



LIFE GATEWAY JÖNKÖPING

Future Healthcare Architecture in the Ryhov context

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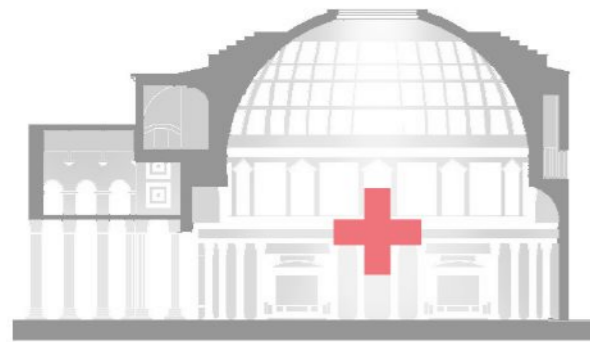
When you enter the hospital you get invited by this airy, lit-up entrance hall working as a transition zone between the existing hospital (red brick) to the left and the new extension to the right.
The reception is situated in the middle of the building

Vision and Standpoint

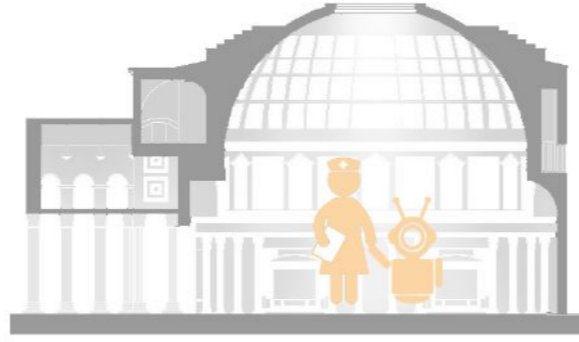
How does healthcare work in 20 years from now? What are the requirements on a new healthcare facility and what is unique about Ryhov hospital in Jönköping? This project aims at showcasing a new entrance building to Ryhov but also adds new qualities and functions to the existing hospital.

The healthcare is changing and with that the hospital building in itself needs to change! Today we are going towards a more patient focused; patient led healthcare. Hospital architecture should support this development. Not only for today's use and in the nearest future, but even further away in time.

It is our objective to create an addition that increases the perceived value of the hospital and in a humane way utilizes the technology at its best. To create an explorative journey that at the same time is easy to comprehend and orientate in. A conference-like arena where the patient can be supported by others support him- or herself.



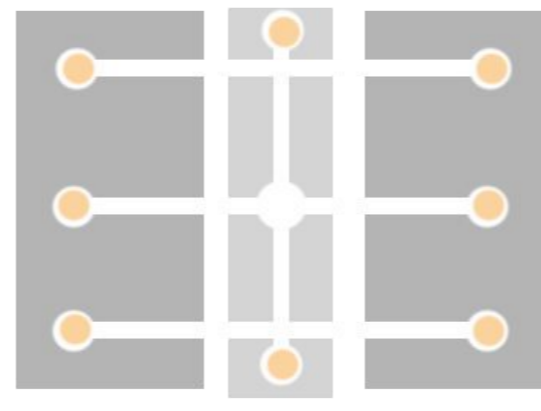
Value
The big gesture. Putting healthcare buildings at the same level as buildings dedicated to art, finances and politics



Trust
An arena where technology supports the traditional healthcare. Human contact is still the most important part but where the modern technology facilitates the work.



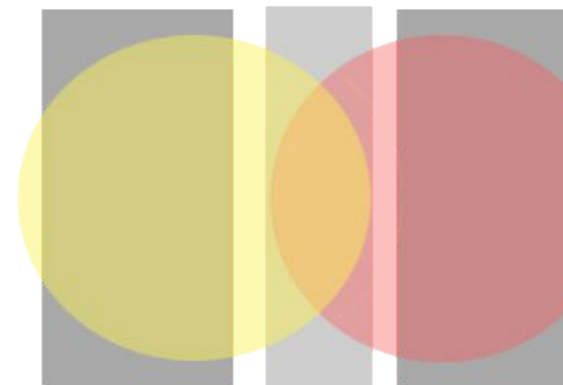
Journey
An explorative journey where you can experience the building in different ways. But also a technological journey exploring the new technologies in healthcare.



Wayfinding
By keeping the old flows and having clear visual sightlines wayfinding becomes facilitated.



Sustainable flexibility
Flexible rooms and a robust structure that can hold a set of different functions, depending on the future needs.



Transition
Making the transition between the old and the new by creating an arena where the two can meet on the same ground, in the tension area between the buildings.

The hospital should!

1. Be a physical manifestation of the art & science of healing, and the timeless values connected with this. An explorative journey and a big gesture towards the rest of Jönköping
2. The building should have an inherited value; it should be an important part of the community and there to serve you in all scales.
3. Meet the needs of tomorrow's healthcare in the Jönköping region, and act as an inspiring role model for equivalent projects abroad.
4. Robust enough to endure technological changes and improvements.
5. Create a platform where technological assistance, the human touch and presence and modern research interconnect and merge into a patient oriented team (case) set up-arena (conference)
6. Connected to the site and use natural elements as daylight and greenery in its design.

Background and Context



Ryhov Hospital (Red) is separated from the city center of Jönköping by the Highway (Black)



The suburban areas of the city are also located at a considerable distance from the hospital, usually with the highway inbetween. This makes the flows to the hospital largely bus and car-dependant .



There are industrial and logistical areas situated close to Ryhov which helps us understand the connections and the prerequisites for the new design.



The entrance situation to the hospital and the traffic situation surrounding it becomes clear and makes us focus on the site in front of the existing hospital entry. This is, as we see it, the natural tension area and this is where we propose an extension to the existing hospital

The surroundings

The hospital area is located southeast of the highway and the lake Rocksjön.

The new building is located in front of the existing hospital, acting as a gateway or transition zone into Ryhov. From the north, bus and taxi arrives and on the south side, the private parking area is situated.

The new building volume corresponds with and reinterprets the structuralistic planning and ideas of the existing hospital with its flows and courtyards. Looking back onto the existing materiality with its light red brick and white concrete beams, we use a light yellow Danish brick from Petersen Tegl.



Existing Brick



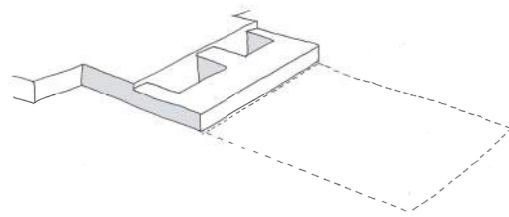
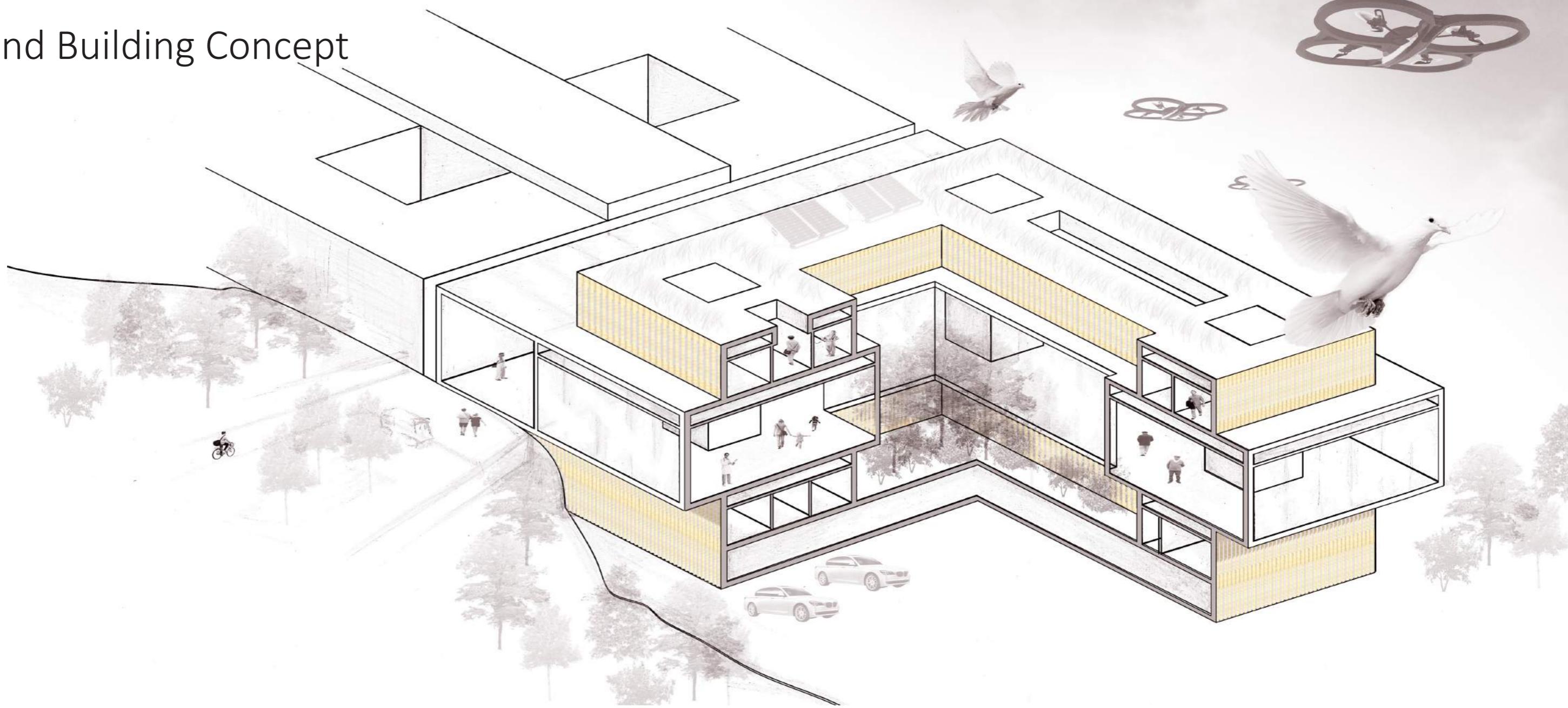
New Brick

