



# Reimagining Bedroom Space

**Saijith M S**  
**176130007**

**Guided by : Prof. P Kumaresan**

# Introduction

In today's ever changing world, material and people move places, cities and countries. As we migrate from city to city in search of better education, jobs or lifestyle, how well are these able to absorb the unprecedented population influx? As spaces become smaller, it is imperative for us designers to appropriate the same into compact livable spaces. While the world is tending towards smart technology, isn't it time to celebrate **smart living** – for a **minimal, compact** yet efficient living for the future?



## Minimal living

Minimalism is a word that carries a lot of weight these days. Ironic, considering it refers to a lifestyle that is all about **living with less or living with just what is needed.**

**MINIMALISM IS INTENTIONALITY.** It is marked by clarity, purpose, and intentionality. At its core, minimalism is the intentional promotion of the things we most value and the removal of everything that distracts us from it. It is a life that forces intentionality.



## Compact living

To live small, you have to think big.

Compact Living is about **making the most of your square metres** when you either live in a small space, move to something smaller or want to make room for more.

The global issues of population explosion and land scarcity have forced us to arrive at a **comprehensive solution for a sustainable future**. Compact living helps us be a part of this solution.



## Smart living

We understand the importance of **having safe, energy efficient and secure living spaces** that is built in a smart way so that you take your home with you wherever you go, watch the happenings home and enjoy watching your playful kids or aged parents from where you are at the click of a button either in your smartphone, ipad, notebook or any device which has internet connectivity and video play back and of course we also understand the requirement of **convenience and comfortable living**, in this click of the clock growing, ever changing and fast world and all this with a feeling of security.

What makes a Space meaningful !



The products, furniture etc that falls into the space.

# What makes a Space into a home?

## Bedroom



# What makes a Space into a home?

Bed room



Kitchen



# What makes a Space into a home?

Bedroom



Bathroom



Kitchen



# What makes a Space into a home?

Bed room



Bathroom



Kitchen



Living room



What if all these rooms come in a **size of a wardrobe !**



**One carries those four wardrobe and the whole house is with him/her.**

The whole concept of the project is a transportable home. Regardless of the space one occupies the furniture and belongings remain the same, hence giving an experience of your own home.

## Design Brief

Reimagining bedroom spaces for a working individual staying in a studio apartment, embracing the activities of the space and yet making it **compact, transportable and smart.**  
( keeping the size constraint - 1m (max.) x 2m x 1m and imagining the space is not more than 3 x3 m for the single furniture to occupy)

# What is the problem?

- Migrant population in the city increases.
- Space becomes a constraint for living.
- Lifestyle degrades.
- Transportability becomes a major problem when people moves from different cities.  
(studies from 2011 census shows a majority of migrating population carry their households along with them)



# What are the user requirements?

- Affordable
- Compact
- Multipurpose
- Portable
- Smart integrated system
- Automated
- Ease of use

# Activities involved in a bedroom.

- Sleeping.
- Working on the bed.
- Watching, browsing in laptop, mobile etc.
- Watching TV.
- Reading.
- Relaxing / napping.
- Playing video games.
- Interaction with friends(Social time).
- Having procreation.
- Getting ready for the day.



# Sleeping,Relaxing & Napping.

Min. Space needed : 38" wide x 75" long (single person).  
54" wide x 75" long (two person).

Items needed : Mattress and pillows.  
: Bedsheet and pillow cover.  
: Blankets

Factors affecting : No lighting.  
: Air conditioning - Temperature control.  
: Air quality.  
: Noise level.  
: mattress quality, bed sheet & blanket fabric quality.  
: Humidity



# Working, Watching, Browsing, Reading etc

## Items needed

- : Adjustable/transformable bed to suit the need (backrest, recliner).
- : Platform to work, keep laptop,book etc
- : Power outlet
- : Light
- : space for keeping accessories.
- : Space for keeping snacks and drinks.
- : Speakers/Headphones.



## Factors affecting

- : Lighting - Task / ambient lighting.
- : Air conditioning - Temperature control.
- : Posture
- : Humidity

# Watching TV

## Items needed

- : Adjustable/transformable bed to suit the need (backrest, recliner).
- : TV / Projector / Display.
- : Power outlet
- : Light
- : Space for keeping snacks and drinks.
- : Speakers/Headphones.

## Factors affecting

- : Lighting - dim lighting.
- : Air conditioning - Temperature control.
- : Posture
- : Humidity



# Getting ready for the day.

## Items needed

- : Wardrobe
  - Storage for clothes, shoes, accessories, cosmetics etc.
- : Mirror
- : Seating
- : Ironing

## Factors affecting

- : Lighting - Task lighting.
- : Mirror height, type, size etc.
- : usability of wardrobe
- : Availability of free space for getting ready.



Analysing similar products in the market.



HiCan : The smart bed.

## Experience



HD Projector w/ 70" home theater screen



Innovative sound system based on exciter technology (invisible speakers)



X-Box and PlayStation supported



Configurable Touch Board incorporated in the headboard.

## Smart home integration



Automated adjustable head and footrest



Automated privacy blinds



Dimmable LED lighting, with RGB ambient lights



Voice Control (under development)

## Seamless synch



Wi-Fi enabled



Apple TV as standard input device with AirPlay



Multi-Platform Web App



Native IOS and Android App

## Health Tracking



Occupancy detection, accurate historical log of time spent in bed and personal habits;



Automation features, like automatic lights control when leaving bed, and smart wake-up alarms;



Sleep tracking (actual sleep time monitoring, movement activity, analysis of the interaction between the surrounding environment (temperature, humidity, air quality, noise level and light) and quality of sleep;



Automatic body weight measurement, with historical log;



Environment monitor and log of temperature, humidity and air quality.

