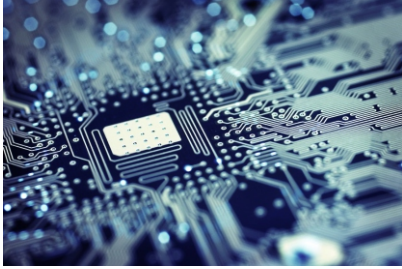
China is also the largest manufacturer of ISO shipping containers. In addition to the transport of goods it has been found, that shipping containers are also suitable material for the construction industry. There is a need for container housing in China, due to the fact that even if the country develops fast, there is still room for improvement in the quality of building materials. Container housing offers a sustainable, fast and inexpensive solution. (ISBU Association).

China has got a long, diverse history and its cultural traditions date back hundreds of years. Today's Chinese still value their own culture, but you can also see influences from the Western countries. China has become a mix of traditions and new technology, old time and modern architecture and poor and prosperous. (Cultural China).

PICTURE 5: SHANGHAI

CHINA IN PICTURES:

中国



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PICTURE COLLAGE: CHINA

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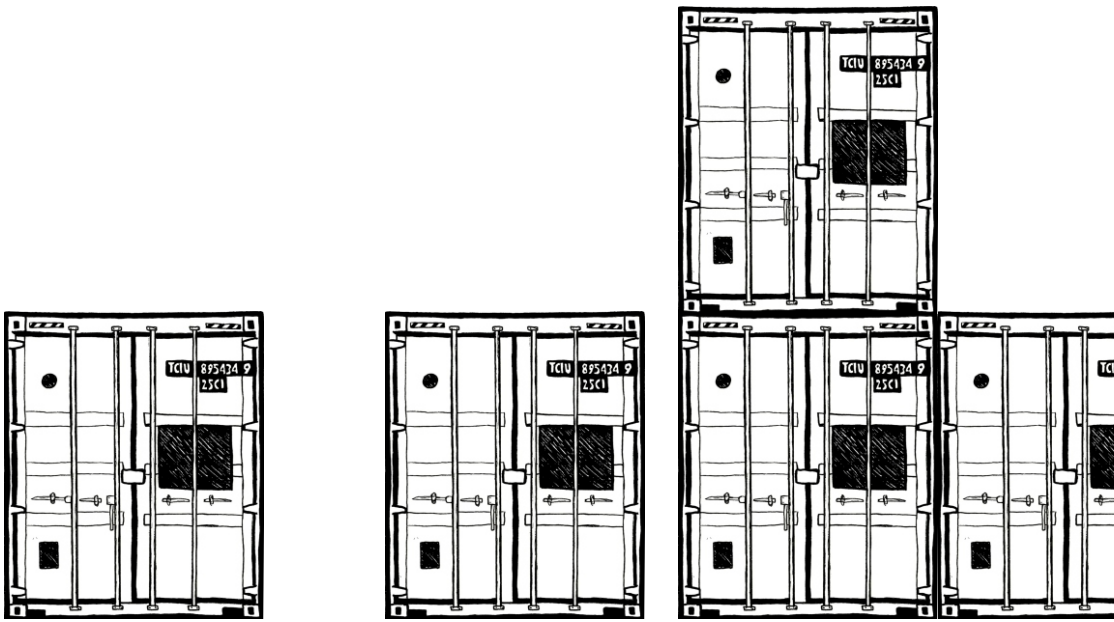
SHIPPING CONTAINER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A shipping container's main function is to make the transport of goods easier. In the past, you had to load and unload the goods from one place to another with hands and cranes, which took time and was impractical and expensive. In the early 1800s, people began to use wooden boxcars on railways in order to make the transport smoother. The first shipping containers were invented in 1926, when Brown Industries started to experiment with lightweight aluminum trailer bodies. The shipping containers were made for rail and sea transport, but there were still problems with the transport over seas, because the ships were not planned for shipping containers. The problem was solved in 1956, when Malcolm McLean's shipyard Sea-Land, in North-Carolina, built the first container ship. (Levinson 2006, p.49-52; Brandt 2011, p.3-4).

Nowadays, shipping containers are made of steel so that they sustain transport better. There are a lot of different kinds of container types, but the most common is the ISO-container. ISO (International Organization for Standardization) composed international container standards in 1970. The container's standard measures became: 6.1m (20ft), 12.2m (40ft), 13.7m (45ft) and 16.2m (53ft) in length and 2.4m (8ft) in width. The high vary, at first it was the same as the width, but now there are also higher alternatives. For example, the most

commonly used 20-foot and 40-foot containers are 2.6 meters (8.6ft) high. These two container types are also called TEU and FEU (Twenty-foot and Forty-foot Equivalent Unit). TEU has become the standard reference for the industry, so vessel capacity and cargo volume are commonly measured in TEU. Thanks to standardization it became easier, faster and, therefore, cheaper to move and stack shipping containers from one place to another.

Shipping containers have become one of the most important inventions in logistic. 90% of goods are nowadays transported with them and there are tens of millions of containers in the world. (Brandt 2011, p.4-5).

PICTURE 6: SHIPPING CONTAINERS


COSCO
MOL
P&O Nedlloyd
NYK LOGISTICS
CAPITAL
AERSK
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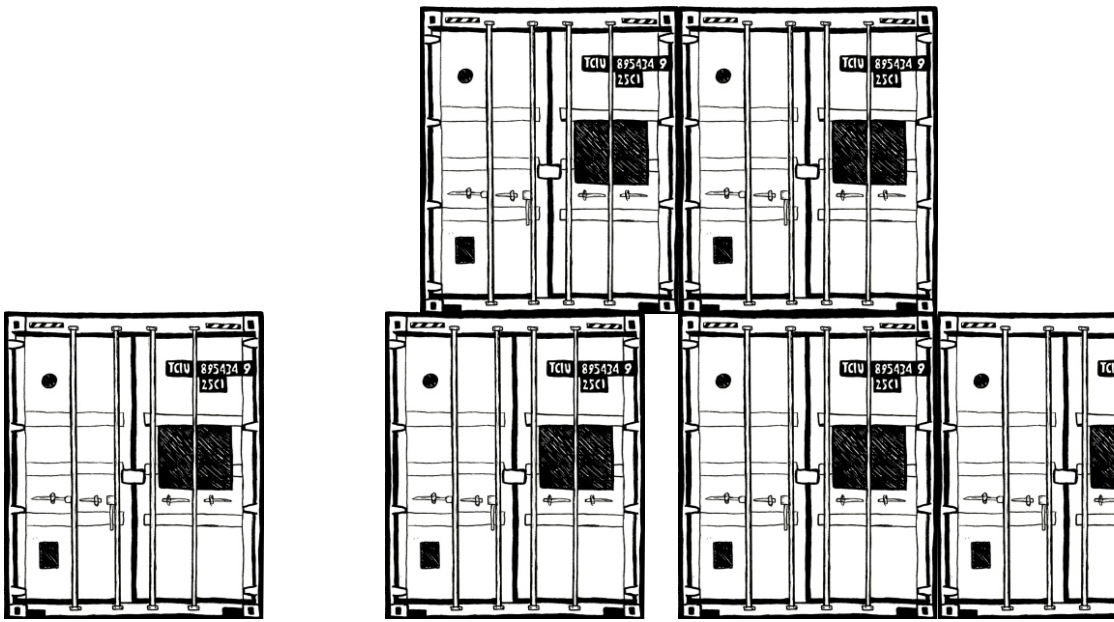
CONTAINER ARCHITECTURE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It has become more and more popular to use shipping containers in the construction industry. At first people began to use them as storage spaces and then as temporary accommodation, containers are, for example, a common sight beside building sites and also used as accommodation in military use. In 1987, Phillip C. Clark filed a patent for a method for converting shipping containers into habitable buildings. The patent provides step by step instructions, for example, how to mount shipping containers to a foundation and install a ceiling, windows and doors. In the 2000s people have realized shipping containers' potential also in long-term and permanent buildings. There has emerged a new term for this phenomenon, container architecture. (Brandt 2011, p.6).

The key factor in this new branch is the ISO-container. One reason why people have started to use them in architecture, is the high availability. There are a lot of empty shipping containers stacked in the yards in the Western countries, because most of the goods are imported from Asia to Europe and America than exported. It is also easier and cheaper to make new shipping containers in China than to transport the empty ones back. (Kotnik 2013).

London is one of the cities, where shipping containers have started to fill up the yards. Urban Space Management started to re-use some of the containers in 2001 by constructing a residential community to Trinity Buoy Wharf, located within London's dockland. The community, Container City, is made of twenty shipping containers, containing work spaces and cafés. People arrange also different kinds of workshops, exhibitions and performances within the community. Container City enlarged in 2005, when a new office building was constructed right beside the river Thames. It took only eight days to fit the 73 re-used shipping containers together and build this five-storey high building with 24 offices. (Brandt 2011, p.6-7, 11-12).

PICTURE 7: CONTAINER CITY , PICTURES 8 & 9: TRAVELODGE HOTEL

Another company that have used shipping containers as a construction material is Travelodge. They built a hotel in Uxbridge, London, in 2008 and were the first ones in Europe to use shipping containers as a construction in a full-scale commercial hotel. However, these containers came directly from China, prefabricated and fitted with bathrooms and hotel room's fixture. Travelodge decided to use containers in order to reduce the construction costs. After being prepared in China and transported to the location, it goes fast to stack and assemble the containers on top of each other, like Lego blocks. Prices fall due to the short construction time and ease in transporting the containers.

The exterior was clad, so the hotel looks like an ordinary building. In comparison with traditionally constructed buildings, this has also the positive side that it is re-usable. That is to say, all the parts can be disassembled and shipped off to the next location if necessary. (Web Urbanist).

A hotel which is designed explicitly for transporting is the Snoozebox. It is a portable container hotel, which can be transported to almost any location in the world. After arriving at the destination it can be fully operational within 48 hours. The containers can be arranged so that there are 40 to 400 rooms and all the rooms have also got a bathroom. Snoozebox is usually used in different events and festivals across Europe, most often in its home country the United Kingdom. There is often a need for temporary accommodation during an event, when all of a sudden a place fills with people. Snoozebox was used, for example, during the Olympics in London, when staff needed accommodation. (Snoozebox).

PICTURES 10 & 11: SNOOZEBOX


www.snoozebox.com
snooze
BOX
PORTABLE HOTEL


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2

Container housing could help big and cramped cities that are having trouble with housing shortage. Shipping containers offer a small and compact solution and do not need a large plot, so they can be set in places, where it otherwise would not be possible to build a house. Due to the fact that shipping containers are easy to lift and move from one place to another, they can be placed in the empty gaps, openings and rooftops that can be found in the cities.

For people who want to live compact and get away from all the fuss that big cities have, container housing could be an inexpensive and environmentally friendly alternative. A container house can be built without damaging as much nature around the building site as when building an ordinary house. There is, for example, a Treehotel in Sweden, that has different kinds of hotel rooms on top of the trees and one of the rooms is made of a container. (Junes, Kohonen, Louhelainen & Pippuri 2013, p.8-10).

PICTURES 12 & 13

In Chile, James & Mau Architects have designed a container house which is environmentally friendly and energy efficient. The Manifesto House is designed on the "Form Follows Energy" principle, that is to say, the architects wanted to create a form that is energy saving. 85% of the materials are recycled, re-used and eco-friendly. There have been used recycled aluminum, iron and wood, ecological painting, eco-label ceramics, and insulation is made of recycled cellulose and cork. The construction is made of three re-used shipping containers, covered with solar covers which are made of recycled mobile pallets and wooden panels, coming from sustainable forests. The covers protect the house from the heat in summer, but they can be opened in winter so that the sun gets to heat the steel surface of the containers. The house is also positioned according to the solar cycle, in order to get the best benefit of the natural source of heat together with the construction. (Brandt 2011, p.67-68; Contemporist).

PICTURE 14: THE MANIFESTO HOUSE

Adam Kalkin, an American architect and artist, has become well-known for his container creations. Kalkin studied first in Vassar College and then in Architectural Association School in London. He was awarded in 1990 at the Young Architects Design Awards and in 2005 one of his container creations, Push Button House, was on display at Art Basel in Miami Beach, Florida. Push Button House is a shipping container filled with different functions that can be revealed by folding down the walls at a push of a button. The container was also in the 2007 Venice Biennale, where it operated as a coffee shop. (Open Architecture Network).

Kalkin has also created a nearly 400m² big summerhouse of 12 orange, re-used shipping containers as well as, a steel building, Bunny Lane Home, that hides inside nine shipping containers and a detached house. Furthermore, he has designed a factory-made container house, Quik House, which is made of recycled containers and produced in the USA and the United Kingdom. It is available in different sizes, but the most common model is 185m² with three bedrooms. (Quik-build, Web Urbanist).

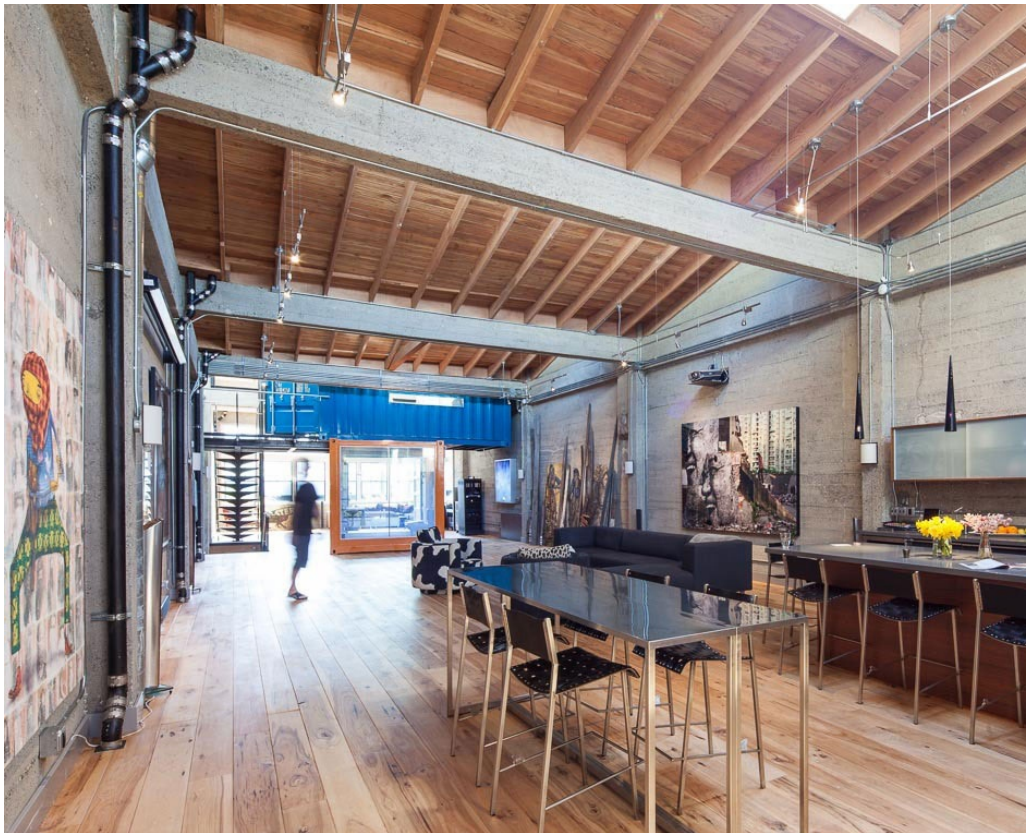
PICTURE COLLAGE: ADAM KALKIN


illy


TRITON

Shipping containers can also be used inside buildings. Here is, for example, a family that used shipping containers as construction material to get new rooms in their loft apartment in California. The blue container is an office with a sleeping loft and the orange one functions as a guestroom. (Kotnik 2013, p.113).

