



HIGH & LOW

FRIHAMNEN NÄRSJUKHUS

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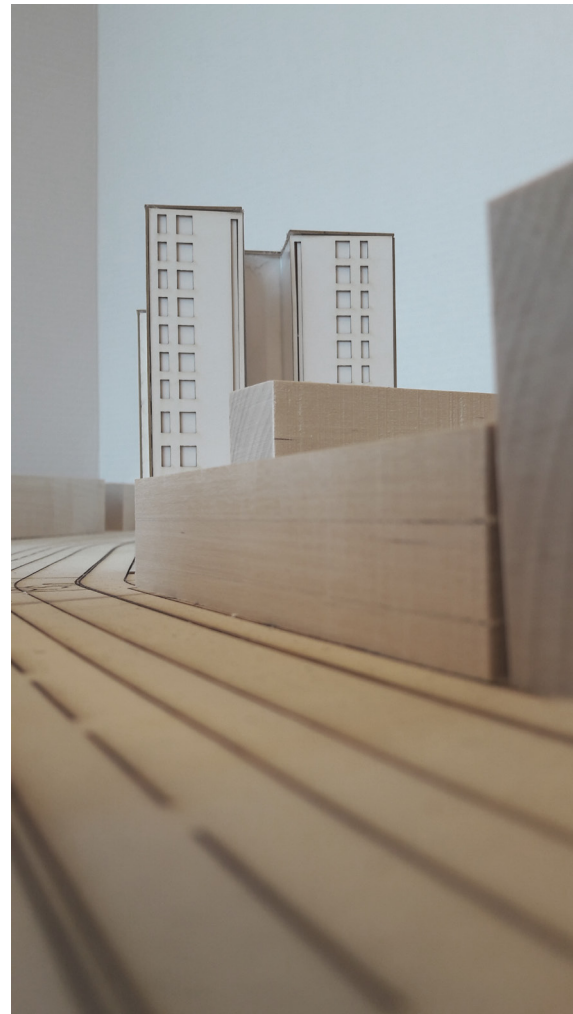


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CORE QUALITIES

Situated in Frihamnen this project has much potential to be a building that can be of use not only for the patients and staff of the hospital but also to give something back to the city. Therefore three important stakeholders have been central when creating this project.

FOR THE STAFF

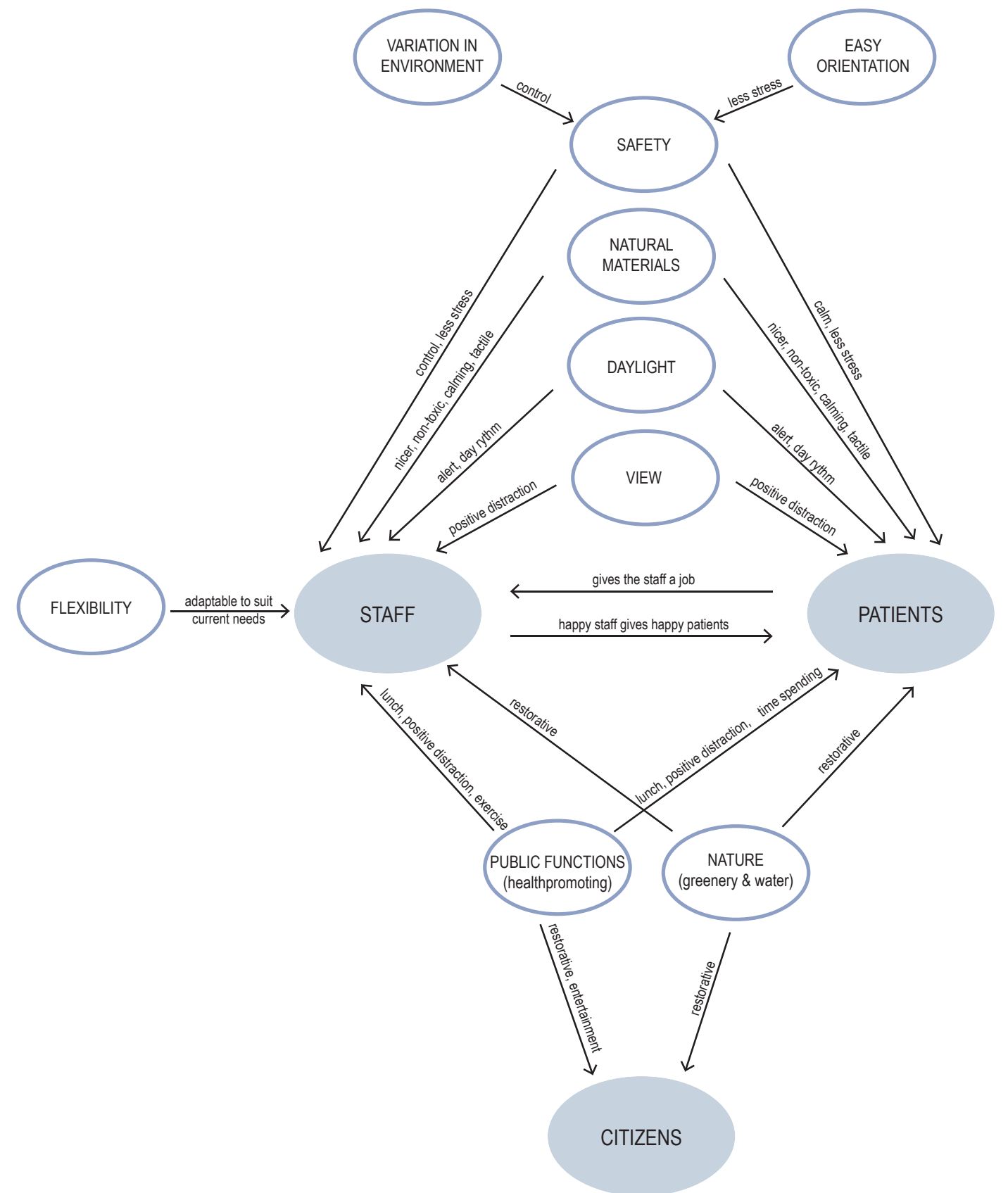
We spend a great deal of our time at work, this is reason enough to make qualitative working environments since *happy staff provides happy patients*. To attract more staff to the health care sector better environments would be a useful tool. Research shows that good light and sound conditions decreases the experienced stress levels at work which leads to less accidents and errors in the care. A significant portion of the working day in healthcare is today spend at walking, so creating a close relationship between collaborative departments and functions that is often used the workflow can be optimized.

FOR THE PATIENTS

Good healthcare is easy healthcare. This should not be a place to go when you are ill, but *a place to get well and stay well*. This is the place for your first encounter with the healthcare and hopefully, depending on the issue, you can get all your treatment done here the same day. From consultation to first check up, sampling, imaging, day surgery and rehabilitation.

FOR THE CITY

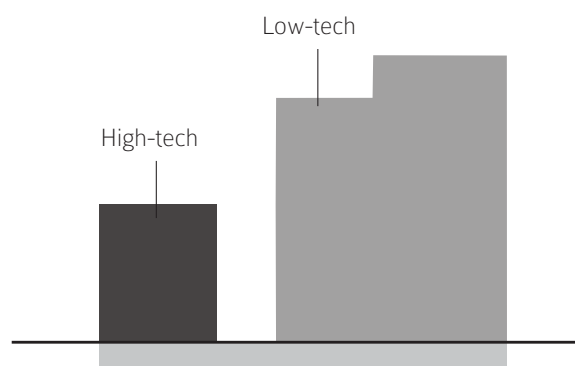
With such a central location the hospital should include public functions and be open for the citizens to enter. Mainly concentrating the public functions at ground level where it is the most easy to access. In order to be an active quarter you should be able to pass through the building taking it down to a smaller, more human scale.



OUR FOCUS

WHAT	FOR WHOM			WHY
	STAFF	PATIENT	PUBLIC	
 NATURE AND GREENERY	●	●	●	Works as positive distractions and has restorative qualities that lowers stress levels.
 SUSTAINABLE	●	●	●	A flexible structure enables the building to change for future needs making it more feasible and economically sustainable. By handling most functions locally transportation is also reduced.
 FLEXIBLE AND GENERAL	●	●	●	The rational and logical structure makes the building flexible and general structure makes the building more adaptable to current needs of the hospital.
 TACTILE MATERIALS	●	●		Careful selection of materials and detailing brings a human scale and shows care and attention. It can also work as a positive distractions.
 EASY ORIENTATION	●	●		Easy wayfinding leads to smoother flows and less frustration. Makes you as a patient feel confident and saves time, especially for the staff.
 GOOD LIGHT	●	●		Good light conditions makes the user feel more alert and better visual control leads to fewer medical errors. Stress levels are reduced and better daily rhythm is achieved.
 WELL CONNECTED	●			A central location of the vertical elements (stairs, elevators etc.) means they are easily accessible for everyone. Promoting the usage of the fire escape stairs to the staff offers better alternative paths.
 PERSON CENTRED CARE		●		A private pre- post-op and recovery room offers more control and security, this gives a better experience for the patients and their relatives.

