



# REACTIVATING HOSPITAL

Create an activating patient environment by  
designing a non-bed-centric department

Roelof Gortemaker  
13 June 2017



de jong gortemaker algra



## Partners

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Diakonessenhuis+



de jong gortemaker algra

**TNO** innovation  
for life

**bB**  
BREMBOUWADVISEURS  
**a**

ARPALIGHT  
verlichting + akoestiek

**Gispen**

**erkamp**  
projectservice

# Content

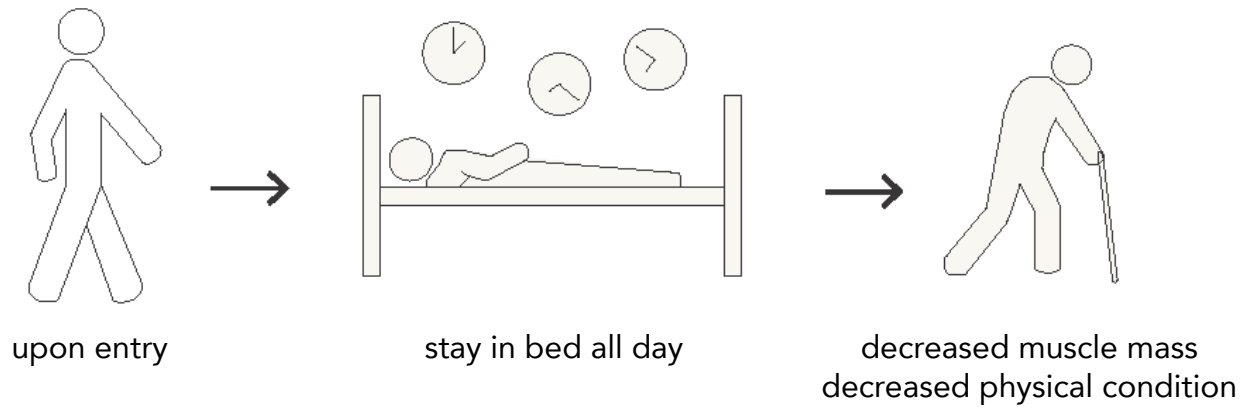
- Where we come from & the road ahead...
- Process
- Changing mindset
- The reactivating concept
- *patient room to sleeping room*
- *reorganize activities*
- *reorganize time & space*
- Implementation Diakonessen Hospital Utrecht (NL)
- *new design department*
- *story Mrs. Robertson*
- Implementation Maastricht University Medical Center (NL)
- *step by step approach*
- *three interventions*

Where we come from



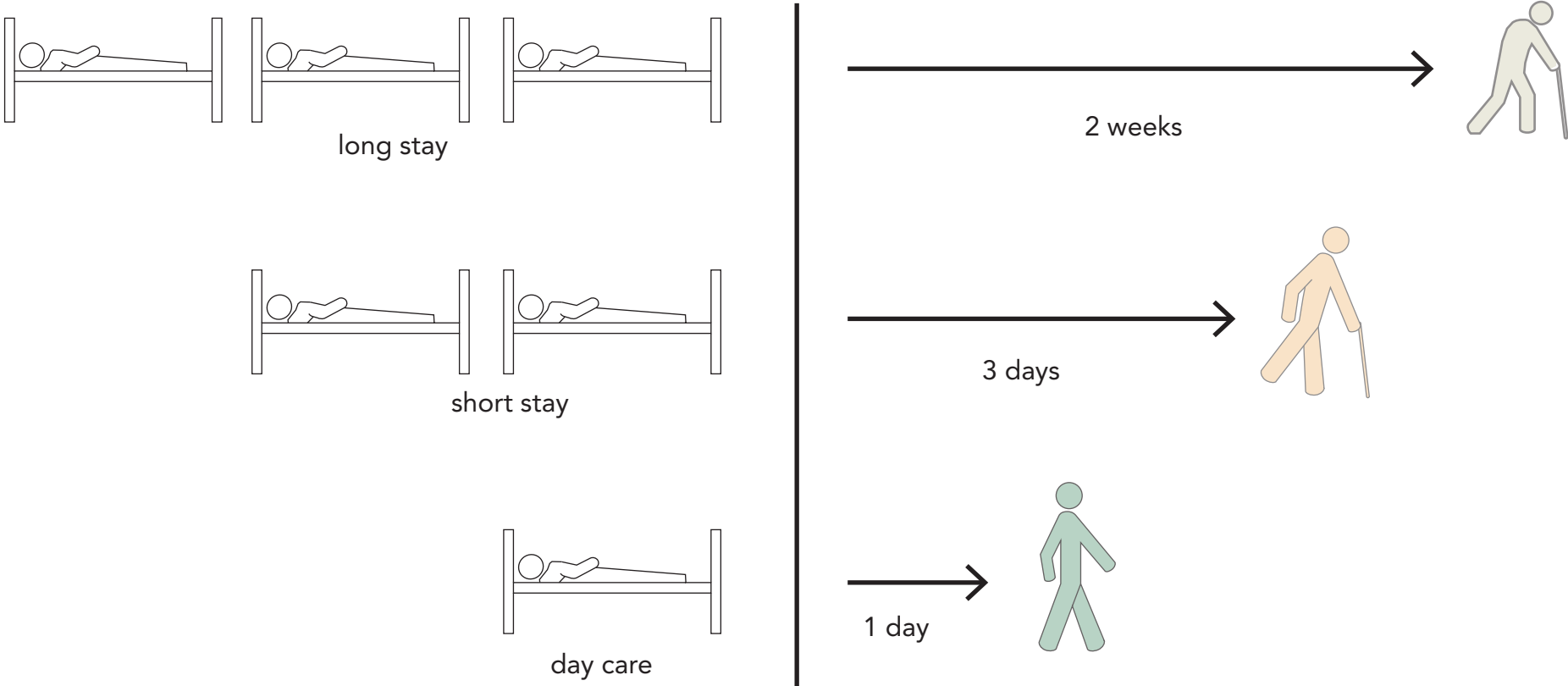


The road ahead...



PRESENT

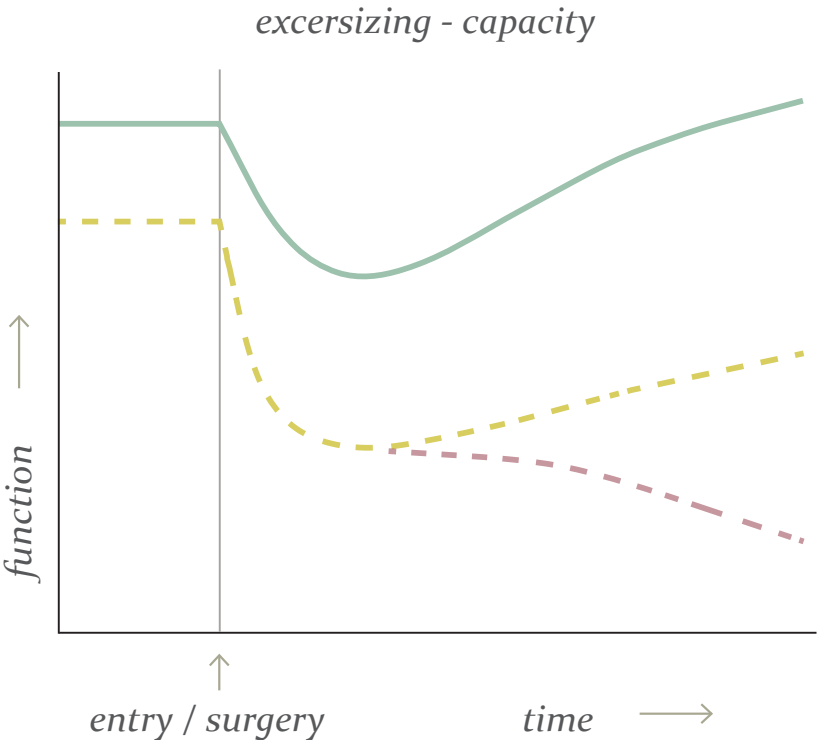
The road ahead...



PRESENT



The road ahead...



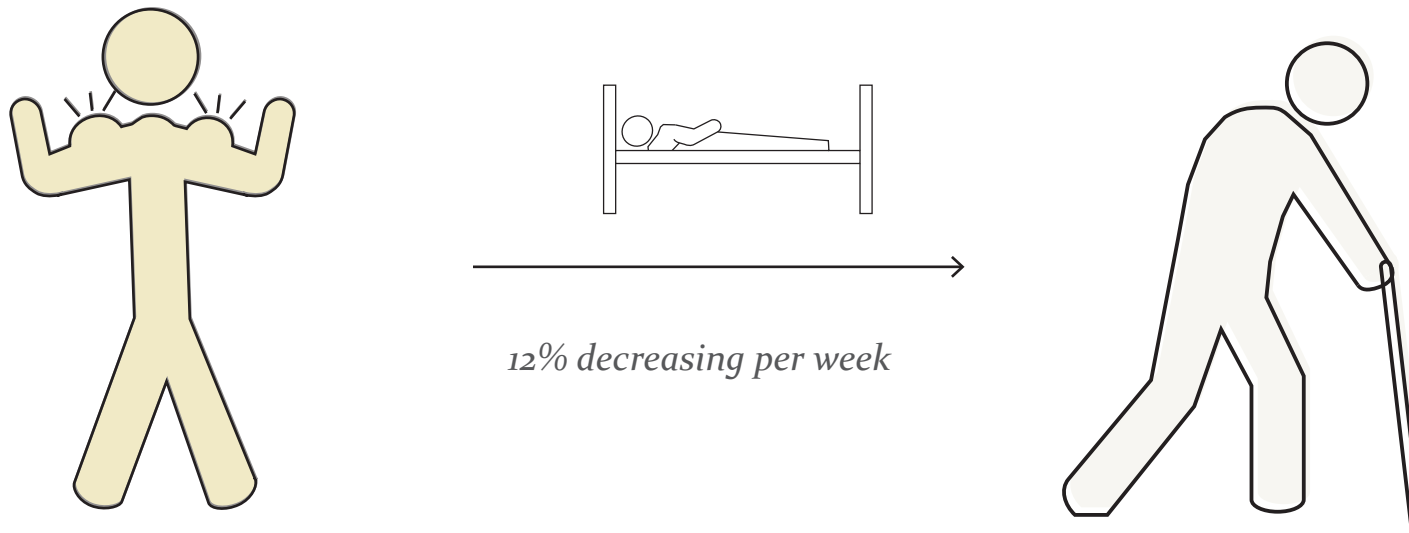
100 %  *fit and healthy*

30 %  *fragileness - decreased condition*

20 %  *dead or serious decreased condition*

## The road ahead...

### *Muscle strength*

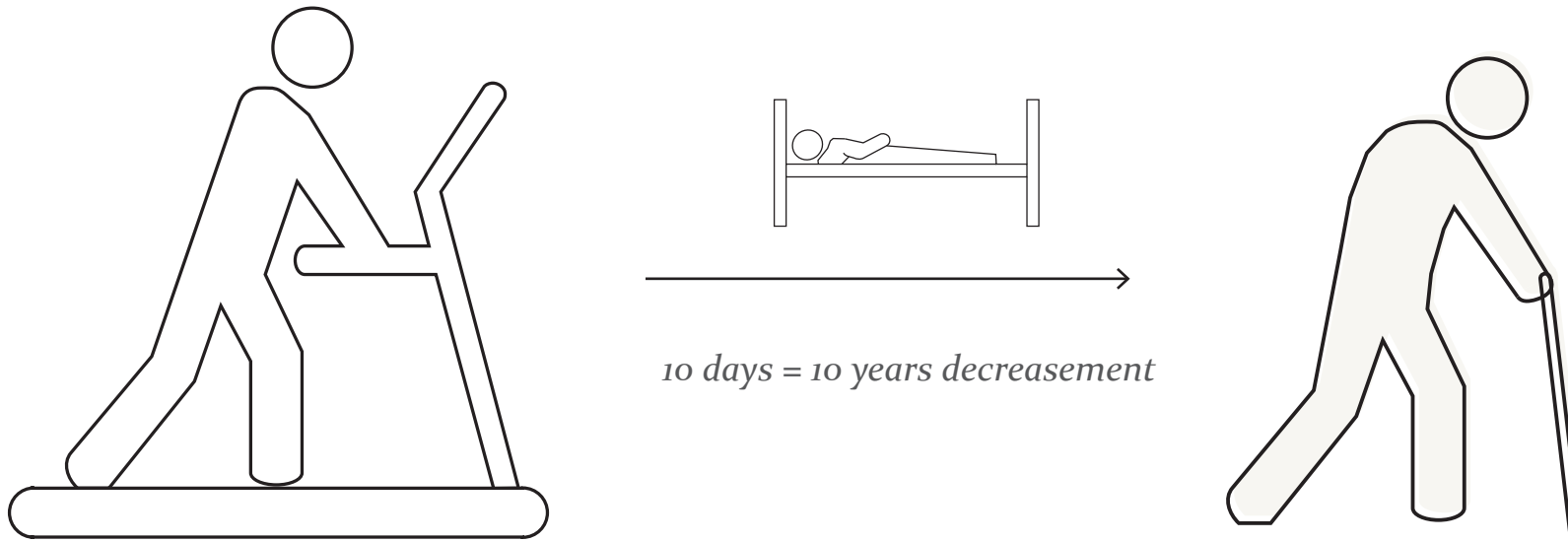


“DUE TO INACTIVITY, MUSCLE STRENGTH REDUCES BY 12% PER WEEK, DURING HOSPITALIZATION. 10 DAYS OF BED REST IN HOSPITAL, RESULTS IN DECONDITIONING, EQUAL TO 10 YEARS OF AGING.”