The Sleep number 360 smart bed.





## SMART, EFFORTLESS COMFORT

Designed to keep you and your partner effortlessly comfortable, the Sleep Number 360 smart bed uses **Responsive Air technology** to sense your movements then **automatically adjusts firmness, comfort and support to keep you both sleeping blissfully**, all night long.



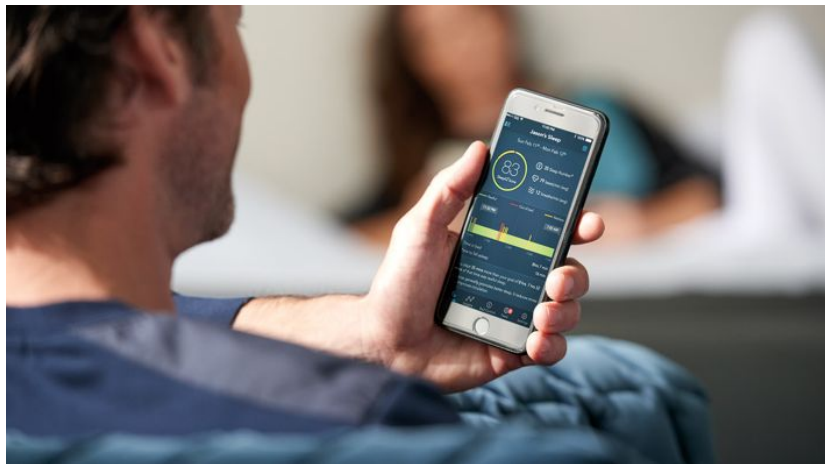
## TAKE YOUR SLEEP TO A WHOLE NEW LEVEL

With a **FlexFit adjustable base**, you'll enjoy the ultimate in **individual comfort**. From taking the roar out of snore† to floating in the weightless feeling of zero gravity, you have to feel the comfort of FlexFit base to believe it.



## DESIGNED TO HELP YOU FALL ASLEEP FASTER

Did you know that many of us **fall asleep faster if our feet are gently warmed**? The Sleep Number 360 smart bed can **pre-warm each side** of the bed so you're both ready for your best sleep.



## KNOWS HOW YOU'RE SLEEPING

**SleepIQ technology** inside the bed tracks how well you sleep each night. In the morning, you'll both learn how the **Sleep Number** bed is adjusting to your individual comfort and the amazing effects the bed has on your sleep quality. It's called your **SleepIQ score**.

## The Jupiter by Eight.





## Sleep Tracking

Track over 15 factors about your sleep and health, including REM sleep, deep sleep, heart rate and respiratory rate.



## Temperature control

Sleep cold? Warm your bed side. Sleep hot? Blast the bedroom AC while warming your partner's side.



## Smart alarm.

Eight detects when you are in light sleep and triggers the alarm when it's easier for your body to wake up.

## It can be connected with

Amazon Alexa

Next (ac system)

Philips hue (lighting system) etc

# Effie. Smart iron machine



Iron



Steam



Dry



Connected  
app



## Bedjet

Save money on utilities -- why heat and cool the whole house vs. just your bed?