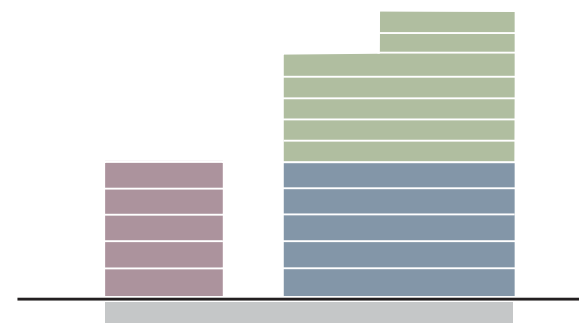
CONCEPT



HIGH-TECH AND LOW-TECH BUILDING

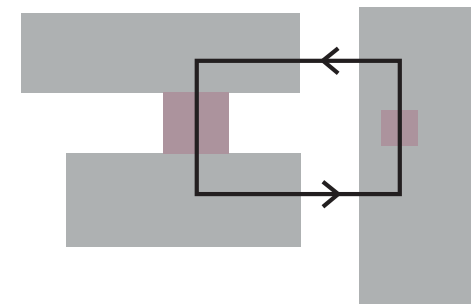
By dividing the structure in two parts we can more easily fulfil:

- different room typologies
- different corridor widths
- different load bearing requirements
- different clean zone requirements
- easier to orientate
- a smaller scale, more suitable for a city context
- becomes more economic and feasible



THREE LEVELS OF GENERALITY

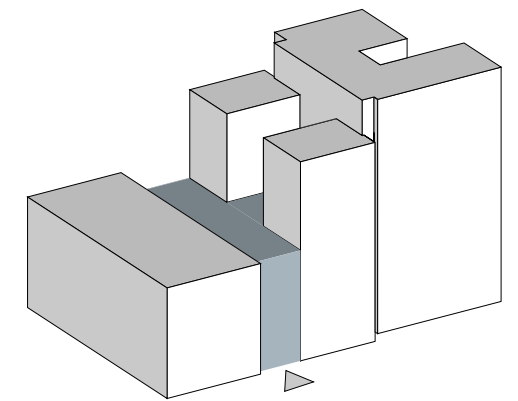
The first five floors have higher ceiling height to be able to house more equipment-heavy functions. The top floors are more general and gives more change functions more flexibly.



FLEXIBILITY AND FLOW

The two buildings are well connected and complements each other but also functions as a whole unit.

By placing the vertical element centrally they have the closest location to reach the whole floor and makes as little impact as possible for future changes.






ATRIUM

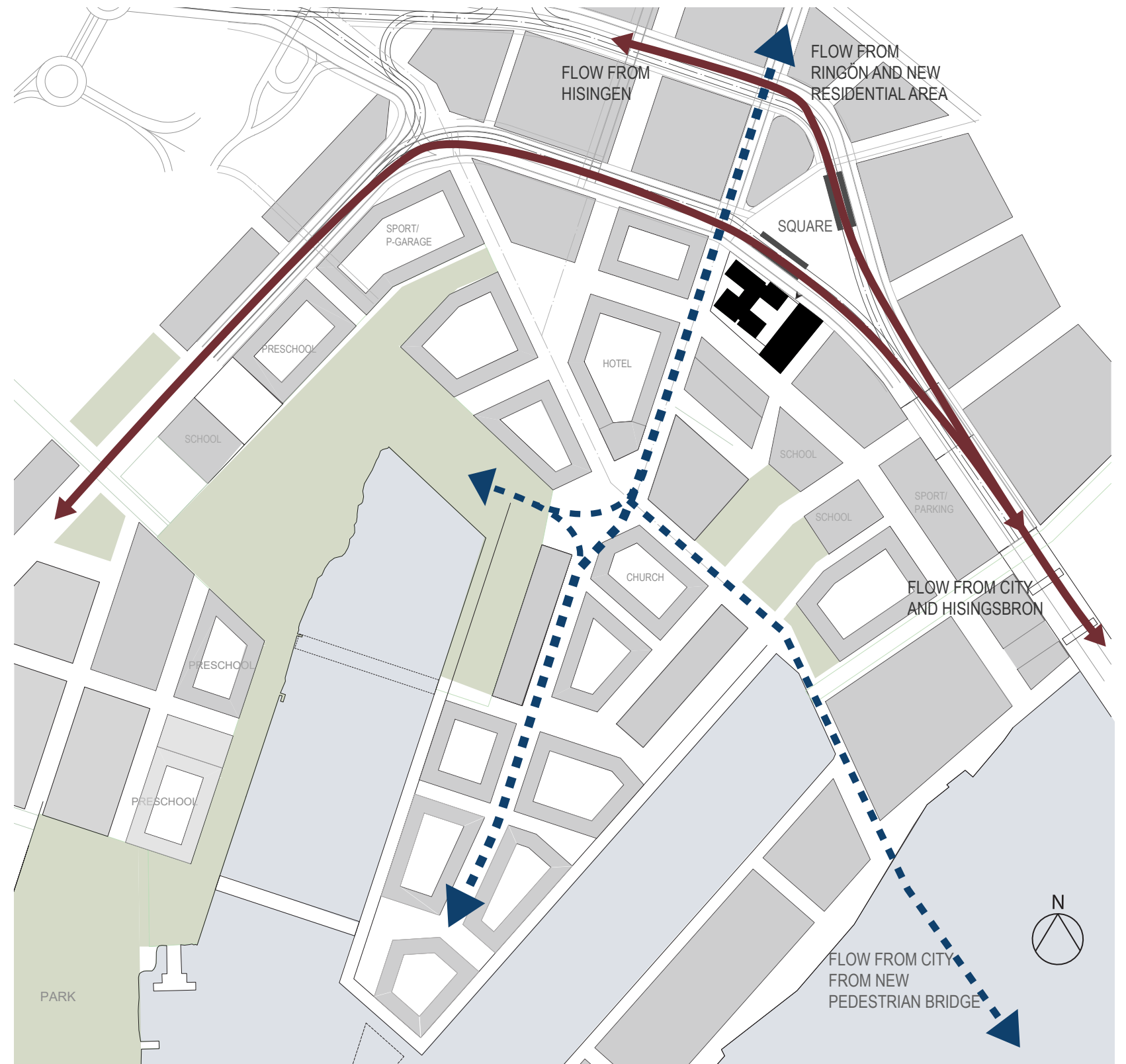
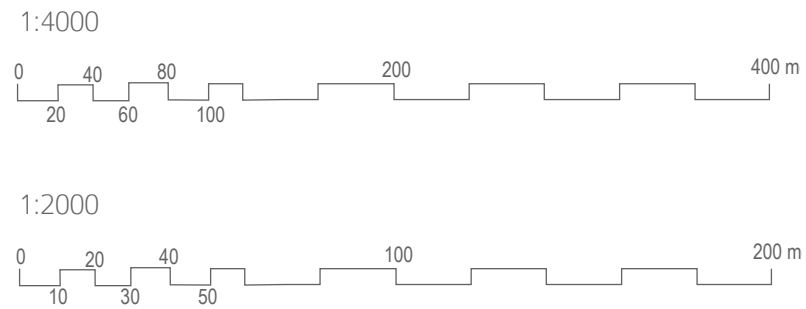
The atrium is filled with pleasant and restorative qualities such as greenery and daylight to benefit all users of the building.

It also creates a clear entrance and is well visible from inside the buildings functioning as a landmark for better orientation on all floors.

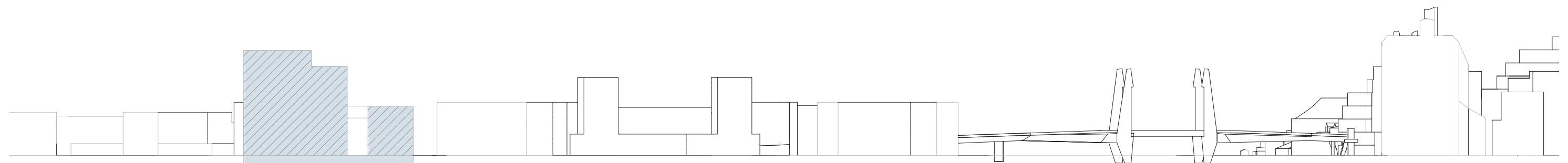
SITE & LANDSCAPE SECTION

The central location makes the hospital easy to access by both foot, public transportation and car. The square just north of the hospital creates a natural main entrance. Dividing the buildings on the plot creates a finer grid of the streets making the area more appealing to pedestrians. Beautiful views of both nature, parks and water.