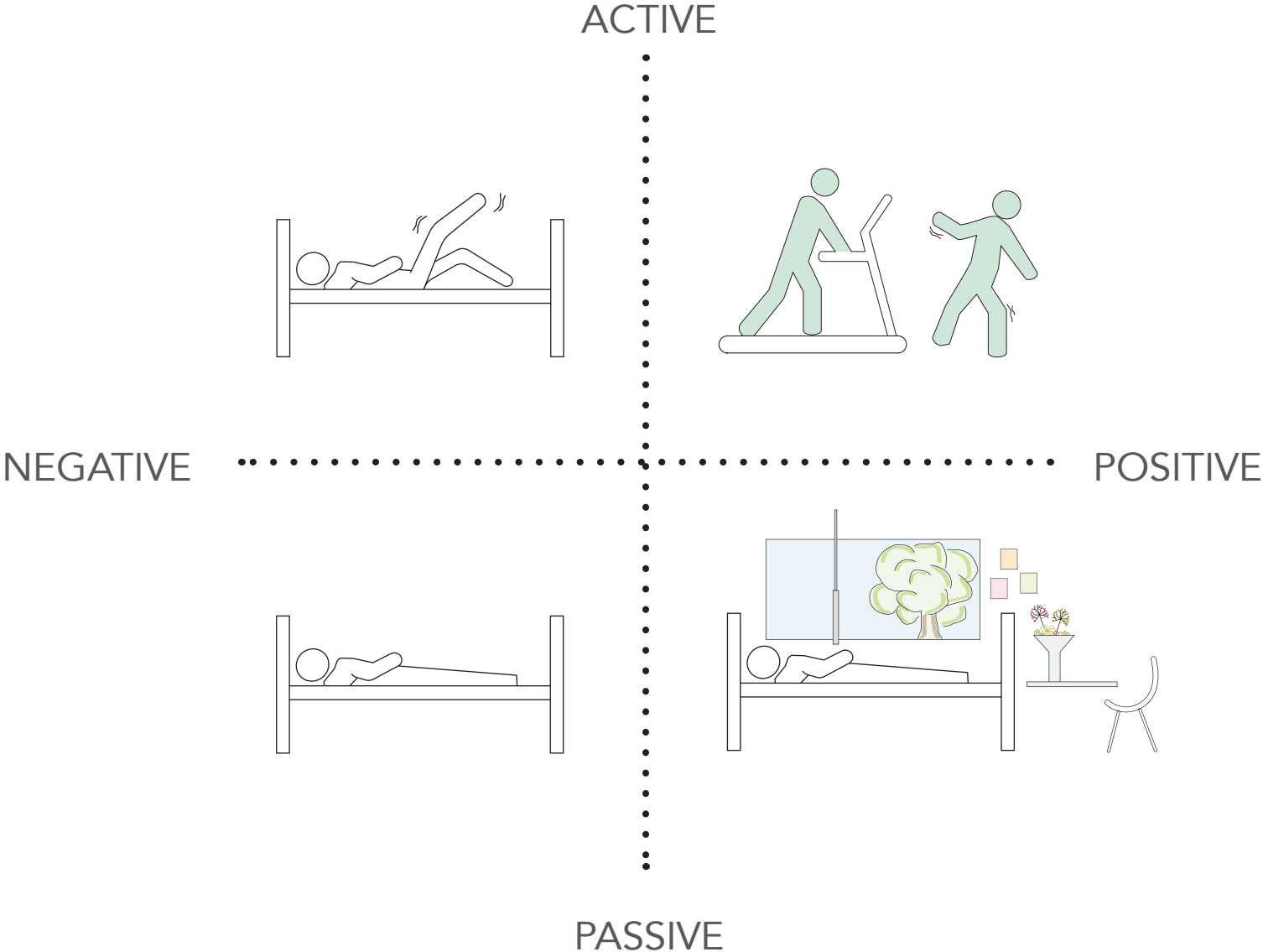
## The road ahead...

*Physical condition*



“DUE TO INACTIVITY, MUSCLE STRENGTH REDUCES BY 12% PER WEEK, DURING HOSPITALIZATION. 10 DAYS OF BED REST IN HOSPITAL, RESULTS IN DECONDITIONING, EQUAL TO 10 YEARS OF AGING.”

The road ahead...





# Process



Passed process Diakonessen Hospital

# Process

4 meetings at Diakonessen Hospital Utrecht (NL)



meeting 1

demands & changes organisation



meeting 2

concept reorganising time & space

# Process

*4 meetings at Diakonessen Hospital Utrecht (NL)*



meeting 3

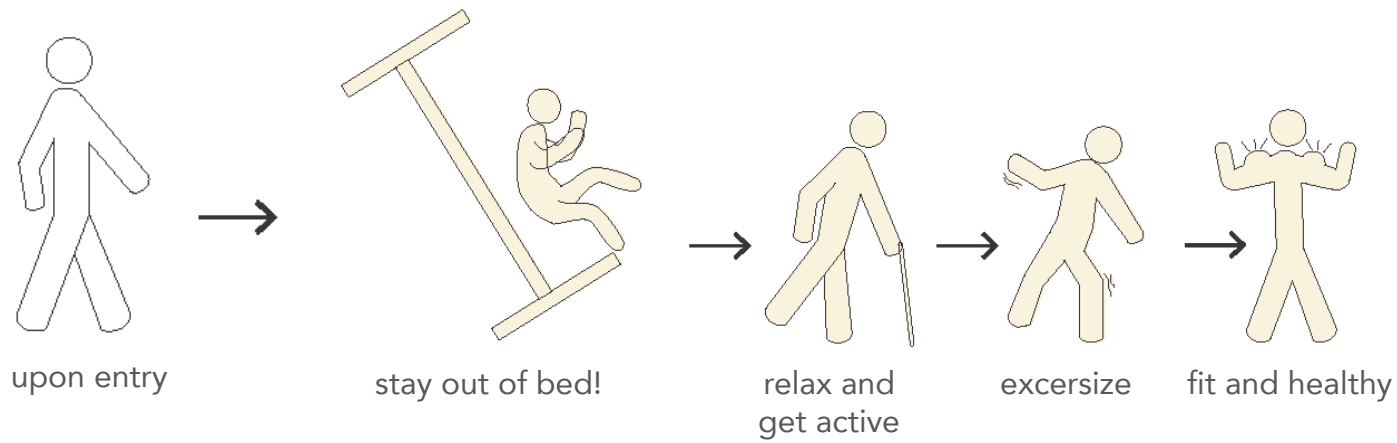
discussion preliminary design with nurses & management



meeting 4

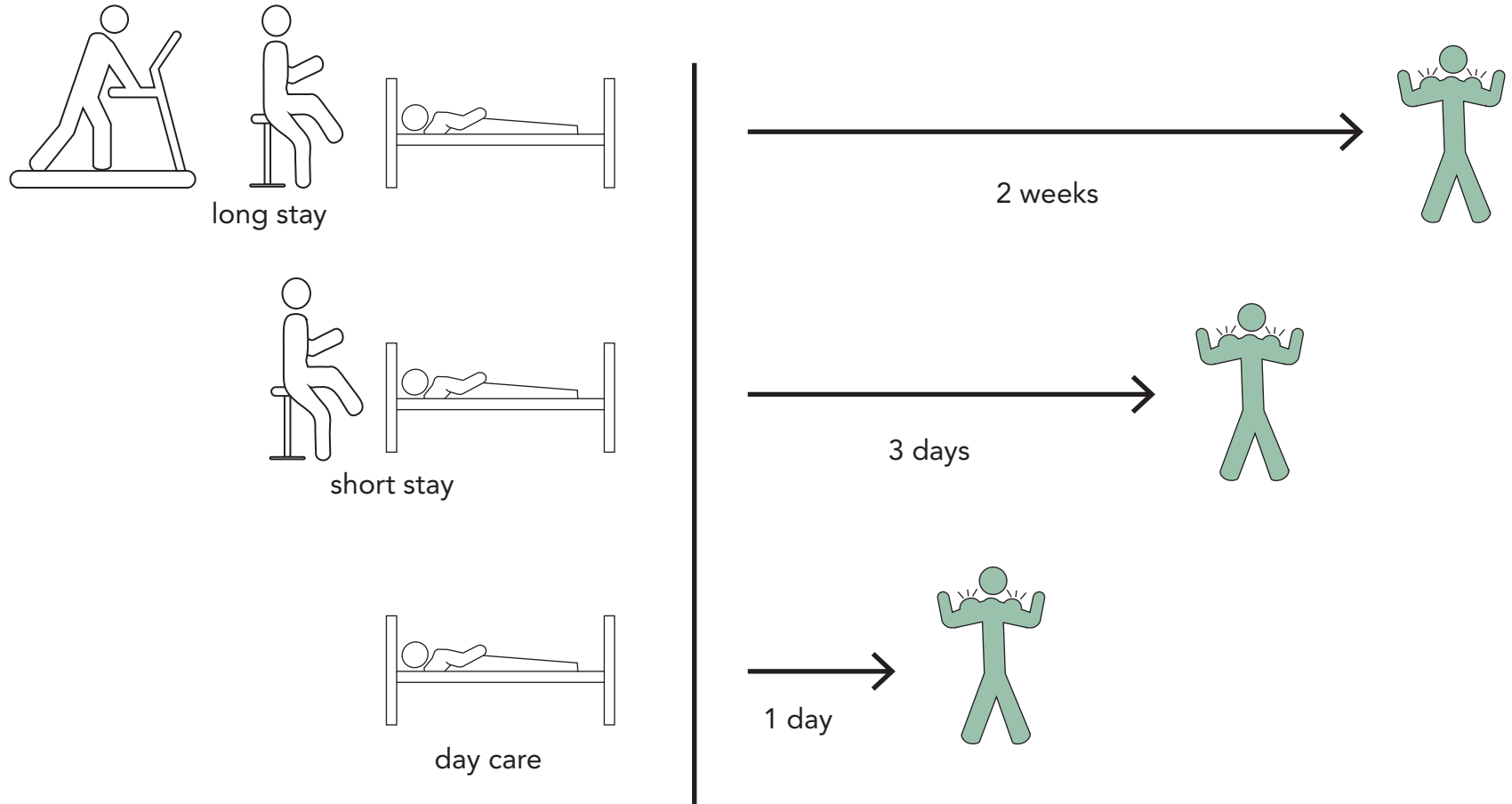
presentation final design to Board Diakonessen Hospital

# Changing mindset



FUTURE

# Changing mindset



FUTURE

# Changing mindset



as long as we do this...