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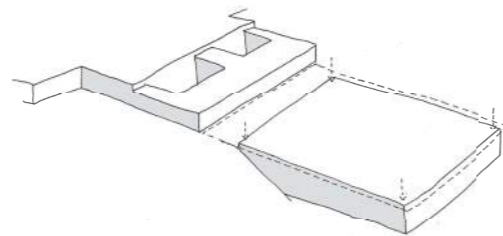
Figure Ground 1:4000

1:4000

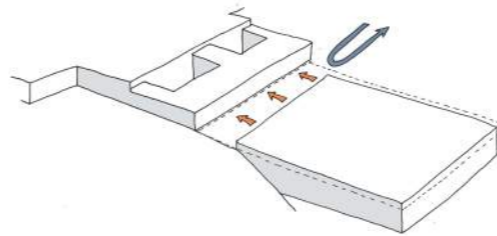
Site and Building Concept



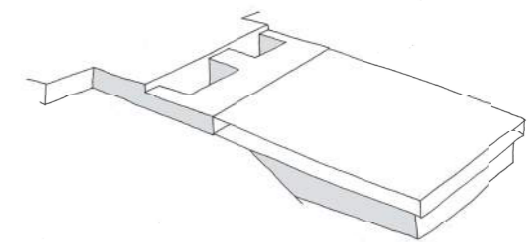
In order to use and connect to the existing structure as rational as possible and at the same time give clarity to the program and the site we propose an addition in front of the existing main entrance.



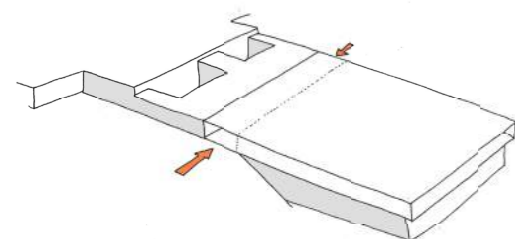
We create a new acute level on the location of the existing parking one floor down and in front of the existing entrance.



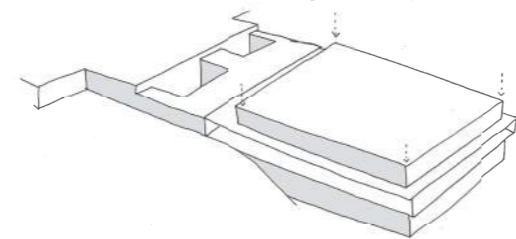
The new building mainly follows the principles and flows of the existing structure. The ambulance arrival is slightly moved to better meet the needs of today but keeps its major path.



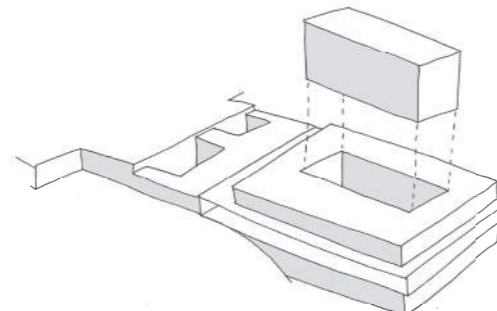
On the main level, we think an opened up pavilion could facilitate future needs of openness, meeting, learning and self-diagnosis.



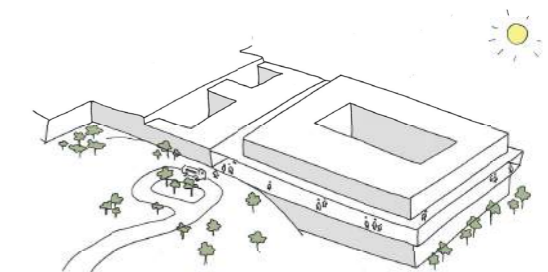
The new entrance is located between the old and the new main building.



The program requires additional space that is connected to both the pavilion, the entrance and the acute. We suggest it is located on top of the pavilion.



We think light, air and greenery are key factors to consider in a good healing environments and there create a big outdoor courtyard located centrally in the new extension.

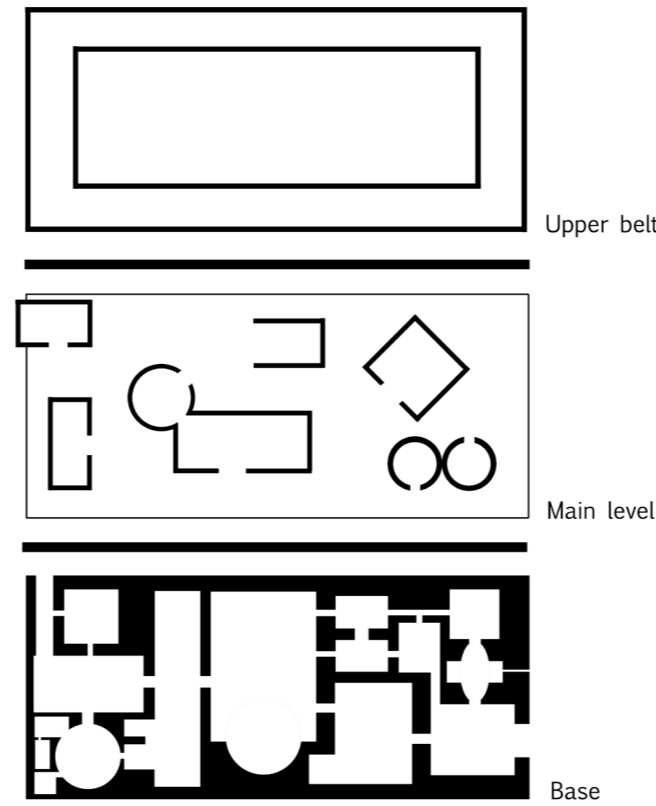


The Life Gateway builds upon the existing, facilitates future needs for healing environments and gives a big gesture of value to the Ryhov hospital and Jönköping.

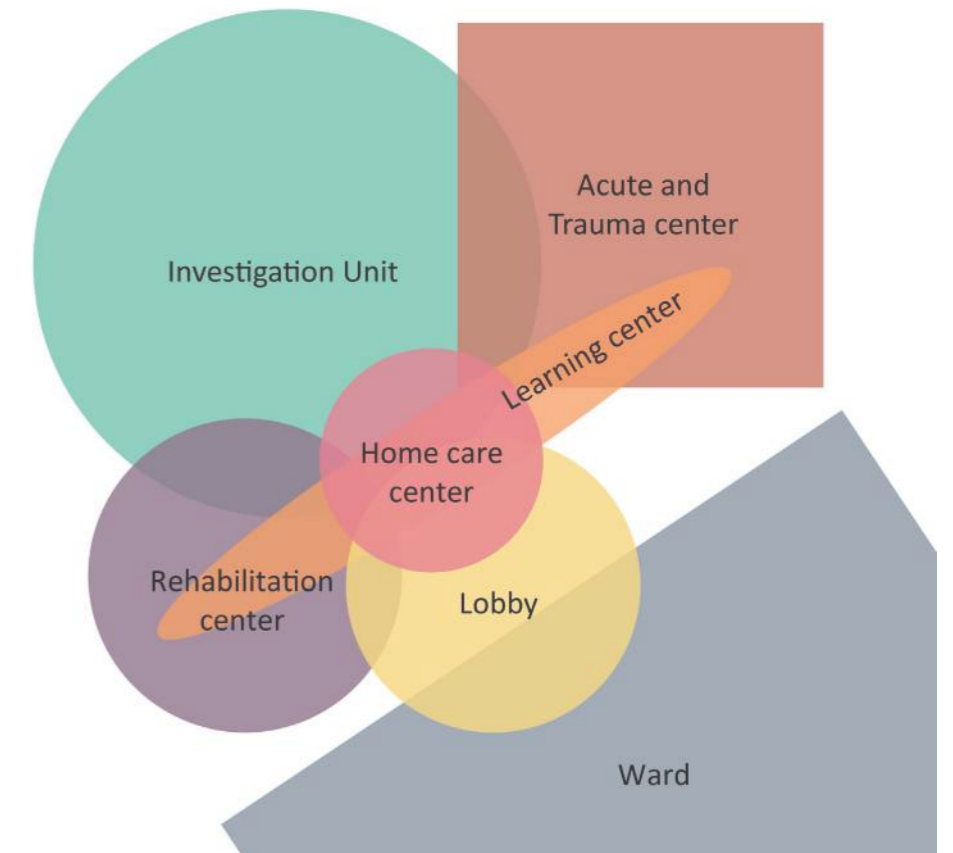
Programmatic Concept

Programmatic ideas:

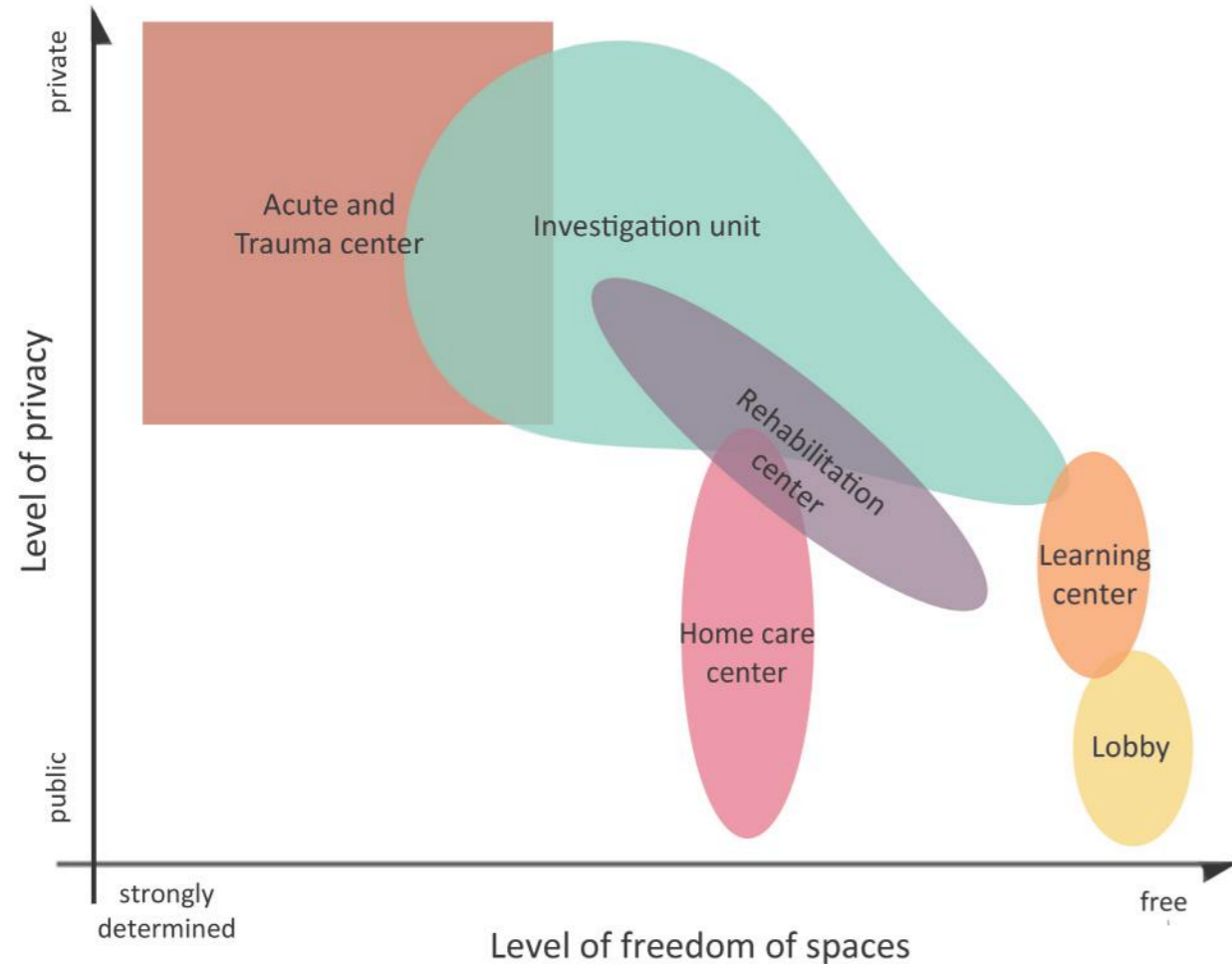
1. We want to let the learning center be spread out and influential on the other parts of the program.
2. Our aim for the investigation unit is that it will be a central part of the program handling complex issues in a patient oriented set of teams, research, and technological assistance. This unit should be the primary catalyst on how to improve and modernize LGJ. The investigation unit will be the core of the new LGJ.
3. The acute /trauma could be kept in place but rethought in terms of accessibility, flow, adequate space and function. Here good examples have been studied.
4. The entrance should connect to the old one in a clear way. The entrance should give an airy, overlooking and welcoming feeling. The entrance should be in the "tension area" between the old and the new building.
5. The rehab should give new input when it comes to what a rehab can be. It should be health promoting and at the same time open up for more advanced technology than before. 3D- printing of prosthetics and customizing them can be a part of the functions that the rehab can house. This to raise the status of the rehab and open up opportunities for it to be relevant for the whole county.



