

HEALING CITY

Mental health clinic in Wałbrzych
with circular economy as a foreground

Joanna Magiera



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Diplomarbeit:

Healing city.

Mental health Clinic in Wałbrzych with circular economy as a foreground.

ausgeführt zum Zwecke der Erlangung des akademischen Grades
einer Diplom-Ingenieurin
unter der Leitung

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Wien, December 2021

Abstract

Mental health and wellbeing can be identified as one of the major challenges of the 21st century. Even the most common mental health issues such as anxiety, stress or depression demand a complex and long-term treatment of patients and their environment. Moreover, the ongoing COVID-19 pandemic negatively affects both mental health and the operation of unprepared mental health facilities.

This project is a reaction to increasing mental health problems now additionally escalated by the pandemic. In order to respond to these needs, the contemporary meaning of mental health care has been identified. Thereafter it was analysed how clinics respond through their spatial arrangement to a given approach to psychiatric treatment.

Out of concern for the climate and the environment, and taking into account the current economic and social problems in Poland, the materiality of the project was defined according to the principles of circular planning.

Kurzfassung

Psychische Gesundheit und Wohlbefinden können als eine der größten Herausforderungen des 21. Jahrhunderts identifiziert werden. Selbst die häufigsten psychischen Probleme wie Angstzustände, Stress oder Depressionen erfordern eine komplexe und langfristige Behandlung der Patienten und ihrer Umgebung. Darüber hinaus wirkt sich die anhaltende COVID-19-Pandemie negativ auf die psychische Gesundheit und den Betrieb der unvorbereiteten Metallgesundheitsinrichtungen aus.

Das Projekt ist eine Reaktion auf die zunehmenden psychischen Gesundheitsprobleme, die jetzt zusätzlich durch die Pandemie steigen werden. Um diesem Bedarf gerecht antworten zu können wird die heutige Bedeutung des Begriffs psychische Gesundheitsversorgung genauer analysiert. Anschließend wurde analysiert, wie Kliniken durch ihre räumliche Anordnung auf einen gegebenen psychiatrischen Behandlungsansatz reagieren.

This project is a response to the needs of the inhabitants of Wałbrzych; both sick and healthy, an attempt to maintain the continuation of the existing heritage and a reaction to the ongoing climatic, economic and social changes.

Aus Sorge um Klima und Umwelt und unter Berücksichtigung der aktuellen wirtschaftlichen und sozialen Probleme in Polen wurde die Wesentlichkeit des Projekts nach den Grundsätzen der Kreislaufplanung definiert.

Das Projekt ist eine Reaktion auf die Bedürfnisse der kranken und gesunden EinwohnerInnen von Wałbrzych, ein Versuch, die Fortführung des bestehenden Erbes aufrechtzuerhalten und eine Reaktion auf die anhaltenden klimatischen, wirtschaftlichen und sozialen Veränderungen.



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MENTAL HELATH	9	ARCHITECTURAL CONCEPT	171
<i>Foregoing state</i>		<i>Mission statement</i>	
<i>Tools for mental health care</i>		<i>Methodology</i>	
<i>Mental health during pandemic</i>		<i>Program</i>	
<i>Impact of the pandemic on mental health facilities</i>		<i>Structure system</i>	
<i>Mental health facilities in Wałbrzych</i>			
TREATMENT APPROACH	21	CLINIC IN THE LANDSCAPE	183
<i>Redefinition of care</i>		<i>Former station</i>	
<i>Deinstitutionalisation</i>		<i>Site interpretation</i>	
<i>Trieste Model</i>		<i>Research interpretation</i>	
		<i>Architectural proposal</i>	
FACILITATING MENTAL HEALTH CARE	37	CLINIC IN THE URBAN TISSUE	233
<i>Neurophysiology</i>		<i>Former library</i>	
<i>Typology of treatment facilities</i>		<i>Site interpretation</i>	
<i>Reference analysis</i>		<i>Research interpretation</i>	
<i>Summary of analysis</i>		<i>Architectural proposal</i>	
<i>Neurophysiological reaction to space</i>			
CIRCULAR ECONOMY	125	OPERATION AND FUTURE USE	279
<i>Climate change and mental health</i>		<i>Development of the mental health facilities</i>	
<i>Climate change and build environment</i>		<i>Programme change and reuse of materials</i>	
<i>Circular built environment</i>			
WAŁBRZYCH	137	LIST OF REFERENCES	287
<i>Scale and location</i>		LIST OF FIGURES	289
<i>Silesia</i>			
<i>Heritage of Wałbrzych</i>			
<i>Selecting a plot</i>			



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MENTAL HEALTH

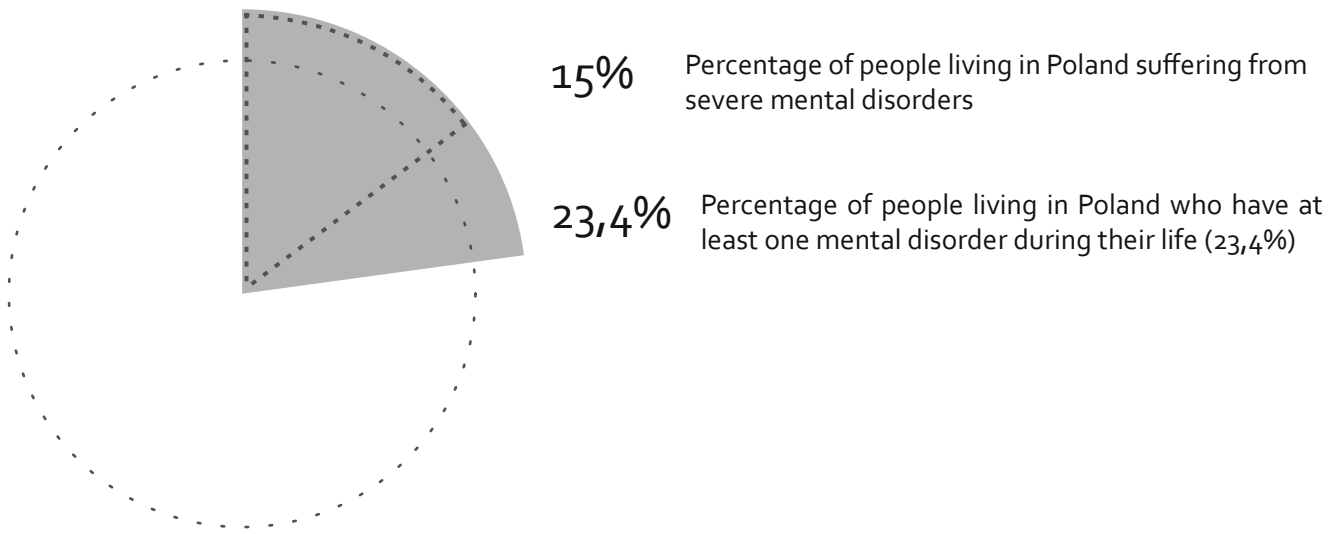
Foregoing state

There is no simple definition of mental health. The norm can be considered as a condition of an individual that allows their adaptation to the changing conditions and an ability to live in harmony with other individuals.

Studies show that in Poland, 23.4% citizens do not meet these criteria for mental health. In Europe, this number oscillates from 1/4 to 1/3 of citizens. About 10-20% of these cases can be assessed as severe disorders.

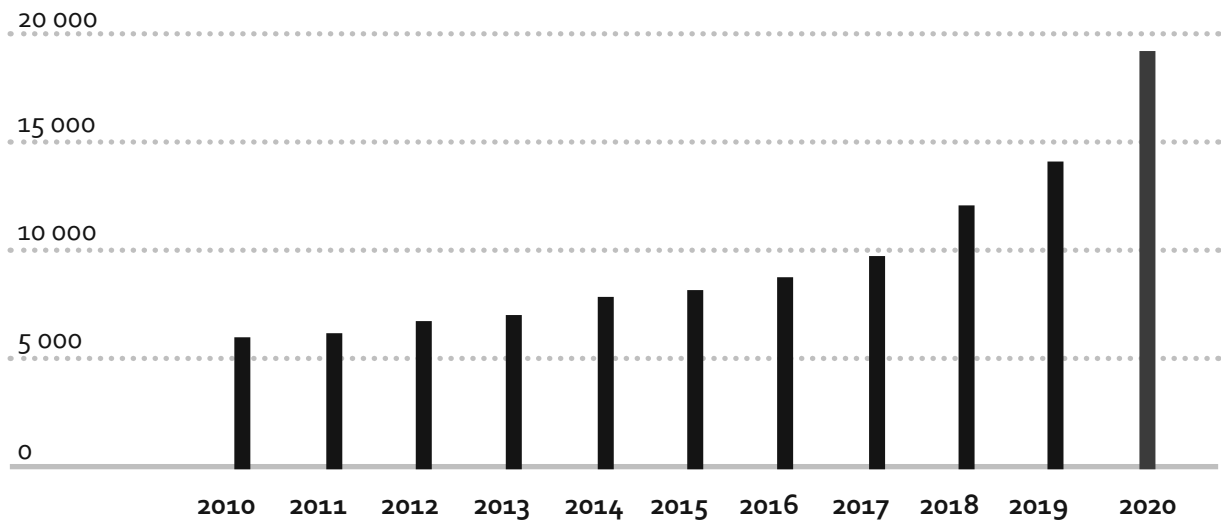
Although mental health problems are common, in Poland only 25% of people with mental disorders use healthcare services. There are two main reasons for this situation. The first are prejudices and simplified perception patterns of mental illness that discredit the people with mental health issues. The second is the neglect of the system of mental health care at the level of planning and functioning.

Moreover, for several years, the absolute number of people suffering from mental disorders is constantly increasing. Over the past 10 years, the number of cases in Poland has tripled. A similar tendency has occurred all over the world. According to the WHO, by 2030 depression will become the most common disease in the world.



Incidence of mental health diseases in Poland

based on: Report of the Commissioner for Human Rights (2014) *Ochrona Zdrowia Psychicznego w Polsce* [Mental Health Protection in Poland] p. 114



Number of patients under 18 years of age who received services diagnosed with depression (F32 or F33)

based on: National Health Fund (2020). *Depresja dzieci* [Child depression] www.ezdrowie.gov.pl/nfz_o_zdrowiu_depresja. Accessed 01.03.2021

- Organic, including symptomatic, mental disorders
- Mental and behavioral disorders due to use of psychoactive substances
 - Schizophrenia and delusional disorders
 - Mood disorders (depression)
- Neurotic, stress and somatoform disorders
- Behavioral disorders with physical disorders and factors (eating, sleeping disorder)
 - Personality and behavioral disorders
 - Mental retardation
 - Developmental disorders (autism)
- Behavioral and emotional disorders beginning in childhood and adolescence
 - Unspecified mental disorders

Tools for mental health care

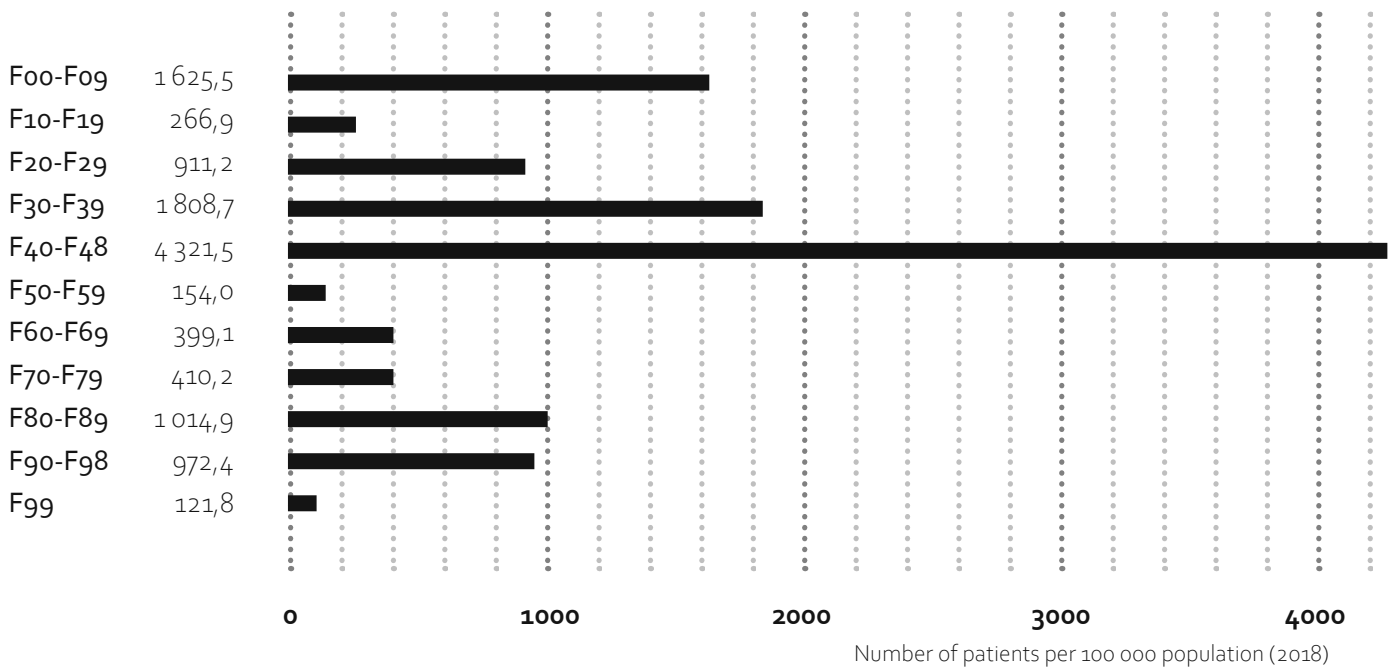
To facilitate the understanding and treatment of mental disorders, the ICD-10 (International Classification of Diseases) code was defined. It serves as a standard for classification of diseases, disorders, injuries for clinical and research purposes. However, it should be remembered that many patients have unclear symptoms or symptoms from several categories. Therefore, in the process of treating mental illnesses, each patient should be considered individually.

Despite the individuality in the treatment of diseases, the use of ICD-10 allows researchers to observe which mental disorders are the most common and thus give guidance on designing clinics so that they respond to the current needs accordingly.

By analysing the data for Dolnośląskie Voivodeship published by the Ministry of Health in 2018, we can observe that the most common diseases are those of the categories F3 (mood disorders) and F4 (neurotic, stress and somatoform disorders).

Both of them are caused by a disturbance of the individual's relationship with society. Therefore, their treatment focuses on helping the patient to rebuild relations with their environment.

Furthermore, both of these disorders increased their incidence due to the stress and insecurity of the pandemic. Therefore, the demand for space, which support treatment and prevention of illnesses from categories F3 and F4 is now particularly high.



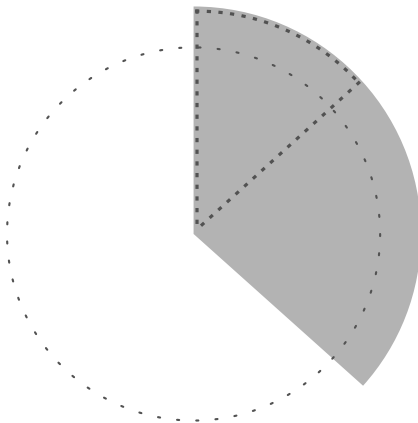
Disorders of psychological development in the Dolnośląskie Voivodeship

based on: Department of Analysis and Strategies of the Ministry of Health (2018).
Mapa potrzeb zdrowotnych w zakresie zaburzeń psychicznych dla województwa dolnośląskiego
 [Map of health needs in the field of mental disorders for the Dolnośląskie Voivodeship]
www.mpz.mz.gov.pl/mapa/mapy/woj-dolnoslaskie. Accessed 01.03.2021

Mental health during pandemic

The number of publications available on the relationship of COVID-19 with mental health continues to grow. However, in Poland statistics for mental health have not been conducted consistently. Thus, comparable data from various sources are used in this thesis.

The increase in the occurrence of symptoms in the previously mentioned diseases is clearly visible. The conclusions and predictions presented for their further development in Poland are mainly based on logical arguments or analogies to previous crisis in other countries. Based on the data collected in this way, it can be predicted that the effects of trauma requiring treatment may affect approximately 20% of the population.

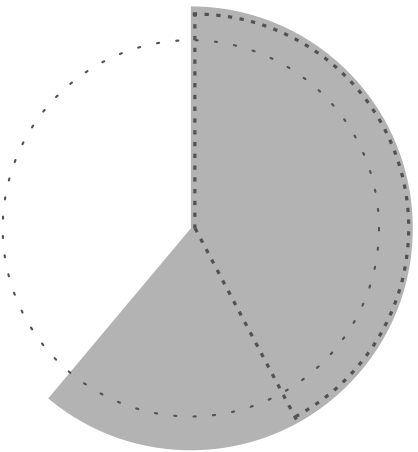


18%

percentage of the Polish citizens suffering from mood disorders (depression) F30-F39 in 2018

38%

percentage of the Polish citizens reporting severe depressive symptoms F32-F33 in 2020

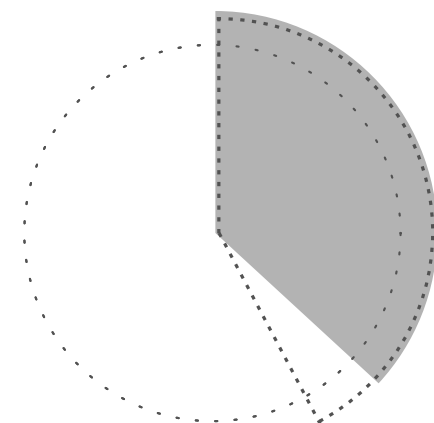


43%

percentage of the Polish citizens suffering from neurotic, stress and somatoform disorders F40-F49 in 2018

62%

percentage of the Polish citizens reporting generalized anxiety disorder symptoms F41 in 2020



43%

percentage of the Polish citizens suffering from neurotic, stress and somatoform disorders F40-F49 in 2018

37%

percentage of the Polish citizens reporting symptoms of post-traumatic stress disorder F43 in 2020

Comparison of the prevalence of selected ICD-10 categories before and during the pandemic

based on 2020: Dragan M. (2020). *Zdrowie psychiczne w czasie pandemii Covid-19*. [Mental health during the Covid-19 pandemic] data 2018: see page 13
www.psych.uw.edu.pl. Accessed 06.03.2021

Impact of the pandemic on mental health facilities

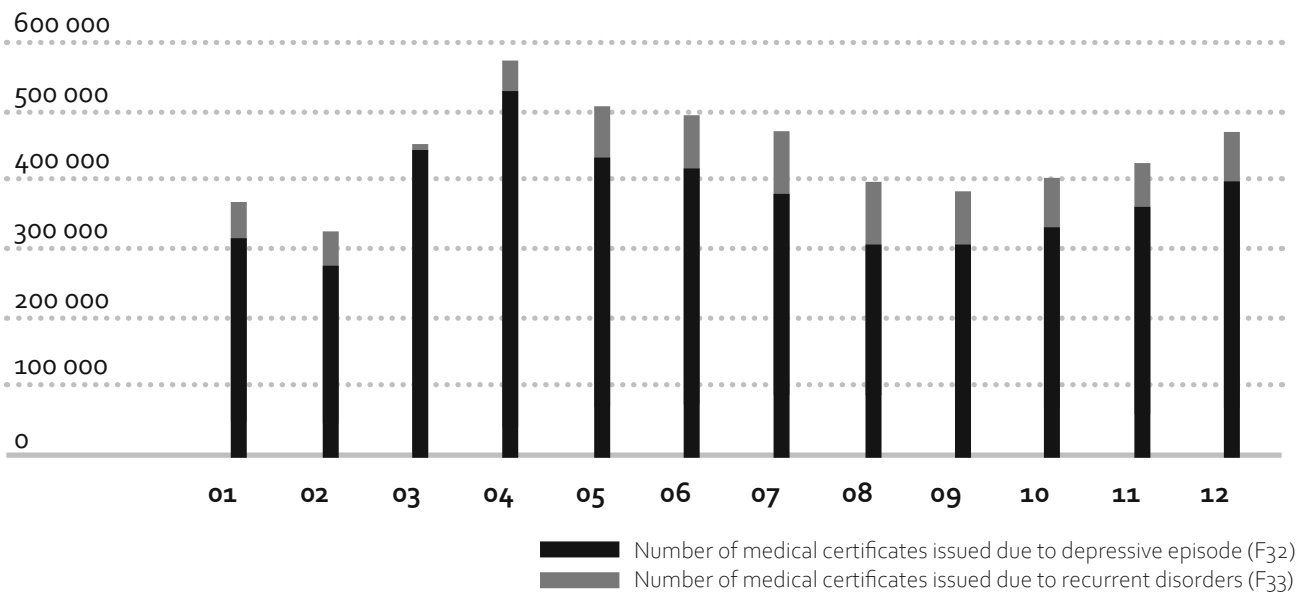
The increase in number of patients with chronic mental illness in March and April of 2020 indicates a large impact of the pandemic and its consequences on mental health. The increase in the number of patients follows the increase in restrictions related to COVID-19 prevention.

However, it should be noted that the increase of deterioration of health did not occur among people who had previously received a mental health treatment.

In fact, people without depressive, anxiety, or obsessive-compulsive disorders showed a greater increase in symptoms during the COVID-19 pandemic.¹

This shows the sensitivity of the whole society, not only people who struggle with mental problems on a daily basis. Therefore, mental health care should not only be accessible for patients with severe illnesses, but also as a daily prevention which is accessible to everyone.

¹ Pan Kuan-Yu et al. (2021). The mental health impact of the COVID-19 pandemic on people with and without depressive, anxiety, or obsessive-compulsive disorders. *Lancet Psychiatry* (8); p. 121



Medical certificates issued in 2020

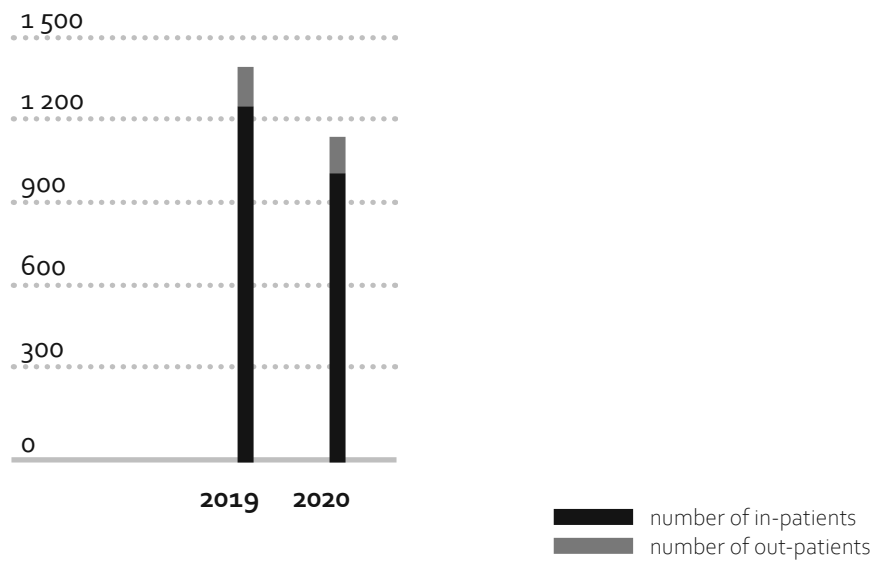
based on: Social Insurance Institution (2020). *Absencja chorobowa* [Sick leave]. www.zus.pl/baza-wiedzy/statystyka/opracowania-tematyczne/absencja-chorobowa. Accessed 6.03.2021.

Mental health facilities in Wałbrzych

In Wałbrzych, despite the increasing incidence of mental diseases, the number of patients in the psychiatric ward has declined.

This situation is caused by maladaptation of hospital spaces to the requirements of the pandemic. All patients who had the opportunity to return home did so at the time. Contact between stationary patients, who remained in the hospital and family or friends was prohibited during the whole time of lockdown.

This situation alone shows a strong need to offer a space that ensures the safety of users, especially during the pandemic.



Number of patients in the psychiatric ward of the hospital in Wałbrzych

based on: Dr. Alfred Sokołowski Specialist Hospital in Wałbrzych, Psychiatric Department, [30.03.2021]



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TREATMENT APPROACH

Redefinition of care

Until the 1960s therapists focused on the individual and paid little attention to a patient's family or work. The sick were stigmatised and treated only in closed hospital wards; being taken into care meant changing one's lifestyle and environment drastically. It involved a limitation of one's autonomy: moving to an asylum, abandoning one's home and ties that one had in the neighbourhood.

This approach started to change from the 1960s onwards, and the focus moved also to the system the patient was living in. It happened among others thanks to Franco Basaglia, Italian psychiatrist, neurologist and professor, who claimed that many of emotional problems are not rooted in the individual itself, but in families, schools, workplaces or society.

As understood by Franco Basaglia, care is becoming a part of life and the living environment. In order to achieve that, many people must get involved in the establishment of local and community servic-

es: users, nurses, doctors and citizens. The process of taking care outside hospital boundaries is much more difficult to organise and requires more staff and care. It is only possible through collaboration between the logic of welfare systems and open dynamics of urban life. However, treatment carried out in this way brings results much faster; patients are able to maintain their health much easier.

Keeping the person at home, even if they are sick or disabled, allows them to support their personal dignity and emotional relationships, while maintaining a cultural conception of illness and death as events that are a natural part of life.¹

Though it is important to point out, that this approach to mental health does not remove the institution of a hospital, but extends its function as a space for development and discussion.

¹ Salvini Francesco (2019) *The ecologies that cure*. www.transversal.at/transversal/0318/salvini/en. Accessed 07.03.2021

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ASYLUM MODEL

CARE PROVIDERS

Doctors
Nurses



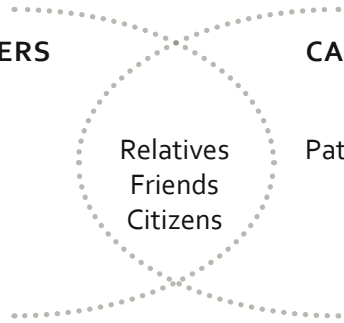
CARE RECEIVERS

Patients

ENVIRONMENTAL MODEL

CARE PROVIDERS

Doctors
Nurses



CARE RECEIVERS

Patients

Shift in understanding of actors' roles in the asylum and environmental model

based on: Salvini Francesco (2019) *The ecologies that cure*.
www.transversal.at/transversal/0318/salvini/en. Accessed 07.03.2021

Deinstitutionalisation

Patients treated without contact with the external world very often relapse after leaving the hospital and changing their environment. This means that as long as the health of the patient allows it, hospitalisation should be avoided in order to avoid increase of a patient's isolation.

An important argument for introducing community-based treatment is the fact that all psychiatry, just as medicine, is not only related to very serious diseases. Some of them can be treated biologically (only by taking medication).

Secondly long, chronic diseases can and should be treated at home as well. The treatment of severe mental illness involves not only psychiatry, but also medicine and the environment. In such situations, the relationship with the community is very important both for the patient's family and for the patient, who can more easily return to social functions after illness.

By these means, it will be possible to reduce feelings of dependency and hopelessness which make it harder for patients to adjust to a life outside of care.



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Trieste Model

A practical concept, which was created on the basis of the conclusions and suggestions for improving the quality of mental health treatment is the Trieste Model developed and presented by Franco Basaglia in Trieste, in the 1970s. Since then, it remains the most progressive model of public psychiatry.

The idea of Trieste model is to *put the suffering person, not disorder, at the centre of the health care system.*¹

The idea of Trieste model is to put the suffering person, not disorder, at the centre of the health care system.

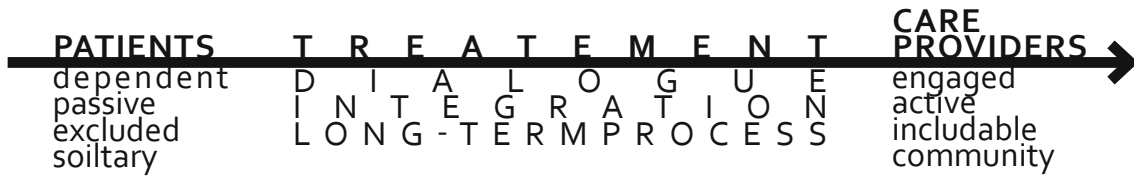
This means that users of mental health services retain all their civic and social rights during the treatment. They are provided with community-based therapy and affordable housing.

The programmes and interventions organised by public psychiatry in Trieste are not only addressed

to the population with serious mental disorders, but to all those who experience prolonged states of sadness, fear or anxiety, often coinciding with particular events, like lack of work, loneliness, social isolation, family conflicts, separation, etc.

These actions seek to accept the disease as part of life, not to push it beyond the boundaries of the community.

¹ Portacolone Elena et al. (2015). A Tale of Two Cities: The Exploration of the Trieste Public Psychiatry Model in San Francisco. *Culture Medicine and Psychiatry* May 2015, p. 2. DOI: 10.1007/s11013-015-9458-3.



Shift of the tole of the patient in Life Project model

based on: Portacolone Elena et al. (2015). A Tale of Two Cities: The Exploration of the Trieste Public Psychiatry Model in San Francisco. *Culture Medicine and Psychiatry* May 2015, p. 2.

Life project

Key aspect of the treatment of mental illness raised by Franco Basaglia was the fact that even the people with most severe mental illness could live a “normal” life within the community. An essential element of his model was the “life project”, which fosters the engagement of people with mental disorders in public life through housing, job and opportunities to spend free time or enjoy nature with other members of the community.

The focus of entire mental health care system shifts from the symptoms and emphasis on bare survival to the long-term social integration of the individual. A crucial element for the success of the life project is the availability of affordable housing, health care services and employment.

Life project can last over a person’s entire life and means the dialogue is between service providers and the patients. Providers enter a shared struggle with patients to fight a disease or a void of daily life, through restoring or to building a network of social ties and support.

Within this idea, during the treatment patients would shift from a state of passive dependence to one of active and engaged participation in the healing process of others.

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Role of a clinic

To support the recovery in community clinics, the Trieste model provides a variety of outpatient services and has small number of beds used only during emergency situations.

The visit in the clinic is to improve the patient's mental condition, reduce disease symptoms, as well as activate and help in undertaking social and professional activities.

In the clinic, patients may receive support in the form of a psychiatrists, an internists and clinical psychotherapists. At all stages of therapy, integrating treatments requires regular meetings of all those team members.

In order to develop more comprehensive and integrated outpatient mental health care, a clinic might be affiliated with an academic department of psychiatry.

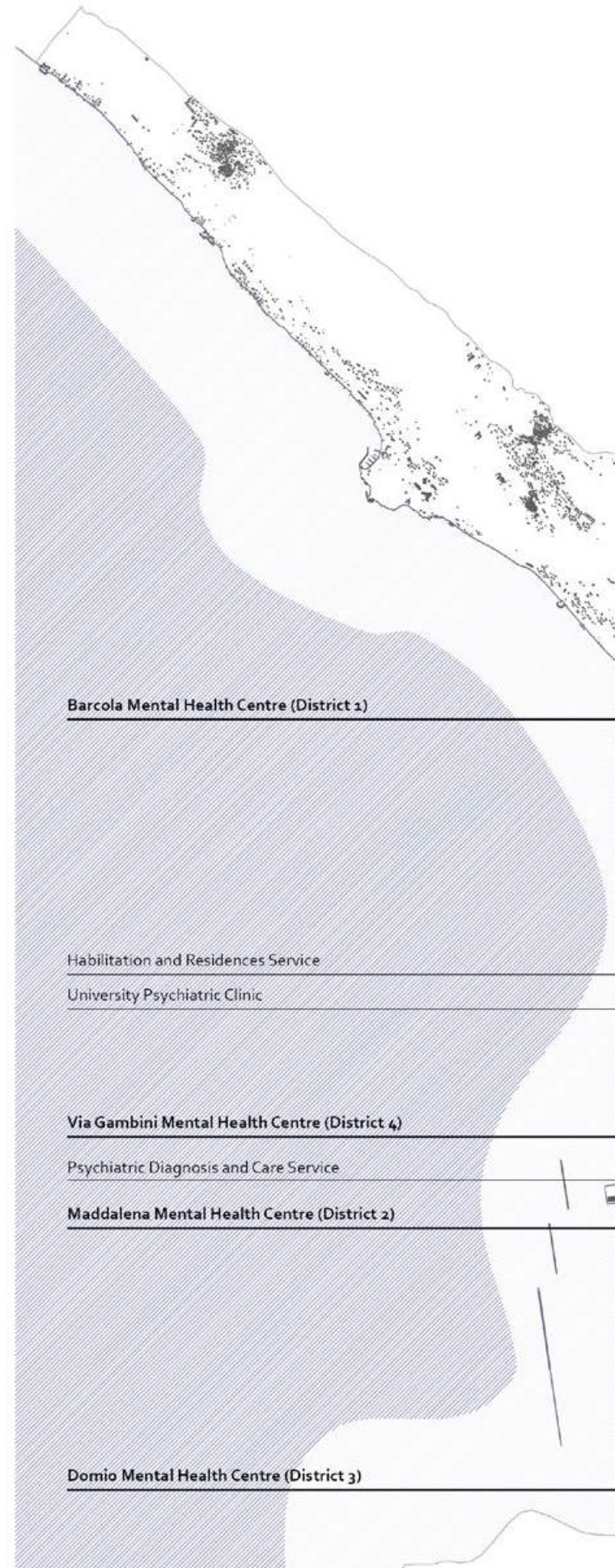


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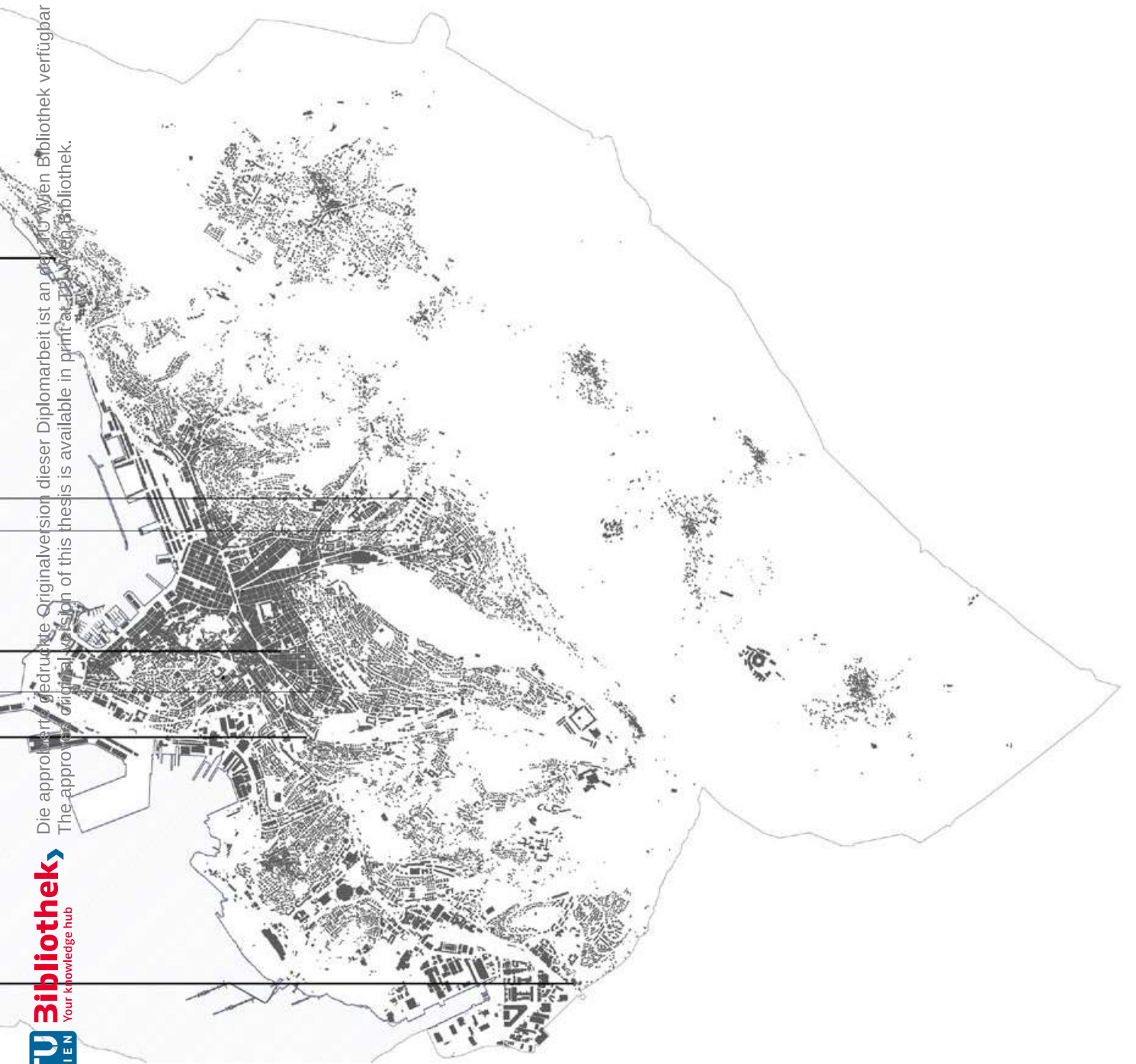
Clinics

The Department of Mental Health in Trieste operates in a small general psychiatric hospital and 4 community mental health clinics. Each clinic serves around 60,000 residents, and has around 1000 users per year. They are open 24 hours a day and are equipped with 4-8 beds, which are used only in case of a night emergency.

Whenever possible, patients in crisis or with acute psychiatric conditions sleep in their homes. Clinics are used during therapy and day activities. The barriers between facilities spaces and the external world are eliminated.



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Network facilities of the Mental Health Centres in Trieste

Users

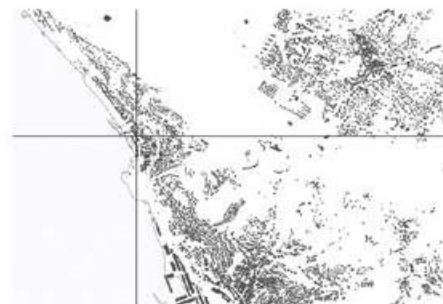
Collected data related to the period of one year (2010)

Location

Barcola Mental Health Centre
(District 1)

Viale Miramare 111

Territory



Coexistence of highly urbanized areas and mainly rural areas. It includes small villages, residential areas and dense urban tissue at the main station.

Total population in the clinic's area of operation



62,579

The number of people who visited the clinic during the year



882

Percent of patients with severe mental disorder



52.38% (462 people)

Users a day (on average)

no data

Beds for day-night hospitality



6 beds

People who used day-night hospitality



90

An average duration of hospitality of 12 days.
6 people stayed for more than 60 days.

People hosted in residential structures

3 people live in the apartment in via Udine
2 people living in the Borgo Grotta apartment group
26 people are hosted in the residential structures coordinated by the Habilitation and Residences Service.



31

Maddalena Mental Health Centre
(District 2)

Via Molino a Vento 123



Urban area, includes the historic Centre.



56,582



982



55.09% (541 people)

no data



8 beds



116
2 people stayed for more than 60 days.

2 people live in the apartment in via Lorenzetti
15 people, living in 3 residential structures (group apartments, transitional therapeutic communities and cohabitation groups)
19 people are hosted in the residential structures coordinated by the Habilitation and Residences Service.



36

Domio Mental Health Centre
(District 3)

Via Morpurgo 7



Coexistence of highly urbanized areas and rural areas with residential areas, small settlements and estates.



61,864



903



48.50% (438 people)

100 people



8 beds



94
5 people stayed for more than 60 days.

4 people live in the apartment in via Buozzi
4 people, living in 2 apartment groups
10 people are hosted in the residential structures coordinated by the Habilitation and Residences Service.



18

Via Gambini Mental Health Centre
(District 4)

Via Gambini 8



Multi-family housing estates, includes the districts of Chiadino, Rozzol - Melara, Città Nuova, Barriera Nuova and San Giovanni.



~50 000



901



60.60% (546 people)

60 people



4 beds



109
3 people stayed for more than 60 days.

2 people live in the two apartments in via Vasari and via delle Docce
4 people, inhabitants in 1 residential structure (groups - apartment, transitional therapeutic communities and cohabitation groups)
58 people are hosted in the residential structures coordinated by the Habilitation and Residences Service.



64

Comparison of conditions

Reference project: Trieste

Study case: Wałbrzych

Based on the collected data, it can be seen that Wałbrzych - the subject of the project, has half the demand of the reference city - Trieste.

Hence the project proposal consists of two clinics located in different environments, which will allow to shape various treatment environments.

Location

Total population (2020)

The number of people who visited the clinic during the year (Trieste 2018, Wałbrzych 2019)

Percent of people who visited the clinic during one year to total population

City area

Number of health care units

Total population in the clinic's area of operation

Beds for day-night hospitality

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Trieste
 Italy

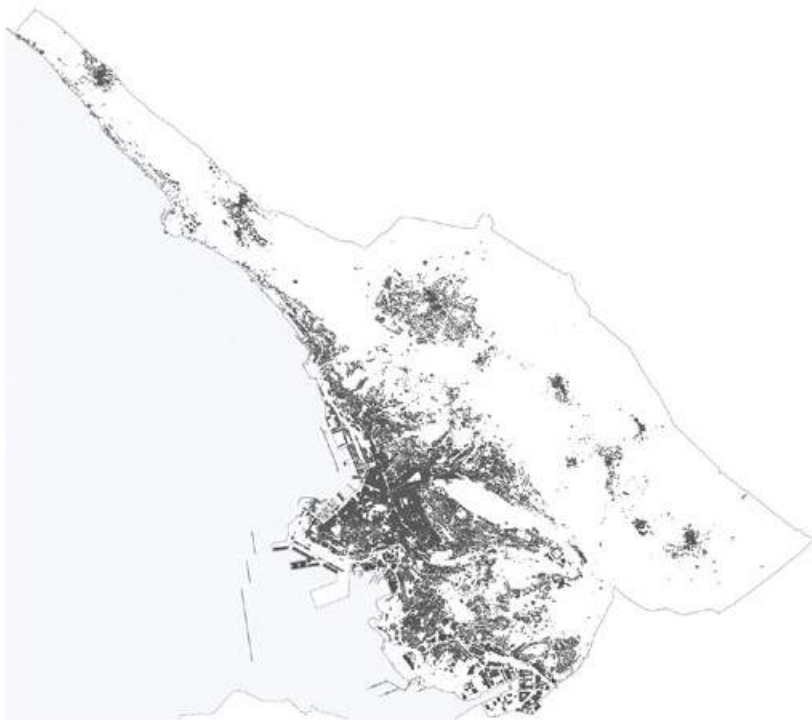


208 614

3 669

1,76 %

84,49 km²



4
 ~50 000 - 62,500
 4-8 beds

Wałbrzych
 Poland



110 603

1386

1,25 %

84,7 km²



2
 ~50 000 - 60 000
 6-8 beds



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FACILITATING MENTAL HEALTH CARE

Neurophysiology

The environment influences our mental health and well-being and this impact can be understood and measured on a neurophysiological level.

This opens the door to understanding if we can support mental health and wellbeing non-invasively through environmental exposure as a form of therapy.

The response of the brain and body on surroundings happens usually on unconscious level. Therefore, at the moment there are no unambiguous tools to describe these relations. However, among scientists, attempts were made to measure and describe the recording of nervous system activity in relation to perception.

For example, studies have proven the reaction of an anterior cingulate cortex to the contrast of open – closed spaces. The research concluded that rooms with high ceilings activate structures of the brain responsible for a visuospatial exploration, while rooms with low ceilings often trigger the decision to leave.

Bowera Isabella / Tuckera Richard / Enticottb Peter G. (2019): Impact of built environment design on emotion measured via neurophysiological correlates and subjective indicators. *Journal of Environmental Psychology* 2019(66), P.10. [www.doi.org/10.1016/j.jenvp.2019.101344](https://doi.org/10.1016/j.jenvp.2019.101344)

The most frequently proven relation is the influence and presence of daylight or view of nature on acceleration of treatment progress and alleviation of depression symptoms.

To be able to apply neuroscience to the treatment of mental disorders, it is important to realise that the process of treating people with mental illness takes place in all areas of the mental health facility, not solely in the therapy rooms.

This is because psychiatric treatment mainly, apart from pharmaceutical treatment, consists of contact and relations with others: doctors, therapists, patients, and family. It requires activity from the patient, who cannot remain passive, for the treatment to start working. It is the opposite from healing somatic disorders, where doctors and the family assist the patient who remains passive during the treatment.

In addition to the above-mentioned, general rules in the designing of psychiatric treatment facilities it is important to remember, that there is a shift of focus between spaces meant for in- and out-patients, due to other needs.

Pertaining to in-patient facilities, the main concern is to balance the sense of dignity and privacy with security and the possibility of control of patients by staff. The feeling of safety and well-being is the base for re-establishing the patient's relations with the environment.

Meanwhile the out-patient facilities aim to focus mostly on fostering integration and re-socialisation of patients and they do not require such patient control.

How does the all the collected information translate into space?

It is confirmed that aggressive behaviour may be also triggered if common spaces do not allow the regulation of distance between users (through restricted space or fixed seating). That is why common rooms should offer several typologies of spaces with different proportions or views. This solution fosters a feeling of gaining the sense of control of own choices, which supports a patient's sense of dignity.

Other researches show that entrance to the room through a narrow corridor can become a barrier for some patients. Therefore the space of circulation should be also a space for meetings and relaxation in order to avoid too narrow or too exposed spaces.

Through the reference analysis the topic of the neurophysiological response to space will be explored more profoundly.

Typology of treatment facilities

In-patient facilities

There are two types of in-patient facilities: hospitalisation for acute care and hospitalisation for rehabilitation. Both provide patients with total care, meaning 24 hour care organising their daily lives.

The main aim of **hospitals for acute** care is to stabilise patients. They have high safety standards due to the increased risk of suicide among users.

Rehabilitation facilities are often set to provide users contact with nature. Security measures are not tightened and the space is meant to be calm and pleasant.

Out-patient facilities

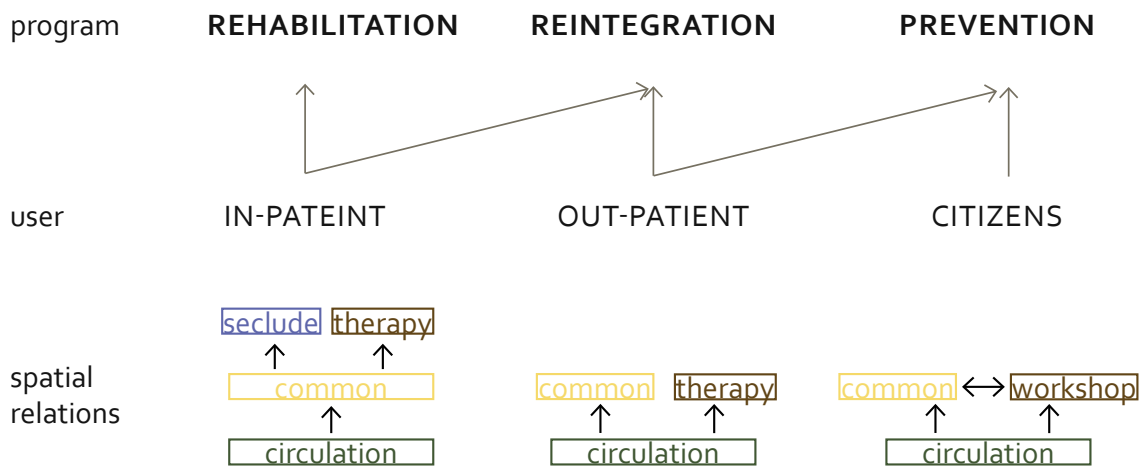
There is a large variety in the programme of out-patients facilities. They aim to enable the patient to live autonomous lives in society through structuring patient's daily life and focusing on social structure, for example by involving their families and friends into the healing process.

Day-care hospitals or clinics are used when stationary treatment is not necessary. It is a centre where patients can spend their day, where they are involved in a therapeutic programme and where they start socialising. The focus is on the reintegration process. Therapeutic activities can be group therapy, garden work, cooking and field trips. The big advantage of this type of care is that patients don't need to give up their familiar surroundings or families.

Reintegration of patients can be provided by **sheltered workshops**, which offer working tasks in a protected environment. It is most often used by patients who are released from treatment where the day was fully planned.

Prevention is provided most often through **clubs**. Their aim is to prevent relapses and help patients to thrive under good conditions.

In **ambulant care**, patients come only upon appointment to one session. This solution doesn't interfere with a patient's other activities. Here, good accessibility is essential.



Reference analysis

The spatial arrangement of the facility reflects the approach towards the process of healing. The comparison includes a set of references with a different scope of provided services in order to investigate this relationship.

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**ACUTE CRISIS
in-patients**

**REHABILITATION
in- and/or out-patients**

**REINTEGRATION
out-patients**

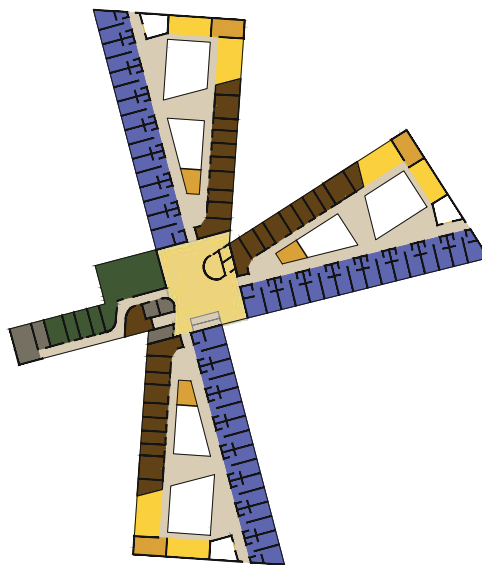
**PREVENTION
out-patients**

- 1. **Helsingør Psychiatric Hospital Rehabilitation:** only in-patient, 24-hour treatment and support
Helsingør, Denmark
- 2. **Nuuk Psychiatric Clinic,** only in-patient care, 24-hour treatment and support
Nuuk, Grenland
- 3. **Vejle Psychiatric Hospital:** psychiatric ward, psychiatric emergency department, 24-hour places and a child and adolescent psychiatric outpatient clinic
Vejle, Denmark
- 4. **Tolworth Hospital,** severe long term adult mental health patients, in- and out-patient facilities
London, UK
- 5. **Residentail Care Centre:** in- and out-patient longterm care, prevention and research
Noordwijk, Netherlands
- 6. **Psychiatric Centre Caritas :** intensive care unit, assistance in various forms of care, activation
Melle, Belgium
- 7. **Sct. Hans Forensic Psychiatry:** treatment for forensic psychiatric patients and psychotic patients with substance abuse, outpatient clinic
Roskilde, Denmark
- 8. **Psychiatric Centre Ballerup:** intensive care, 24-hour emergency department, outpatient clinics, centre for rehabilitation and recovery
Ballerup, Denmark
- 9. **Children's Centre for Psychiatric:** only in-patient, psychological treatment and lifestyle guidance necessary for adapting to social life
Date, Japan
- 10. **Psychiatric Centre:** for people with insufficient family and social support, unable staying at home, who require permanent care to avoid a worsening
Pamplona, Spain
- 11. **Residence and Day Centre for the Mentally Handicapped:** focus on in-patient care
Barcelona, Spain
- 12. **Psychiatric Centre Sint-Amedeus:** full-time or part-time admission, outpatient treatment, integration in society
Mortsel, Belgium
- 13. **Mental Health Centre:** short and long in-patient care, out-patient care and support, habilitation and prevention
Trieste, Italy
- 14. **Centre for Psychiatric Rehabilitation:** in- (short and long-term residents) and out-patients, users with chronic diseases at the beginnings of pathologies
Bolzano, Italy
- 15. **Psychopedagogical Medical Centre :** short and long in-patient care, out-patient care and support, habilitation and prevention (residence separately)
Vic, Spain
- 16. **Centre for the Mentally Disabled:** short and long in-patient care, out-patient care and support, habilitation and prevention (residence separately)
Toro, Spain
- 17. **University Psychiatric Centre Gasthuisberg:** in- and out-patient longterm care, prevention and research
Leuven, Belgium
- Specialist Hospital, Psychiatric Ward (Existing hospital):** in-patient 24-hour treatment and support, research
Wałbrzych, Poland
- Mental Health Clinic:** short and long in-patient care, out-patient care and support, habilitation and prevention
Wałbrzych, Poland





Helsingør Psychiatric Hospital Rehabilitation
 Helsingør, Denmark
 2007
 BIG, JDSA
 6 000 m²
independent unit outside the city
 only in-patient , 24-hour treatment and support



+1



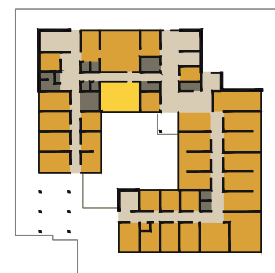
ACUTE | HABILITATION | INTEGRATION | PREVENTION



Nuuk Psychiatric Clinic
 Nuuk, Grenland
 2018
 White Arkitekter
 3300 m²
independent unit outside the city
 only in-patient , 24-hour treatment and support



+1



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typology



3.



