



FRONT VIEW



GYMNASIUM COURTYARD VIEW

REHABITAT

Rehabilitation centre REHABITAT takes its name from a combination of the words rehabilitation and habitat. These describe the project as a place for rehabilitation characterised by optimal conditions for its users. The main design directions shaping these optimal conditions are structuralism and biophilia.

Important for structuralism is the openness of the system and its incompleteness, which is more like a constantly changing city than a defined, finite architectural composition. It is this characteristic in terms of responding to the coming increase in the incidence of stroke as a result of an ageing population and population growth that allows the structure to adapt to current needs. Therefore, a designed rehabilitation centre is never finished. Thanks to its modularity and characteristic 'block-courtyard' layout, it can be extended in the future to meet current demand for such units. Structuralism also aims to create a balance between private and shared spaces. Designing spaces where patients can actively participate in the community has a major impact on the recovery process. Activity and social support is important in protecting against the onset of post-stroke depression, which is a factor that reduces motivation for further rehabilitation ¹.

The aim is a balance between these spaces and the possibility for users to control these zones. According to this concept, it is the user who decides when he or she wants to interact with others. Social isolation, i.e. a lack of access to social contacts, can be a consequence of difficulties in cognitive and emotional functioning that affect interpersonal relationships, communication difficulties and the challenges of future life in society ². In line with these ideas, the designed building has many spaces for social interaction. By covering the night area and sliding the entrance door open, the Stroke Survivor's Space can be opened up to other patients by its user. This allows contact to be initiated between them. Some of the corridors, in order to avoid limiting its function to movement only, have been extended to include spaces for meetings, conversations or individual relaxation. The extended space has been complemented with vegetation, furniture and increased height making it similar to an urban street.

Biophilia plays an important role in the project. Our tendency to come into contact with nature has a significant impact on physical and mental health. In the healthcare field, contact with nature can reduce stress, lower blood pressure, bring relief from pain, speed up recovery and improve staff performance. Extensive research in various settings has demonstrated the positive effects of biophilic design on human health and function. ³ This is particularly important in terms of healthcare facilities. The designed rehabilitation centre provides views of courtyards full of greenery from every room. In addition, the construction materials as well as the interior finishes are natural materials.

In order to create a site with the most optimal parameters, the project plot is located in the Polish city of Gdansk. The plot is close to a neurological clinic, a landscape park, the sea, a lake and a stud farm with hippotherapy activities.

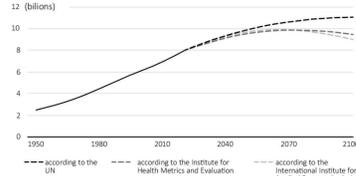
¹ Lewin A, Jöbges M, Werheid K. The influence of self-efficacy, pre-stroke depression and perceived social support on self-reported depressive symptoms during stroke rehabilitation. *Neuropsychological Rehabilitation*. 2013

² Mukherjee D, Levin R, Heller W. The Cognitive, Emotional, and Social Sequelae of Stroke: Psychological and Ethical Concerns in Post-Stroke Adaptation. 2014

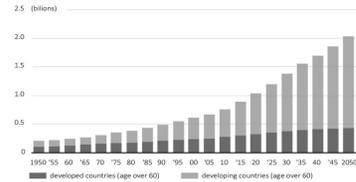
³ Totaforti S, Applying the benefits of biophilic theory to hospital design, Totaforti City Territ Archit, 2018