PICTURES 15 & 16

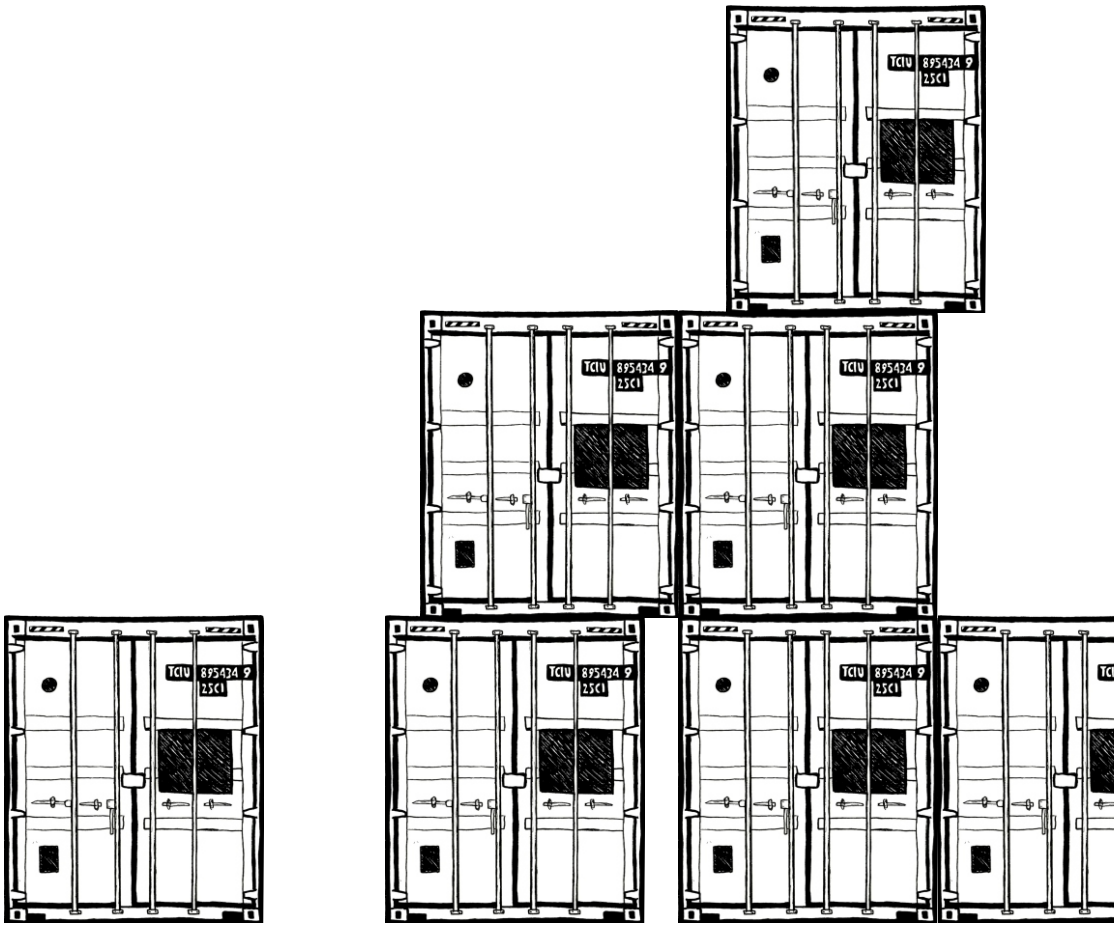


Here are a couple of new projects from the field of container architecture. Morris Architects have come up with a new function for oil platforms which have ended their operation, a hotel. The architects decided to use shipping containers as construction material, because of the shared life both the containers and the platform have had at sea. Yoav Messer Architects have designed an ECOntainer bridge. The bridge will be placed in Ariel Sharon Park in Israel and it is meant for pedestrians and light traffic. (WebUrbanist, Designboom).

PICTURES 17 & 18

7

SMALL SPACES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Nowadays people want to have a lot of space around them and big, spacious rooms. However, it is not always possible to get a lot of square meters around you and you have to adapt to the space you have got. But even if the space is small it can include all the functions you need and also feel bigger than it actually is. In the next paragraphs, I introduce some methods on how to create a spacious atmosphere in small spaces, and show pictures of my inspiration sources: camper van, cabin and boat.

HARMONIOUS ENTIRETY

When planning small spaces it is important to see the big picture and create a harmony between the different parts in the space. The entirety becomes unclear if you use a lot of different styles, effects and details. Be minimalist and have only details that are needed, use big prints rather than tiny ones and prefer clean and simple lines and surfaces. For example, the use of the same kind of floor materials is a good choice, because it combines the whole space and therefore creates a spacious, open-plan feel. When using different kinds of floor materials you divide the space into smaller areas, which also makes the whole space feel smaller. Continuity between different surfaces and parts in the interior creates a feeling of space. (Conran p.151-156).

PICTURE 19: SPACIOUS ROOM

LIGHTING

Lighting has a big effect on the atmosphere and coziness of the space, and is therefore one of the most important elements in interiors. Good lighting shows all the colors correctly, does not irritate or blind your eyes and is child and fire safe. A good lighting scheme takes also into account all the major activities that take place in the space.

Moreover, light is a good tool when you want to make a space look larger. You can create depth to the space by varying the amount of light and shadows. A space without shadows can easily look blank and powerless, whereas a layered lighting creates variability and therefore lets the eyes circulate in the space. When using interior lights, for example floor or table lights, it is better to have a couple of bigger ones than a lot of small ones, because the more items you have in the space the smaller and narrower it appears. Besides, the bigger ones give also more light to the space. (Martin p.14-15, 30-31, 57 & Pekanheimo p.11).

PICTURE 20: LIGHTING

COLORS

All planes reflect and absorb light and disperse it to different colors. The human eye can only see the colors that reflect from the planes, for example, green planes absorb all other colors than greens. A plane that reflects all the colors is seen as white whereas black absorbs all the rays of light. Nowadays, humans can create more than 16 million different hues.

The way we see a color can vary depending on the surroundings; light, nearby colors and structures affect the color shades. Also people from different cultures can sense the colors in different ways, one color can be seen as passionate and calming at the same time.

Colors are a powerful tool, when you want to create different kinds of atmospheres into interiors. You can make a space seem warmer or cooler, an object look heavier or lighter and cause planes to recede or advance. Cool colors, such as blue, green and purple, can be a better choice for small spaces, because they tend to be receding. Whereas warm colors, such as red, orange and yellow, are advancing and make the walls appear closer. Also colors that have a lot of white are good for small spaces, because they reflect more light than darker hues. (Starmer, p.8-9, 13-14, Conran, p.156-157).

PICTURES 21 & 22: WARM & COOL COLORS

MIRRORS

Mirrors create an illusion of space by reduplicating the surroundings. There are often mirrors for example in elevators to decrease the confined and even claustrophobic feeling. One good way to get a lot of new perspectives to a space is to put two mirrors against each other. You can also multiply the amount of light by putting a mirror near a window or other light source. However, if you have too many mirrors the space can become unclear and feel like a mirror labyrinth in an amusement park. (Conran, p.114-116).

PICTURE 23: MIRRORS

STORAGE & MULTIFUNCTIONAL FURNITURE

Another great way to create space is to make storage places for your belongings so that they are not in the way, when you do not use them. Especially small spaces can easily become cramped and messy if you do not have enough space for storage. It can, however, become really challenging to find a space for storage, when you have only got a small amount of square meters available. But the problem can be solved with some creative thinking and clever designing.

There are two different categories for storage, fitted and unfitted. Fitted storage is everything from module kitchens to custom made closets and shelves that are made on the spot. All the freestanding furniture which you can move from place to place goes to unfitted storage. The fitted ones work better in small spaces, because the furniture can be custom made so that they fit in the exact places. In that case, you also get the best benefit of all the space you have got.

Furthermore, one great way to make the most of the space is to have multifunctional furniture. Storage can, for example, be added under a bed. By having different functions in one piece of furniture you save significant space. (Wilhide p.48; Conran, p. 48, 56 & 68).

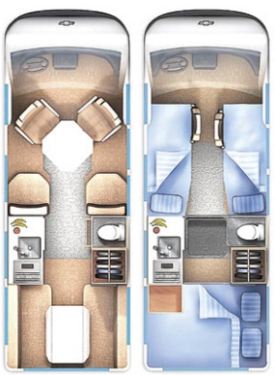
PICTURE 24

EXAMPLES OF SMALL SPACES

Transportation vehicles are good inspiration sources when seeking for ideas to small spaces, because they are often full of compact interior solutions. The living space does not need to be very big, when traveling from one place to another and spending just some time in the vehicle. I have studied the constructions and design of different transportation vehicles, and collected pictures of the interiors in camper vans, boats and cabins.

PICTURE COLLAGES:
CAMPER VAN, CABIN, BOAT

CAMPER VAN

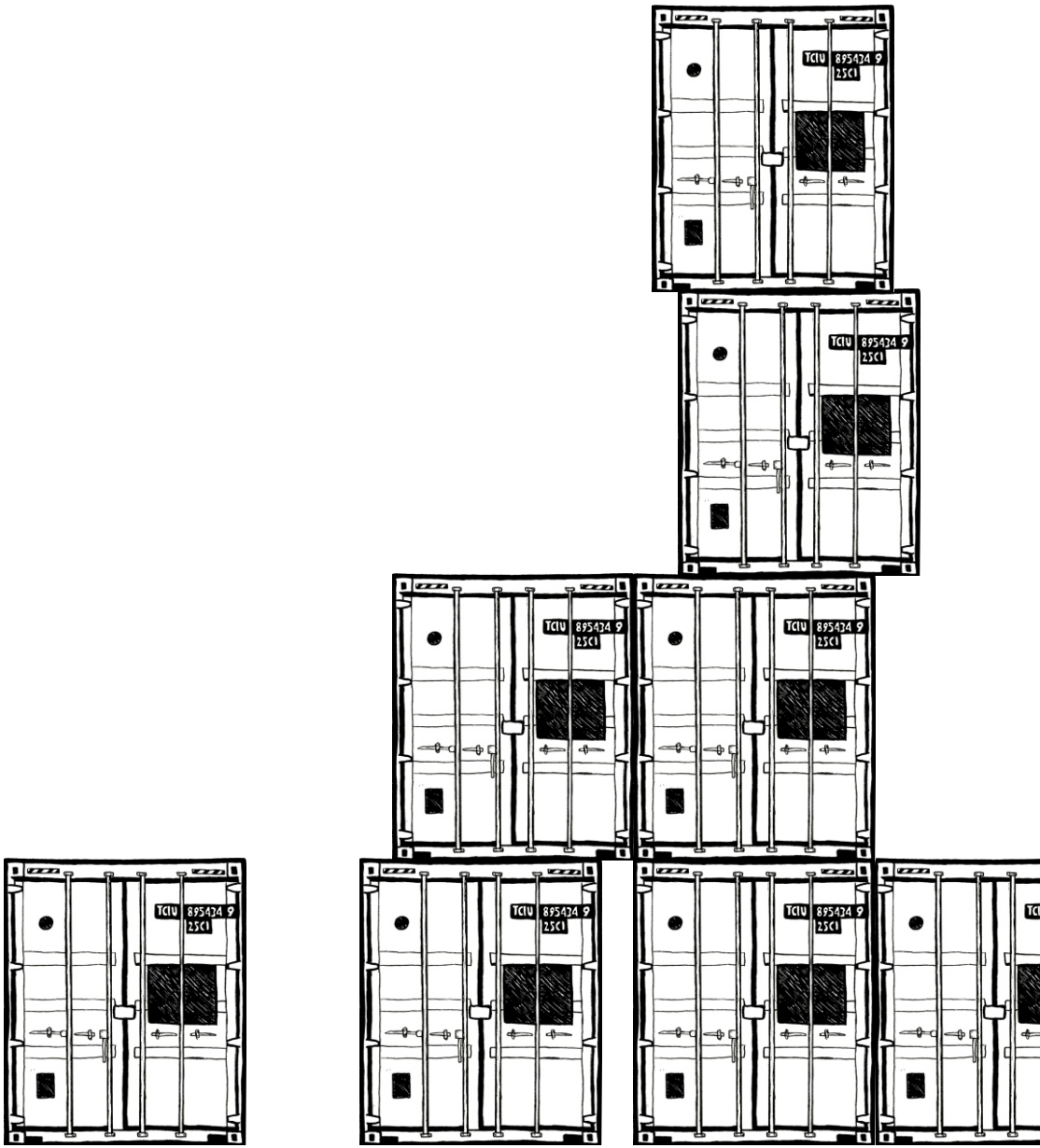


CABIN

BOAT

8

DESIGN PROCESS


TCIU 895424 9
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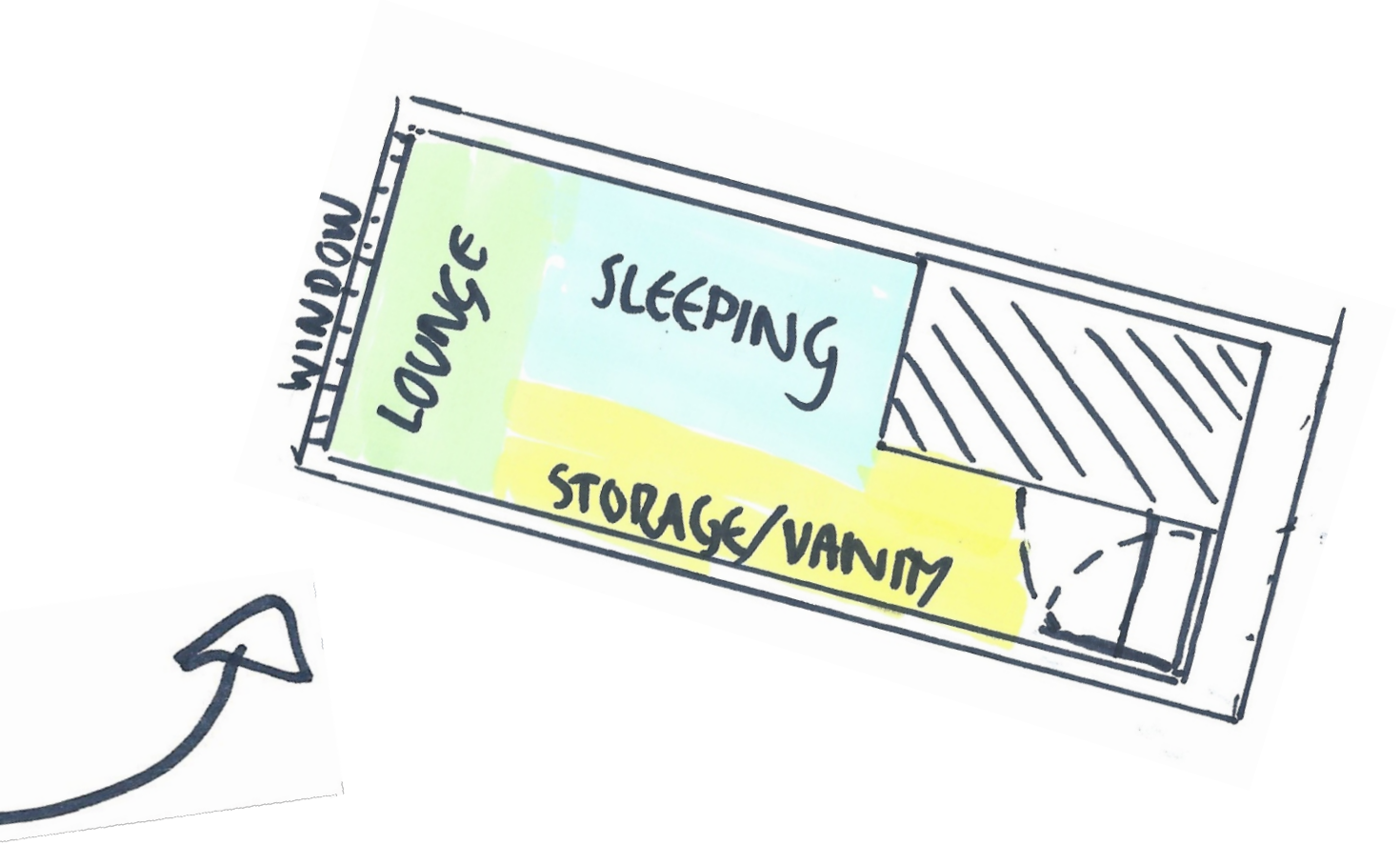
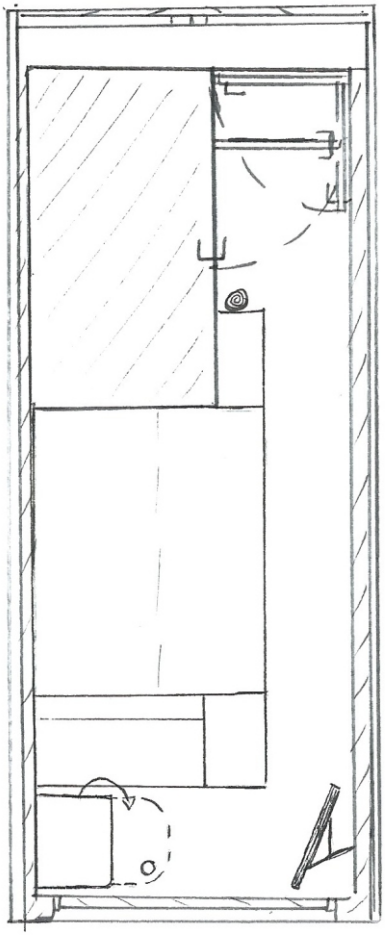
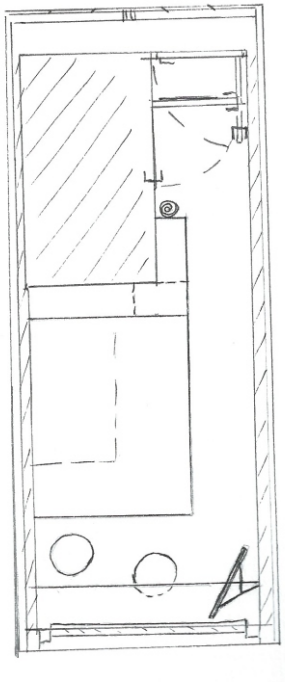
There are many different elements that you have to take into account, when designing an interior: the space and the users of the space, surroundings, functions, materials, colors, lighting, furniture etc. In this chapter I will present the design process from brainstorming and sketching to the final ideas.