-  Green area
-  Tram and public transportation
-  Main pedestrian flows



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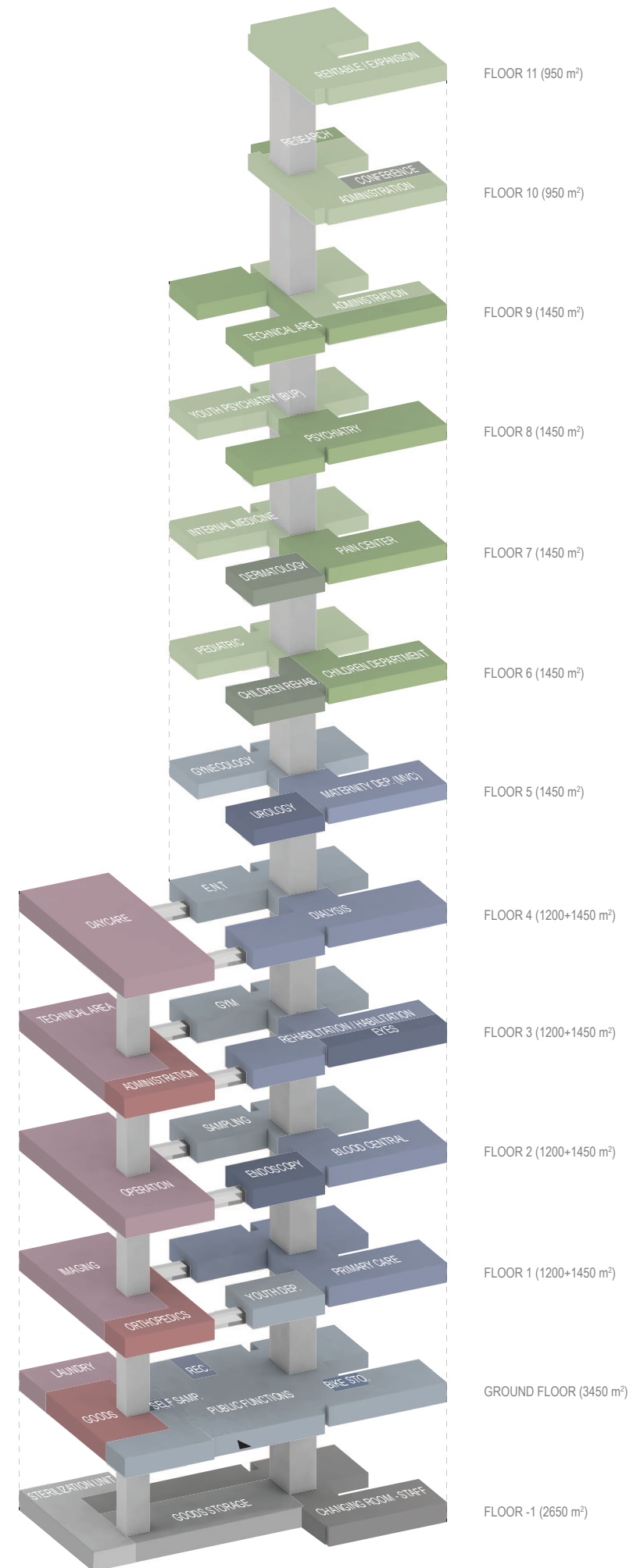


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DEPARTMENTS & NUMBERS

DEPARTMENTS	FLOOR	AREA
Rentable area / expansion	11	900 m ²
Administration	10	650 m ²
Research	10	150 m ²
Conference room	10	150 m ²
Administration	9	500 m ²
Technical space	9	900 m ²
Psychiatry	8	750 m ²
Youth Psychiatry (BUP)	8	650 m ²
Pain Centre	7	500 m ²
Internal Medicine	7	650 m ²
Dermatology	7	250 m ²
Pediatric	6	650 m ²
Children Rehabilitation / Habilitation	6	350 m ²
Children Department (BVC)	6	400 m ²
Maternity Department (MVC)	5	500 m ²
Gynecology	5	650 m ²
Urology	5	250 m ²
Dialysis	4	750 m ²
Ear, Nose, Throat	4	650 m ²
Daycare	4	1150 m ²
Eyes	3	150 m ²
Rehabilitation & Habilitation	3	600 m ²
Gym	3	600 m ²
Administration	3	500 m ²
Technical space	3	650 m ²
Endoscopy	2	250 m ²
Blood Central	2	500 m ²
Sampling	2	650 m ²
Operation	2	1150 m ²
Youth Dep. (BUM)	1	250 m ²
Primary care	1	1150 m ²
Orthopedics	1	300 m ²
Imaging	1	850 m ²
Public Functions	0	2200 m ²
Reception	0	100 m ²
Self sampling	0	50 m ²
Laundry	0	250 m ²
Goods and Recycling	0	450 m ²
Goods storage	-1	750 m ²
Sterilization unit	-1	500 m ²
Changing room staff	-1	700 m ²

NUMBERS	
Hospital	22 700 sqm
Public	3 300 sqm
Gross total area (BTA)	26 000 sqm
Total exam. rooms	245



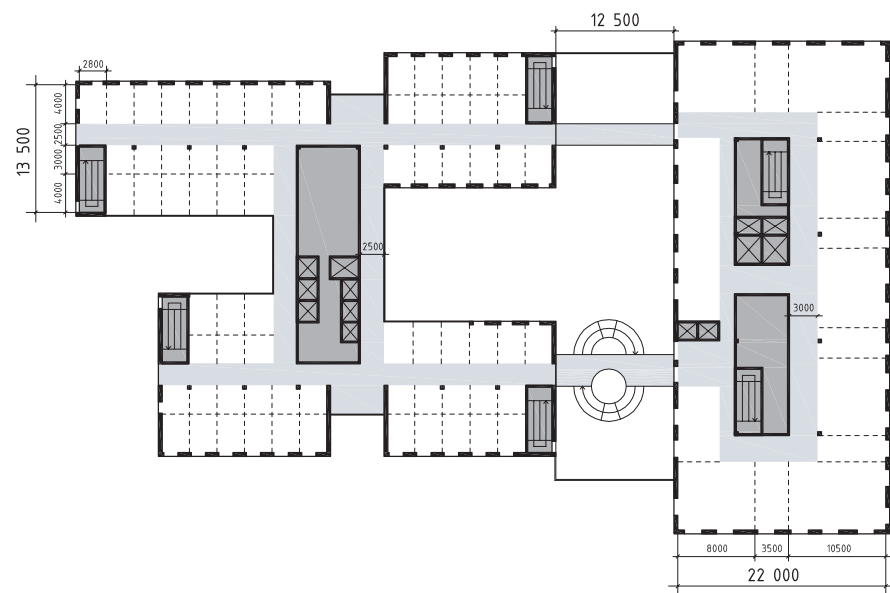
GENERAL FLOOR

The hospital requires both large complex rooms (operation and imaging) and many small rooms (examination and evaluation rooms). These two typologies also have different requirements regarding corridor widths, load bearing features and clean zones.

By dividing the hospital into two building structures we can easily satisfy both of these two typologies in a very efficient way. This way allows that the entire building does not need to fulfill the requirements stated by the most spatially demanding department making the project more feasible.

The urban plot allows little possibility for the hospital to expand horizontally, but both the high- and low-tech buildings can expand upwards. This together with the general grid system makes the buildings flexible to meet the changing demands of the future.

To enable an easy first expansion of the hospital the building is planned with one additional floor that from the start can be leased to other functions.



LOW-TECH BUILDING
(exam. & eval.)

HIGH-TECH BUILDING
(operation & imaging)

1:800 0 5 10 25 m

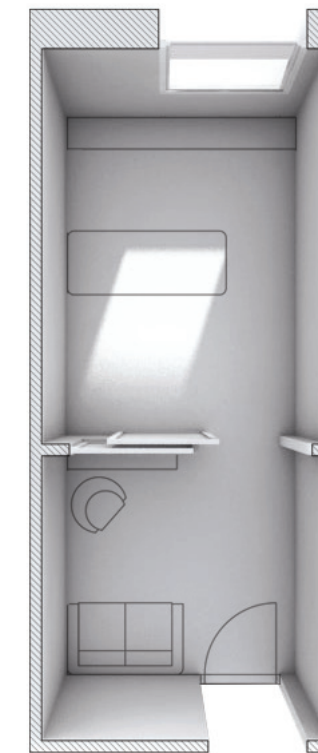
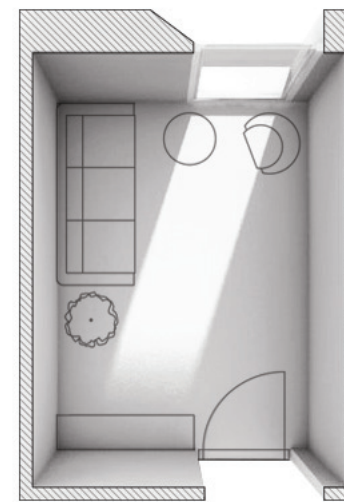
ROOM TYPOLOGIES

The examination rooms are designed to provide a more patient centered care. Considering the variation of departments, two main room typologies were developed.

In the larger room, the meeting with a doctor or nurse always starts and ends with dialogue, which is why you first enter an environment for conversations. In this part of the examination room the stretcher or medical equipment are not immediately visible.