**Ideations**

# Different ways to put the box in the same space.



1 Vertically up



2 Horizontally up

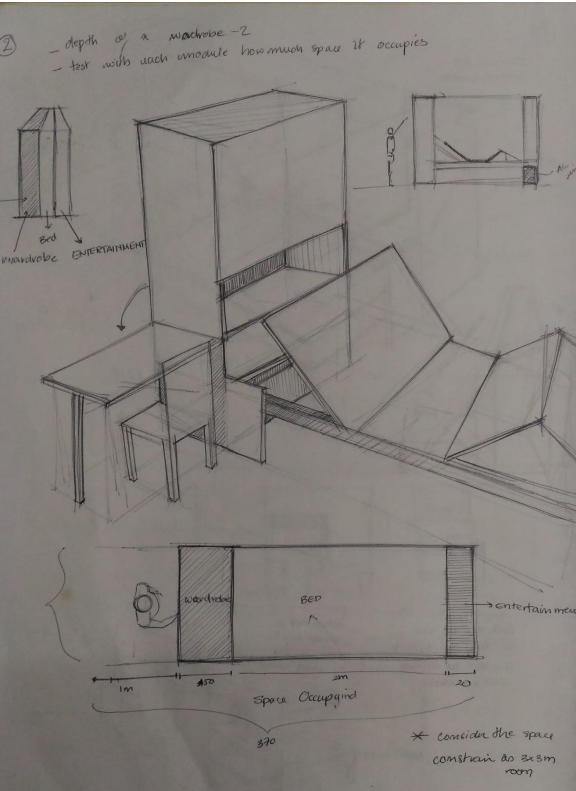


3 Flat on ground

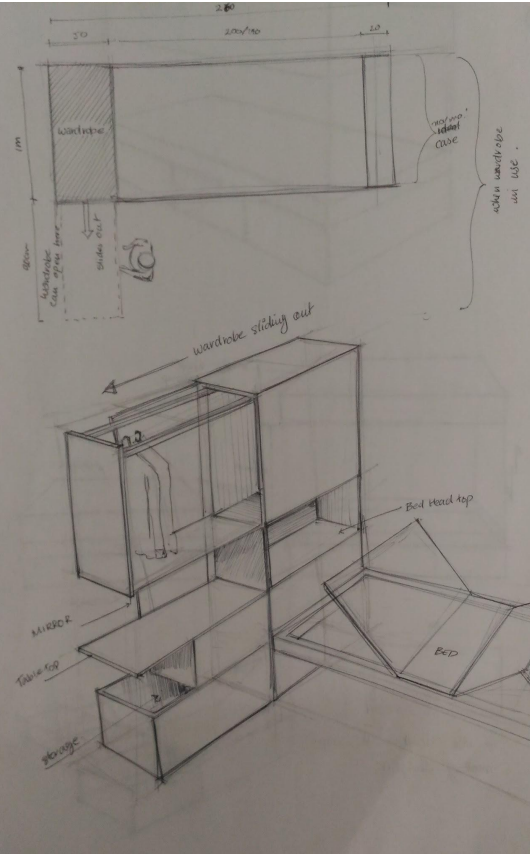


4 On ceiling

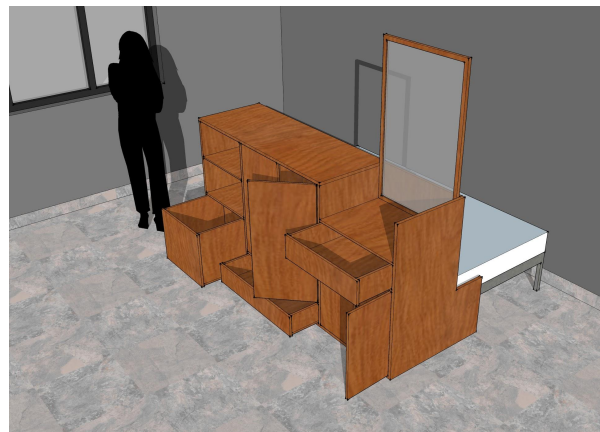
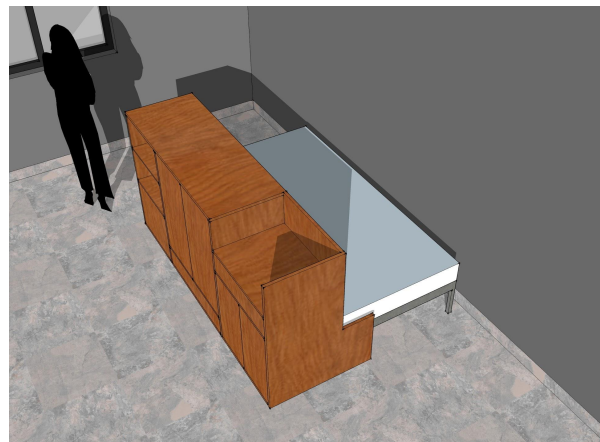
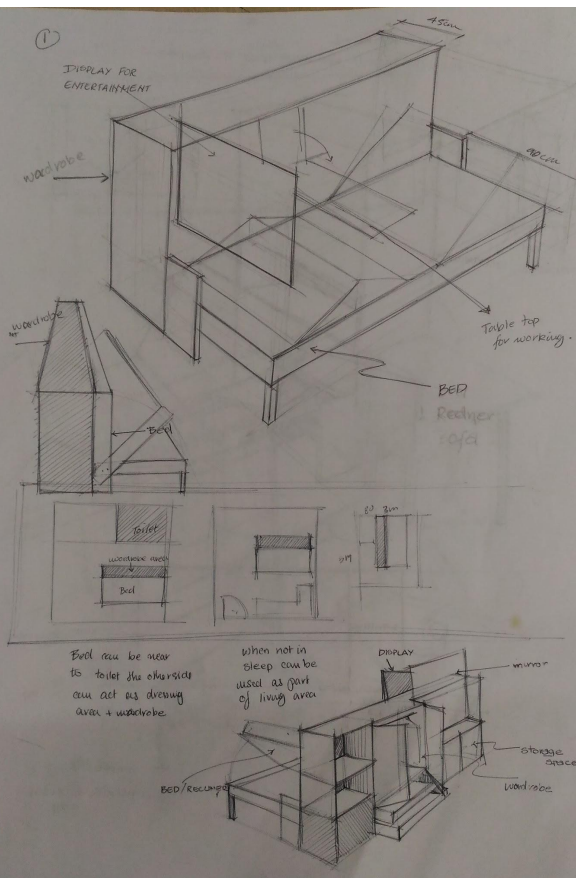
# Option 1