## Changing mindset



... this won't happen

The reactivating concept



*10 hours*



*10 hours*



*4 hours*

division of time  
PRESENT

The reactivating concept



division of space  
PRESENT

The reactivating concept



*8 hours*



*8 hours*

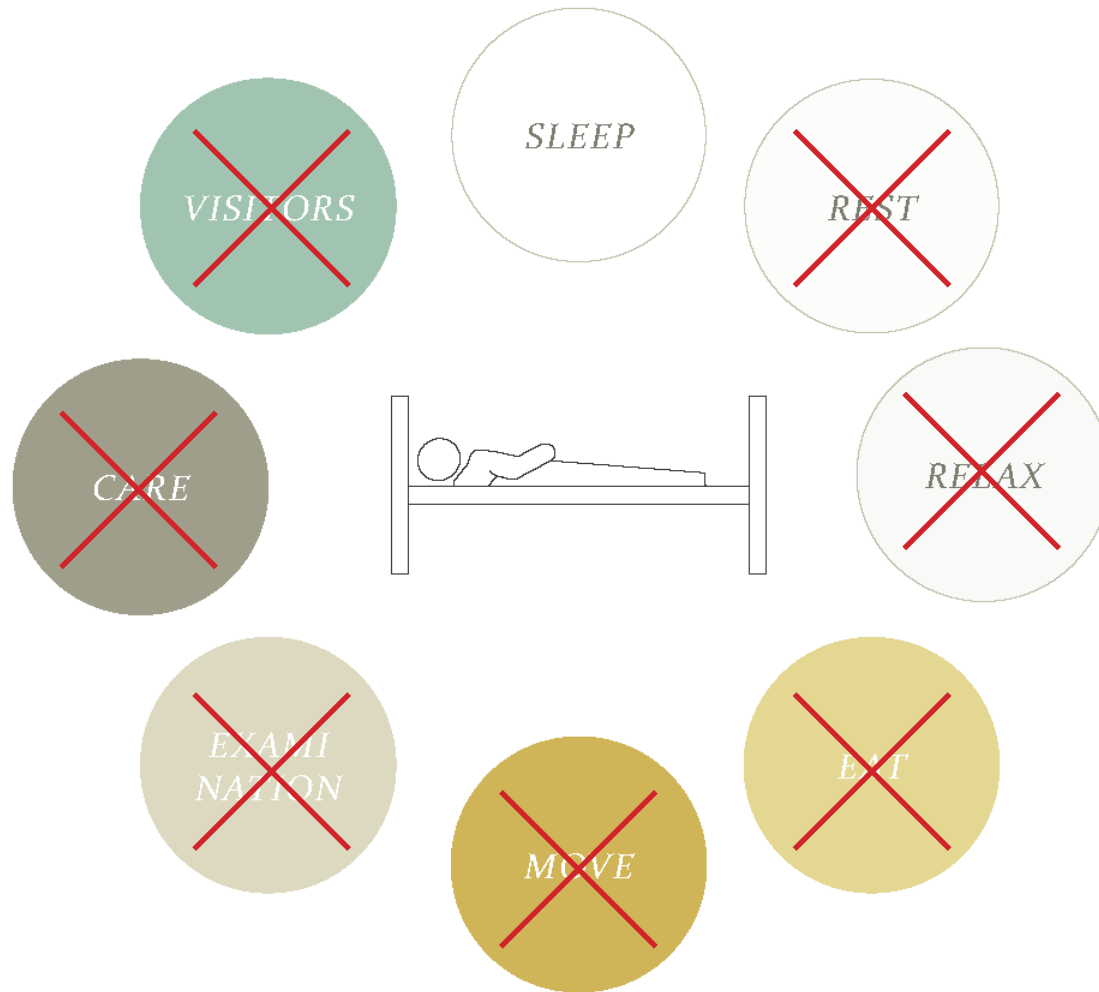


*8 hours*

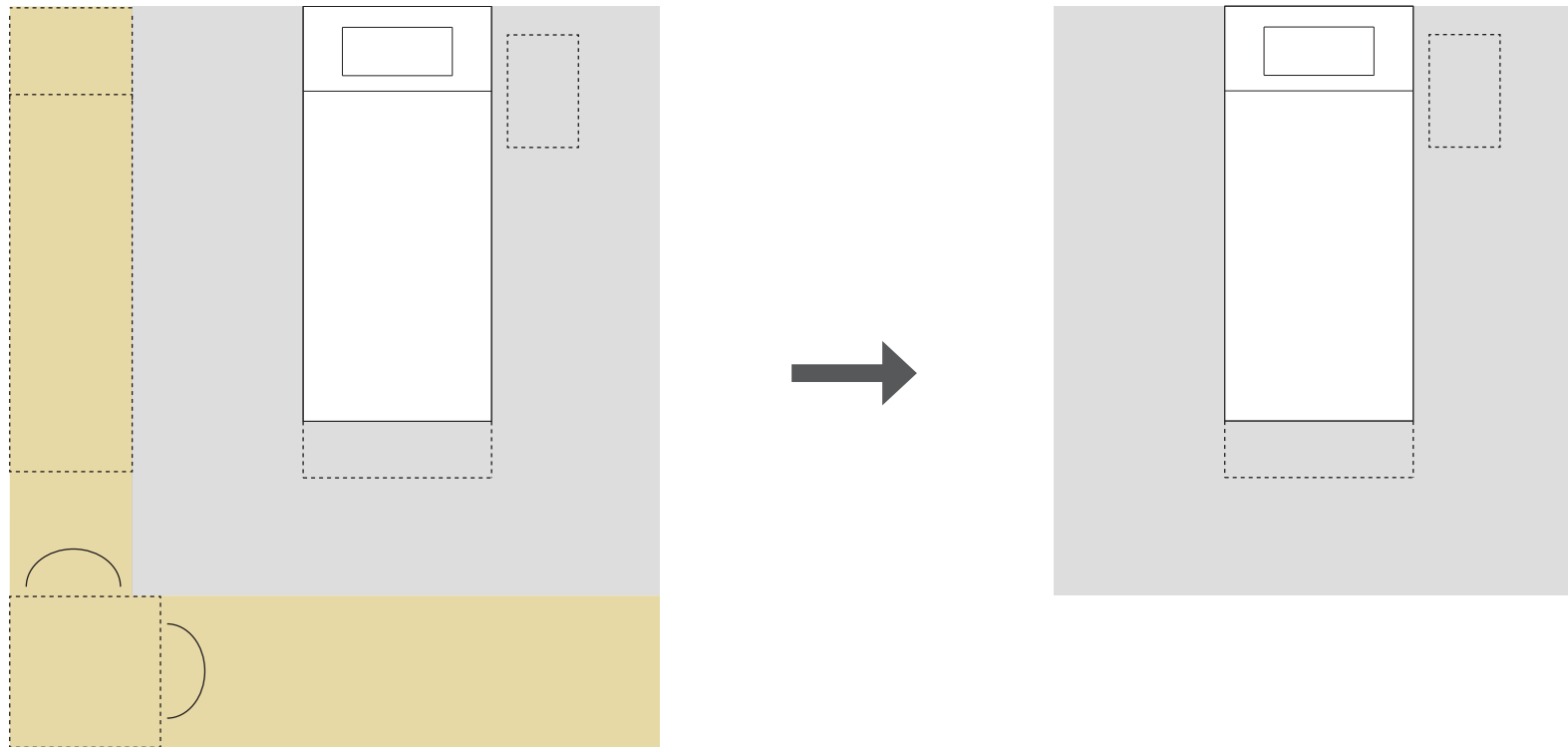
division of time and space

FUTURE

# Patient room becomes sleeping room



## Patient room becomes sleeping room

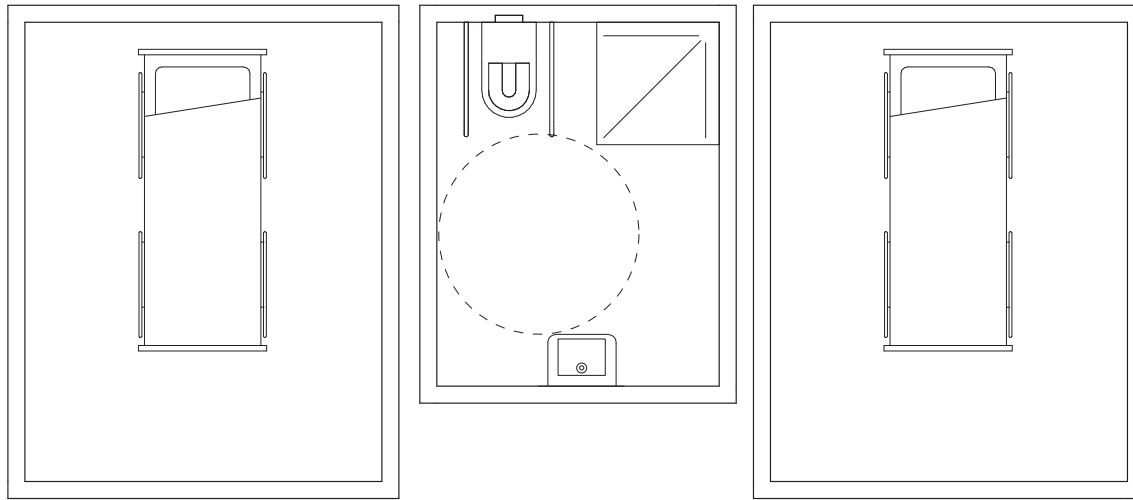


sizing down the bedroom to the absolute minimum

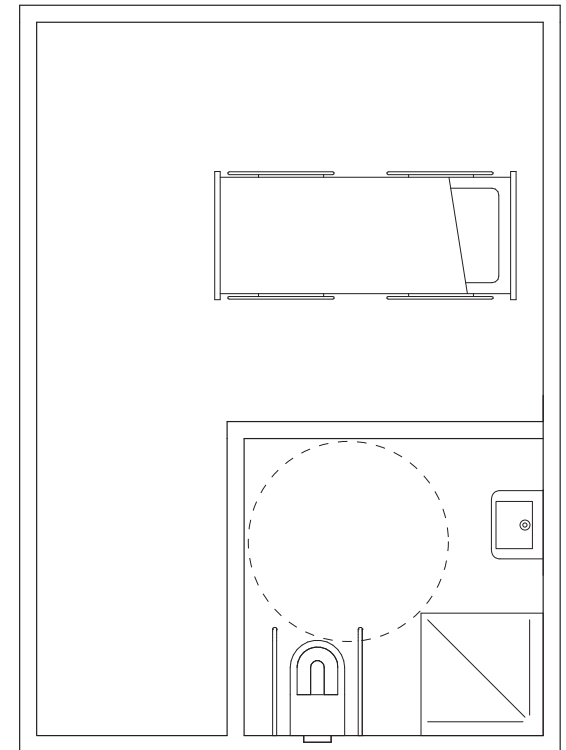


# Patient room becomes sleeping room

standard room with shared bathroom

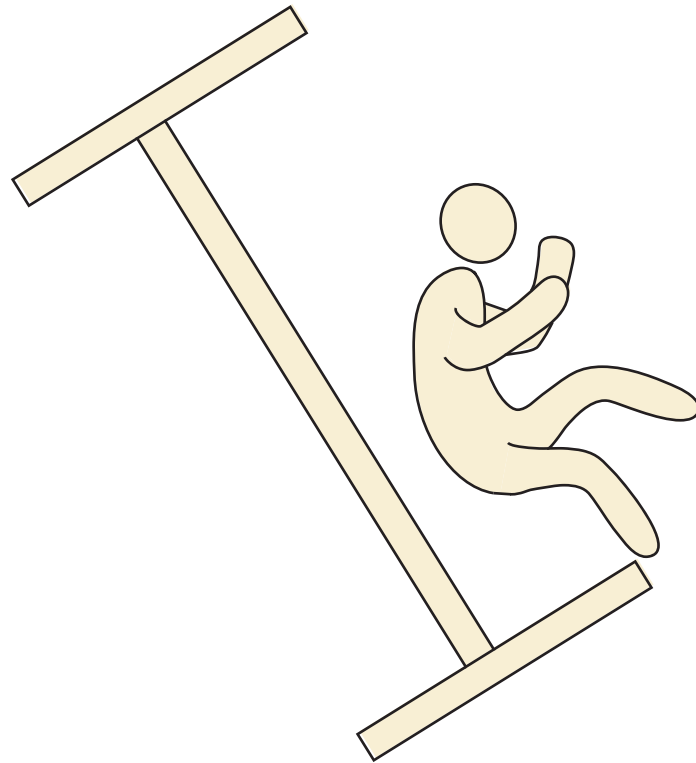


care room with own bathroom



2 types of rooms

Stay out of bed!



Reorganize activities

---



*8 hours*



*8 hours*



*8 hours*



# Reorganize activities



ACTIVITIES SPREAD OVER THE HOSPITAL

ACTIVITIES SPREAD OVER THE DEPARTMENT

ACTIVITY IN THE ROOM



*sleep*



*relax*



*drink*



*concentrate*



*eat*



*examination*



*meet*



*wellness*



*hairdresser*



*movie*



*drink*



*physiotherapy*



*shop*



*promenade*



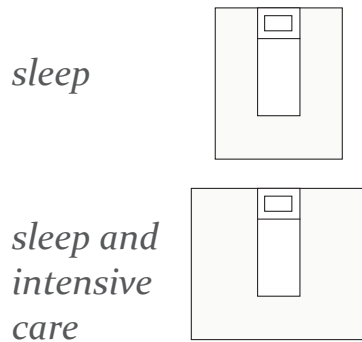
*sport*

Reorganize time and space

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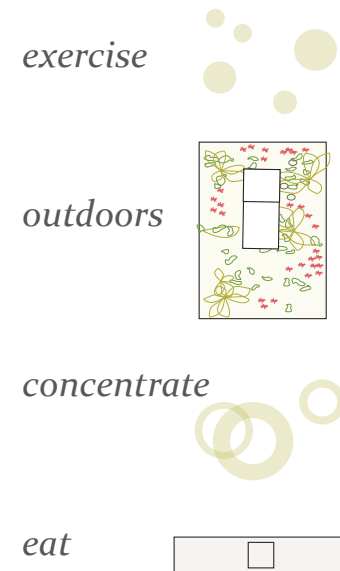
*8 hours*