Vejle Psychiatric Hospital

Vejle, Denmark

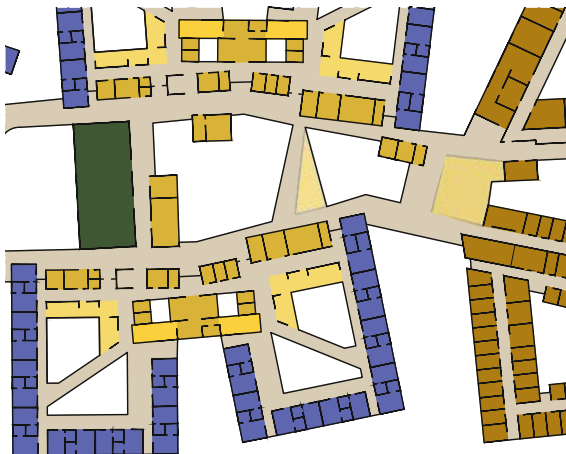
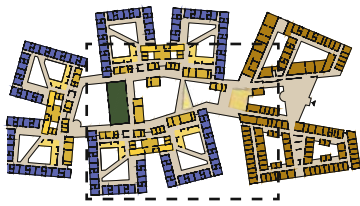
2017

Arkitema Architects

17 000 m²

independent unit outside the city

psychiatric ward, psychiatric emergency department, a child and adolescent psychiatric outpatient clinic



■ ACUTE | HABILITATION | INTEGRATION | PREVENTION

4.



Tolworth Hospital

London, UK

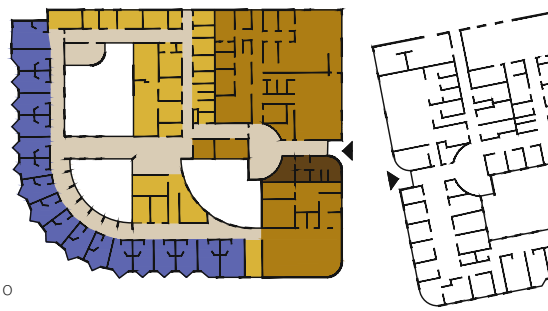
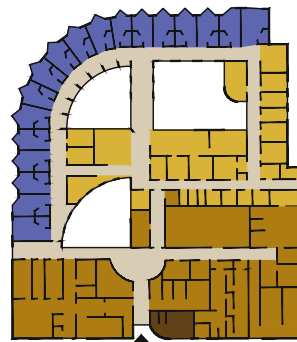
2012-2022

C.F. Møller

17 600 m²

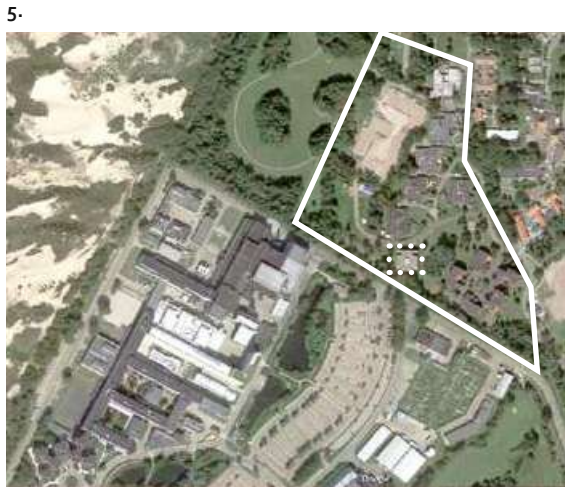
unit relating to the city

severe long term adult mental health patients, in- and out-patient facilities

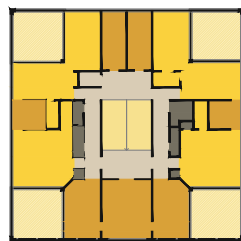


■ ACUTE | HABILITATION | INTEGRATION | PREVENTION





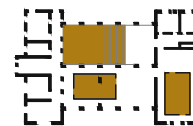
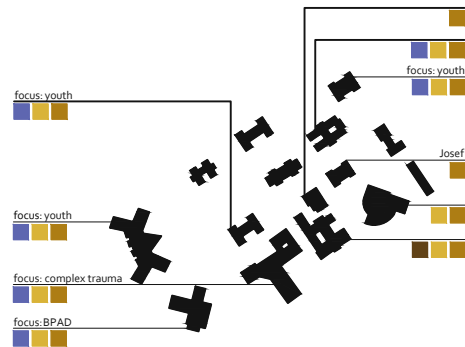
Residentail Care Centre
 Noordwijk, Netherlands
 2007
 Marlies Rohmer Arrchitecture
 1170 m²
independent unit inside the city
 in-patients only, provides all daytime activities



+1



Psychiatric Centre Caritas
 Melle, Belgium
 1808, restructuring 1970, extention 2016
 many (architecten De Vylder Vinck Taillieu: Sint-Jozef, 2016)
 no data
independent unit outside the city
 recovery from a deep crisis to social integration



0

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7.



Sct. Hans Forensic Psychiatry

Roskilde, Denmark

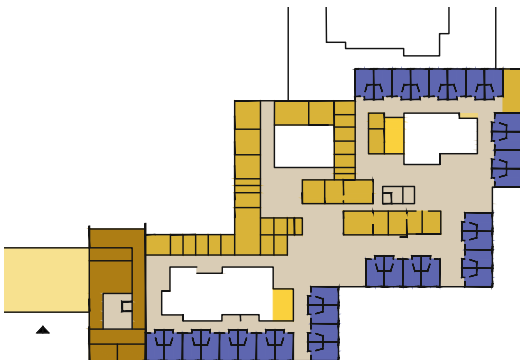
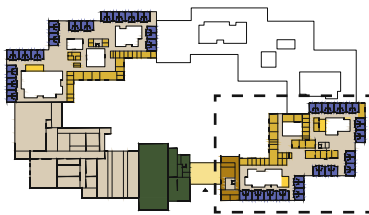
competition 2013

C.F. Møller

25 000 m²

independent unit outside the city

forensic psychiatric patients and patients with substance abuse, both open and closed, outpatient clinic



■ ACUTE | ■ HABILITATION | ■ INTEGRATION | ■ PREVENTION

8.



Psychiatric Centre Ballerup

Ballerup, Denmark

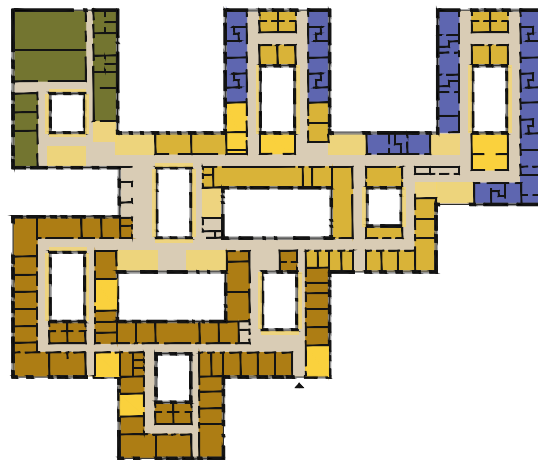
competition 2014

CREO ARKITEKTER A/S,
WE architecture

6 000 m²

independent unit outside the city

intensive care, 24-hour emergency department, outpatient clinics, centre for rehabilitation and recovery



■ ACUTE | ■ HABILITATION | ■ INTEGRATION | ■ PREVENTION



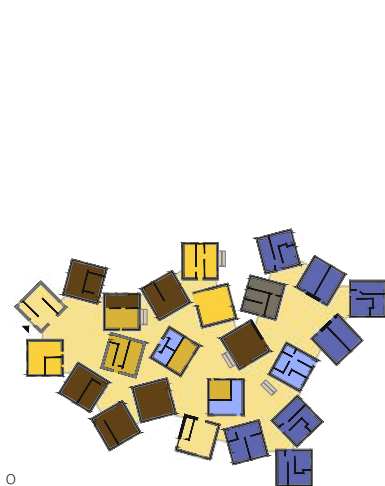
Children's Centre for Psychiatric

Date, Japan
 2006
 Sou Fujimoto Architects

2 536 m²

independent unit outside the city

only in-patient, psychological treatment and lifestyle guidance necessary for adapting to social life



■ ACUTE | **HABILITATION** | INTEGRATION | PREVENTION



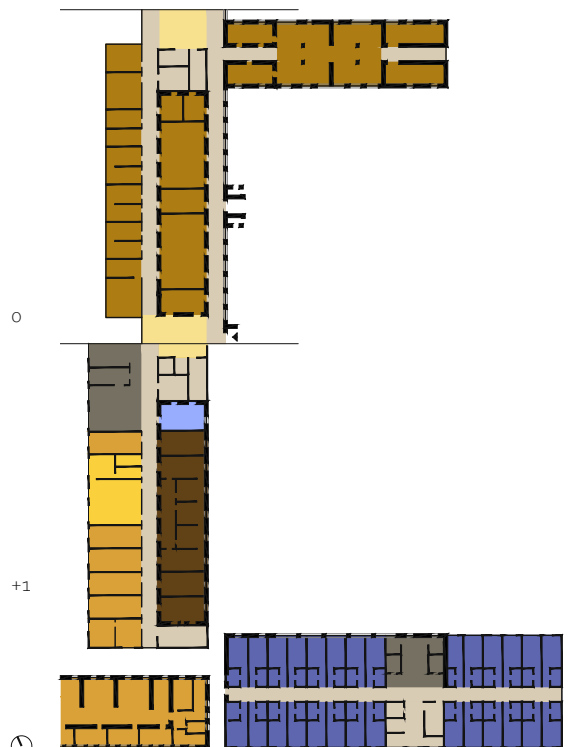
Psychiatric Centre

Pamplona, Spain
 1899, restructuring 1975, extension 2010-2017
 many, (Vaillo+Irigaray Architects, Galar, Vélaz extension 2017)

9 820 m² (extension 2017)

independent unit outside the city

for people with insufficient family and social support, unable staying at home, who require permanent care



■ ACUTE | **HABILITATION** | INTEGRATION | PREVENTION

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typology

11.



Residence and Day Centre for the Mentally Handicapped

Barcelona, Spain

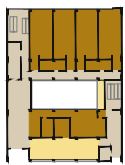
2010

Aldayjover Arquitectura y Paisaje

2 000 m²

unit relating to the city

focus on in-patient care



0

+3

12.



Psychiatric Centre Sint-Amedeus

Mortsel, Belgium

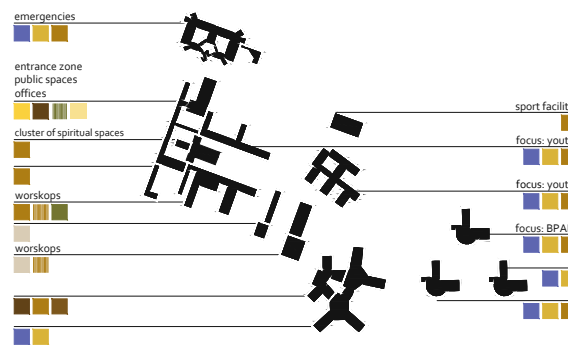
1876, restructuring 1970

many (TC PLUS: Encounter Place, 2014)

no data

independent unit outside the city

full-time or part-time admission, treatment focused on integration in society



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13.1



Maddalena Mental Health Centre

Trieste, Italy

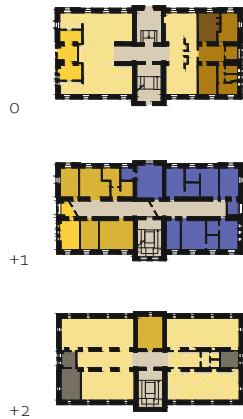
late 19th century, former asylum, as a clinic used since 1975, renovated in 2008

Antonio Villas (renovation 2008)

930 m²

unit integrated with the city

short and long in-patient care, out-patient care and support, habilitation and prevention



▪ ACUTE | HABILITATION | INTEGRATION | PREVENTION

13.2



Via Gambini Mental Health Centre

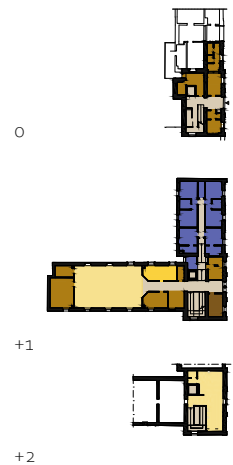
Trieste, Italy

early 20th century, as a clinic used since 1975, renovated in 2010 many, (Antonio Villas, renovation 2010)

554 m²

unit integrated with the city

short and long in-patient care, out-patient care and support, habilitation and prevention



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13.3



Barcola Mental Health Centre

Trieste, Italy

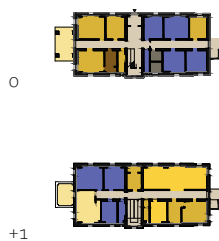
early 20th century, former villa, as a clinic used since 1975, renovated in 1990

no data

440 m²

unit integrated with the city

short and long in-patient care, out-patient care and support, habilitation and prevention



13.4



Domio Mental Health Centre

Trieste, Italy

1999 - 2004

Starassociati

520 m²

unit integrated with the city

short and long in-patient care, out-patient care and support, habilitation and prevention



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14.



Centre for Psychiatric Rehabilitation

Bolzano, Italy

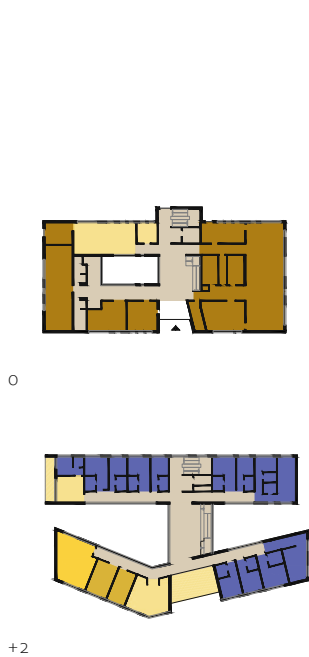
2014

Modus Architects

4 700 m²

unit relating to the city

in- (short and long-term residents) and out-patients, users with chronic diseases at the beginnings of pathologies



■ ACUTE | HABILITATION | INTEGRATION | PREVENTION

15.



Psychopedagogical Medical Centre

Vic, Spain

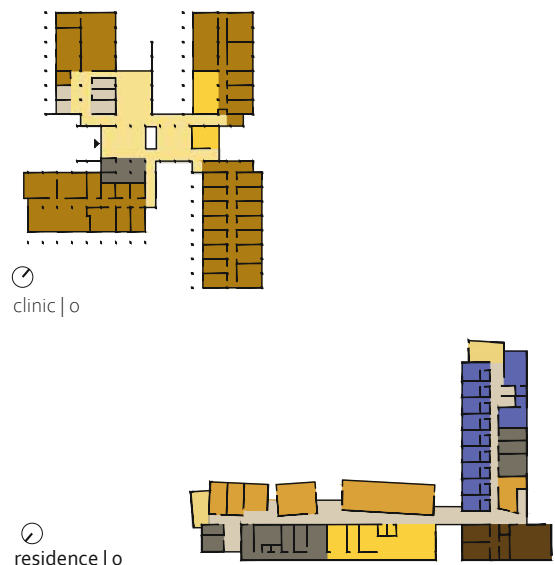
2015

Comas-Pont arquitectos

1657 m²

unit outside the city, inetgrated with residence

short and long in-patient care, out-patient care and support, ha-bilitation and prevention



■ ACUTE | HABILITATION | INTEGRATION | PREVENTION

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typology

16.



Centre for the Mentally Disabled

Toro, Spain

2009

Amas4arquitectura

770 m²

unit integrated with the city

short and long in-patient care, out-patient care and support, habilitation and prevention



17.



University Psychiatric Centre Gasthuisberg

Leuven, Belgium

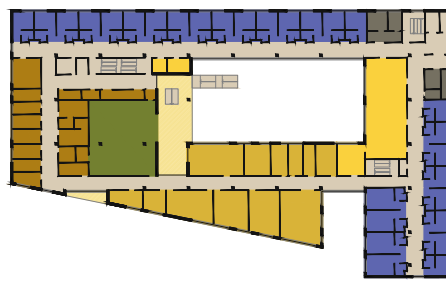
2011-2015

Stéphane Beel Architects

9 374 m²

unit relating to the city

in- and out-patient longterm care, prevention and research



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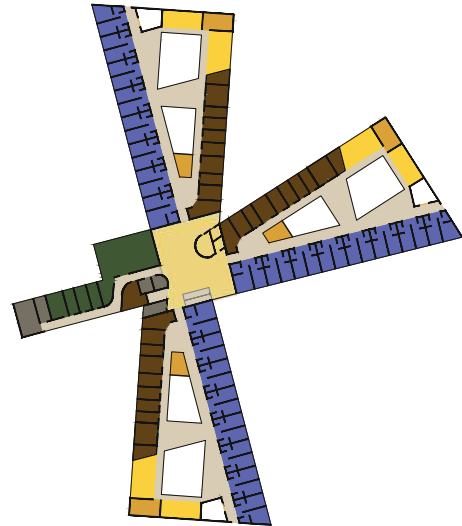


■ ACUTE | HABILITATION | INTEGRATION | PREVENTION



■ ACUTE | HABILITATION | INTEGRATION | PREVENTION

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



0

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1. Helsingor Psychiatric Hospital Rehabilitation

Helsingør, Denmark

2007

BIG, JDSA

6 000 m²

independent unit outside the city

acute crisis

only in-patient, 24-hour treatment and support

A facility located near the somatic hospital, but isolated by greenery.

The hospital consists of 3 identical units, each built of clearly defined and separated spaces: private, common and for treatment. Security is valued here before privacy.

The spaces are connected by corridors opening onto internal courtyards. On the corridors and in common spaces patients are fully exposed, which facilitates their full control.

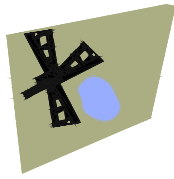
The fields and lake around the facility serves as a backdrop. It is supposed to provide patients with the feeling of safety and pleasant views of nature from the patient's rooms. Green spaces are available for patients and are located on the roof and in internal courtyards, but are not directly accessible.



relation to the outside



therapy room



VIEWING GARDEN

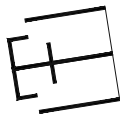
Green area that cannot be entered. Seen from patient and therapy rooms to reduce stress.



ROOF GARDEN

Outdoor terraces are placed on the roof of the ground floor and serve as private, isolated gardens for use of patients, visitors and staff. They provide secure contact with outside.

+1

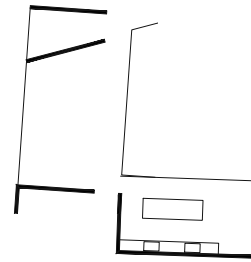


0



PRIVATE ROOM WITH A BATHROOM

4,2 single rooms with a bathroom (16 m²) with view opening towards lake or fields - a desirable solution which provides the patient with a sense of privacy, security and dignity. The entrance to the room is retracted, which is a good buffer from the circulation space.

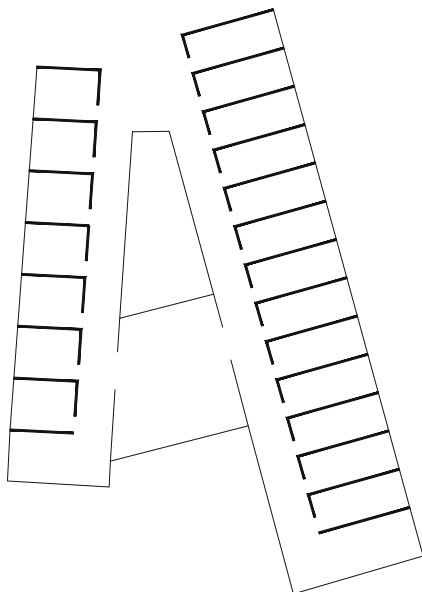


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KITCHEN WITH A DINING AREA

Kitchen (28,5 m²) serves for unit of 16 patients. The act of eating has a social meaning, it is a pretext to meet. Room opens towards the inner courtyard.

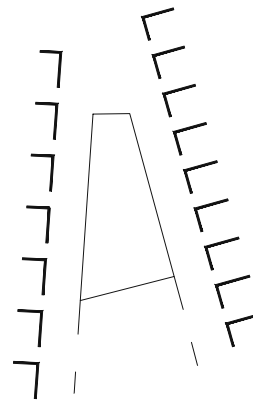


+1



THERAPY ROOM IN RELATION TO STRUCTURE'S MODULE

Therapy rooms (10 m²) located on different floor than patient rooms. The proportions of the room support the program: rectangular rooms are used for individual therapy, while square rooms host group therapy.



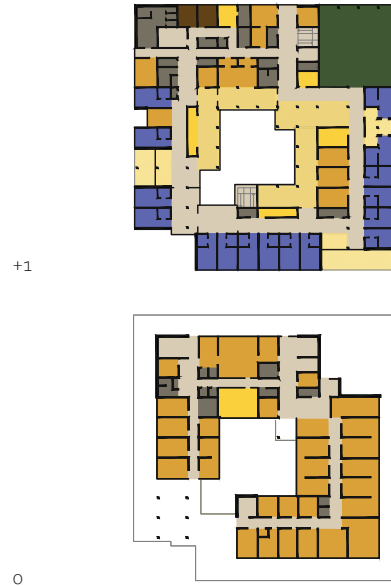
+1



COMMON AREA INTEGRAL WITH THE CIRCULATION

Users are watching and being watched. Integration is forced, there is no possibility to regulate a distance, which may cause stress or aggressive behaviour.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



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2. Nuuk Psychiatric Clinic

Nuuk, Grenland

2018

White Arkitekter

3300 m2

independent unit outside the city

acute crisis

only in-patient care

The facility is located on the outskirts, on the seashore. The scale of the building is to be similar to the scale of residential buildings.

The privacy of in-patients is ensured by locating their rooms on a different floor. The circulation and common spaces interpenetrate each other; the patients are not exposed and they can easily regulate the distance.

The common spaces open up to the internal courtyard, private to the greenery around the hospital. Owing to the overhangs, the building offers generous, roofed external spaces.

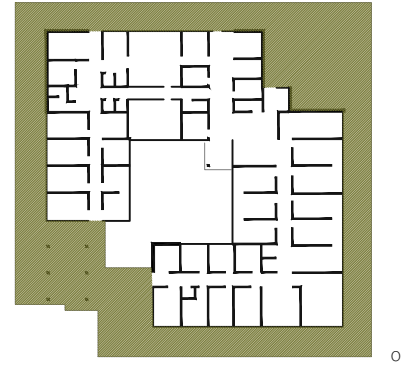
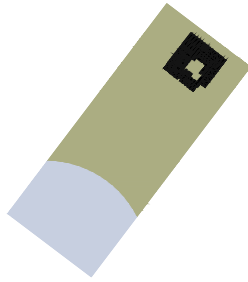
All rooms are finished with wood due to the availability of the material and its effect on reduction of stress.



relation to the outside



common area



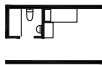
COURTYARD, HEALING GARDEN

Hospital is placed on the seashore, surrounding is accessible for patients. Building is organised around courtyard. All rooms and kitchens open to either covered courtyard, sea or city, in that the patient can decide which part of the building he wants to stay in.

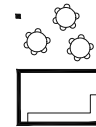


PORCH

Due to the use of overhang roofed, accessible space surrounds the building. It is accessible from all therapy rooms on the ground floor.



+1



+1



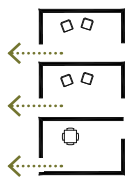
PRIVATE ROOM WITH A BATHROOM

16 in-patient single rooms with toilet (23,5 m²) - a desirable solution which provides the patient with a sense of privacy, security and dignity. The narrow vestibule of the room may not be perceived positively.



KITCHEN SEPARATED FROM DINING ROOM

5 small kitchen units (each 15-18 m²) are separated from dining area, which is planned as a part of common space. It allows use of less formal environment, the furniture there is varied, what makes it easier for the patient to to decide on the degree of interaction.

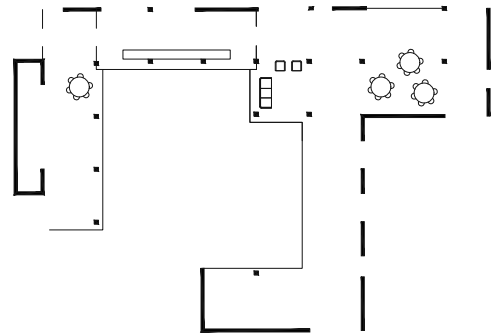


o



THERAPY ROOMS RELATED TO THE STRUCTURE

Therapy rooms 18 m² in relation to the structure ensures clarity of space. Proportions are imposed, so quality of rooms differs through furniture and outside views: towards sea, courtyard or town. All rooms prolong directly to the surrounding garden or courtyard.



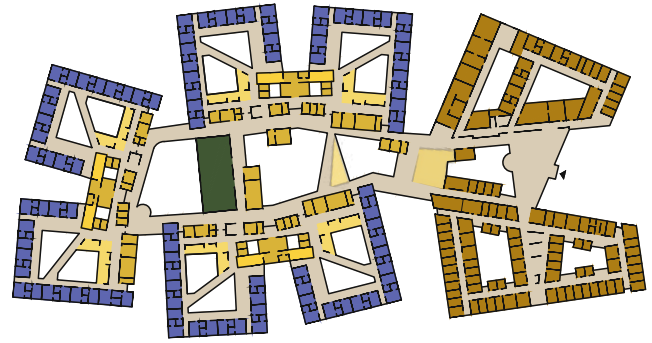
+1



COMMON AREA AS SPACE IN THE CENTRE

Common areas face either atrium or the terraces open towards the sea. Space is not defined by walls, so the control of patients is facilitated. At the same time, due to the niches and irregular form, it gives patients the possibility to define their exposure.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



o

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3. Vejle Psychiatric Hospital

Vejle, Denmark

2017

Arkitema Architects

17 000 m²

independent unit outside the city

acute crisis, rehabilitation, reintegration

psychiatric ward, psychiatric emergency department, and a child and adolescent psychiatric outpatient clinic

A very large hospital, located on the outskirts of the city.

It consists of 3 repeatable hospital units and two out-patient units. The spaces inside are clearly zoned and organised around courtyards.

Corridors have been avoided in private rooms and patient units, and common spaces are niches in the circular space. All spaces are open to nature.



relation to the outside

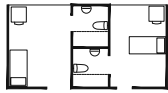


common area



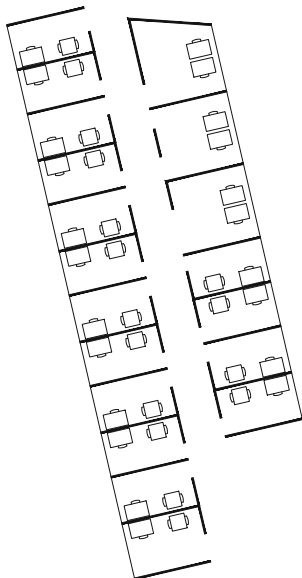
COURTYARD

Common areas open towards courtyards, patient's rooms towards surroundings: railway tracks in the west, forest in the east.



PRIVATE ROOM WITH A BATHROOM

Single room with a bathroom (22 m²). A desirable solution which provides the patient with a sense of privacy, security and dignity.

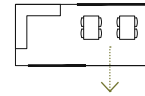


THERAPY ROOMS REPETITIVE WITH AREA MODIFICATION

Clinic is build up of two types of therapy rooms: 10 and 16 m². It does not provide a variety of spaces. The proportions are most conducive to individual therapy.

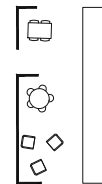
SEMI-OPEN SPACES

The building does not provide semi-open spaces.



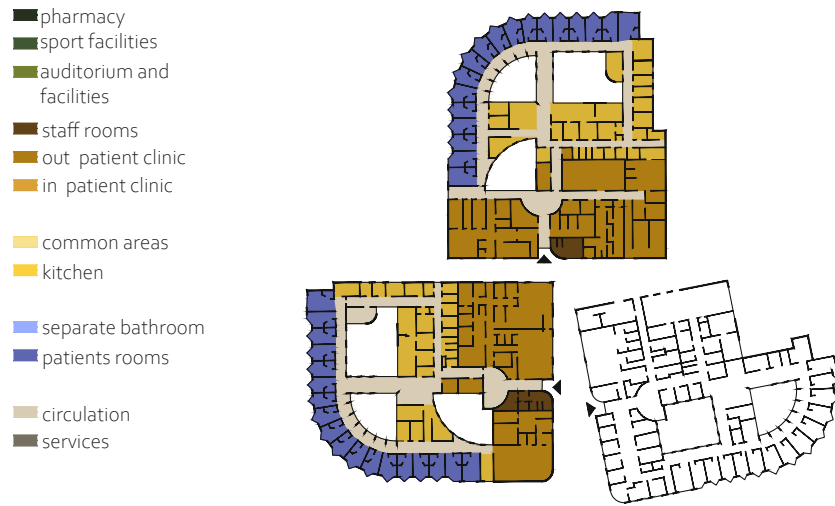
DINING ROOM EXTENDED TO THE OUTSIDE

1 kitchen (23 m²) serves for unit of 16 patients and adjoins the atrium. Patients can cook for themselves or for therapeutic activities.



COMMON AREA AS SHELTERED PART OF THE CIRCULATION

32 m² for unit of 15 in-patients area separated from circulation within the in-patient unit. Common area faces the inner courtyard. Is located close to therapy rooms and can be used during therapy sessions.



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4. Tolworth Hospital

London, UK

2012-2022

C.F. Møller

17 600 m²

unit relating to the city

acute crisis, rehabilitation

severe long term adult mental health patients, in- and out-patient facilities

Facility located in the city centre, the repetitive buildings of the psychiatric hospital constitute separate units, together defining the square. They are adjacent to the somatic hospital.

The zoning of the space inside is very clear.

Common spaces are organised around internal gardens with different characters.

Private and common spaces are very strongly defined; there is a lack of semi-open spaces allowing for the regulation of distance and degree of interaction.



relation to the outside



common area

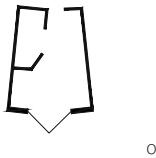


COURTYARD

The three buildings function independently of each other, although together they define an valuable urban space. Accessible courtyards are surrounded by circulation areas and few therapy rooms. Patients rooms open towards surrounding streets.

SEMI-OPEN SPACES

The building does not provide semi-open spaces.

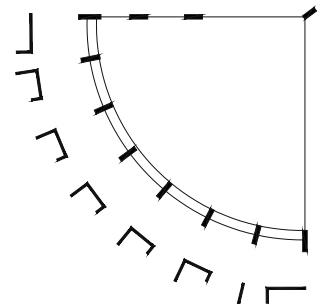
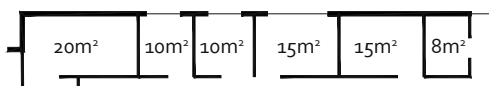


PRIVATE ROOM WITH A BATHROOM

149 in-patient single rooms with a bathroom (22 m²) open towards the streets. A wide vestibule and a widening room give a sense of comfort and dignity.

KITCHEN

No data.



VARIOUS THERAPY ROOMS

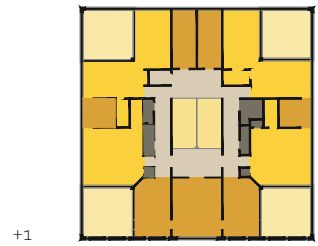
Offers a diversity of rooms for the same programme to provide space for a different number of therapy participants.



COMMON AREA AS A PART OF CIRCULATION

Common space proposed as niches placed parallel to the circulation, opening towards inner courtyard. Designed as fixed furniture.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



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5. Residentail Care Centre

Noordwijk, Netherlands

2007

Marlies Rohmer Arrchitecture

1170 m²

independent unit inside the city

rehabilitation, reintegration

in-patients only, provides all daytime activities

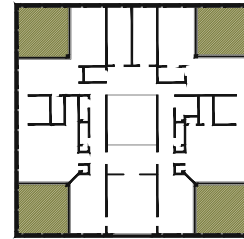
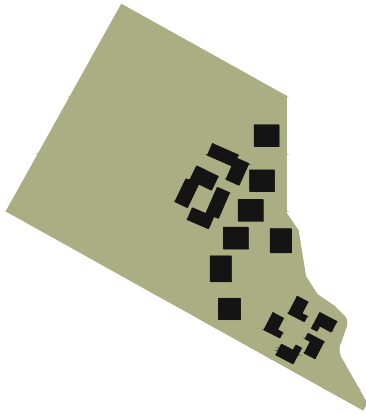
The building complements the complex of a psychiatric hospital. Provides space for shared meals, recreation and events for inpatients.



common area



common area



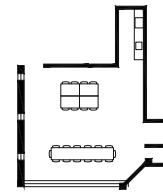
LANDSCAPED GROUNDS, HEALING GARDEN

Garden consists of two parts: space between buildings - heritage of an asylum concept - and space for recreation in the west part, behind the facilities of the centre. Recreation space is meant to have therapeutic function and is accessible only for users of the centre.



PORCH, TERRACES

Roofed, accessible spaces on the ground floor and terraces on the first floor are located in all four corners of the building and provides patients with the possibility of regulation their exposure to the external world.

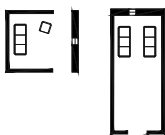


KITCHEN SEPARATED FROM A DINING ROOM

Due to the fact that kitchen is organised as a niche in a dining room (70 m²) the dining room can be used for other purposes. On the other site the act of cooking together is losing its importance.

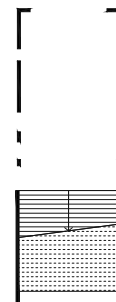
PRIVATE ROOMS

No data.



THERAPY ROOMS WITH MODIFICATION OF PROPORTIONS

Therapy rooms 18 m² with different proportions, facilitating different types of therapy.



COMMON AREA AS SPACE IN THE CENTRE

The core of a building is a common area using the stairs as amphitheatre, highlighting the presence of users.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic

- common areas
- kitchen

- separate bathroom
- patients rooms

- circulation
- services

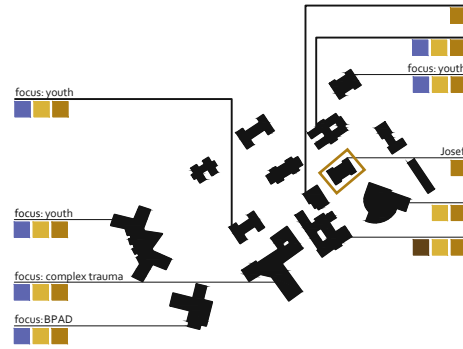
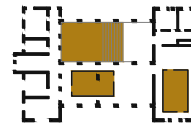


Figure ground plan



Sint-Josef building plan

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6. Psychiatric Centre Caritas

Melle, Belgium

- 1808, restructuring 1970, extension 2016
- many (architecten De Vylder Vinck Taillieu: Sint-Jozef, 2016)
- independent unit outside the city
- acute crisis, rehabilitation, reintegration
- recovery from a deep crisis to social integration

The hospital adapts the existing buildings of a former asylum.

In this thesis only the Sant Josef building in analysed more detail. After years of neglect, it was redesigned into a roofed outdoor space used for the needs of in and outpatient therapy.

Here, a set of separate, transparent rooms was designed. They do not serve a specific programme and are equipped with portable furniture to ensure flexibility.



relation to the outside

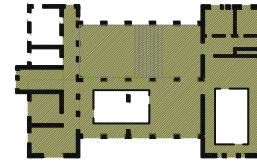


common area



LANDSCAPED GROUNDS

Garden serves as a space for circulation between units, providing privacy and a view of nature to each unit.



ROOFED SPACE

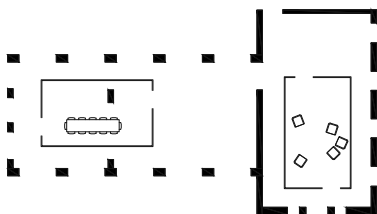
Structure of an unused building is adapted as a covered outdoor space.

PRIVATE ROOMS

The entire Psychiatric Centre Caritas provides space for 247 in-patients. In this thesis only the expansion of Sint-Jozef from 2016, by architecten De Vylder Vinck Taillieu is analysed. It covers only the common spaces.

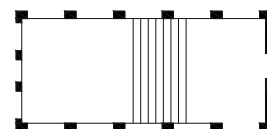
KITCHEN

The building does not offer kitchen area.



THERAPY ROOMS REPETITIVE WITH POSITION MODIFICATION

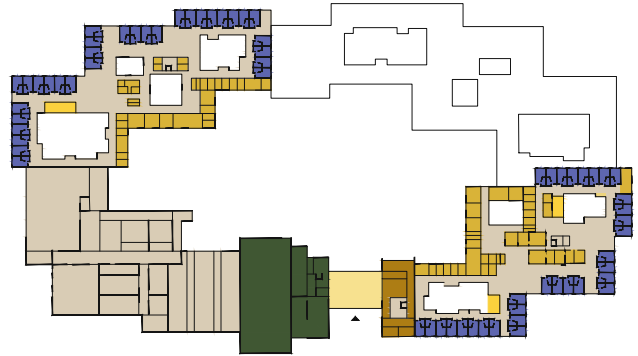
The features of the existing structure differentiate the features of spaces in glass modules placed within structure (32 m²)



COMMON AREA AS A SHELTERED PART OF THE GARDEN

The spaces suggesting the program: the amphitheater or the hardened surfaces smoothly merge with the undefined spaces of the building.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



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7. Sct. Hans Forensic Psychiatry

Roskilde, Denmark

competition 2013

C.F. Møller

25 000 m²

independent unit outside the city

acute crisis, rehabilitation, reintegration

forensic psychiatric patients and patients with substance abuse, both open and closed, outpatient clinic

The hospital is located on the outskirts of the city and consists of 3 repeatable hospital units.

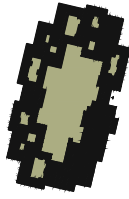
The architects sought to blur the boundaries between spaces. Due to the lack of long axes and the difference of levels, hospital units are isolated from each other, providing patients with the appropriate scale and a sense of security.



relation to the outside

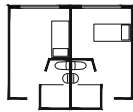


common area



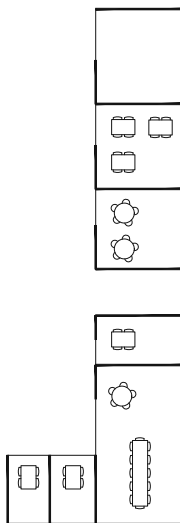
COURTYARD

Smaller courtyards are organised around main one, which serves as a garden. Therapy rooms open towards main garden, common areas and kitchens towards small courtyards, patients rooms towards surrounding fields.



PRIVATE ROOM WITH A BATHROOM

96 in-patient single rooms with a bathroom (16 m²) open towards garden. Entrance area is wide, not claustrophobic.

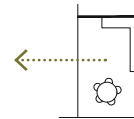


THERAPY ROOMS REPETITIVE WITH AREA MODIFICATION

Clinic build up of three types of therapy rooms: 8, 20, 38 m² with different proportions. Offers a diversity of rooms to provide space for groups with a different number of participants.

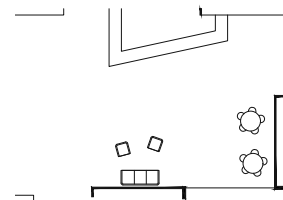
SEMI-OPEN SPACES

The building does not provide semi-open spaces.



KITCHEN WITH DINING ROOM EXTENDED TO THE OUTSIDE

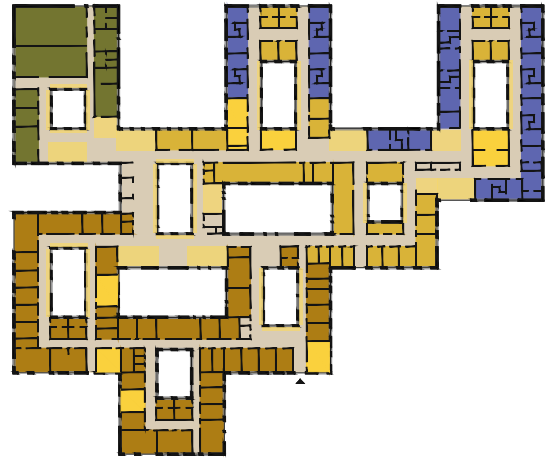
Kitchen together with dining room (18 m²) is the most recommended solution. Used in clinics where patients can cook for themselves or for therapeutic activities. They are arranged irregularly and have different proportions - offer variety of spaces. Contact with nature in the courtyard reduces stress and fosters the healing process.



COMMON AREA AS SHELTERED PART OF CIRCULATION

Area is adjoined to the circulation between in- and out- patient facilities so it serves both groups and it forces integration.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



ground floor

8. Psychiatric Centre Ballerup

Ballerup, Denmark

competition 2014

CREO ARKITEKTER A/S,
WE architecture

6 000 m²

independent unit outside the city

acute crisis, rehabilitation, reintegration

intensive care, 24-hour emergency department,

outpatient clinics, centre for rehabilitation and recovery

The unit planned as part of a hospital, located in the city, but distanced through a green backdrop.

Zoning is subtle, common areas extend into courtyards.

The corridors have numerous niches of varying scale, ranging from single-person seats to isolated common spaces.

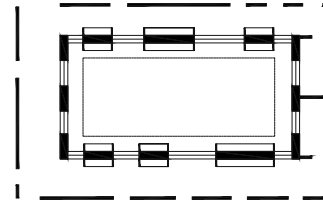
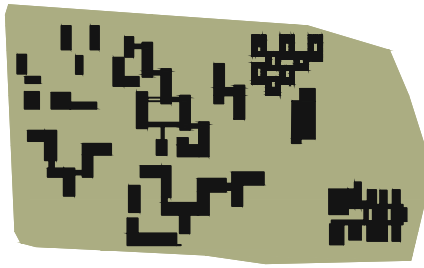


relation to the outside



common area

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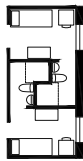
LANDSCAPED GROUNDS, COURTYARD

Hospital buildings are placed as pavilions in a garden. All buildings have also their internal courtyards that extend the common areas.



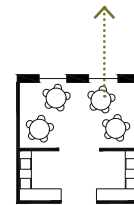
PORCH

The inner courtyards are equipped with fixed furniture and are partially roofed by overhang, what allows use of the courtyard through the most of the year.



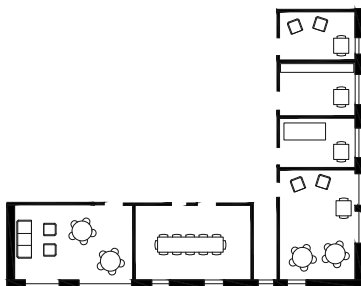
PRIVATE ROOM WITH A BATHROOM

Single room with a bathroom (14 m²) it is accessible directly from the corridor, there is no buffer between public and private space.



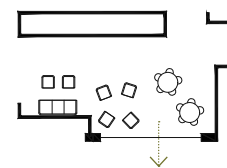
KITCHEN SEPARATED FROM A DINING ROOM

Kitchen (18 m²) and separate dining room (22 m²) which adjoins the atrium. Patients are allowed to cook for themselves or for therapeutic activities. Dining room can be prolonged into the courtyard.



THERAPY ROOMS REPETITIVE WITH AREA MODIFICATION

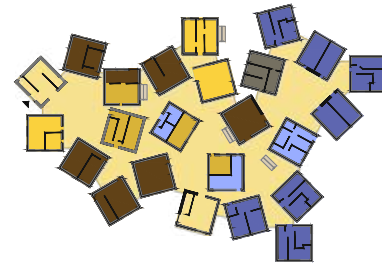
Therapy rooms are repeating modules with area of either 11 or 24 m². They have the same rectangular proportions, which does not provide a variety of available spaces.



COMMON AREA AS SHELTERED PART OF CIRCULATION

Unit of 50 m² is located along the circulation between in- and out-patient facilities and the garden. It facilitates the regulation of integration, gives a sense of security and at the same time does not isolate. It is hard to keep an eye on all patients.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



ground floor

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9. Children's Centre for Psychiatric

Date, Japan

2006

Sou Fujimoto Architects

2 536 m²

independent unit outside the city

rehabilitation

only in-patient, psychological treatment and lifestyle guidance necessary for adapting to social life

The hospital for children is located on the outskirts of the city, on hills, in greenery.

The play space merges with the space of circulation, in which volumes with the specific programme are placed. It is supposed to resemble a city and be unpredictable



relation to the outside



common area



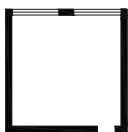
LANDSCAPED SETBACK

The huge area of lawn separates the hospital from the motorway and also serves children as playground. It is good visible and easily accessible.



ROOM

All single rooms (10 m²) are open towards surrounding nature. The users share the bathroom.

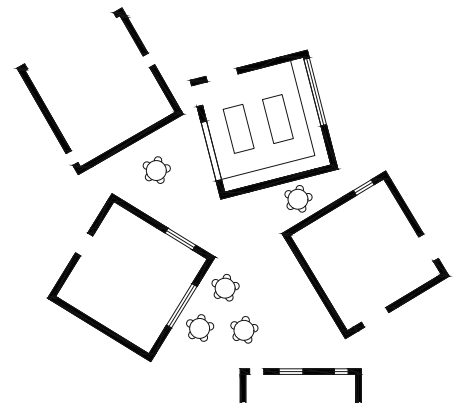


THERAPY ROOMS IN RELATION TO STRUCTURE'S MODULE

Therapy rooms relate to the general module (34 m²). All spaces have the same size and proportions, they differ through the relation towards landscape or inside common area.

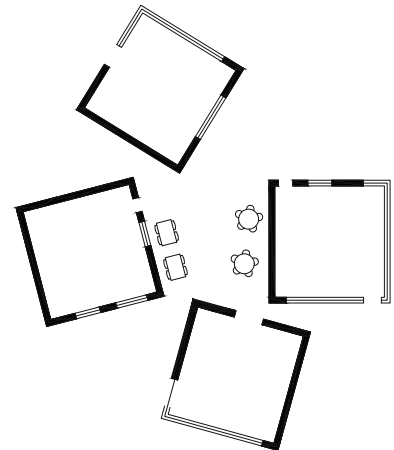
SEMI-OPEN SPACES

The building does not provide semi-open spaces.



DINING ROOM IN COMMON AREA

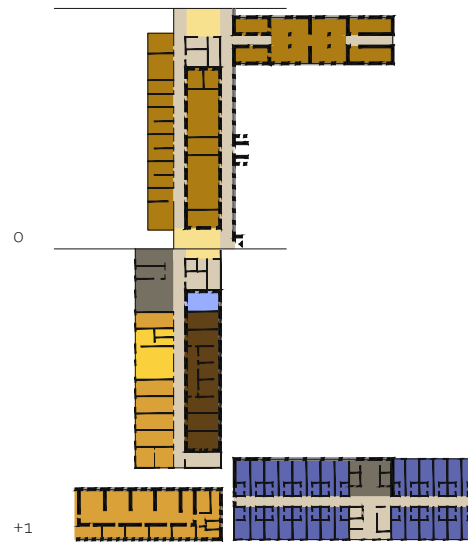
Kitchen is used by staff (35 m²), dining area is part of common and circulation areas (approximately 88 m²) The act of eating is given a social meaning.



COMMON AREA INTEGRAL WITH THE CIRCULATION

Common area is here synonymous with circulation and is an element that binds spaces which have clearly defined form and program. In this way clinic has no corridors and tight spaces. Integration is forced, it is difficult to regulate it, which can cause stress.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



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10. Psychiatric Centre

Pamplona, Spain

1899, restructuring 1975, extension 2010-2017

many, (Vaillo+Irigaray Architects, Galar, Vélaz extension 2017)

9 820 m² (extension 2017)

independent unit outside the city

rehabilitation

Facility is an adaptation of the structure of former asylum to the space for people with insufficient family and social support, unable staying at home, who require permanent care.

It aims to provide a friendly and safe atmosphere. It is not intended to re-integrate patients with the external environment, but constant care.

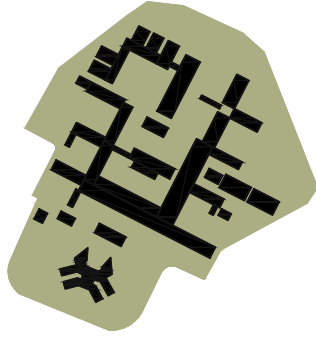
The zoning is clear, each space opens onto the garden.



relation to the outside

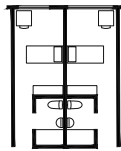


therapy room



VIEWING GARDEN

Gardens provide calming view and are used as space connecting buildings. Patients usually stay in the Centre.

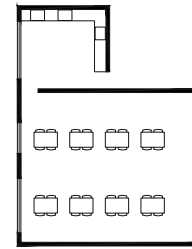


PRIVATE ROOM WITH A BATHROOM

230 in-patient single rooms with a bathroom (20 m²) opening towards garden. Rooms with a narrow vestibule, which can be perceived as claustrophobic and trigger stress reaction.

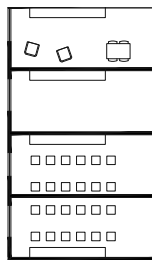
SEMI-OPEN SPACES

The building does not provide semi-open spaces.



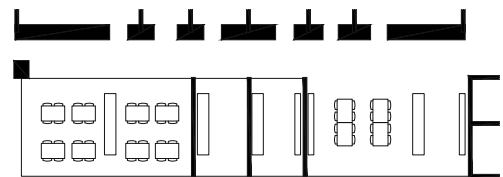
KITCHEN SEPARATED FROM A DINING ROOM

Kitchen is operated only by the staff (20 m²) Dining room (76 m²) can be also used for other activities like workshops, meetings, events. Kitchen and dining room are placed in clinic wing, between the therapy rooms.



THERAPY ROOMS REPETITIVE

Every therapy room 25 m², rooms close to each other. Extended proportions due to adaptation to the existing structure.



COMMON AREA AS A SEPARATE ROOM

Common area is clearly defined and regular. Gives a sense of security and facilitates control of patients.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



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11. Residence and Day Centre for the Mentally Handicapped

Barcelona, Spain

2010
 Aldayjover Arquitectura y Paisaje
 2 000 m²
 unit relating to the city
 acute crisis, rehabilitation
 in-patient care

A three-story building in a dense urban fabric, between 10-story buildings.

All common spaces open onto the inner courtyard, isolating from the surrounding streets.

Grading of privacy takes place across the floors.

In the basement parking, technical services, personnel area are located. Ground floor hosts gym, dining room and workshops. On the attic level, opened to the courtyard administration day centre (medic, psychologist and visiting rooms) is placed.

Private rooms are placed on the first and second floor. They are separated from circulation space; by common area with dining room. Due to the lack of space, the rooms have a shared bathroom. The terrace, available to all users, is located on the rooftop.



relation to the courtyard

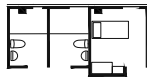


common terrace



COURTYARD

Courtyard serves as a core of the building, defining the quality of most of the rooms. The building cuts off its surroundings.

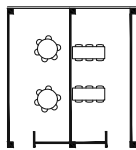


+3



SINGLE AND DOUBLE ROOMS

24 in-patient beds in both double and single room. The privacy necessary for the patients was not ensured due to costs. Single rooms open towards atrium (10 m²). Double rooms, which are not a recommended solution, due to difficulty in allocation of suitable personalities, open towards streets (18 m²). Shared bathrooms force integration, which increases stress and might result in aggressive behaviour.