DESIGN ISSUES

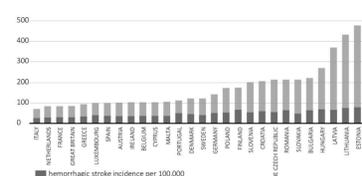
WORLD POPULATION GRAPH



POPULATION AGING GRAPH

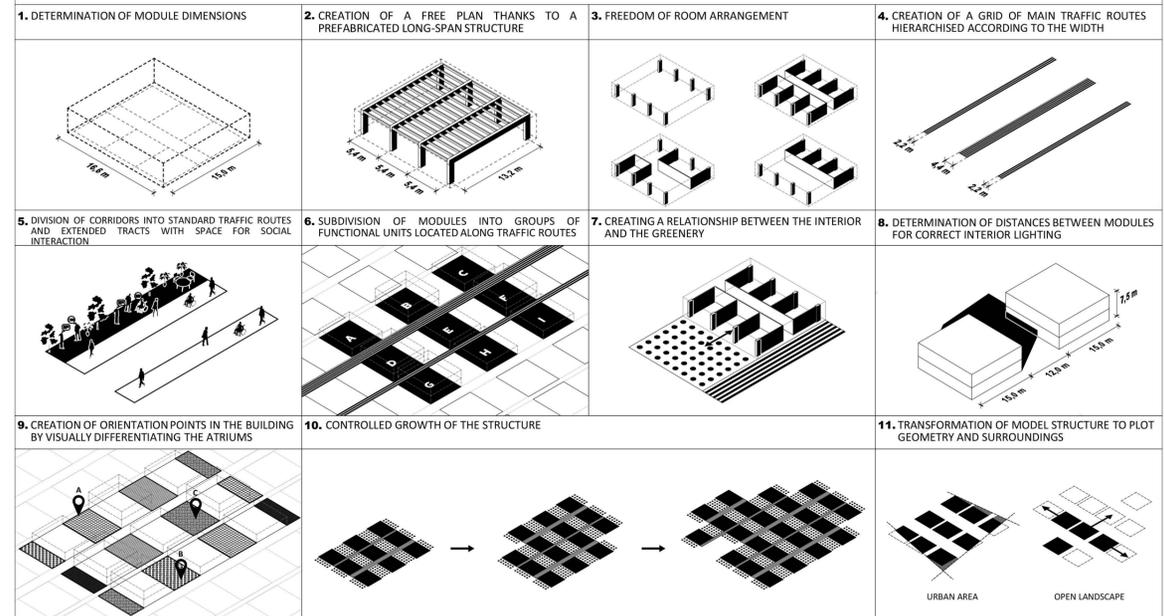


STROKE INCIDENCE GRAPH

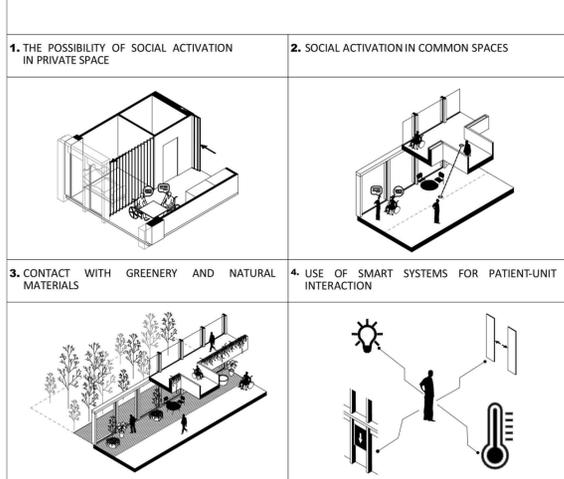


The combination of an ever-increasing ageing population and lifestyle-related health status in developing countries is moving towards an increasing incidence of stroke among the population, requiring health facilities to be adapted to these changes. These facilities must be adaptable and amenable to continued growth and development.