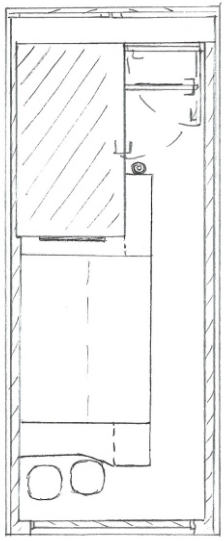
GROUND PLAN

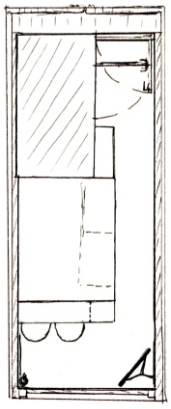
I started the design process by testing, how much space there is for the different functions and what kind of furniture fits into the hotel room. The bed was the only piece of furniture that had given dimensions, so I placed it first into the room. The bed took most of the space so there were not many options, how to place it. The corner between the bathroom wall and the side wall seemed like the best place. There had to be a view from the lounge area, so it has got to be next to the window, which is on the end wall. The entrance hall was the most suitable place for the storage, because you usually want to put your clothes and luggage directly somewhere when coming into a hotel room. There is a bathroom door in the hall, so I placed also the vanity unit there. In that way, it can work as an extension for the bathroom.

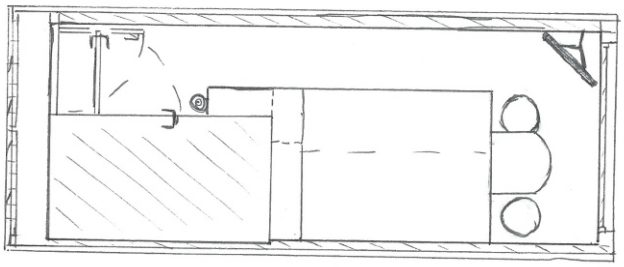

WINDOW
LOUNGE
SLEEPING
STORAGE/VANITY

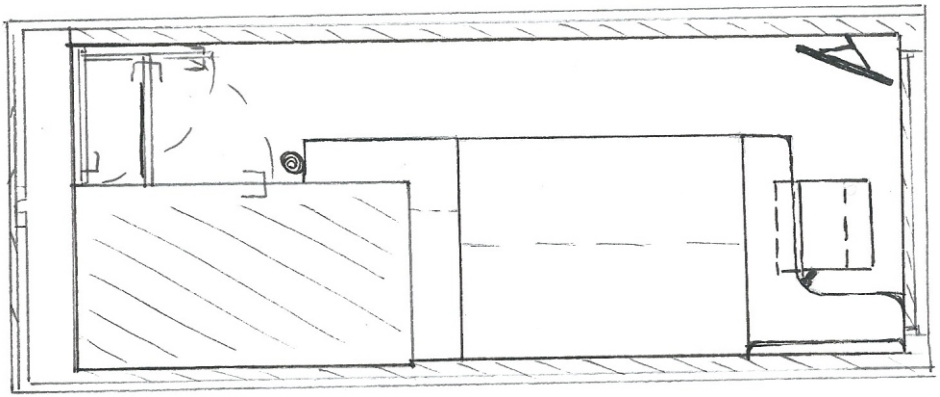


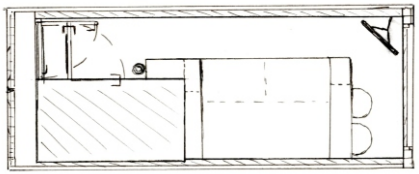


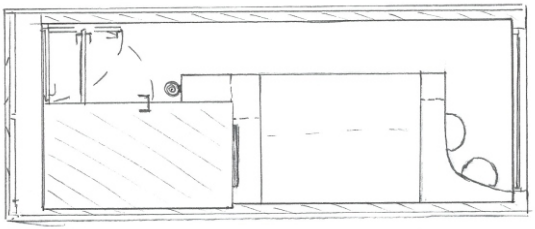






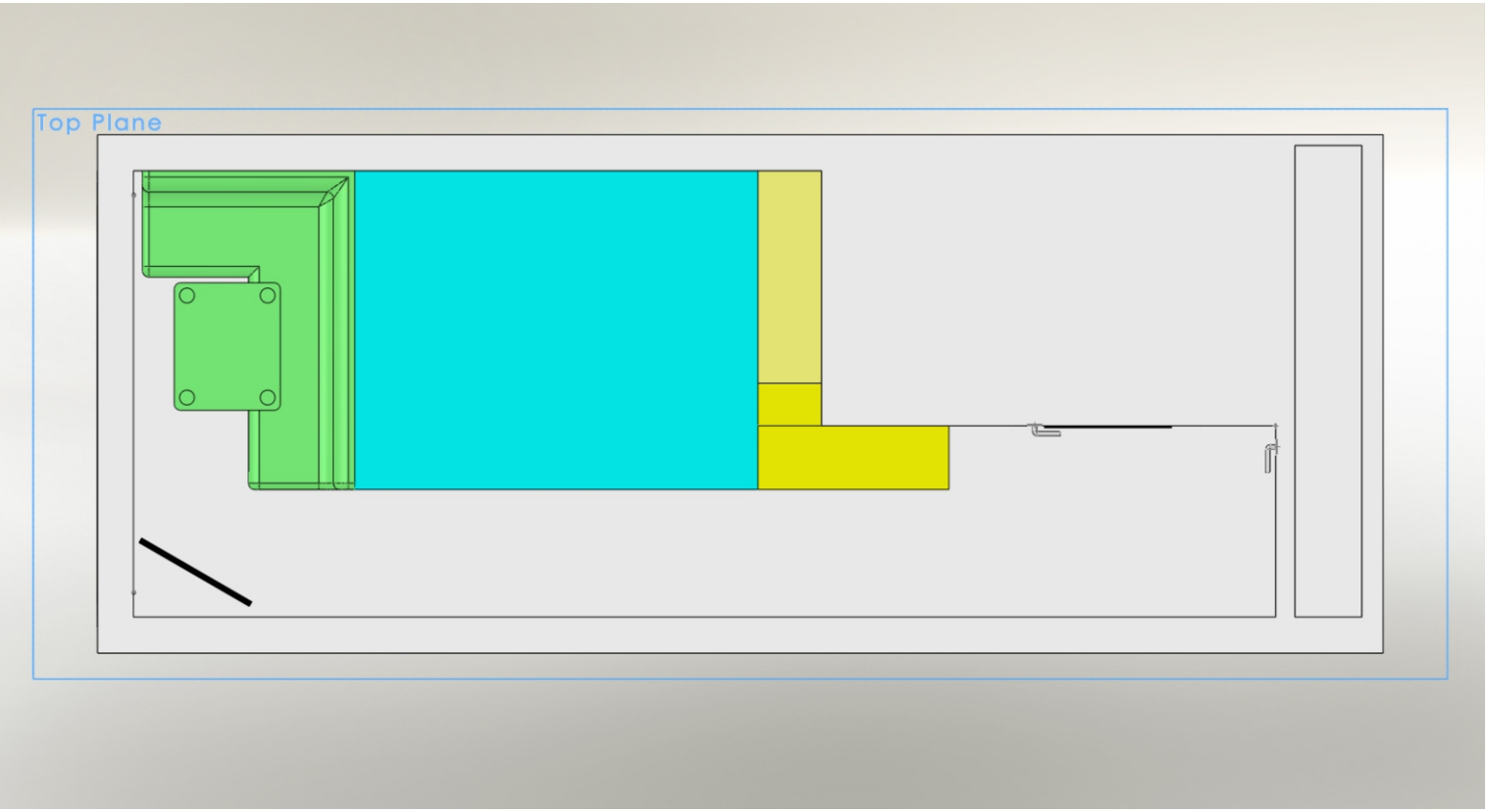


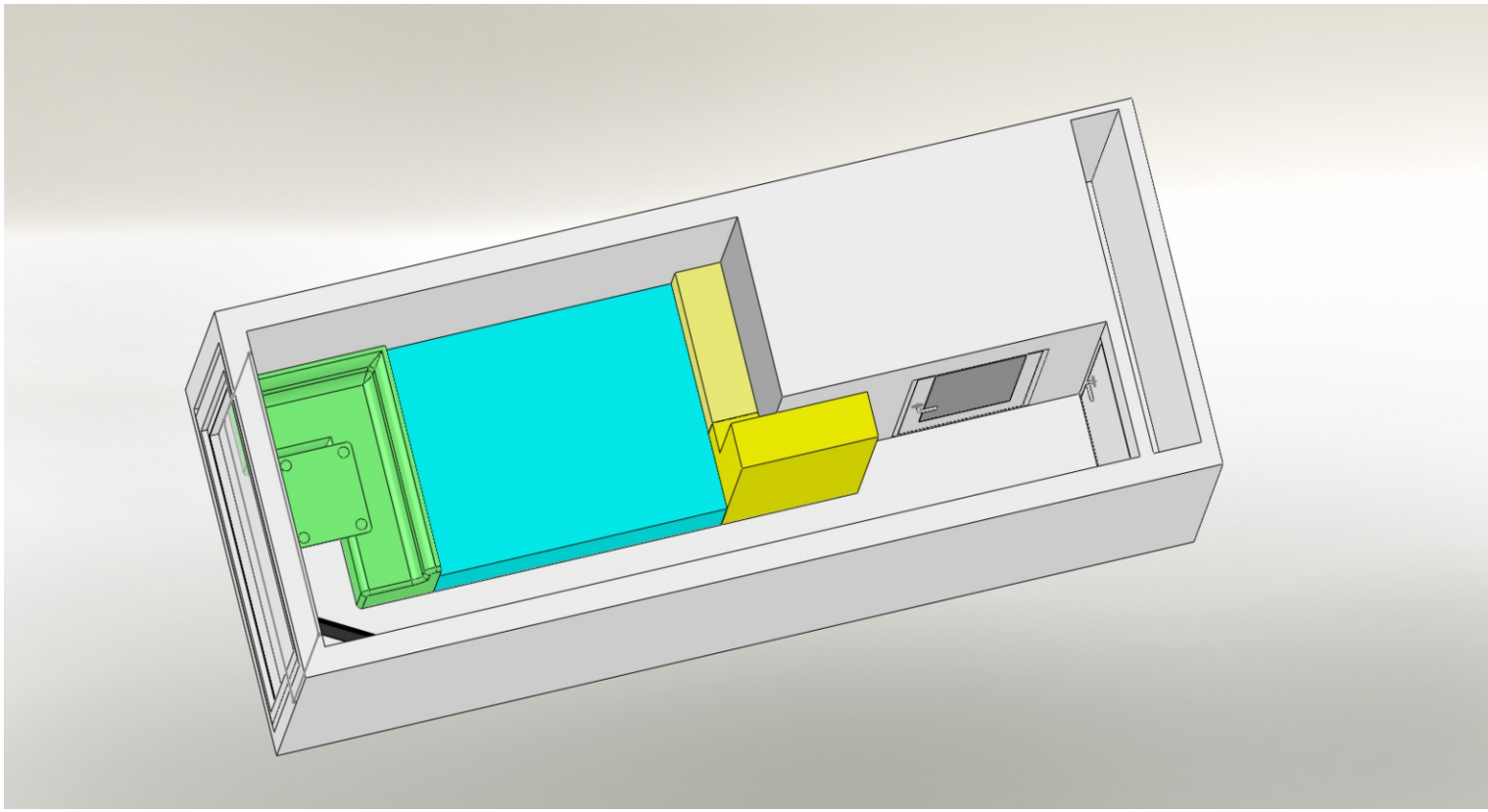




"CONTAINER TETRIS"

After sketching, I drew a 3D-picture of the container and made different kind of boxes, which represented the different furniture elements. By varying the places, sizes and forms of the boxes I got a functional ground plan. Next, it was time for furniture design.



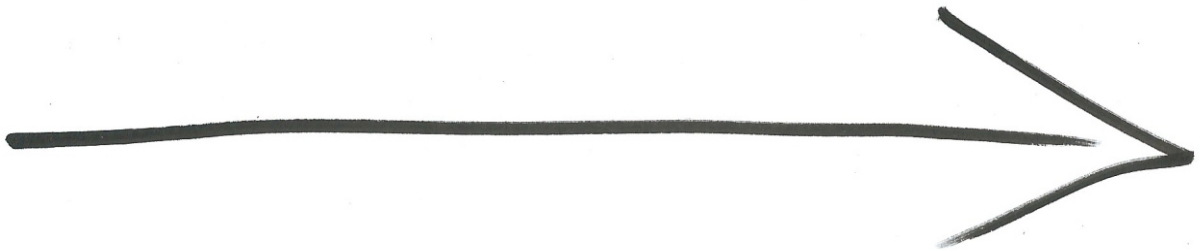


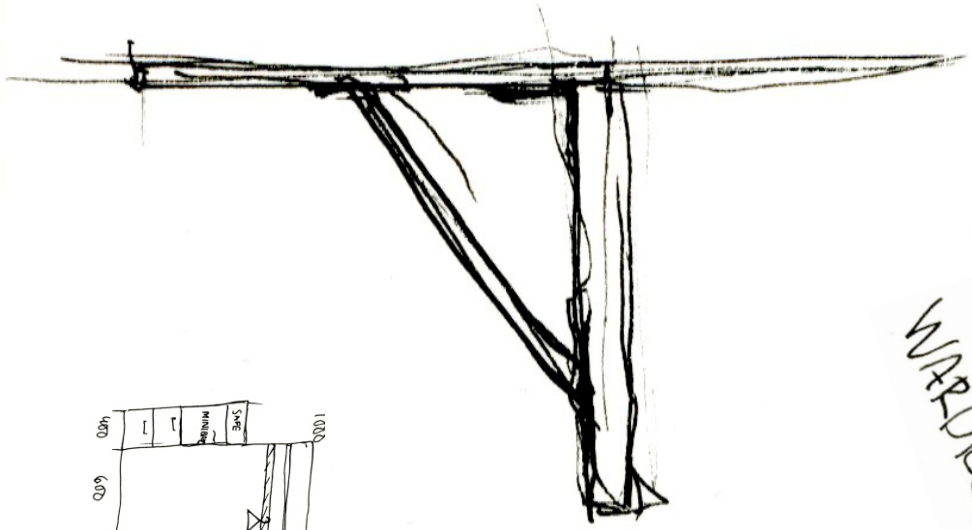
FURNITURE DESIGN

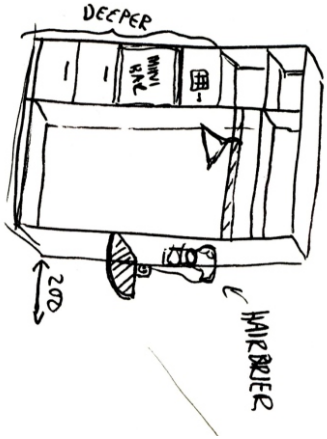
I divided the space into three areas:

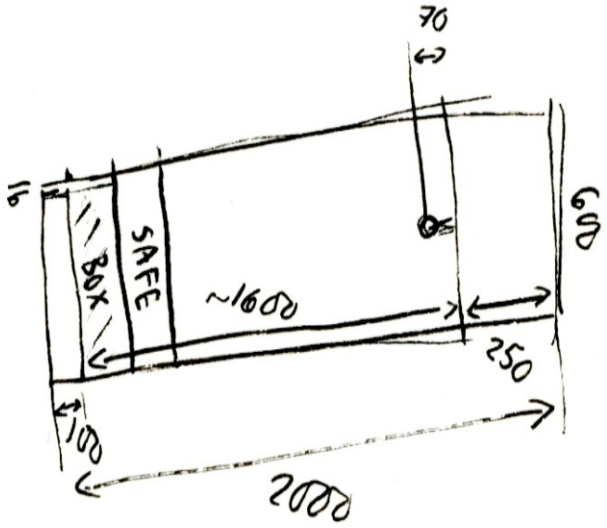
ENTRANCE, SLEEPING & LOUNGE

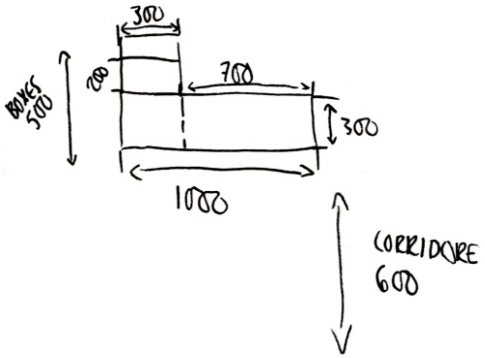
Now I will present, what kind of furniture that will be used in these areas...