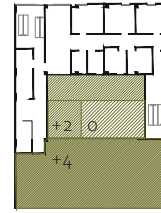


+1



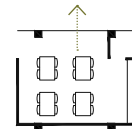
THERAPY ROOMS IN RELATION TO STRUCTURE

Therapy rooms relate to the structural module or it's half (35 or 12 m²) All with extended proportions that are beneficial for individual therapy, but make group therapy more difficult.



TERRACE, ROOF GARDEN

On every floor common areas are prolonged with outdoor terraces, some partially roofed. Roof terrace is accessible for all users. Terraces are partially covered from weather conditions and sheltered from heavily used street.

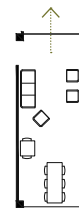


0



DINING ROOM EXTENDED TO THE OUTSIDE

Dining room together with a kitchen, 30 m² adjoins the courtyard. Solution beneficial for therapeutic activities.



+3



COMMON AREA AS TRANSITION TO PRIVATE ROOMS

32 m² for unit of 8 in-patients, separating circulation and private rooms. Adjoins the terrace open to the courtyard..

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic

- common areas
- kitchen

- separate bathroom
- patients rooms

- circulation
- services

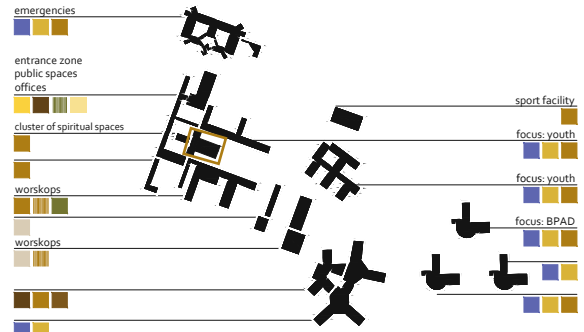
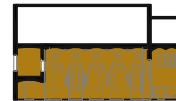


Figure ground plan



section of Encounter Place in old chapel

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12. Psychiatric Centre Sint-Amedeus

Mortsel, Belgium

- 1876, restructuring 1970
- many (TC PLUS: Encounter Place, 2014)
- independent unit outside the city
- rehabilitation, reintegration
- full-time or part-time admission, treatment focused on integration in society

The hospital adapts the existing buildings of former asylum.

In this thesis, only the building of a chapel is analysed. It is currently used as a flexible therapeutic space for relaxation, talks and meetings, for inpatients and outpatients and to be a place of tranquillity for everyone who needs it.

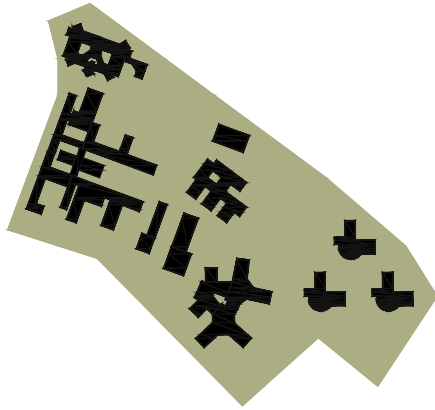
The space of the chapel has been divided into several rooms with different proportions, characters and materials.



common area

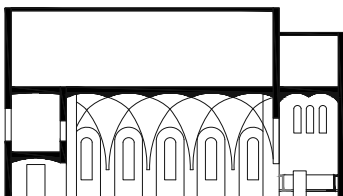


common area



LANDSCAPED GROUNDS

Space for circulation between units, providing privacy and a view of nature to each unit - remnant of asylum. The space in the former chapel does not interact with its surroundings



THERAPY ROOMS ADJUSTED

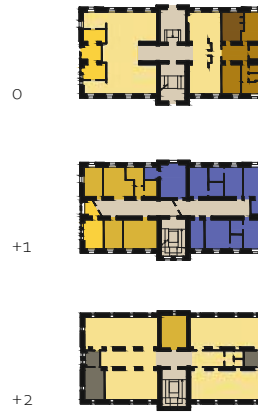
Therapeutic rooms are located in previously disused chapel using its features, light and changes of level to define spaces with various qualities.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out-patient clinic
- in-patient clinic

- common areas
- kitchen

- separate bathroom
- patients rooms

- circulation
- services



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13.1. Maddalena Mental Health Centre

Trieste, Italy

late 19th century, former asylum, as a clinic used since 1975, renovated in 2008

Antonio Villas (renovation 2008)

930 m²

Unit integrated with the city

rehabilitation, reintegration, prevention (residence separately)

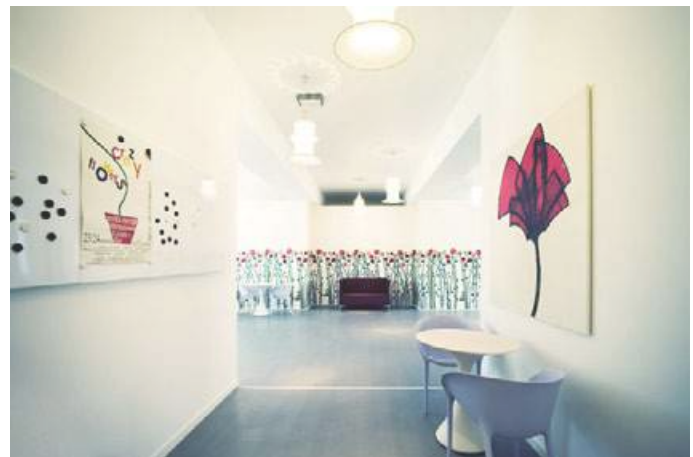
short and long in-patient care, out-patient care and support, habilitation and prevention

Adaptation of the structure of a former asylum.

Clear zoning, private spaces and therapy rooms isolated from common space.



common area



common area

GREEN AREA

The centre is located in urban tissue and has no outside space at disposal.

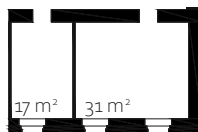
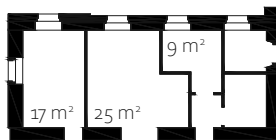


+1



PRIVATE ROOM WITH A BATHROOM

8 single rooms with a bathroom (17 - 27 m²) - a desirable solution which provides the patient with a sense of privacy, security and dignity.



+1

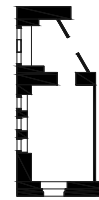


VARIOUS THERAPY ROOMS

Rooms irregular, depending on the original structure.

SEMI-OPEN SPACES

The building does not provide semi-open spaces.

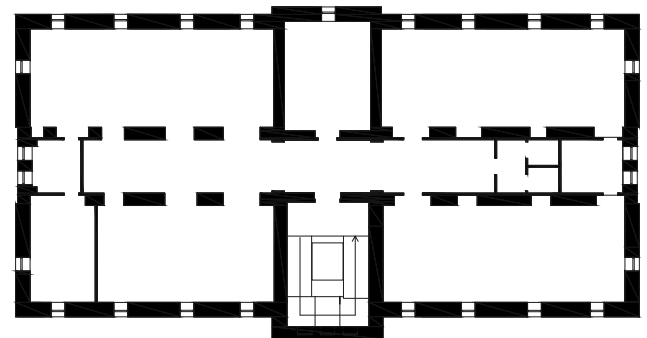


+1



KITCHEN WITH A DINING AREA

Kitchen and dining room for in-patients (24 m²) follows the shape of readapted space.



+2



COMMON AREA AS A SEPARATE FLOOR

Patients have the whole floor (170 m²) for their disposal in their free time. Thorough various furniture and irregular form ensures that the degree of integration can be regulated, gives a sense of security and at the same time does not isolate.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic

- common areas
- kitchen

- separate bathroom
- patients rooms

- circulation
- services



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13.2. Via Gambini Mental Health Centre

Trieste, Italy

early 20th century, as a clinic used since 1975, renovated in 2010

many, (Antonio Villas, renovation 2010)

554 m²

unit integrated with the city

rehabilitation, reintegration, prevention (residence separately)

short and long in-patient care, out-patient care and support, habilitation and prevention

Adaptation of a house from the industrial period to meet the needs of a clinic.

Clear zoning, private spaces accessible though therapy rooms, which act as a buffer against the common space.



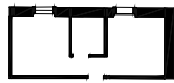
furniture



common area

GREEN AREA

The centre is located in urban tissue and has no outside space at disposal.



+1



ROOM

4 single rooms (10 m²) in readapted space, opening towards street or courtyard. Shared bathroom due to scarcity of space.

SEMI-OPEN SPACES

The building does not provide semi-open spaces.

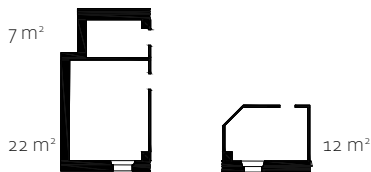


+1



KITCHEN WITH A DINING AREA

Kitchen (15 m²) for both out- and in-patient use in readapted space. Connected directly to the common area.

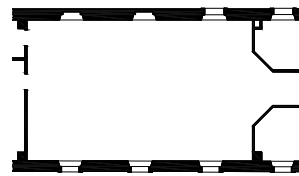


+1



VARIOUS THERAPY ROOMS

Form of the rooms imposed by the original structure.



+1



COMMON AREA AS SPACE IN THE CENTRE

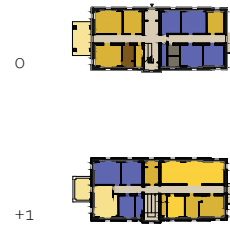
Open space between the therapy rooms 89 m² used also during workshops, screenings or events.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic

- common areas
- kitchen

- separate bathroom
- patients rooms

- circulation
- services



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13.3. Barcola Mental Health Centre

Trieste, Italy

early 20th century, former villa, as a clinic used since 1975, renovated in 1990

440 m²

unit integrated with the city

rehabilitation, reintegration, prevention (residence separately)

short and long in-patient care, out-patient care and support, habilitation and prevention

Adaptation of a residential house to the needs of the clinic. Constructed of irregular, small spaces connected by a corridor.



common area



common area



LANDSCAPED SETBACK

A small garden of approximately 75m² surrounds the building and isolates it from the street.

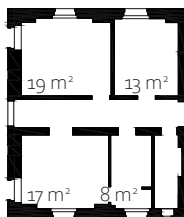


0



ROOM

6 single rooms (14 - 17 m²) in readapted space. Due to the lack of space, the rooms do not have private bathrooms



0

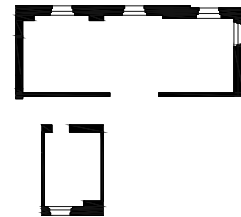


VARIOUS THERAPY ROOMS

The size and proportions of therapy rooms come from the existing structure.

SEMI-OPEN SPACES

The building does not provide semi-open spaces.

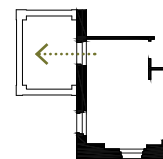


+1



KITCHEN SEPARATED FROM DINING ROOM

Kitchen (11,3 m²) and dining (45 m²) room separated from each other as a consequence of readapting given space.

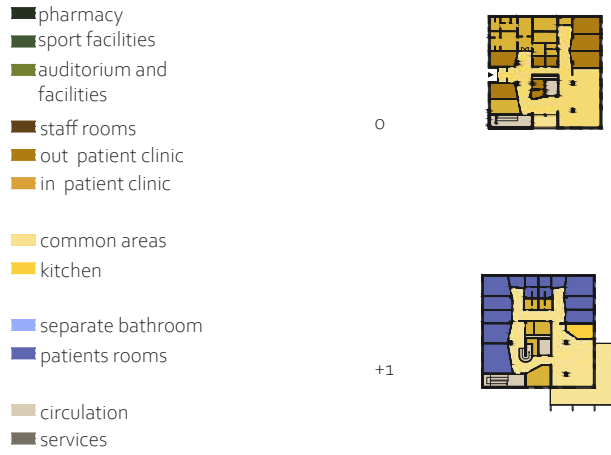


+1



COMMON AREA AS SEPARATE ROOM

Common area (21 m²) organised on the first floor, facilitated with terrace.



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13.4. Domio Mental Health Centre

Trieste, Italy

1999 - 2004

Starassociati

520 m²

Unit integrated with the city

rehabilitation, reintegration, prevention
(residence separately)

short and long in-patient care, out-patient care and
support, habilitation and prevention

Separation of in- and outpatients by level differ-
ence. The relationship with the garden is empha-
sised. The common space is continued to the out-
side either into the garden or the terrace.



relation to the outside



common area



HEALING GARDEN

The garden is an extension of the common areas.



ROOM

8 single rooms (11 - 18 m²) with a common bathroom open towards garden. Interaction between patients is forced.



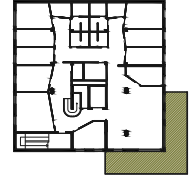
THERAPY ROOMS REPETITIVE

All therapy rooms (14 m² each) are meant for individual therapy. Group therapy takes place in common areas.



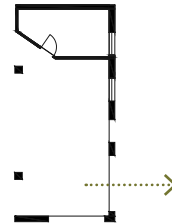
PORCH

Overhang over the entrance area extends the common space to the garden.



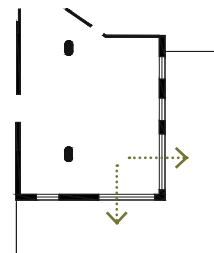
TERRACE

On the first floor terrace prolongs the common area for in patients.



DINING ROOM IN A COMMON AREA

Kitchen (10 m²) is separate from dining room, which is simultaneously a common area (43 m²). The act of eating acquires a social meaning. Space prolongs into terrace.



COMMON AREA AS SPACE IN THE CENTRE

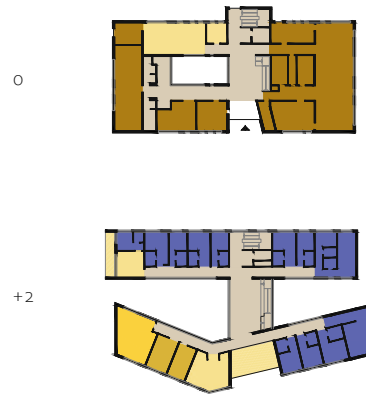
Common area (66 m²) is designed to host also dinning space, wrohshops, evets, etc. Located between the private rooms, therapy rooms and outside space.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out-patient clinic
- in-patient clinic

- common areas
- kitchen

- separate bathroom
- patients rooms

- circulation
- services



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14. Centre for Psychiatric Rehabilitation

Bolzano, Italy

2014
 Modus Architects

4 700 m²
 unit relating to the city

rehabilitation, reintegration, prevention
 in- (short and long-term residents) and out-patients,
 users with chronic diseases at the beginnings of
 pathologies

The building is located in an urban area and all
 rooms open up towards it. The inner courtyards
 are surrounded by a circulation space.

Zoning is clear; rooms with different programmes
 are separated by a corridor. Due to the lack of
 informal spaces interaction is forced both inside
 the clinic and in the surroundings.

The gradation of privacy is achieved by moving
 private rooms to the upper floors.



relation to the outside

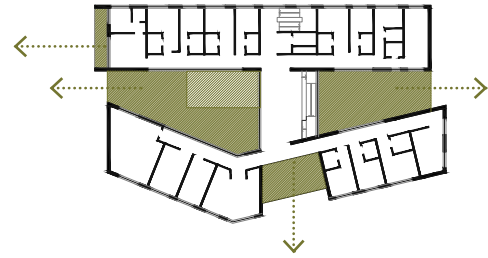


common area



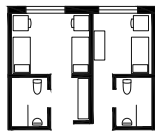
COURTYARD

The volume of the building defines two courtyards. Spaces of circulation open up to them. Private, therapy and common rooms open outwards.



ROOF GARDEN, TERRACES

Terraces face the surrounding streets. They accessible directly from circulation space, they seldom relate to the common space. For all patients interaction with the environment is inevitable.

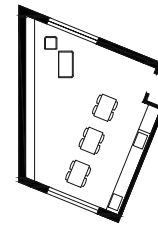


+2



ROOM WITH A BATHROOM

Centre offers 36 in-patient beds in single room with a bathroom (18 m²) or double room with a bathroom (24 m²). Double rooms are intended for families or couples. The rooms are accessible through a narrow corridor, which may be perceived negatively by many patients. Room is intended only for relaxation, and patients are to stay in common spaces as often as possible.

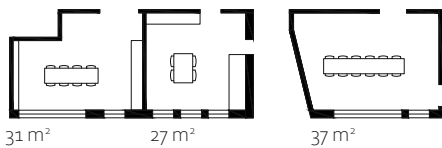


+2



KITCHEN WITH A DINING AREA

Kitchen, dining room and common room are organized in one room of 50 m². The interaction is forced, the patient has no possibility to withdraw. The way furniture is arranged forces the exposure.

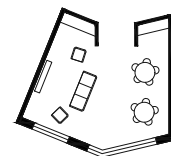


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VARIOUS THERAPY ROOMS

The forms of the rooms are irregular and follow the given volume.



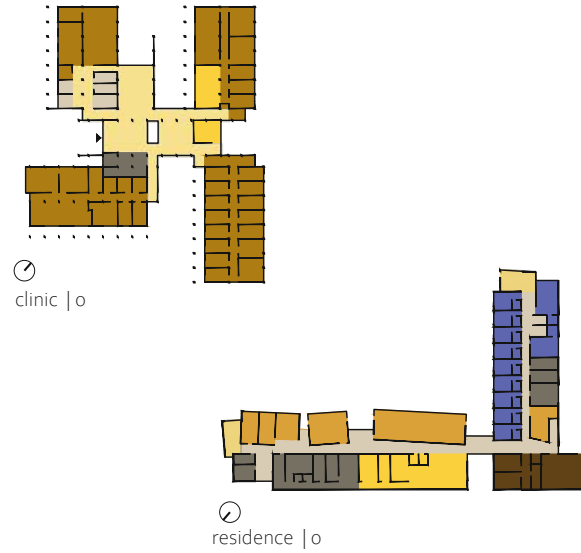
+2



COMMON AREA AS SEPARATE ROOM

Common area of 46 m² for unit of 10 in-patients is placed in separate room, accessible from corridor. The ability to adjust the distance is limited. Room has no direct connection with the outside.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



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15. Psychopedagogical Medical Centre

Vic, Spain

2015

Comas-Pont arquitectos

1657 m²

Unit integrated with the city

rehabilitation, reintegration, prevention
residence separately

short and long in-patient care, out-patient care and support, habilitation and prevention

The clinic and the residence are in separate buildings accessible by a bus connection. Both buildings are located on the city outskirts.

The clinic provides user with contact with nature through large windows and roofed terraces along the therapy rooms.

The residence is closed and it isolates the users from the surrounding.



clinic, relation to the outside



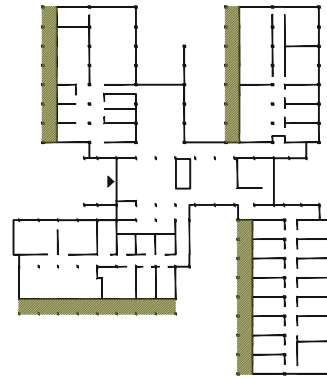
residence, relation to the outside



residence



clinic



clinic | o



HEALING GARDEN

The patients and therapy rooms view the garden, which is not visible from the street and accessible only by residents.



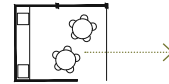
LANDSCAPED SETBACK

The lawn isolates the clinic from its surroundings. Outdoor space is used only next to the building.



PORCH

Roofed outside space along therapy rooms and common areas enables connection with the outside space.



clinic | o



DINING ROOM EXTENDED TO THE OUTSIDE

Kitchen (19 m²) with a dining room prolongs to the terrace.

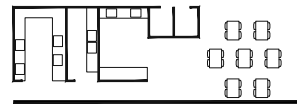


residence | o



ROOM WITH A TOILET

There are 30 in-patient beds either in single room with toilet (14 m²) or double room with toilet (22 m²). The shower is shared. This solution forces interaction and is not recommended. Most of the rooms open towards the inner garden.

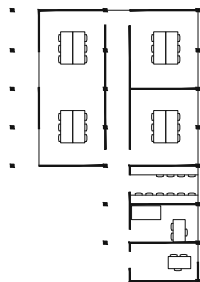


residence | o



KITCHEN SEPARATED FROM A DINING ROOM

The residence has two kitchens: one operated by the staff (35 m²) and the other, connected to the dining room (80 m²), which can be used by patients in their free time or during therapy. Placement of the kitchen in a niche makes it possible to use the dining room also for other purposes: therapeutic workshops, meetings, events.



clinic | o



THERAPY ROOMS IN RELATION TO THE STRUCTURE'S MODULE

Therapy rooms relate to the structural module, its doubling or tripling (11, 22, 33 m²). The therapy spaces are accessible from the corridor and have direct access to the terrace

COMMON AREA

In both buildings, the common space is not defined. In the clinic it uses the entrance area and a cafeteria, in the residence - a dining room. This forces users to stay active.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out-patient clinic
- in-patient clinic

- common areas
- kitchen

- separate bathroom
- patients rooms

- circulation
- services



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16. Centre for the Mentally Disabled

Toro, Spain

2009

Amas4arquitectura

770 m²

Unit integrated with the city

rehabilitation, reintegration, prevention
(residence separately)

short and long in-patient care, out-patient care and support, habilitation and prevention

The clinic and the residence are in separate buildings, within 5 minutes walking distance.

The analysed building is a clinic, serving integration and prevention. It incorporates a cafe, a well-equipped workshop, a kitchen, therapy rooms and covered open spaces.



relation to the outside

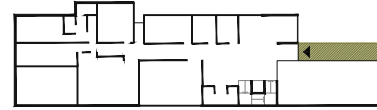


workshop



HEALING GARDEN

Centre is surrounded by and open towards public park and playground. It uses public space to its advantage.

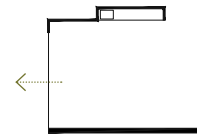
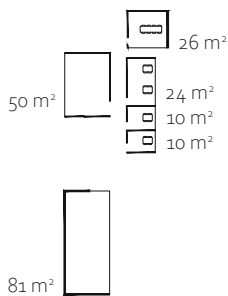


PORCH

Roofed space before therapy room and entrance area creates a connection between the interior of the building and the park.

PRIVATE ROOMS

In this thesis only the Centre for the Mentally Disabled is analysed, which does not provide in-patient services.



DINING ROOM EXTENDED TO THE OUTSIDE

Kitchen (50 m²) with dinning room adjoins the internal atrium, isolated from the surrounding.



VARIOUS THERAPY ROOMS

The dimensions of the rooms are various to provide space for different number of therapy participants as well as to adjusted to the fixed equipment required by the programme.

COMMON AREA

The common space is not defined. This forces users to stay active.

- pharmacy
- sport facilities
- auditorium and facilities
- staff rooms
- out patient clinic
- in patient clinic
- common areas
- kitchen
- separate bathroom
- patients rooms
- circulation
- services



+2

17. University Psychiatric Centre Gasthuisberg

Leuven, Belgium

2011-2015

Stéphane Beel Architects

9 374 m²

Unit relating to the city

acute crisis, rehabilitation, reintegration, prevention

in- and out-patient longterm care, prevention and research

A comprehensive unit providing all forms of assistance for mental health, operating together with the university, which provides the possibility of research and dialogue.

Privacy is graded by levels. Spaces designed to ensure privacy open to the surroundings, common spaces to the inner courtyard.



relation to the outside



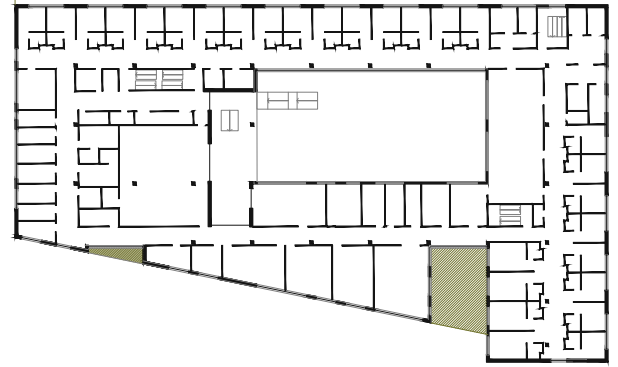
common area

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COURTYARD

Courtyard works as plaza, has no greenery. Dining and therapy rooms open towards it.

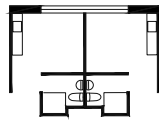


+2

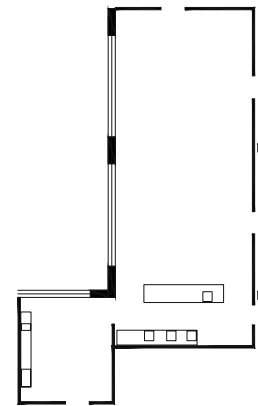


TERRACES, ROOF GARDEN

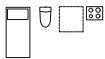
All outside spaces are accessible only from circulation area.



+2



+2



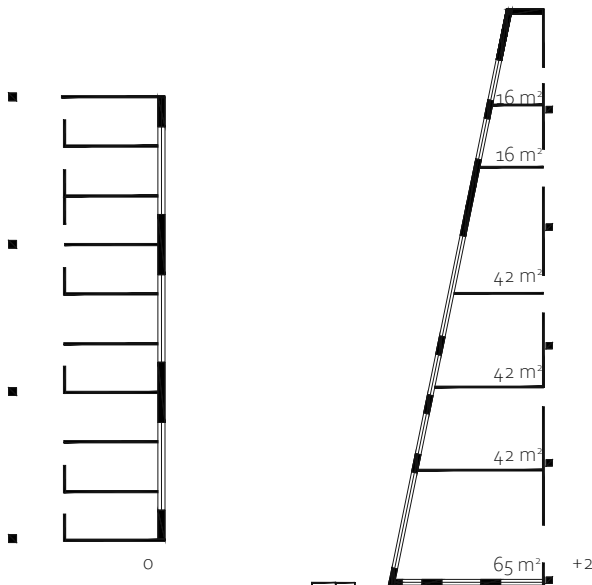
PRIVATE ROOM WITH BATHROOM AND KITCHEN

90 single rooms with a bathroom and kitchen (24 m²). This solution is rarely used as patients are encouraged to spend time outside their own room.



KITCHEN SEPARATED FROM DINING ROOM

1 kitchen (40 m²) for floor (28 patients) operated by the staff, dining room (100 m²).



THERAPY ROOM IN RELATION TO STRUCTURE MODULE

For out-patients therapy rooms are planned within the structural module of 7,80 cm (each room 12,80 m²). Used for individual therapy.



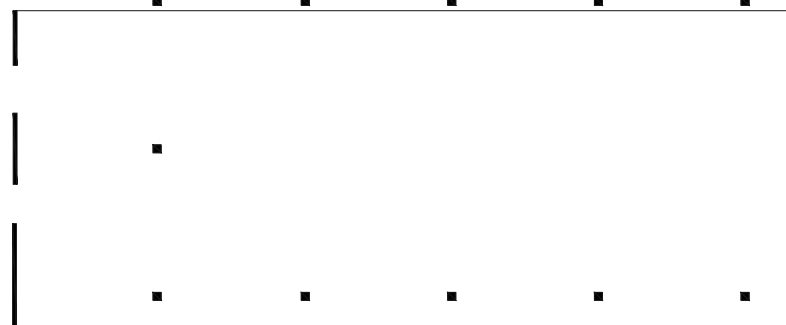
THERAPY ROOM WITH PROPORTIONS MODIFICATION

For in-patients therapy rooms of different sizes and proportions are foreseen in order to adjust to different groups of users.



COMMON AREA IN ROOFED PATIO

The hospital does not have common spaces as such. Patients can use a covered patio on the ground floor (68,5 m²). Interaction is foreseen only during therapy sessions.



Summary of analysis

Neurophysiological reaction to space

The summary based on the analysed examples and published scientific articles, answers the question of how treatment spaces respond to a specific approach to treating mental illness.

Private room

Private room is a place where the patient rests and calms down. He is encouraged to stay in common spaces for as long as possible and use his own room only when necessary. Rooms are often remote from the centre of the clinic to ensure patient with peace and privacy.

The exception is in an acute hospital, where the patient stays in his room for the most of time. The rooms are equipped to ensure safety against self-harm as well as protecting other patients and staff. These rooms have transparent walls or panels so the staff can constantly observe the patient.

The most desirable solution for private room is a single room with a bathroom. A sense of privacy is very important and ensures the dignity of patients. The number of people sharing a bedroom correlates with crowding stress, social withdrawal and aggression in inpatient psychiatric wards.

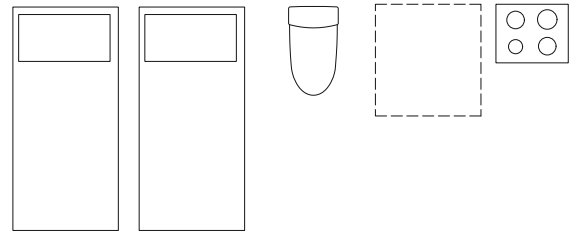
Large windows in the private rooms support the treatment process. They should overlook the natural landscape. If possible, the ceiling can be raised next to the window, so more daylight could enter the room and the patient would have stronger contact with the environment.

The entrance to the room should not be through a narrow corridor. Tight spaces increase patients' stress, which can lead to aggression.

The clinic can also have double rooms. They are meant for couples, siblings, families of parent and a child. Patients who are strangers to one another should not be placed in one room, due to difficulty in allocation of suitable personalities.

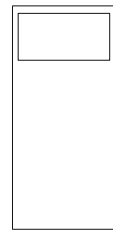
DOUBLE ROOM

Meant for families of parent and a child, siblings, couples. Strangers should not be accommodated together, due to difficulty in allocation of suitable personalities.



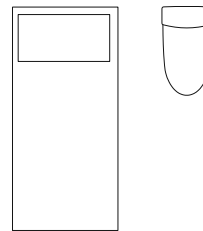
ROOM (with shared bathroom)

Not recommended solution. Shared bathroom forces integration, what increases stress. Used to reduce costs or due to lack of space.



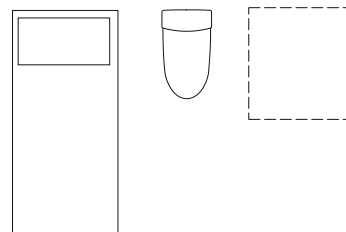
ROOM + WC

Not recommended, although it provides more comfort than solution mentioned above. Used to reduce costs or due to lack of space.



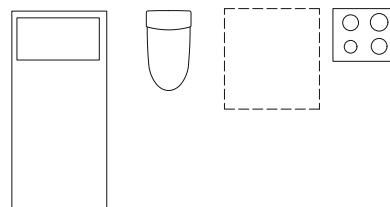
ROOM + BATHROOM

A desirable solution which provides the patient with a sense of privacy, security and dignity.



ROOM + BATHROOM + KITCHEN

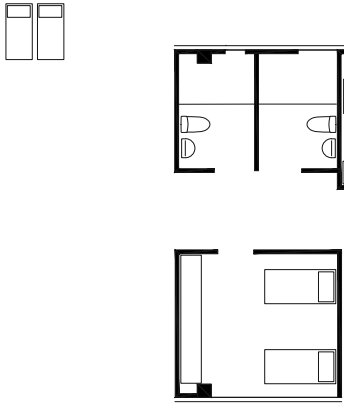
The solution is not recommended and rarely used. Usually patients are encouraged to stay in a private room only if they need rest. Cooking and eating together are used as an integral part of the therapy. Solution is used in therapy that supports the development of independence.



DOUBLE ROOM

Residence and Day Centre for the Mentally Handicapped, Barcelona, Spain

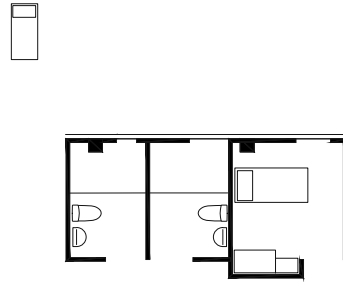
2010
acute crisis, habilitation
double room opening towards the street (18 m²),
solution recommended only for families



ROOM

Residence and Day Centre for the Mentally Handicapped, Barcelona, Spain

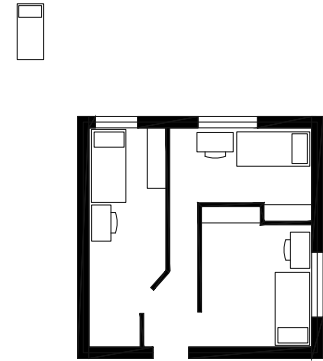
2010
acute crisis, habilitation
single room opening towards atrium (10 m²)



ROOM

Children's Centre for Psychiatric Date, Japan

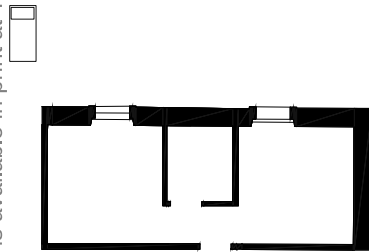
2006
habilitation
single room (10 m²),
open towards surrounding nature



ROOM

Via Gambini Mental Health Centre Trieste, Italy

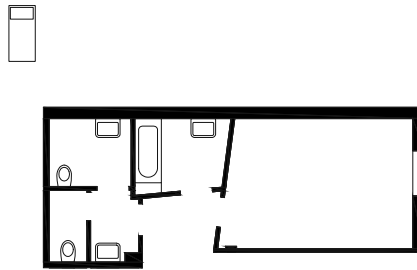
early 20th century, renovated in 2010
habilitation, integration, prevention
single room (10 m²) in readapted space
opening towards street or courtyard



ROOM

Domio Mental Health Centre Trieste, Italy

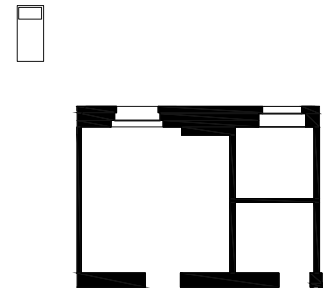
1999 - 2004
habilitation, integration, prevention
single room (11 - 18 m²)
opening towards garden



ROOM

Barcola Mental Health Centre Trieste, Italy

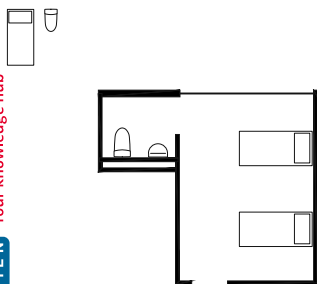
early 20th century, renovated in 1990
rehabilitation, reintegration, prevention
single room (14 - 17 m²)
in readapted space



ROOM + WC

Psychopedagogical Medical Centre Vic, Spain

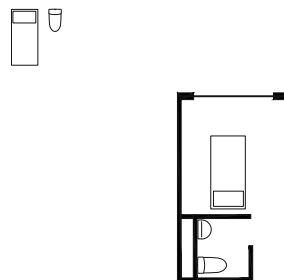
2015
habilitation, integration, prevention
(residence separately)
double room with toilet (22 m²),



ROOM + WC

Psychopedagogical Medical Centre Vic, Spain

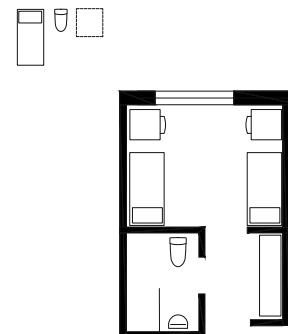
2015
habilitation, integration, prevention
(residence separately)
single room with toilet (14 m²), opening towards
green courtyard



ROOM + BATHROOM

Centre for Psychiatric Rehabilitation Bolzano, Italy

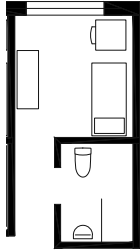
2014
habilitation, integration, prevention
double room with a bathroom (24 m²),
opening towards surrounding streets



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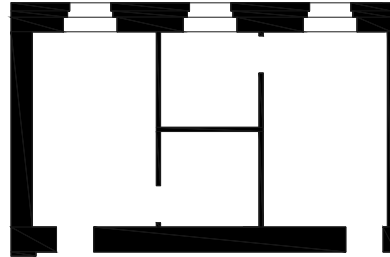
ROOM + BATHROOM

Centre for Psychiatric Rehabilitation
Bolzano, Italy
2014
habilitation, integration, prevention
single room with a bathroom (18 m²)
opening on surrounding streets



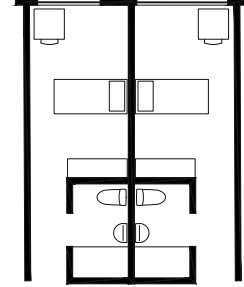
ROOM + BATHROOM

Maddalena Mental Health Centre
Trieste, Italy
late 19th century, former asylum, renovated in 2008
habilitation, integration, prevention
single room with a bathroom (17 - 27 m²)
in readapted space



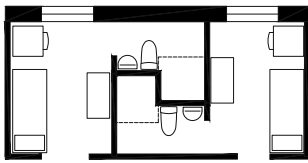
ROOM + BATHROOM

Psychiatric Centre
Pamplona, Spain
1899, restructuring 1975, extension 2010-2017
habilitation
single room with a bathroom (20 m²)



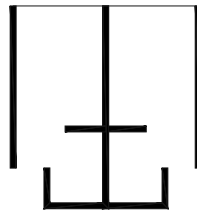
ROOM + BATHROOM

Psychiatric Centre Ballerup
Ballerup, Denmark
competition 2014
acute crisis, habilitation, integration
single room with a bathroom (14 m²)



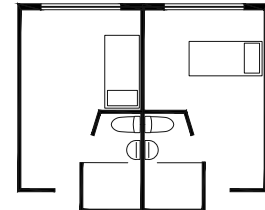
ROOM + BATHROOM

Helsingor Psychiatric Hospital Rehabilitation
Helsingør, Denmark
2007
acute crisis
single room with a bathroom (16 m²)



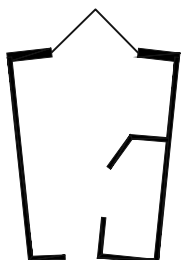
ROOM + BATHROOM

Sct. Hans Forensic Psychiatry
Roskilde, Denmark
competition 2013
acute crisis, habilitation, integration
single room with a bathroom (16 m²)



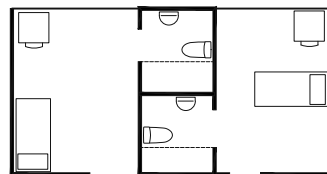
ROOM + BATHROOM

Tolworth Hospital
London, UK
2012-2022
acute crisis, habilitation
single room with a bathroom (21,3 m²)



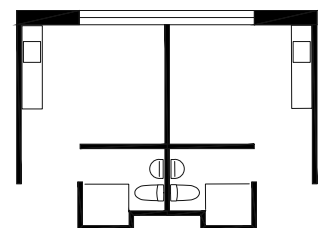
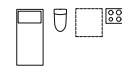
ROOM + BATHROOM

Vejle Psychiatric Hospital
Vejle, Denmark
2017
acute crisis, habilitation, integration
single room with a bathroom (22 m²)



ROOM + BATHROOM + KITCHEN

University Psychiatric Centre Gasthuisberg
Leuven, Belgium
2011-2015
acute crisis, habilitation, integration, prevention
single room with a bathroom and a kitchen (24 m²)



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Therapy rooms according to type of therapy

The therapeutic programme is defined individually for each patient.

Therefore, therapy rooms are meant to host wide range of activities both the individual and groups, such as sitting, talking, reading, watching, playing, performing, listening or making music, dancing or relaxing, as well as wide range of individual habits.

INTERVIEW ROOMS

Clearly defined space, the type of therapy requires specific equipment.



- PSYCHOLOGICAL AND MEDICAL DIAGNOSTICS
- PHARMACOTHERAPY
- INDIVIDUAL PSYCHOTHERAPY

SECLUDE ROOMS

Space for private conversation.



- MEETING WITH FAMILY

GROUP ROOMS

Highly flexible, should be able to take on a variety of rapidly changing activities like conversation, role playing, watching movies.
Two scales are used here: for social skill training, which involves 4-5 people, and group therapy for 5-15 users.



- GROUP THERAPY (community meetings, maintenance and support therapy)
- SOCIAL SKILLS TRAINING
- PSYCHOEDUCATION

ACTIVITY ROOMS

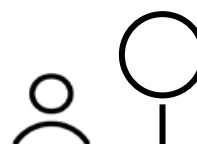
Flexibe, programme changes within hours.
If the type of therapy requires specific equipment, storage should be available.



- COOKING AND DINING
- RELAXATION
- KINESITHERAPY
- ART THERAPY
- MUSIC THERAPY
- PLAY

OUTSIDE ROOMS

Needs clear definition to foster performed activities.



- GARDENING
- RELAXATION
- KINESITHERAPY
- WALKS /TRIPS

Therapy rooms according to definition of space

Therapeutic spaces do not have a clearly defined programme, because the treatment plan is tailored to the needs of each service user.

During therapy, patients often walk and change places. Rooms must also accommodate the needs of staff members or be ready to receive another person. Thus, there is a need for generous spaces, especially because tight spaces might cause agitation or negative associations.

Therapy rooms are spaces, where patients need to relax. They generally have high ceilings to avoid the feeling of being locked in.

Therapy rooms are located next to each other to facilitate changing rooms if needed. By moving between therapy rooms and common spaces patients can regulate level of interaction, size of the group they are in or access to privacy as well as avoid stressors.

An additional advantage may be establishing a relationship with the outside environment, either by access or opening to the view.

RELATION TO STRUCTURE MODULE

Used in larger units, it ensures clarity of the space, the proportions are imposed.



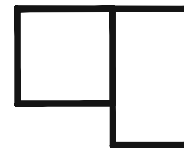
REPETITION

During therapy, patients often walk and change their surroundings. The necessary programme does not change, the furniture or colors do change. In this way, therapists are not assigned to specific rooms and accompany patients.



REPETITION WITH PROPORTIONS MODIFICATION

The proportions of the room can support the program. For example long rooms are mostly used for individual therapy and are equipped with various seating possibilities, such as chairs, armchairs, while square rooms fit better the needs of a group therapy.



REPETITION WITH AREA MODIFICATION

Offers a diversity of rooms to provide space for a groups with a different number of participants.



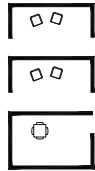
VARIOUS

Designed for specific program, such as workshops, café. Mostly used in small or adapted units.



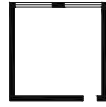
RELATION TO STRUCTURE MODULE

Nuuk Psychiatric Clinic
 Nuuk, Greenland
 2018
acute, habilitation
 therapy room 18 m²



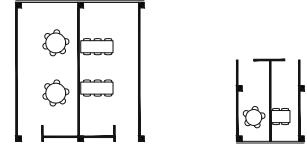
RELATION TO STRUCTURE MODULE

Children's Centre for Psychiatric
 Date, Japan
 2006
habilitation
 therapy rooms (34 m²) relate to the structural module



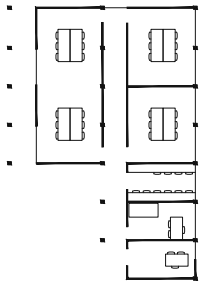
RELATION TO STRUCTURE MODULE

Residence and Day Centre for the Mentally Handicapped, Barcelona, Spain
 2010
acute crisis, habilitation
 therapy rooms relate to the structural module or it's half (35 or 12 m²)



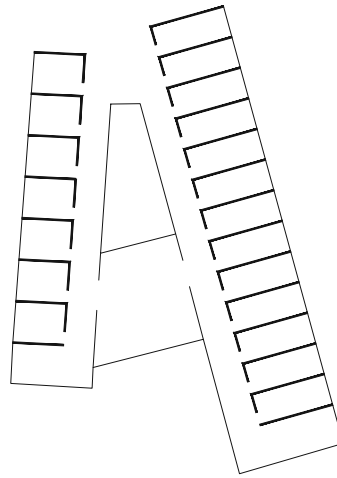
RELATION TO STRUCTURE MODULE

Psychopedagogical Medical Centre
 Vic, Spain
 2015
integration, prevention
 therapy rooms relate to the structural module, its doubling or tripling (11, 22, 33 m²)



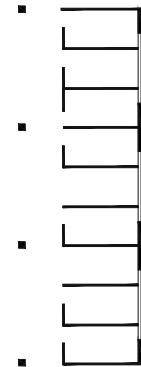
RELATION TO STRUCTURE MODULE

Helsingor Psychiatric Hospital Rehabilitation
 Helsingør, Denmark
 2007
acute
 therapy rooms (10 m²) are located on different floor than patient rooms



RELATION TO STRUCTURE MODULE

University Psychiatric Centre Gasthuisberg
 Leuven, Belgium
 2011-2015
 (acute crisis, habilitation) **integration, prevention**
 3 therapy rooms in the structural module of 7,80 cm (each room 12,80 m²)



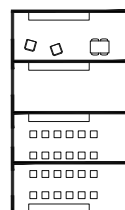
REPETITION

Domio Mental Health Centre
 Trieste, Italy
 1999 - 2004
habilitation, integration, prevention
 all therapy rooms of 14 m²



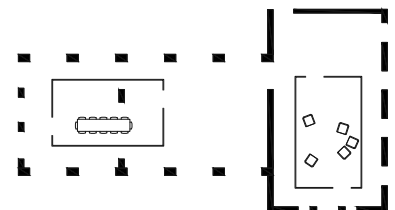
REPETITION

Psychiatric Centre
 Pamplona, Spain
 (1899, restructuring 1975) extention 2010-2017
habilitation
 all therapy rooms of 25 m²



REPETITION

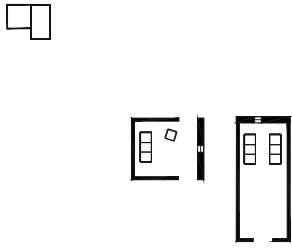
Psychiatric Centre Caritas
 Melle, Belgium
 (1808, restructuring 1970) extention 2016
 (acute) **habilitation, integration**
 the features of the existing structure define the features of spaces in glass modules placed within existing structure (32 m²)



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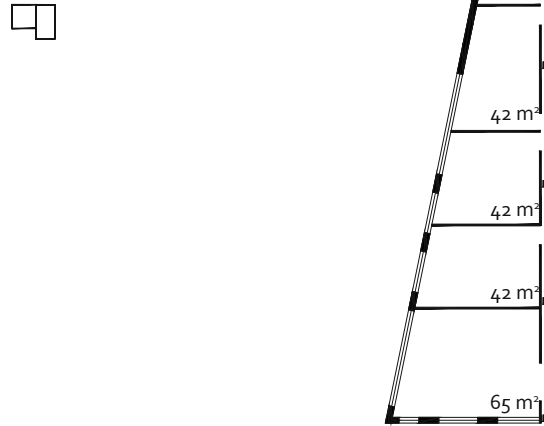
REPETITION, PROPORTIONS MODIFICATION

Residential Care Centre
 Noordwijk, Netherlands
 2007
 acute crisis, habilitation, integration
 therapy rooms of 18 m²



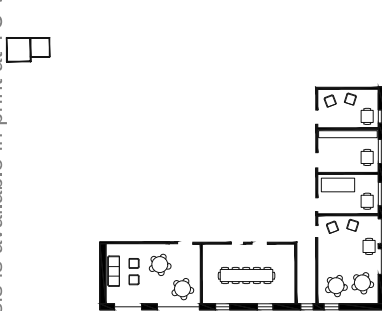
REPETITION, PROPORTIONS MODIFICATION

University Psychiatric Centre Gasthuisb
 Leuven, Belgium
 2011-2015
 acute crisis, habilitation (integration, prevention)
 rooms with variable proportions and areas, ignoring the structural module



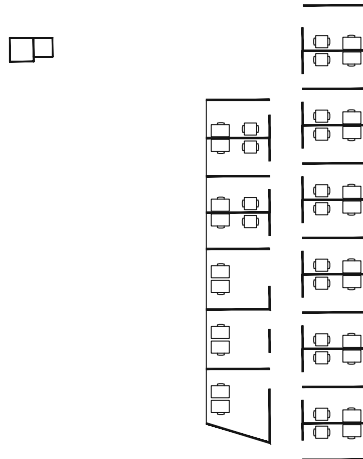
REPETITION, AREA MODIFICATION

Psychiatric Centre Ballerup
 Ballerup, Denmark
 competition 2014
 acute crisis, habilitation, integration
 therapy rooms of either 11 or 24 m²



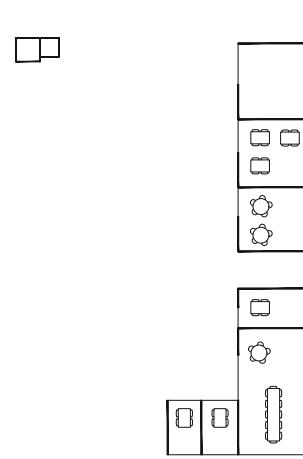
REPETITION, AREA MODIFICATION

Vejle Psychiatric Hospital
 Vejle, Denmark
 2017
 acute crisis, habilitation, integration
 therapy rooms of either 10 or 16 m²



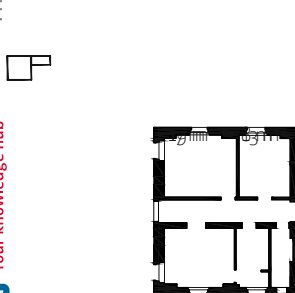
REPETITION, AREA MODIFICATION

Sct. Hans Forensic Psychiatry
 Roskilde, Denmark
 competition 2013
 acute crisis, habilitation, integration
 therapy rooms of 8, 20 or 38 m²



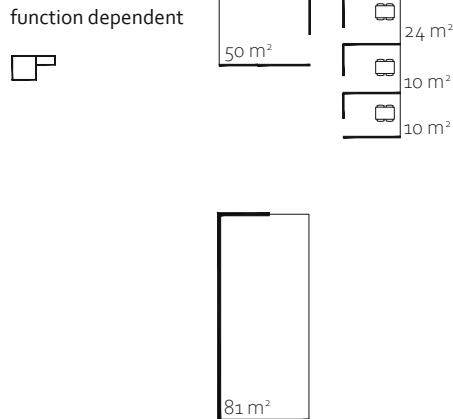
VARIOUS

Barcola Mental Health Centre
 Trieste, Italy
 (early 20thc., clinic since 1975) renovated in 1990
 habilitation, integration, prevention
 rooms defined by the original structure



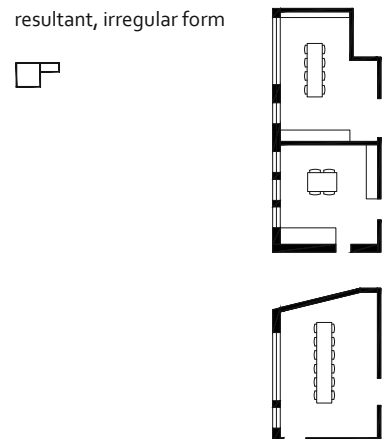
VARIOUS

Centre for the Mentally Disabled
 Toro, Spain
 2009
 habilitation, integration, prevention
 function dependent



VARIOUS

Centre for Psychiatric Rehabilitation
 Bolzano, Italy
 2014
 habilitation, integration, prevention



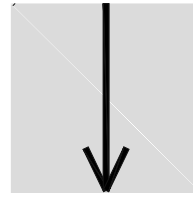
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Common area

Common areas should provide access to outdoor spaces. It is also important to equip common areas with movable furniture and wide range of seating possibilities to enable patient's regulation of personal space and level of interaction with others. This reduces aggressive behaviour and facilitates the integration process.

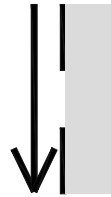
INTEGRAL WITH THE CIRCULATION

Users are watching and being watched. Integration is forced, it is difficult to regulate it, which can cause stress. On the other hand, the clinic has no corridors and tight spaces, which also may trigger aggressive behaviour.



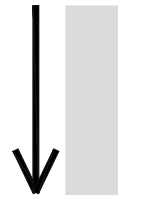
SHELTERED PART OF CIRCULATION

It facilitates the regulation of integration, gives a sense of security and at the same time does not isolate. In this space it is hard to observe patients.