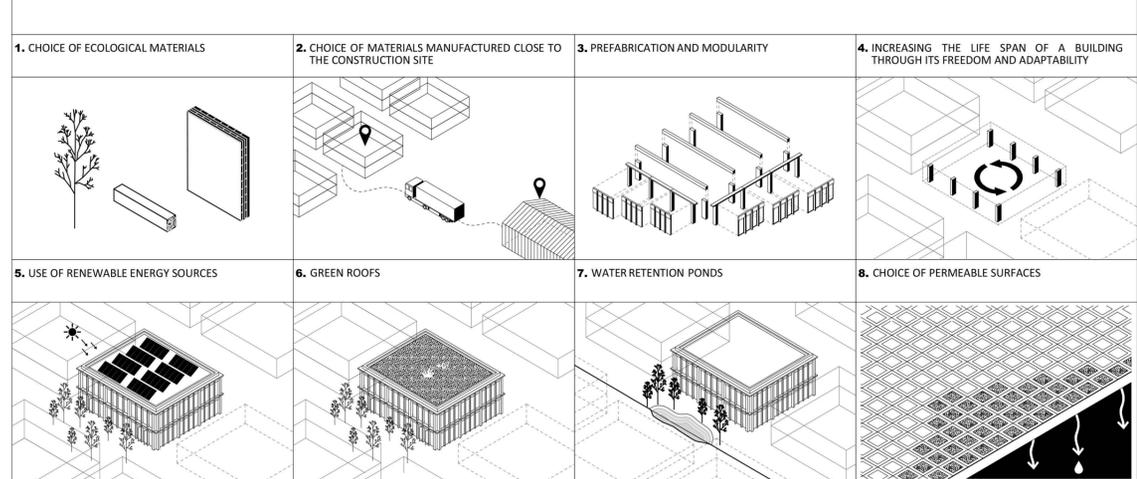
STRUCTURE FORMATION SCHEMES



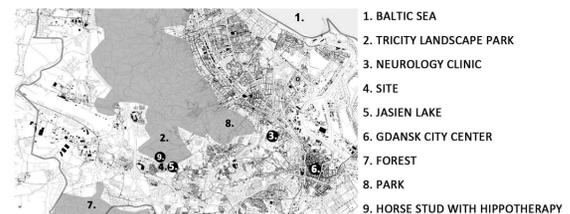
IMPACT OF THE UNIT ON THE USER



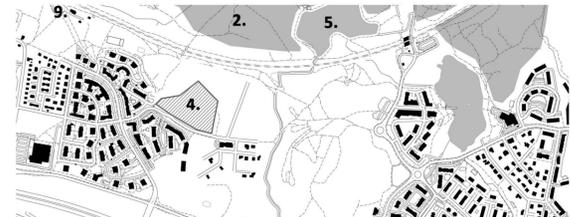
IMPACT OF THE UNIT ON THE ENVIRONMENT (ECOLOGICAL ELEMENTS)