In the adjacent room the physical examination takes place. The direct relationship between the two rooms means that the patient does not have to exit to the corridor until the meeting is done, eliminating the feeling of being shipped around.

The smaller room is more suitable for a longer conversation or a specific equipment.

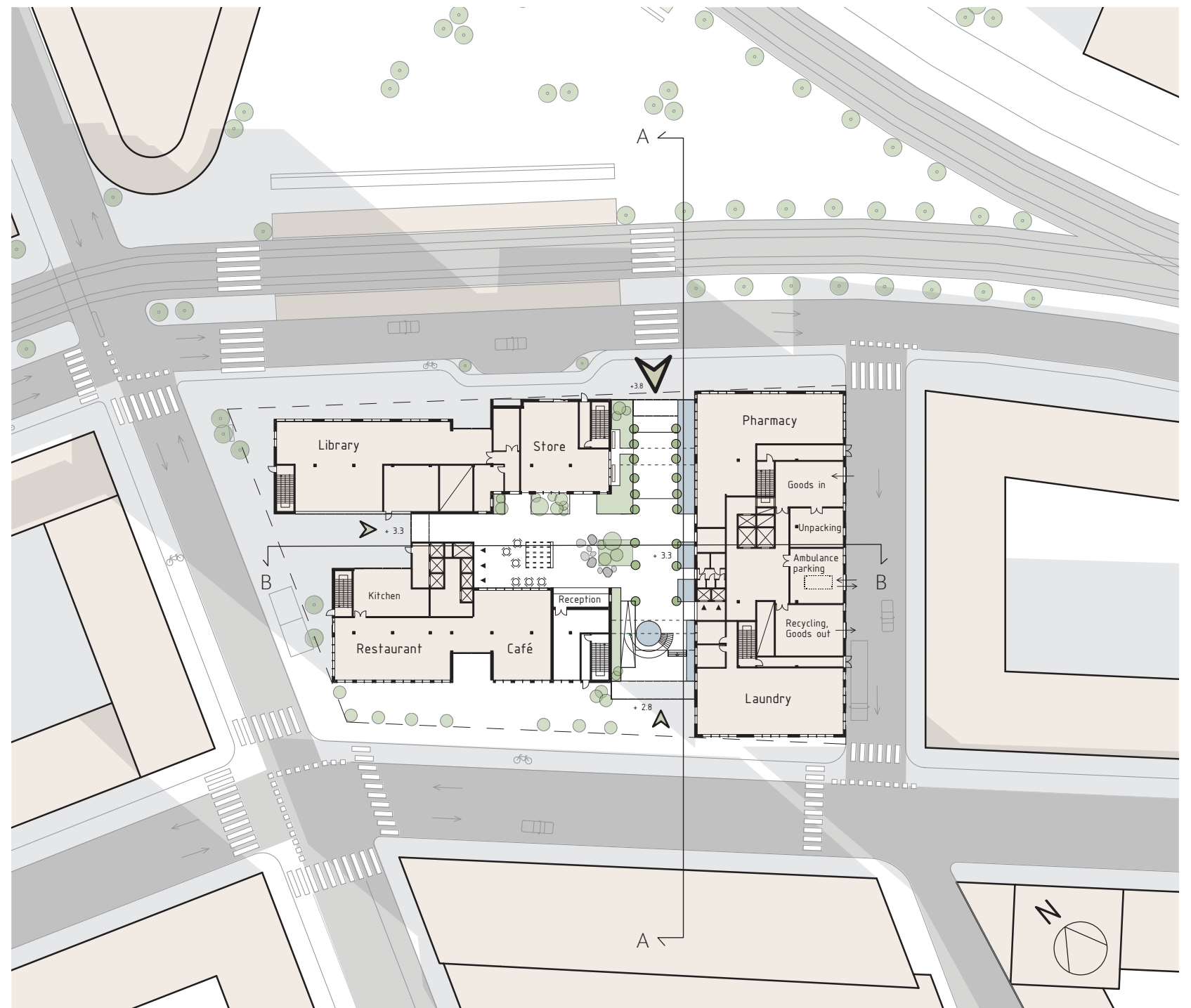


GROUND FLOOR

The hospital can be accessed by three entrances making the building open to the public and functions as a living block with a fine grid of streets. Offering the city a lively street that is green all year round.

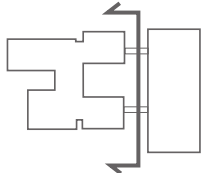
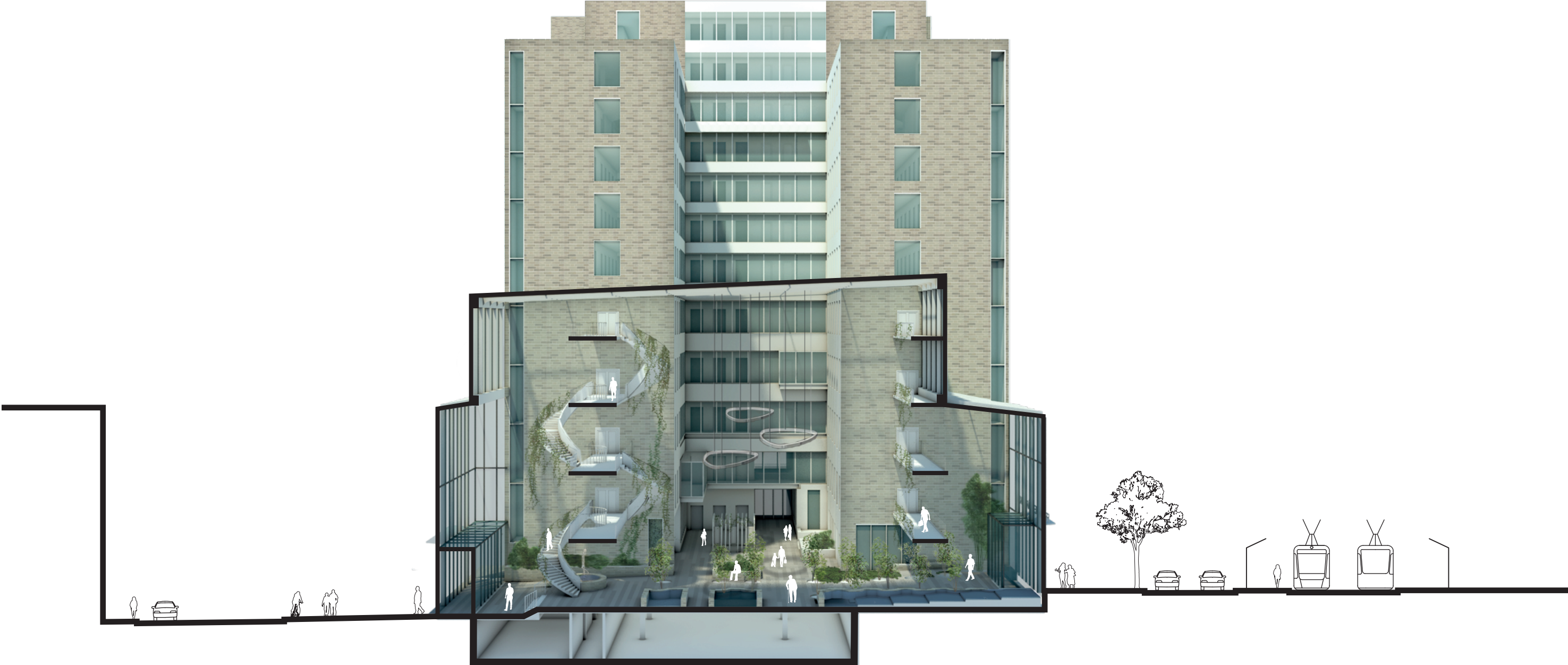
A restaurant and café is placed towards the sunny south facade and stores towards the busier north facade. Concentrating goods deliveries and ambulance stop at the east facade which is a street with less public character.

The laundry decreases the amount of transportation to and from the hospital which has both sustainable qualities and reduces the traffic flow. Placing the sterilization unit and goods storage in the basement allows for a more open and public ground floor.

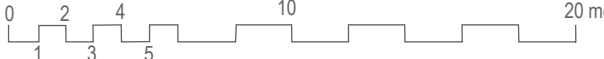


SECTION OF THE ATRIUM

The atrium offers the city a public and green indoor street. The glazing makes the room light and transparent towards the exterior. The greenery functions as a positive distraction for the nervous patient and creates a pleasant atmosphere for everyone. The atrium is emphasized by a change in materiality. The brick facade that encloses the hospital is substituted to plaster in the atrium.