# Option 2

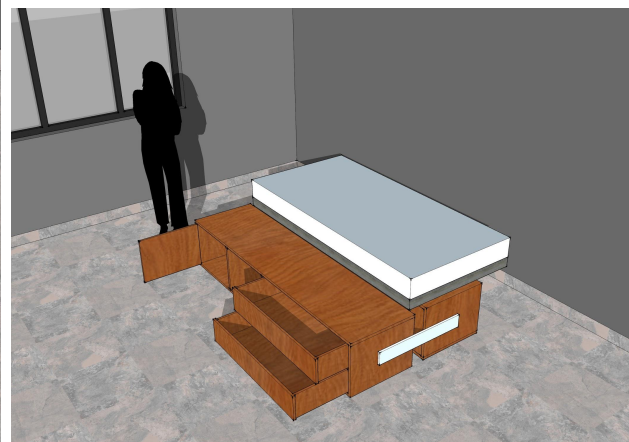
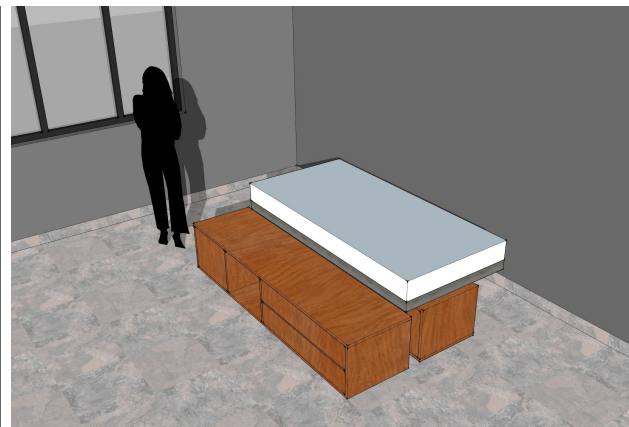
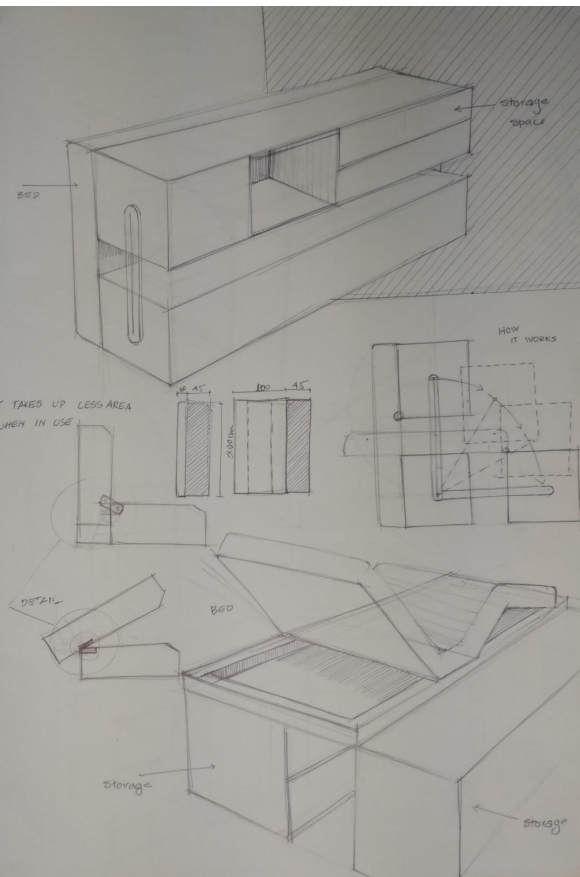


# Option 3

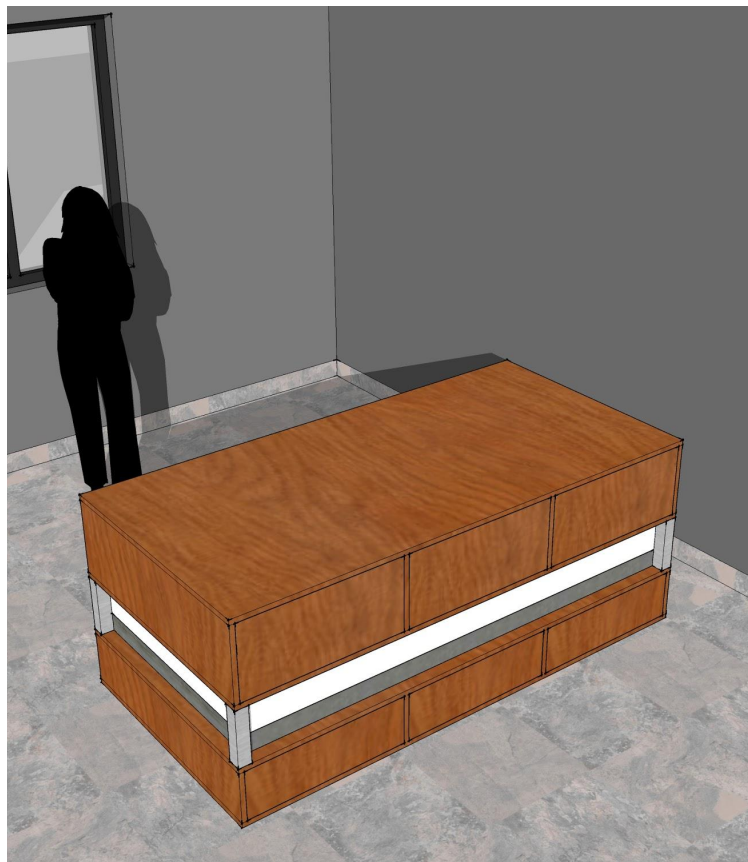
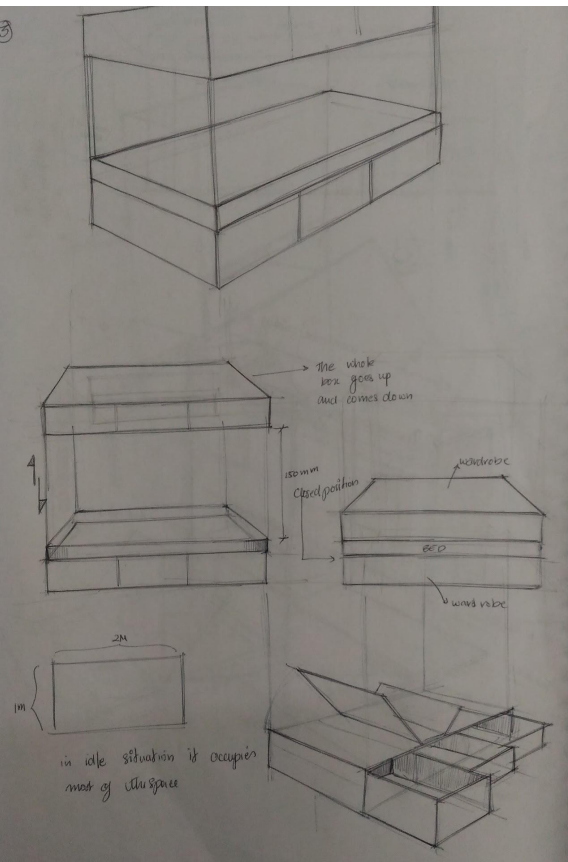