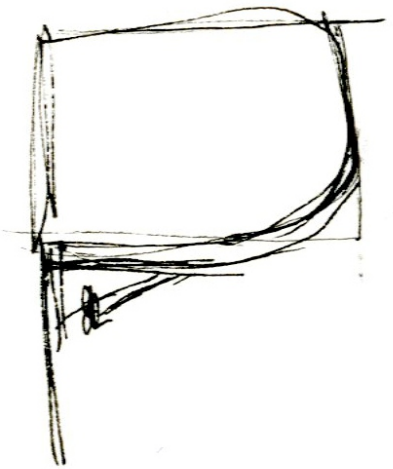


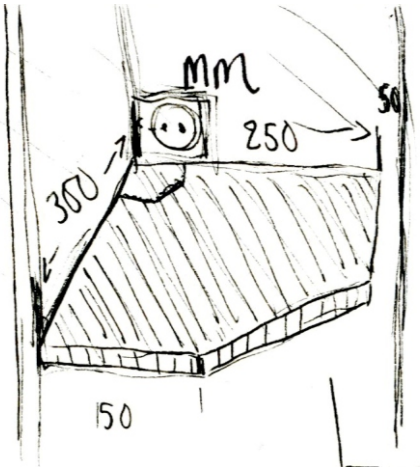

SAFE
MINIBAR
600
1000
WARDROBE

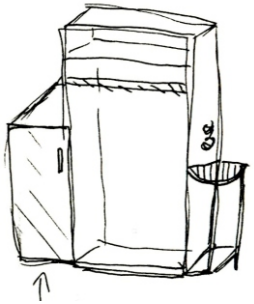

DEEPER
MINI BAR
200
HAIRDRIER

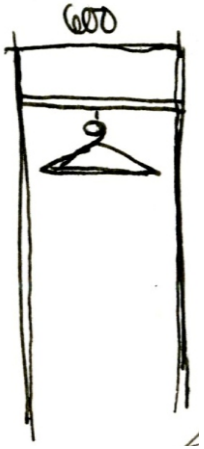

70
10
600
BOX
SAFE
~1600
250
150
2000


300
BOXES
500
200
700
300
1000
CORRIDORE
600




MM
250
50
300
150


250

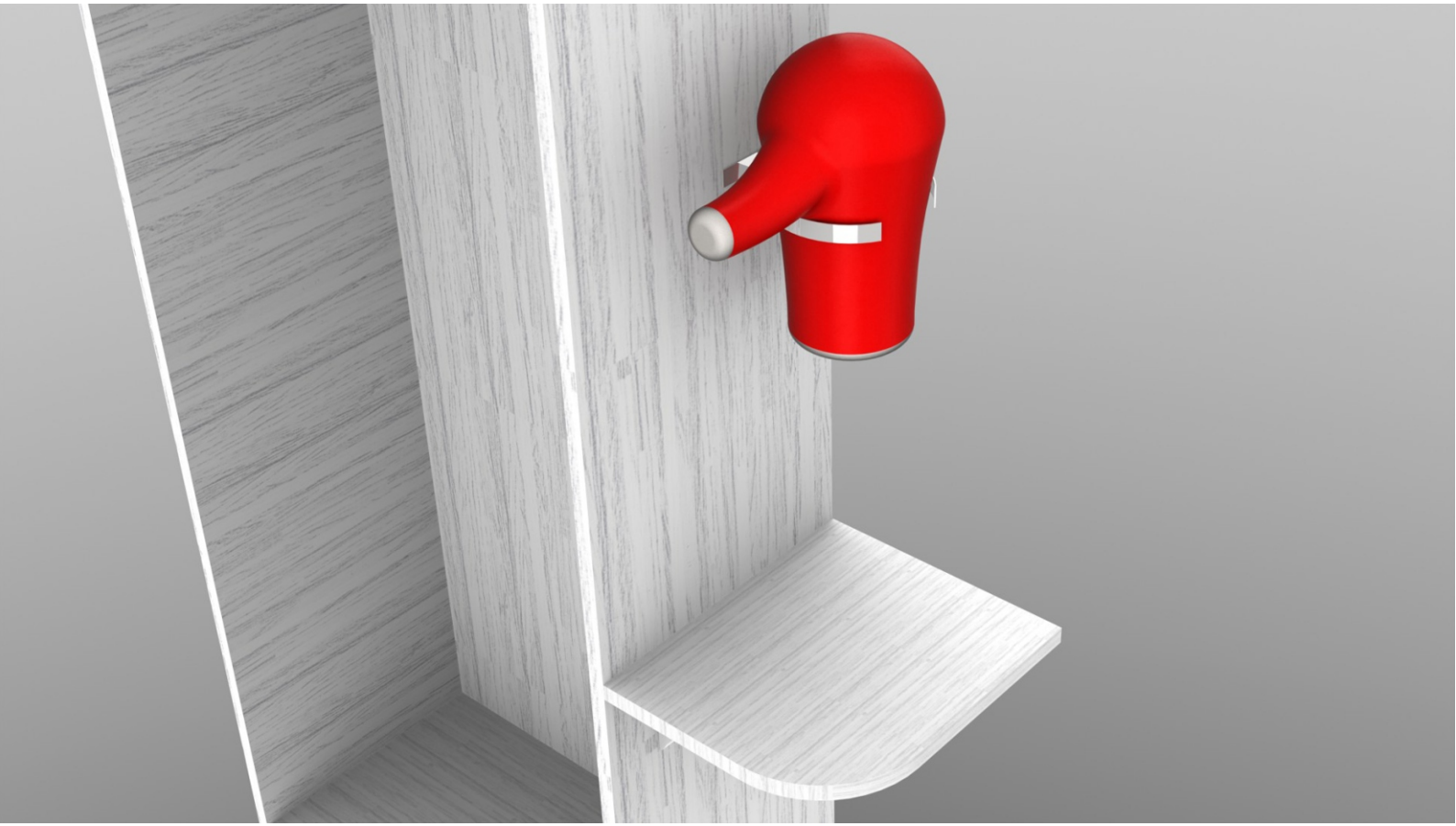

600

ENTRANCE HALL

Besides putting clothes in the wardrobe, I wanted it to include other functions as well. At first I thought that the bed could have a wide headboard, which would enlarge the storage in the entrance hall. However, there was not enough space for this idea and this would also have left empty space in the other side of the board. Finally, I ended up with one high wardrobe with room for a safe and a vanity unit on the side. I left the wardrobe open, because the hall is very narrow and doors would only have been in the way.

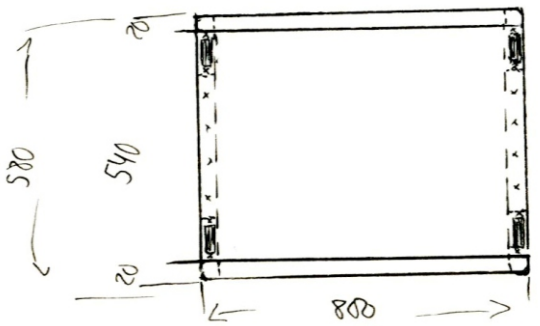
In order to get the price as low as possible, I decided to use inexpensive chipboard, with bamboo veneer coating, and keep the structure very simple. I did not even put any drawers into the wardrobe, because most of the clothes can be put on hangers. To make it easier to hang the clothes there is a pull-out rail below the top shelf.

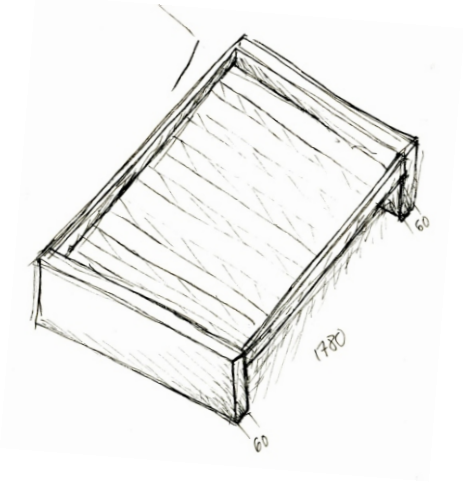
The vanity unit is attached on the side board of the wardrobe, consisting of a small table top and a hairdryer holder. The vanity unit will be right beside the bathroom door on which I placed a full length mirror. The table top is rounded in the outer corner in order to avoid it to be in the way, when coming out of the bathroom.



BED → SIMPLE, AFFORDABLE, FUNCTIONAL

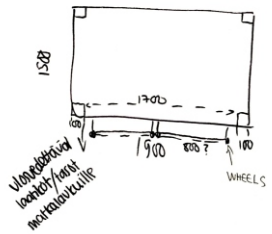
DIMENSIONS: 1900 × 1500 × 600
L. W. H.

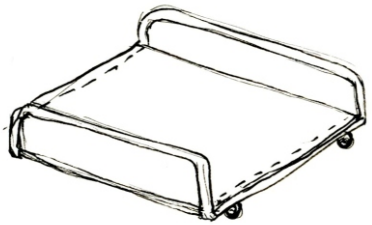


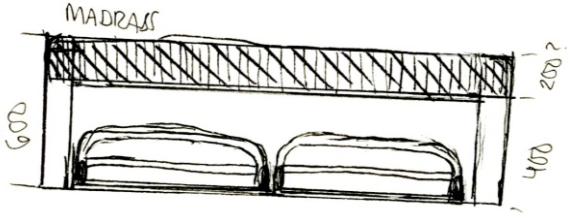


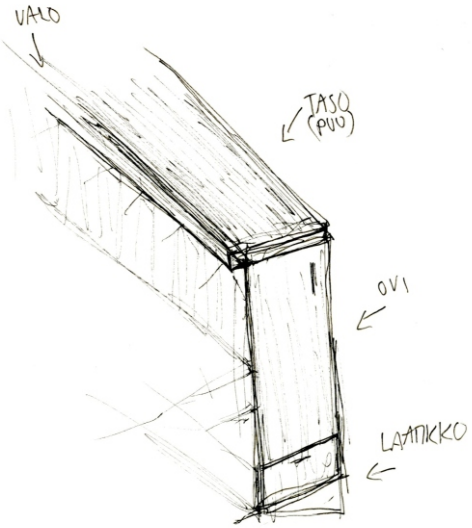
→ luggage storage : AVERAGE DIMENSIONS

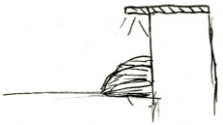
	H.	W.	D.	
LARGE:	770	× 490	× 320	mm
MEDIUM:	670	× 450	× 280	
CABIN:	540	× 370	× 200	