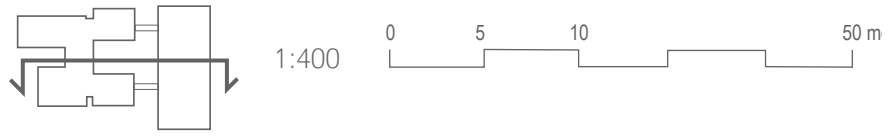
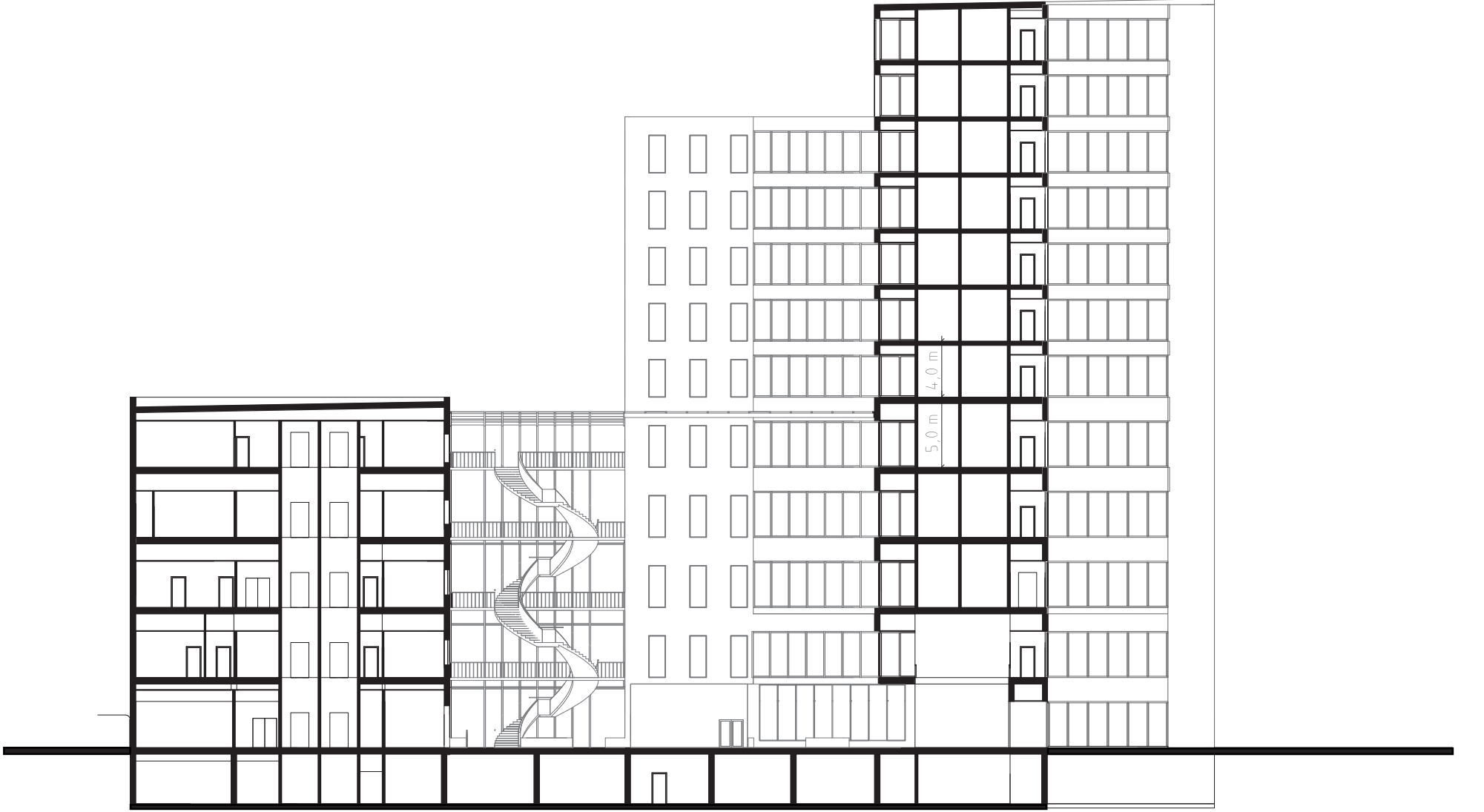


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SECTION OF VERTICAL ELEMENTS

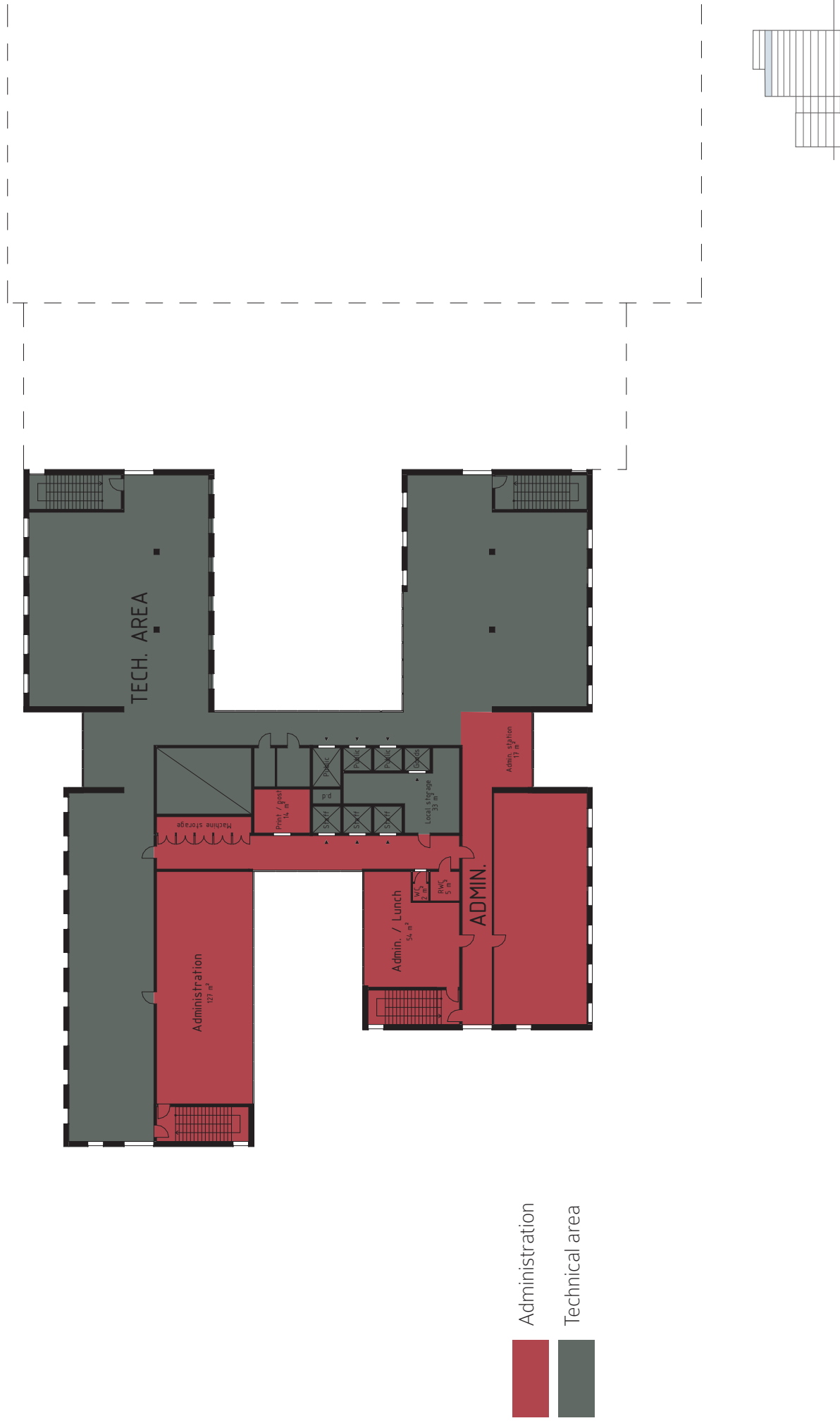
On the first five floors bridges are connecting the two buildings through the atrium. This enables the hospital to only have one set of functions and special equipment on each floor.