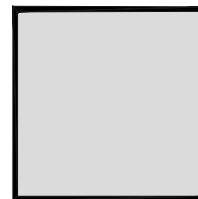
TRANSITION TO PRIVATE ROOMS

Private rooms are equipped with an isolation buffer against the clinic's noise and its circulation. This common area is only used by residents.



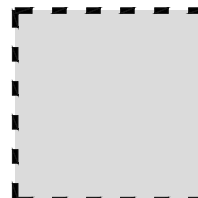
SEPARATE ROOM

This solution facilitates the control of the patients. It should not be narrow to ensure that the degree of integration can be regulated. Often it is combined with the use of a corridor system that negatively affects the level of stress in patients.



SPACE IN THE CENTRE

Easy to control. The users are strongly exposed, so the possibility to withdraw must be enshured.

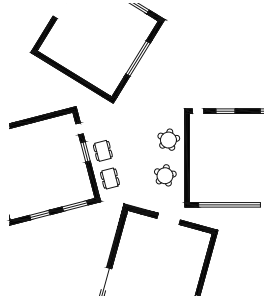


INTEGRAL WITH THE CIRCULATION

Children's Centre for Psychiatric
Date, Japan
2006

habilitation

the common area hosts also other functions such as circulation or dining area

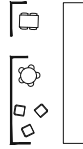


SHELTERED PART OF CIRCULATION

Vejle Psychiatric Hospital
Vejle, Denmark
2017

acute crisis, habilitation, integration

32 m² for unit of 15 in-patients, area separated from circulation within the in-patient clinic

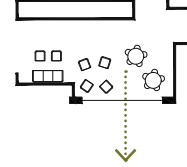


SHELTERED PART OF CIRCULATION

Psychiatric Centre Ballerup
Ballerup, Denmark
competition 2014

acute crisis, habilitation, integration

space of 50 m² adjoined to the circulation between in- and out- patient facilities, adjoins the garden



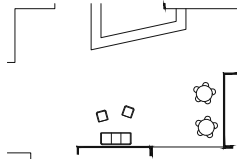
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SHELTERED PART OF CIRCULATION

Sct. Hans Forensic Psychiatry
Roskilde, Denmark
competition 2013

acute crisis, habilitation, integration

area adjoined to the circulation between in- and out- patient facilities



SHELTERED PART OF CIRCULATION

Psychiatric Centre Ballerup
Ballerup, Denmark
competition 2014

acute crisis, habilitation, integration

equipped with niches parallel to the circulation, designed as fixed furniture

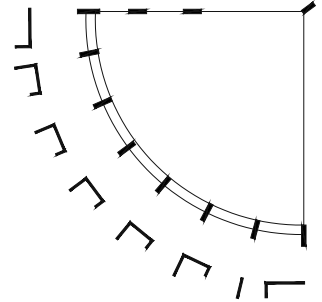


SHELTERED PART OF CIRCULATION

Tolworth Hospital
London, UK
2012-2022

acute crisis, habilitation

equipped with niches parallel to the circulation, designed as fixed furniture



TRANSITION TO PRIVATE ROOMS

Residence and Day Centre for the Mentally Handicapped, Barcelona, Spain
2010

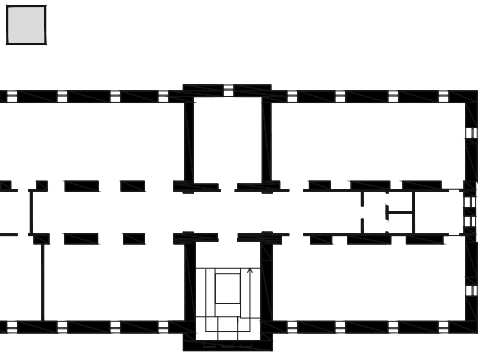
acute crisis, habilitation

32 m² for unit of 8 in-patients between circulation and private rooms adjoins the atrium



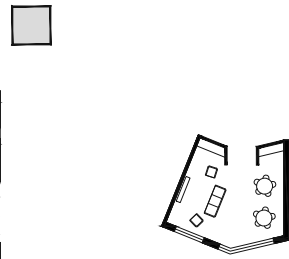
SEPARATE

Maddalena Mental Health Centre
 Trieste, Italy
 late 19th century, former asylum, renovated in 2008
habilitation, integration, prevention
 whole floor 170 m²



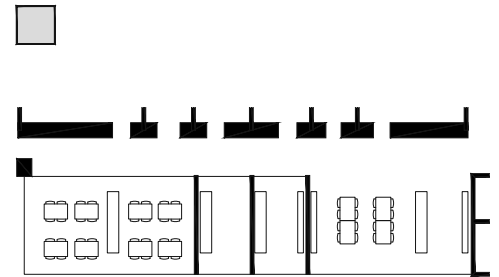
SEPARATE

Centre for Psychiatric Rehabilitation
 Bolzano, Italy
 2014
habilitation, integration, prevention
 46 m² for unit of 10 in-patients



SEPARATE

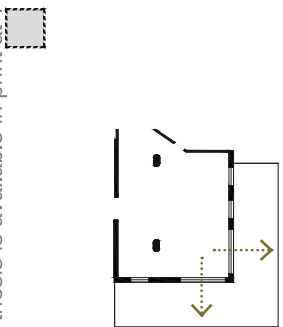
Psychiatric Centre
 Pamplona, Spain
 1899, restructuring 1975, extension 2010-2017
habilitation
 carefully defined rooms in the corridor system



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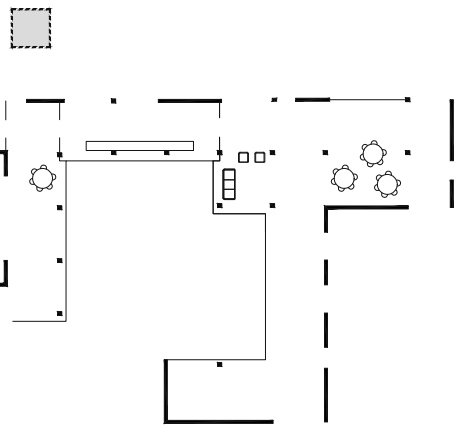
SPACE IN THE CENTRE

Domio Mental Health Centre
 Trieste, Italy
 1999 - 2004
habilitation, integration, prevention
 space between clinic's rooms and the terrace of 66 m²



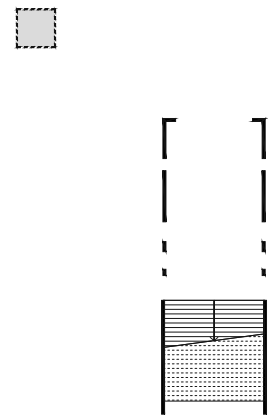
SPACE IN THE CENTRE

Nuuk Psychiatric Clinic
 Nuuk, Grenland
 2018
acute crisis
 common areas prolonged with terraces open either towards the atrium or the sea



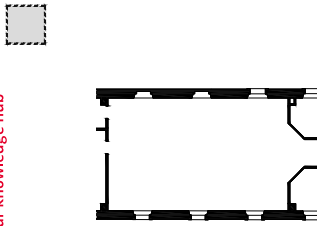
SPACE IN THE CENTRE

Residentail Care Centre
 Noordwijk, Netherlands
 2007
habilitation, integration
 common area using the stairs



SPACE IN THE CENTRE

Via Gambini Mental Health Centre
 Trieste, Italy
 early 20th century, renovated in 2010
habilitation, integration, prevention
 space between the therapy rooms of 89 m²



Kitchen and dining room

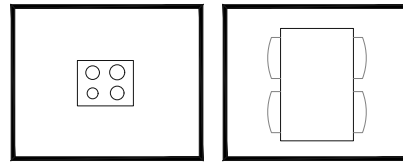
A kitchen and a dining room are important part of both of in- and out- patients facilities. In rehabilitation facilities, patients eat in a communal dining room (not private rooms). Patients are often provided with meals though cooking can be foreseen as therapeutic activity.

A dining room may share the space with a common area to foster socialisation. Access to an outdoor space is recommended.

The dining room should be sized to accommodate all patients and care takers simultaneously. As the largest clinic space it should also be able to host other activities like events or workshops. For this reason it is desirable to use easily movable furniture and foresee the storage for it.

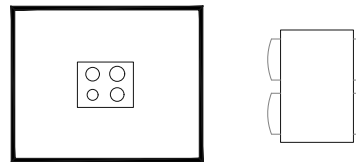
KITCHEN SEPARATED FROM DINING ROOM

This arrangement makes it possible to use the dining room for any purpose: therapy, workshops, meetings, events. The dining room should have movable furniture.



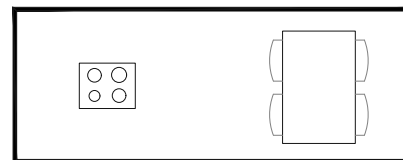
DINING ROOM IN COMMON AREA

The act of eating has a social meaning, it is a pretext to meet. Common area is usually a less formal environment than the dining room, the furniture there are more varied, which makes it easier to adjust the distance. For some, this solution may be uncomfortable due to forced interaction.



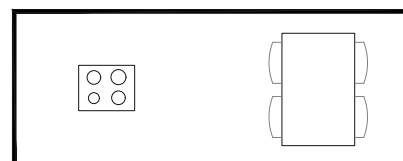
KITCHEN WITH DINING AREA

Used in clinics where patients can cook for themselves or for therapeutic activities.



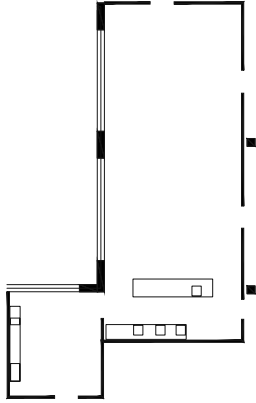
DINING ROOM EXTENDED TO THE OUTSIDE

The most recommended solution. Contact with nature reduces stress and fosters the process of healing.



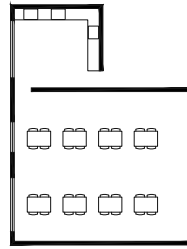
KITCHEN SEPARATED FROM DINING ROOM

University Psychiatric Centre Gasthuisberg
 Leuven, Belgium
 2011-2015
acute crisis, habilitation (integration, prevention)
 kitchen operated by the staff, 1 kitchen (40 m²) for floor (28 patients) dining room (100 m²)



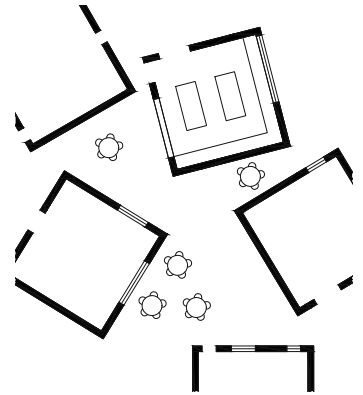
KITCHEN SEPARATED FROM DINING ROOM

Psychiatric Centre
 Pamplona, Spain
 1899, restructuring 1975, extension 2010-2017
habilitation
 kitchen, operated by the staff (20 m²) with dining room (76 m²) placed between therapy rooms



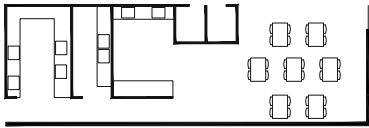
DINING ROOM IN COMMON AREA

Children's Centre for Psychiatric
 Date, Japan
 2006
habilitation
 kitchen operated by the staff (35 m²) dining area directly in common area (88 m²)



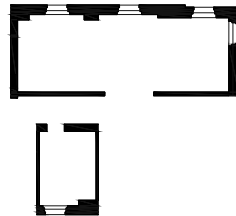
KITCHEN SEPARATED FROM DINING ROOM

Psychopedagogical Medical Centre
 Vic, Spain
 2015
habilitation, integration, prevention
 (residence separately)
 kitchen and dining room for patients 80 m²
 kitchen operated by the staff 35 m²



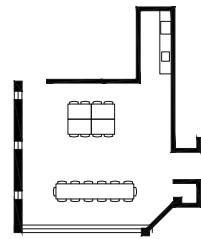
KITCHEN SEPARATED FROM DINING ROOM

Barcola Mental Health Centre
 Trieste, Italy
 early 20th century, renovated in 1990
habilitation, integration, prevention
 kitchen (11,3 m²) and dining (45 m²) room in readapted space



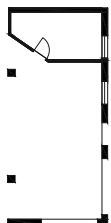
KITCHEN SEPARATED FROM DINING ROOM

Residentail Care Centre
 Noordwijk, Netherlands
 2007
habilitation, integration
 kitchen and dining room 70 m²
 dining room is also used for other purposes



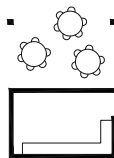
DINING ROOM IN COMMON AREA

Domio Mental Health Centre
 Trieste, Italy
 1999 - 2004
habilitation, integration, prevention
 kitchen (10 m²) separate,
 dining room in common area (43 m²)



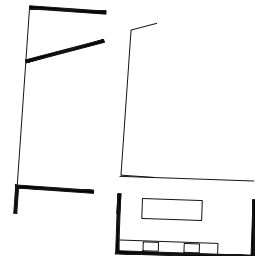
DINING ROOM IN COMMON AREA

Nuuk Psychiatric Clinic
 Nuuk, Grenland
 2018
acute crisis
 kitchen and dining room as a part of common area
 clinic uses many small kitchen units (each 15-18 m²)



DINING ROOM IN COMMON AREA

Helsingor Psychiatric Hospital Rehabilitation
 Helsingør, Denmark
 2007
acute crisis
 kitchen (28,5 m²) for unit of 16 patients



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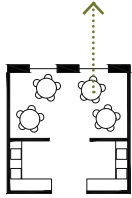
KITCHEN SEPARATED FROM DINING ROOM

Psychiatric Centre Ballerup

Ballerup, Denmark
competition 2014

acute crisis, habilitation, integration

kitchen (18 m²) and a dining room (22 m²)
adjoin the atrium



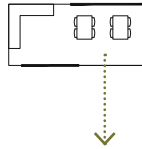
DINING ROOM EXTENDED TO THE OUTSIDE

Vejele Psychiatric Hospital

Vejele, Denmark
2017

acute crisis, habilitation, integration

1 kitchen (23 m²) for unit of 16 patients,
adjoins the atrium



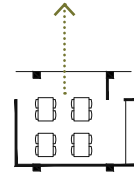
DINING ROOM EXTENDED TO THE OUTSIDE

Residence and Day Centre for the Mentally Handicapped

Barcelona, Spain
2010

acute crisis, habilitation

kitchen with a dining area (30 m²) adjoins the
atrium



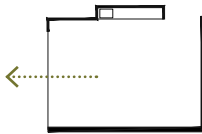
DINING ROOM EXTENDED TO THE OUTSIDE

Centre for the Mentally Disabled

Toro, Spain
2009

habilitation, integration, prevention

(residence separately)
kitchen (50 m²) for out-patient use,
adjoins the atrium



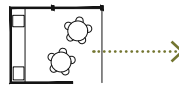
DINING ROOM EXTENDED TO THE OUTSIDE

Psychopedagogical Medical Centre

Vic, Spain
2015

habilitation, integration, prevention

(residence separately)
kitchen (19 m²) for out-patient use,
adjoins the atrium



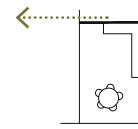
DINING ROOM EXTENDED TO THE OUTSIDE

Sct. Hans Forensic Psychiatry

Roskilde, Denmark
competition 2013

acute crisis, habilitation, integration

many kitchens with a dining room (18 m²) for
in-patient, they are arranged irregularly and have
different proportions, all adjoin the atrium



KITCHEN WITH DINING AREA

Maddalena Mental Health Centre

Trieste, Italy

(late 19th century, former asylum) renovated in 2008

habilitation, integration, prevention

kitchen and dining room for in-patients (24 m²)
in readapted space



KITCHEN WITH DINING AREA

Via Gambini Mental Health Centre

Trieste, Italy

early 20th century, renovated in 2010

habilitation, integration, prevention

kitchen 15 m² for out- and in-patient use
in readapted space



KITCHEN WITH DINING AREA

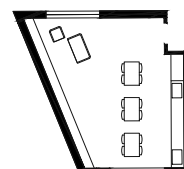
Centre for Psychiatric Rehabilitation

Bolzano, Italy

2014

habilitation, integration, prevention

kitchen unit 50 m²



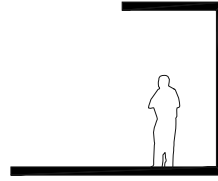
Semi-open spaces

Semi open spaces can significantly foster the therapy. They provide unlimited and direct contact with nature through all the senses while ensuring a sense of security.

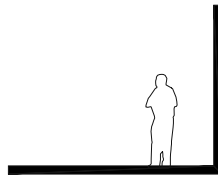
They allow to regulate the degree of exposure, provide a buffer against open spaces and protect against weather conditions, allowing users to stay outside more often and for longer time.

PORCH AND ROOFED SPACE

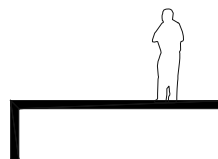
Provides secure contact with outside. It scales down the building and creates welcoming area. It provides the patients with the possibility of regulation their exposure to external world. Can be equipped with movable furniture.

**TERRACE**

Often used as extension of common area or dining room. Due to it's attachment to the building the terrace is partially covered from weather conditions. It also provides the patients with the possibility of easy regulation of the level of privacy.

**ROOF GARDEN**

Isolated garden for patients, visitors and staff. Provides secure contact with outside, though protection against weather conditions should be provided.



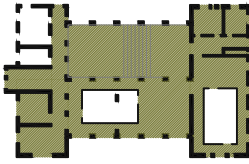
ROOFED SPACE

Psychiatric Centre Caritas
Melle, Belgium

1808, extension 2016

acute crisis, habilitation, integration

structure of an unused building adapted as a covered outdoor space



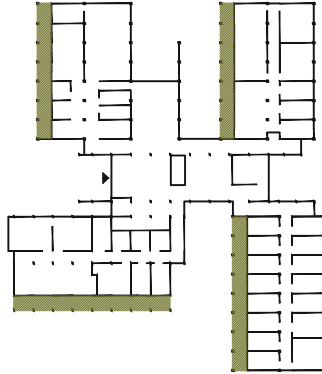
PORCH

Psychopedagogical Medical Centre
Vic, Spain

2015

habilitation, integration, prevention

(residence separately)
roofed outside space along therapy rooms and common areas



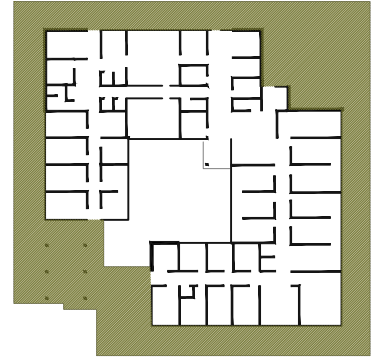
PORCH

Nuuk Psychiatric Clinic
Nuuk, Grenland

2018

acute crisis

roofed, accessible space surrounding the building



PORCH

Domio Mental Health Centre
Trieste, Italy

1999 - 2004

habilitation, integration, prevention

overhang over the entrance area



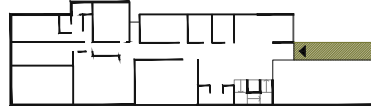
PORCH

Centre for the Mentally Disabled
Toro, Spain

2009

habilitation, integration, prevention

(residence separately)
roofed space before therapy room and entrance area



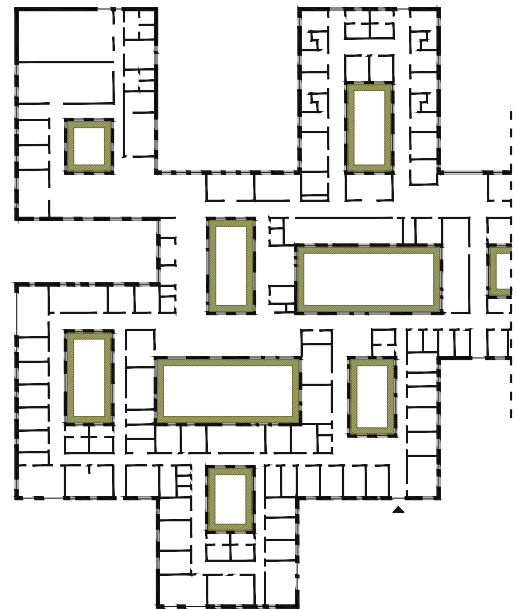
PORCH

Psychiatric Centre Ballerup
Ballerup, Denmark

competition 2014

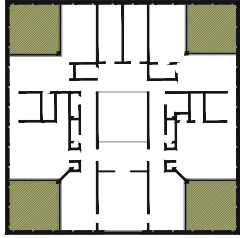
acute crisis, habilitation, integration

courtyards, with fixed furniture, partially protected by overhangs



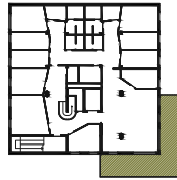
PORCH, TERRACES

Residential Care Centre
 Noordwijk, Netherlands
 2007
habilitation, integration
 roofed, accessible spaces on the ground floor and terraces on the first floor



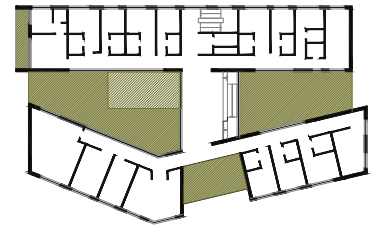
TERRACE

Domio Mental Health Centre
 Trieste, Italy
 1999 - 2004
habilitation, integration, prevention
 outdoor terrace prolongs common area and dining room



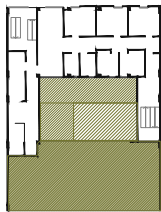
TERRACES

Centre for Psychiatric Rehabilitation
 Bolzano, Italy
 2014
habilitation, integration, prevention
 terraces facing both inside of the building and surrounding streets



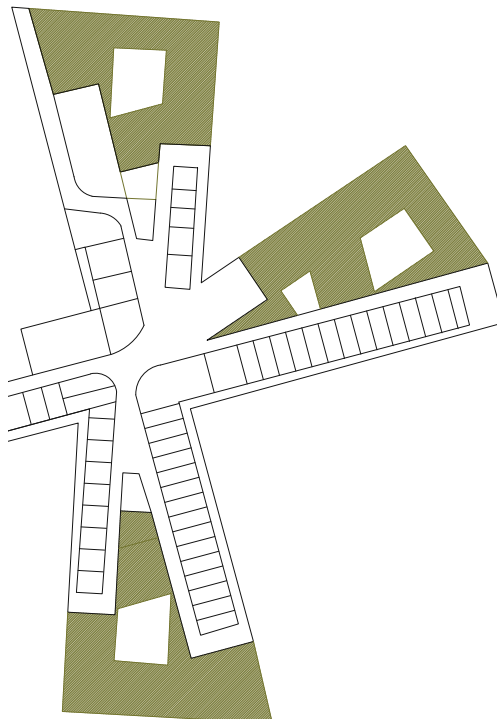
TERRACES, ROOF GARDEN

Residence and Day Centre for the Mentally Handicapped, Barcelona, Spain
 2010
acute crisis, habilitation
 common areas prolonged with outdoor terraces, roof accessible for all users



ROOF GARDEN

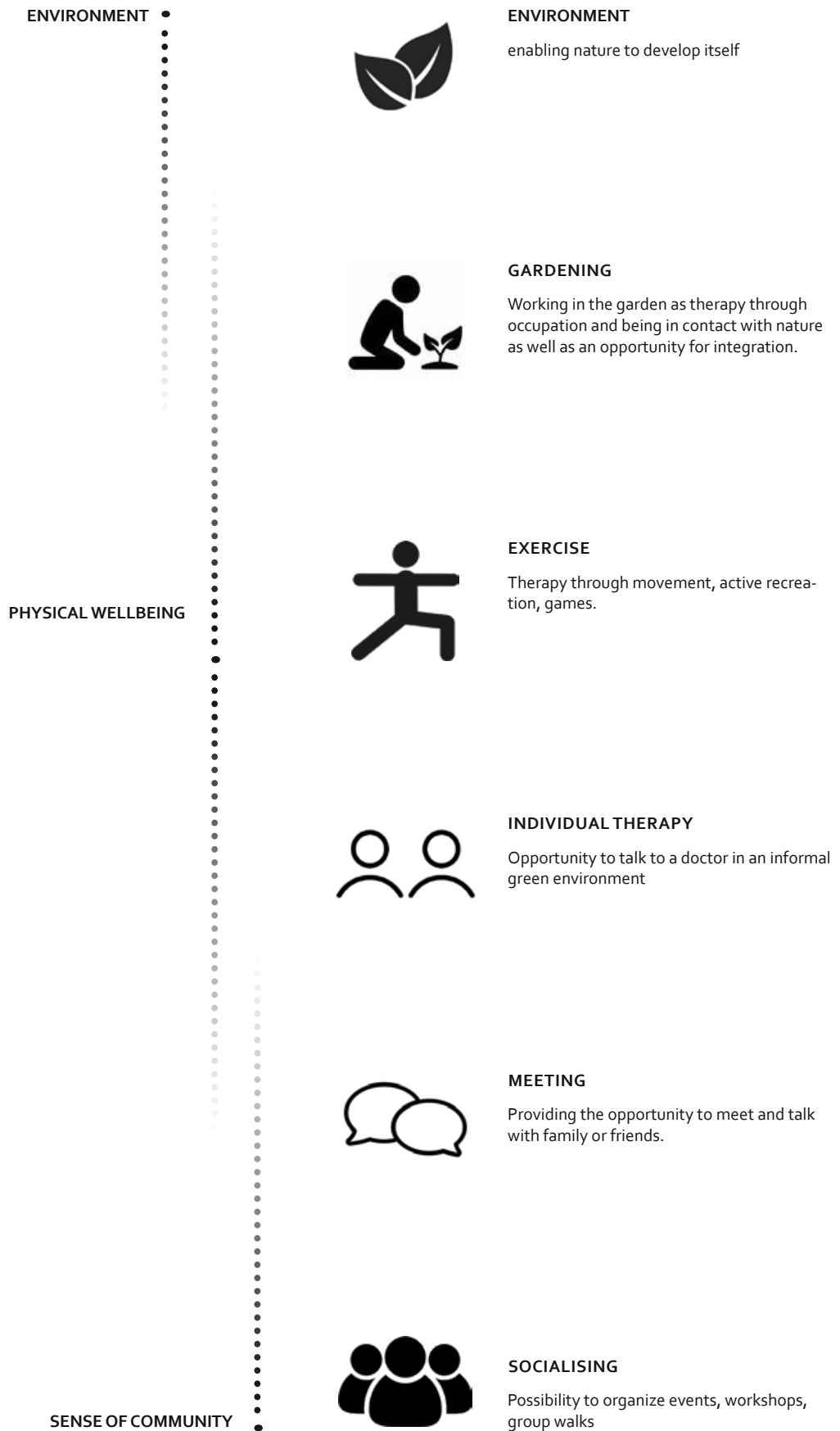
Helsingor Psychiatric Hospital Rehabilitation, Helsingør, Denmark
 2007
acute crisis
 outdoor terraces placed on the roof of the ground floor



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Green areas according to program

In order to support the treatment process green areas of mental health facilities are used for three purposes: allow the natural environment to develop, provide physical wellbeing for its users and enable the formation of communities.



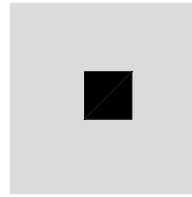
Green areas according to typology

Gardens, particularly informal and natural, reduce stress and improve well-being of both patients and staff.

Physical access to a garden significantly fosters restoration from stress, although also just a view on nature can reduce stress.

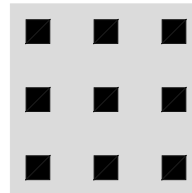
LANDSCAPED SETBACK

Area, usually lawn with trees, which separates building from the street. Provides visually comforting appearance and privacy to the rooms. It is good visible and easily accessible. Allows ambulatory patients to observe the street from sheltered space.



LANDSCAPED GROUNDS

Described as park or campus. Variable, walkable area between buildings. Accessible for patients, used for therapy, relaxation and circulation. Due to its size maintenance can be expensive.

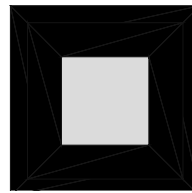


COURTYARD

Garden is the core of the facility. Should be good visible from entrance to facilitate orientation in space and increase the sense of security.

Trees and greenery are desirable here for stress reduction and shading. It gives a sense of security and privacy, is easily viewed and accessible. Sheltered from wind and strong sun.

It cannot be tight to avoid the impression of being closed and not to interfere with the privacy of rooms open towards it. Just as any common space should be equipped with movable furniture to allow regulation of social distancing.



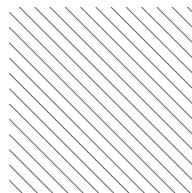
HEALING GARDEN

Garden that is meant to have therapeutic function only. It is not accessible for everyone.



VIEWING GARDEN

Green area that cannot be entered. Seen from patient or therapy rooms to reduce stress.



LANDSCAPED SETBACK

Children's Centre for Psychiatric
Date, Japan
2006
habilitation
the greenery separates the hospital from the motorway and is also used by children



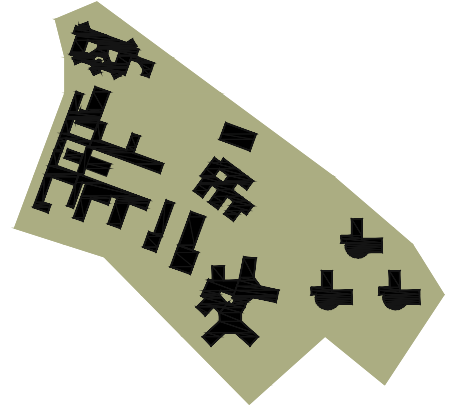
LANDSCAPED SETBACK

Psychopedagogical Medical Centre
Vic, Spain
2015
habilitation, integration, prevention
(residence separately)
greenery distances the centre from the streets, not used for therapy



LANDSCAPED GROUNDS

Psychiatric Centre Sint-Amedeus
Mortsel, Belgium
1876, 2014
habilitation, integration,
space for circulation between units, providing privacy and a view of nature to each unit



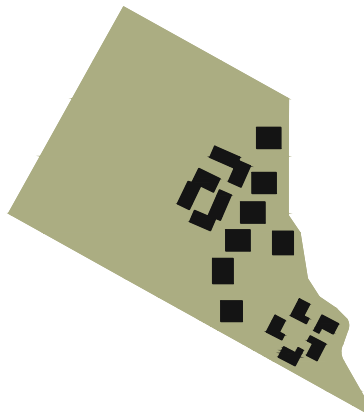
LANDSCAPED GROUNDS

Psychiatric Centre Caritas
Melle, Belgium
1808, extension 2016
acute crisis, habilitation, integration
space for circulation between units, providing privacy and a view of nature to each unit



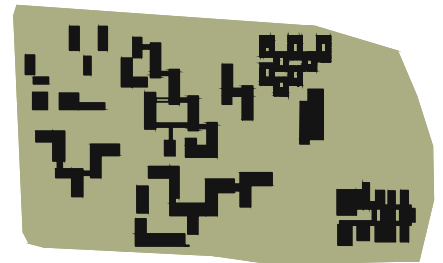
LANDSCAPED GROUNDS, HEALING GARDEN

Residential Care Centre
Noordwijk, Netherlands
2007
habilitation, integration
garden consists of two parts: space between buildings and space for recreation



LANDSCAPED GROUNDS, COURTYARD

Psychiatric Centre Ballerup
Ballerup, Denmark
competition 2014
acute crisis, habilitation, integration
all buildings have internal courtyards which are part of their common areas; buildings are distanced from each other by the garden



HEALING GARDEN

Centre for the Mentally Disabled
Toro, Spain
2009
habilitation, integration, prevention
centre surrounded by and open towards public park and playground



HEALING GARDEN

Residence of Psychopedagogical Medical Centre
Vic, Spain
2015
habilitation, integration, prevention
(residence separately)
patients and therapy rooms view over the accessible garden



HEALING GARDEN

Domio Mental Health Centre
Trieste, Italy
1999 - 2004
habilitation, integration, prevention
common area and dining room prolong into garden



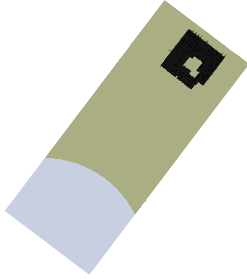
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COURTYARD, HEALING GARDEN

Nuuk Psychiatric Clinic
Nuuk, Grenland
2018

acute crisis

hospital organised around courtyard is placed on the seashore, surrounding is accessible



COURTYARD

University Psychiatric Centre Gasthuisberg
Leuven, Belgium
2011-2015

acute crisis, habilitation, integration, prevention
no greenery, courtyard works as plaza, common areas open towards courtyard (patients rooms towards outside)



COURTYARD

Residence and Day Centre for the Mentally Handicapped, Barcelona, Spain
2010

acute crisis, habilitation`

common areas and patients rooms open towards courtyard

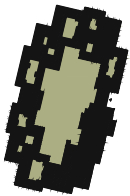


COURTYARD

Sct. Hans Forensic Psychiatry
Roskilde, Denmark
comeptition 2013

acute crisis, habilitation, integration

smaller courtyards organised around main one, which serves as a garden; common areas open towards courtyards, patients rooms - outside



COURTYARD

Vejle Psychiatric Hospital
Vejle, Denmark
2017

acute crisis, habilitation, integration

common areas open towards courtyards, patients rooms towards outside



COURTYARD

Centre for Psychiatric Rehabilitation
Bolzano, Italy
2014

habilitation, integration, prevention

two courtyards placed between circulation areas



COURTYARD

Tolworth Hospital
London, UK
2012-2022

acute crisis, habilitation

courtyards are surrounded by circulation areas and few therapy rooms, patients rooms open towards outside

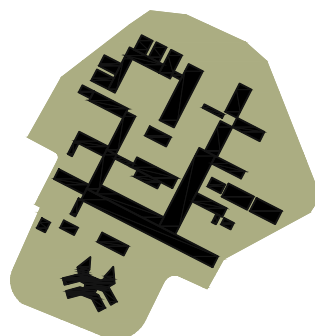


VIEWING GARDEN

Psychiatric Centre
Pamplona, Spain
1899, restructuring 1975, extention 2010-2017

habilitation

garden provide calming view and is used as space connecting buildings

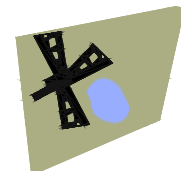


VIEWING GARDEN

Helsingor Psychiatric Hospital Rehabilitation
Helsingør, Denmark
2007

acute crisis

patient rooms open towards lake and fields, garden is not accessible for patients



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CIRCULAR ECONOMY

Climate change and mental health

The impact of natural disasters caused by climate change such as floods, fires or droughts leads to the loss of jobs or livelihoods, forces the migration and loss of social support and community resources, which reinforce negative effects on the mental health.

Also long term climate change, such as increasing temperatures and sea levels or deforestation change natural landscapes and agricultural conditions. As a consequence food and water resources are being destroyed. This forces the redefinition of habitation and infrastructure and increase of stress, aggression and displacement of communities.

Moreover, especially among young people, simply the concern about climate change is often a cause of stress and mental health issues.

People exposed to climate related natural disasters experience stress and serious mental health consequences. The effects of climate change can be direct or indirect, short-term or long-term. They range from minimal stress and distress symptoms to clinical disorders, from anxiety and sleep disturbances to depression, post-traumatic stress, and suicidal thoughts. Acute events can act through mechanisms similar to that of traumatic stress, leading to well-understood psychopathological patterns.

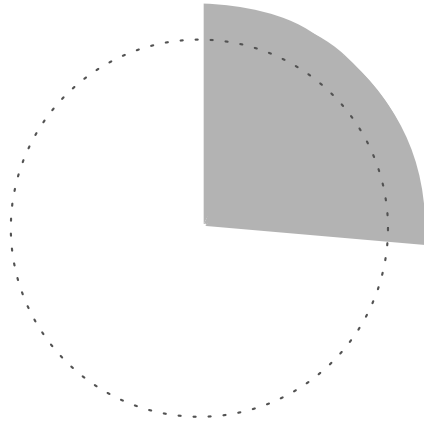
The understanding of the linkage between climate change and mental health encourage actions focused on climate change mitigation and adaptation that support psychosocial resilience. Therefore, it is desirable that mental health care spaces also respond to the needs of reducing the negative effects of climate change on the environment and society.

Climate change and built environment

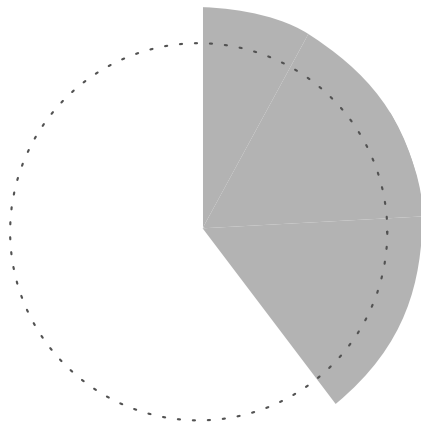
In the world building construction is responsible for about 26% of material resource use, 40% of primary energy use, and 35% of waste generation. Thus any improvements in building sector can have significant impacts on the reduction of energy and material use.

The above mentioned numbers show that the material and technical aspects of the building impact the environment through all life-cycle of the building. Thus in order to reduce this impact a number of a cross-disciplinary features such as energy saving, improved use of materials (maintenance and repair), reuse and recycling of materials are required.

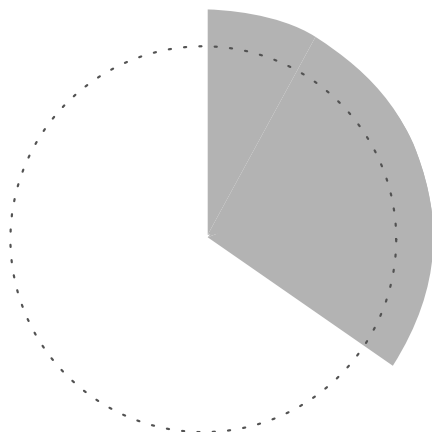
Therefore, as a framework for the project, the circular model of economy is used. In this model, the use of resources and waste generation are significantly reduced through closing the material loops by reusing, repairing, recycling and a design that facilitates them.



26%
percentage of **raw materials** used by building construction in 2019



40%
percentage of **primary energy** used by building construction in 2019



35%
percentage of **waste** generated by building construction in 2019

Impact of building construction on environment

based on: TU Delft (2021), CESBE1: *Circular Economy for a Sustainable Built Environment*

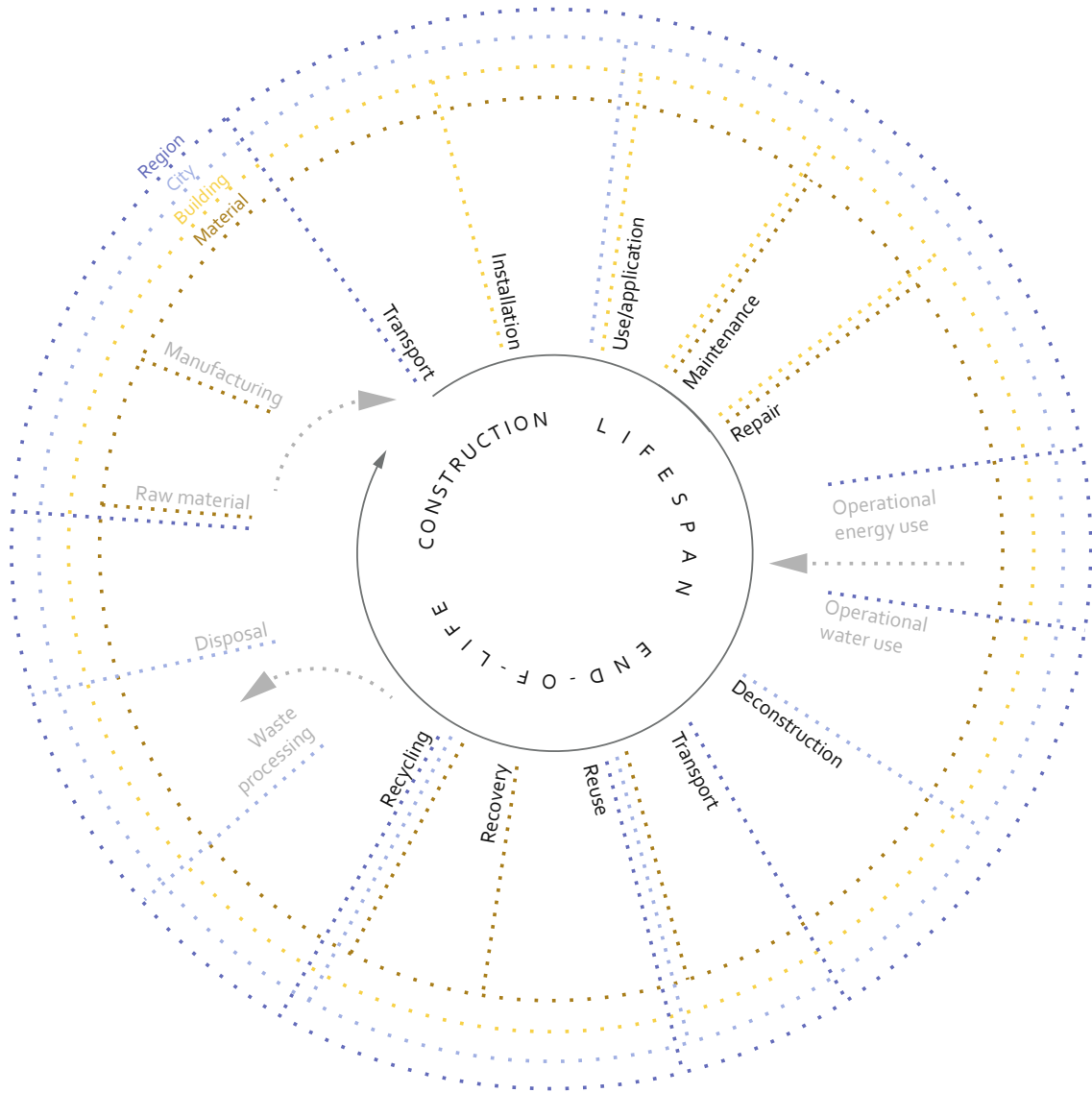
Circular built environment

Circularity in build environment is divided into three phases related to each other:

1. Smart manufacturing, which means minimising resource input, need of transport, waste emission, water and energy leakage.
2. Extending lifespan of all products by slowing and closing energy and material loops, through proper maintenance, repair and reuse.
3. End-of-life application, which means keeping both economic and ecological value of building elements.

So that these phases function properly, various actions must be carried out simultaneously on different scales: material, building, city and region scale. This thesis focuses on material and building scales of circular economy.

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Life-cycle of the building in relation to operational scales

based on: Petrovic, Bojana et al. (2018): *Life Cycle Assessment of Building Materials*, 10th International Conference on Applied Energy

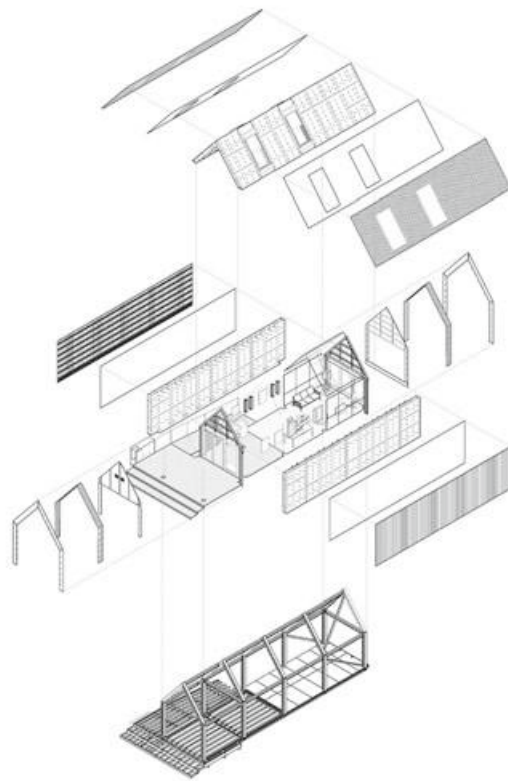
Material scale

At the level of materials and products, questions about sourcing, maintenance and end-of-life needs to be answered.

To ensure that the materials can be reused in the future, the structure that facilitate disassembly is applied in the project. Modularity and standardisation of all components enable reuse. The possibility to separate components can extend the use of products through recovery of components and materials, avoiding demolition or disposal.

Due to the availability of construction wood in Silesia, spruce wood will be used in this project. The spaces are based on a modular structure to ensure flexibility and ease of assembly.

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Construction diagram of the circular building

by Arup Associates

Building scale

Change of programme of a building is a base solution for extending lifespan in circular model. This makes it possible to reuse the building material with very little energy and financial expenditure. This solution can be provided by using generous structure, which is independent from the programme and programme specific equipment.

Therefore, in the circular economy, building is seen as an arrangement of spaces, defined by assembled components of materials or products. It is perceived not as one product but rather set of various layers and components. According to concept of architect Frank Duffy, which was elaborated by Stewart Brand, buildings are composed of several "Shearing layers" with different life-span durations.

Using the pattern of shearing layers at the beginning of the process allows making decisions that respond to the demands of circular planning.

In the concept of shearing layers, building elements are distinguished according to their time of use:

Site: the geographical setting in which the building is positioned. Eternal.

Structure: the foundation and load-bearing elements. Should last 30 - 300 years.

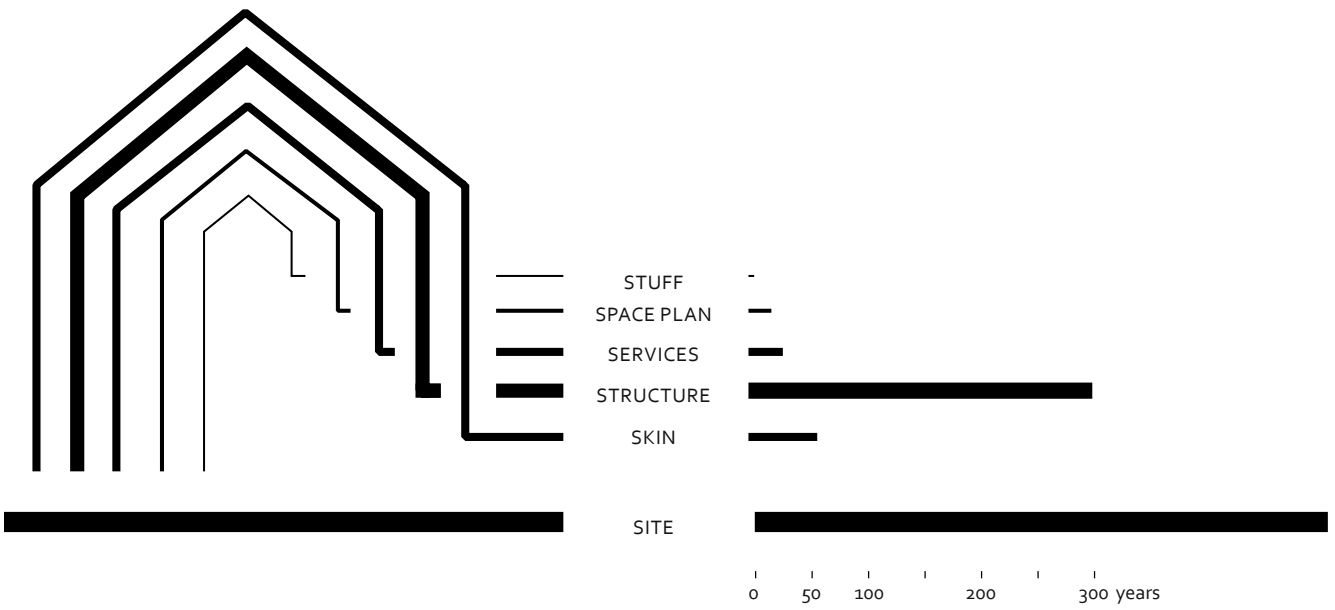
Skin: façade of a building. Should last around 20-60 years.

Services: wiring, plumbing, fire sprinkler systems, heating, ventilating, moving parts like elevators. Should last 7 - 30 years.

Space Plan: interior layout of walls, ceilings, floors and doors. Last usually 3 - 30 years.

Stuff: furniture, belongings. Last usually daily to monthly.

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WAŁBRZYCH





Scale and location

Wałbrzych is historically part of Lower Silesia, currently within the borders of Poland.

At the moment the city has approximately 100,000 inhabitants (2020). It is the second largest city in the Lower Silesia Voivodeship, after Wrocław, which is distanced 70 km to the north.

Wałbrzych formerly was a very important industrial centre of Lower Silesia. Now it is trying to redefine itself to become a centre for science and tourism.

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- Wałbrzych
- Wrocław
- Warsaw

Location of Wałbrzych on the map of Europe

Silesia

For centuries, the economy of Silesia was based on agriculture and coal mining. The shift from the country of fossil fuels to country of renewable energy requires huge effort and state-funded support programmes for workers from the fossil fuel industry, aimed at professional retraining. This need has not been met. This causes migrations and the collapse of existing forms of social relations.

Moreover neighbourhoods are becoming more and more international, as it was before Second World War and time of Communism. This state generates the need of places where people meet, cooperate and create bonds. This need, which has been present in Poland for decades, has never been satisfied.

In order to avoid repeating past mistakes the spaces where citizens can learn from each other, feel respected and cared for should be created.





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View from the Stary Zdrój [Old Spring] district towards Śródmieście [Midtown]



Nature

Wałbrzych is the second largest city in Silesia, but from a bird's eye view it is almost invisible - it disappears into the greenery - about $\frac{2}{3}$ of the city's area is covered with forests.