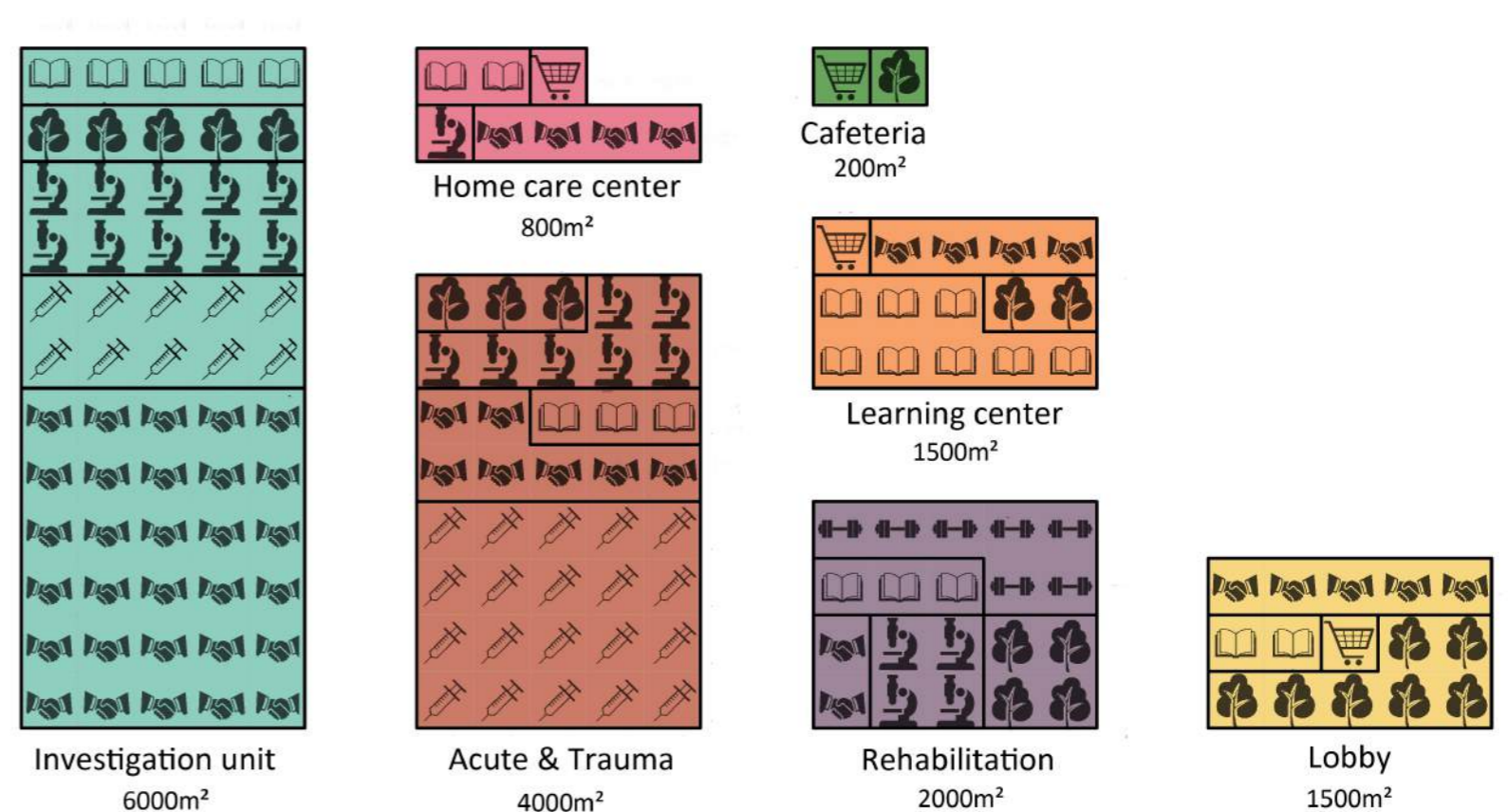
Layout concept



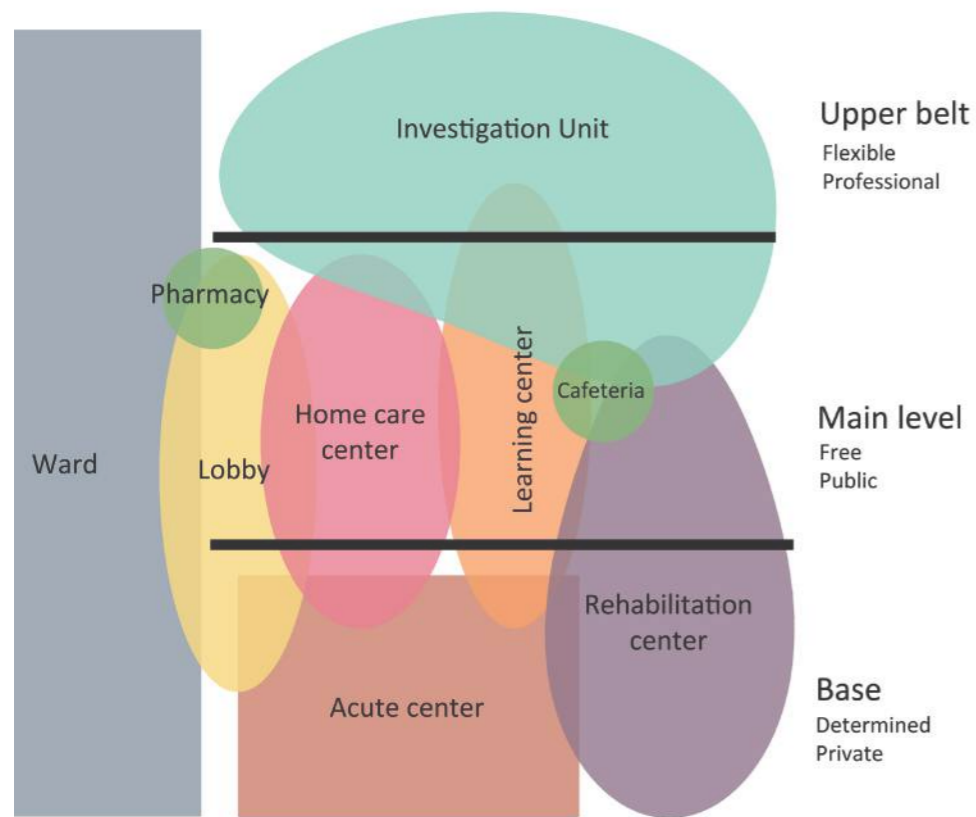
Interconnections between the different programs



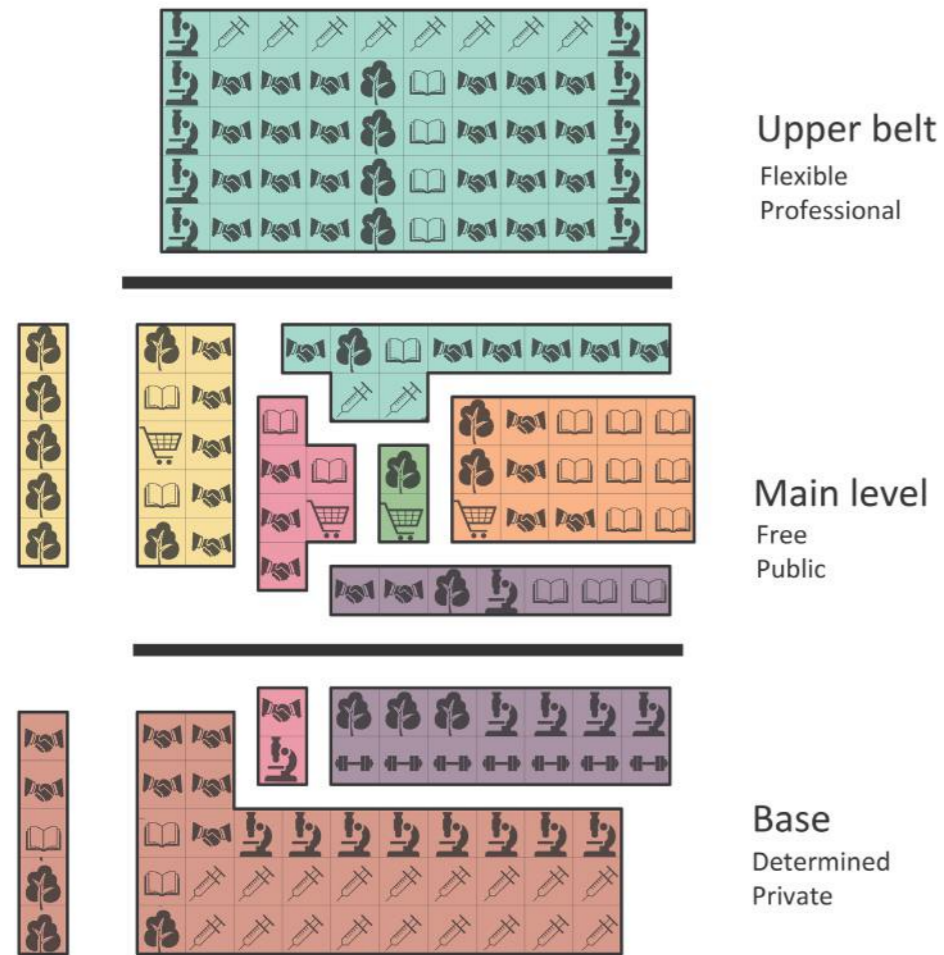
Identification of the aulities required by each program- privacy and level of freedom



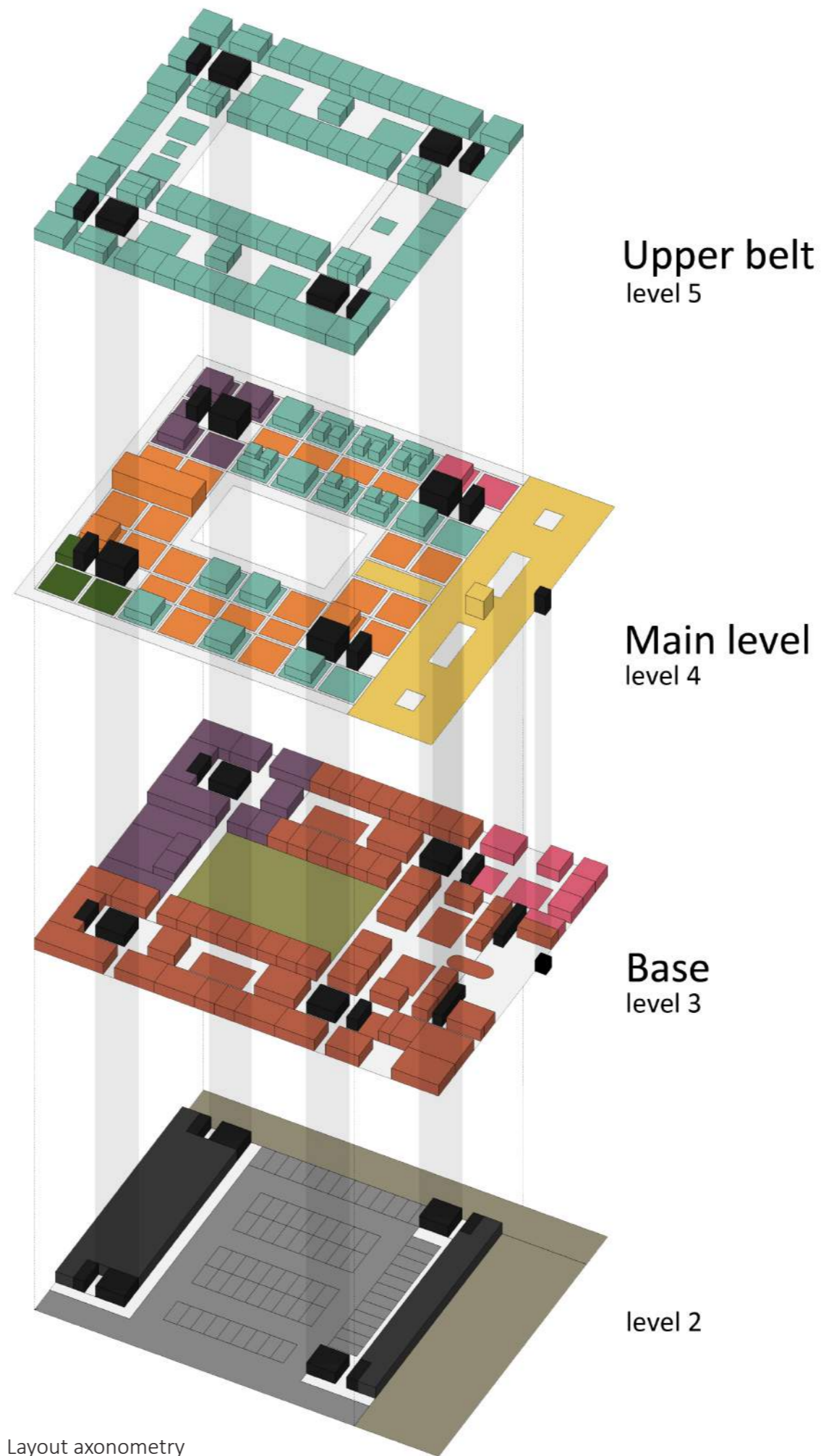
Division of the programs into fundamental functions