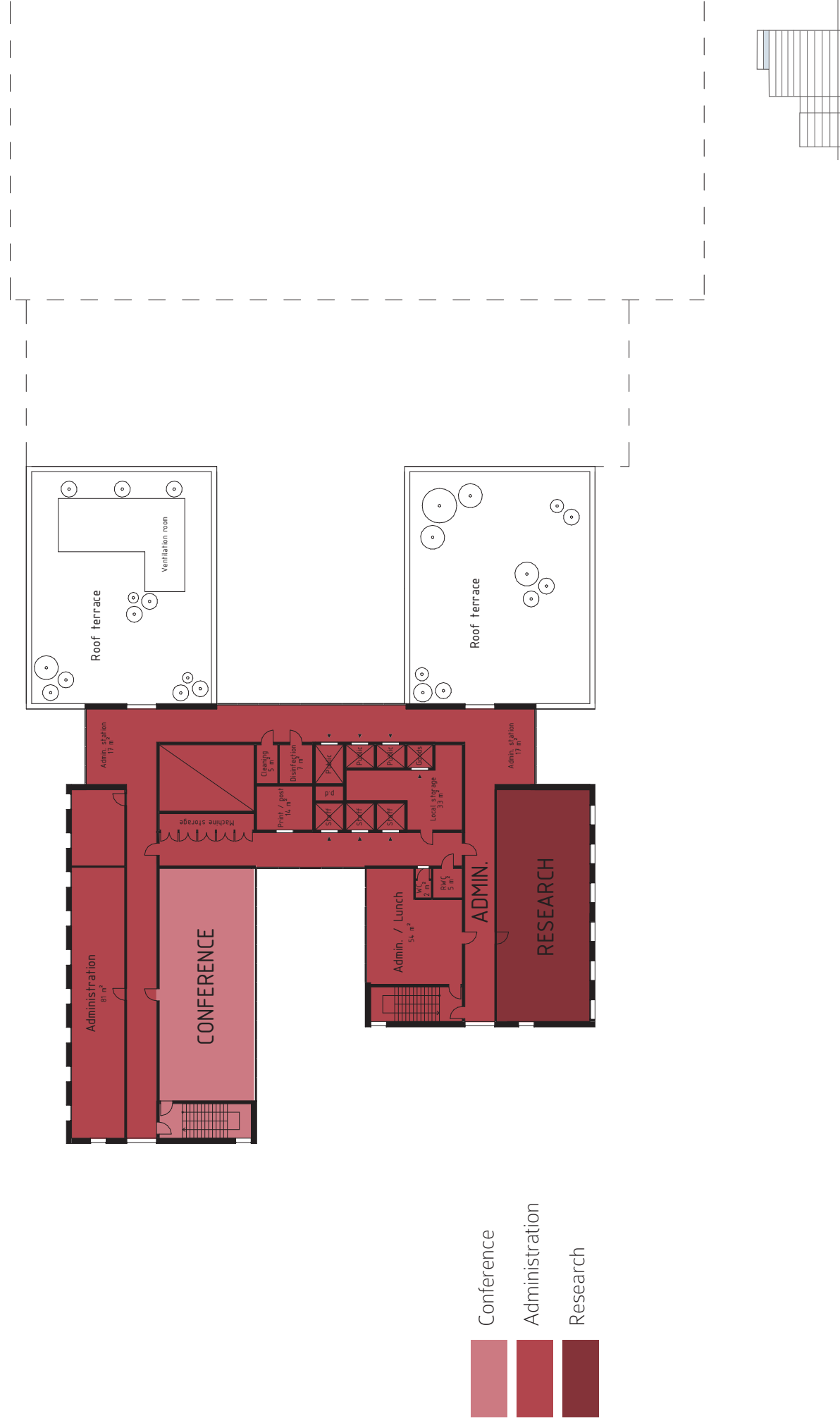


The atrium that functions as an internal, public street also functions as a restorative waiting area. The room is filled with water and greenery which condenses the flow and guides the visitor.