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Forests, meadows, grasslands and agricultural land within the city

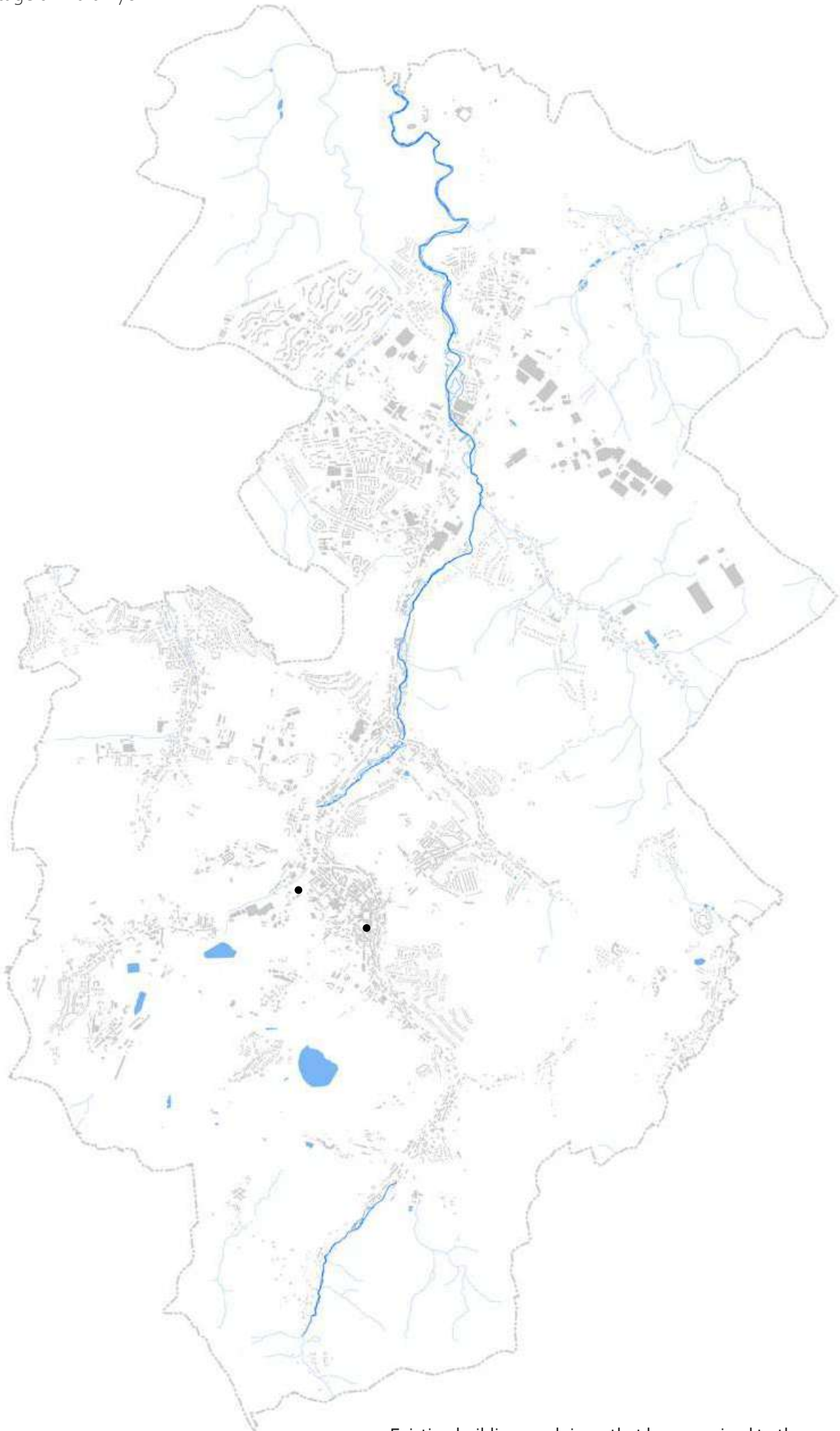
● Location of the designed clinics



Water system

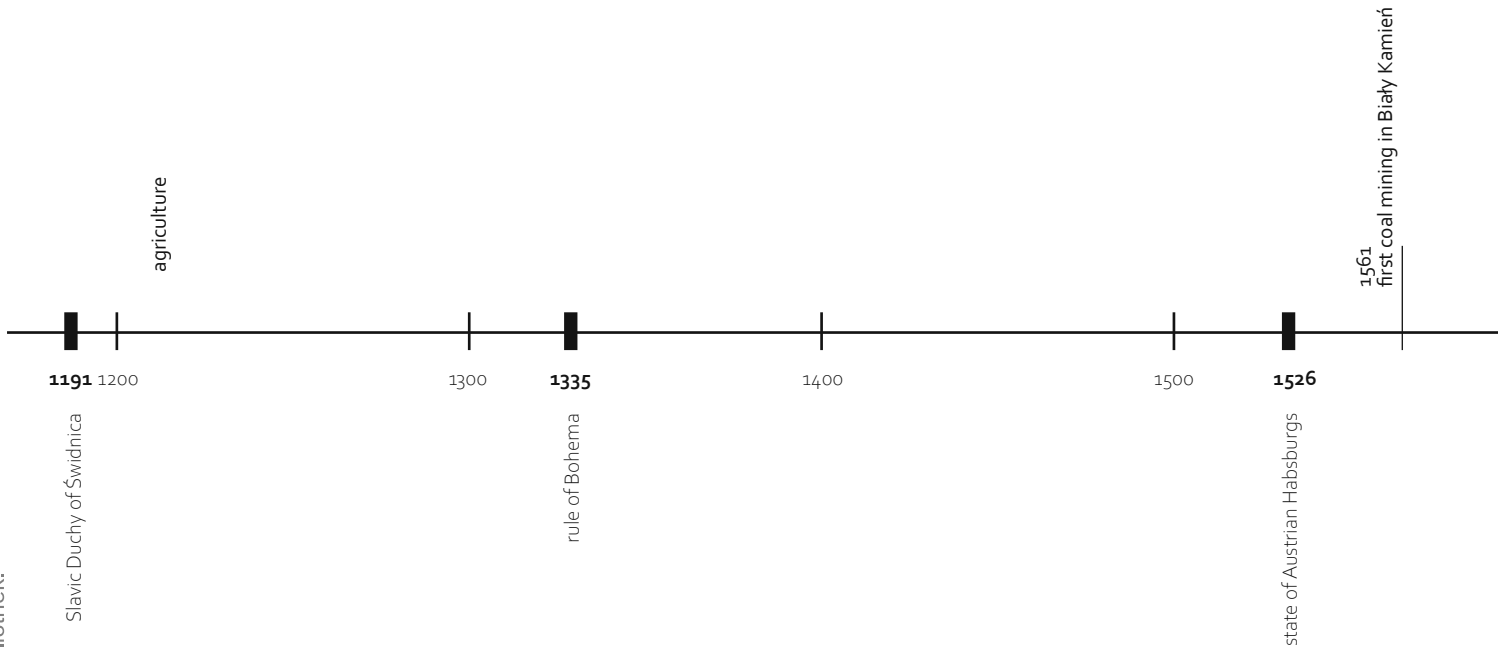
The settlements are scattered between the hills and grooves. This irregular and extensive urban layout is the result of both the mountainous terrain and the fact that most of the current city districts grew out of villages stretched along mountain streams.

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Existing buildings and rivers that have survived to the present day

● Location of the designed clinics



Culture

Over the years, the city passed from hand to hand, starting from the Czech Republic through Austria, Prussia, and Germany. From the Second World War, it has been within the borders of Poland for the first time. During communist period, the Polish population was displaced here, replacing the past residents.

The basis of the economy is also changing. Since 1996 industrial-based development has been abandoned.

Currently, a city with a very rich cultural and material heritage, but the discontinuity of the population, must define itself in order to respond to problems that have not occurred so far.



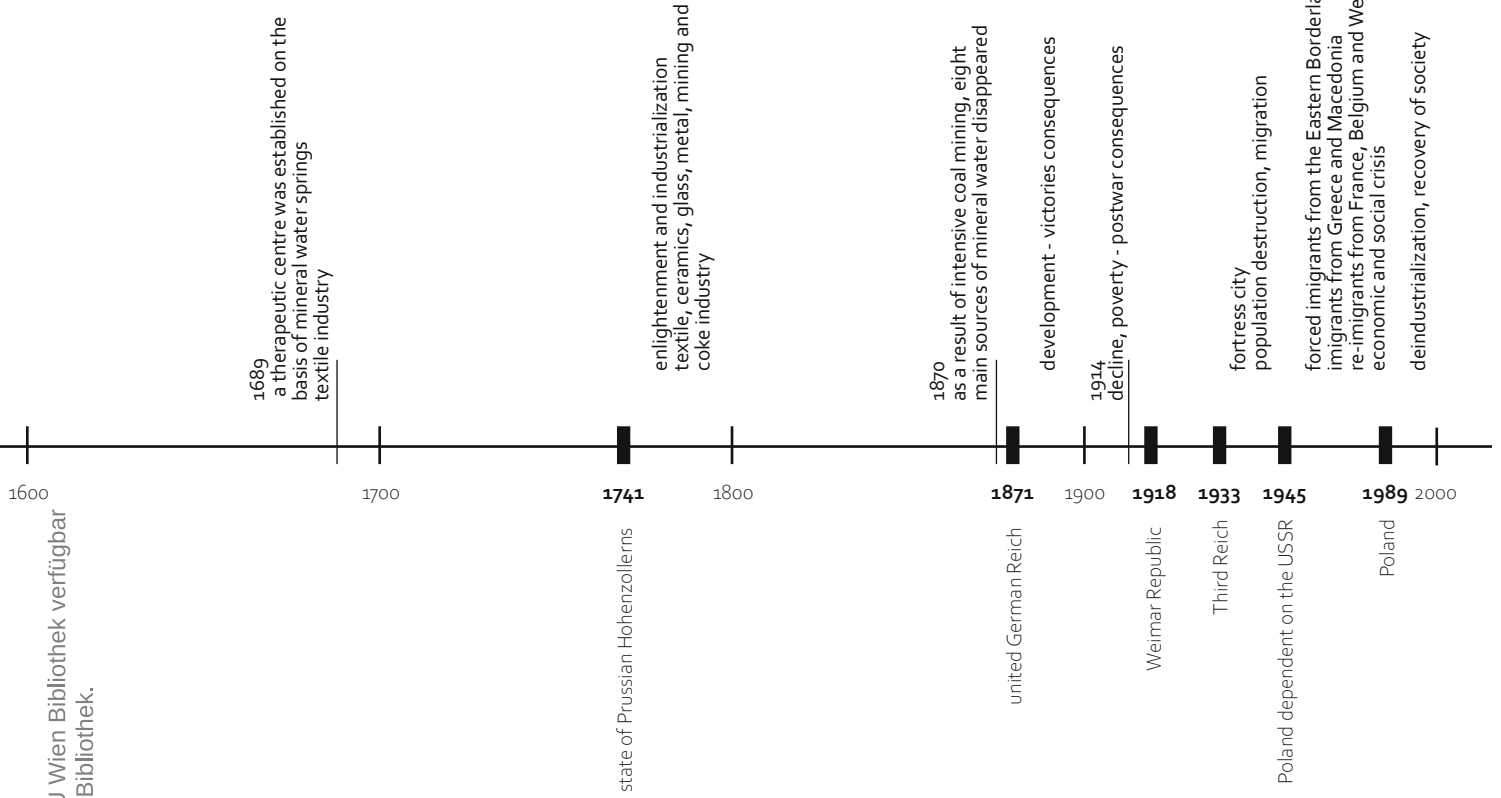
~1800; Stary Zdrój [Old resort]



~1850; Wałbrzych



1947; Wałbrzych



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~1960; Greek refugees received in Wałbrzych



2020, Settler, a relic of the industrial period

Cultural heritage

Wałbrzych has developed in stages over the years, not by adding individual houses, but coherent housing estates or networks of cooperating institutions.



buildings on Moniuszki Street



buildings on Asnyka Street



buildings on Żytnia Street



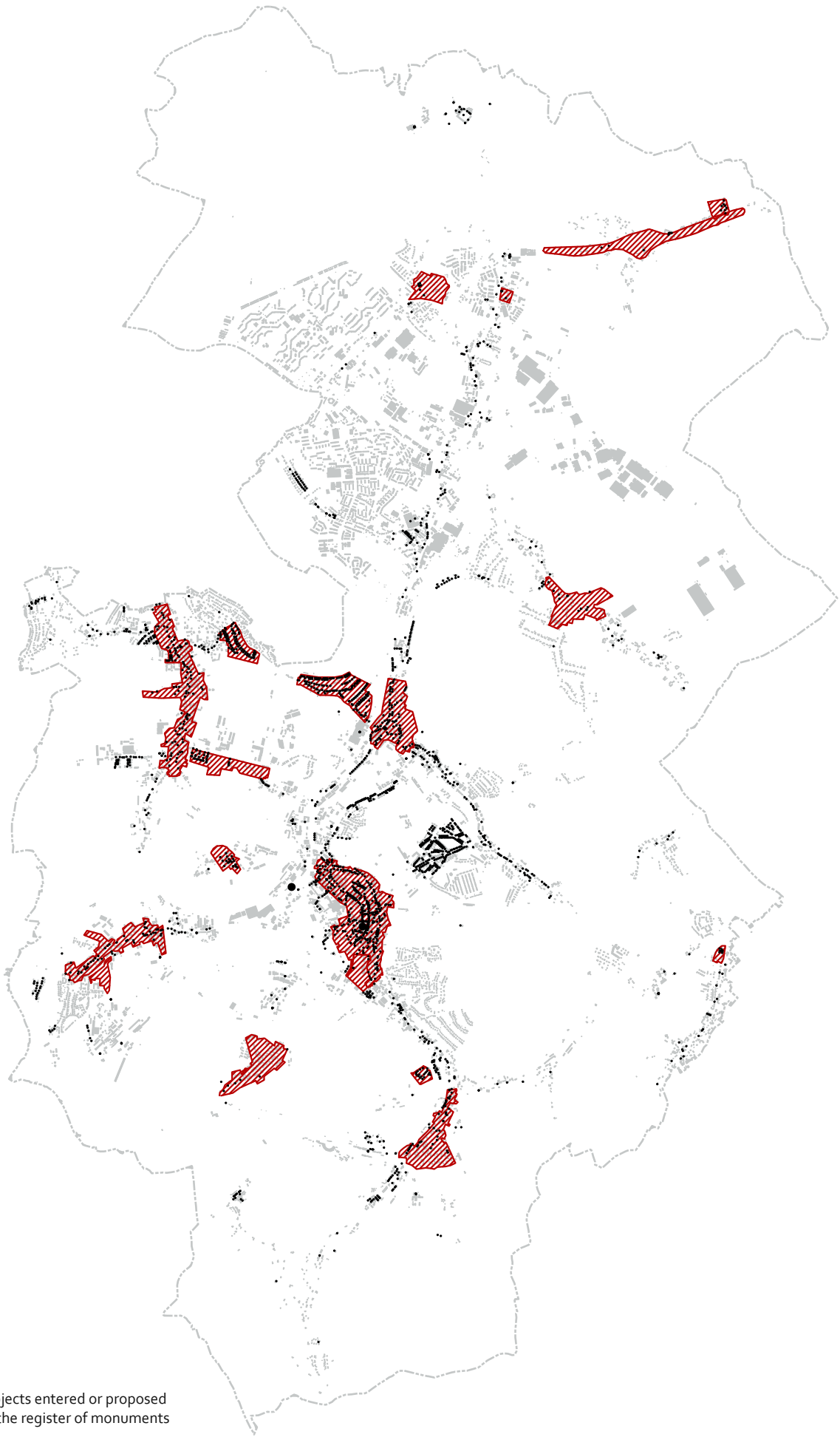
buildings on Nowy Świat Street



buildings on Wysockiego Street

Selected housing estates of repetitive houses, 19./20. century

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- Objects entered or proposed in the register of monuments
- Urban and spatial layouts in the register of monuments

- Cultural heritage
- Location of the designed clinics



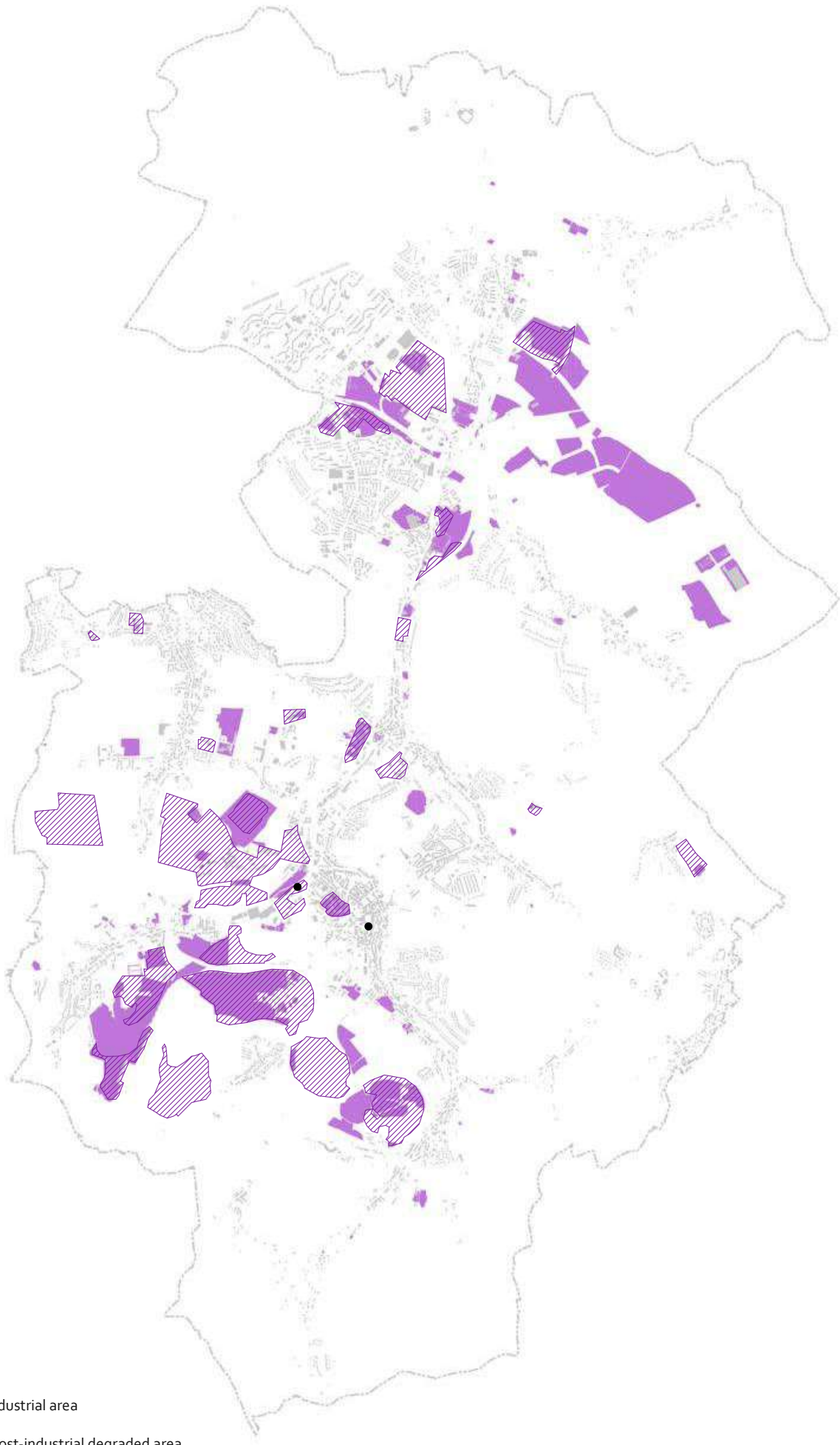
Industrial heritage

The remains of the mining industry affect not only the areas where industrial plants were located, but also the surrounding spaces. Underground shafts, corridors, overground mine dumps, coal tips and settling tanks surround the remains of the plants.

Where people find no use for the structures, nature takes over and it is slowly recovering. This improvements can be observed since the fall of the Lower Silesian Coal Basin in 1996. However, the geological layers and the hydrological system were irreversibly damaged.



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- Industrial area
- Post-industrial degraded area

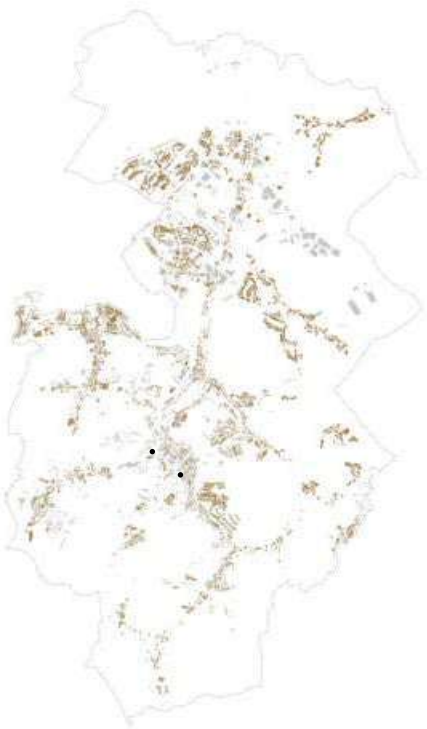
Post-industrial degraded area
● Location of the designed clinics



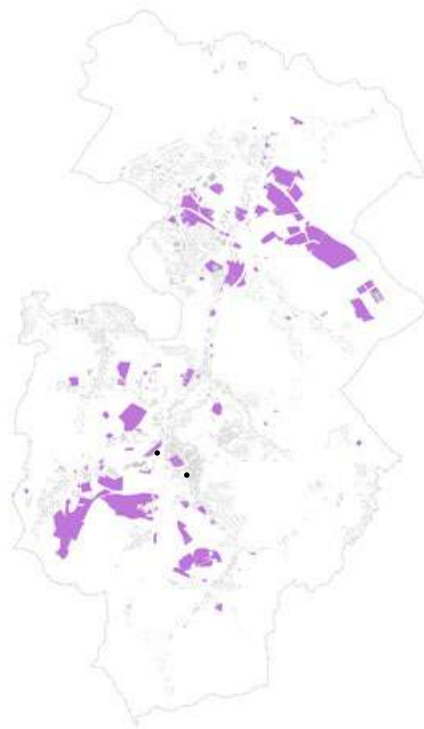
Structure

As a result of development and growth over the years, spaces with different functions are adjacent and interchange with each other, industrial spaces intertwined with the fabric of the city.

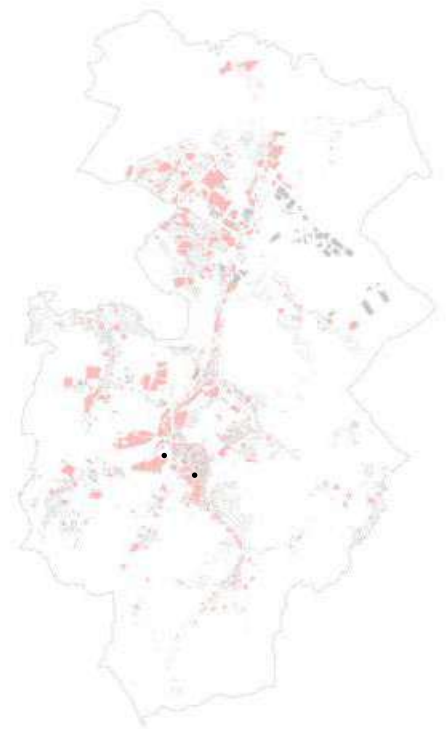
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Residential areas



Industrial areas

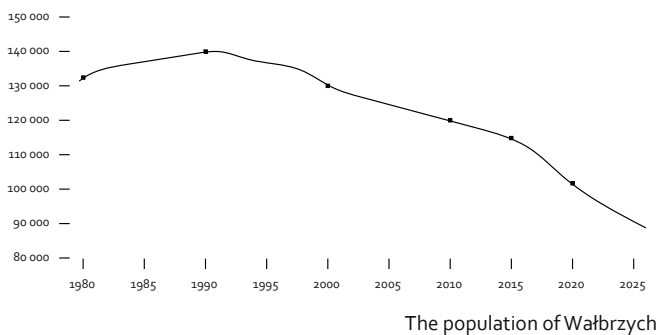


Service areas

Interchange of uses
● Location of the designed clinics

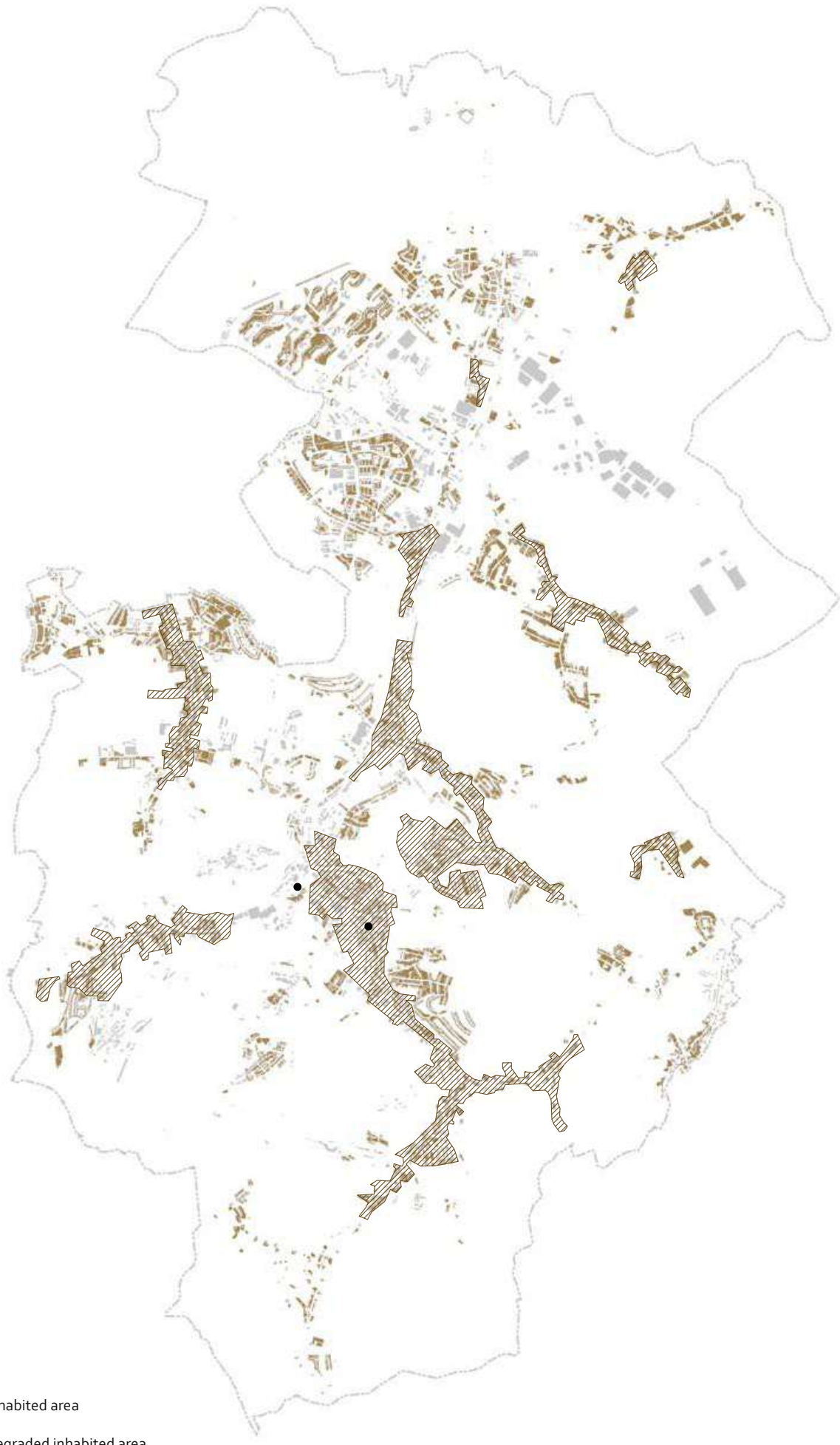
Neglection and perfection



In Wałbrzych, well-kept spaces, such as public spaces or public buildings, coexist with private and residential spaces that have been neglected for years.




based on: <http://populacja.population.city/polska/walbrzych/>
 Access 15.03.2021

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-  Inhabited area
-  Degraded inhabited area

- Degraded inhabited area**
-  Location of the designed clinics



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Selecting a plot Criterion I

A cultural heritage site

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Buildings named on the list of the Municipal Heritage Register

Selecting a plot Criterion II

Currently out of use





Buildings onamed on the list of the Municipal Heritage Register

- Buildings currently out of use
- Location of the designed clinics

Selecting a plot

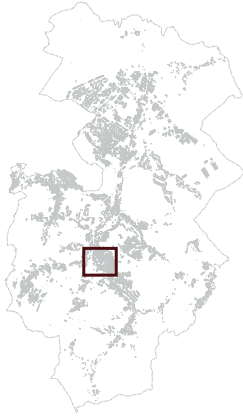
Criterion III

Proximity of the community
Availability of green areas
Flexibility of existing space
Scale

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Objects considered for location of the project



Selected plots

Selected locations offer the opportunity to create a variety of treatment environments based either on a relationship with nature or with the urban tissue.

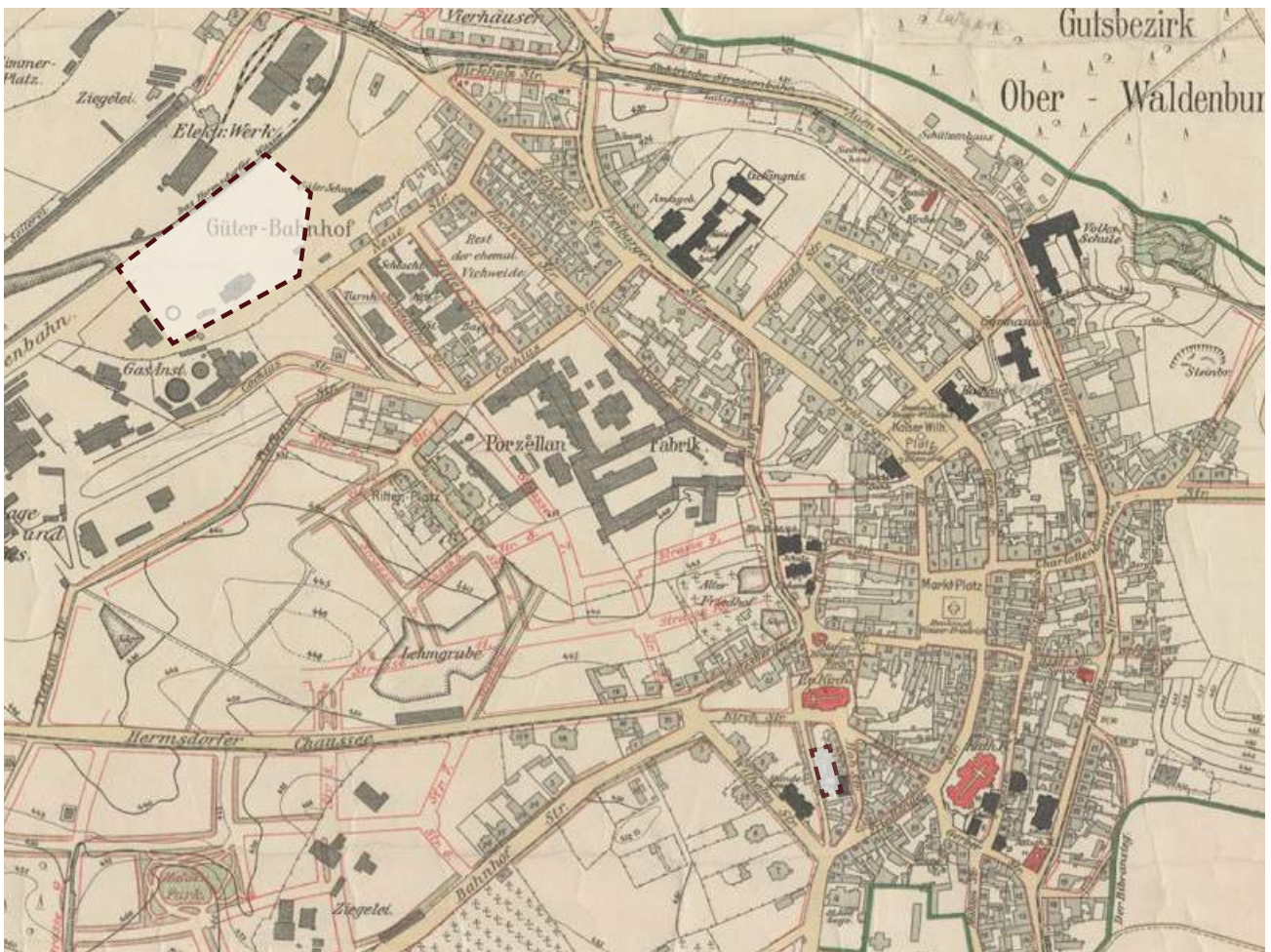


CLINIC IN THE LANDSCAPE
FORMER STATION



CLINIC IN THE URBAN TISSUE
FORMER LIBRARY





Selected plots

View on the map from 1906.



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View on the map from 1937.



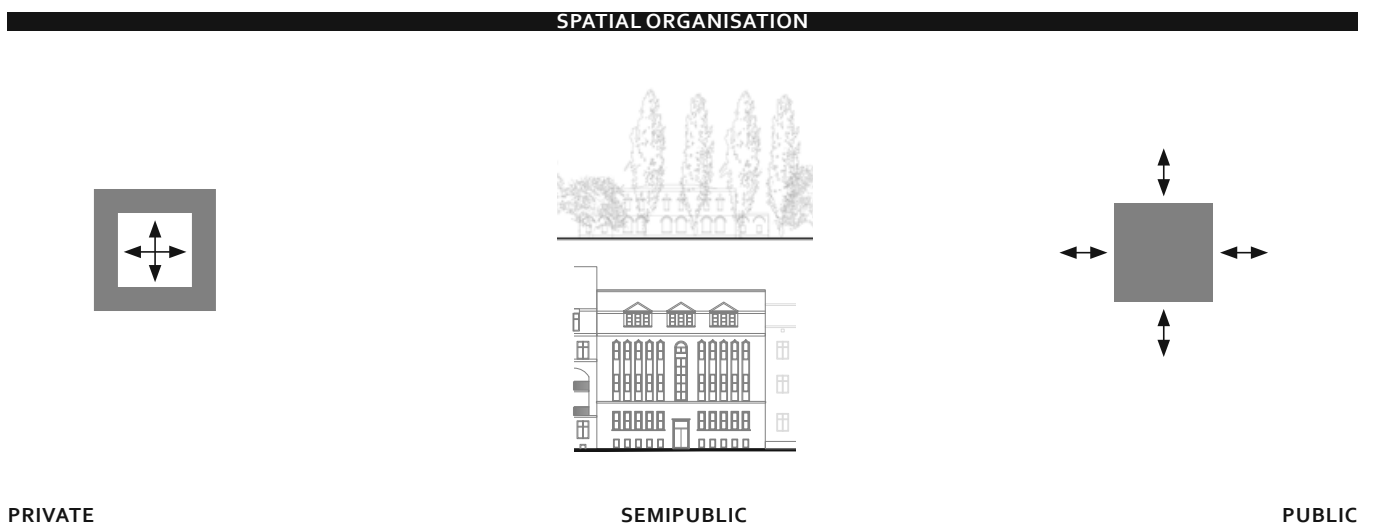
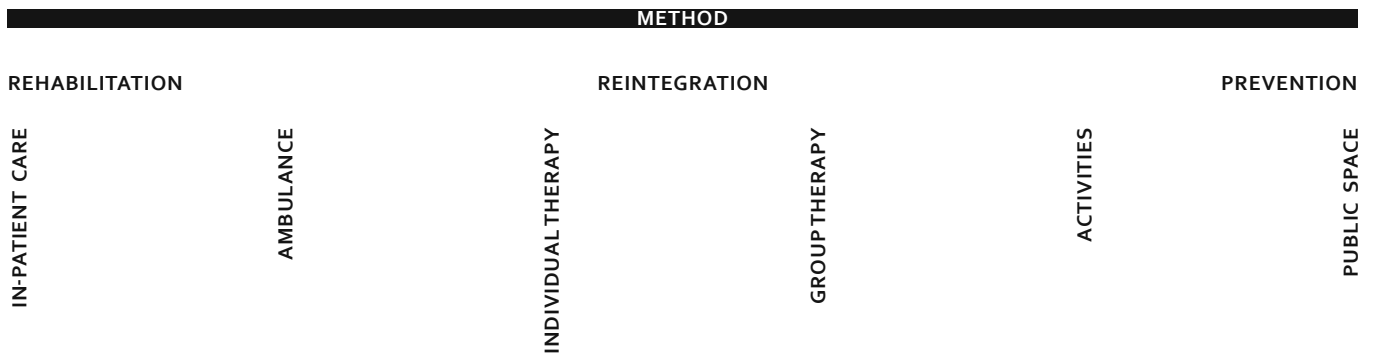
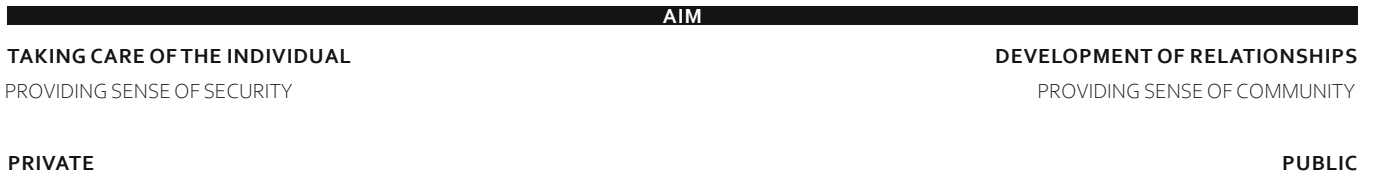
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ARCHITECTURAL CONCEPT

Methodology

The clinic's programme is a response to the needs of individuals, their mutual relationships and their relationship with the environment. It accordingly offers a space of isolation and interaction.

In order to keep the existing buildings as unchanged as possible and to use their presence to build the identity of the place, they are adapted to therapy (reintegration) spaces. Therapy rooms can be easily integrated into existing structures, while rehabilitation and prevention, which are more demanding in terms of space are located in new buildings that can meet their needs.



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Program

The analysis of references through the prism of neurophysiology are used to choose the specific definition of spaces and relations between them as an answer to clinic's program.

PATIENT

THERAPY

KITCHEN

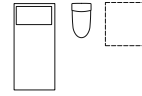
COMMON AREAS

SEMI-OPEN SPACES

GREEN OUSTIDE SPACES

PRIVATE

ROOM + BATHROOM



SECLUDE ROOMS



INTERVIEW ROOMS



VIEWING GARDEN



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SEMI-PUBLIC
in-patients

SEMI-PUBLIC
out-patients

PUBLIC

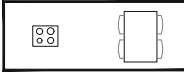
GROUP ROOMS



ACTIVITY ROOMS OUTSIDE ROOMS



KITCHEN WITH DINING ROOM
EXTENDED TO THE OUTSIDE



TRANSITION TO PRIVATE ROOMS



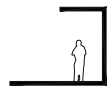
SPACE IN THE CENTRE



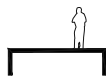
SHELTERED PART OF CIRCULATION



PORCH AND ROOFED SPACE



ROOF GARDEN



PORCH AND ROOFED SPACE



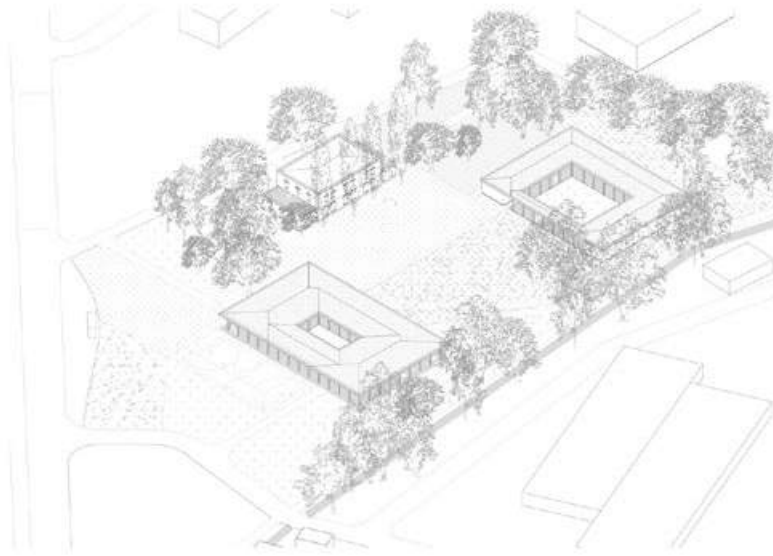
COURTYARD



HEALING GARDEN



1.



Clinic in the landscape

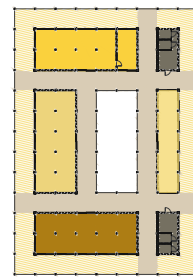
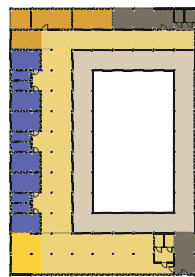
3 250 m²

clinic outside the city

short and long in-patient care, out-patient care and support, habilitation and prevention

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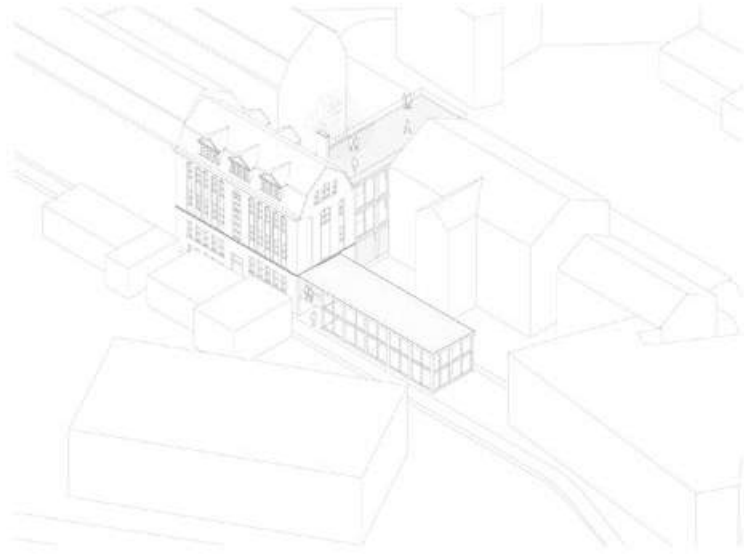
program
 pharmacy
 sport facilities
 auditorium and facilities
 staff rooms
 out patient clinic
 in patient clinic
 common areas
 kitchen
 separate bathrooms
 patients rooms
 circulation
 services



0



2.

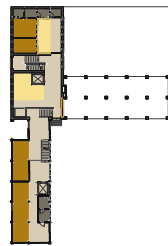


Clinic in the urban tissue

1500 m²

clinic within the city

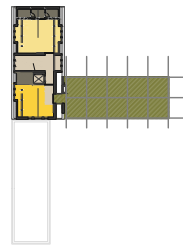
short and long in-patient care, out-patient care and support, habilitation and prevention



0



+1, +2



+3



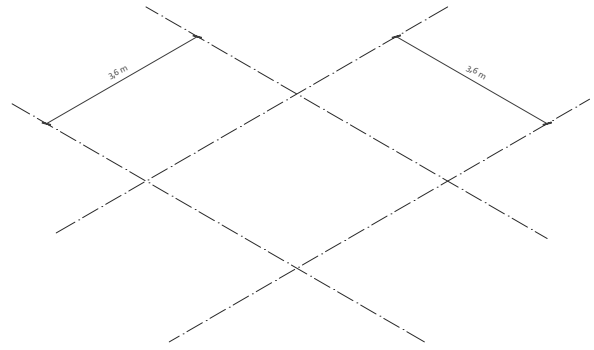
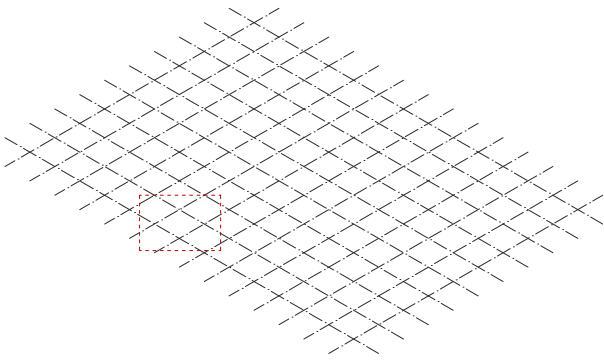
Structure system

The buildings were designed in a wooden skeleton structure due to the availability of spruce wood.

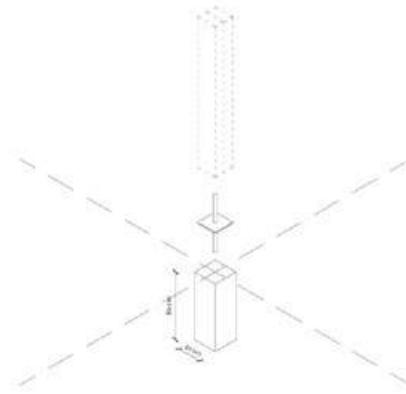
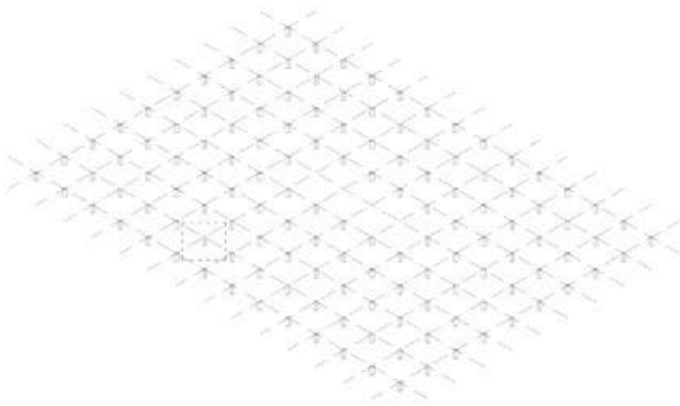
The proposed buildings are defined on the basis of a 3.60 x 3.60m module.

For the structure the construction beams with a cross-section of 250x125 mm are used. Were needed, cause of bigger span or load, they are doubled.

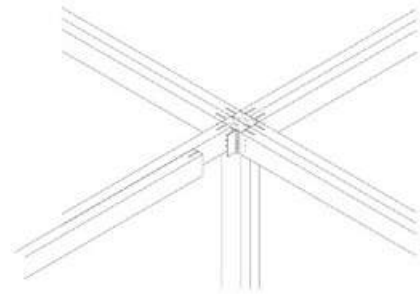
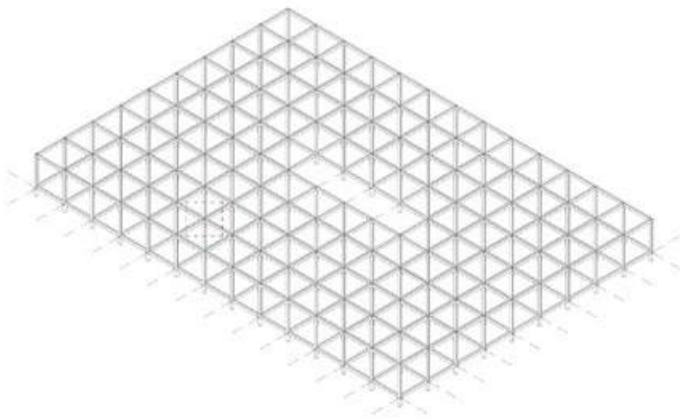
Building elements: structure, skin, services and furnishings, in accordance with Frank Duffy's theory of "shearing layers", are separated from each other and can be modified depending on the needs.



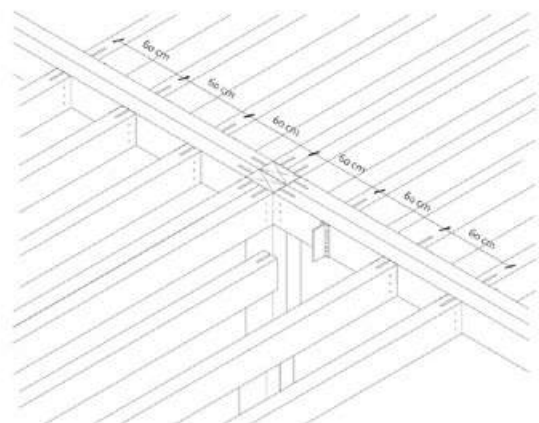
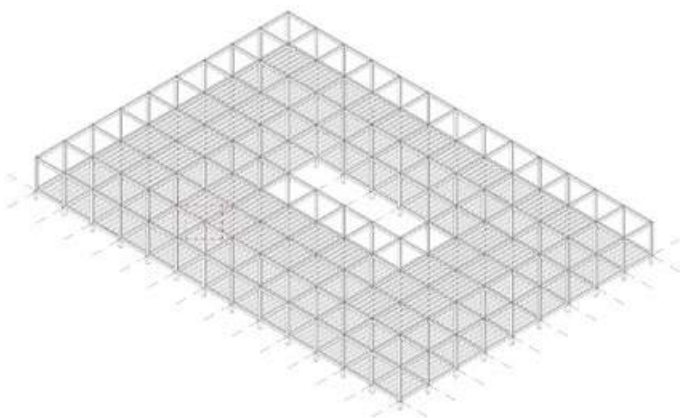
1. Grid



2. Foundations



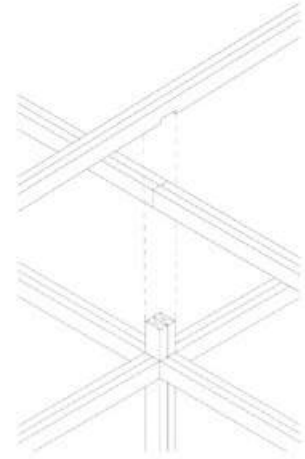
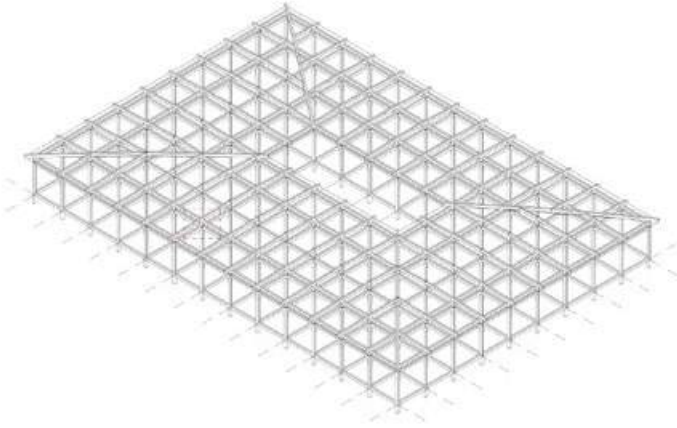
3. Structure



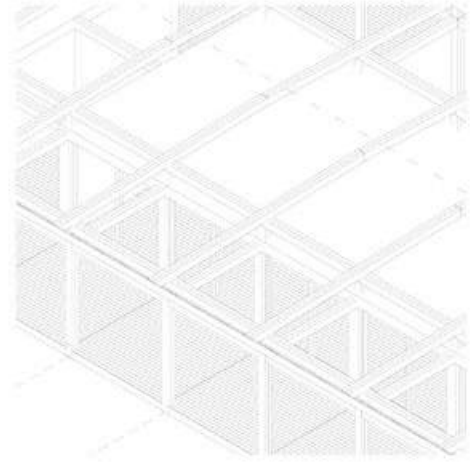
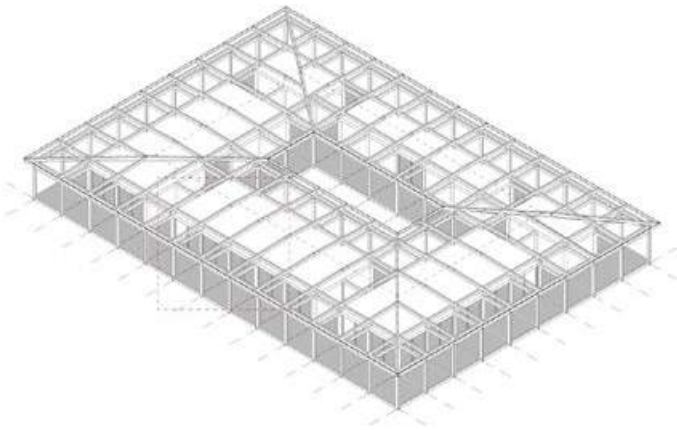
4. Ceiling

Structure system

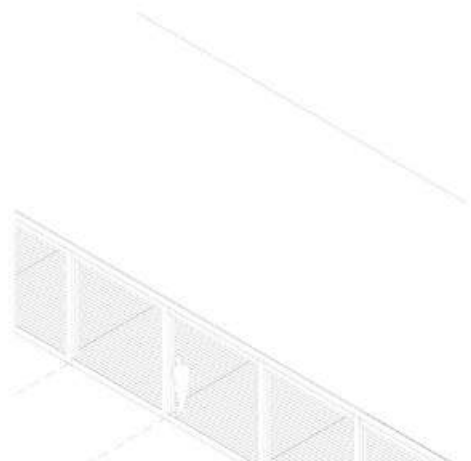
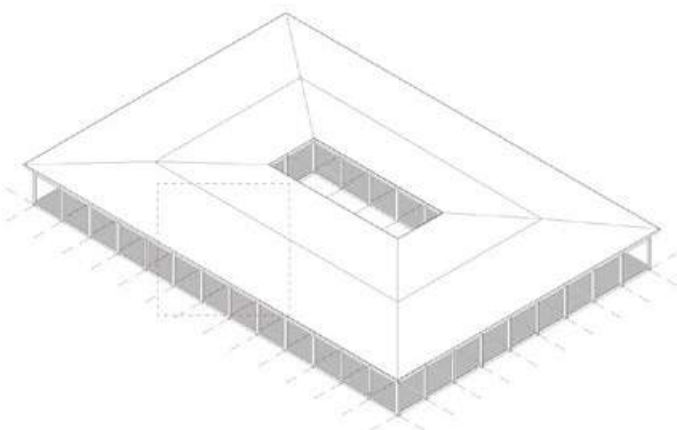
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5. Roof



Overview



6. Skin



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ARCHITECTURAL PROPOSAL

Clinic in the landscape

Former station

The building of the station was erected in 1853 and was the first railway station in Wałbrzych.