Global layout of the programs regarding their qualities (set by the floors) and interconnections previously determined



Global layout of the programs with their functions



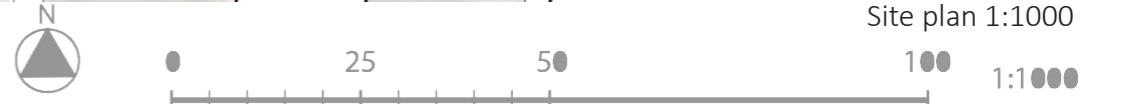
Layout axonometry

- Investigation Unit
- Acute & Trauma center
- Rehabilitation center
- Home care center
- Learning center
- Lobby
- Existing wards
- Restaurant
- Delivery
- Parking
- Technical rooms
- Meeting
- Medical Intervention
- Laboratories
- Learning
- Sport & Health
- Recreative spaces
- Commercial spaces

The Site

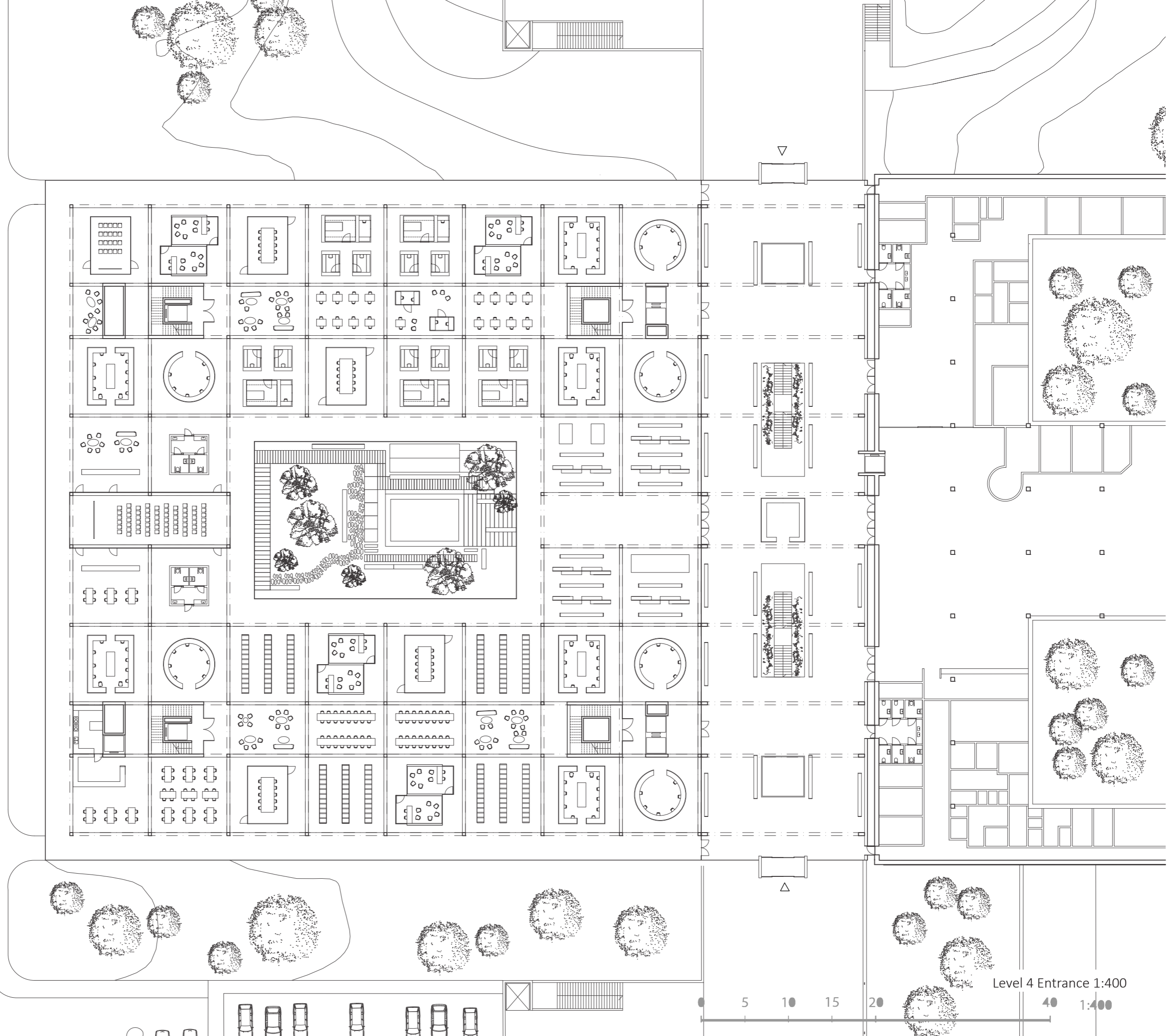
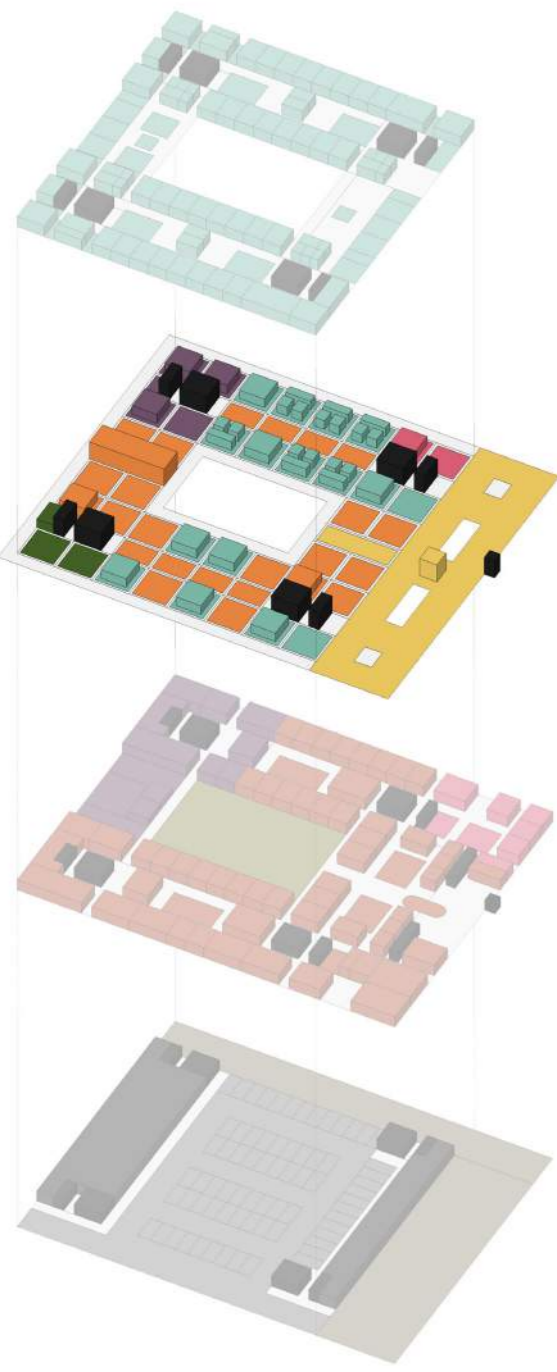


Site plan 1:1000





View from the north entrance square where the bus and taxi stops are located. The existing Ryhov hospital is seen to the left in the above picture.



Level 4 Entrance 1:400



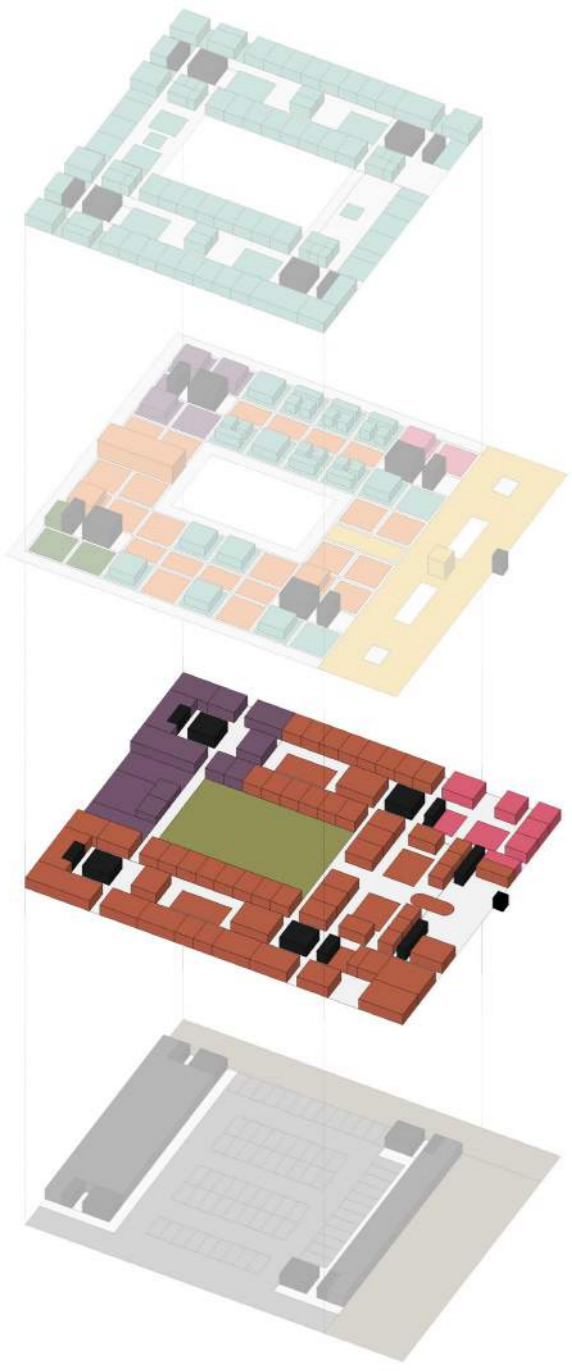


View from the reception area into the pavillion and the library.