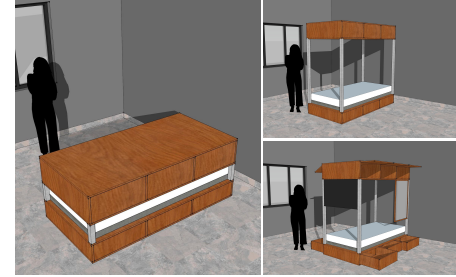
# Option 5



# Option 6

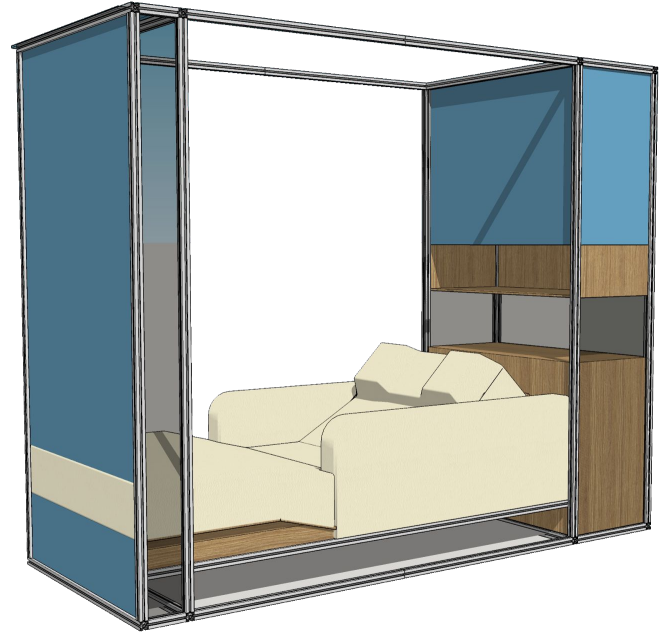
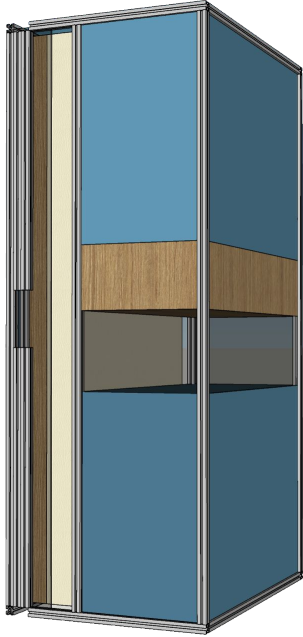


# Concept evaluation



Criteria	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
Area occupying (l x b)	270 x 100 cm	270 x 100 cm	200 x 150 cm	200 x 180 cm	200 x 150 cm	100 x 200 cm
Area occupying when in use	370 x 190 cm	270 x 190 cm	200 x 260 cm	200 x 380 cm	200 x 260 cm	300 x 200 cm
Transportable(w x l x h)	90x100x200cm	90x100x200cm	70x200x100cm	100x200x100cm	70x200x100cm	100x200x100cm
Provision for enclosure	Yes	Yes	No	No	No	Yes
Possibility for a complete entertainment unit.	Yes	Yes	No	No	No	Yes
Total	2	3.5	1	0	1	3