It is a remnant of the former railway station "Wałbrzych Towarowy" [Wałbrzych `Freight Station] located between Jaworzyna Śląska and Wałbrzych Główny. It allowed connecting the city with numerous coal mines.

The station was closed to passenger traffic in 1868. Subsequently the freight station gradually lost its importance and was completely decommissioned in 1973. The building of the station was used for residential purposes between 1910 and 2008.

Because of its location in green areas and by the river, the building will allow to develop the clinic in relation to nature.

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- bus stop
- theatre
- sport facilities
- pedestrian road
- river
- expressway

Elements of surrounding affecting the project



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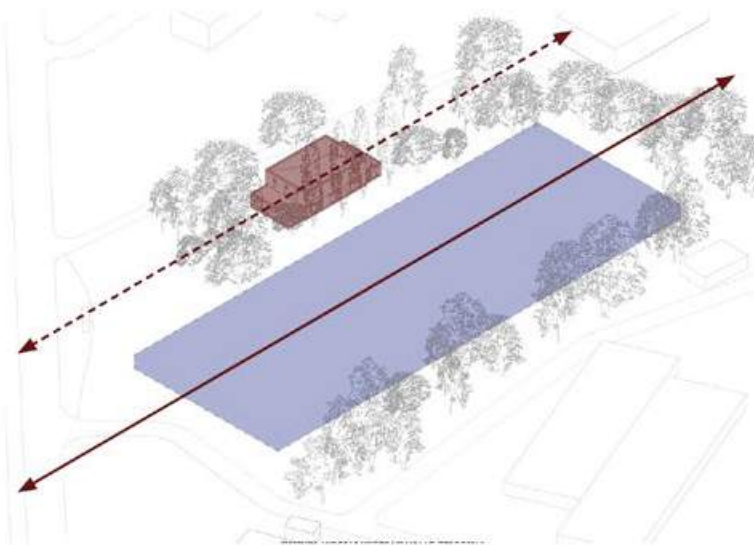


Archival land development plan from 1911 with the current satellite image (state 2018)



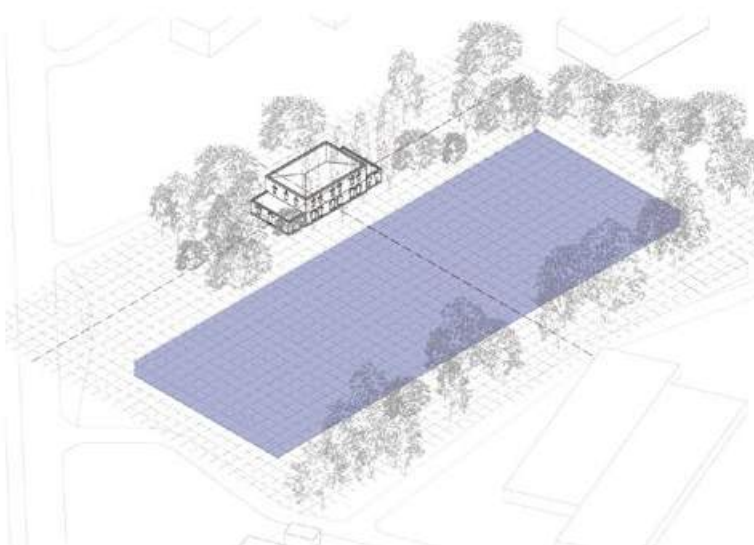
1. Melting into a landscape

The plot is the point of contact between city and green areas. This allows the clinic to gradually sink into the landscape and define the space of prevention - easily accessible to passers-by, rehabilitation space – space of isolation and silence, and the intermediate space of the reintegration.



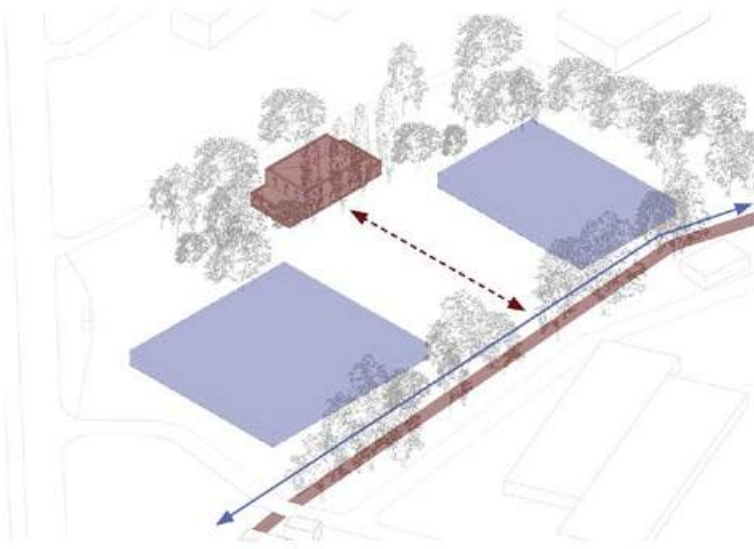
2. Reacting to the existing station

A new volume follows the former location of the railway tracks, allowing to maintain the present exposition of the station. It respects also the river bed as well as existing trees. The station cornice defines the height of the designed clinic.



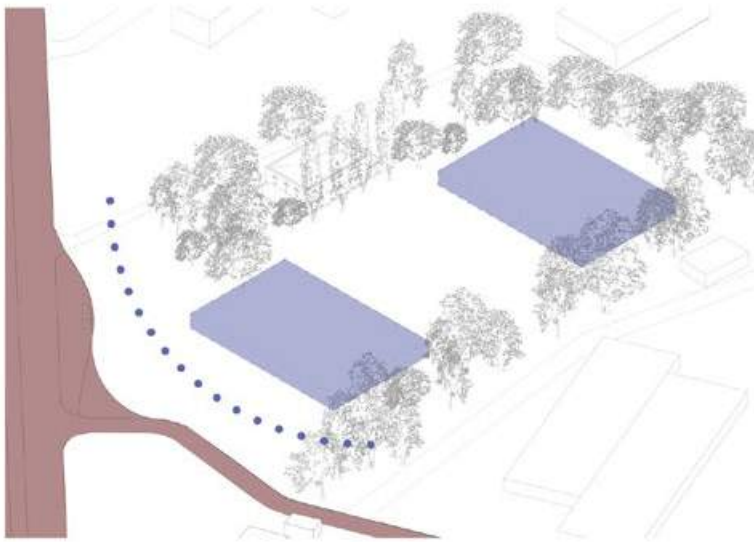
3. Anchoring the new volume

The new buildings will be designed in a modular wooden structure. The intersection of the symmetry axis of the existing railway station defines the beginning of new grid system.



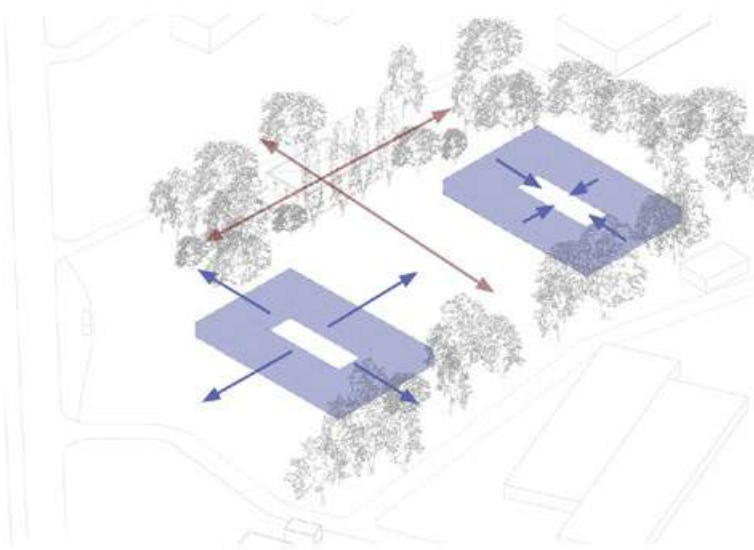
4. Reacting to the river

The visual connection between the station and the river is maintained, so both of these elements are properly exposed. Because of the distance between new volume and the river it is possible to lead a walking path connecting the city with the surrounding hills.



5. Buffering the noise of the express road

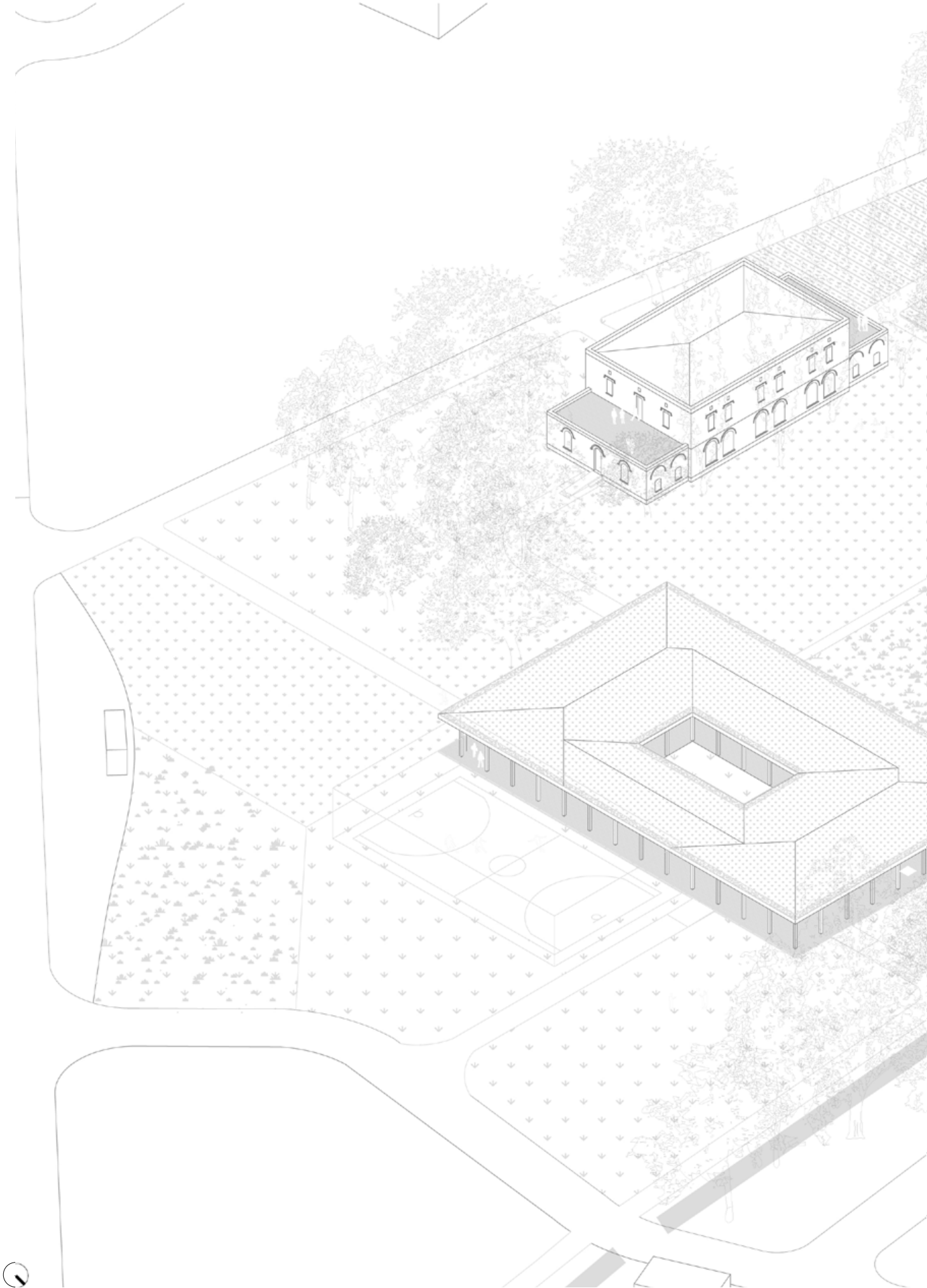
From the side of the street, the volume is withdrawn to ensure space for the definition of a buffer to alleviate the nuisance of car traffic and public transport.

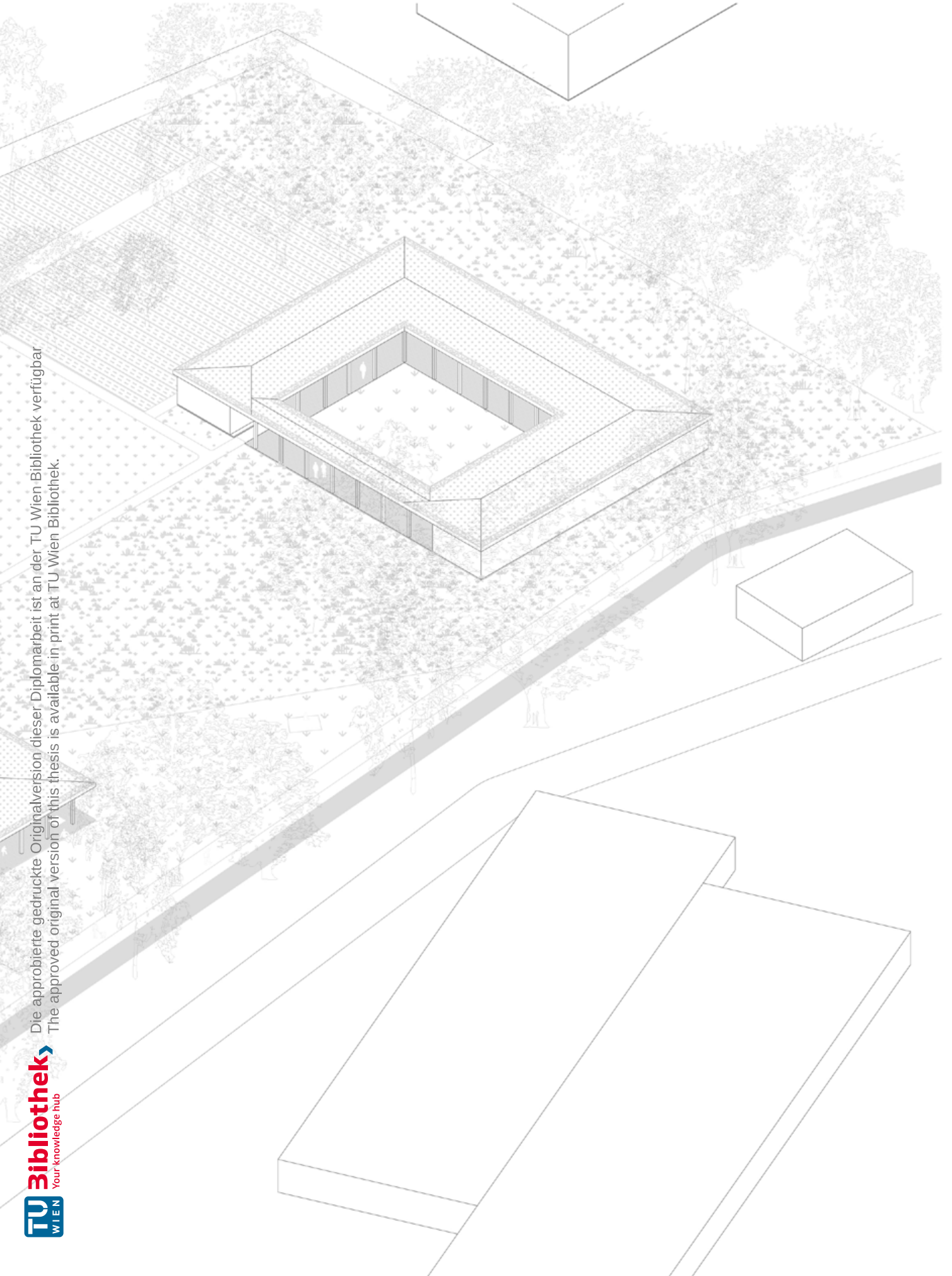


6. Introducing the program

The existing station and the designed volumes have to operate as a whole, but also have to be self-sufficient. Therefore new buildings are organized around the atriums, what enables the gradation of public and private spaces within them and also allows more precise response to the needs of the clinic program.

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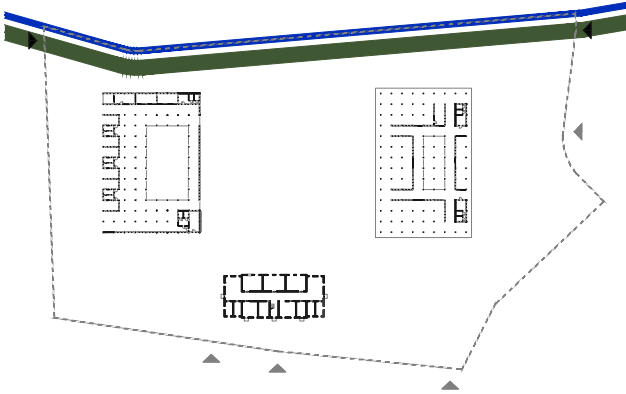




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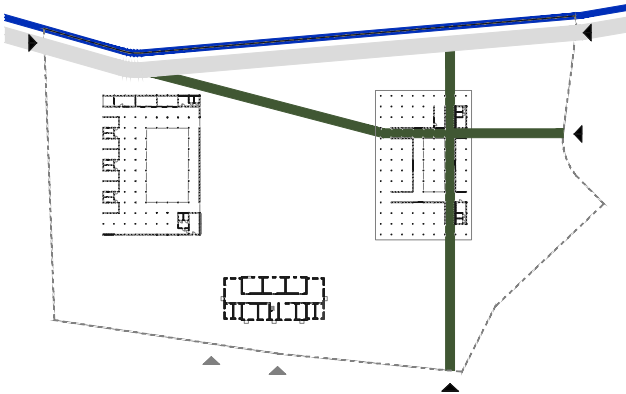
ENTRANCES AND MOVEMENT

The plot is accessible from three sides: from the town, from the sports centre and from the forested hills.



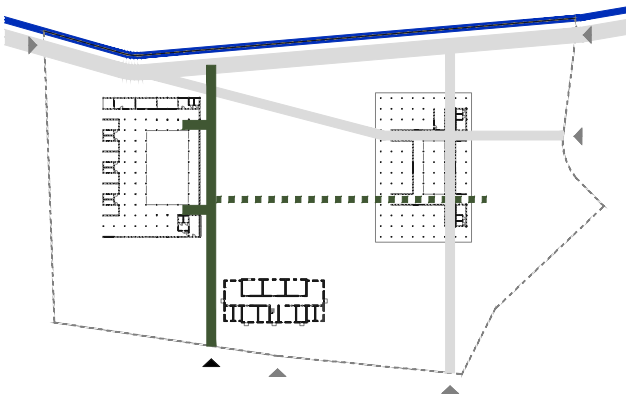
1. Establishing walking path

A planned walking path follows the river, linking the city centre and the surrounding hills.



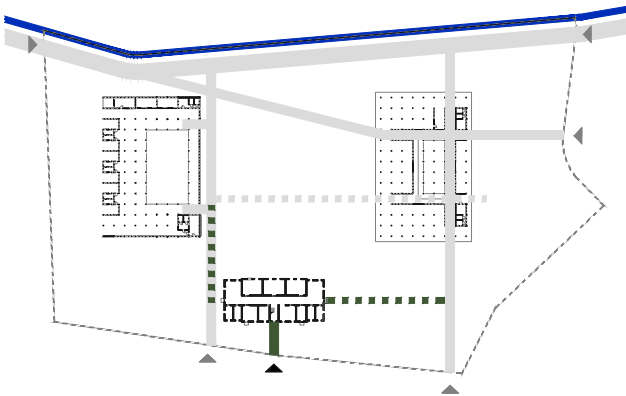
2. Intersection of paths

The prevention building is located at the intersection of the paths connecting the river, clinic, city and hills.



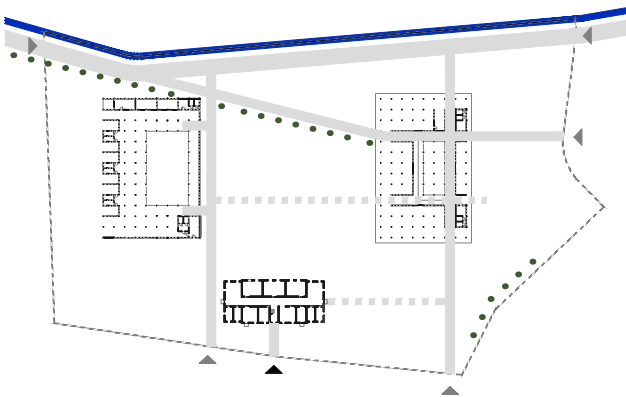
3. Beside the paths

The rehabilitation building is located next to the paths, the entrances are not on the axes.



4. Existing entrances

The existing entrances were used in the re-integration building. The main entrance has been preserved, the side entrances connect respectively with the rehabilitation and prevention clinic.

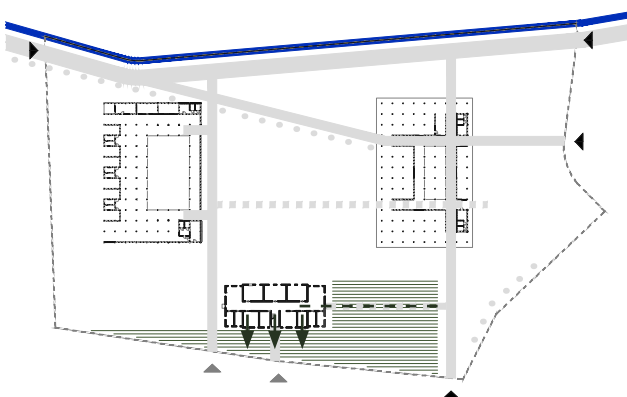
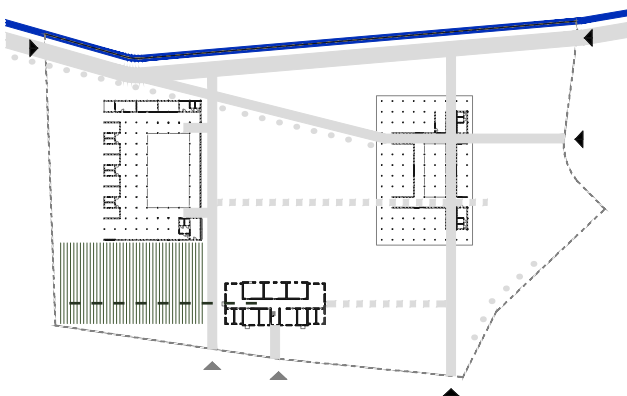
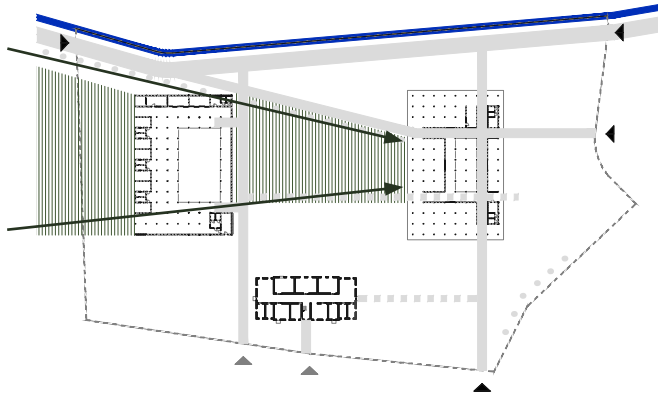


5. Protecting

Next to the bus stop and along the healing garden, rows of trees have been suggested to shelter the therapy space.

HEALING LANDSCAPE

The proposed landscape is the link between the clinic's programme and its surrounding.



1. Contact with nature

Private rooms and relaxation space open onto meadows and forest. This rooms provide users with an uninterrupted view of nature and introduce calming atmosphere.



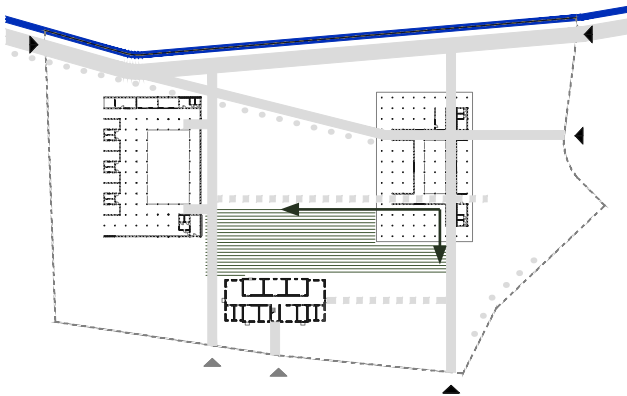
2. Gardening

The space for gardening belongs to the programme of the reintegration clinic. Taking care of the garden or flower beds is an important part of therapy, because it keeps the patient occupied and in contact with nature.



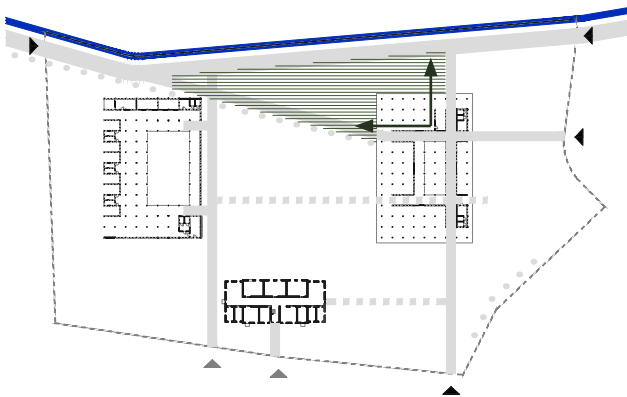
3. Therapy spaces

An informal outside space for individual and group therapy has been designed next to the reintegration building. Some of the rooms have their own exits to the outside from the street side. Existing trees build spaces with different characters and provide the opportunity to mute the noise from the street.



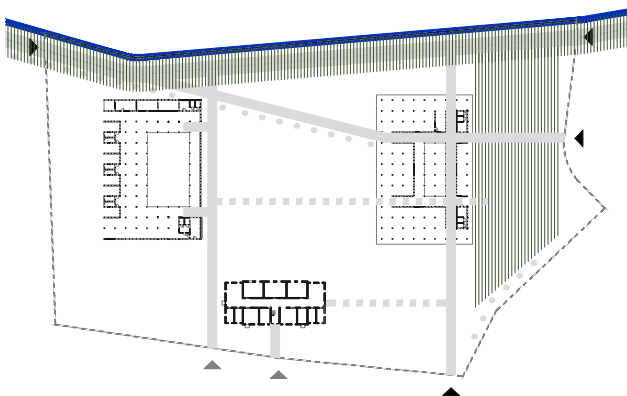
4. Occupational therapy

The workshop space of the prevention building adjoins the building, so that, for example, open-air events can be easily organized. This space is also adjacent to the reintegration building, which makes it easier to conduct occupational therapy here.



5. Socialising

By the river, extending the space of the cafeteria, a space for meetings or outdoor events was designed. Its shape was proposed so as not to disturb the peace of the clinic and follow the walking path.

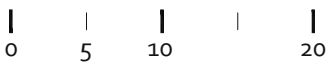


6. Exercising

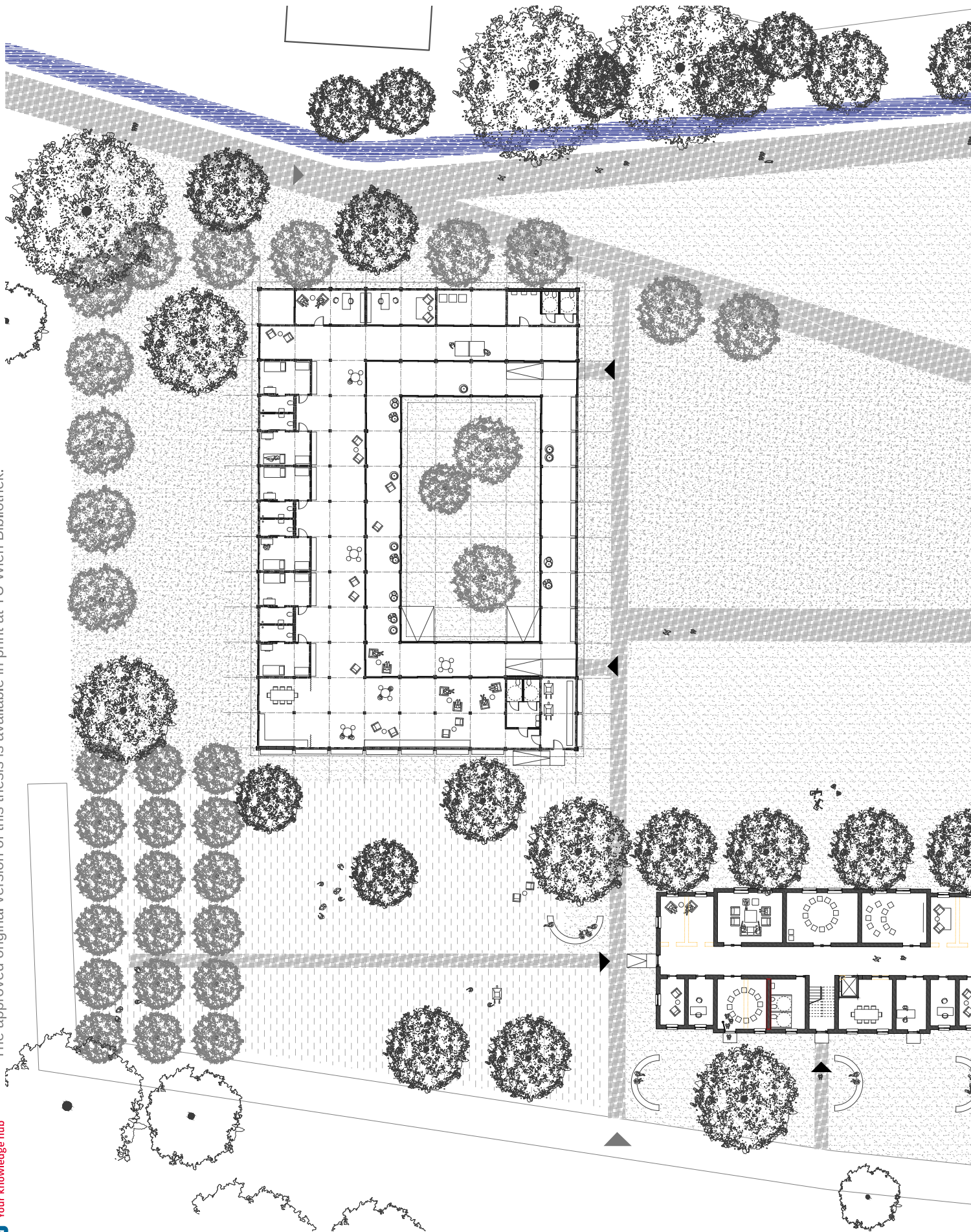
In the area preceding the clinic a court and a playground have been proposed. They constitute a buffer for the clinic and are a response to the needs of the more densely built-up part of the city.

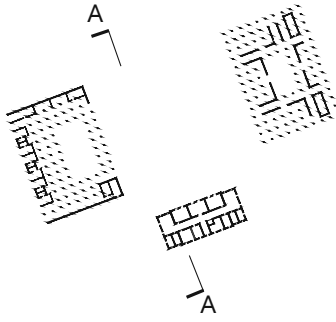
The space along the river is a walking path., but it is wide enough to enable users to sit freely on the riverbank or make a pikinik.

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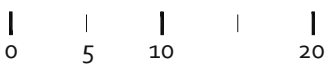


1:500 | Ground floor



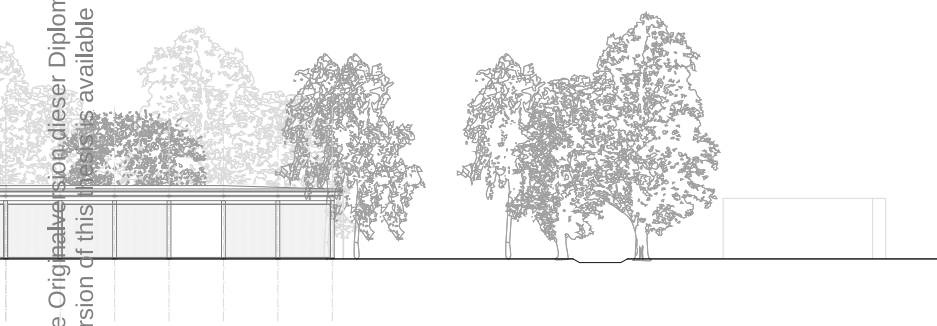


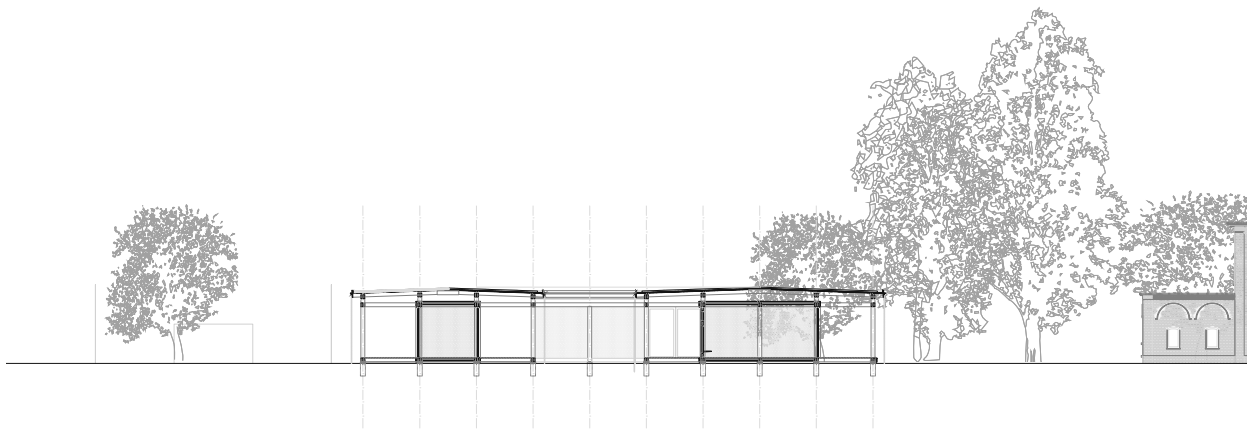
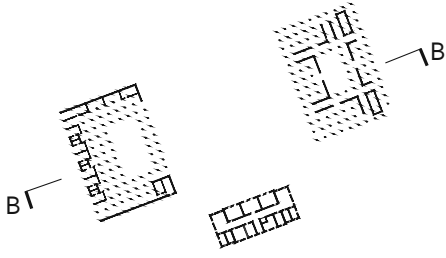
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1:500 | Section A-A: Relation to the river

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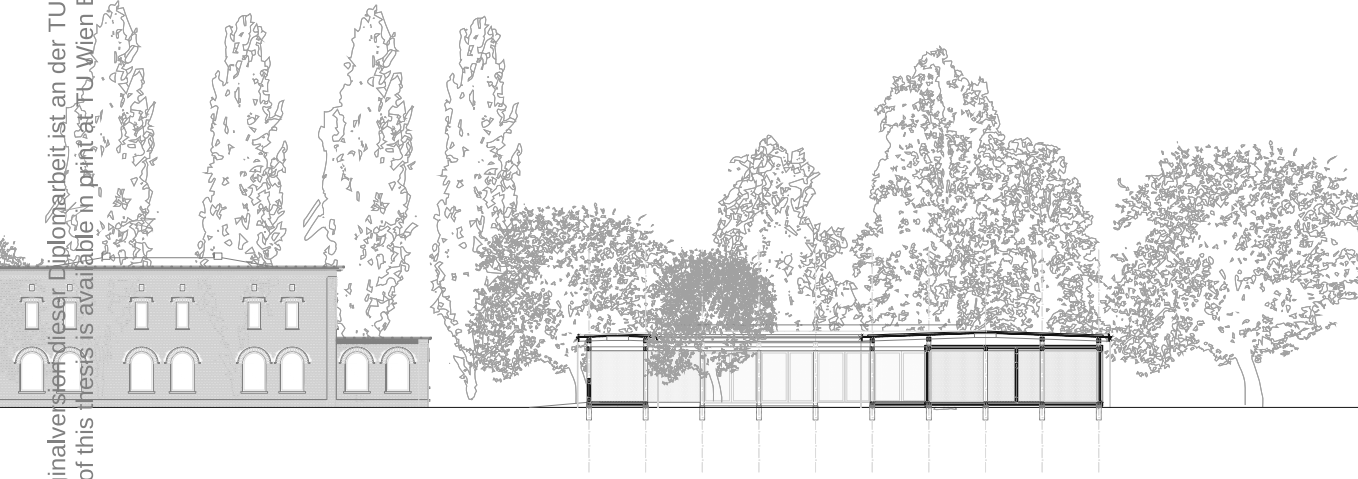
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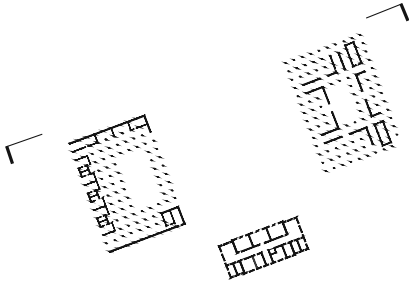


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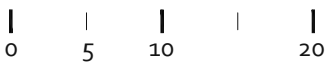
1:500 | Section B-B: Atriums

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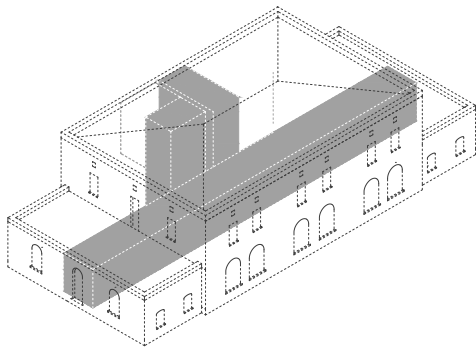
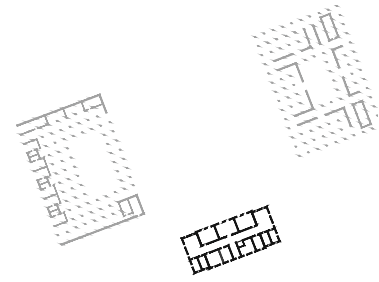
1:500 | North elevation (river side)

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REINTEGRATION BUILDING

The reintegration unit is a space for individual, group and occupational therapy and is located in the old station building.



1. Introducing natural light to the corridors

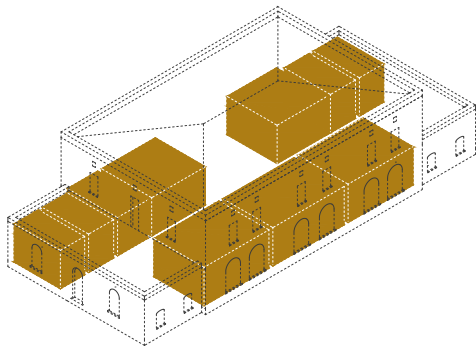
To transform existing claustrophobic corridors on the ground floor, four closed rooms have been transformed into niche in circulation space, introducing natural light deeper into the building.

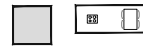
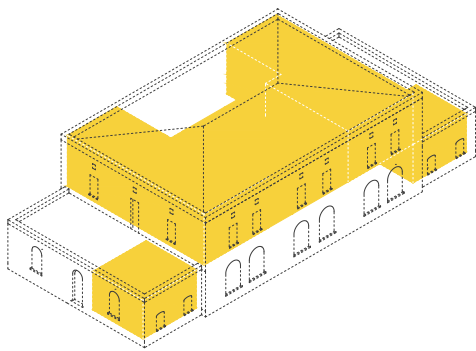
On the first floor, circulation has been integrated with the common space.



2. Using existing diversity for therapeutic purposes

Therapy rooms use the existing, differentiated room division.

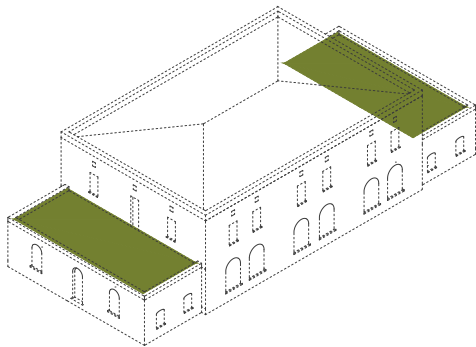




3. Generous common space

The space on the first floor was designed as a space for informal therapeutic activities and an opportunity for an informal meeting. Common spaces are organized loosely, have access to the kitchen, the possibility of division.

Next to the entrance, small informal spaces have been designed and introducing light into the building.



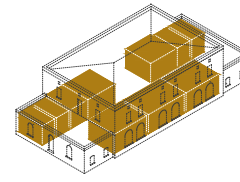
4. Providing a common space with an access to the outside

The existing difference in the height of the building are used to construct terraces that serve as an extension of the common space.

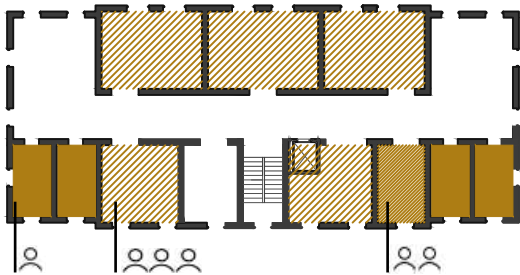
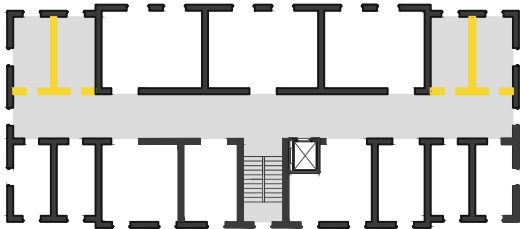
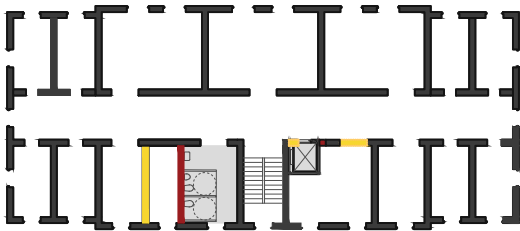


REINTEGRATION BUILDING |
Therapy spaces

Due to its accessibility the entire ground floor is dedicated to the therapy rooms. They follow the original structure of the building. Their proximity makes it easier to change between spaces during therapeutic sessions.



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I Modernizing




The existing building had no sewage system. The project introduces new toilets and an elevator located in the centre of the building.

II Introducing the light

The rooms at the entrances on the long axis have been turned into an informal common space. Thanks to this, the entrance zone is created, and the corridor is natural lighted.

III Defining therapy rooms

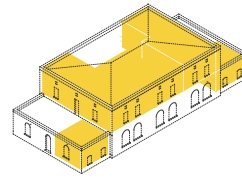
Identifying rooms that could answer to the needs of therapy room program: both group and individual.

-  Interview rooms
-  Seclude room
-  Group rooms

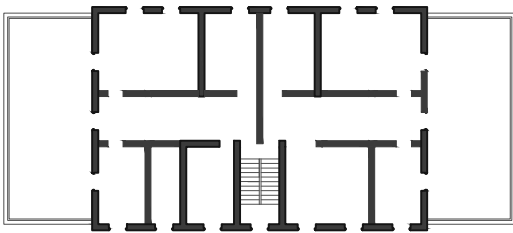


REINTEGRATION BUILDING |
Generous common area

Reintegration clinic needs generous informal spaces. In order to provide them the first floor was changed into a common space.

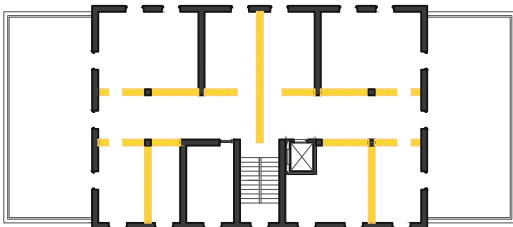


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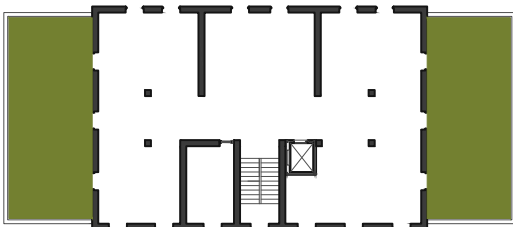
I Assessing the existing structure

Originally, there were two workers' apartments on the first floor. Their layout does not meet the needs of the common space.



II Defining common area

On the first floor, only the load-bearing walls have been preserved from the original layout. As a result large, various spaces are obtained.



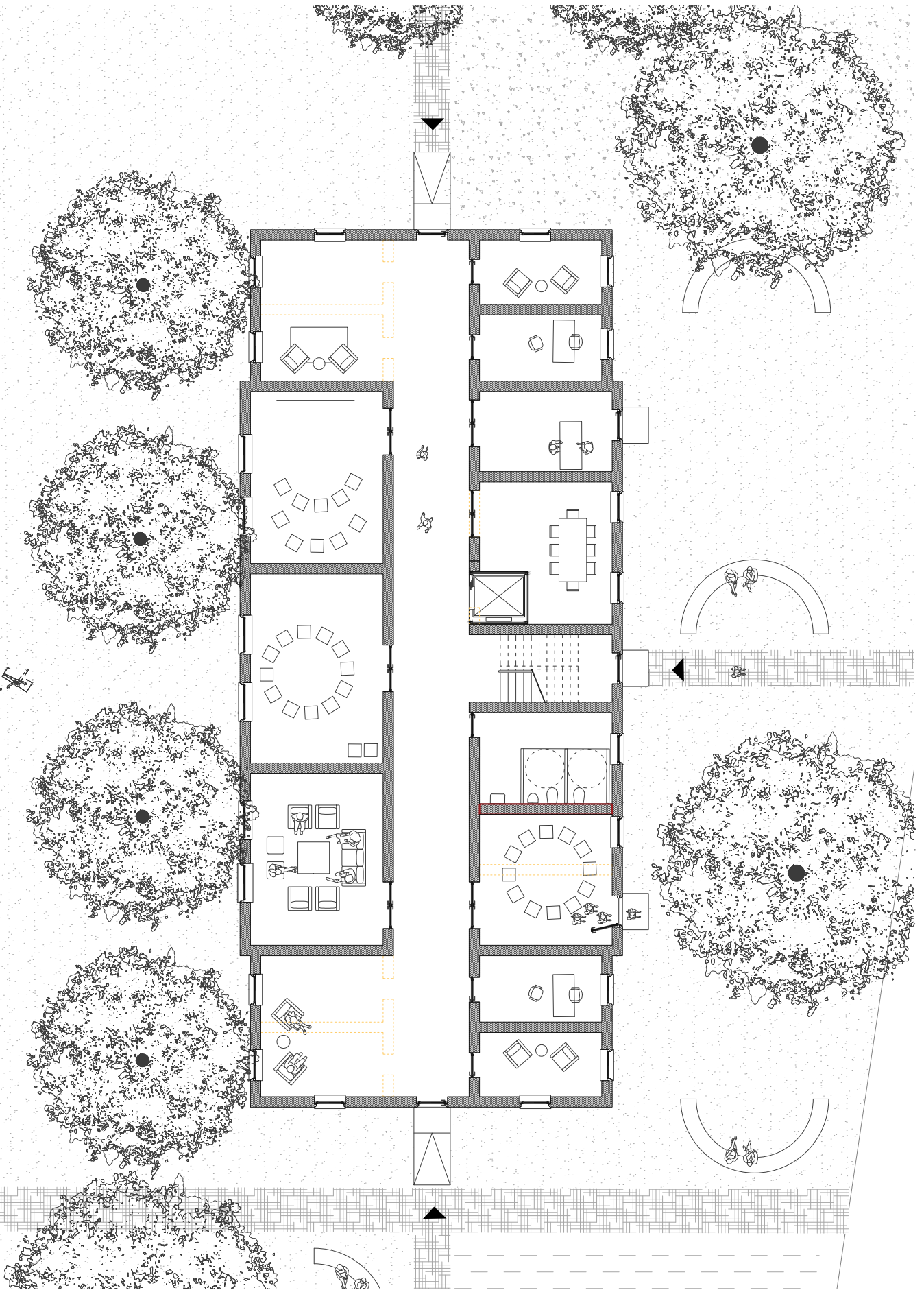
III Relation to the outside

The existing lowering of the building's body is used as a possibility to introduce terraces, which become an extension of the common space.