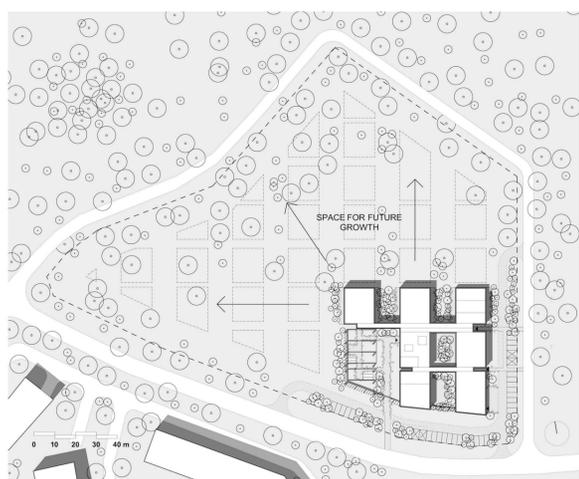
ANALYSIS OF THE SITE'S SURROUNDINGS

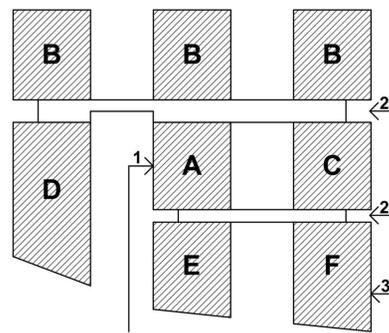


SITE'S CLOSE SURROUNDINGS



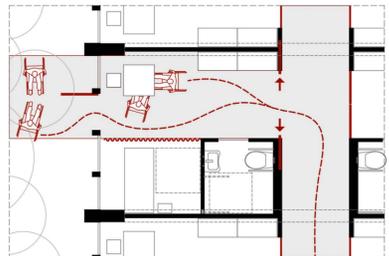
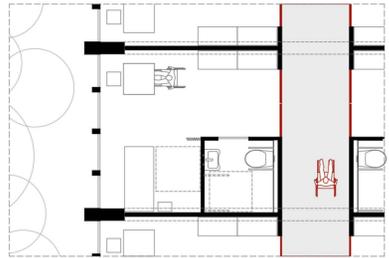
SITE PLAN





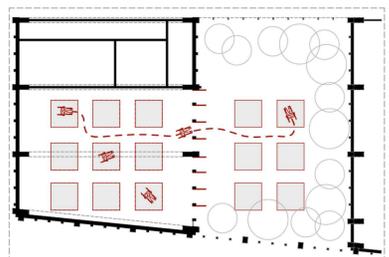
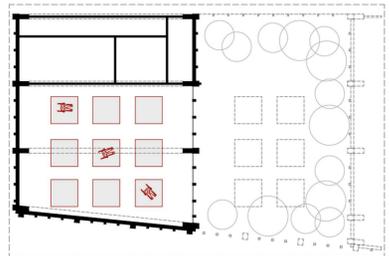
ADAPTABILITY OF PATIENTS' ROOMS

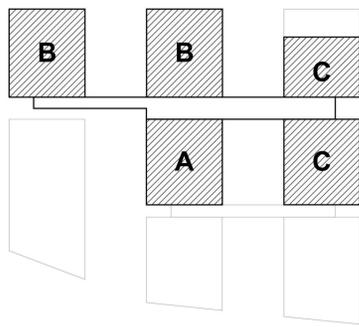
The patient staying in his room can decide on the form of this space themselves. The basic closed form of the room can be opened up and combined with a communal space and become a place for social integration.



ADAPTABILITY OF GYMNASIUM

Patients exercising in the gymnasium overlook a garden full of a variety of plants. During suitable weather conditions, patients can exercise directly in this green space.

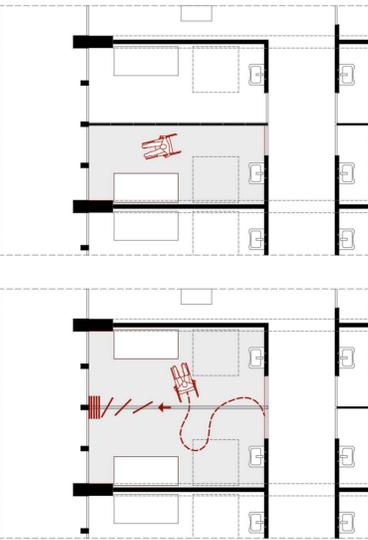




A - VERTICAL COMMUNICATION, COMMON SPACE
 B - PATIENT ROOMS
 C - VERTICAL COMMUNICATION, COMMON SPACE, INDIVIDUAL EXERCISE ROOMS

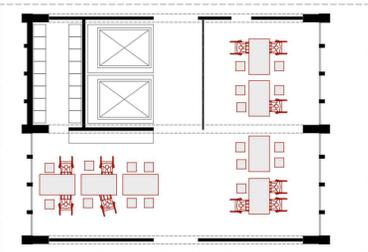
ADAPTABILITY OF INDIVIDUAL EXERCISE ROOMS

An individual exercise unit with basic dimensions, by using sliding walls, can be enlarged and adapted for exercises that require more space. This could be particularly important with the development of robotics in the field of rehabilitation. At the moment, we do not know the space requirements of the new development, but it will be able to adapt to them.