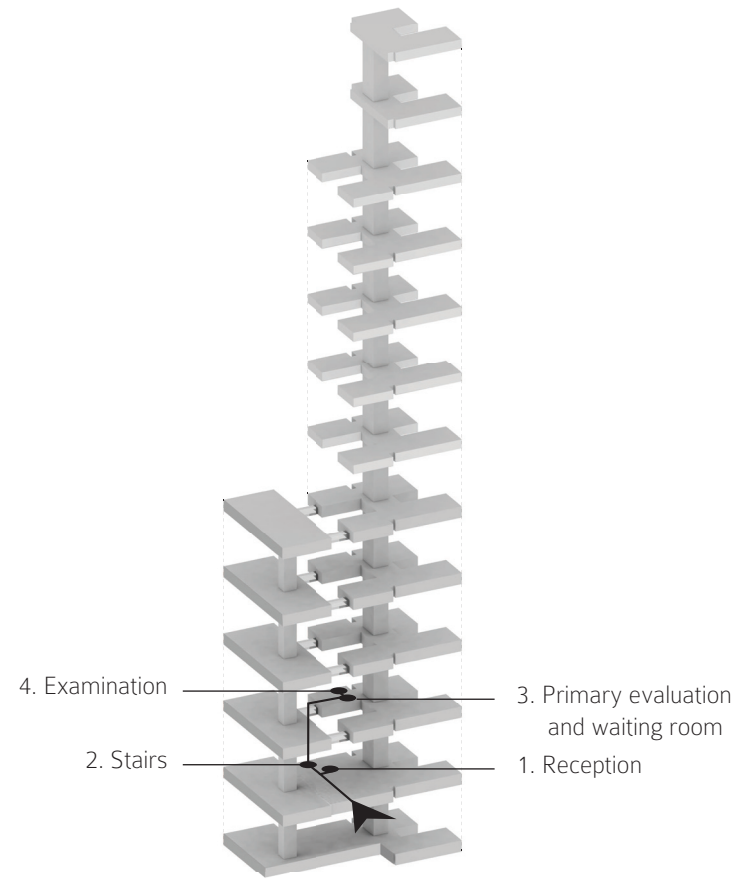
FLOOR 9



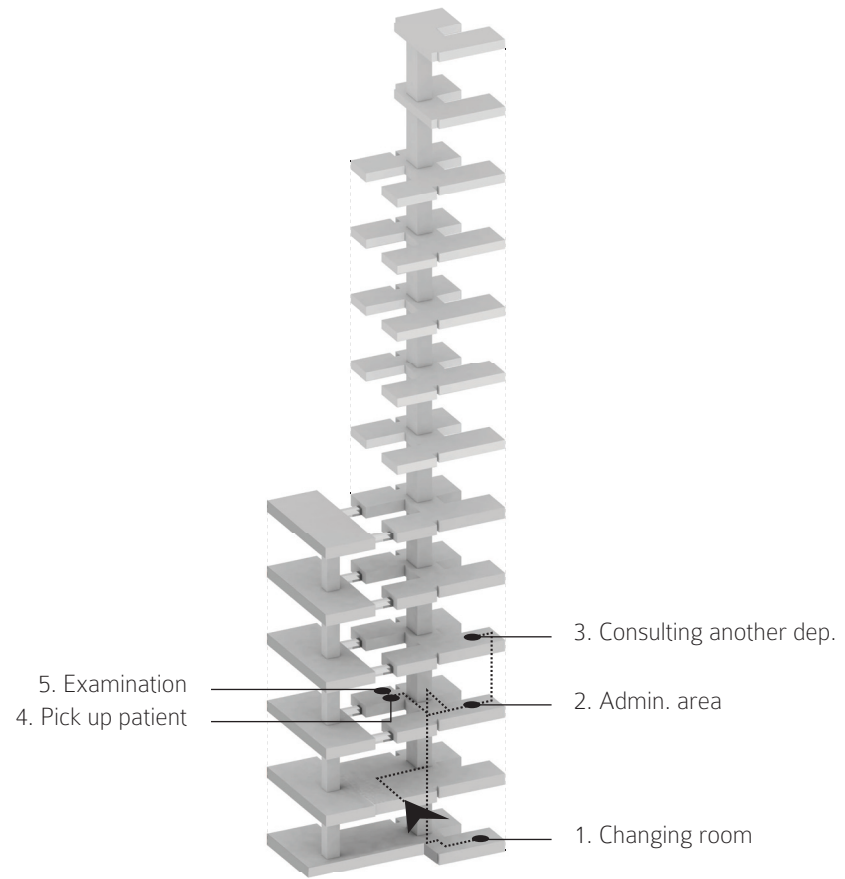
FLOOR 10



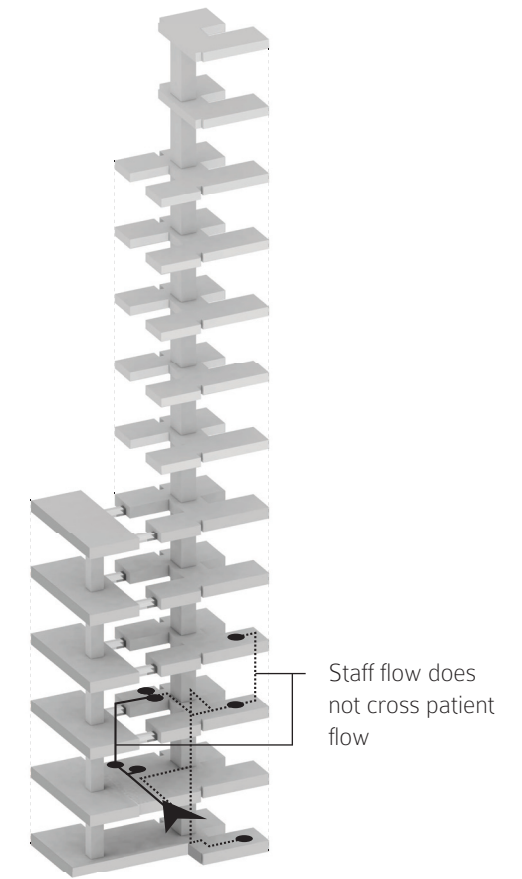
FLOWS



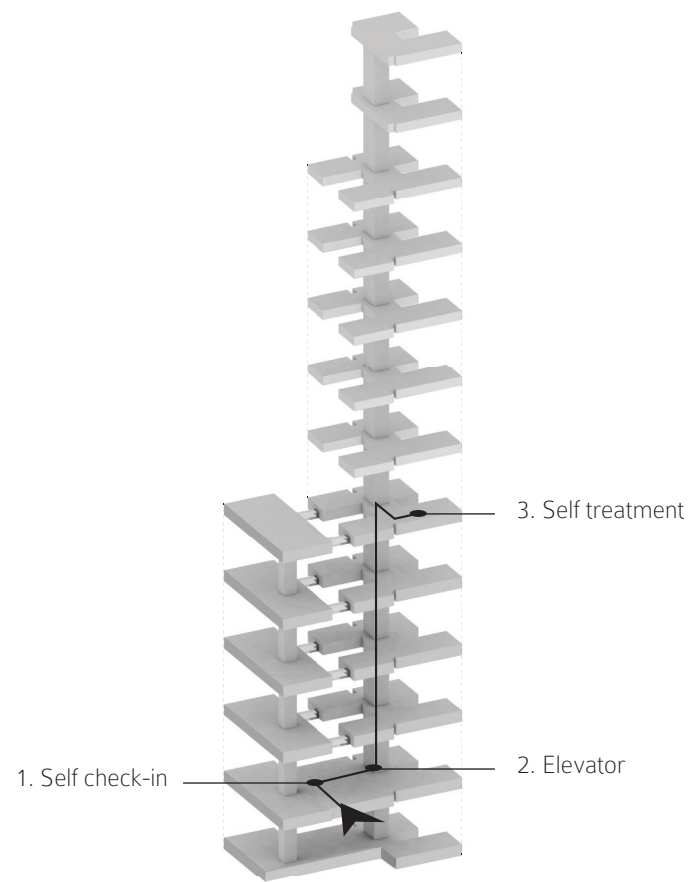
PRIMARY CARE - PATIENT



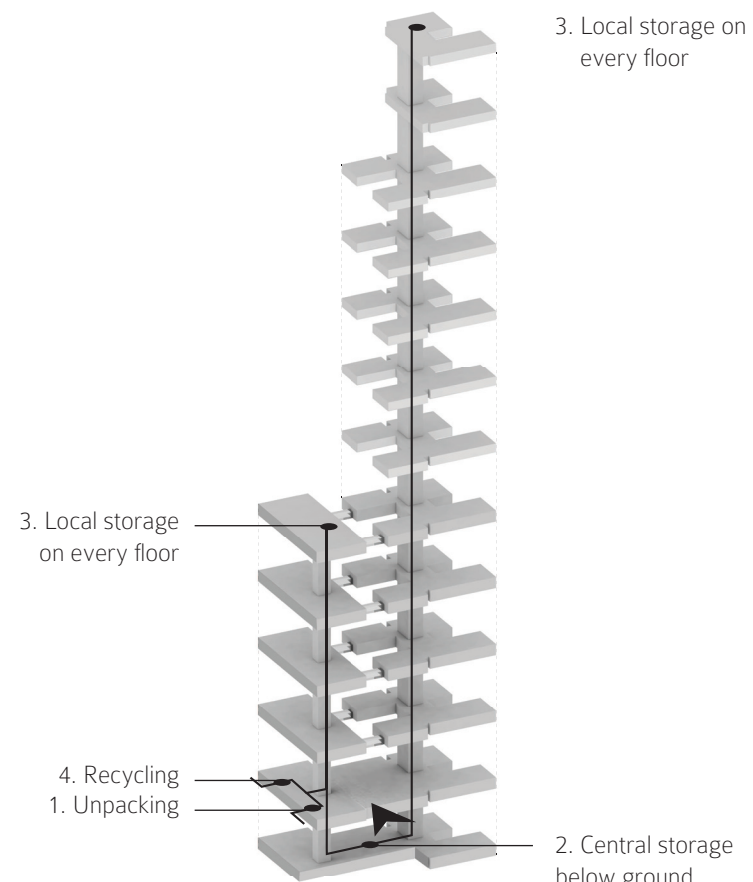
PRIMARY CARE - STAFF



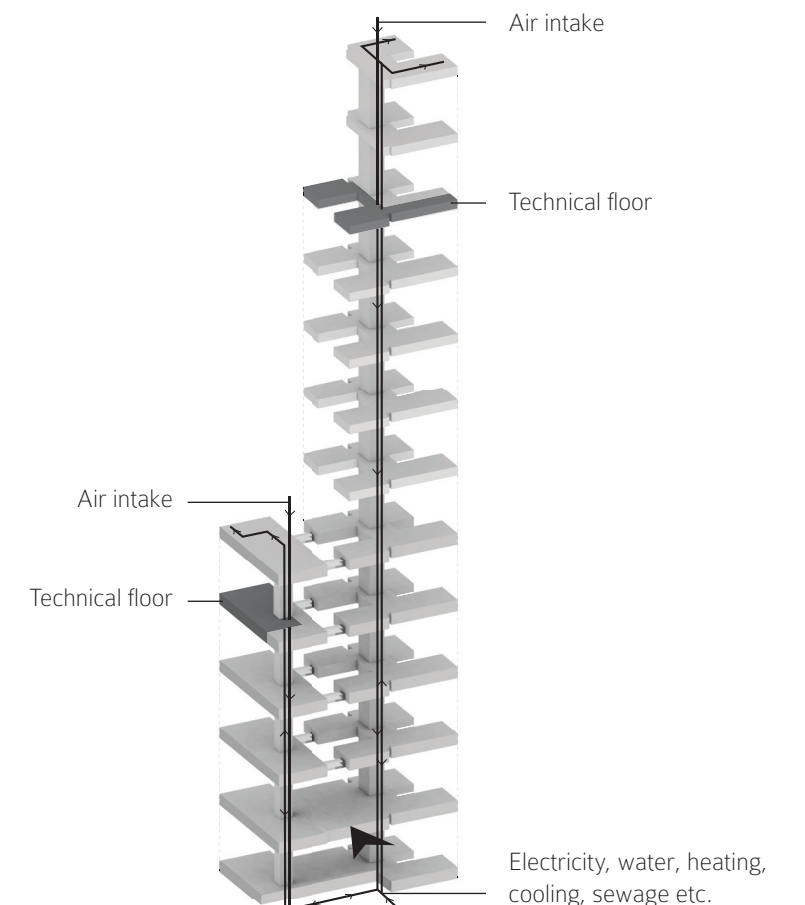
PATIENT AND STAFF



DIALYSIS - PATIENT



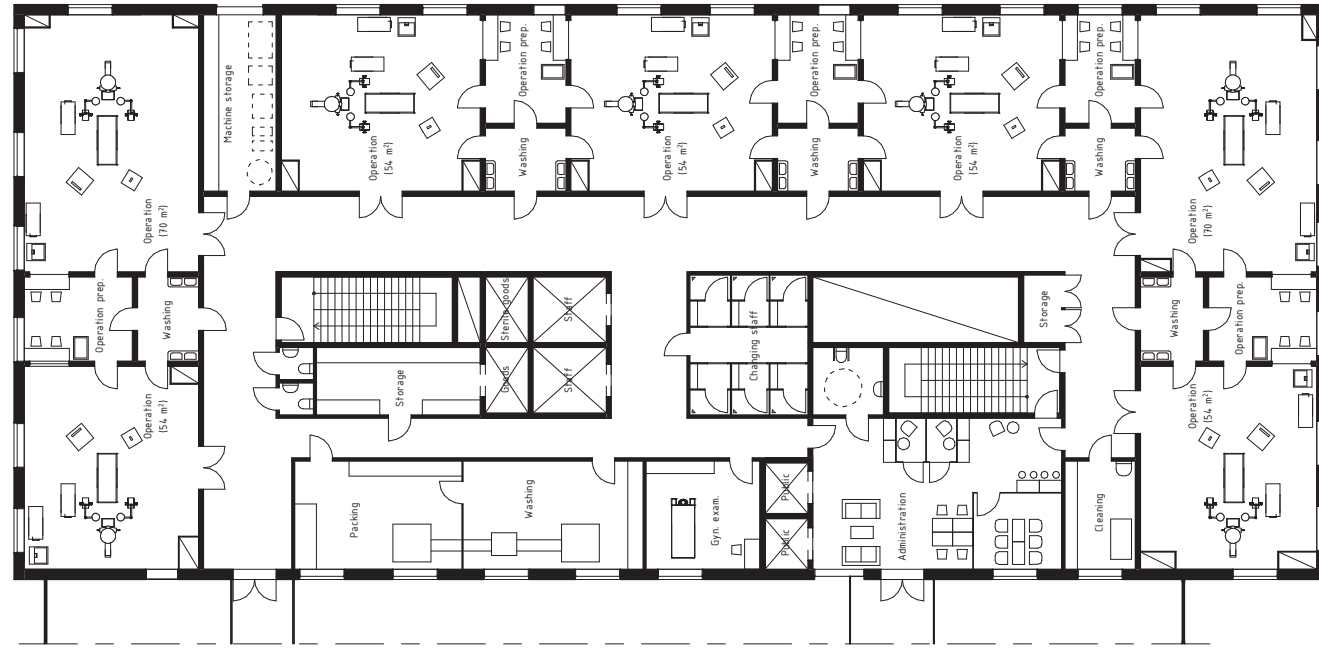
GOODS



INSTALLATIONS + TECHNICAL AREAS

OPERATION

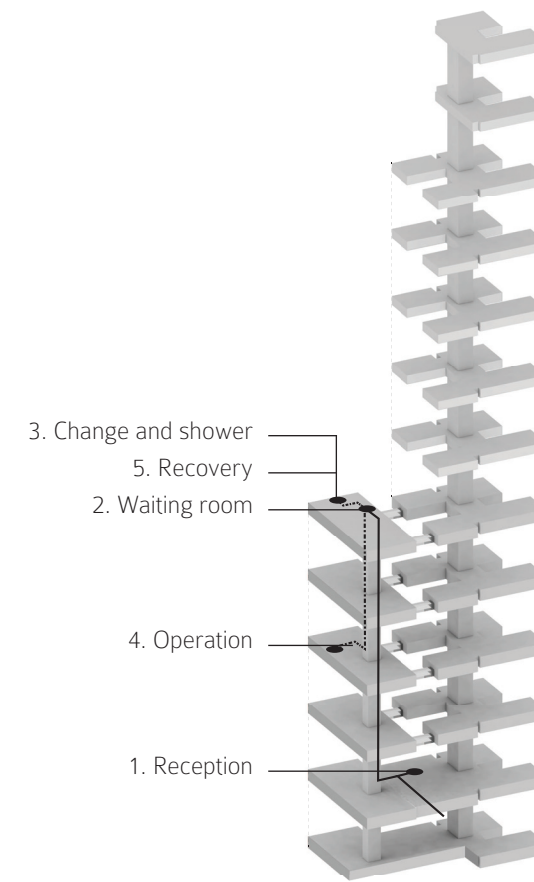
Even though the daycare would not classify as a high-tech function we wanted to place it here to minimize forcing an unnecessary flow between the buildings. This vertical plot calls for a vertical building, but by utilizing the elevators the distances on each floor is reduced.



Operation floor 2 - High-tech building

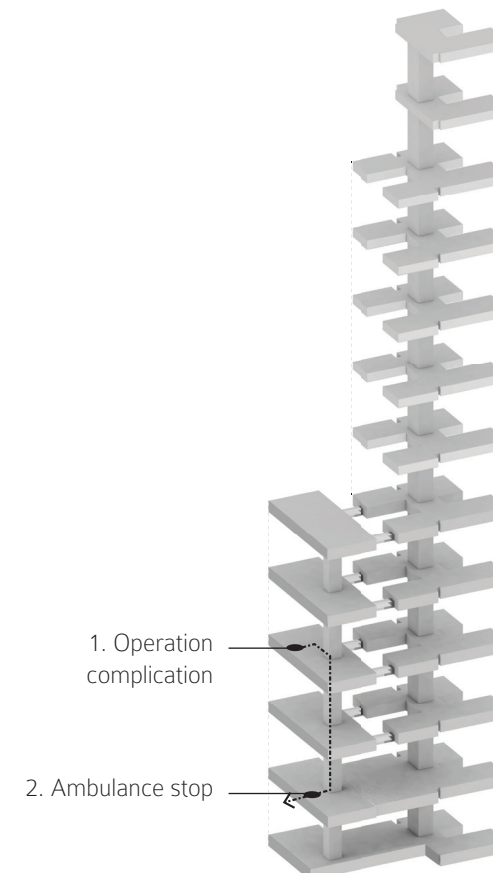


Daycare floor 4 - High-tech building



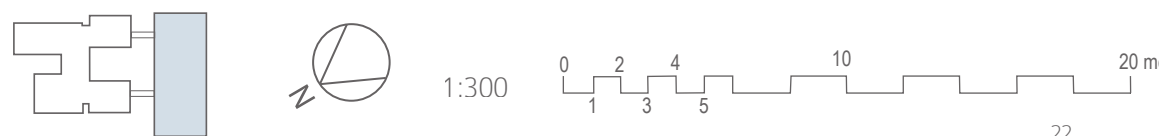
- 3. Change and shower
- 5. Recovery
- 2. Waiting room
- 4. Operation
- 1. Reception

OPERATION PATIENT FLOW



- 1. Operation complication
- 2. Ambulance stop

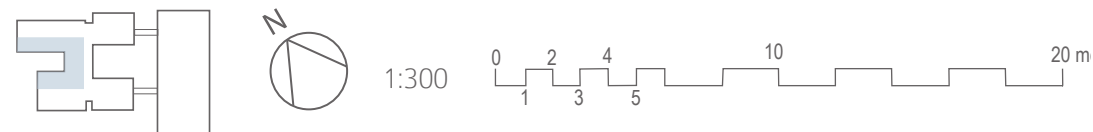
AMBULANCE FLOW



ADMINISTRATION AREA