*8 hours*



*8 hours*



# Implementation

*Diakonessen Hospital Utrecht (NL)*



PRESENT SITUATION



# Implementation

*Diakonessen Hospital Utrecht (NL)*



FUTURE SITUATION

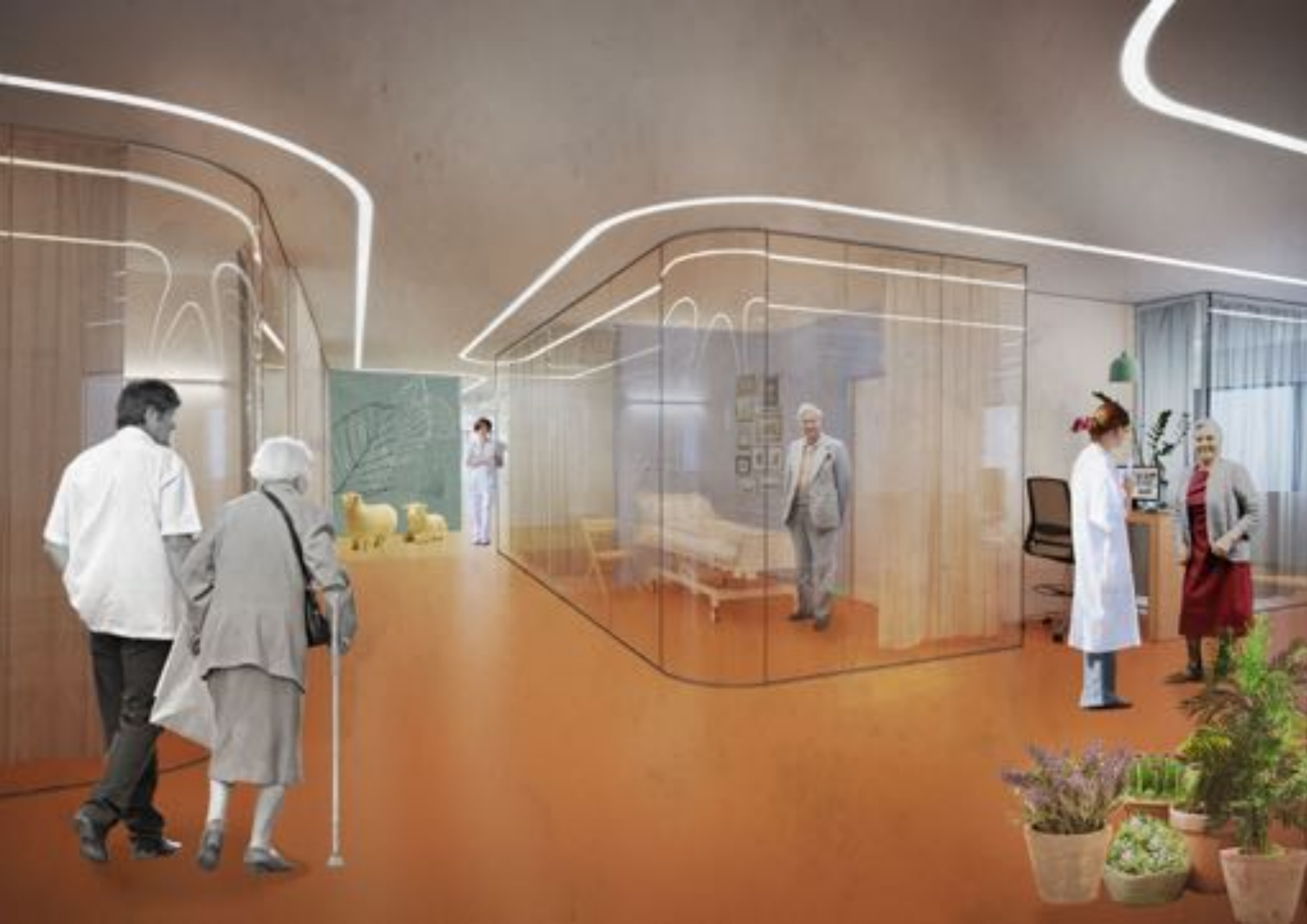
# Implementation

## *sleeping rooms*









# Implementation

*restaurant*

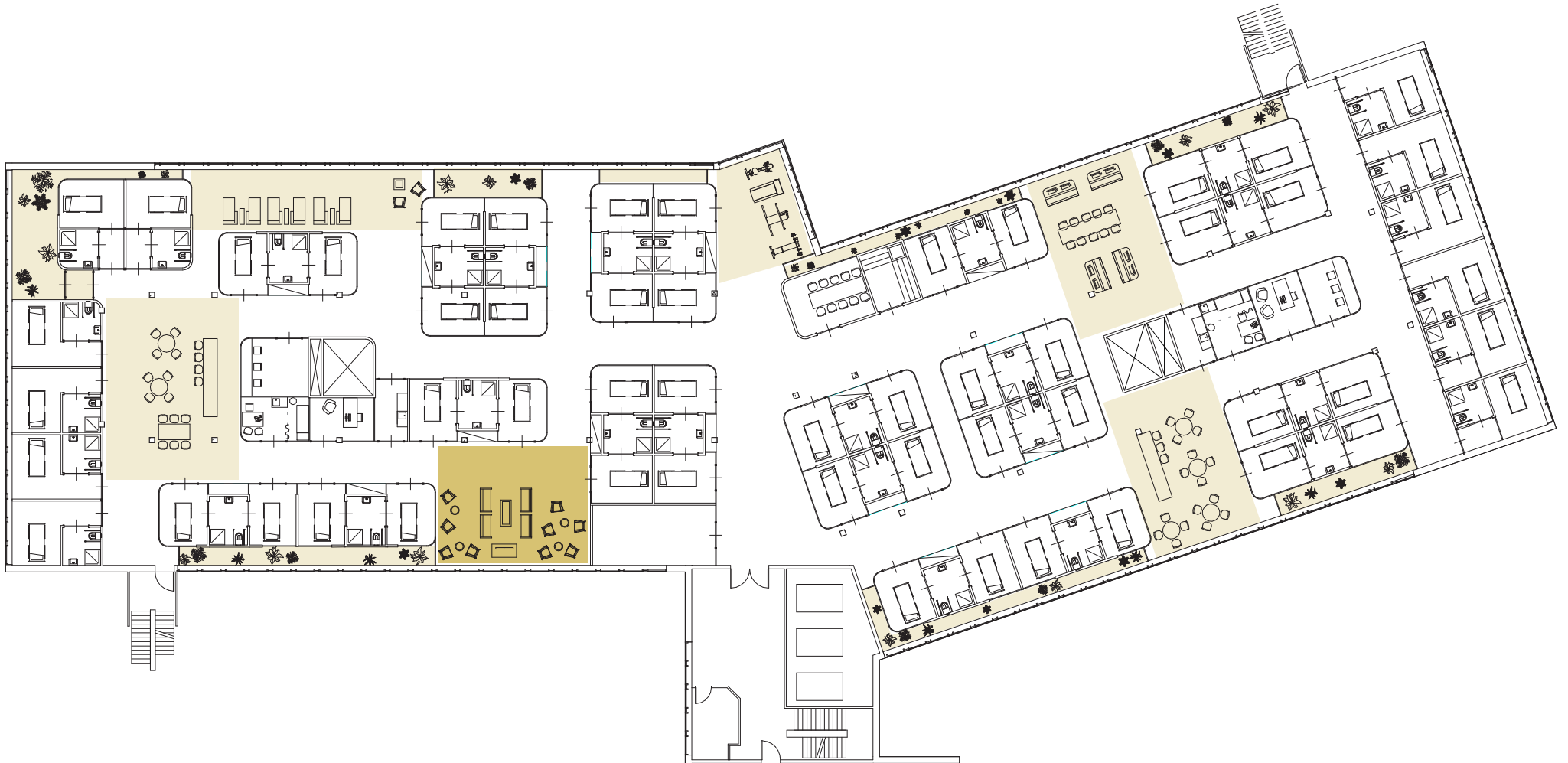






# Implementation

*living room*





# Implementation

*gym*



# Implementation

*garden*







# Implementation

*library*



# Implementation

*lounge*









# Implementation

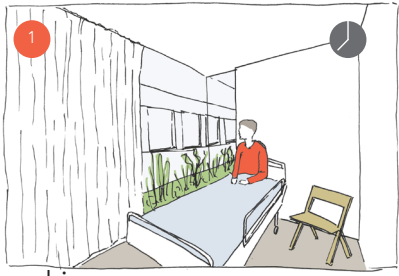
*situation during the day*



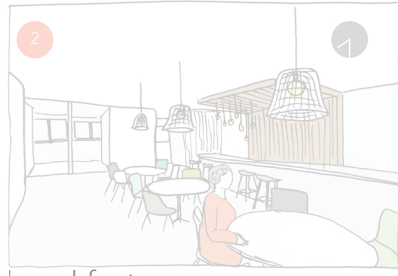
# Implementation

*situation at night*





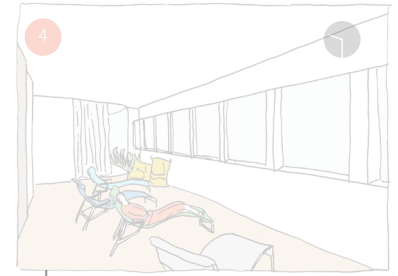
waking up



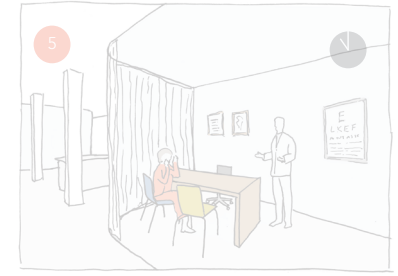
breakfast



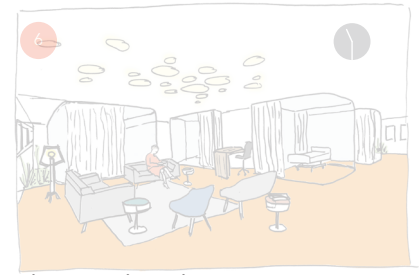
get a breath of air



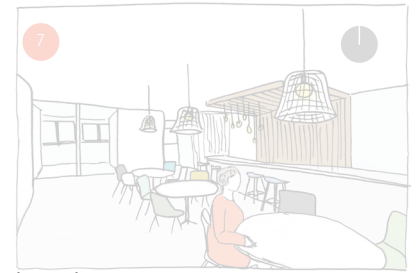
relax



examination



chat with other patients



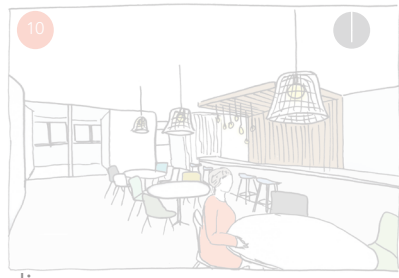
lunch



relax



excercise



dinner

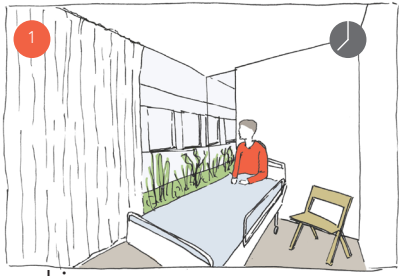


playing games, reading a book

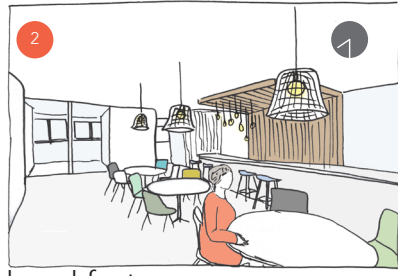


going to bed





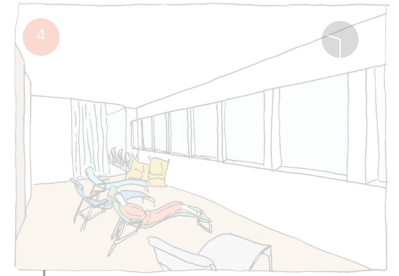
waking up



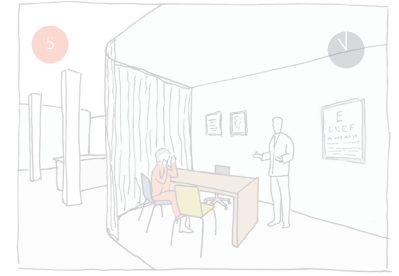
breakfast



get a breath of air



relax



examination



chat with other patients



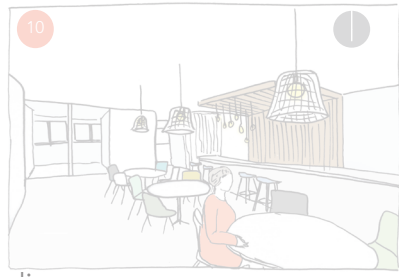
lunch



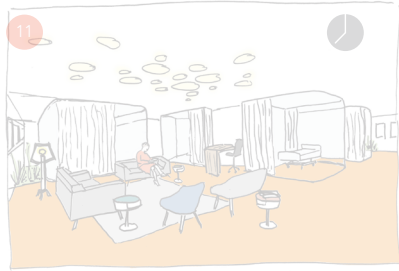
relax



excercise



dinner



playing games, reading a book



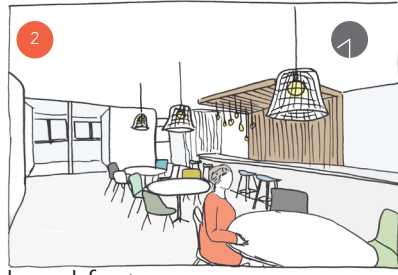
going to bed



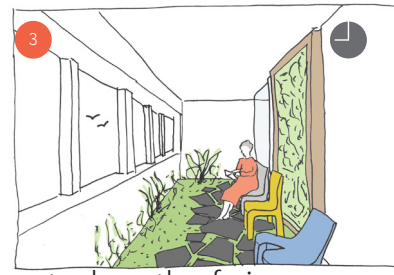




waking up



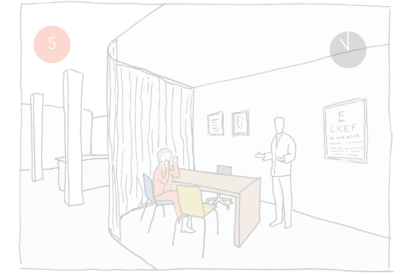