ADAPTABILITY OF DINNING ROOM

Thanks to the use of long-span structures, the interior design can be freely shaped and changed. The dining area, which is only used for part of the day for these purposes, can also become a place for meetings or communal activities.

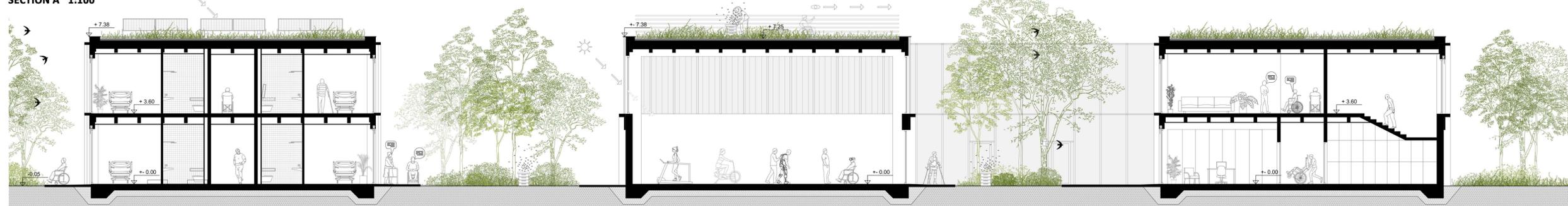


EAST ELEVATION 1:100



FIRST FLOOR PLAN 1:100 AREA: 831,9 SQM

SECTION A 1:100



1. Empowerment

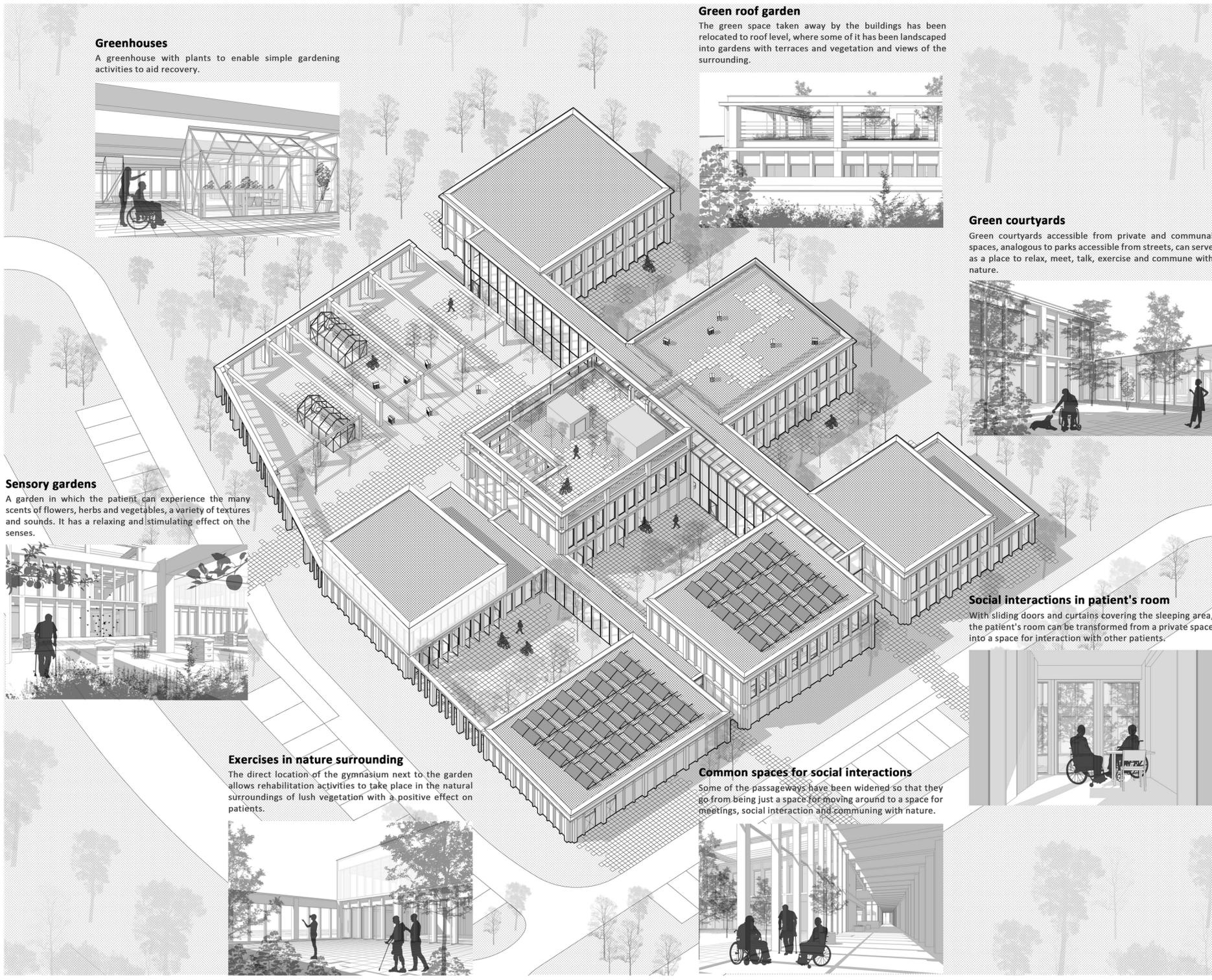
Patients at the rehabilitation centre have control of the room. In the aspect of technological amenities, they can control elements of the room with gestures and voice commands. In the aspect of control of the social experience, the user of the space can transform a private place into a place for social interaction (see adaptability scheme on board no.2) Movement and orientation are facilitated by views of the differentiated patios as signposts.