The open main level is an inviting platform for learning and meeting and functions as the living room of the hospital. It's closely situated to the existing wards aswell as the acute, investigation, parking, main reception, auditorium, cafeteria and restaurant.

You enter the hospital into an airy entrance hall with light from above and a centrally located reception. The stairs down to the acute are situated right in front of the main entrance and are easy to find. There is a glazed gap between the entrance hall and the old hospital. This gives light to the acute waiting room one floor down and makes the addition clear. Glazed bridges connect the two buildings. The border between the entrance hall and the pavillion consists of glass walls and doors.

A set of elevators and and staircases are located in each corner of the pavillion. To the outside and to the garden, a walking zone is situated between the columns and the windows. This, from the outside, stands out and creates a very welcoming impression of this level. On the main Level, a set of self-check in and self-diagnosis boxes are located. Learning and meeting are the main activities on the south side of the main level. In the southwest corner, a restaurant with an eco-profile is situated.



Level 3 Acute 1:400

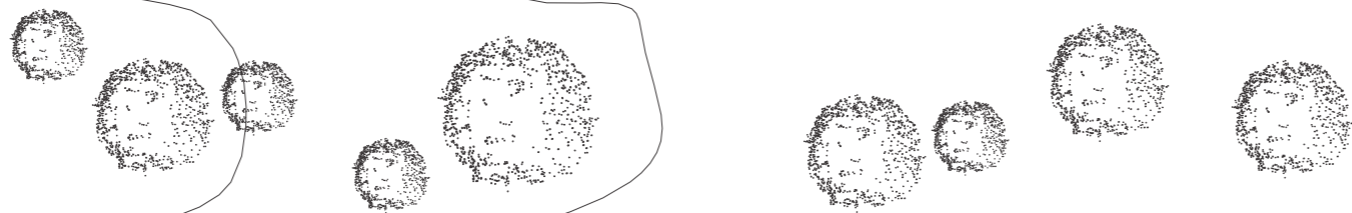
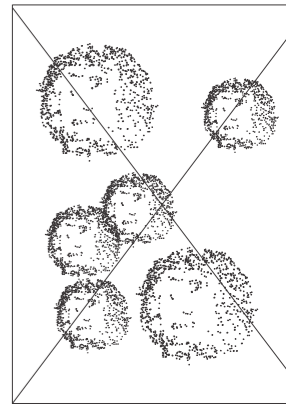
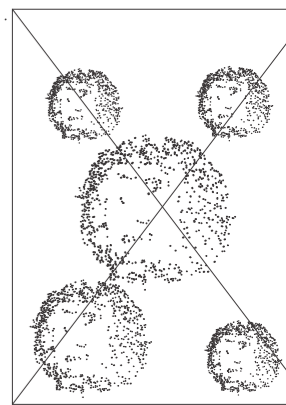
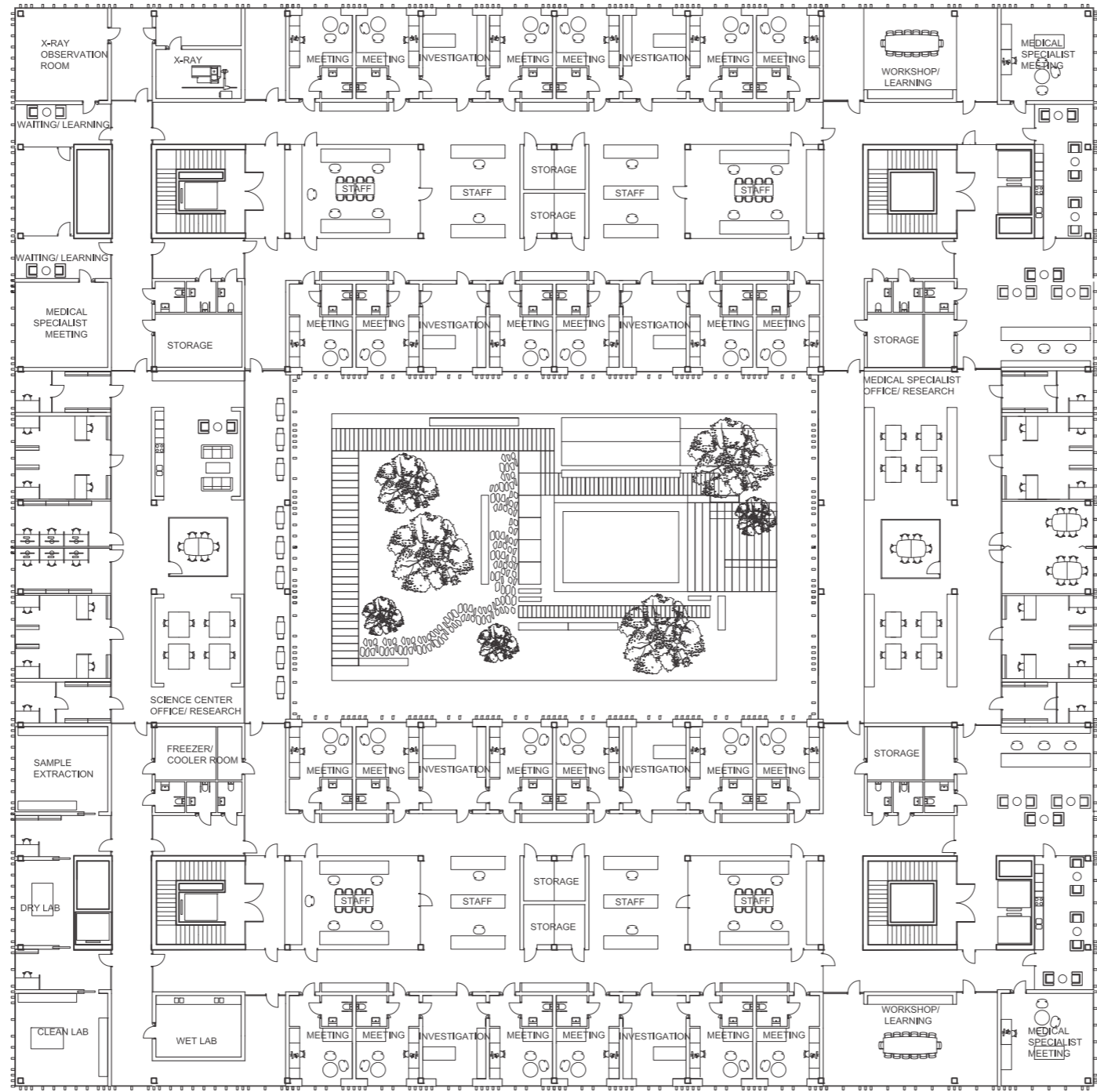
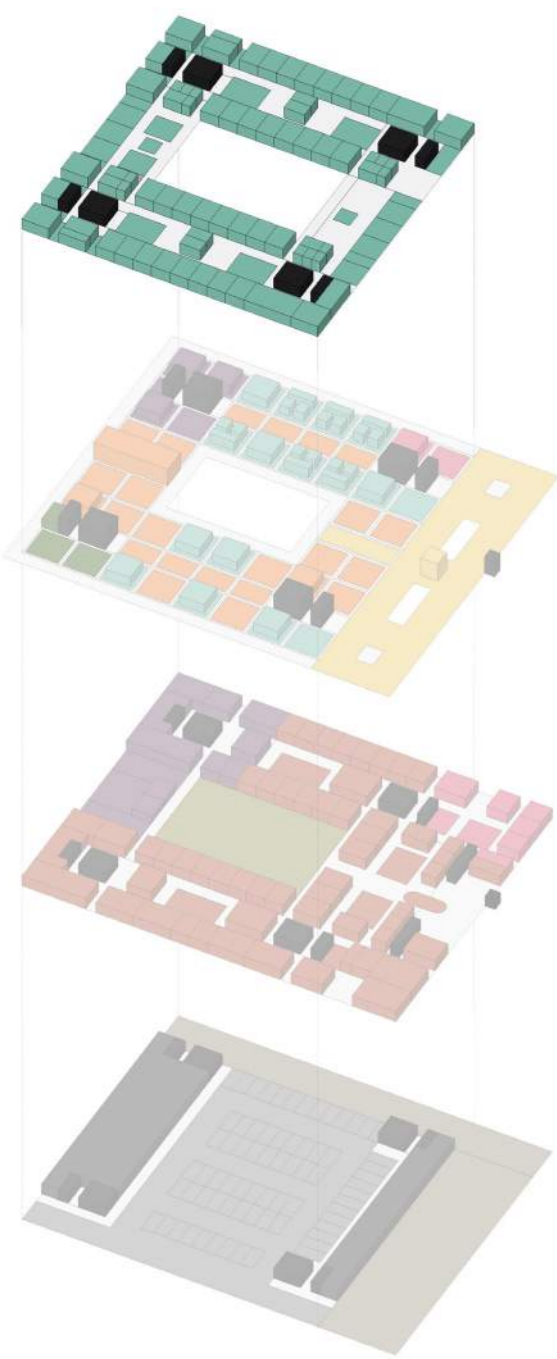




Axonometric view of the acute level with its triage and reception

One floor down from the main level, the acute is situated. You enter through the stairs or elevator in the entrance hall and face the reception and waiting room. The staff has temporary working spots and support areas located in what we call “the bridge”. From here, the examination, investigation and operation rooms can be overviewed. Close to the reception, there is a set of small triage rooms for first tests and meetings. Further into the system, a set of examination rooms are located to the calm courtyard. Between the courtyard and the reception, relatives can sit and wait while having a cup of coffee.