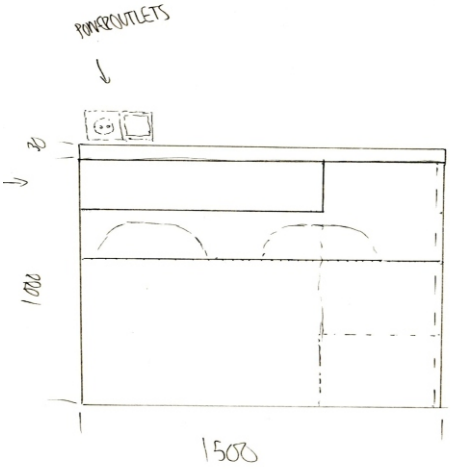




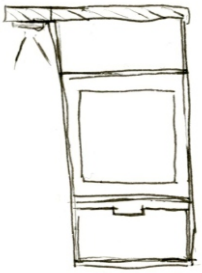



VALO
TASO (PUU)
OVI
LAATIKKO

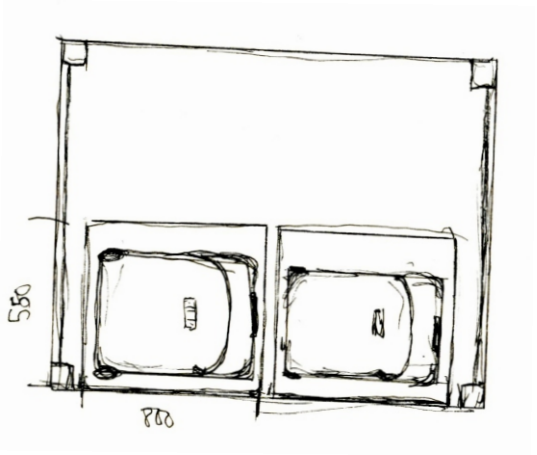



POWER OUTLETS
1000
1500

HEADBOARD




OPEN
air circulation

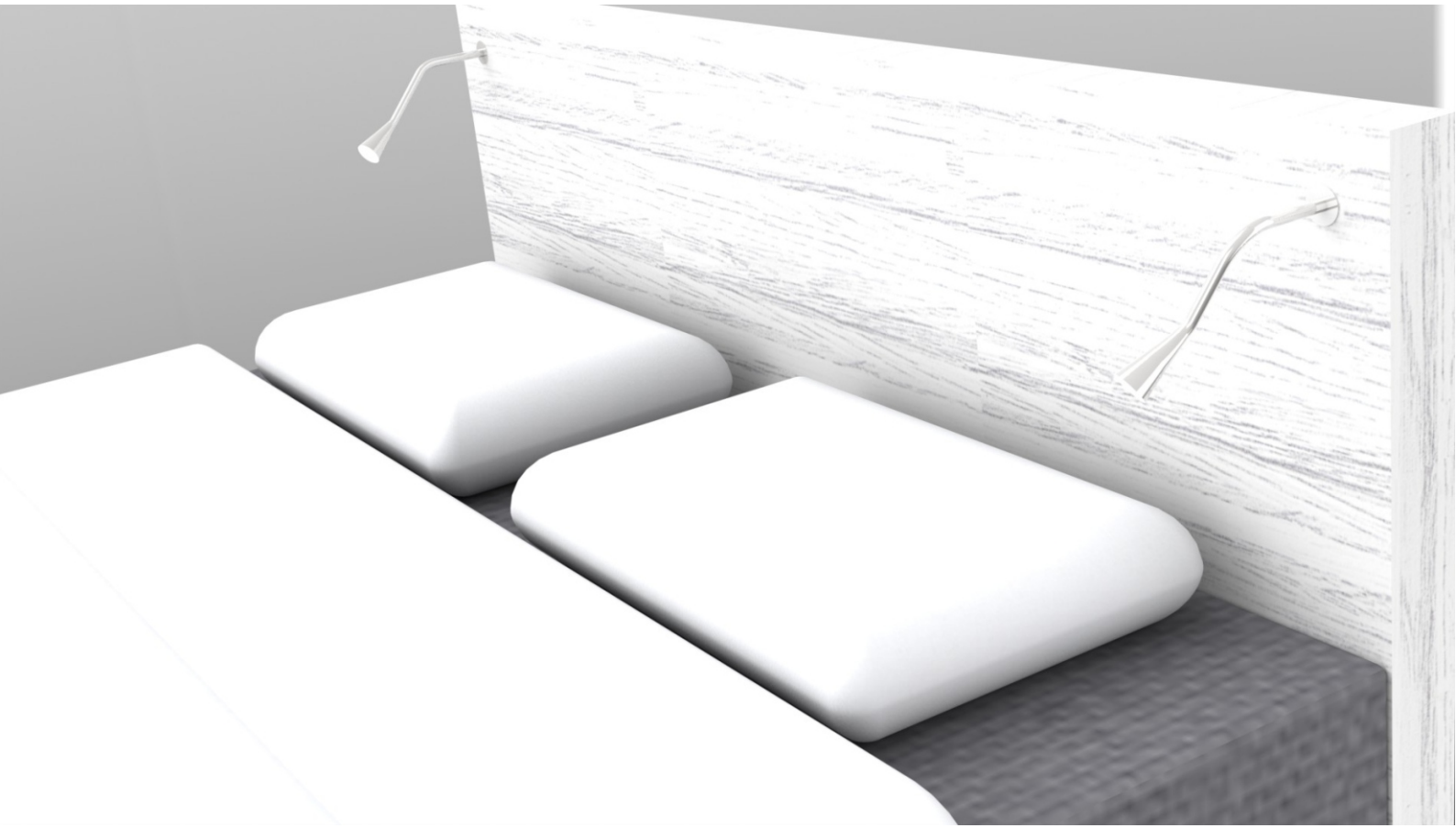

550
800

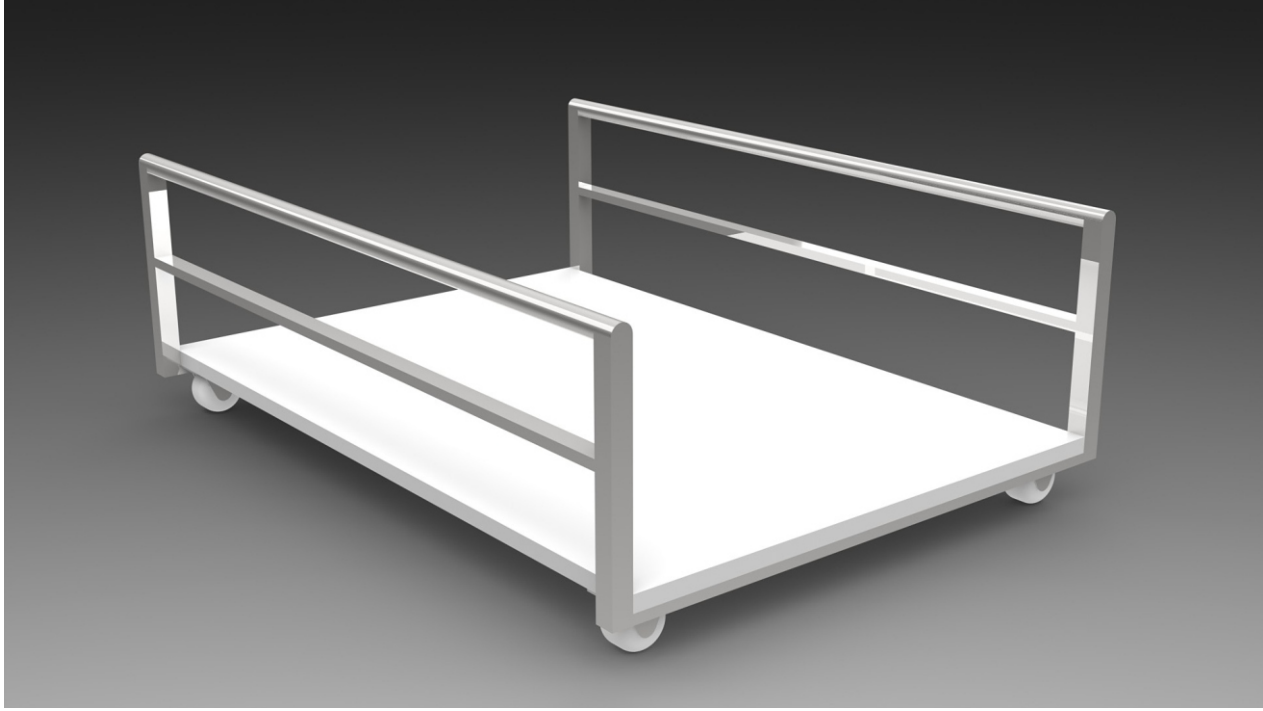
SLEEPING AREA

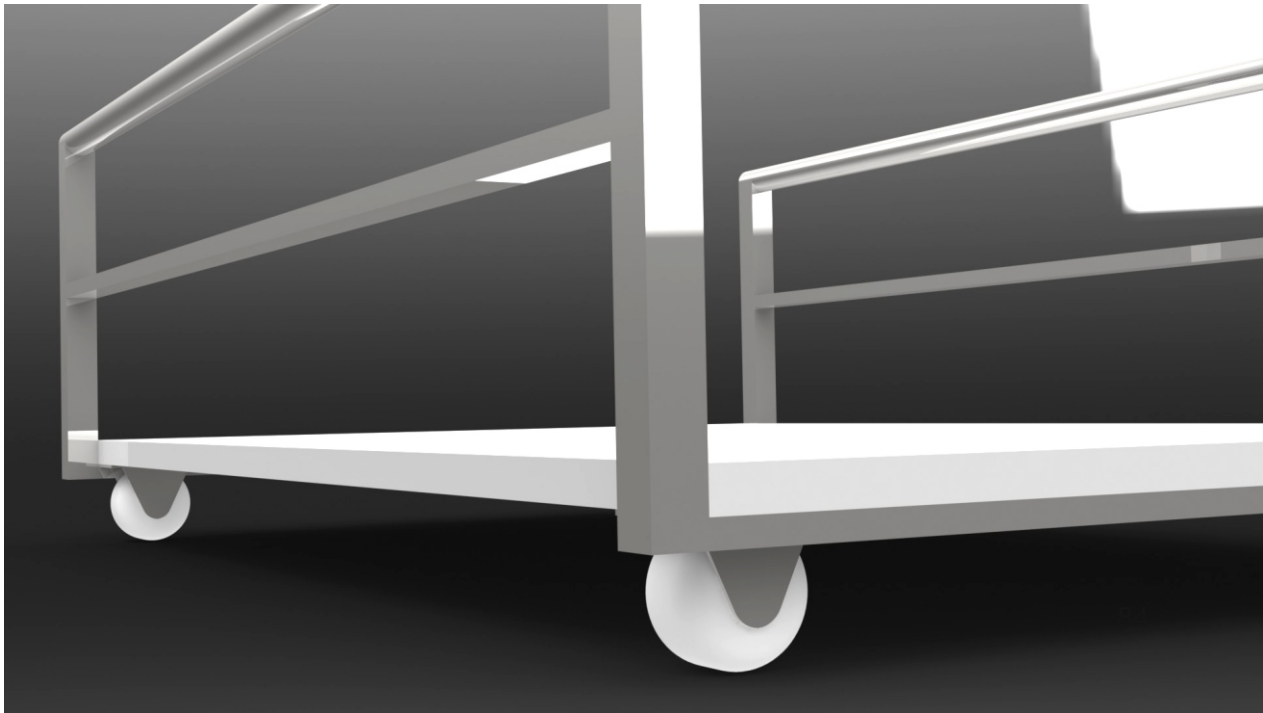
The sleeping area consists of a double bed and reading lights. The bed had to be 600mm high, so I made the frame low enough so there was room for a thick mattress. After all, one of the most important things in a hotel room is a comfortable bed. The bed frame has a simple structure, wooden pallets under the mattress and two boards as feet. The other foot continues as a headboard on which you can put, for example, a wristwatch and mobile. I decided to leave the underside of the bed open in order to make the bed look lighter and the hotel room feel bigger; the more you see the floor surface the bigger the space seems.

I placed the reading lights on the headboard. They are small and simple, because I did not want them to take too much space or attention in the room. The lights are also functional, that is to say, they can be placed in whatever way so that the light is in the direction you want. Moreover, the on/off switch is smartly on the widening end of the light. The lights are on the sides of the headboard, so that you can rest on the board when, for example, reading a book or watching TV.

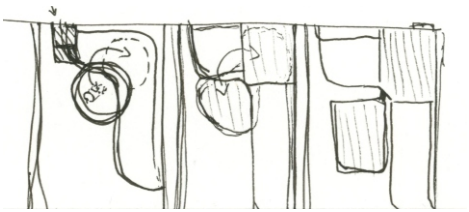
There is a lot of space under the bed, so it is a good place for suitcases which can be big. In order to make it easier to push a heavy suitcase under the bed I designed a trolley. The trolley is low and open from two sides so that it is easy to lift the suitcase on it. The bottom is white chipboard and the side supports/handles polished steel. There could be two trolleys beside each other under the bed, but I decided to have only one, because it felt unnecessary to have more. Some of the luggage can also be placed on the floor, moreover, the costs stay lower when having only one trolley per room.



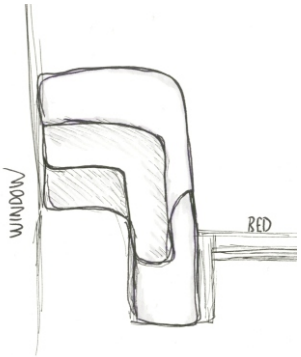


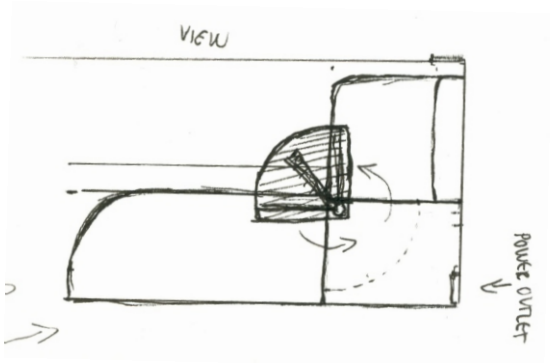


SOFA



COMFORTABLE, SOFT, ROUND FORMS, TEXTILE





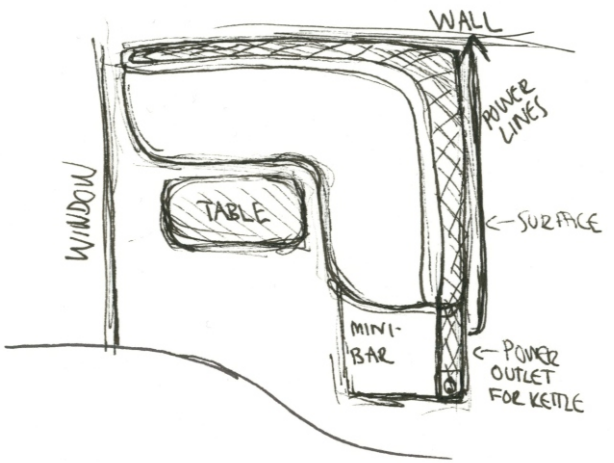


TABLE WITHOUT MECHANISMES
(LESS THINGS THAT CAN GET BROKEN)

PÖYDÄN KIINNITYS

SMALL BACKREST

BIGGER FITTING

KETTLE

MINI-BAR

REMEMBER HIR KETTLE!
and POWER OUTLET

enough space for a MINIBAR?

TABLE

600

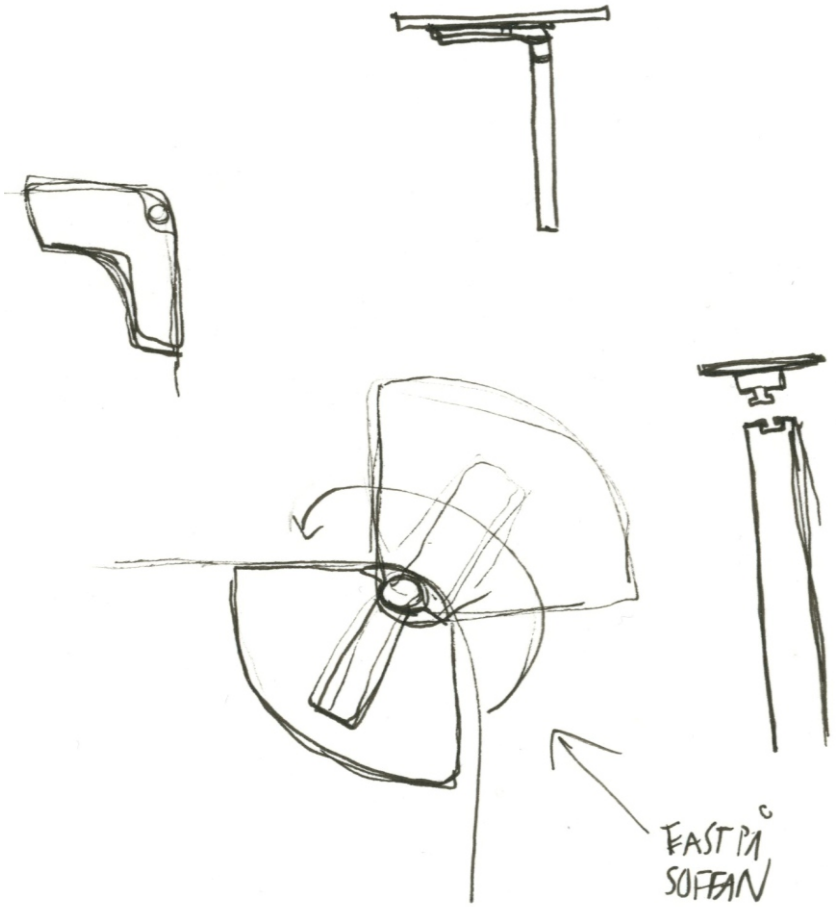
170

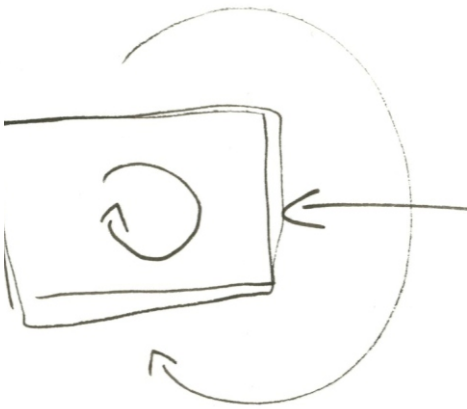
430

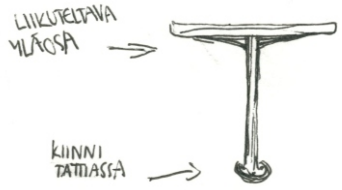
SOFA

WHAT KIND OF TABLE?!

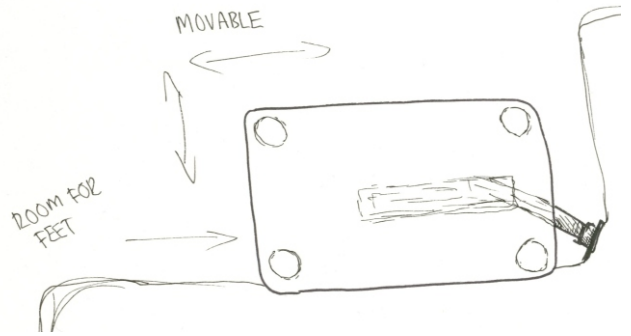
360°
ROTATION
NOTHING
ON THE FLOOR!
TABLE SLICE
400
400
600







→ " the most comfortable distance between the bottom of the table and the top of the chair is about 6 or 7 inches --
make sure that is not less. 6 inches = 15,24 cm ≈15
7 inches = 17.78 cm ≈18 cm

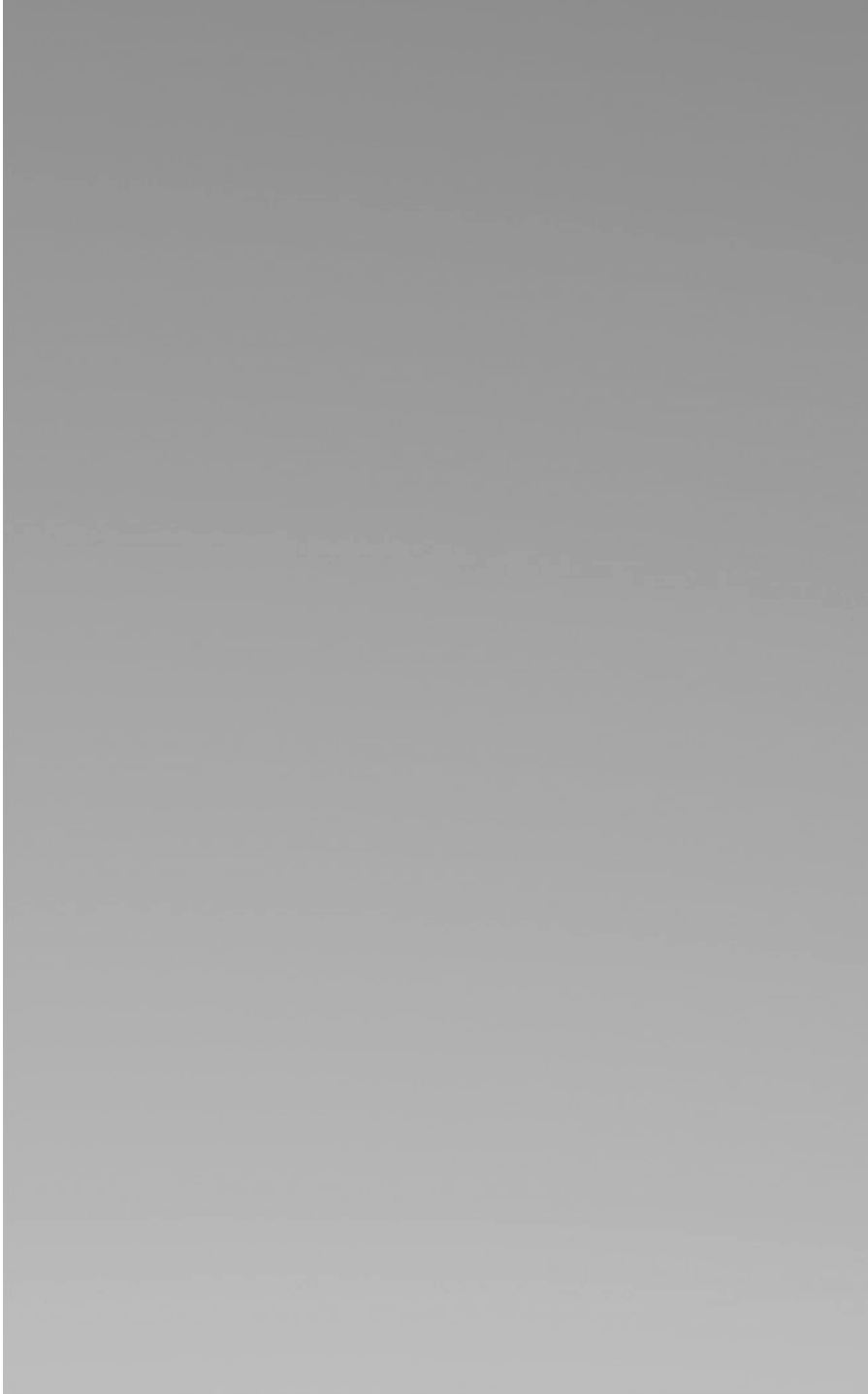


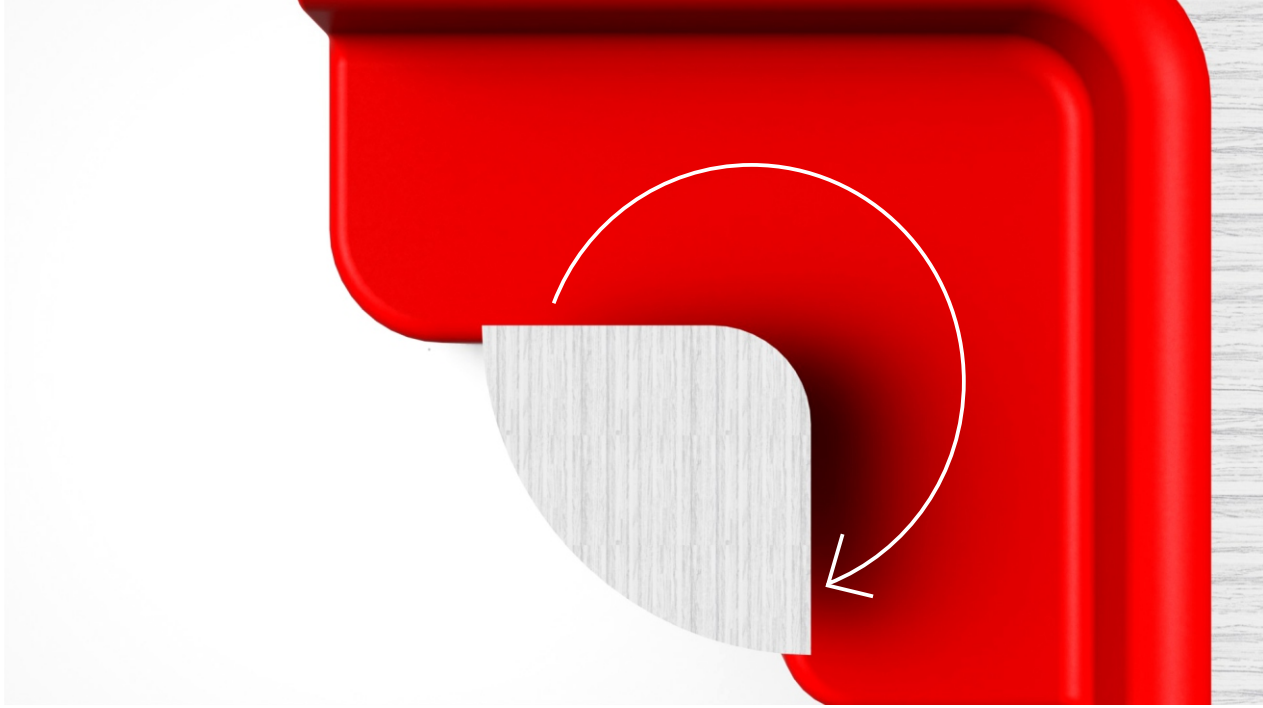
LOUNGE AREA

One of the most challenging parts of the design process was to design the lounge area. There was only a limited amount of space, which had to include quite many functions. There had to be a TV, room for a kettle as well as opportunity to dine, so there had to be some kind of table surface and seating. I decided to place also the minibar in the lounge area so it would be near when eating. Also the window, which is the size of the end wall, made the designing a bit more challenging.