breakfast



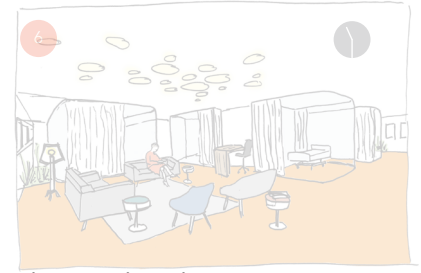
get a breath of air



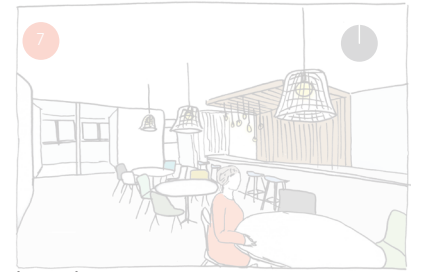
relax



examination



chat with other patients



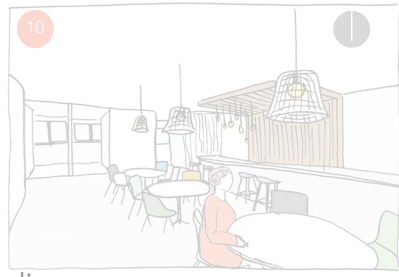
lunch



relax



excercise



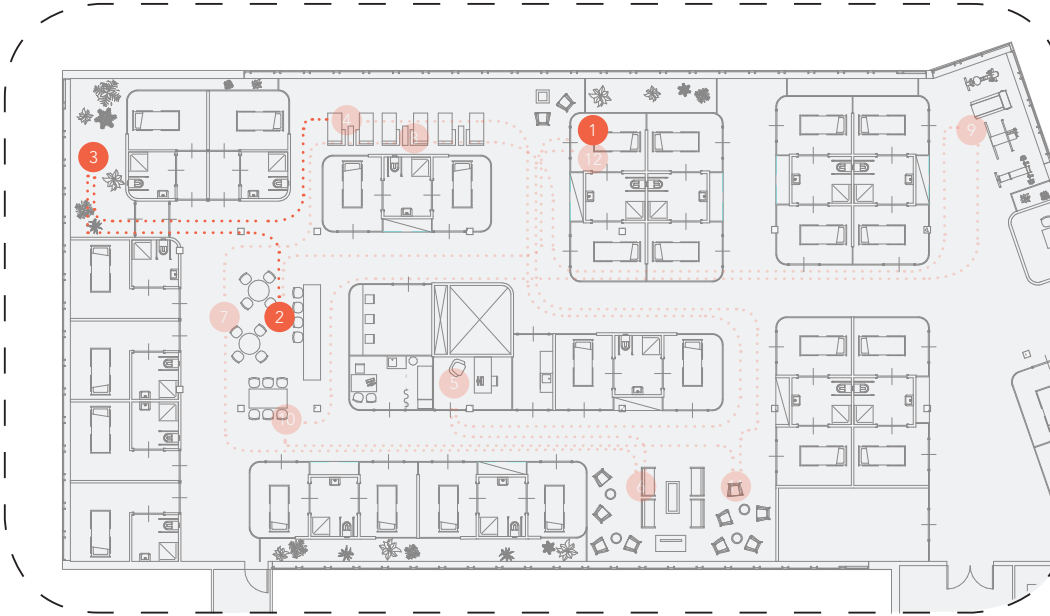
dinner

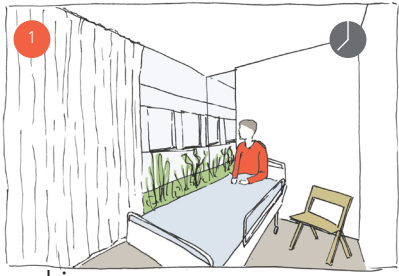


playing games, reading a book

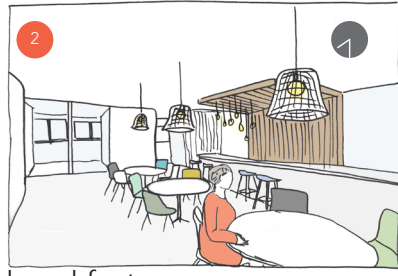


going to bed

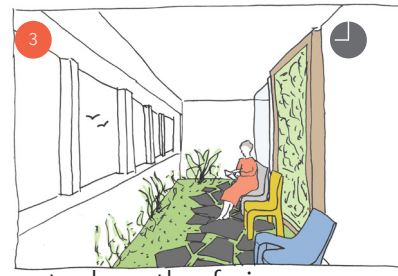




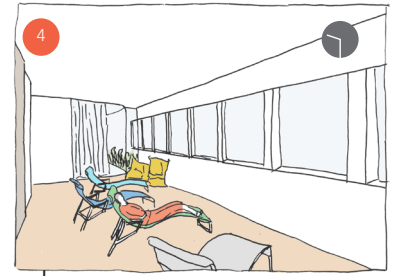
waking up ↑



breakfast



get a breath of air



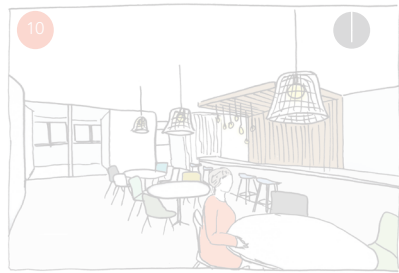
relax



going to bed ↓



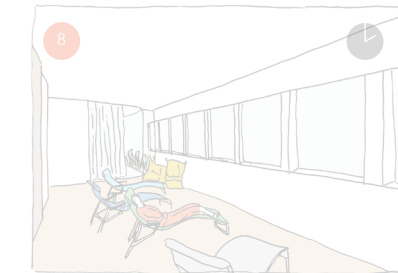
playing games, reading a book



dinner



excercise



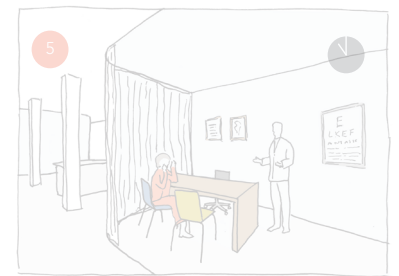
relax



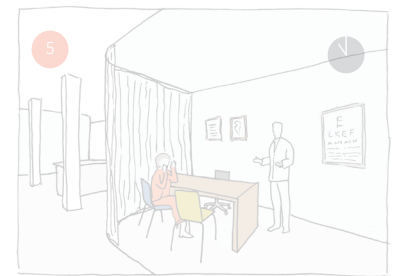
lunch

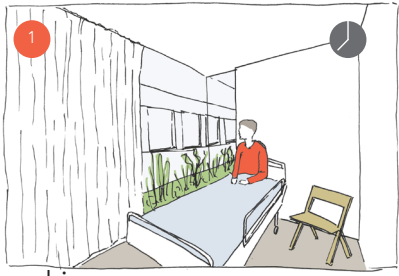


chat with other patients

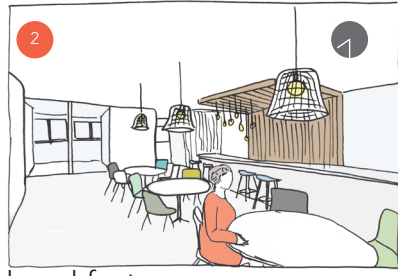


examination

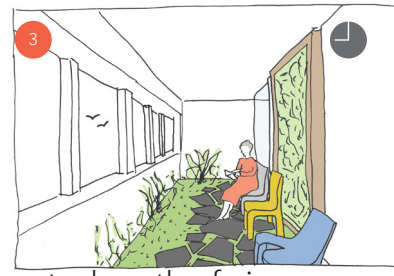




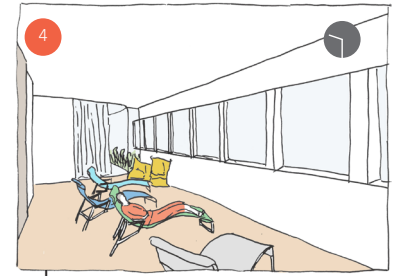
waking up



breakfast



get a breath of air



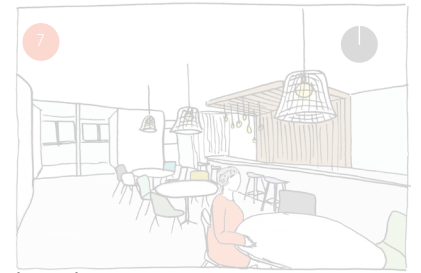
relax



examination



chat with other patients



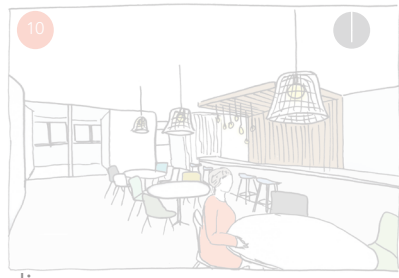
lunch



relax



exercise



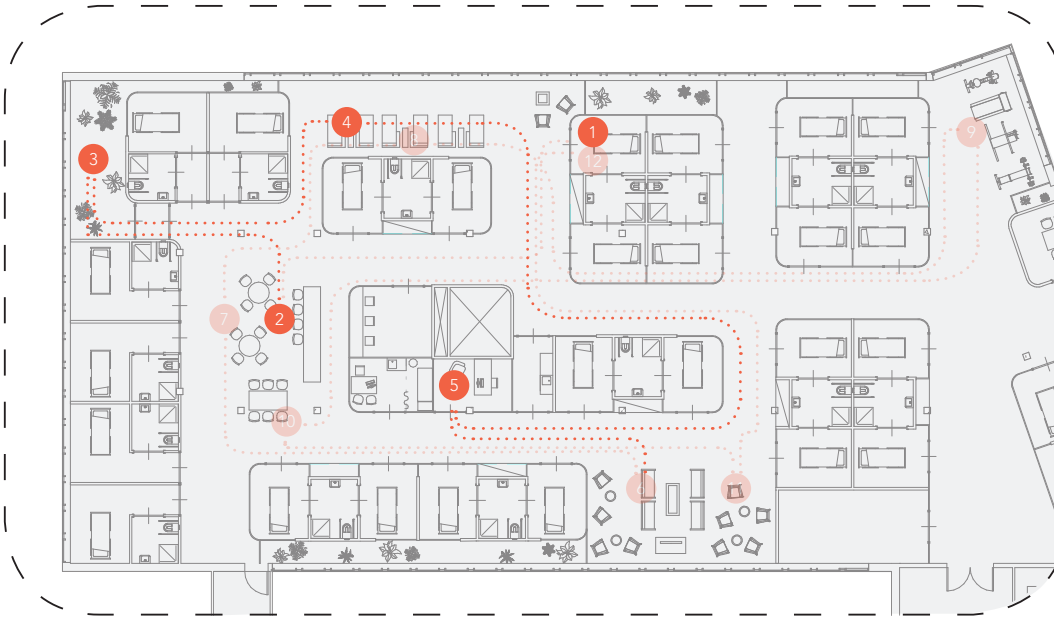
dinner



playing games, reading a book

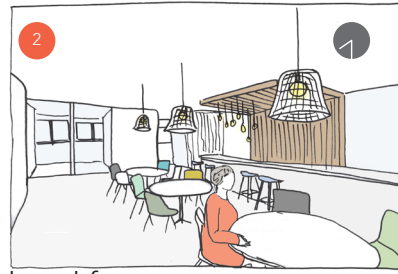


going to bed





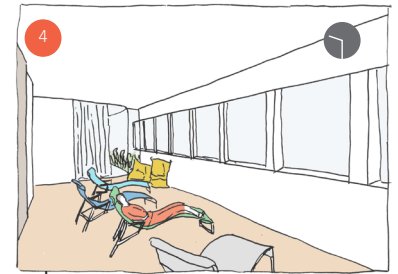
waking up



breakfast



get a breath of air



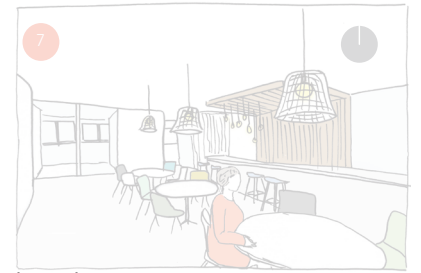
relax



examination



chat with other patients



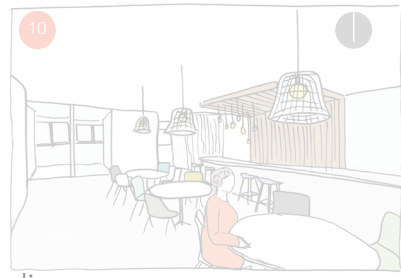
lunch



relax



excercise



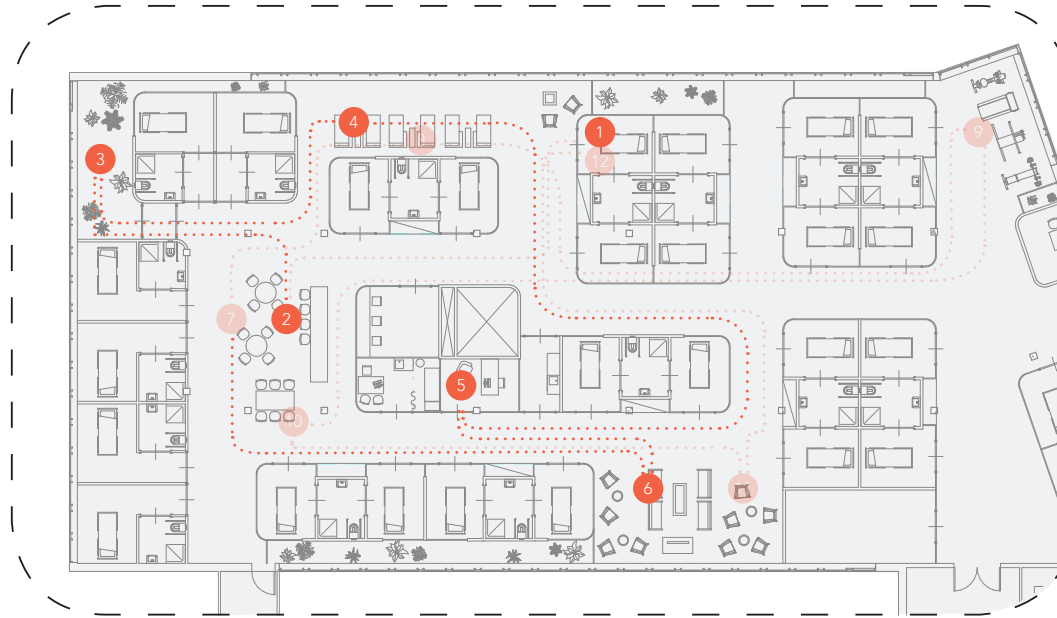