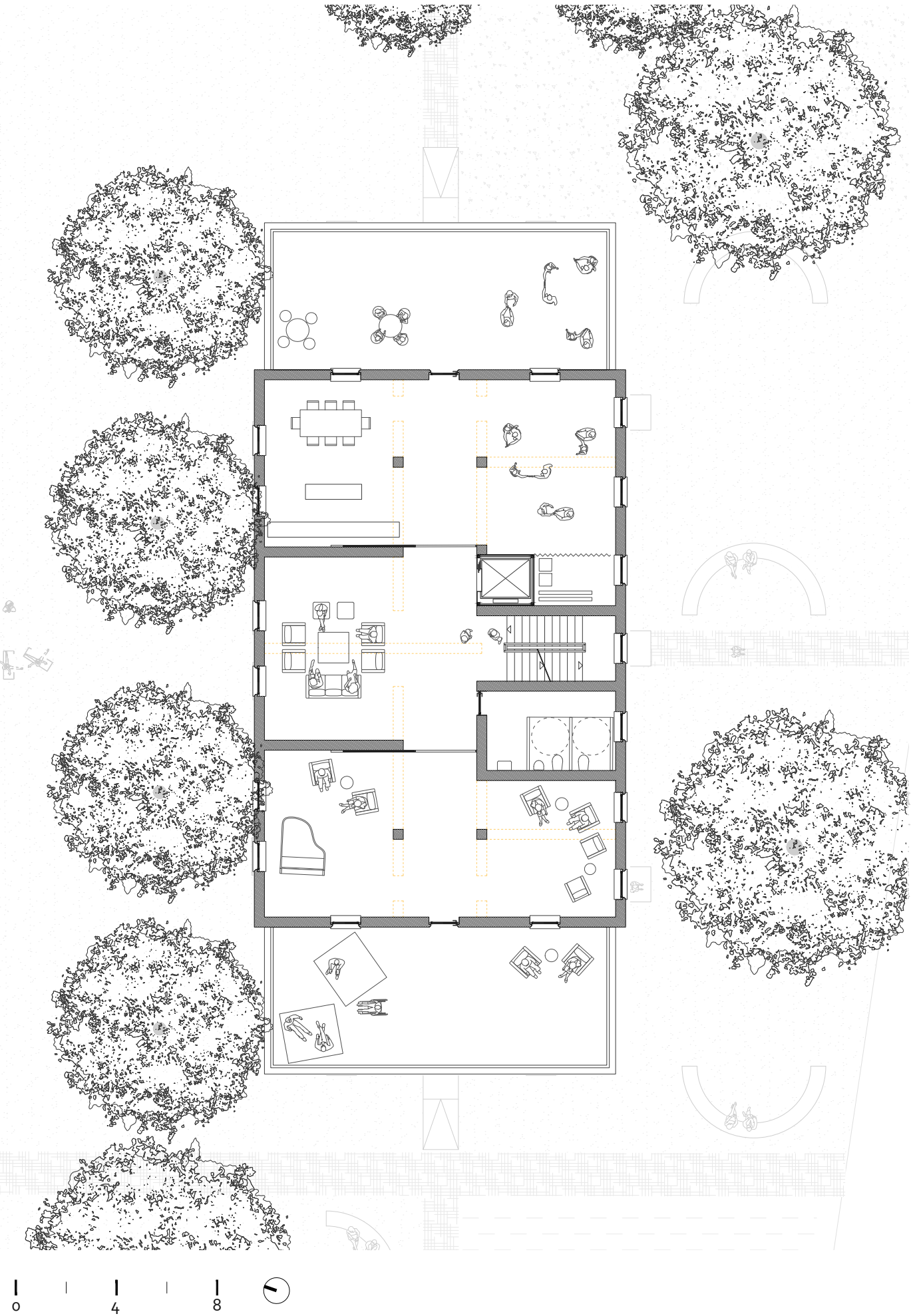
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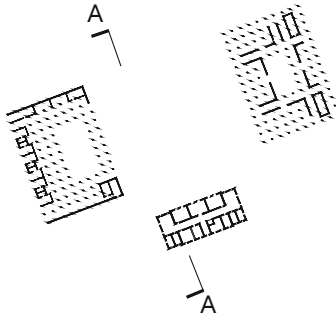
1:200 | Reintegration space, ground floor



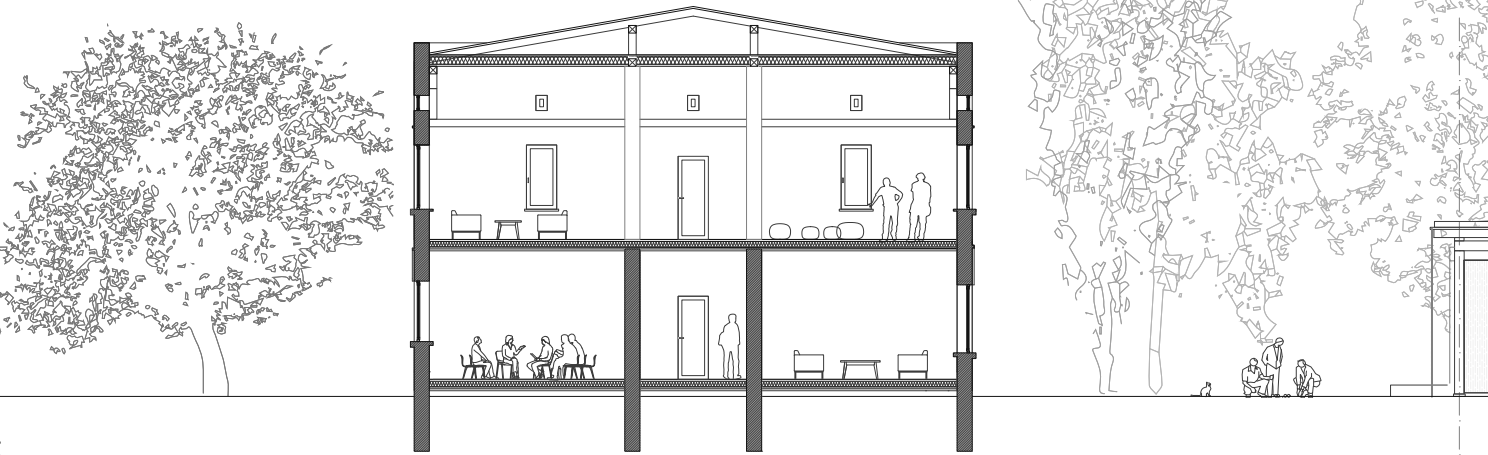
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1:200 | Reintegration space, first floor



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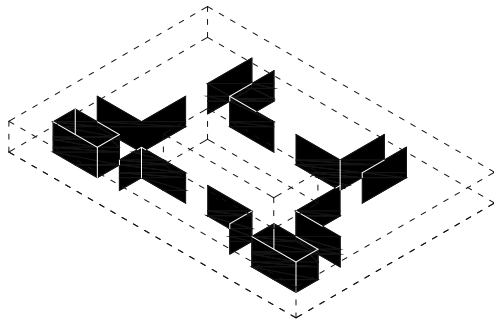
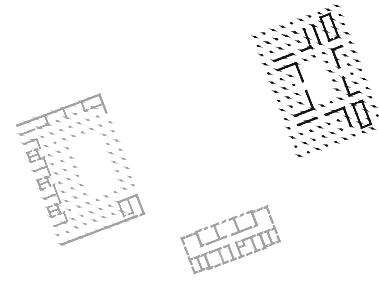
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PREVENTION BUILDING

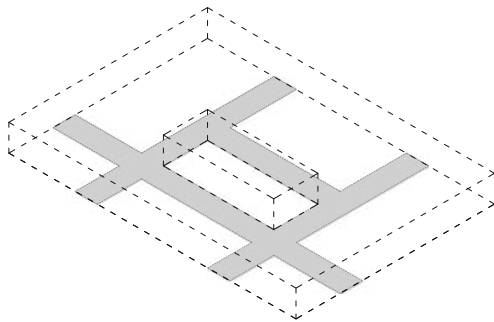
Prevention space should be attractive both for town citizens and patients. It offers a space for sports, relaxation, a workshop and a cafeteria.

The space of prevention is also the clinic's buffer, separating it from the city.



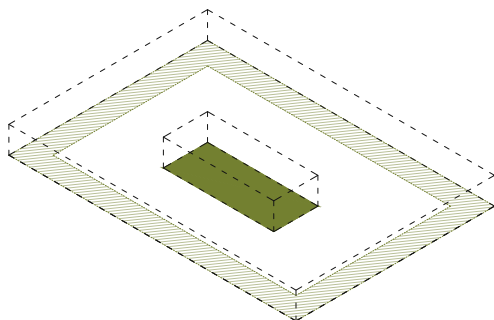
1. Opening up to the surroundings

Despite being organized around the courtyard, the rooms open to the surroundings and are accessible both from atrium and the surrounding terrace



2. Atrium as an intersection of paths

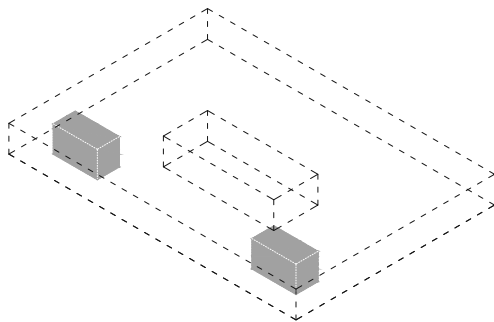
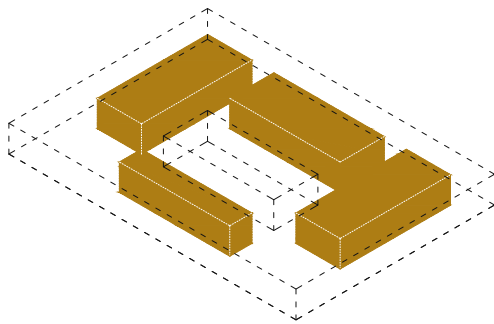
The prevention building should be open and easily accessible. It is located at the intersection of paths connecting the river, the old station building, sports facilities and clinic's courtyard.



3. Reversing the atrium

Atrium supports circulation area introducing the natural light and giving a sense of community.

Overhang surrounds the whole building to allow interiors prolonging onto surrounding.



4. Therapy spaces

Therapy rooms react to what is visible through their windows.

The cafeteria opens onto the river, workshop to the clinic's area. The spaces of movement and silence open respectively onto the sports facility or the courtyard.

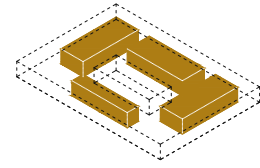
A distinction is made between spaces that need permanent (workshop, cafeteria) and flexible furniture.

5. Public bathrooms

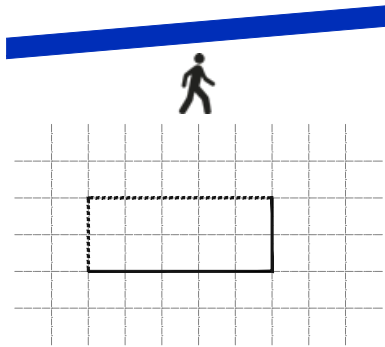
To support the use of sports spaces and the walking route, publicly accessible bathrooms have been designed.

PREVENTION BUILDING | Cafeteria

Cafeteria is run by clinic users for outsiders. It gives the possibility of interaction between the users of the clinic and the users of the walking route.

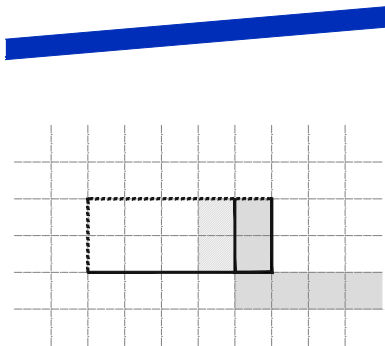


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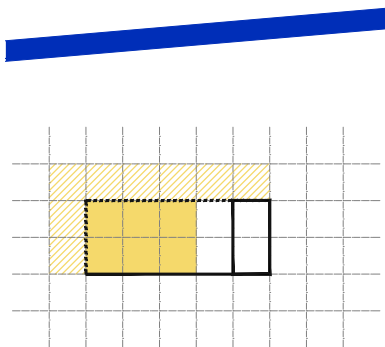
I Directivity

The cafeteria opens onto the river and the walking route, facing away from the atrium and the street.



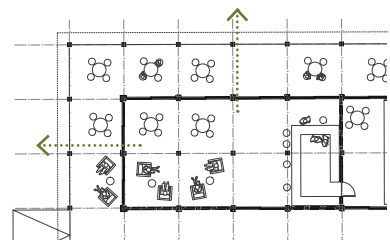
II Front and back

The kitchen is located on the side of the street in order to improve their functioning..



III Prolonging into outside

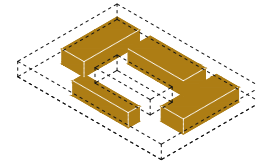
Thanks to large glazing, the cafeteria can be extended to the terrace. In case of organizing larger events it can be extended further towards the river.



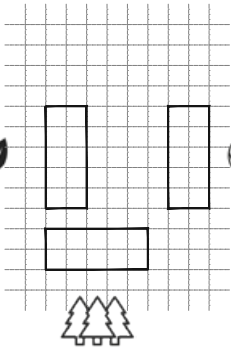


PREVENTION BUILDING | Therapy spaces

All spaces are intended for occupational therapy, but are open to all interested citizens. Spaces can be extended to the outside through the porch.

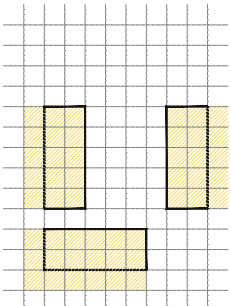


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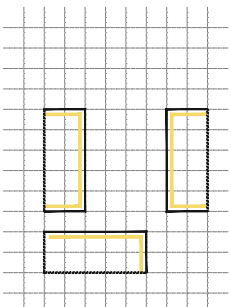
I Complementing the surroundings

The rooms fit into the grid and open up to the surroundings of different characteristics.



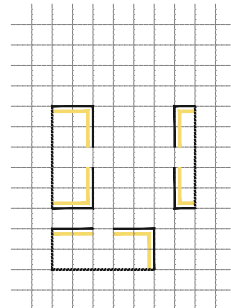
II Prolonging into outside

The rooms have large glazing that can be fully opened and extend the interior onto the porch.



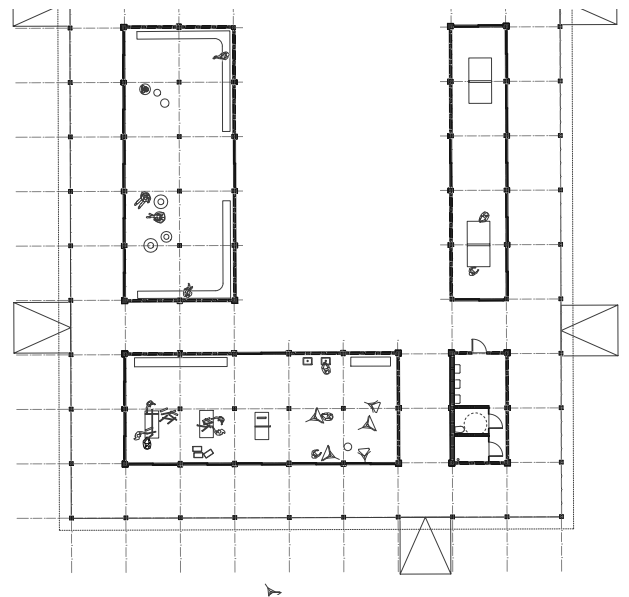
III Defining constants

Fixed elements in the rooms are placed against the walls to ensure flexibility of the space.

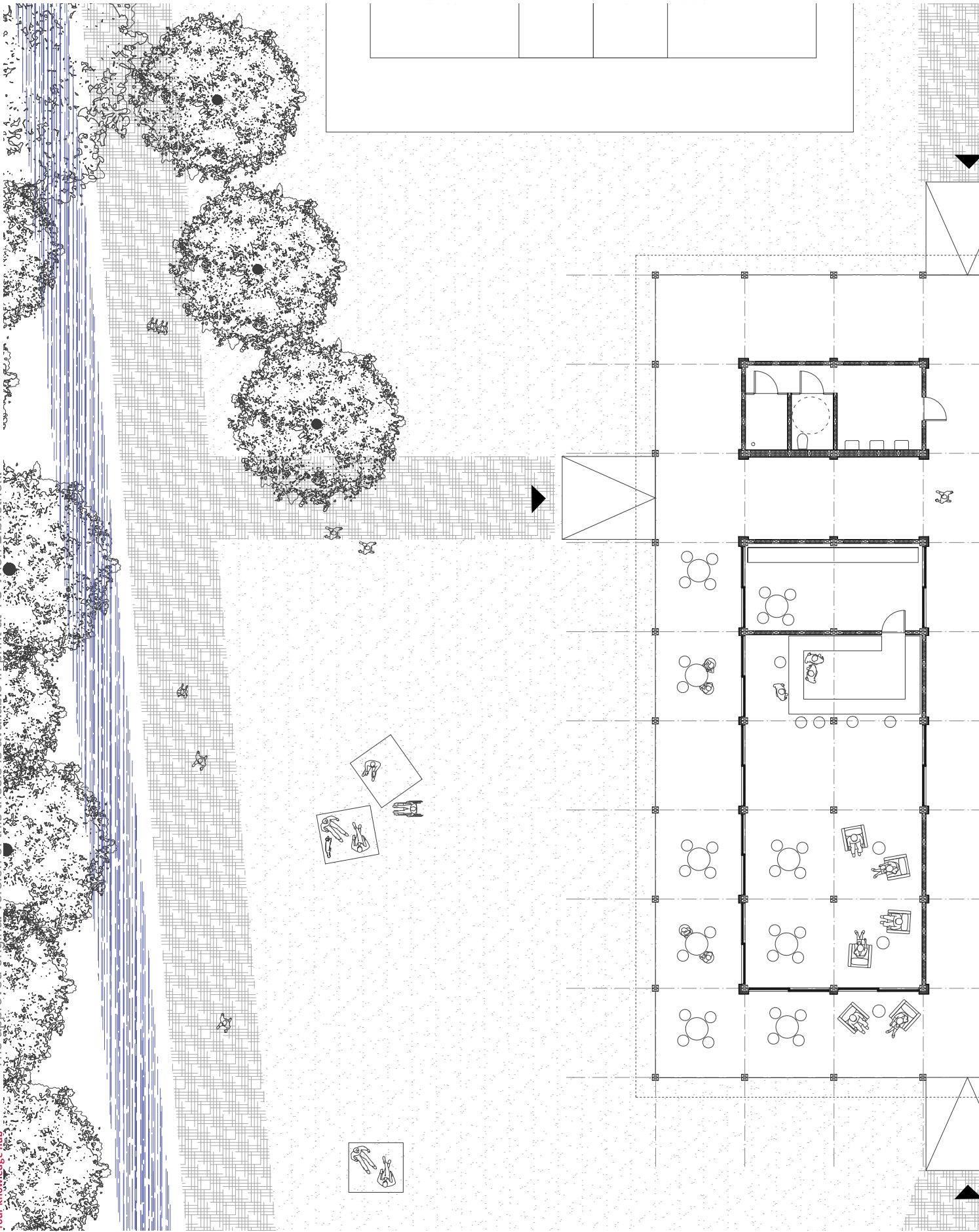


IV Defining the entrance

The main entrances to the rooms are located in the inner courtyard.

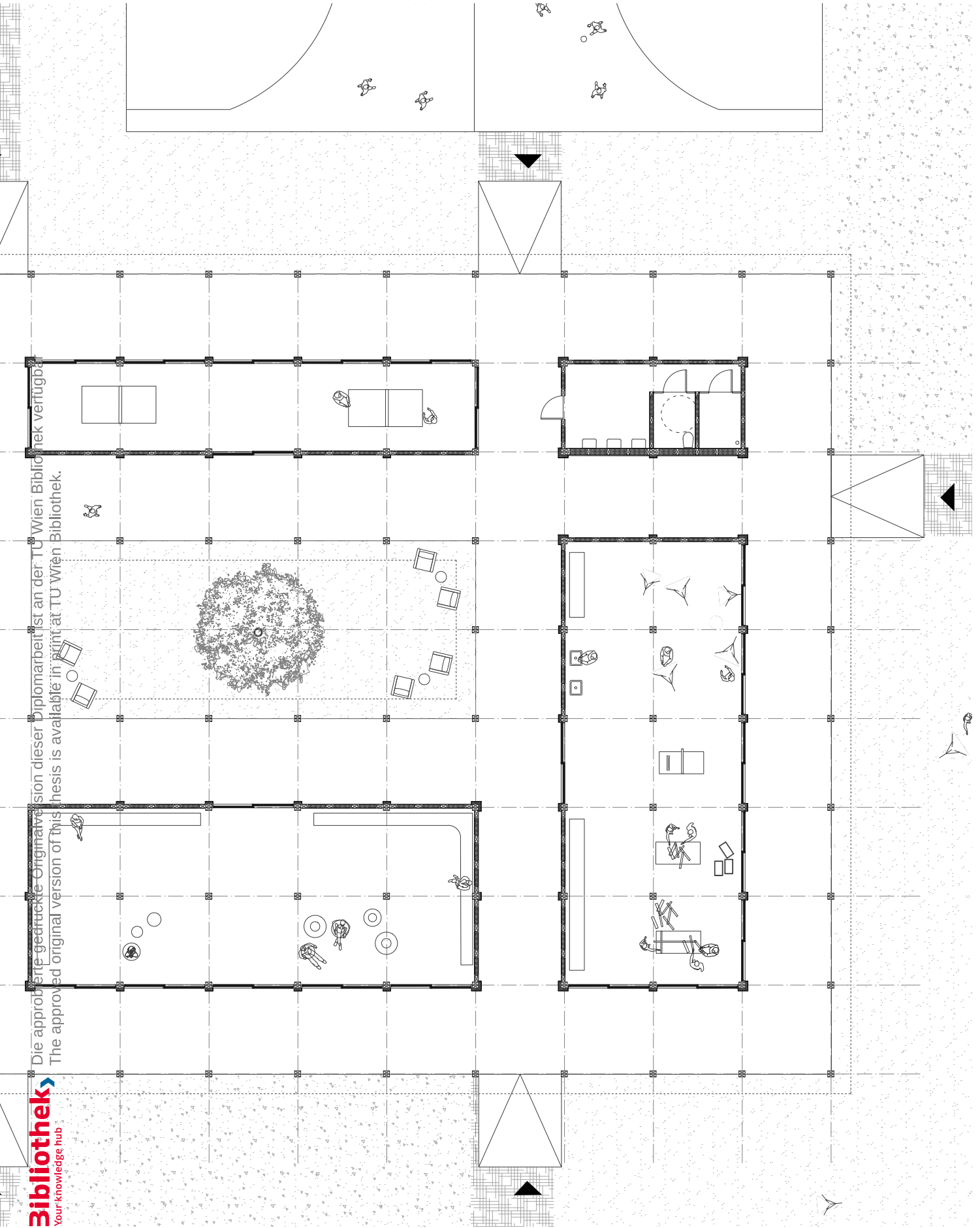


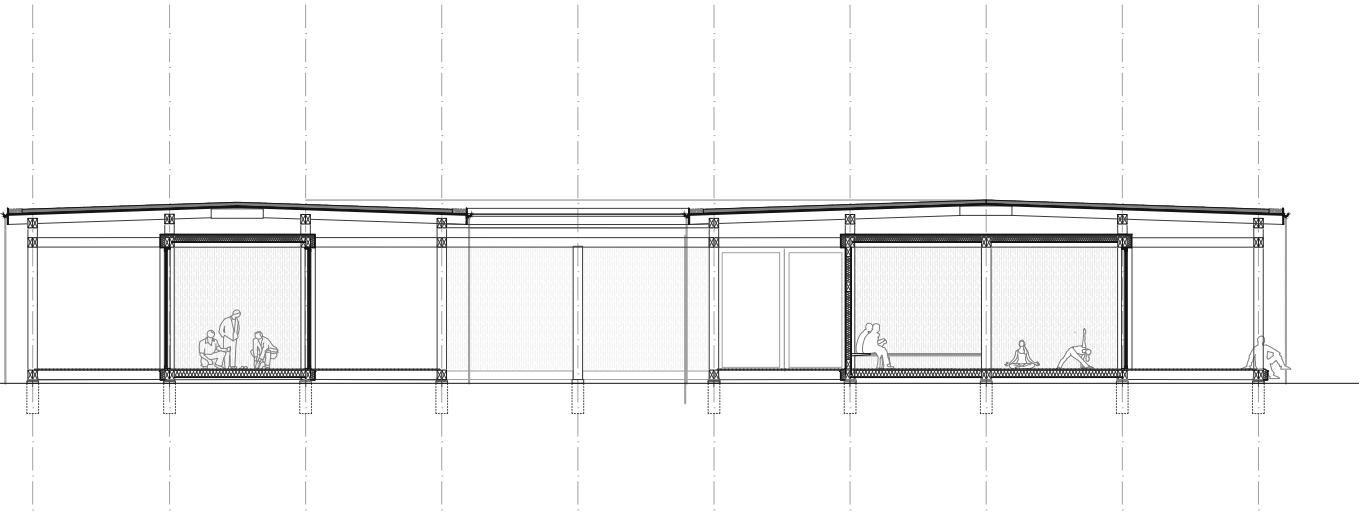
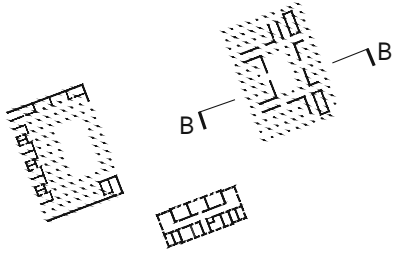
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1:200 | Prevention space

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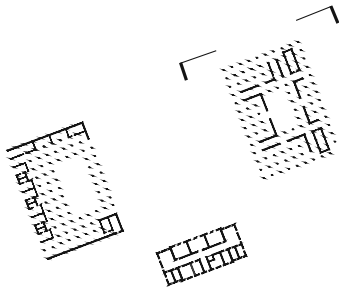




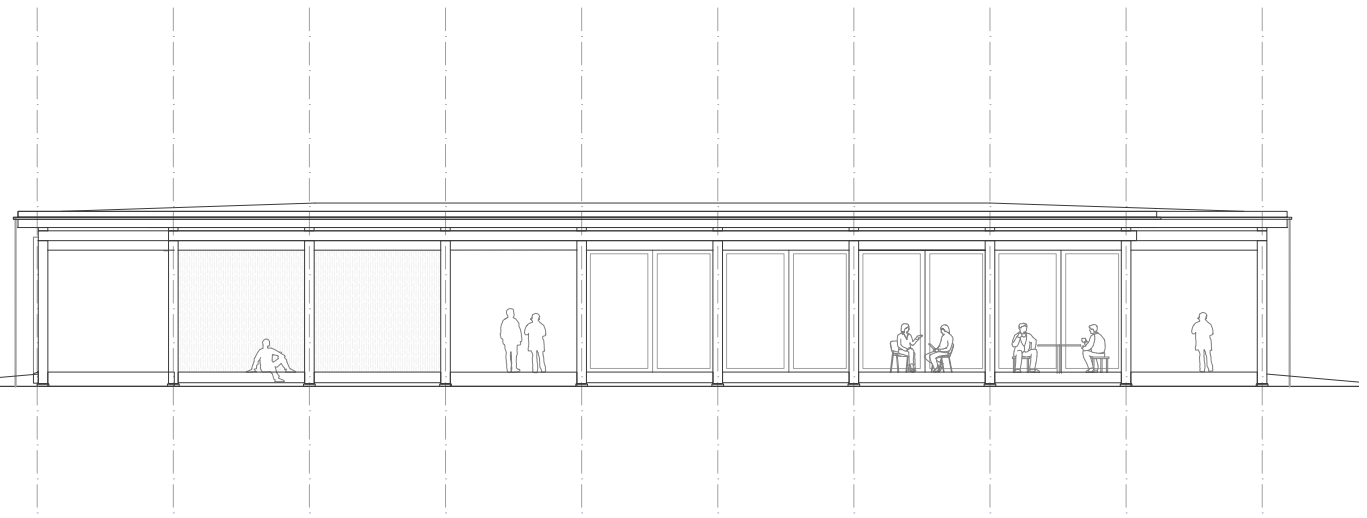
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1:200 | Section B-B: prevention space



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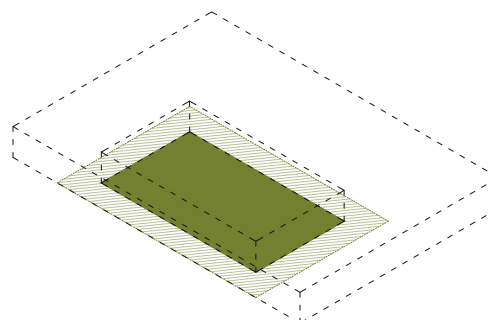
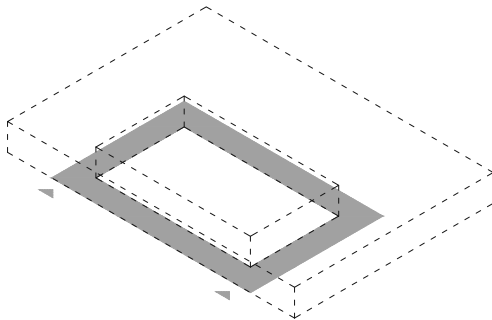
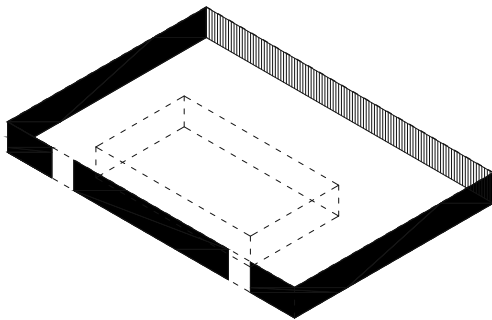
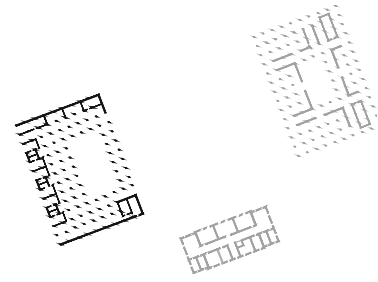


1:200 | North elevation: prevention space

REHABILITATION BUILDING

The rehabilitation building gives patients a sense of security and ensures contact with nature.

It is arranged in such a way that patients can decide on the level of integration: at any time withdraw or establish closer contact.



1. Isolation from the surrounding

To provide users with a sense of security, the common spaces open onto an internal, isolated courtyard. The rooms open onto a forest so resting users can benefit from undisturbed contact with nature.

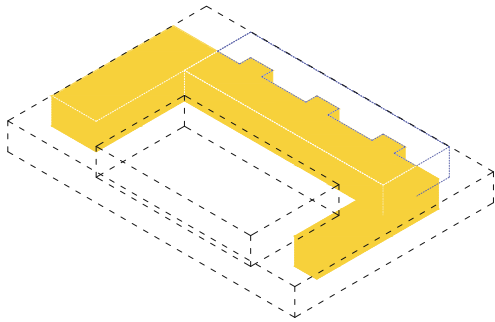
2. Circulation around the courtyard

Due to the small number of users and the lack of outsiders, circulation area is reduced. Because of removable glazing it is part of the winter garden in cold seasons and part of the atrium in a summer.



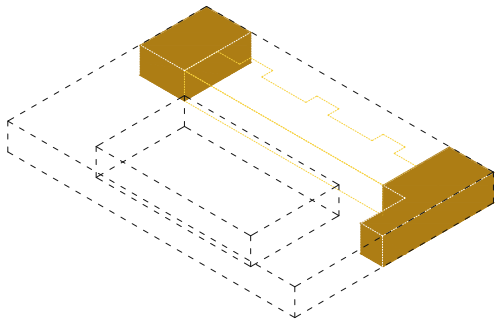
3. Secluded garden

The garden is located in the centre of the building and is surrounded by overhang, which provides the possibility of extending the rooms to the outside



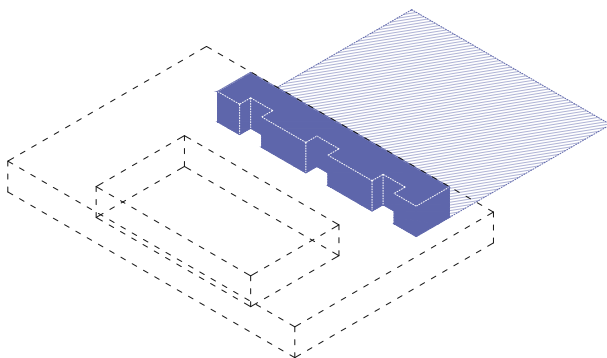
4. Common area as a buffer

The common space is a buffer between private and therapy spaces and the outside.



5. Easily accessible therapy spaces

The spaces of therapeutic activities are an extension of the common space and are open onto outside space.



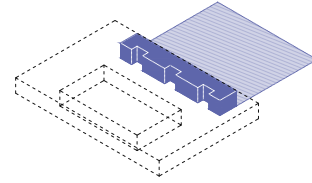
6. Private rooms open to the viewing garden

The patients' rooms ensure privacy and a view of greenery. Its location allows isolation from the planned walking route.

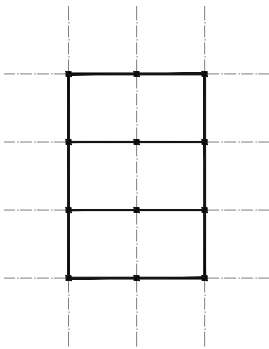


REHABILITATION BUILDING |
Private room with a bathroom

Clinic has at the disposal 6 in-patient single rooms with bathroom (16+6m²). This is a desirable solution which provides the patient with a sense of privacy, security and dignity. Room should be used just as relaxation area and the user is encouraged to be in the common space as often as possible.

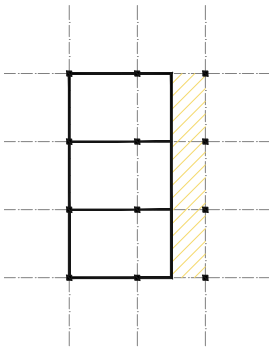


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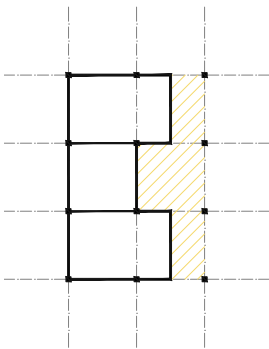
I Fitting into the module

Two private rooms with a bathroom are developed in the 3.6m module.



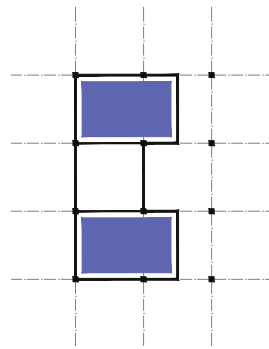
II Retreating

Rooms are withdrawn to define a transition zone for private room users.



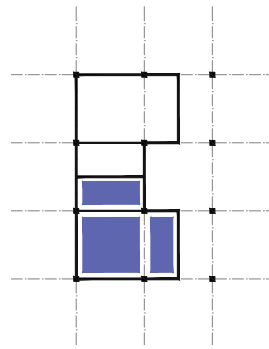
III Defining the entrance

To ensure the sense of privacy and dignity for users, the entrance area has been withdrawn.



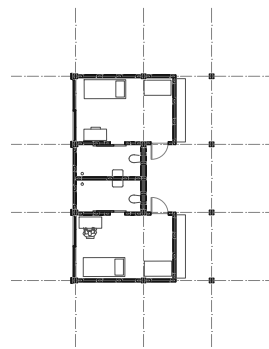
IV Single-space private room

The room cannot be equipped with narrow spaces that can cause stress.



V Functional division

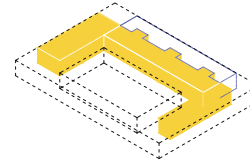
The room has a sleeping area and a private bathroom. Thanks to the legible structure, the entrance area is suggested.



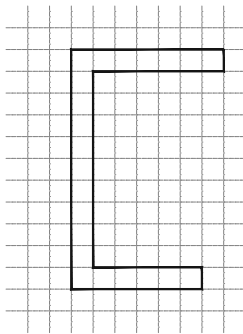


REHABILITATION BUILDING |
Common area as a buffer

There are sitting possibilities next to private rooms that allows to stay in a common space, but do not force exposure.
The space is extended to the outside thanks to large glazing.

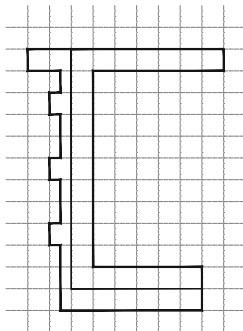


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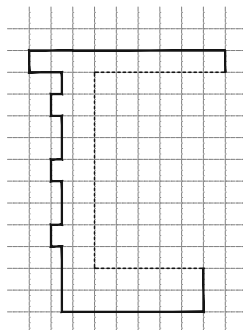
I Space uniting the building

The common space surrounds the inner courtyard, linking all the spaces included in the building.



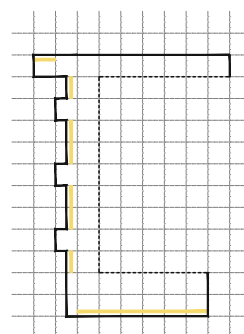
II Defining niches

Before in-patient and therapy rooms niches have been designed. This allows users for a gradual change of the environment and the possibility of withdrawal.



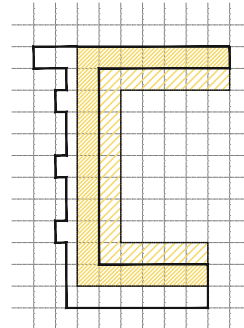
III Uniting with nature

Common area provides generous access to outdoor atrium. In the summer the glazing can be fully opened, allowing the interiors to be connected with the atrium. In the cold seasons, the space turns into a winter garden.



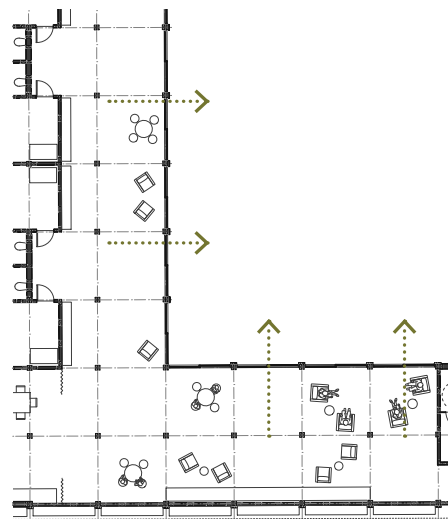
IV Fixed furniture

The fixed furniture was placed in niches.



V Movable furniture

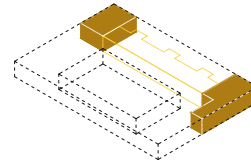
Common area is equipped with movable furniture and wide range of seating possibilities to enable patient's regulation of personal space and level of interaction with others.



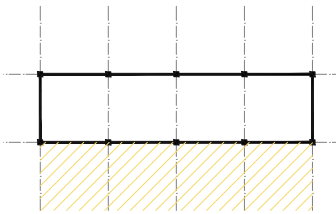


REHABILITATION BUILDING |
Therapy spaces

The therapy space in rehabilitation process is used for individual psychotherapy or as seclude room for therapeutic meeting with people from outside the hospital (family, friends). Group therapy for in-patients takes place in a common space. They can also participate in activities for the out-patient in the reintegration space.

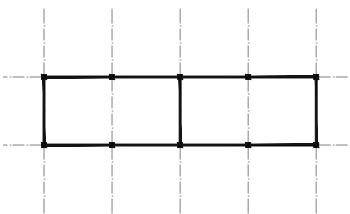


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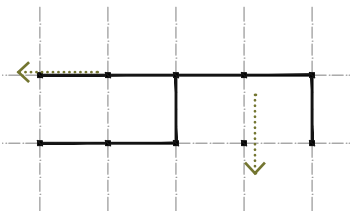
I Attaching to common

Therapy rooms are located next to each other and close to common space to facilitate changing rooms if needed during the conversation.



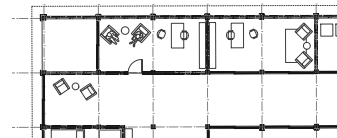
II Individual therapy

In the rehabilitation unit, users have various rooms for individual therapy at their disposal, so that they can choose their surrounding according to needs.



III Relation to the outside

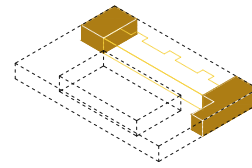
Both rooms open to nature, but the proportions of rooms and windows are different. Further one room opens to the internal courtyard of the clinic, the other to the forest adjacent to the clinic.



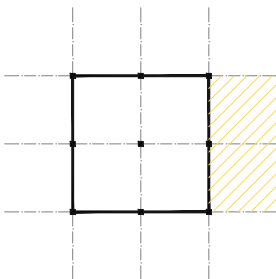


REHABILITATION BUILDING |
Kitchen (as a therapy space)

The act of eating has a social meaning. Preparing the meal and dining is part of the therapy.

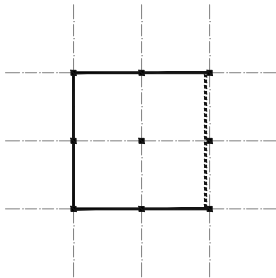


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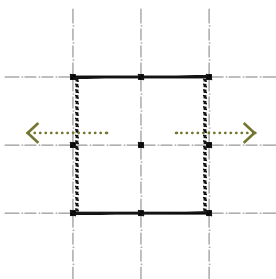
I Attaching to common

The kitchen is located next to the common space. The patient can decide whether he prefers to eat in the dining room or in the informal common area



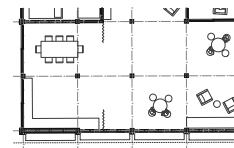
II Possibility of separation

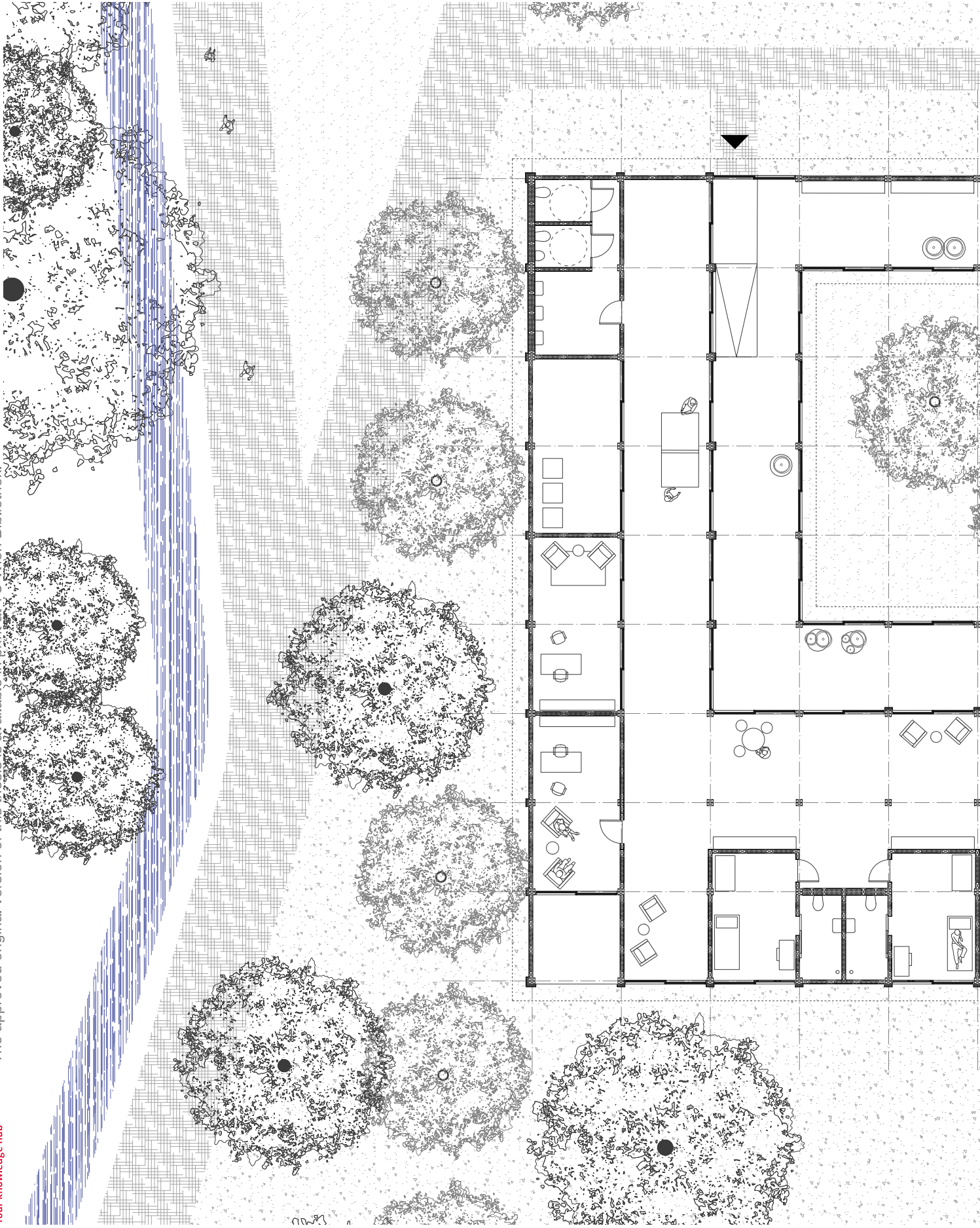
Kitchen can be separated from the common room. This arrangement makes it possible to use the dining room for any purpose: workshops, meetings, events.



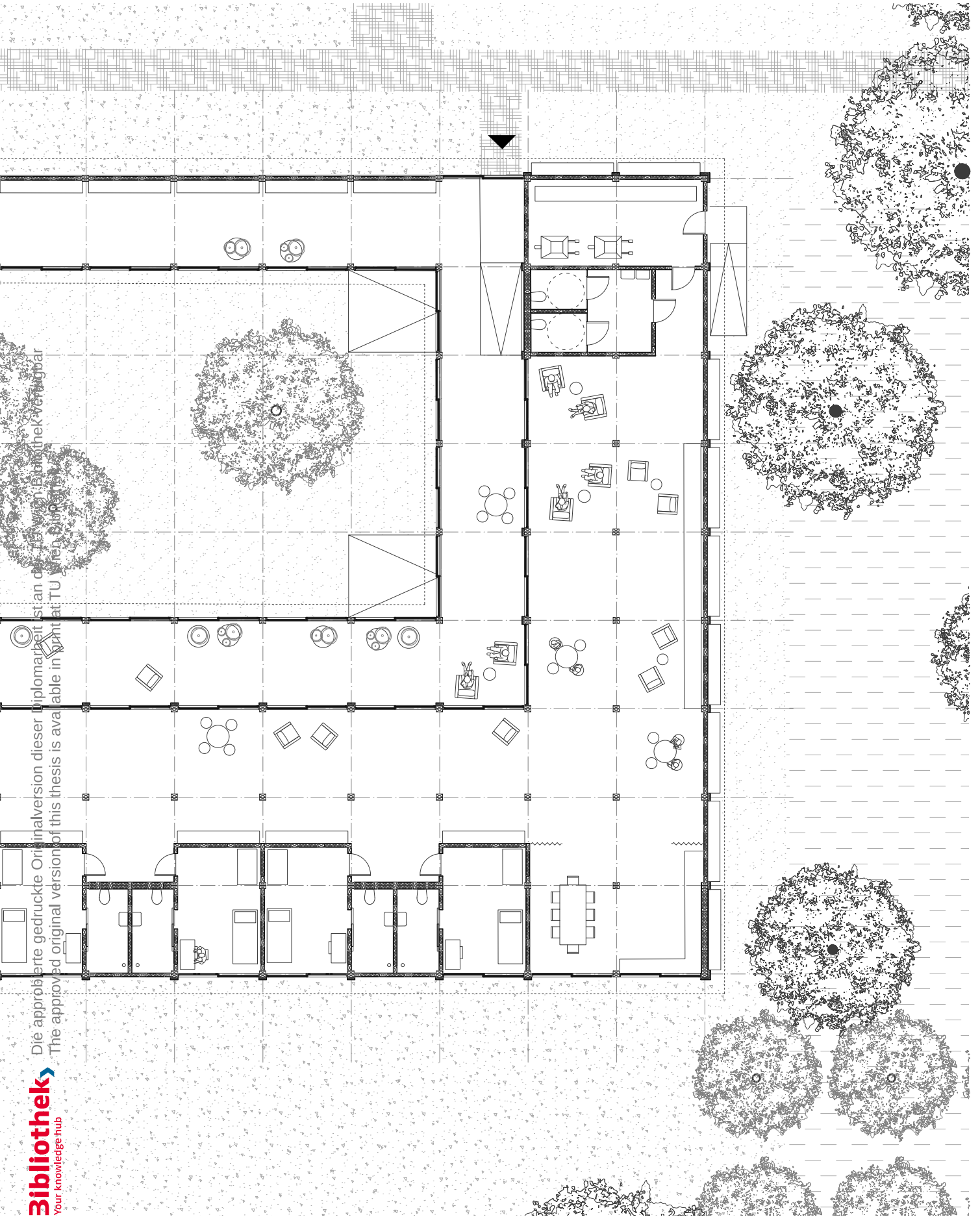
III Relation to the outside

The boundaries between the kitchen, dining room, common space and courtyard are fluid.

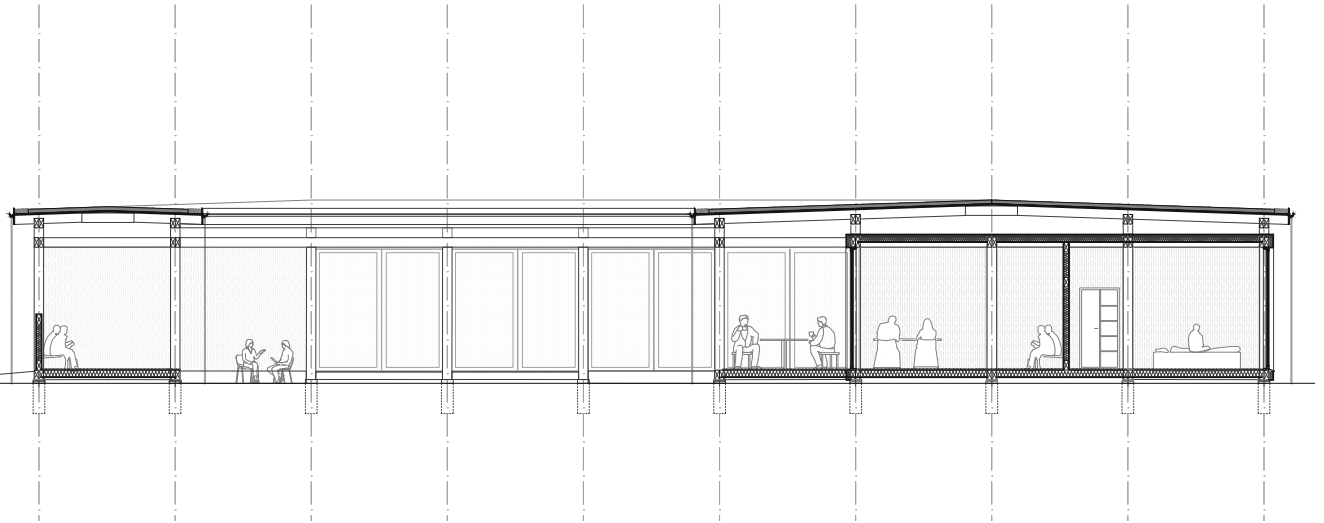
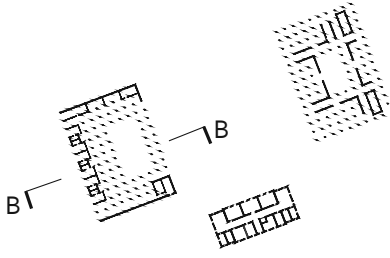




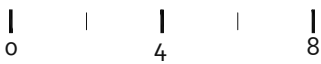
1:200 | Rehabilitation space



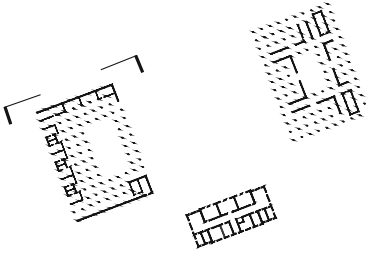
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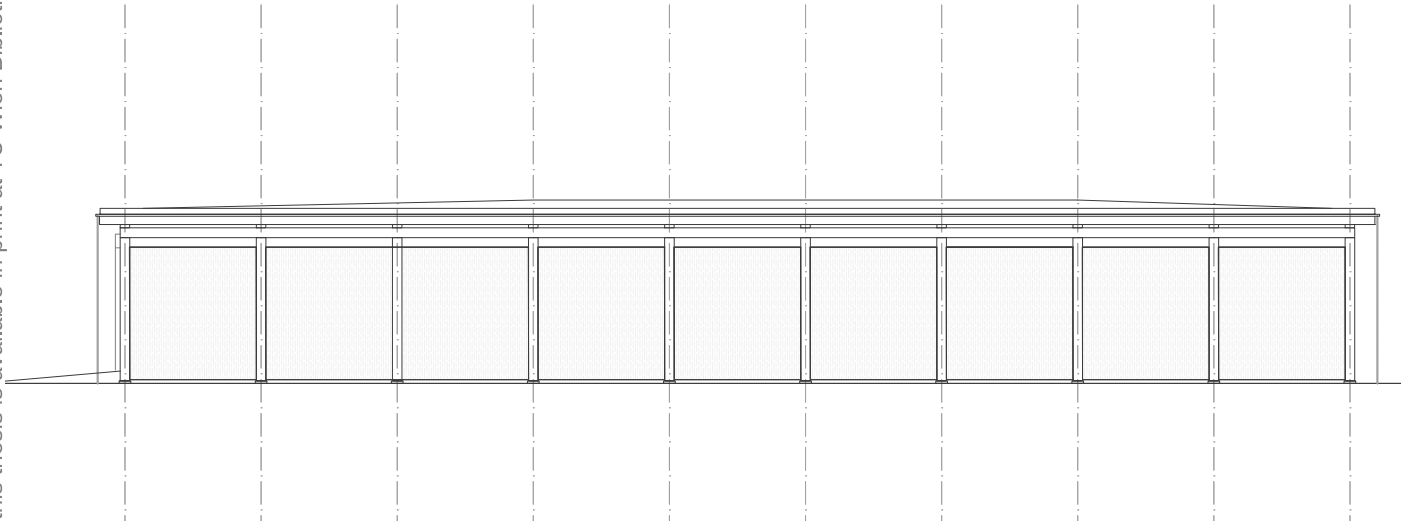
1:200 | Section B-B: rehabilitation space

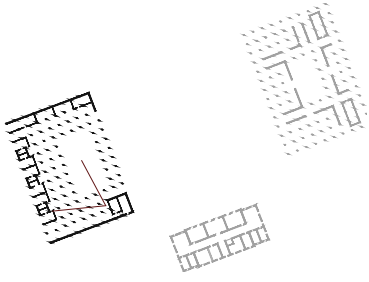


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1:200 | North elevation: rehabilitation space

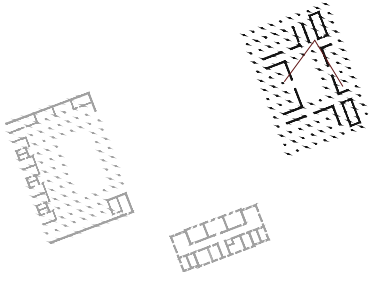




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Internal courtyard of the rehabilitation space



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Internal courtyard of the prevention space



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ARCHITECTURAL PROPOSAL

Clinic in the urban tissue

Former library

The narrow Juliusz Kossak Street was marked out second half of the 19th century. The dense development of the eastern frontage was built around 1910.