3. Level of risks

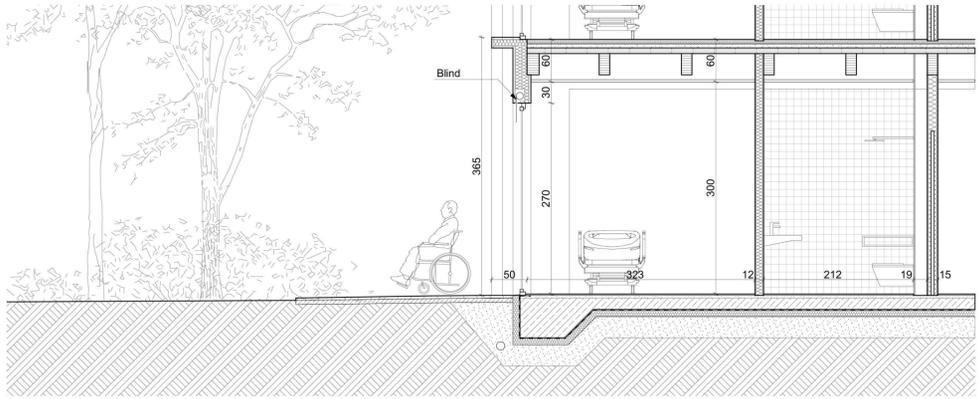
Patients have the opportunity to engage in different types of activities depending on their stage of rehabilitation. Activities with other patients such as exercising, working with plants in the greenhouse, stimulating the senses in the sensory gardens, meeting in communal areas allow them to spend time out of bed and remain active.

2. Communication

Patients can interact with other patients in their rooms or in public areas, e.g. in specially designed corridors extended with space for meetings and relaxation. They can also spend time with family and friends in their private space. Private and communal spaces have direct access to the courtyards, where one can experience a connection with nature, bringing conversation or personal relaxation to a peaceful tone.



STROKE SURVIVOR'S SPACE SECTION 1:50



STROKE SURVIVOR'S SPACE PLAN 1:50