dinner



playing games, reading a book



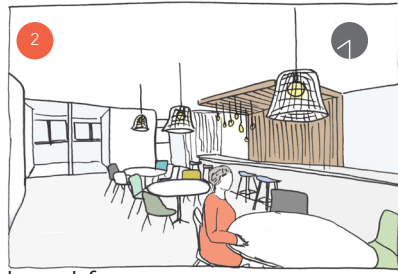
going to bed



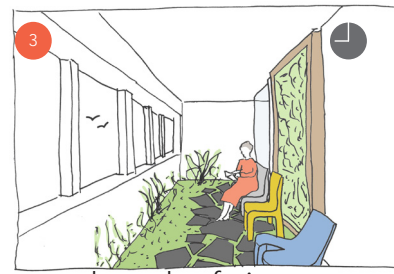




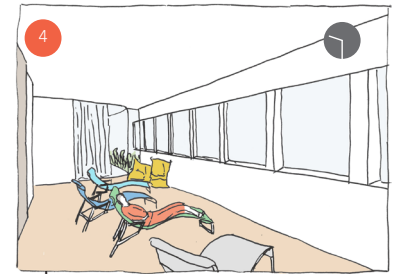
waking up



breakfast



get a breath of air



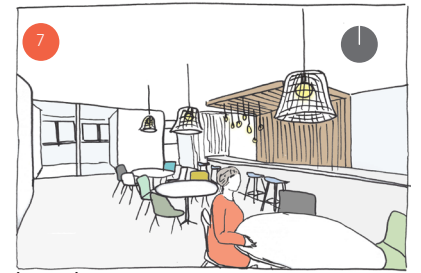
relax



examination



chat with other patients



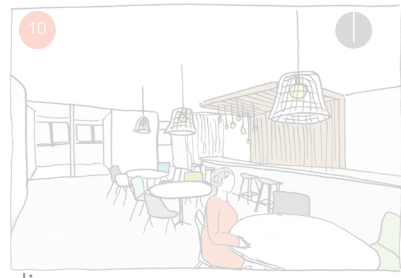
lunch



relax



excercise



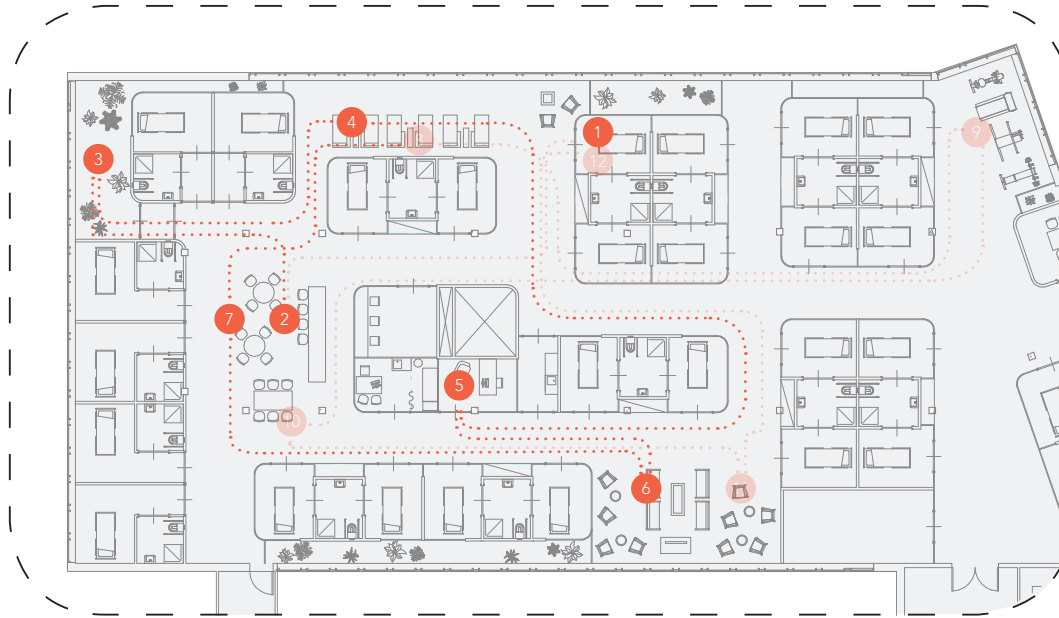
dinner



playing games, reading a book

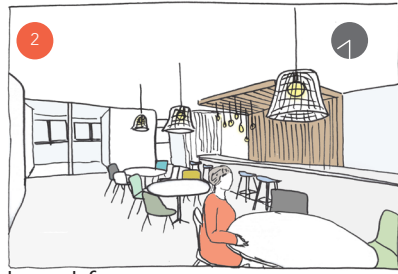


going to bed

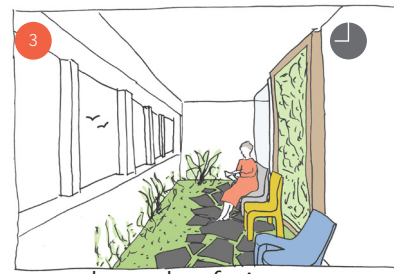




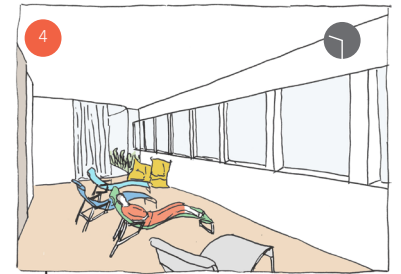
waking up



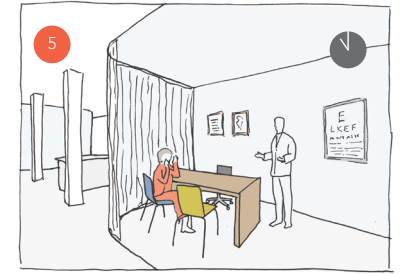
breakfast



get a breath of air



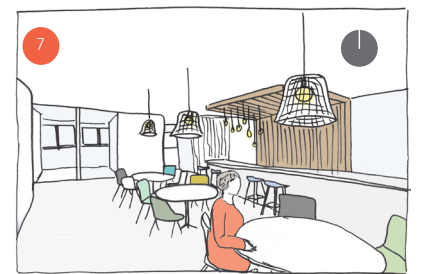
relax



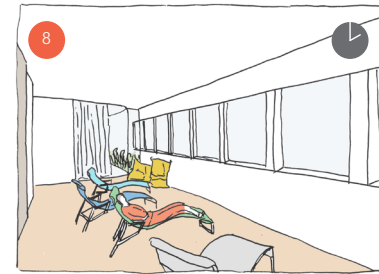
examination



chat with other patients



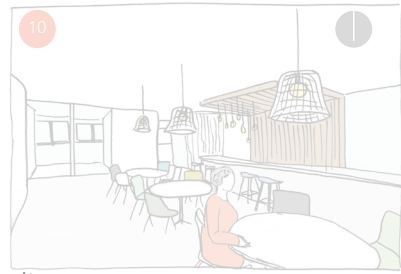
lunch



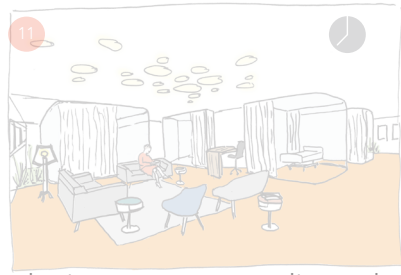
relax



exercise



dinner



playing games, reading a book

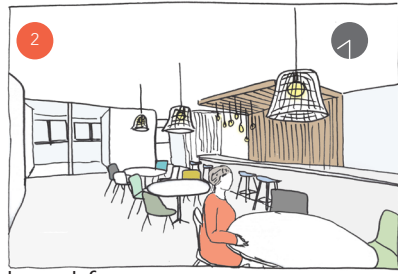


going to bed

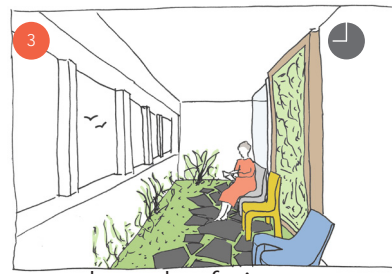




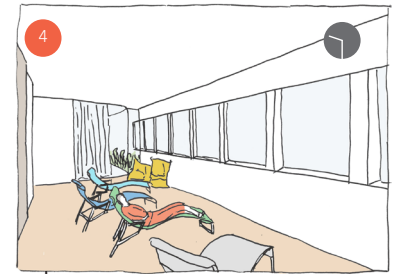
waking up



breakfast



get a breath of air



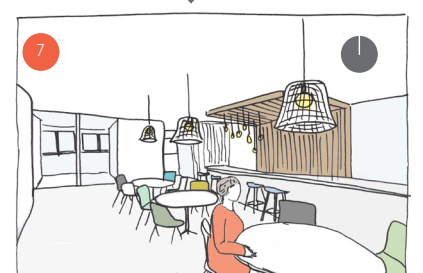
relax



examination



chat with other patients



lunch



relax



excercise



dinner



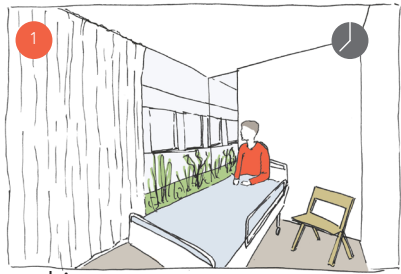
playing games, reading a book



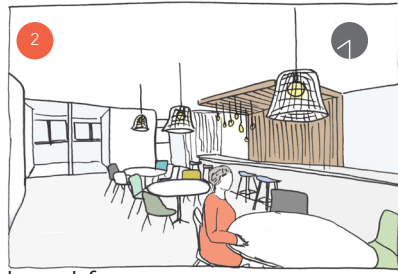
going to bed



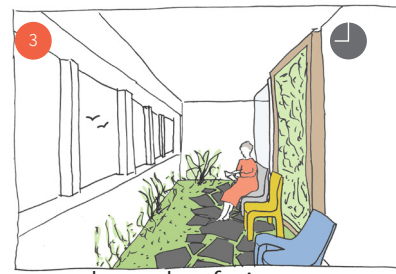




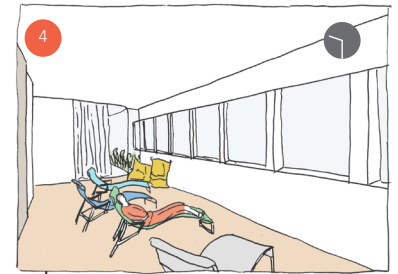
waking up



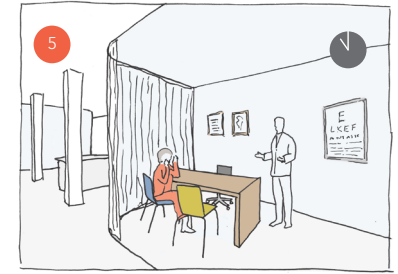
breakfast



get a breath of air