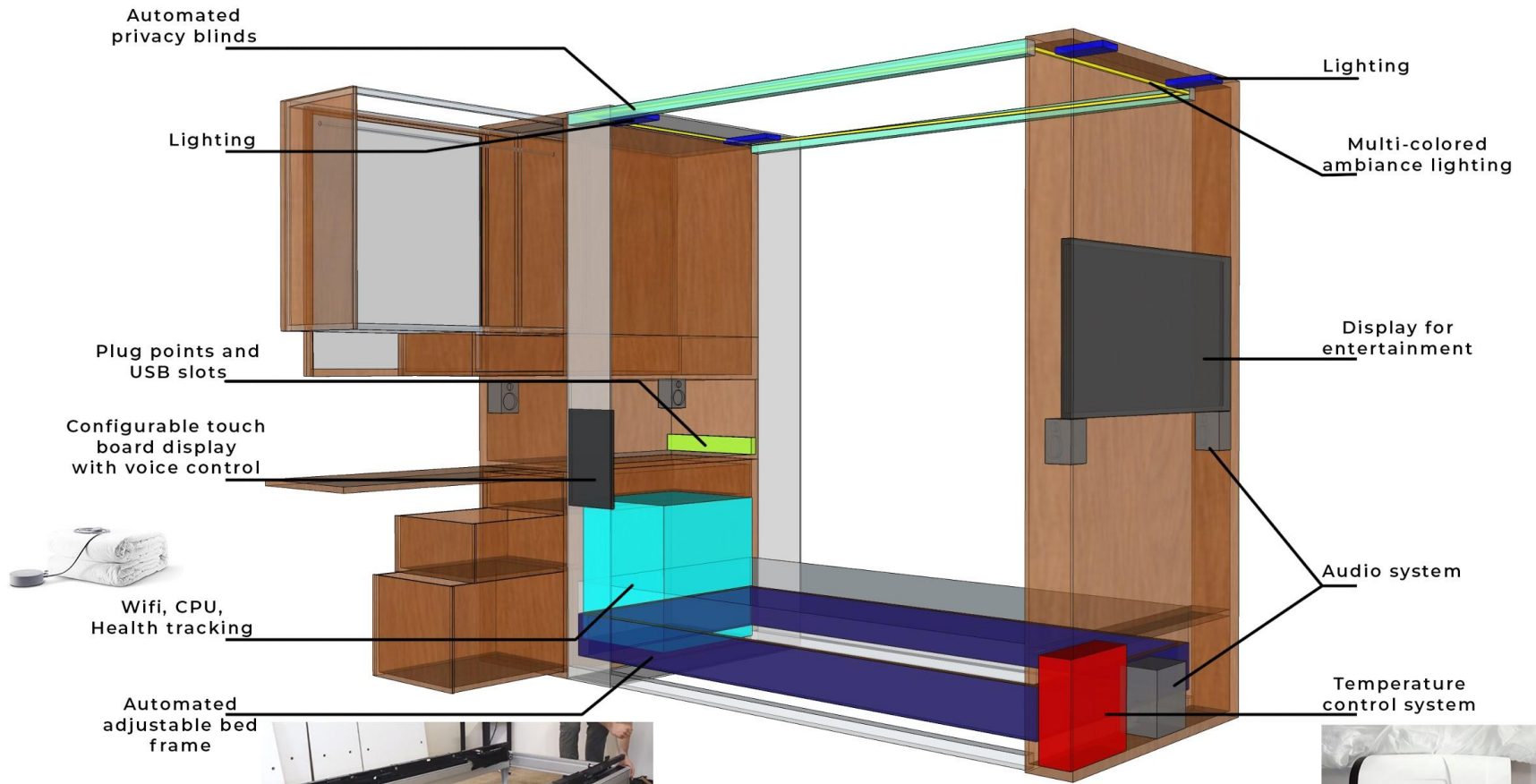
# Basic Rig Design











**Basic volume distribution**



Mood board

SOFT  
CLASSY  
FUTURISTIC  
SMOOTH  
CONTRAST  
ELEGANT

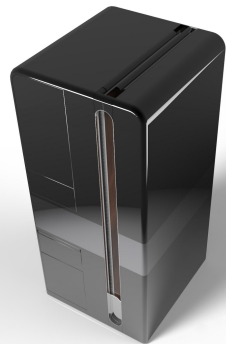




Mood board



# Formal Language



# Concept 1



# Concept 1



# Concept 1



## Concept 2



## Concept 2



# Concept 3



# Concept 3



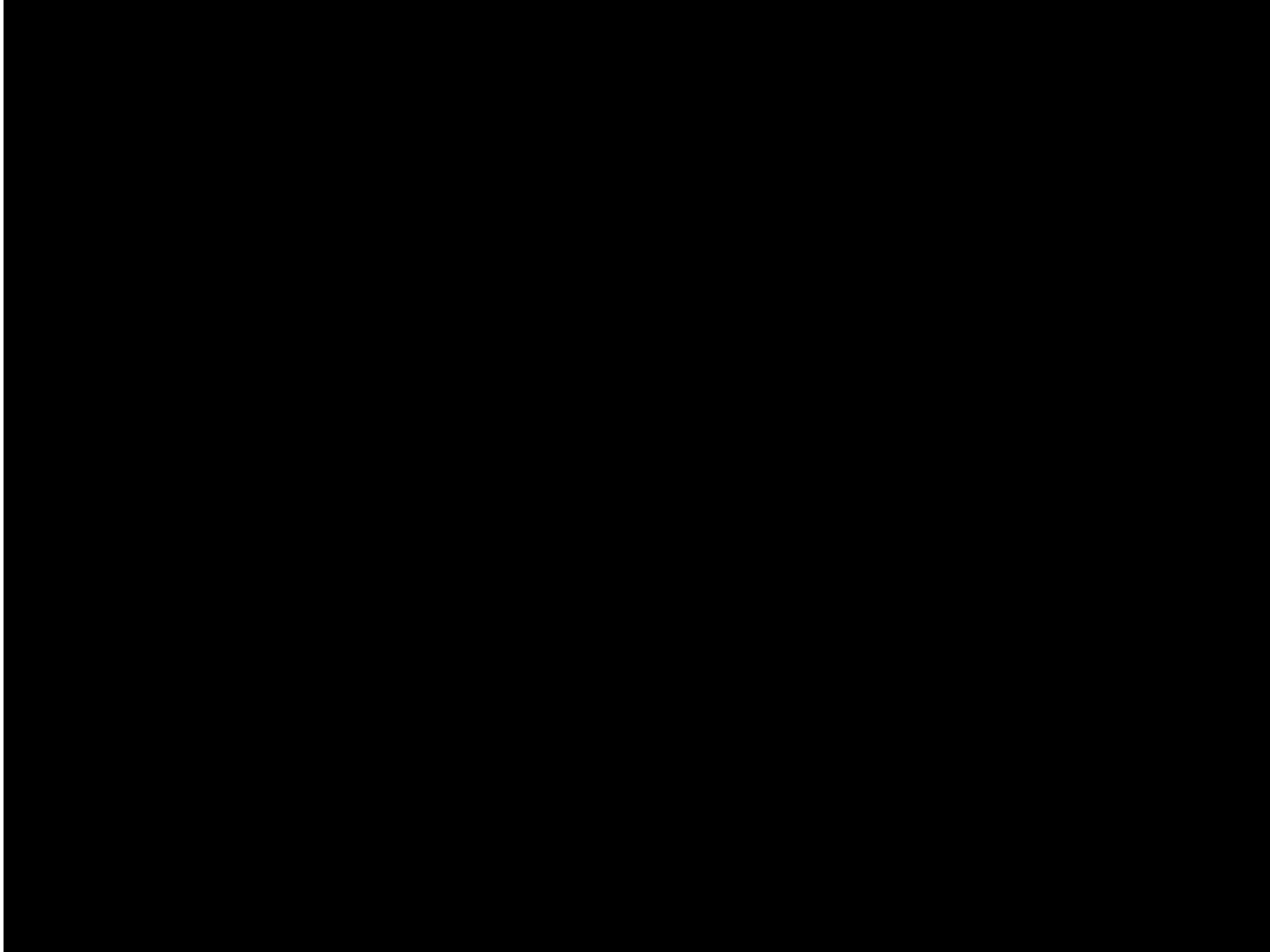
# Concept Evaluation

	Concept 1	Concept 2	Concept 3
Most effective storage solution?	2	3	0
User flexibility	0	5	0
User Experience	0	1	4
Which one do you buy?	0	1	4
Total	2	10	8

## User feedback

In the user feedback concept 2 got most of the points but when it came to buying perspective people switched to concept 4. Concept 4 was giving that experiential part of it being a bedroom.

Then an idea of combining concept 3 and 4 was introduced to them. Which all the users agreed to be a better option from the above concepts.