After sketching on paper and trying different kinds of seating alternatives in a 3D-program, I decided to have a corner sofa with a moveable table surface. A sofa is comfortable and can be formed so that it takes the best benefit of the space. In my final drawings, the sofa is not only for seating, but also functions as a footboard for the bed and as a surface for mobiles, tablets and other small belongings, that had to have a place in the sleeping area. There are also power outlets for minibar and kettle on the side of the sofa. The power lines go inside the backrest to a power source. The backside and upper part of the sofa rest is chipboard with bamboo veneer coating and the upholstery is comfortable and fire retardant wool. Red color in the upholstery makes the sofa inviting and cozy.

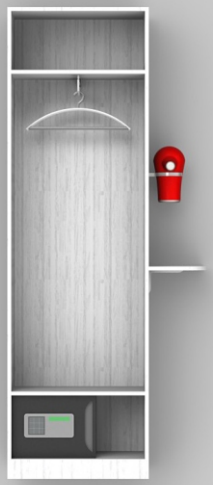
The table, which is in the corner of the sofa, can be rotated 360-degrees horizontally. A moveable table makes it easier to get on the sofa, moreover, it can be moved when it is in the way in the small lounge area. The table leg is attached to the sofa in order to keep the floor open and leave room for feet. There could have been even more mechanisms in the table leg so that it would have been possible to rotate and move the table even more. Nonetheless, I decided to have only one mechanism because the more functions there are, the greater the risk that something breaks. Especially in hotel rooms, which accommodate a lot of different kinds of people, it is important that the furniture is not too complicated.





The minibar will be in a small cabinet next to the sofa. When having a refrigeration machine in a piece of furniture, it is important, that there is some extra space around so the air can circulate. That is why the opening in the middle of the cabinet is a bit bigger than the minibar. The bottom of the cabinet is also shorter than the side boards, so that the minibar will not be right against a surface in the back and the air gets out below the bottom. The cabinet has also got a small drawer for tea bags, napkins, remote controls etc. The pull is attached on the upper edge of the drawer so that it does not come too much out and be in the way. The pull gives also a modern touch to the simple cabinet.

During the design process I kept all the time in mind, how the pieces of furniture will fit into the room and can be combined with each other. The final furniture has the same kind of style and, therefore, creates a whole. The materials, bamboo veneer and steel, combine it also together. To soften the angularity that the wardrobe, bed and minibar cabinet have, I designed softer forms for the sofa and table. Also the pillows and covers on the bed soften the overall look.



MATERIAL CHOICES

The requirements are often very strict when designing interior for a commercial or public building. All the textiles and other materials have to be fire-safe and it is important that they also are durable, easy to clean and secure.

BAMBOO

Bamboo is a strong, fire resistant, eco-friendly and affordable material. China is among the largest bamboo producers in the world, so it is also a local material. Due to these benefits I decided to use it in the furniture and flooring.

Bamboo belongs to the grass family and there is a large variety of bamboo species. Bamboos are some of the fastest growing plants in the world and when the climate and soil are right, the plants can grow up to one meter in a single day. When traditional hardwoods reach their maturity in 20 to 120 years and softwoods in 10 to 20 years, bamboos are mature after three to five years. Bamboo is also rapidly renewable due to the fact that there is no need to replant after the plant is harvested, because the root system remains intact in the soil. There is even no need for fertilizers, pesticides or irrigation when growing bamboo. Furthermore, bamboo plantation produce one-third more oxygen

than equivalent trees planted on the same area, so it is a very environmentally friendly material.

Asia is the biggest bamboo producer and the plant has been used there already for thousands of years. Bamboo is in fact one of the oldest construction materials. However, in Western countries the benefits of the plant have been seen only recently and bamboo is still a rather new material in the construction industry and furniture design.

Even thought bamboo is not a tree it can be used as a substitute for hardwoods due to its strength and flexibility. The outer zone of the tube is highly elastic and the fibers run axial, which make the bamboo very strong. Though, while being strong, the bamboo is also light because of its cavities. With new technologies for further processing, most products made of wood can also be made of bamboo. Thanks to its rapid growth it is also more affordable than hardwood. Bamboo has also the benefit that it has a high fire resistance because of the high content of silicate acid. Moreover, bamboo is naturally moisture repellant and antibacterial, which makes it easy to clean and ideal for, for example, flooring. (Ecoplanet Bamboo; Bambooki).

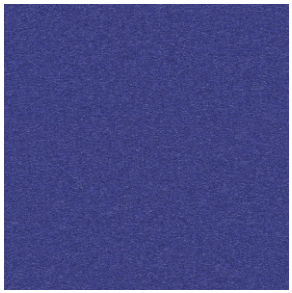
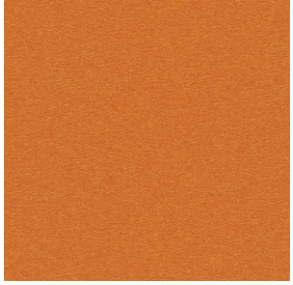
PICTURES 25 & 26: BAMBOO

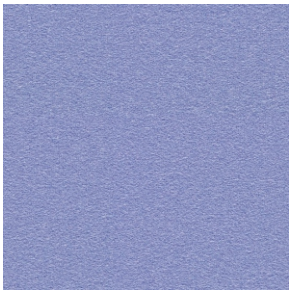
WOOL

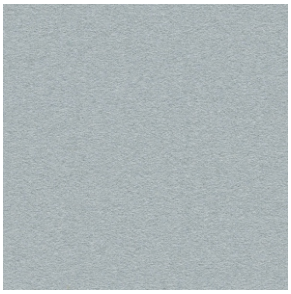
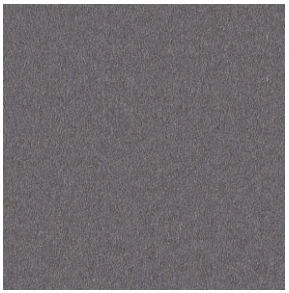
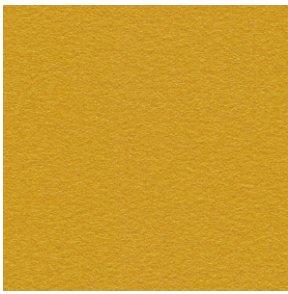
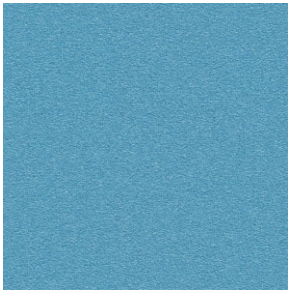
I decided to use wool as the upholstery textile for the sofa because of its many good qualities. Wool is an environmental-friendly and biodegradable natural fiber. Due to its structure and crimp, the fiber has an ability to absorb and give off air and humidity, which makes it comfortable. Wool has also got natural grease that makes it soil resistant and easy to clean. Furthermore, wool is flame retardant thanks to its complex fiber structure. It has a high ignition temperature and it forms a self-insulating char that prevents further flame spread. (IWTO).

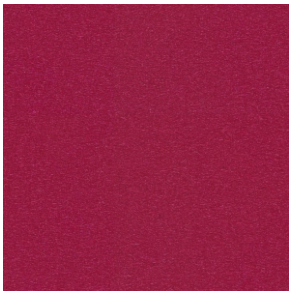
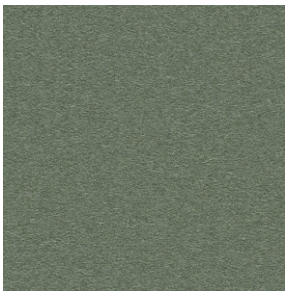
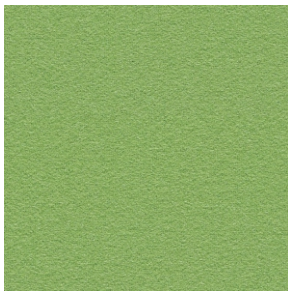
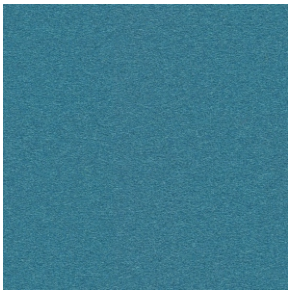
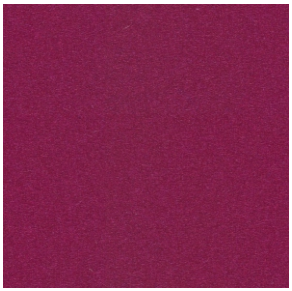
The fabric that I chose is Divina, it is 100% wool and available in a variety of colors. The fabric is manufactured by first weaving yarn in a plain weave and then shrinking it in a mechanical process which uses high temperatures. The directionless and consistent surface, gained with the manufacturing method, makes the fabric suitable for organically shaped furniture, such as the sofa. The fabric is also soft, comfortable and durable, which makes it ideal for seating furniture. (Kvadrat).

PICTURE COLLAGE: WOOL

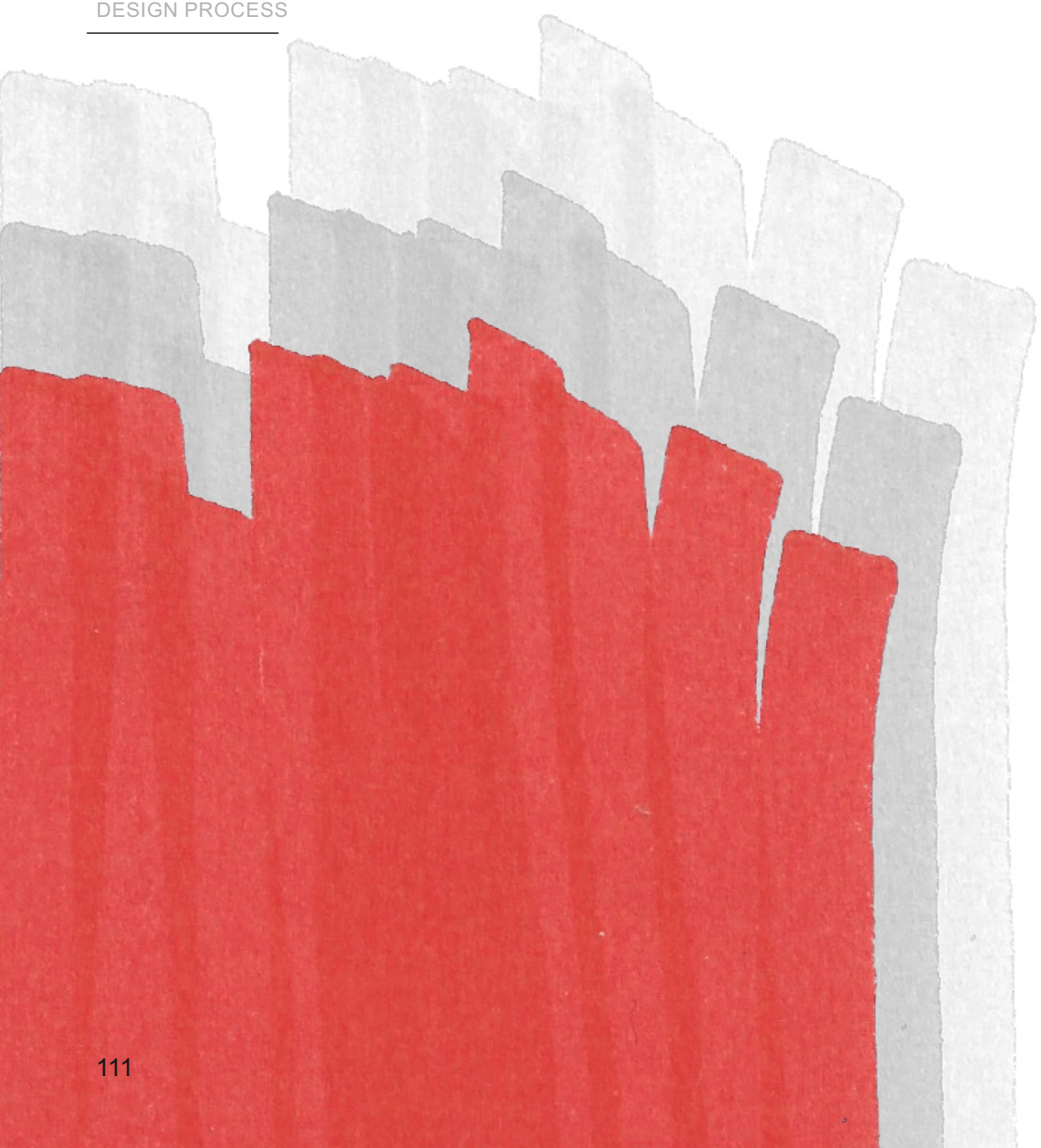







COLOR SCHEME

Colors play a big roll when creating an atmosphere to a space. When choosing colors you have to take into account: the target group, the surroundings, the space and the functions that are going to take place in the space. The color palette for this hotel room will consist of neutral grey and white hues combined with dark brown and bright red.

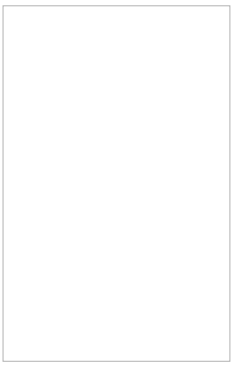
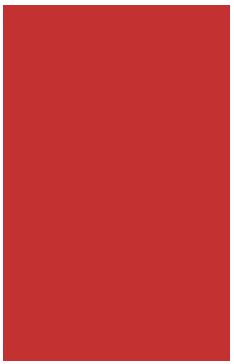
White is a clean and understated color, which works good as a general color in a space, because it can be combined with all colors. Grey matches also with many colors, as well as calms the stronger hues. I decided to use white and grey in most of the surfaces, because they give a restful atmosphere. The big surfaces, ceiling and walls, will be white and light grey in order to create a spacious and light atmosphere. By not using only white but also grey on some of the walls, I wanted to create dept to the room. The third bigger surface, the floor, got a dark brown color in order to avoid a cool and plain atmosphere. Brown is a calm color, which gives warmth, coziness and a sense of security. A darker shade on the floor gives also contrast, as well as combines all the elements in the space. A light floor could create a hovering feeling.

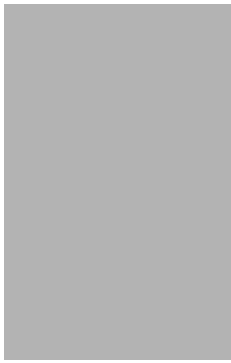
To give some liveliness to the room I decided to use an accent color. Red is a strong and warm color, which creates an exciting combination with the cooler neutrals as well as freshen the space together with the white. Furthermore, red is a popular color in China and used extensively in everyday life. It has been an important color since ancient times and has an important meaning in the Chinese culture. Red is associated with good fortune, happiness, prosperity, peace and harmony. The color is used in festivals and it is a traditional color in weddings, giving good luck for the couple. Chinese people like also to decorate their surroundings and homes with red, for example, with lanterns and traditional paper-cuts for windows. There are not any associations to anger or danger, but red is seen positively among the Chinese people. (Cultural China).



PICTURE 27





LIGHTING

It is important that a hotel room's lighting responds to the different activities. The room needs to be dark when sleeping, but also have a good lighting when, for example, reading. This chapter presents the hotel room's lighting scheme and the chosen curtains.

CURTAINS

The big window in the end of the hotel room is a good source of natural light. Daylight is most pleasant for the eyes, because it is even and have blue wavelengths, which makes seeing easier (Pekanheimo 2012, p.6). However, when for example watching TV the light rays can dazzle the screen in a disturbing way. That is why I placed two panel curtains in front of the window, which can be moved in front of the disturbing rays of light. One of the curtains is red and does not let any light through, whereas the other one is transparent white and can be used when not needing that much cover. The transparent curtain is also useful when wanting some privacy, but still wanting to see the view that opens from the window. By having different kinds of curtain fabrics I wanted to create some liveliness and excitement in the room. The red one gives some color whereas the transparent white lightens the overall look. The transparent fabric has also got a pattern that becomes more visible when placed in front of the red curtain.

PICTURES 28 & 29

In addition to panel curtains, there needs to be a curtain that covers the whole window in order to darken the room and get more privacy. A motor driven roller blind is suitable for this purpose. The blind can be rolled up and down with a remote control and the white fabric is fully dimming and developed for use with extra wide roller blinds. It is also flame retardant, as are the fabrics in the panels. (Création Baumann).