A part of every floor is purely dedicated to the staff, this is clearly separated making it easy to work even with secrecy. This area is reachable by separate elevators to go between many floors and the direct access to the fire escape stairs making them the best alternative when moving one floor up or down.

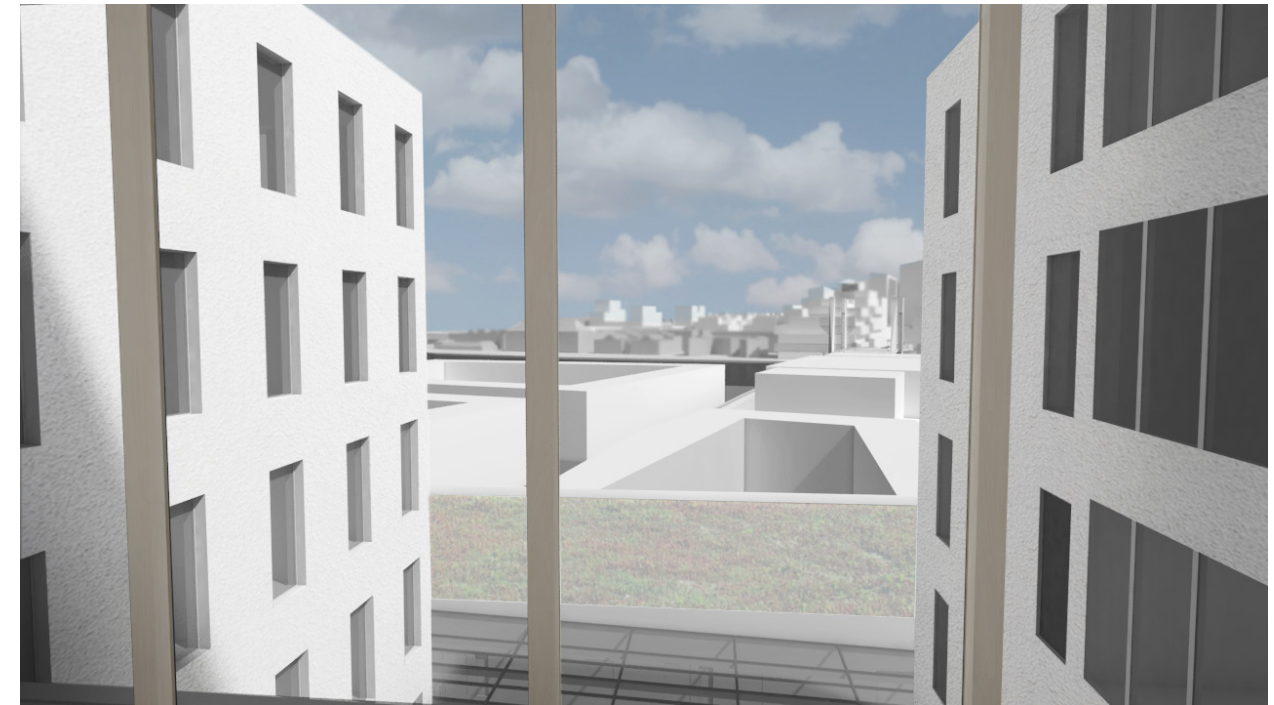
A variety of different seating arrangements to suit all kind of work and different personalities. The larger lunch room can also be used as a working space during the other hours. Smaller administration stations are placed in the middle of the corridor.



WAYFINDING

The facade towards the atrium highlighted by plaster is utilized as a memorable landmark for better wayfinding. The corridors reach all the way to the facades letting both daylight in and gives the user an awareness of its surroundings and helps to orientate.

Subtle hints for the orientation are also found in the ceiling with the direction of the wooden lamellas that highlights intersections in the corridors.



The view stepping out from the elevator at floor nine, where you see the green roof of the high-tech building, river and the new bridge in the distance.



The view turning right towards the waiting room, where you can see the corridor open towards the view to the ocean and the highlight of this corridor by the ceiling.