# Final concept







Display for  
entertainment



Inbuilt surround  
sound system



Smart ambient and  
task lighting



Recliner & sofa in  
one



Effective cooling  
system



Sleep tracking  
health tracking etc



Smart alarm

## Smart features



Configurable  
Touch display

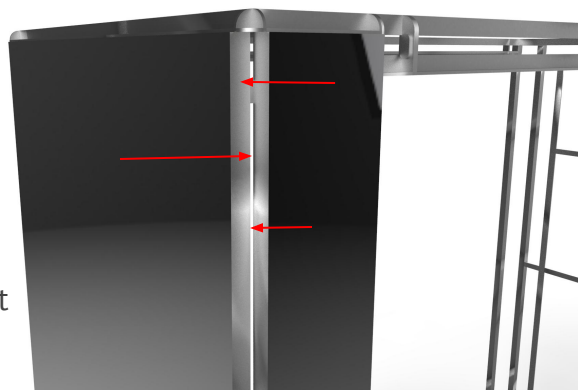
# Details



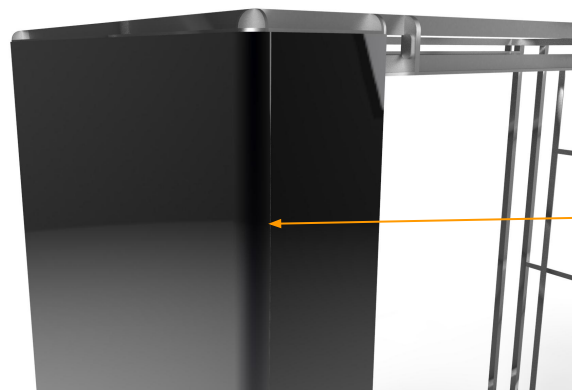
Aluminium alloy framework



FRP/aluminium sheet with form inside



Will be screwed from two sides to the sheet

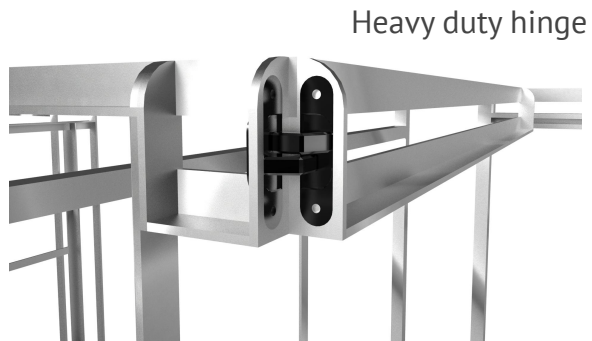


Snap fit detail

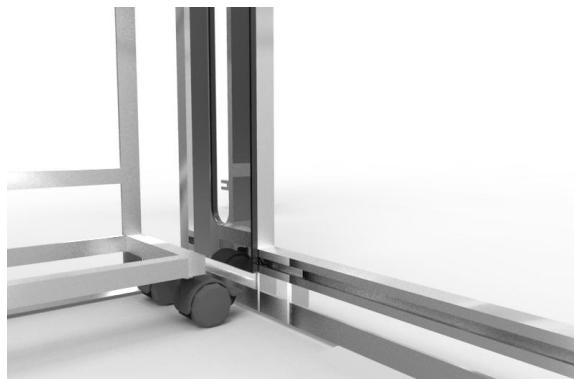
# Details



Main folding mechanism



Heavy duty hinge

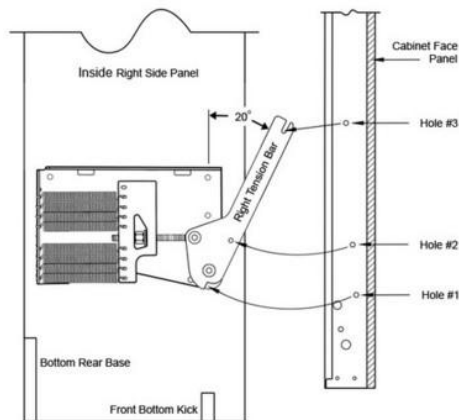
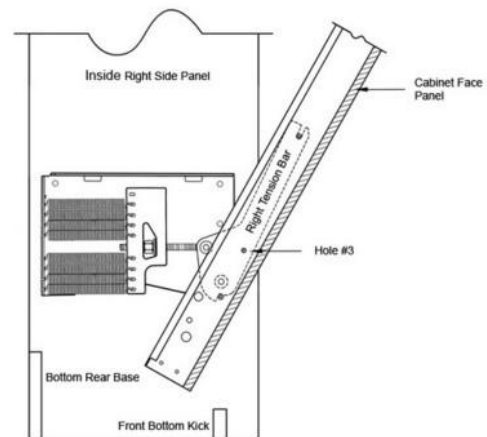
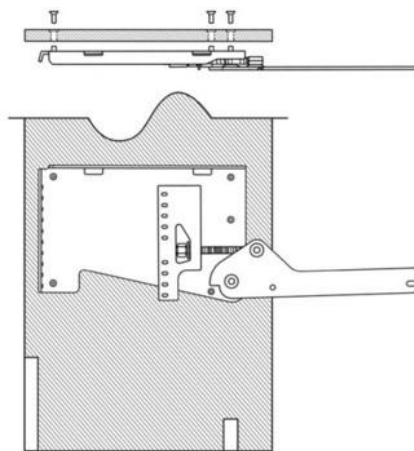


Floating table track

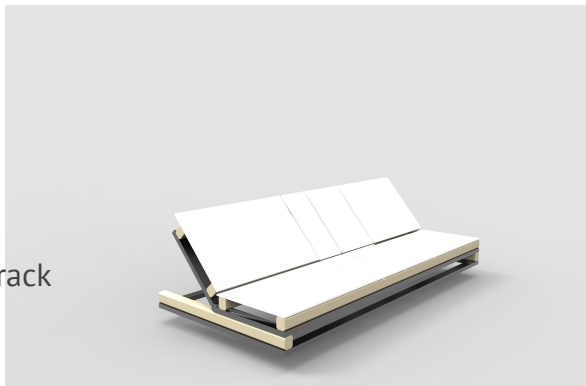
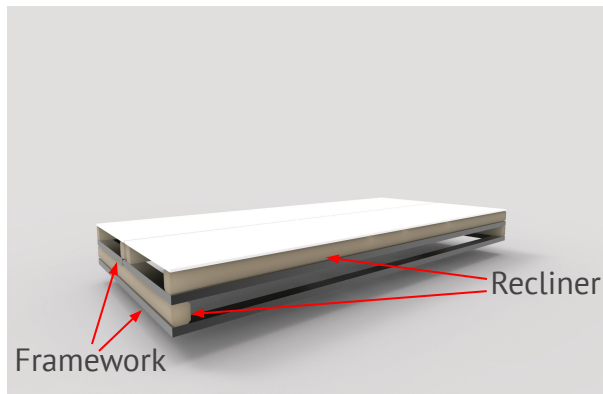
# Details



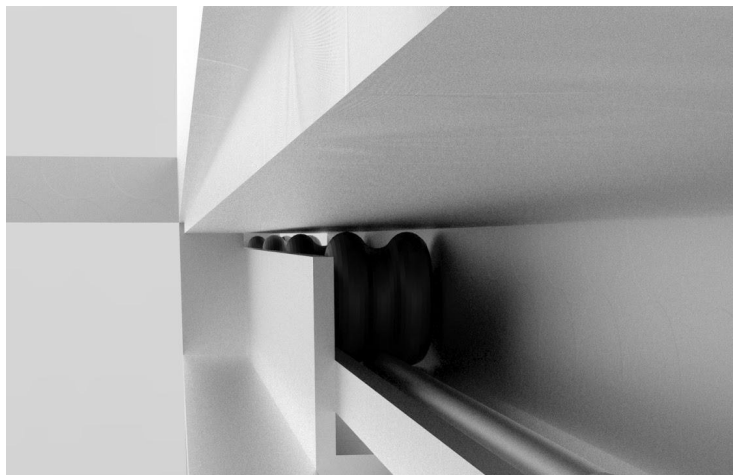
Murphy bed detail



# Details



Recliner bed details



**Thank you**