The ambulance enters from the south. There are two trauma rooms for handling immediate difficulties and pre-op, x-ray, laboratories and operation as well as intensive care (in the existing building) closely situated to this. On the far west of the acute level, a rehab facility is connected to the garden and the views of the forest outside. From the reception on the main level you reach gym, prosthetics-department, physiotherapist, and a swimming pool. The Home Care department has a reception on the main floor and most of its staff in the acute level close to the car-bound home visit and (possibly) drone-bound home delivery. In the southwest corner, there are some set back staff-rooms and administration.



Level 5 Investigation 1:400



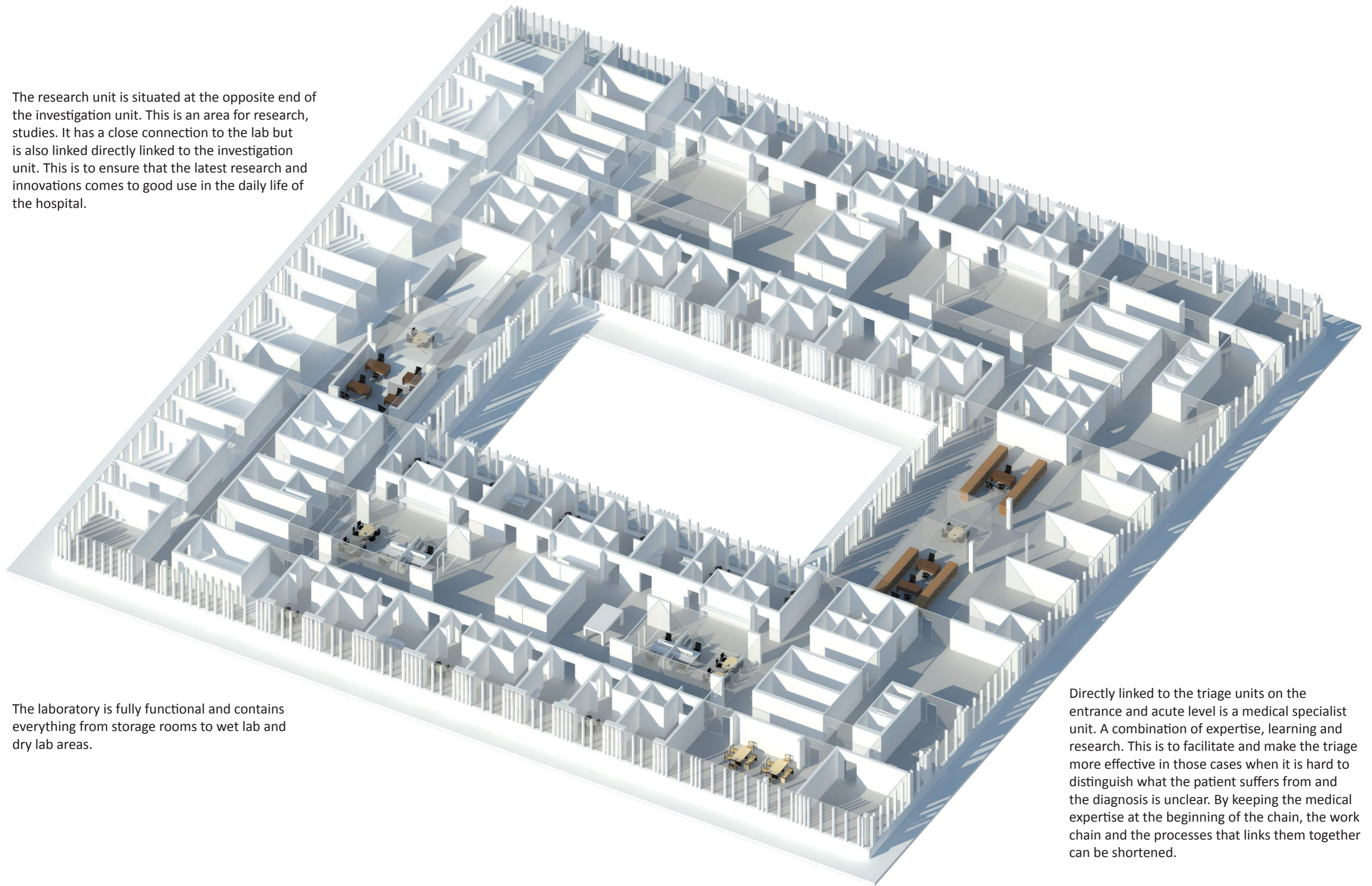
The upper floor is created and designed to help Ryhov stay as the forerunner of Swedish healthcare. Both when it comes to innovation, research and education. The learning unit is spread out instead of concentrated into one spot to fully integrate it into the healthcare unit and situation.

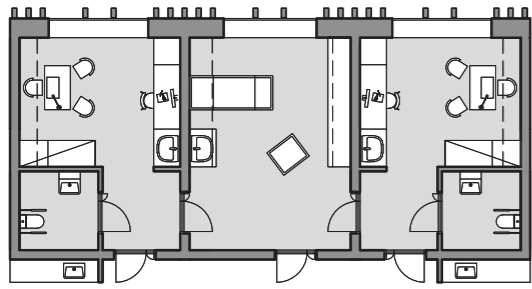
View into the investigation units hallway and workstation

The research unit is situated at the opposite end of the investigation unit. This is an area for research, studies. It has a close connection to the lab but is also linked directly to the investigation unit. This is to ensure that the latest research and innovations comes to good use in the daily life of the hospital.

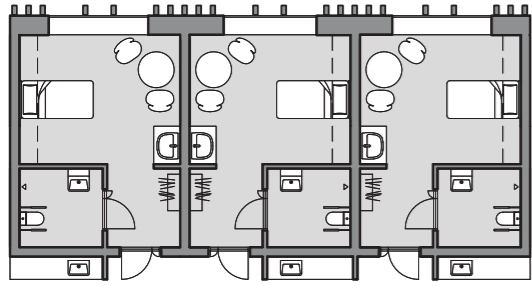
The laboratory is fully functional and contains everything from storage rooms to wet lab and dry lab areas.

Directly linked to the triage units on the entrance and acute level is a medical specialist unit. A combination of expertise, learning and research. This is to facilitate and make the triage more effective in those cases when it is hard to distinguish what the patient suffers from and the diagnosis is unclear. By keeping the medical expertise at the beginning of the chain, the work chain and the processes that links them together can be shortened.

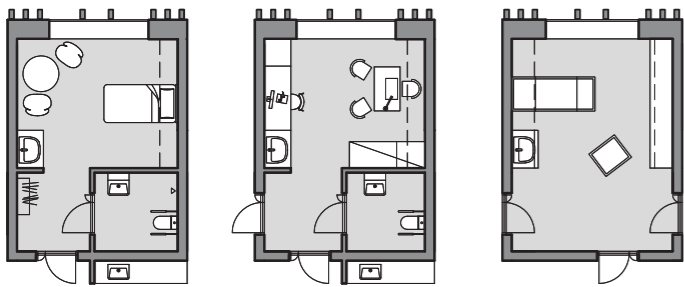




The principal set up in the investigation unit is two meeting rooms connected to a larger investigation room. Lighter treatment and examinations can be performed in the meeting room, but in case of multiple diagnoses and unsatisfactory results the more advanced examination room can be used. This room has been kept open and spacious so that machines and portable healthcare devices can be rolled in. The healthcare comes to the patient.