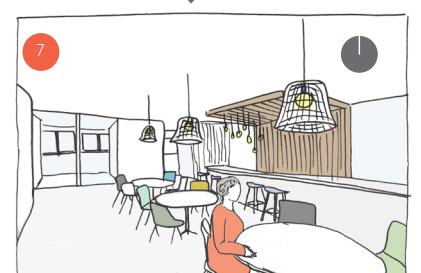
relax



examination



chat with other patients



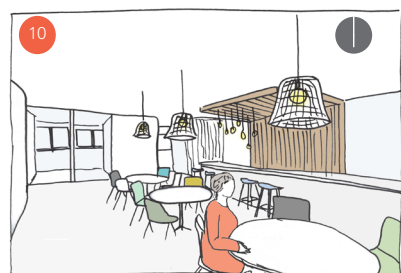
lunch



relax



excercise



dinner



playing games, reading a book

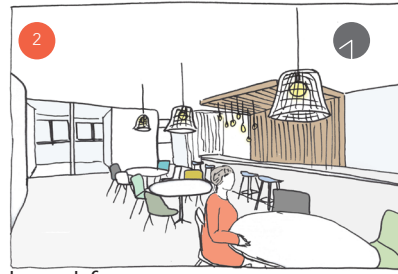


going to bed

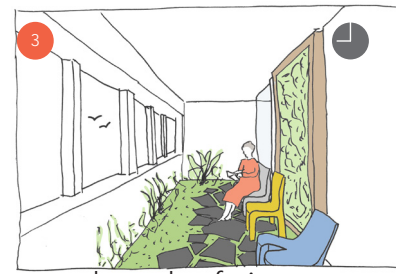




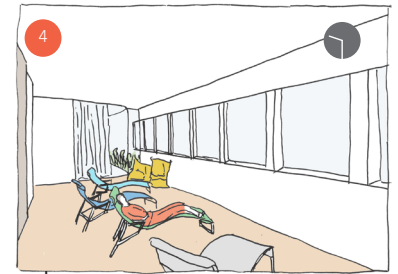
waking up ↑



breakfast



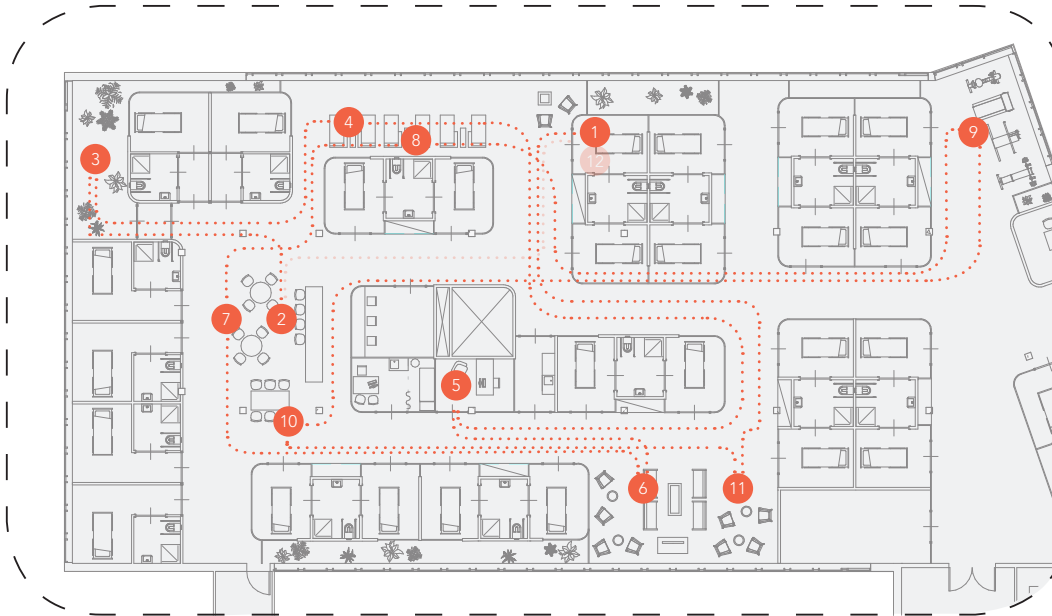
get a breath of air



relax



going to bed ↑



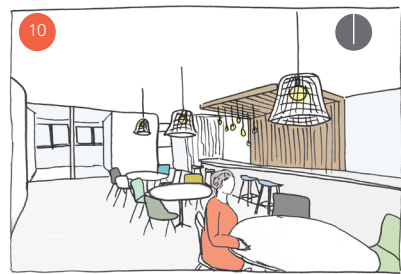
examination ↓



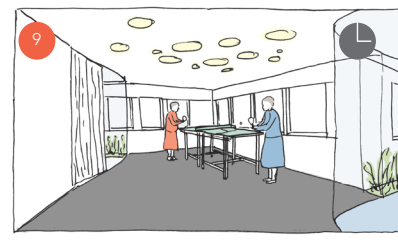
playing games, reading a book ↑



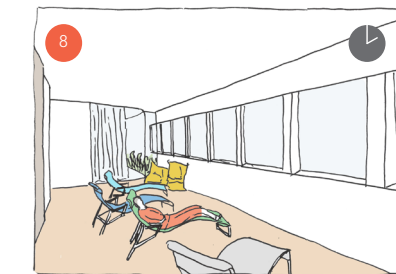
chat with other patients ↓



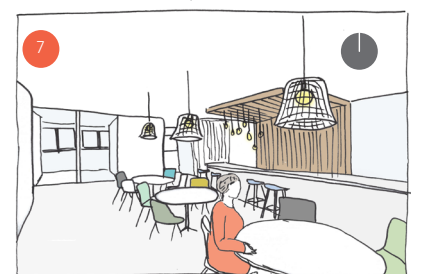
dinner



excercise



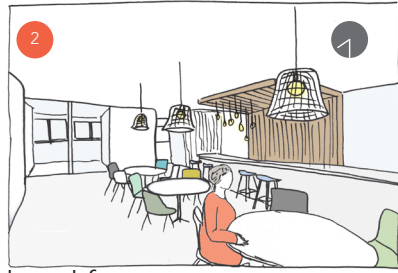
relax



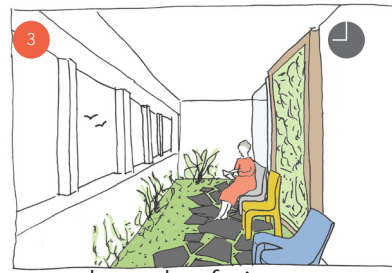
lunch



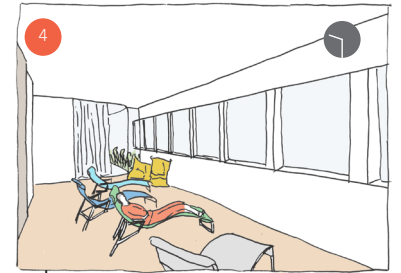
waking up



breakfast



get a breath of air



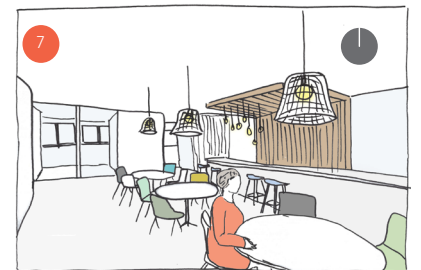
relax



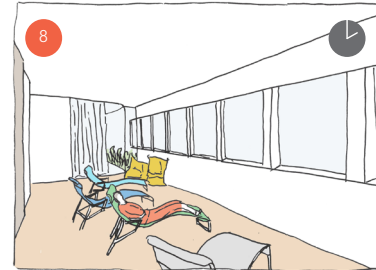
examination



chat with other patients



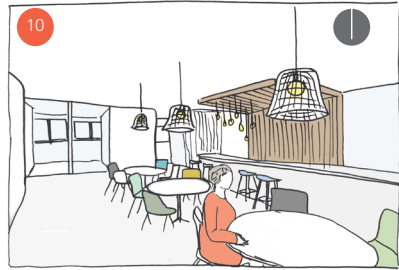
lunch



relax



excercise



dinner



playing games, reading a book



going to bed



# Process



Passed process Diakonessen Hospital



# Process



Process Maastricht University Medical Center



Passed process Diakonessen Hospital



## Partners



Netherlands Enterprise Agency

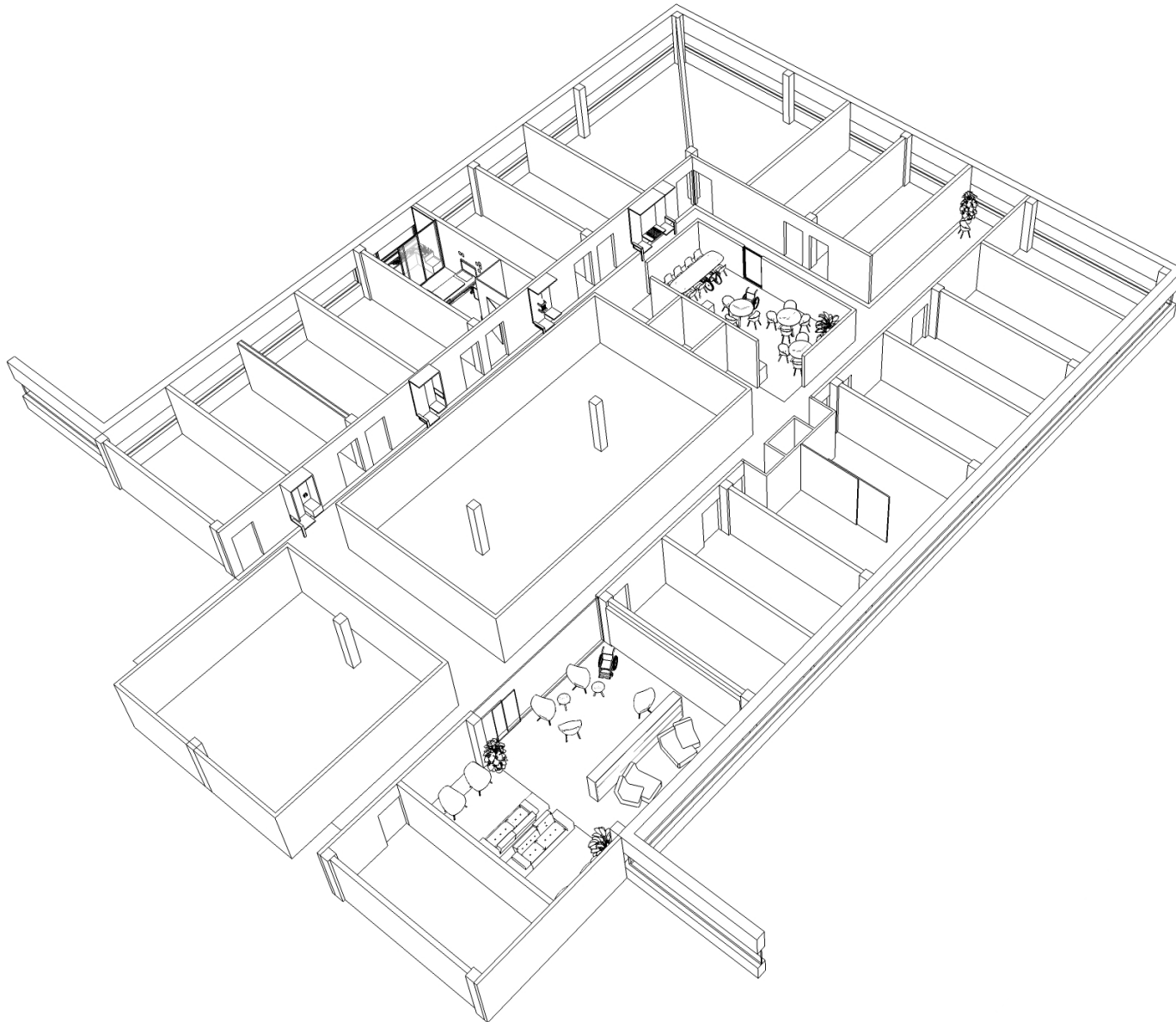
SBIR program  
Small Business Innovation Research



de jong gortemaker algra

# Implementation

*Department Test Case MUMC*

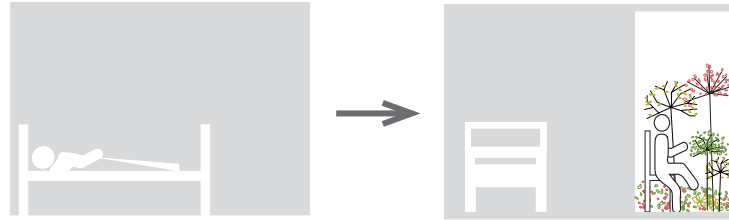


# Implementation

## Maastricht University Medical Center

STEP BY STEP:

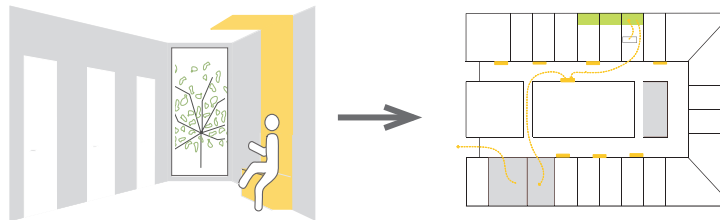
*from bed to room*



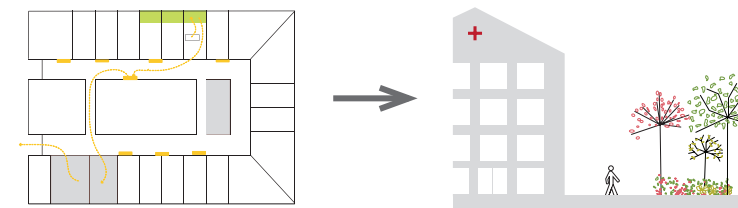
*from room to corridor*



*from corridor to department*



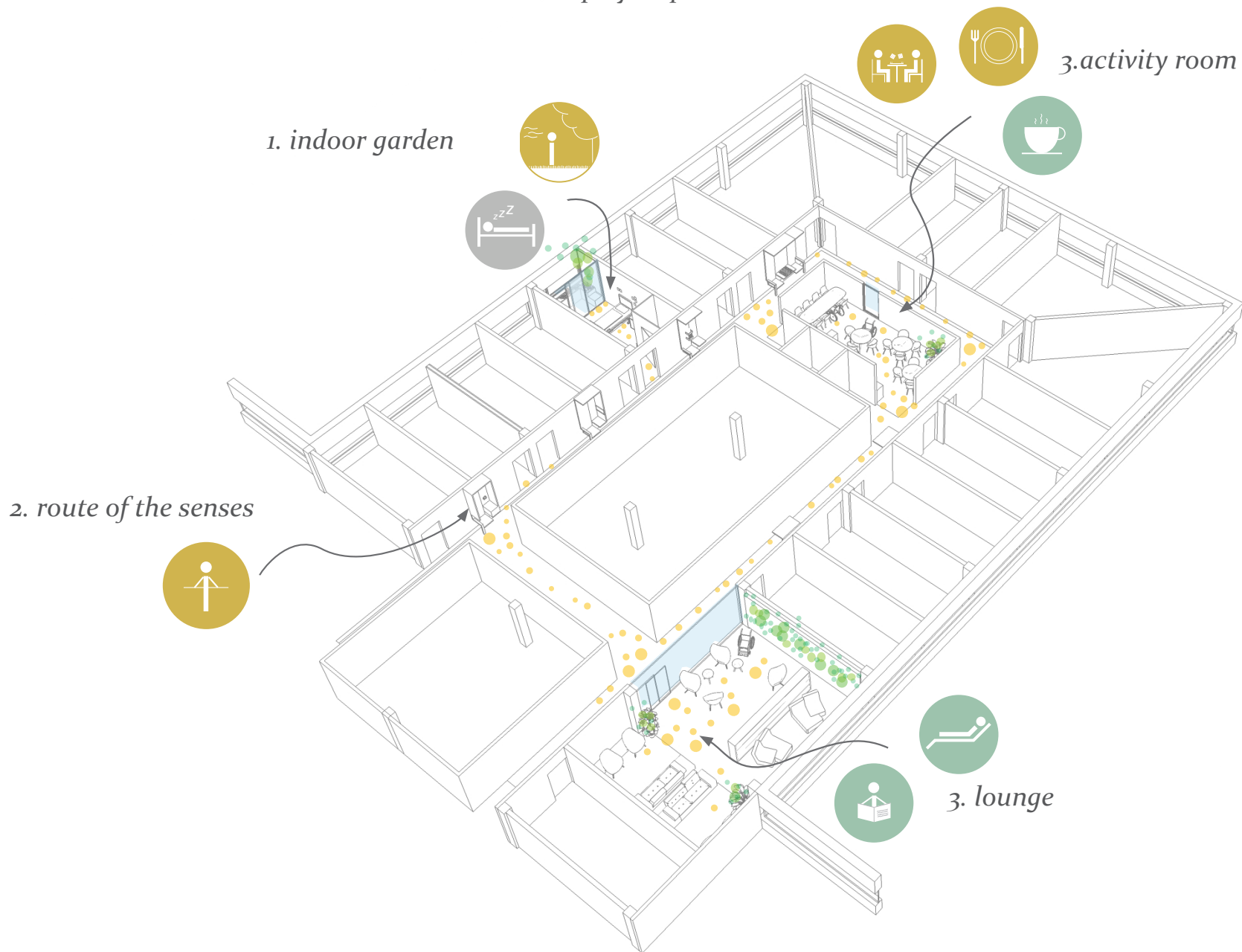
*from department to surroundings*





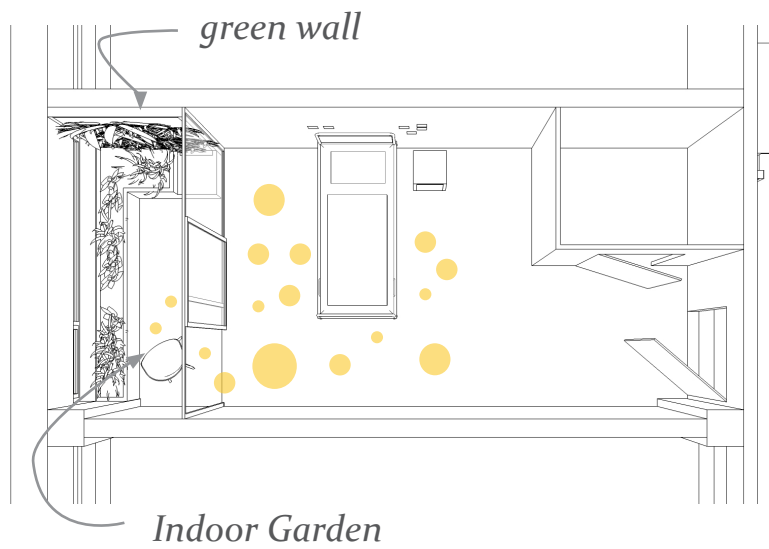
# Implementation

*step by step interventions MUMC*



# Implementation

## *Intervention 1: Indoor Garden*

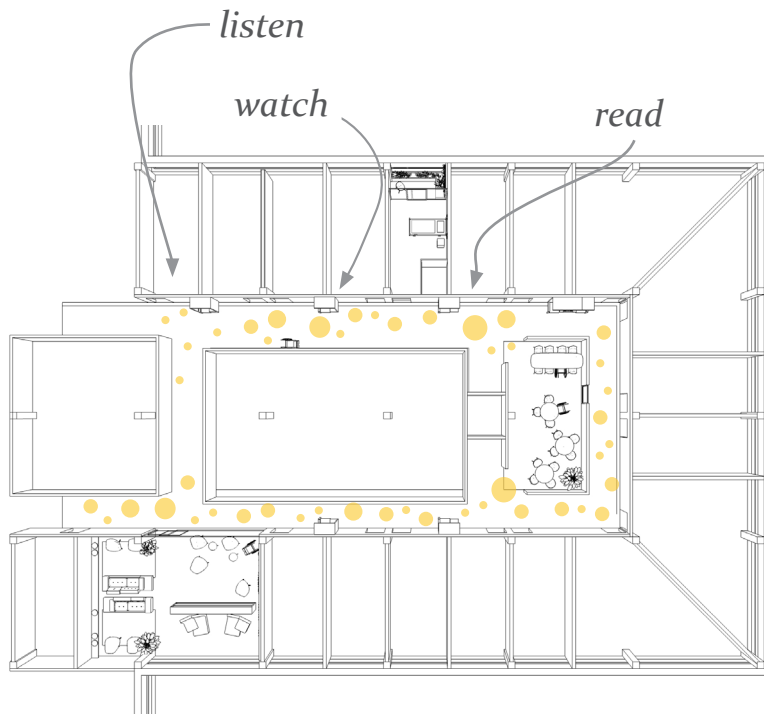


Step 1: From bed to room: stimulance to get out of bed



# Implementation

## *Intervention 2: Route of the senses*



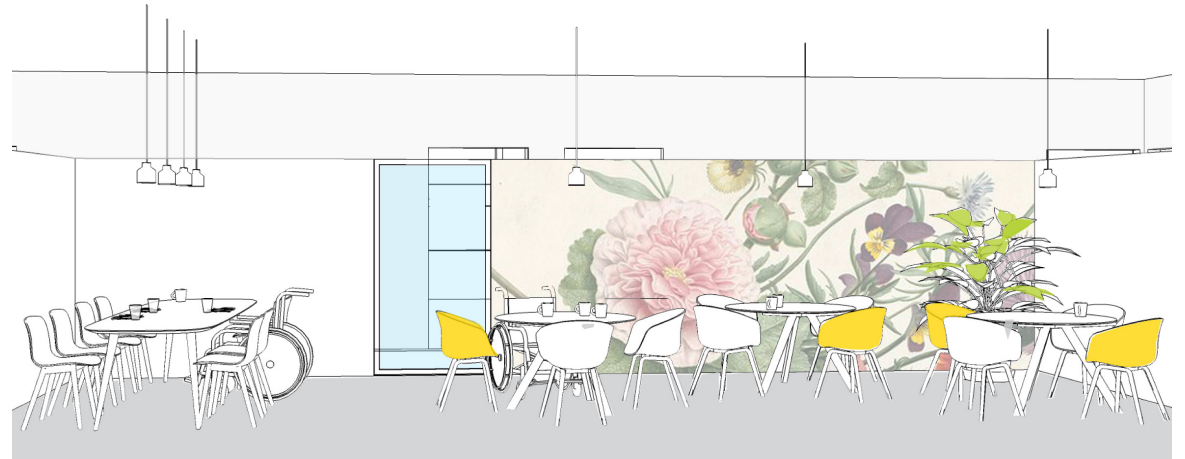
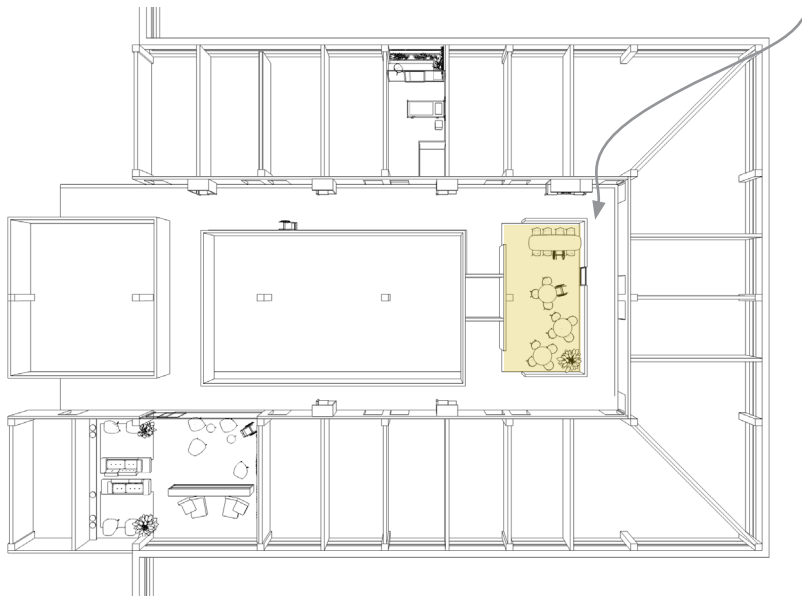
Step 2: From room to corridor: stimulance to get out of the room and use corridor



# Implementation

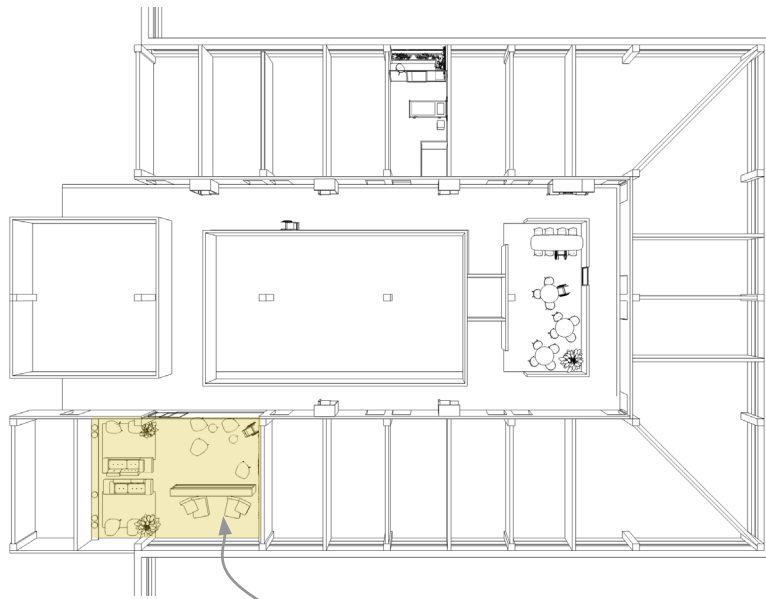
## *Intervention 3: Meeting area*

*Meeting area*

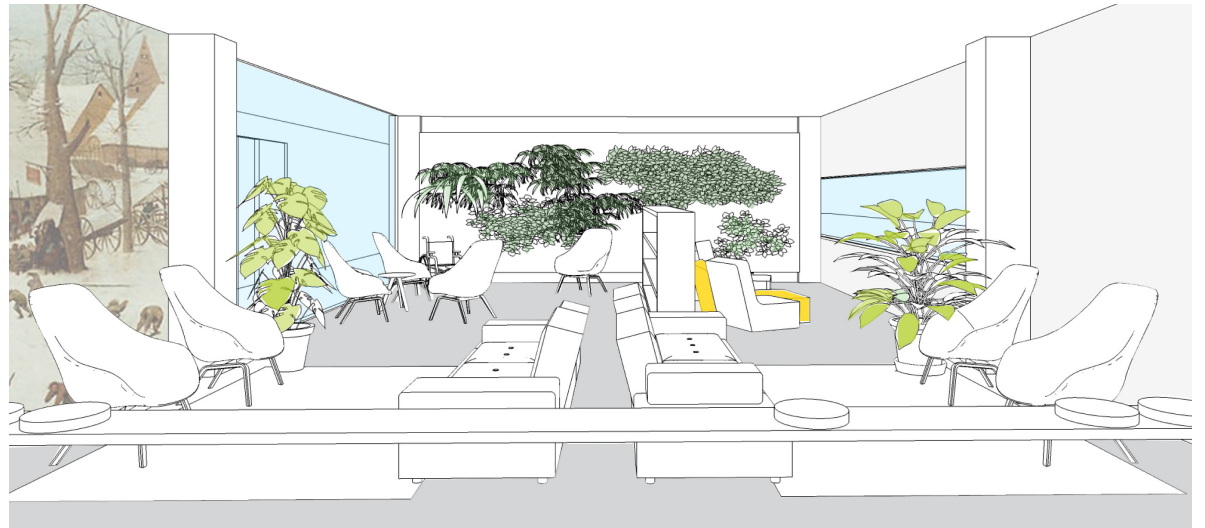


# Implementation

## *Intervention 3: Lounge*



*Lounge*





An architectural rendering of a hospital interior. The scene is a bright, modern space with large windows on the left side, offering a view of a lush green landscape. The walls are light-colored, and a prominent feature is a large, vertical green wall on the right side, covered in various plants and flowers. In the center, a woman is seated in a wicker chair, reading a book. A young girl is standing in the foreground, pointing towards the green wall. A young boy is sitting on the floor, playing with a toy fire truck. The floor is made of light-colored tiles, and there are several potted plants scattered throughout the space. The overall atmosphere is clean, bright, and inviting, suggesting a focus on natural light and greenery in a healthcare setting.

# REACTIVATING HOSPITAL



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