LIGHTING SCHEME

Lighting has a big effect on the atmosphere in a room; even if the room would otherwise be cozy a wrong kind of lighting can make it unpleasant. One room can often have many kinds of functions, so it is smart to create a lighting scheme that can be modified.

It is important to have a good general lighting, in the hotel room it is created with recessed ceiling luminaries. The recessed lights do not gather too much attention and give an even lighting to the room. These lights can also be dimmed if you want to create a mood lighting. I did not place any lights above the bed, because they would blind the eyes when laying on the bed. There are reading lights on the headboard, which can be rotated to a desired direction. The cone of light is also narrow so that it does not disturb the person next to the reader.

During the day time the big window gives lots of natural light, but after the sunset it becomes a dark surface. In order to avoid these dead-spots from occurring I placed a light strip above the window. The lighting will also become nice and soft, when the roller blind is down and the light reflects from the white fabric; an indirect lighting is pleasant to the eyes. (Martin 2010, p. 64-65, 75, 215).

PICTURE 30: READING LIGHT

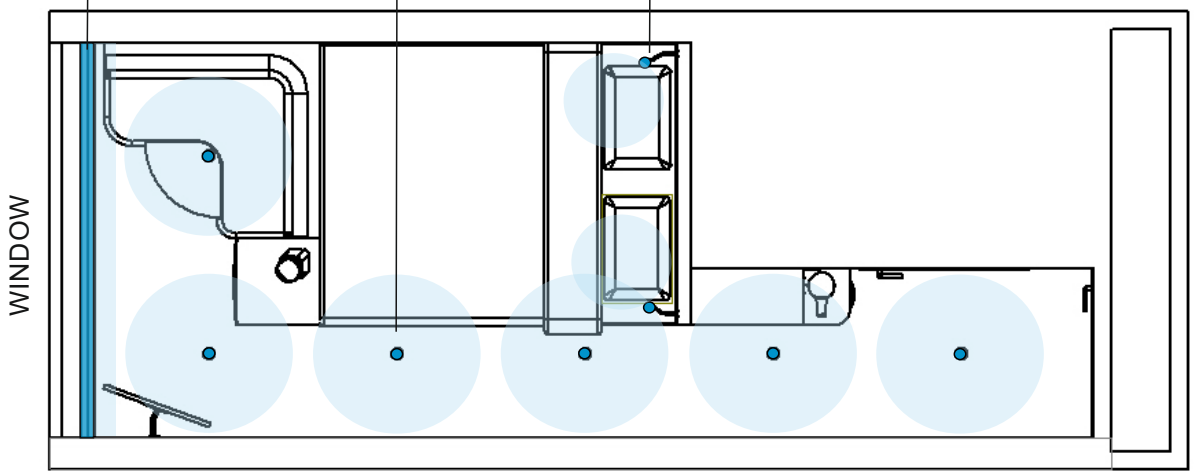
RECESSED CEILING LIGHTS

READING LIGHTS

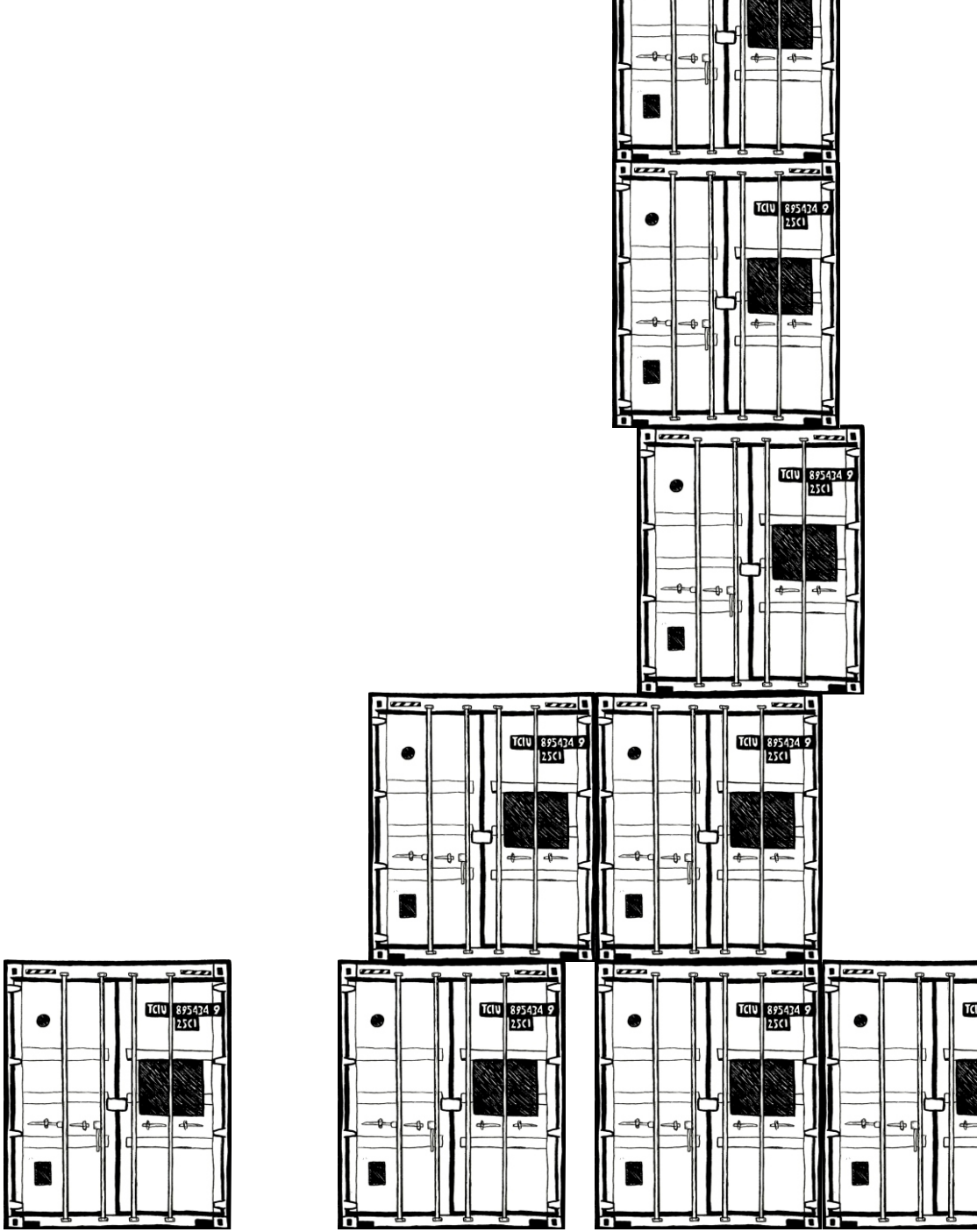
BY,

ÖRSJÖ

LIGHT STRIP



9 RESULT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Here is the final layout of the hotel room. You can see how the furniture complement each other and the different elements fit together. On the next pages, I present the hotel room's functions and details with 3D -pictures.


LOUNGE AREA
SLEEPING AREA


BATHROOM
VANITY UNIT

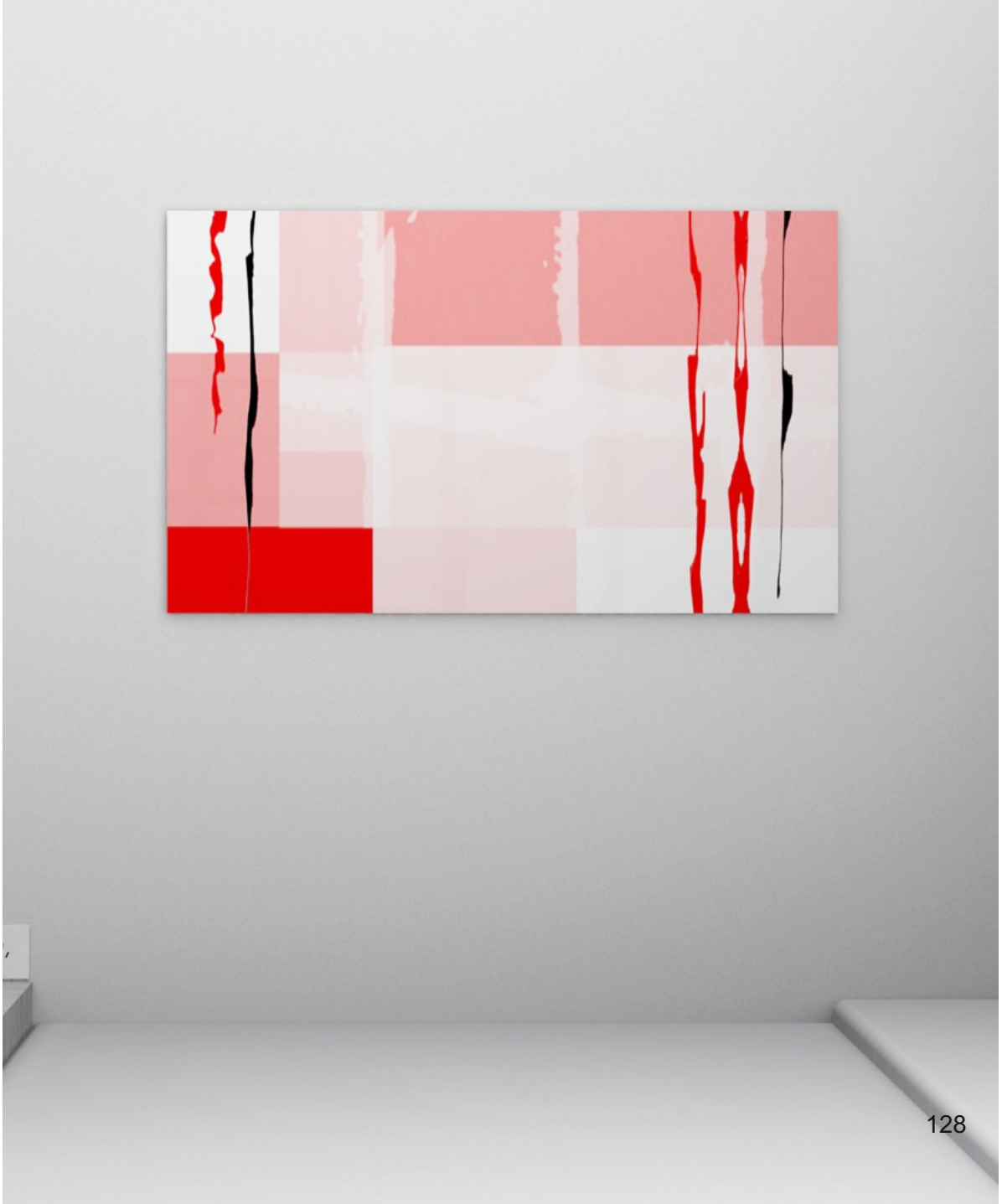

LUGGAGE STORAGE

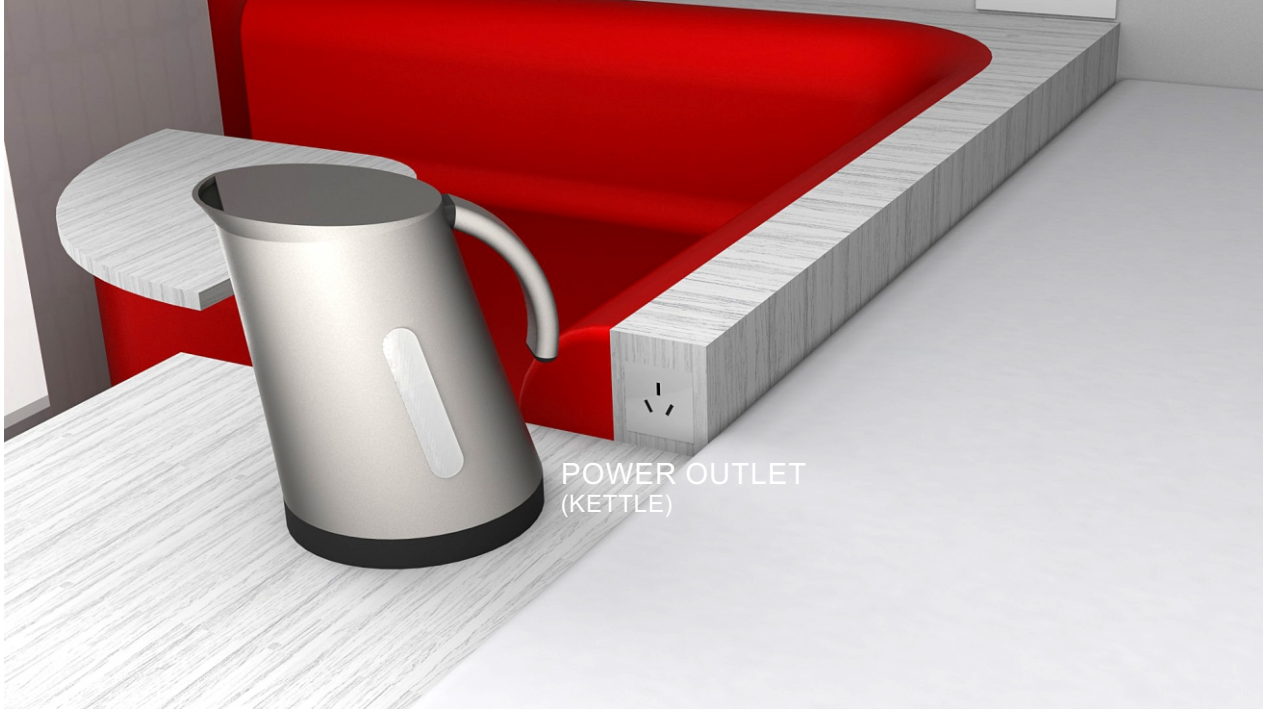

MIRROR
HAIRDRYER
+ POWER OUTLET
SAFE
TRASH CAN


KETTLE
MINIBAR
PANEL
CURTAINS


TV+
SWIVEL WALL MOUNT
POWER OUTLETS

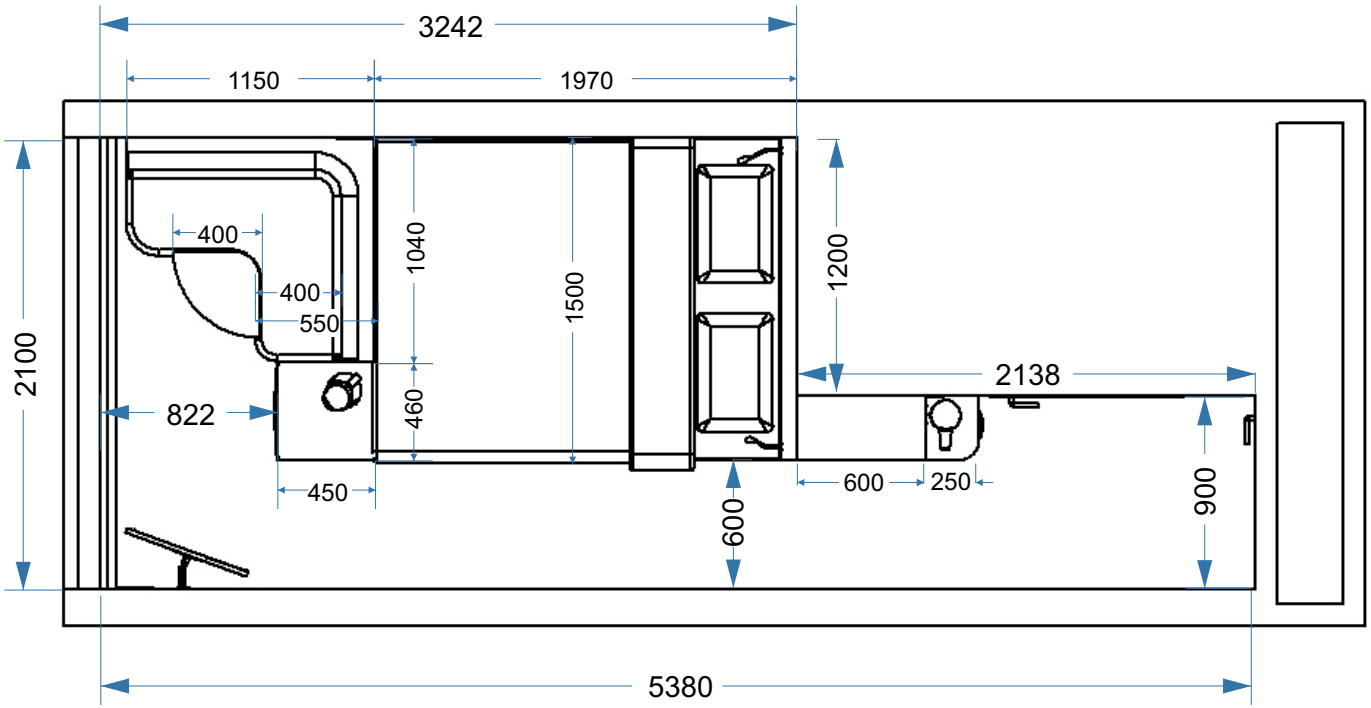
I made some art on the wall so that it does not look so blank. The colors of the wall-art are from the interior. Light and soft pastels are combined with strong red and black.