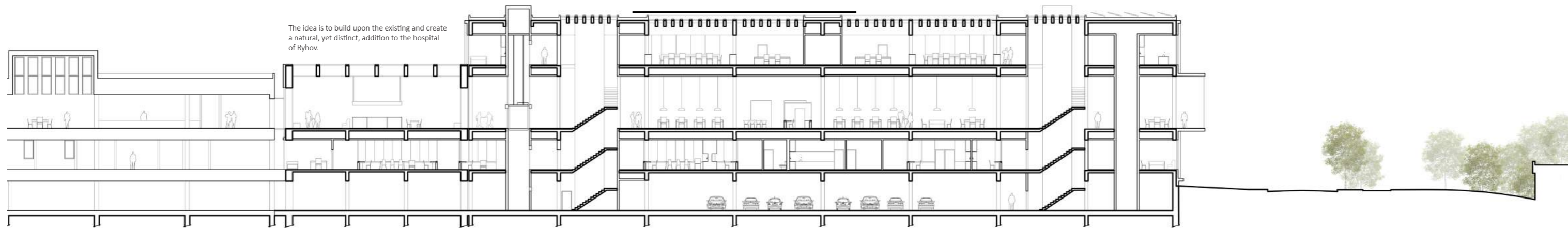
The rooms have been kept in a general size and design. A room can easily be changed from a meeting room into a ward room, or into a room for more in depth investigation. This is to future proof the building even further since we cannot be fully sure how the healthcare will develop and evolve during the coming years. Each room type have been equipped with its own washing basin to keep the unit hygienic and avoid the spreading of infections. In the case of the wardrooms and meeting rooms an extra set of clean up stations has been set up in the corridor outside the room





Sustainability, according to us, is a lot about generality and robustness. The building should, through its layout, structure and set of spaces endure programmatic changes and adapt to future needs.

Section North-South 1:400



The idea is to build upon the existing and create a natural, yet distinct, addition to the hospital of Ryhov.

Section North 1:400



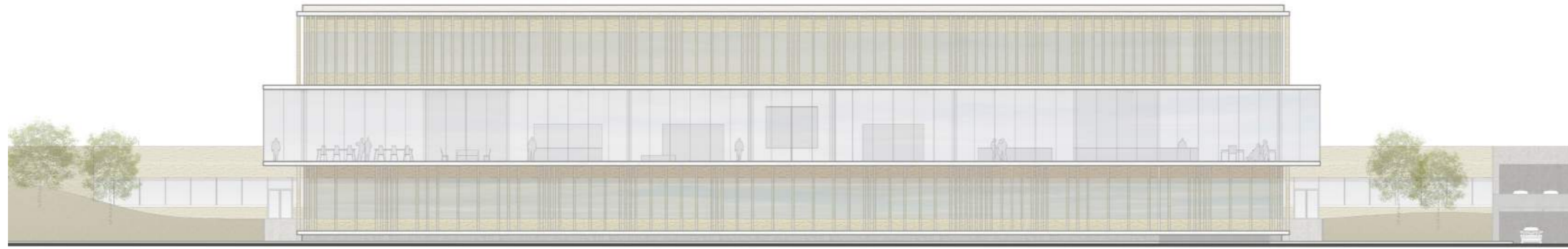
The main entrance gets light from above, raising the value and gesture of the hospital.

On the roof, solar cells and solar panels produce electricity and warm water for the building. A green roof acts as a natural habitat for birds.

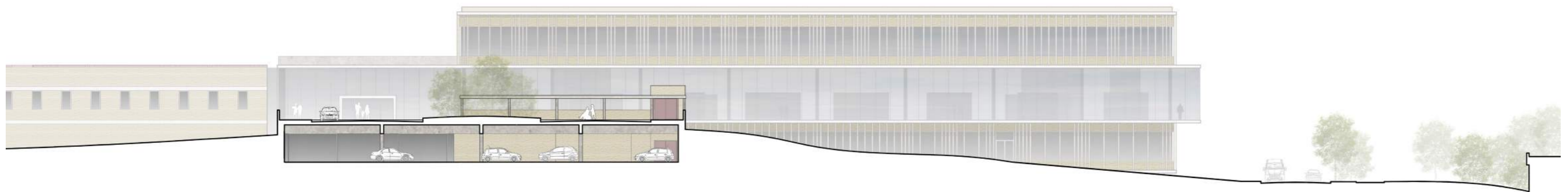
In the garden, greenhouses produce vegetables for the restaurant on the main level. Here, long-term patients are also given the chance to grow themselves.

Elevation North 1:400





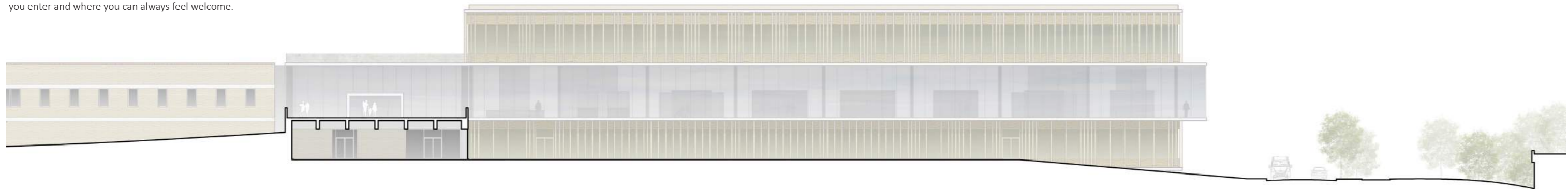
Elevation West 1:400



Elevation North 1:400

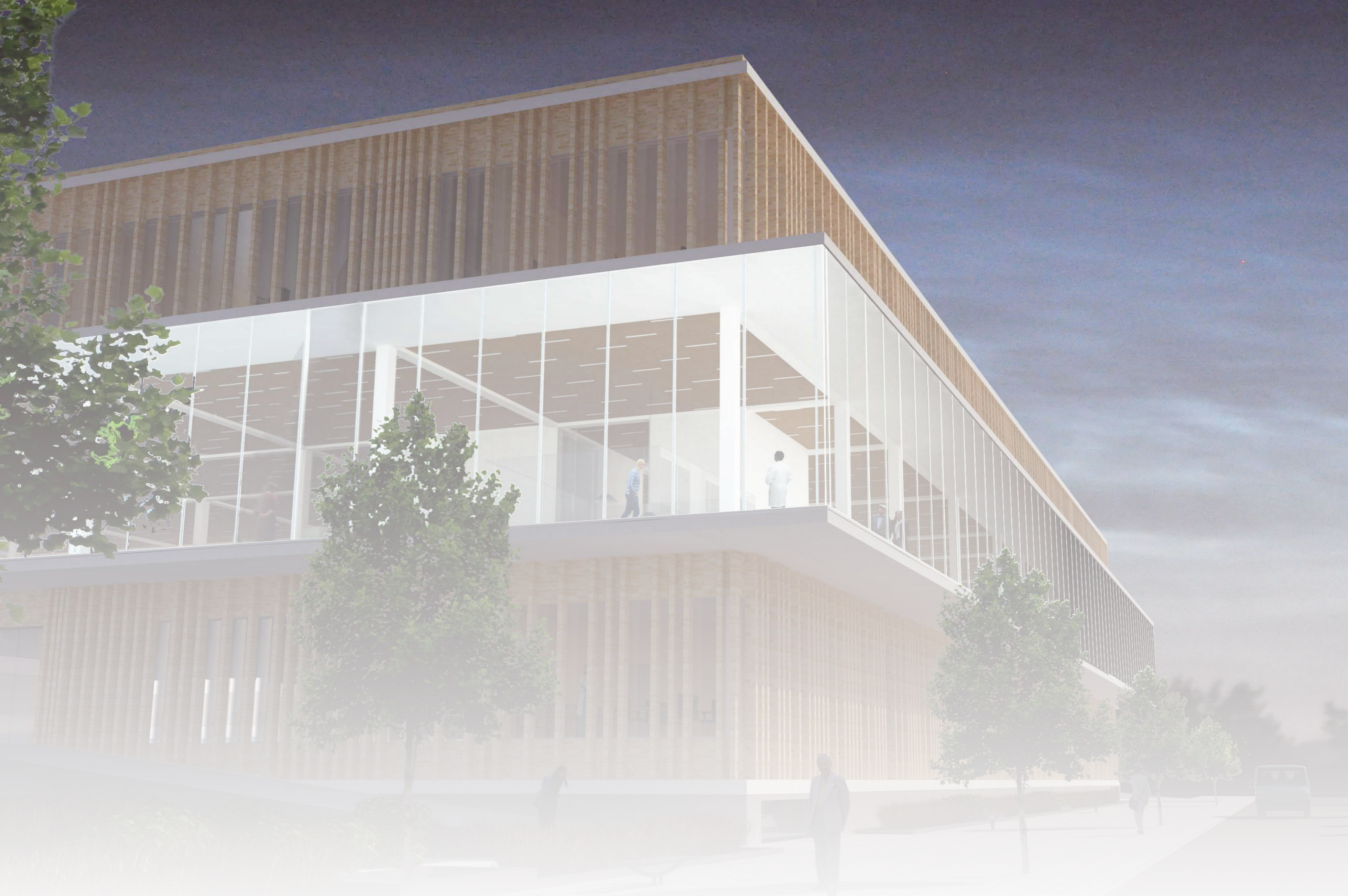


Conceptually, the glazed up main level contrasts the two brick-column covered lower and upper level and signals where you enter and where you can always feel welcome.



Elevation North 1:400





Evening-view of the building from Försörjningsvägen