POWER OUTLET
(KETTLE)


POWER OUTLETS
(MOBILES / TABLETS)

DIMENSIONS: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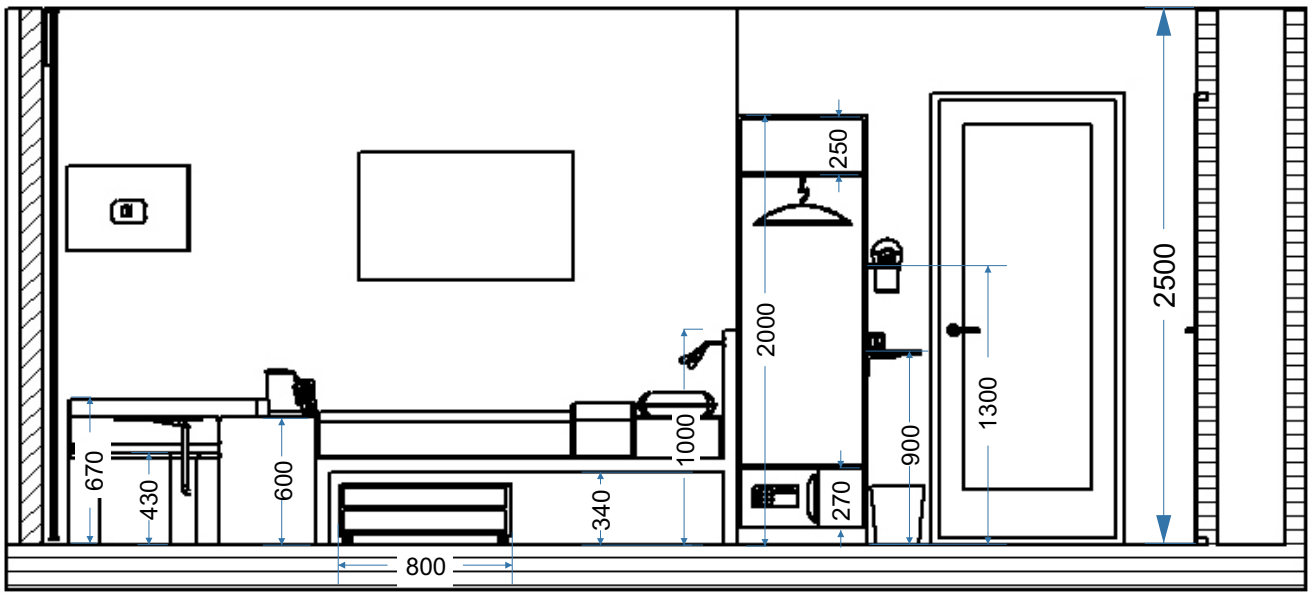
250
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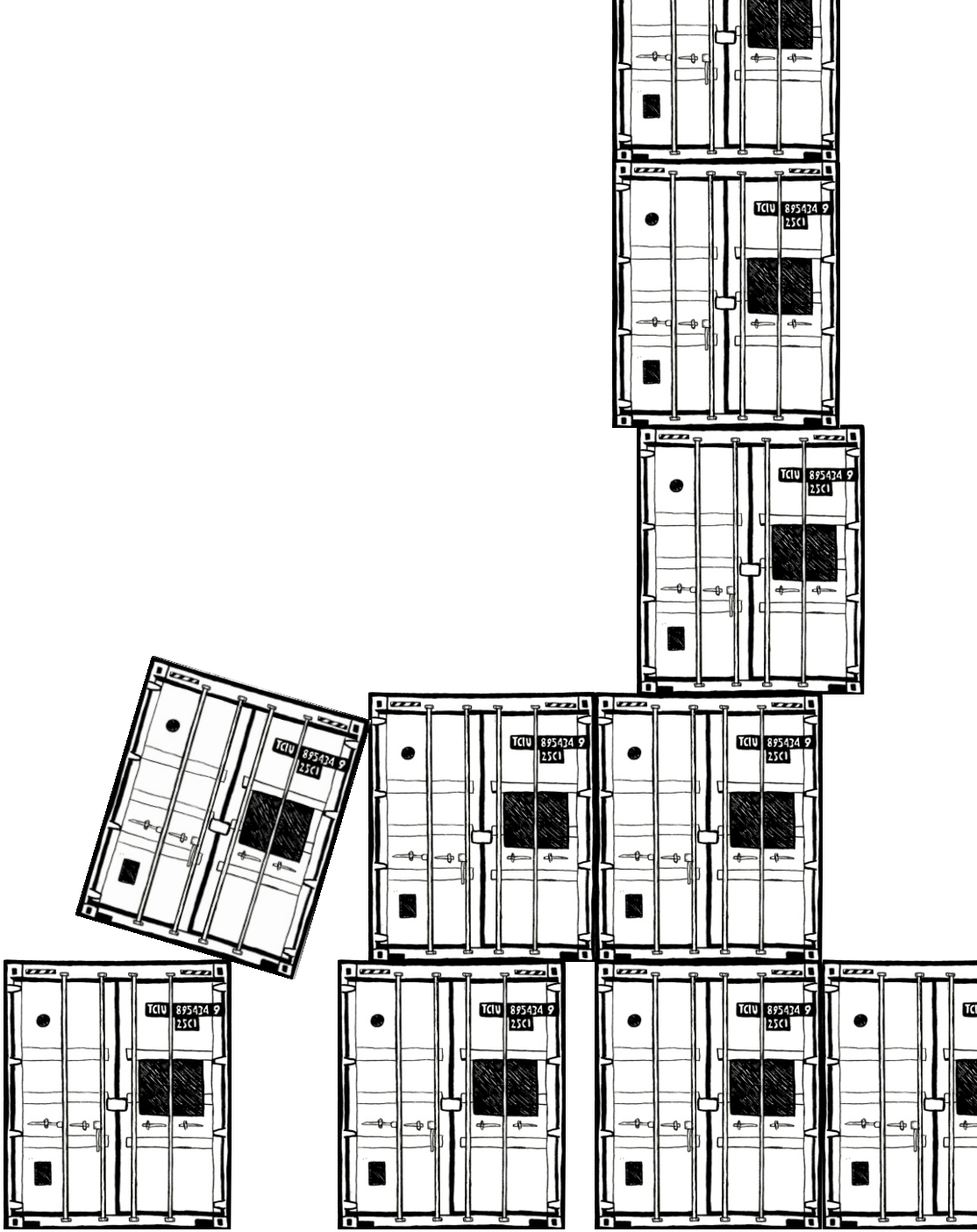
10

FINAL WORDS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It was really nice to get this kind of assignment for my thesis. I think ALMACO works with interesting projects and this is one among them. I had not heard about container architecture before, so it was very interesting to become familiar with this new branch. I knew that containers are used as temporary accommodation units, but it was new that you can also build permanent and ordinary looking buildings of them. At first I had my own prejudices that the container buildings would look like something you see next to construction sites, but it was surprising to see that it is also possible to make something so great and even luxurious of these angular steel boxes. It also surprised me, how much there already are different kinds of container buildings and other creations around the world. I even had a hard time choosing, which container creations I present in this thesis, because there were so many alternatives. I think that containers have the possibility to become an even more popular construction material and there are still new kinds of exciting creations to be seen. The container is a functional, affordable, sustainable, eco-friendly, modern and in my opinion also a fun building material.

The container is quite small and compact when modified to an accommodation room. The small amount of square meters in the hotel room became also one of the most challenging parts in the design process. Moreover, the fact that the

hotel will be built to a country where I have never been made my work a bit more challenging. But I think that the challenges made the work only more interesting. It was useful to learn about the different methods of creating space and I have always been interested in different cultures, so it was nice to know a little bit more about China. I think I also managed to exceed all the challenges.

There would certainly be things which had to be improved in the hotel room if it would be realized. This is only the first plan and usually there are several steps in a design project before the final plan is put into practice. However, I am happy with the result; the hotel room has all the needed elements, but it does not look too small or cramped. It is also functional and the furniture works well together. I have also become better at using SolidWorks, which was a useful tool when drawing the furniture and testing how they fit into the hotel room. Furthermore, I was able to take advantage of all the things I have learnt at school and in the practical trainings. When making this thesis I realized, how much I have actually developed during these four years of studying design. I have become more confident of the choices I make, I can work independently, but also ask for help when running into a problem, and I was also able to keep the schedule I made at the beginning of the project.

This has been a very interesting and nice project to work with and it did not feel tedious at any point, because there were so many different phases. I got to learn about Chinese culture, shipping containers and the new and topical container architecture as well as, how to design small spaces and what you have to take into account when designing a hotel room.

After graduating I would like to work also within other areas of design than furniture design, so it was nice to have a project where I got to design an interior. Moreover, I got to work a little bit with graphic design when making the layout for this book. Design is something that surrounds us everyday and as a designer you can work with a wide range of projects. I think that it is going to be interesting to work in the field of design.

THANK YOU!

Thank you ALMACO and most of all Pia for giving me this project and for all the help I got!

Tack Tommy för handledning och alla andra lärare som på något sätt har hjälpt mig i mitt arbete!

Kiitos Janne kaikesta avusta, vinkeistä ja palautteen antamisesta!

Tack Frida, Heidi, Sara, Camilla, Kirre och Tina för ert stöd och hjälp, ni gjorde hela projektet ännu roligare!

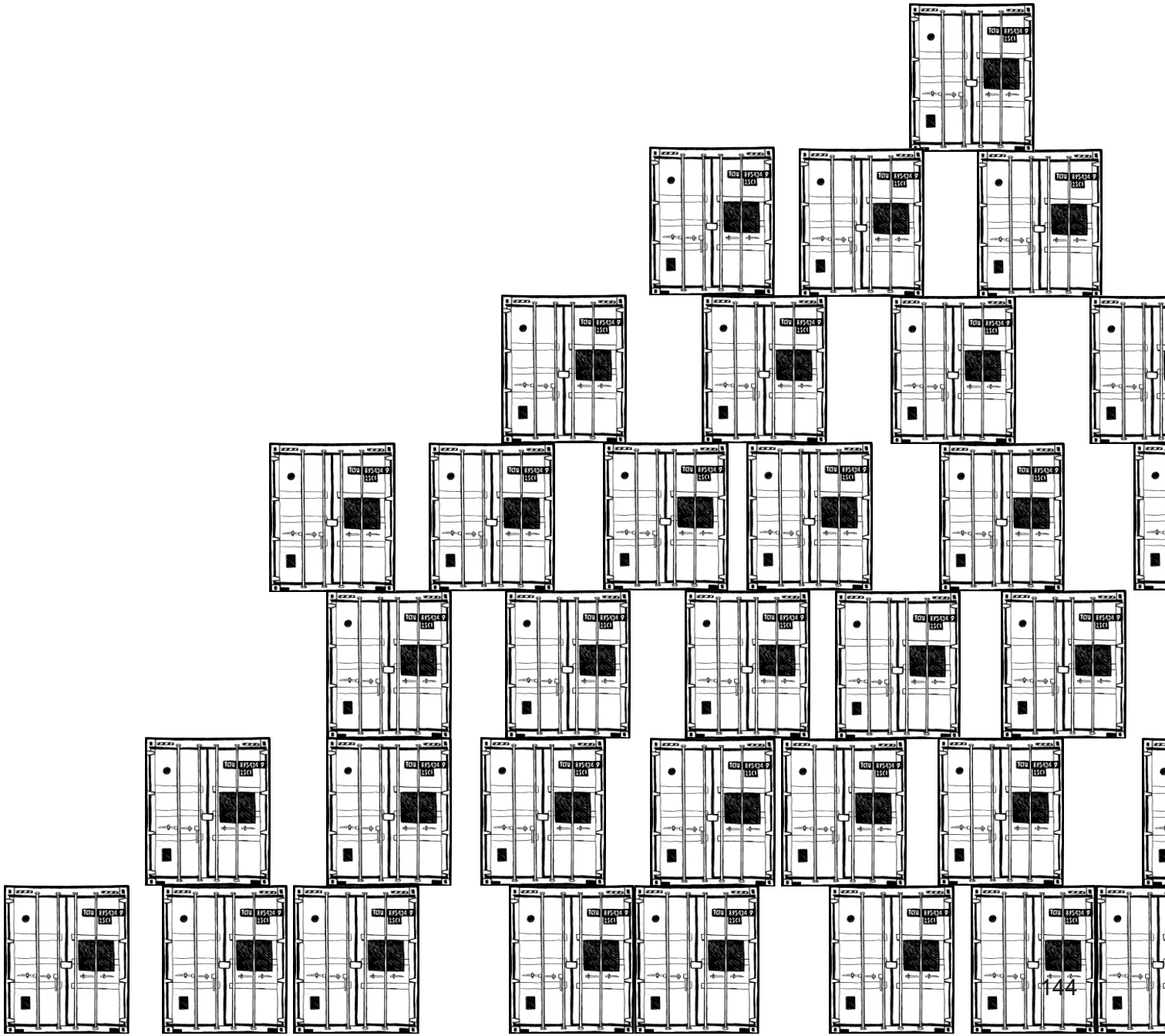
FEEDBACK FROM ALMACO:

You have a good thesis in your hands. You have done great research and benchmarked existing buildings, which is a very smart starting point. You have also familiarized yourself with the culture of the location so that you understand better the end users and the world they come from.

There is, however, one important regulation that is not fulfilled; the exit must usually be at least 900mm wide, so the wardrobe makes the hall too narrow. On the other hand, this is maybe not the most important thing in this thesis. As a designer it is more important how you have arranged the space and how the furniture will work in all different situations, and I think you have succeeded very well therein. I liked also very much of the way you describe the design process with your sketches.

Overall I think the work is well-structured and presented.

Pia Litokorpi
MANAGER, ARCHITECTURE & INTERIOR DESIGN
ALMACO Group Oy



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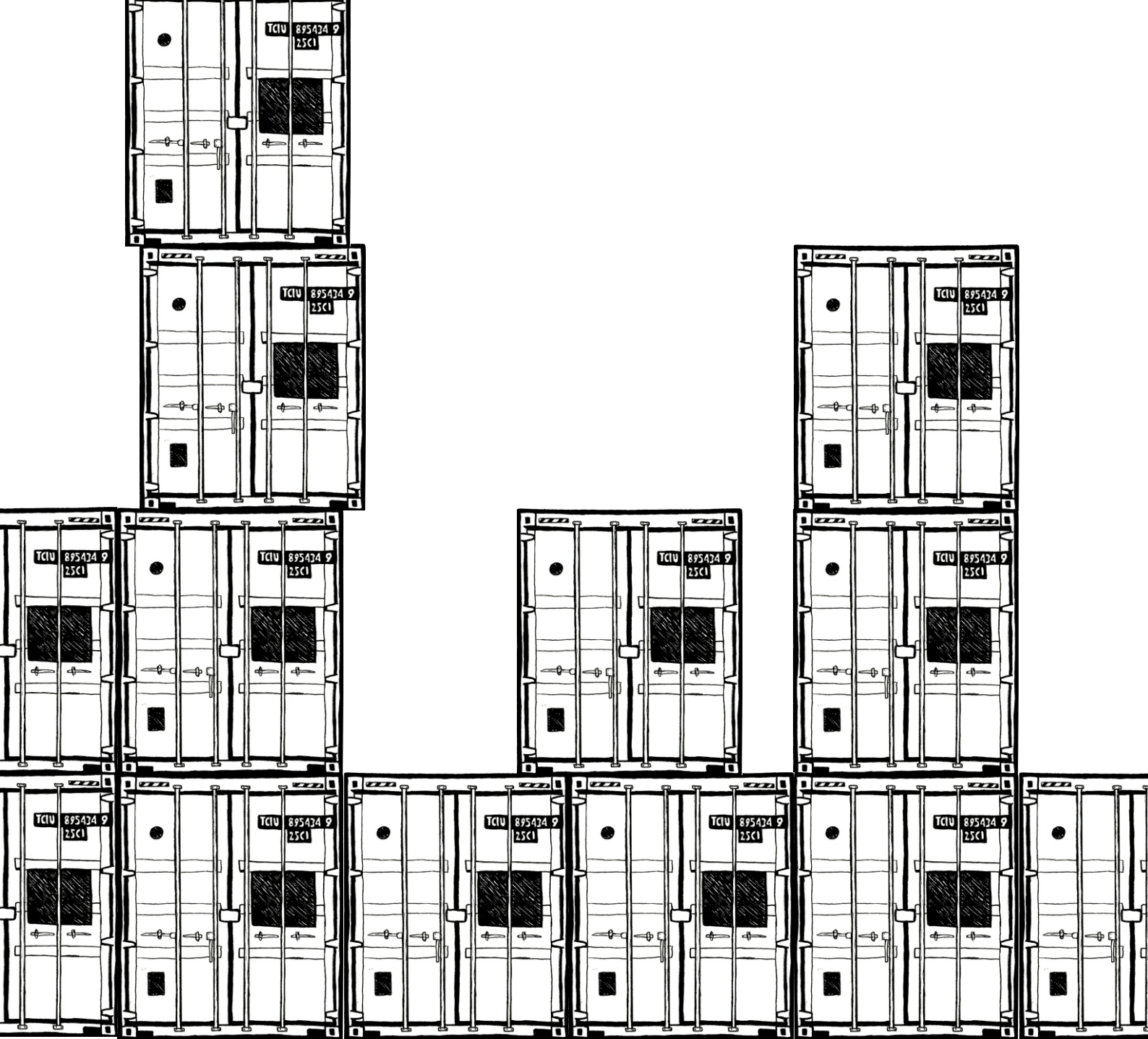
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