The building of the former library was built around 1915 and functioned as a public utility building. From 1956 it operated as the seat of the Lower Silesian Pedagogical Library. The building is currently vacant.

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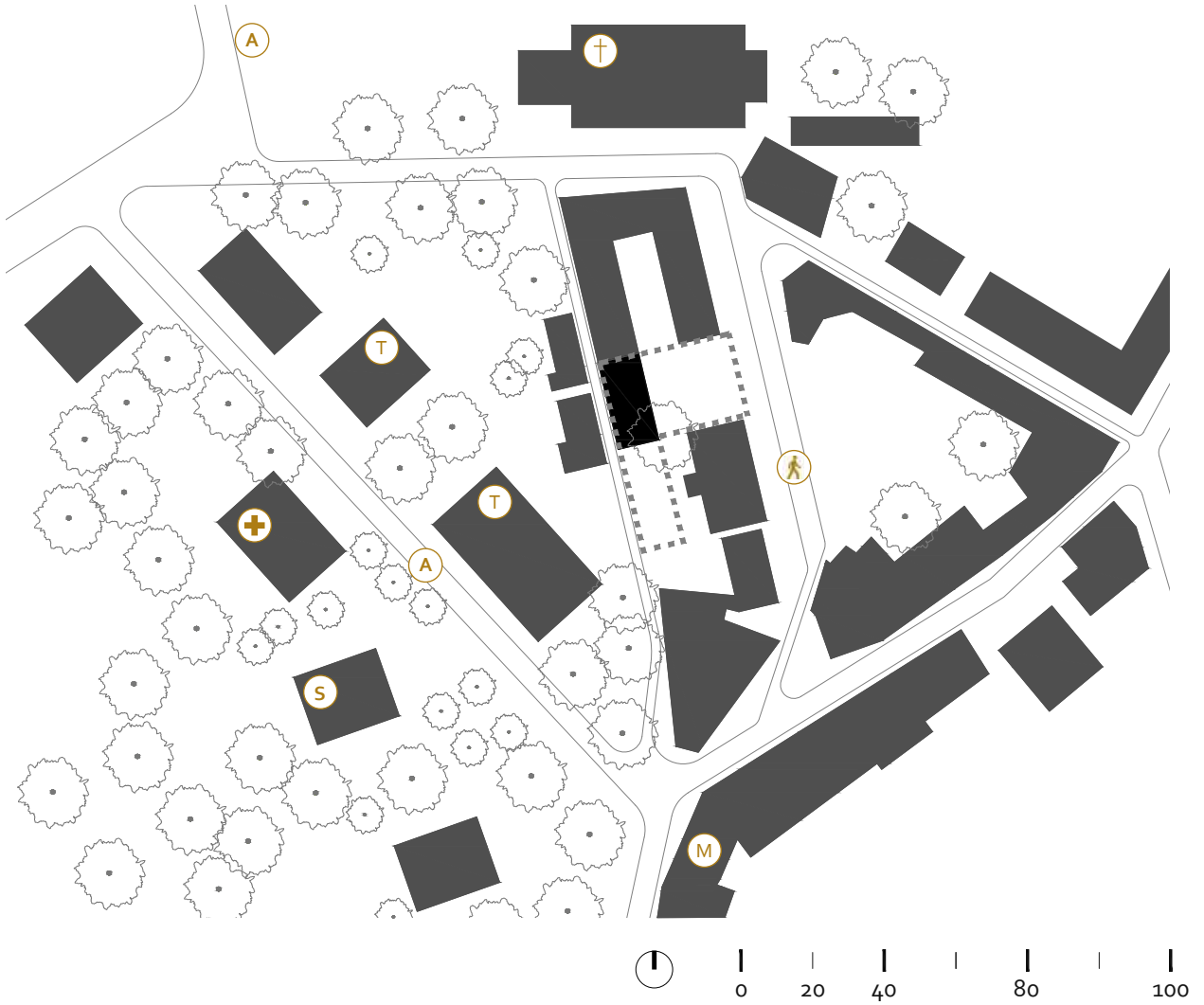
West elevation (form Pankiewicz Street)



South elevation (form Kossak Street)

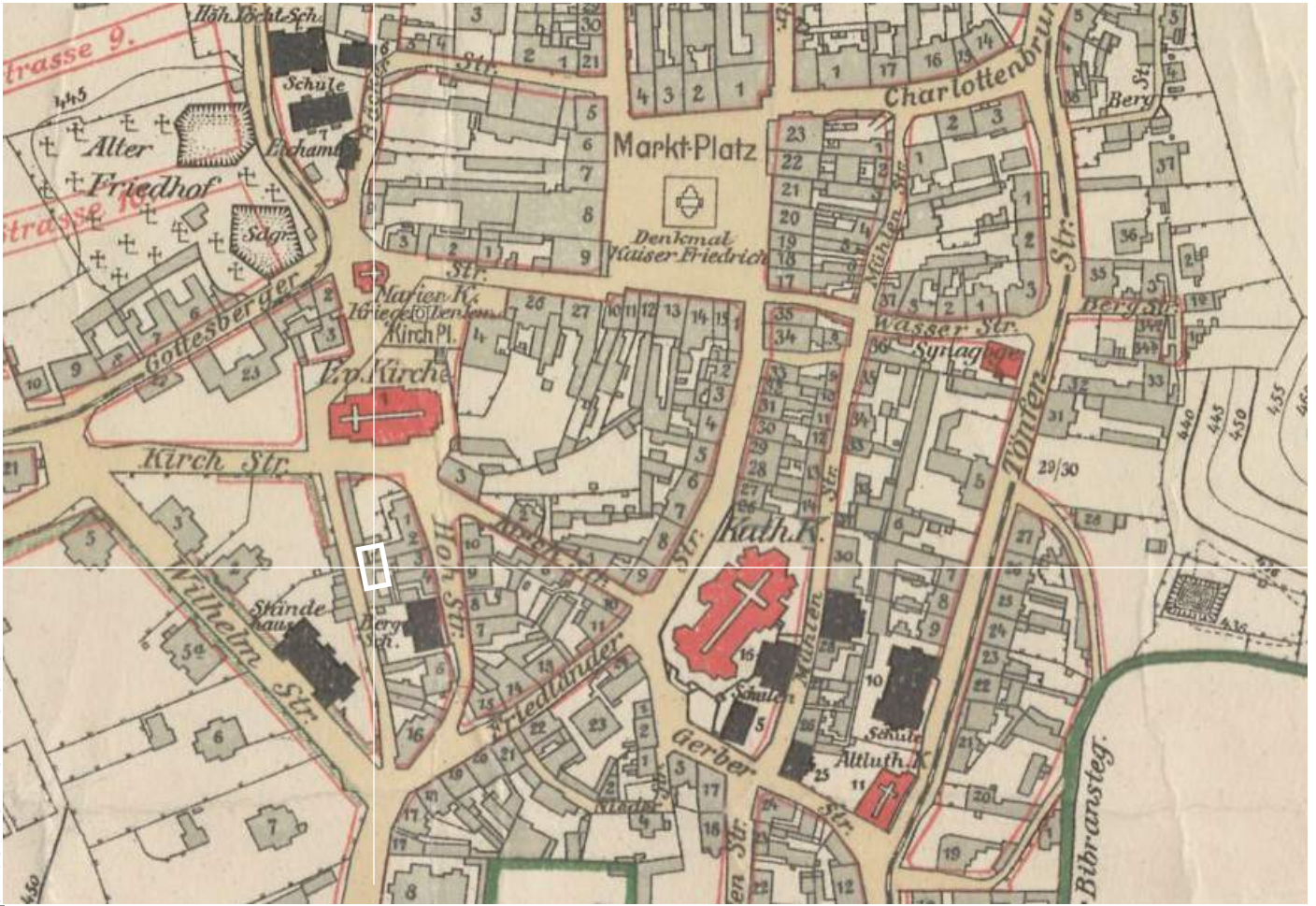


Courtyard (form Pankiewicz Street)

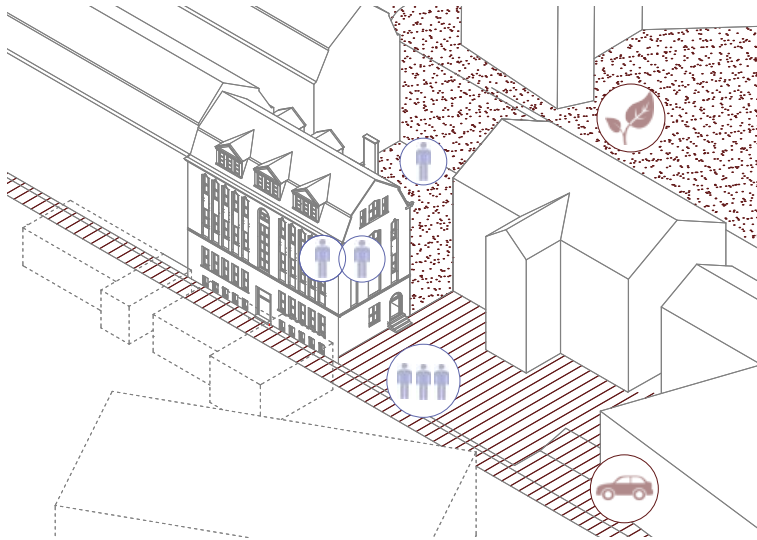


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- (A)** bus stop
- (S)** school (High School Of Education)
- (M)** school (Music School Complex)
- (T)** Town Hall
- (+)** church (Evangelical-Augsburg Church)
- (+)** public diagnostic and treatment Centre
- (Person icon)** pedestrian road



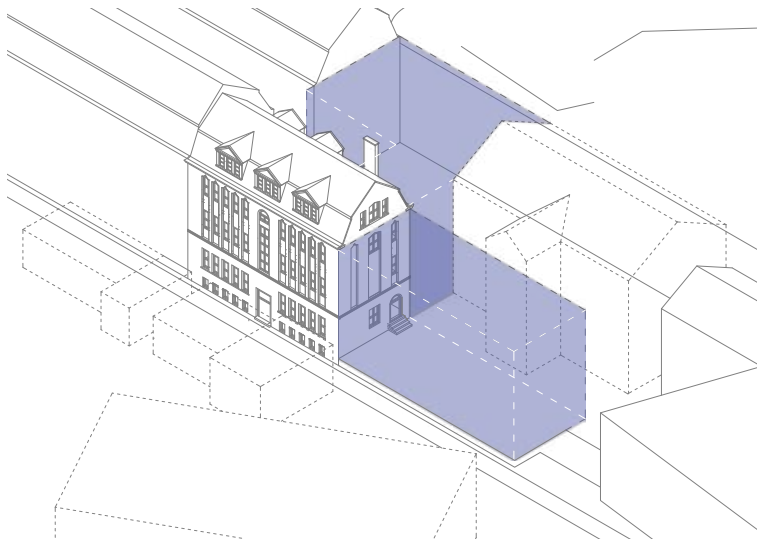
Archival plan, state of 1906



1. Defining places of interaction and silence

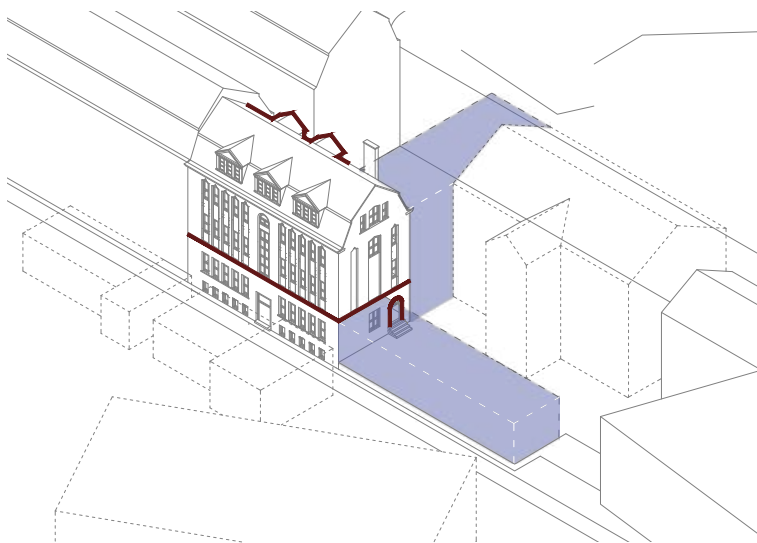
The main entrance to the former library is from Kossak Street. The street is accessible to car traffic and also facing, among others, with the municipal office.

The internal façade opens onto a currently undeveloped plot located on a pedestrian-only street. It is adjacent to garden and residential buildings.



2. Reacting to the existing quarter

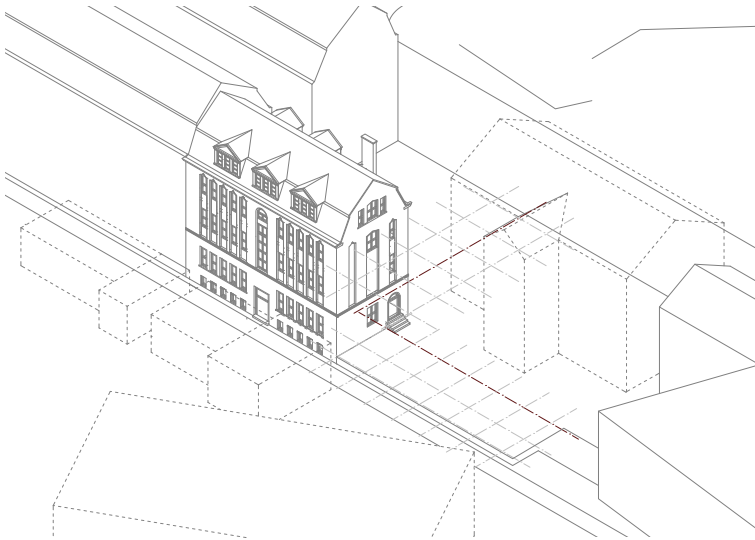
New volumes continues the frontage development of the quarter.



3. Reacting to the library

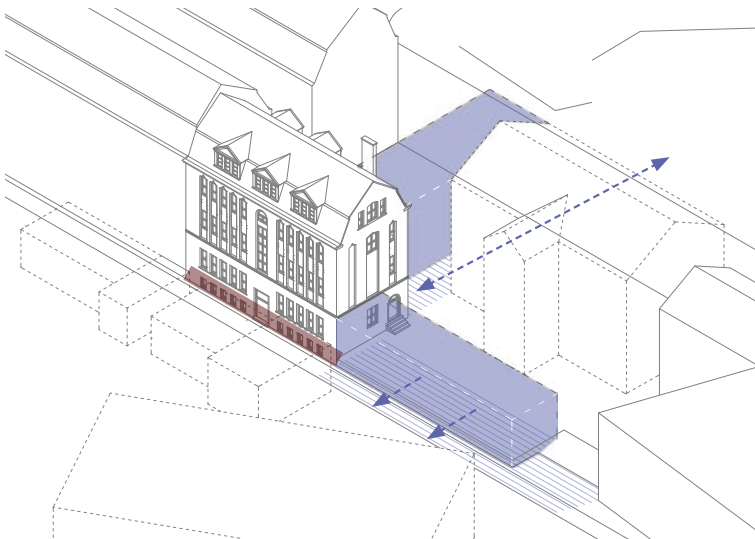
The new block is formed in a way, which expose the library façades both from the side of Kossak Street and the garden.

The height of the designed buildings corresponds to the location of the cornices of the existing library.



4. Anchoring the new volume

The new buildings will be designed in a modular wooden structure. The existing proportions of the rooms of the existing library define a new grid system.



5. Opening the ground floor

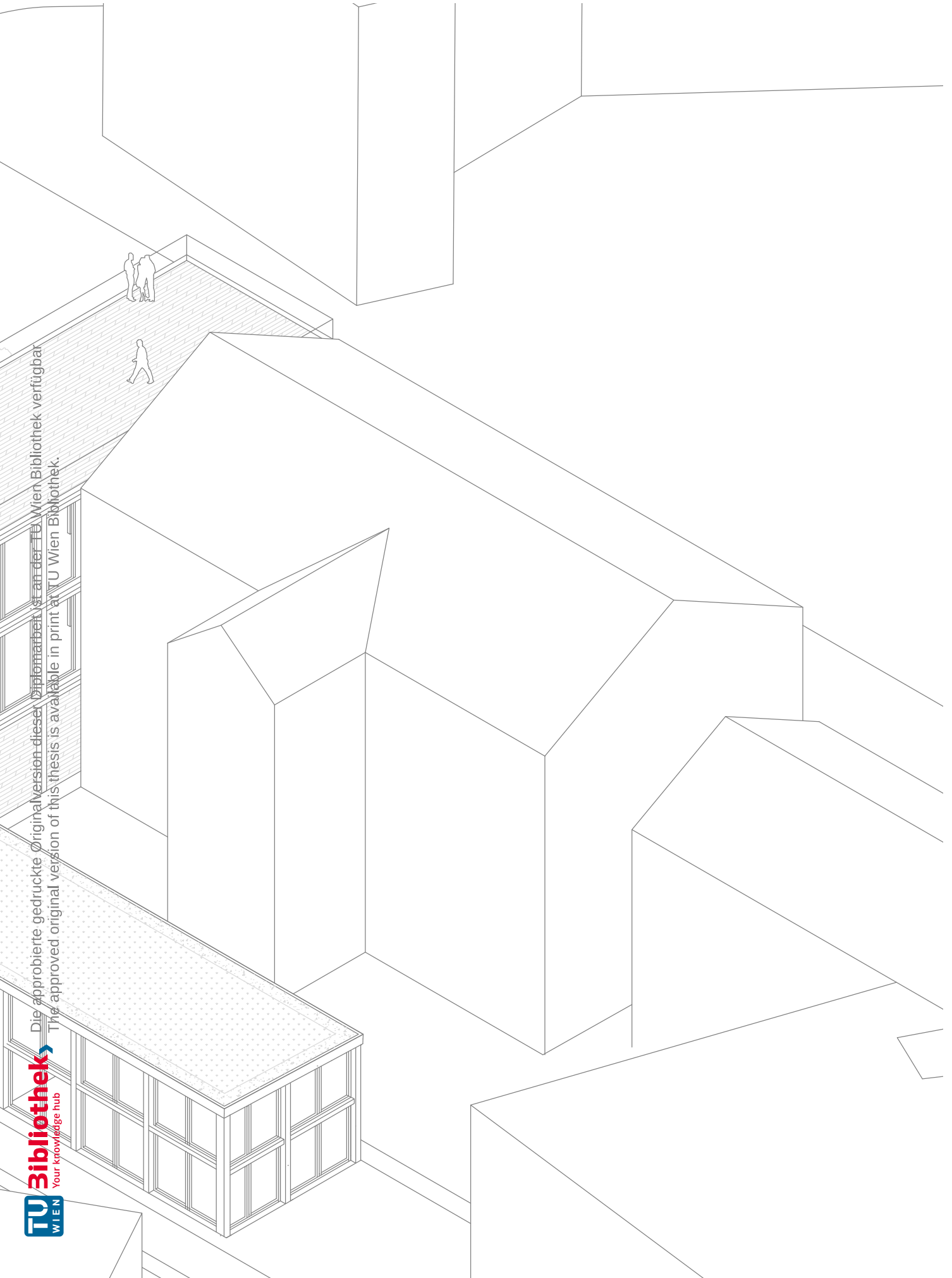
The existing library is clearly cut off from the street. The ground floor is raised to isolate the interior.

The designed building from the side of Kosak Street is lowered so that the interiors can open directly onto the street.

From the garden side, the designed building is raised to define an open, covered area adjacent to the garden.

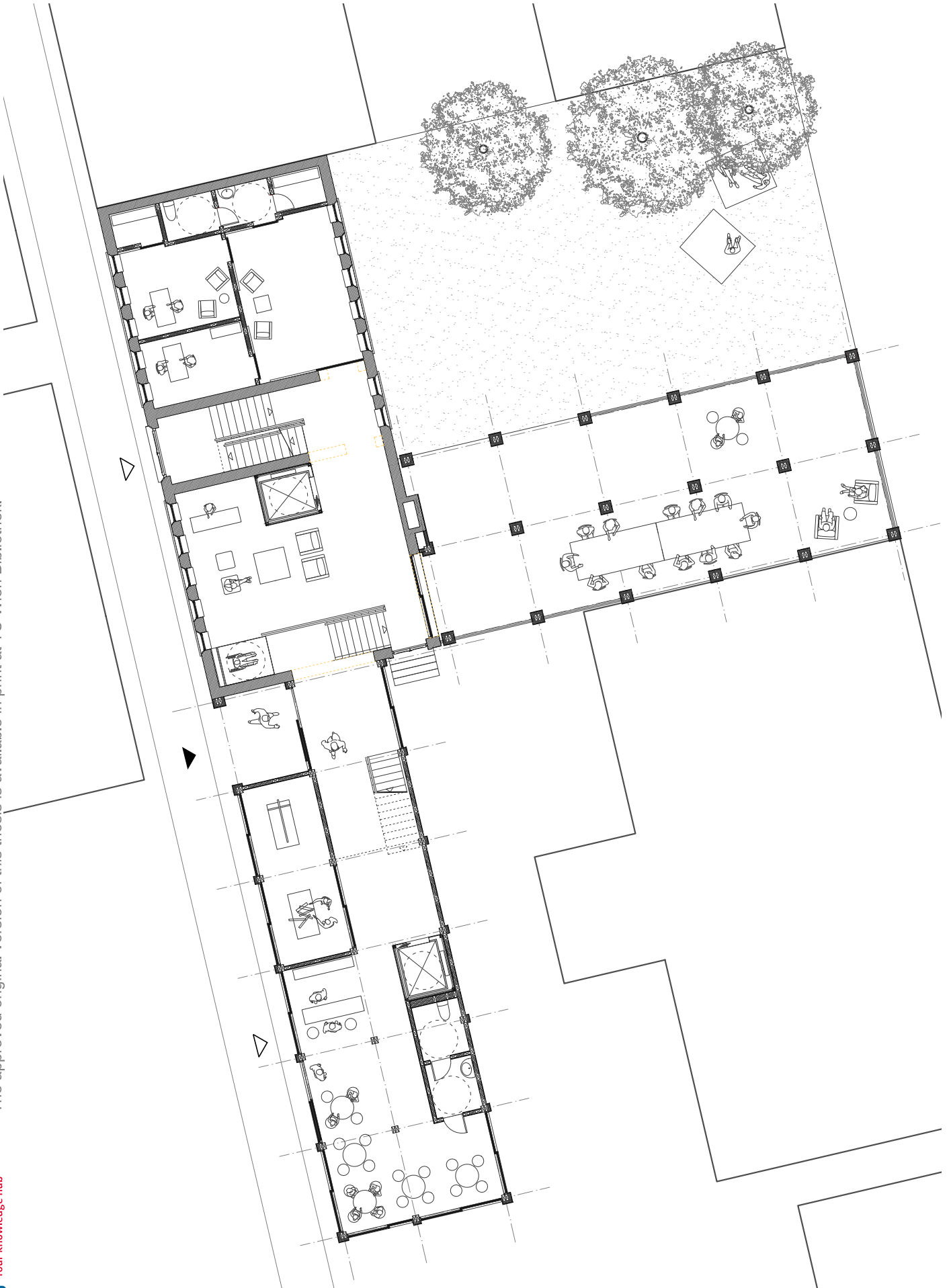
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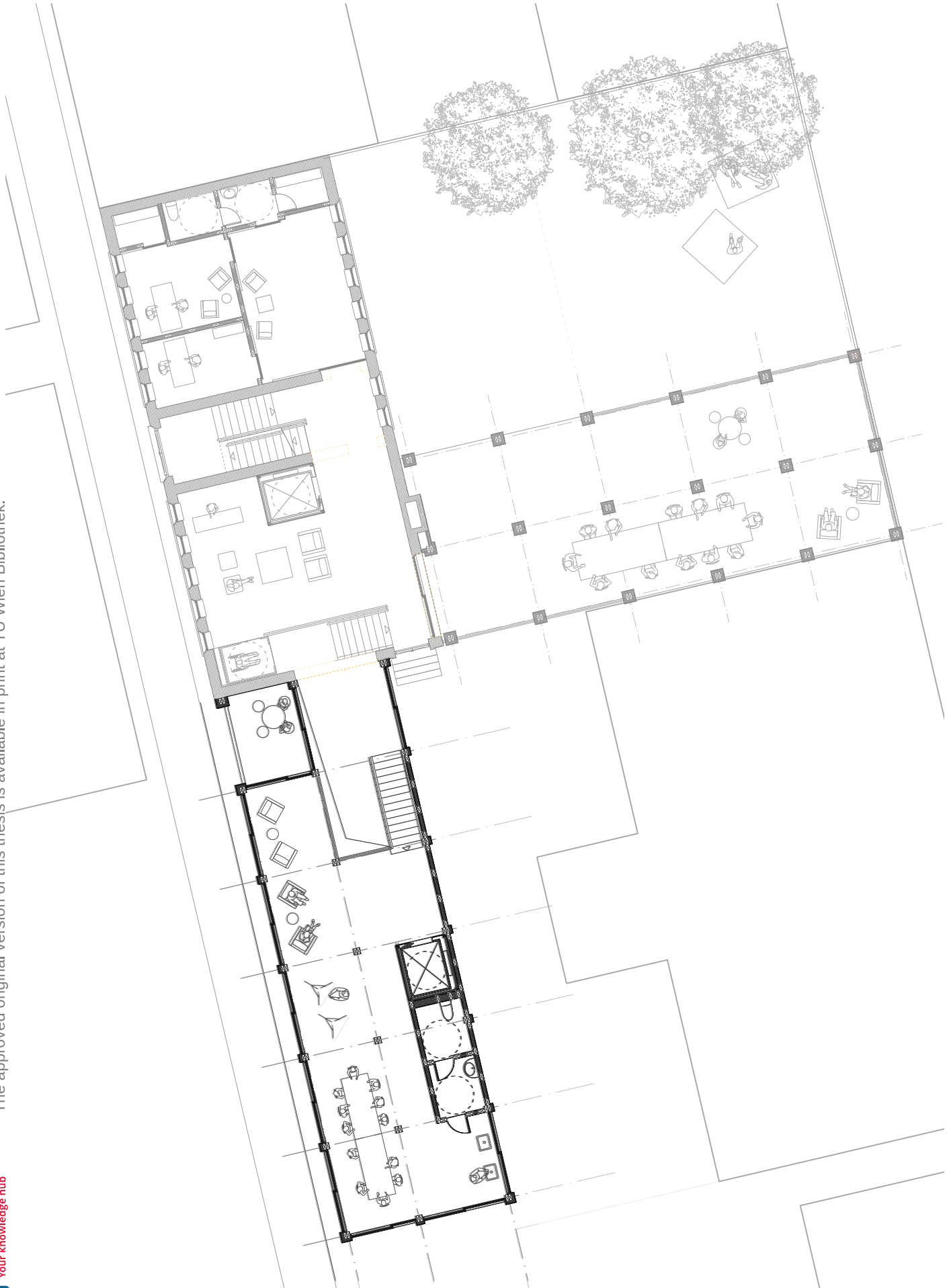


1:200 | Ground floor

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1:200 | Mezzanine



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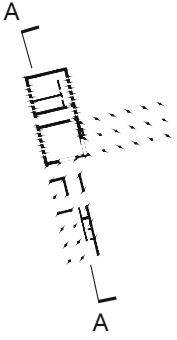
1:200 | Repetitive floor (first and second floor)

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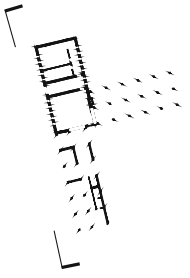


1:200 | Third floor

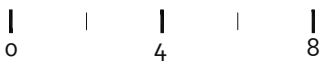




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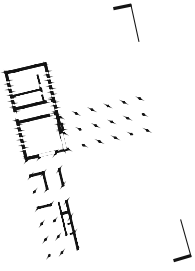
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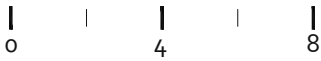
1:200 | North-west elevation: view from Kossak Street

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1:200 | North-eastern elevation: inner courtyard

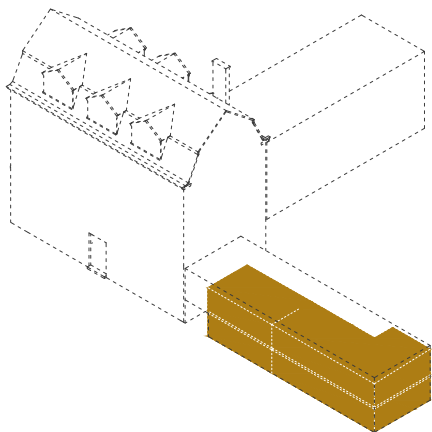
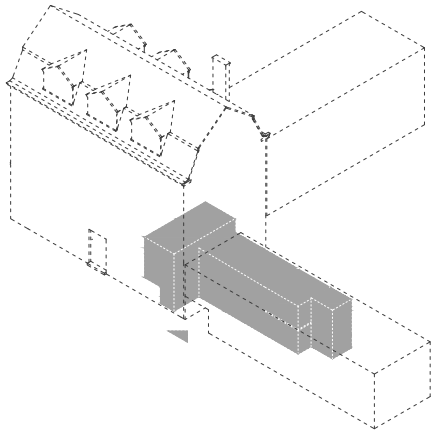
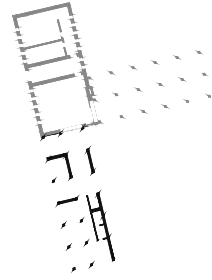
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View of the inner courtyard

PREVENTION BUILDING

The spaces of prevention (cafeteria, workshops) are located on the side of the Kossak Street and are also accessible directly from it. The building supports the street frontage and provides a clear border between public space of the street and private space of the courtyard.



1. Connecting three buildings

The entrance area connects the different levels of the ground floors: in the new building it is located at the level of the street in a historic 1.4 m above it.

The circulation of prevention unit opens onto the backyard.

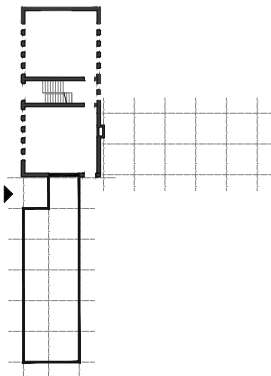
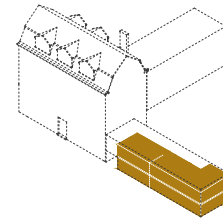
2. Opening up to the city

Prevention spaces: a workshop and a cafeteria are also accessible directly from the street. The spaces located on the level of the street: the cafeteria and workshop require specific fixed furniture. The workshop space on the first floor remains flexible and has movable furniture.

PREVENTION BUILDING | Therapy

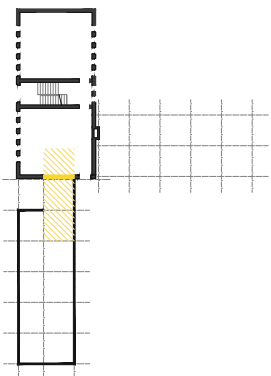
Cafeteria is run by clinic users. It gives the possibility of interaction between the users of the clinic and the citizens.

A workshop is intended in particular for occupational therapy, however it remains open to all interested citizens.



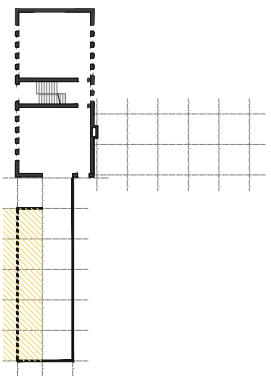
I Defining a new entry

The entrance to the existing library is not suitable for people with disabilities, therefore, new one has been defined. It is set back to create a niche to allow slowing down on a narrow street.



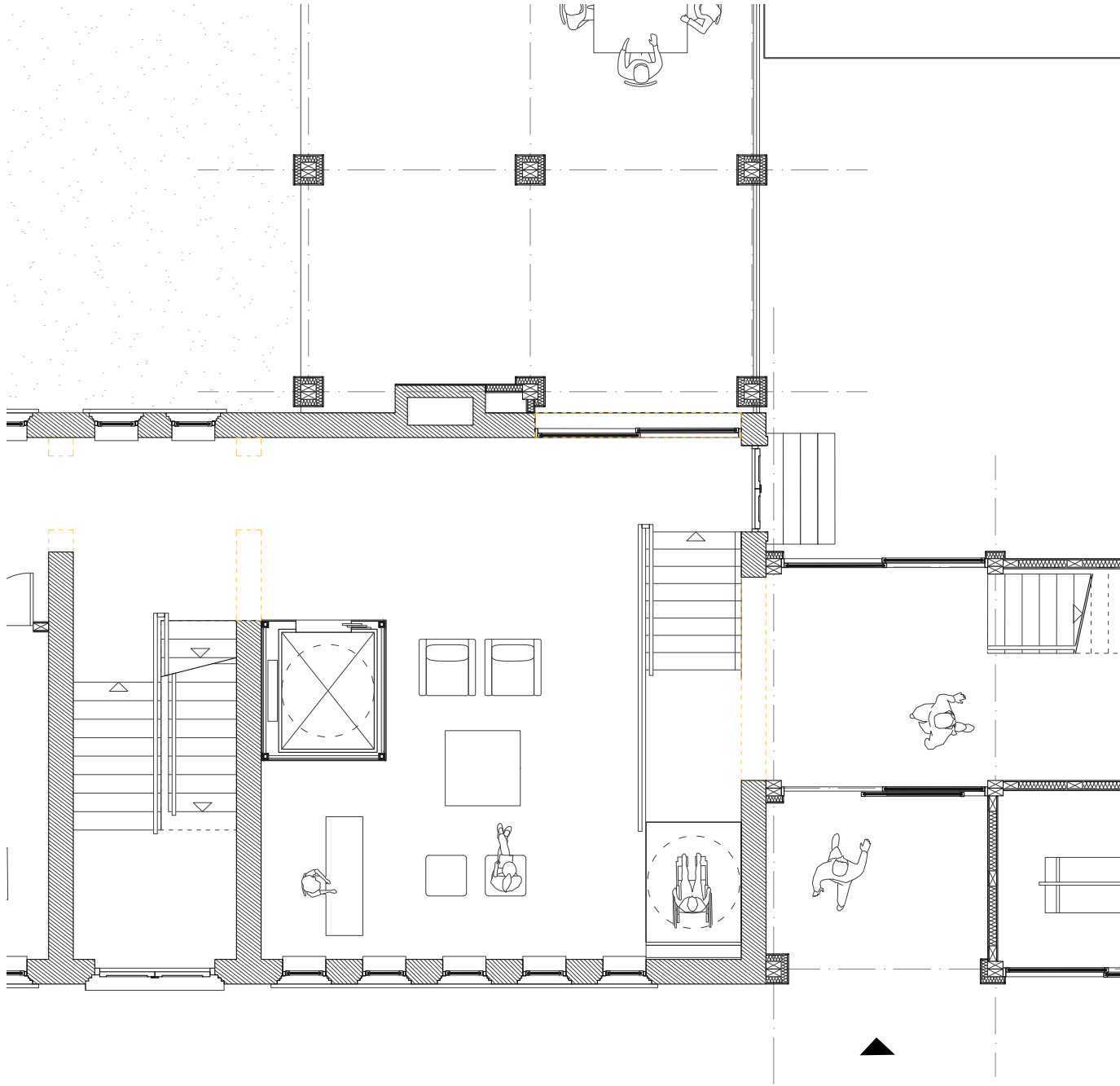
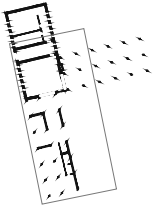
II Connecting

The entrance area is a connector. It serves all three parts of the clinic, it connects the existing building with the new one, as well as street level with the library ground floor level.



III Opening

The entire ground floor opens onto the street and is accessible from it.

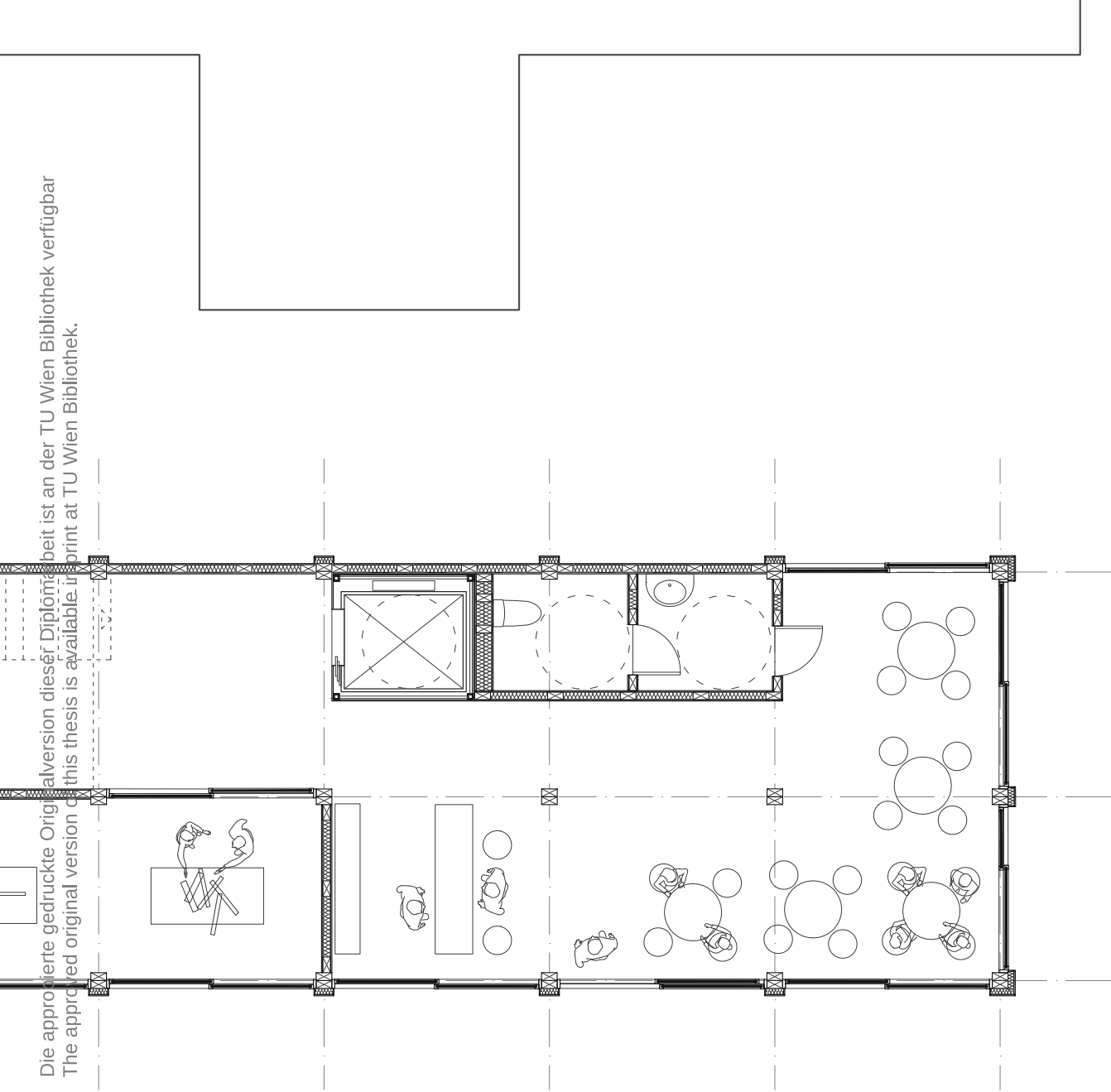


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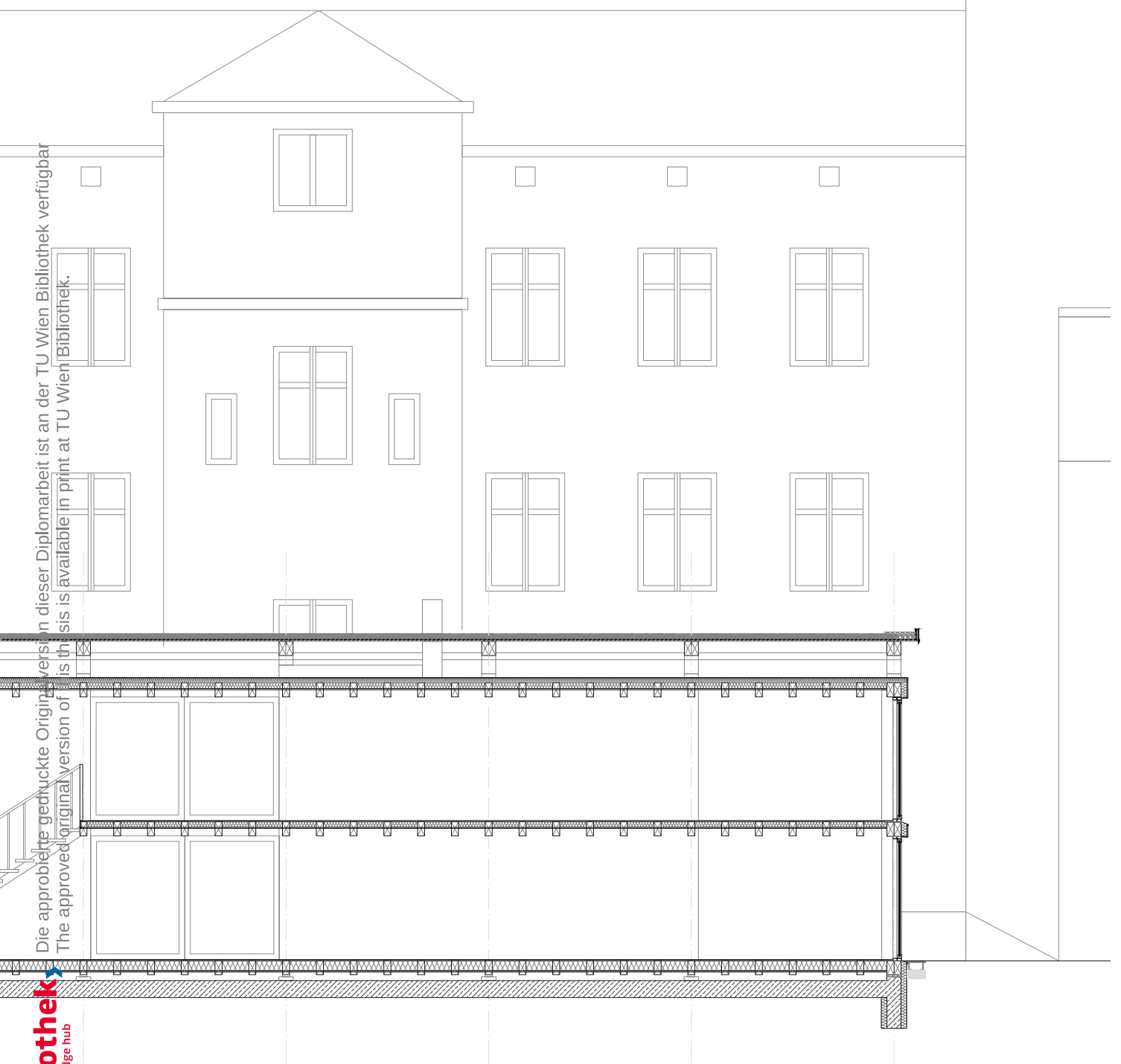
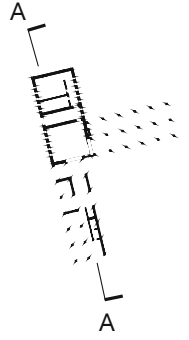
1:100 | Entrance area and prevention space

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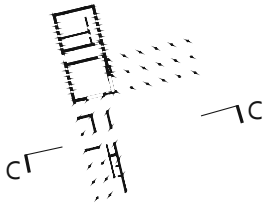


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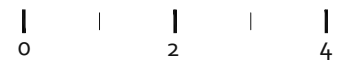




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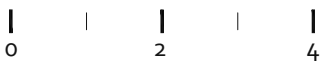
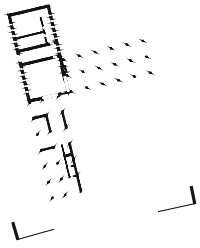


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1:100 | Section C-C: prevention space

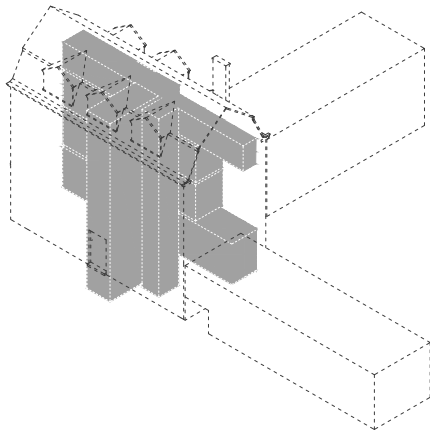
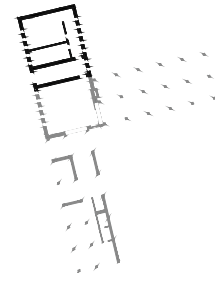
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1:100 | South elevation

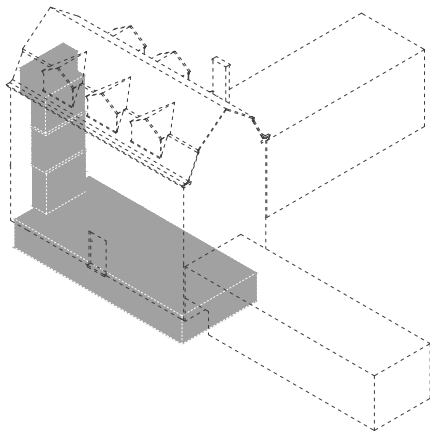
REINTEGRATION BUILDING

The reintegration space for individual, group and occupational therapy is located in the existing building, fitting into the existing structure. On the ground floor and the top floor, the common spaces are located in order to benefit from the connection with external terraces.



1. Existing circulation system

The axial location of the staircase forces the corridor circulation system. An elevator has been added.



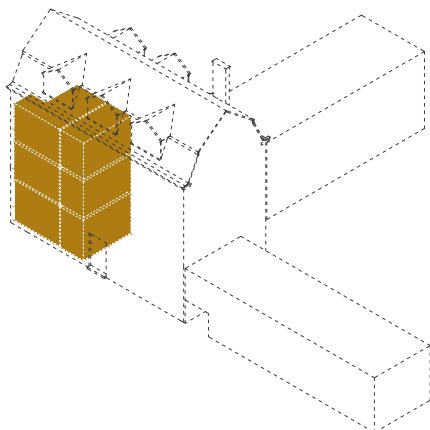
2. Existing technical spaces

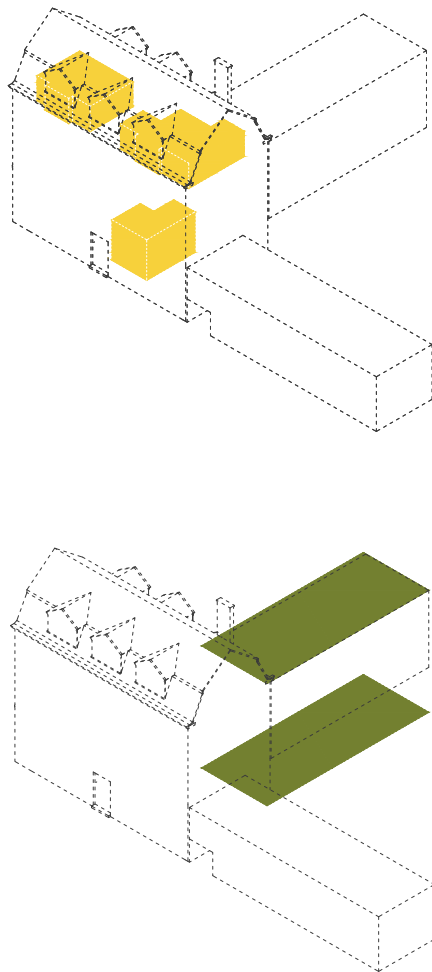
The existing technical spaces are located along the blind wall and in the basement.



3. Repetitive therapy spaces

The therapy space is repeated on each floor. Individual therapy is planned on the ground floor, group therapy on the first and second floor.





4. Generous common space.

The space on the last floor was designed as a space for informal therapeutic activities like cooking, playing or relaxation. The common space is complemented by the terrace. The common area at the entrance zone serves as a buffer between prevention space and space for reintegration and rehabilitation.



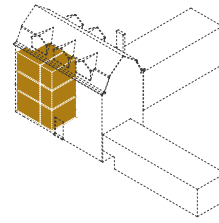
5. Providing access to greenery

The new building was located in such a way as to create semi-open external spaces. On its roof there is a terrace extending the common space. Due to the free ground floor a roofed outside space was created. It prolongs onto the green courtyard.

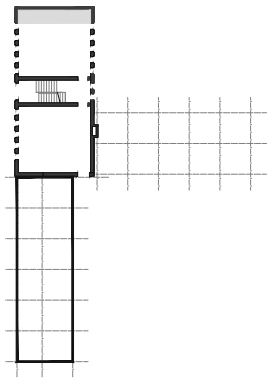


REINTEGRATION BUILDING | Therapy rooms

The entire north wing of the existing building is dedicated to therapy rooms.

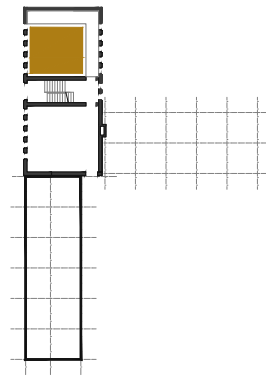


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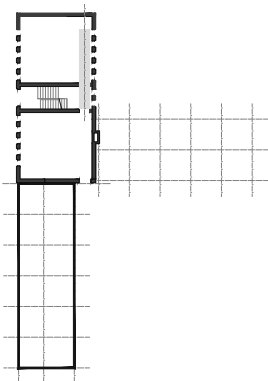
I Adaptation to the current needs

The services (toilet, storage room) are located along the existing blind wall.



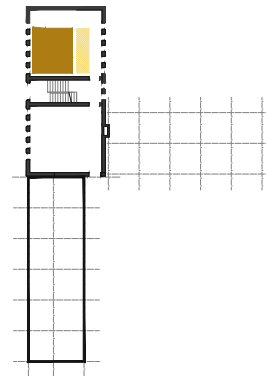
III Generous therapy space

The therapy space occupies the entire north wing of the building.



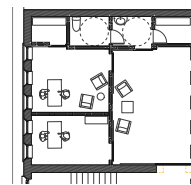
II Using existing circulation

The existing staircase imposes the location of the circulation from the courtyard side

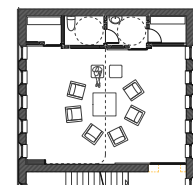


IV Informal space

Before the space of individual therapy the rooms have been set back. This allows definition of an informal space and prevents the creation of a narrow corridor.



0

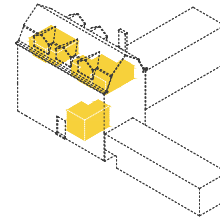


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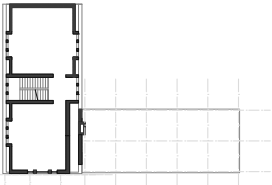


REINTEGRATION BUILDING | Common area

The common space is located on the last floor. Thanks to the existing structure, it gives the possibility of withdrawing and regulating the degree of exposure. A kitchen is connected to the dining room and has an access to the large terrace.

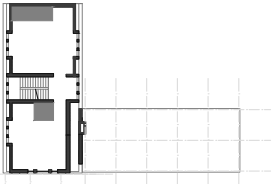


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I Use of the existing layout

The entire floor was used as an informal meeting space.



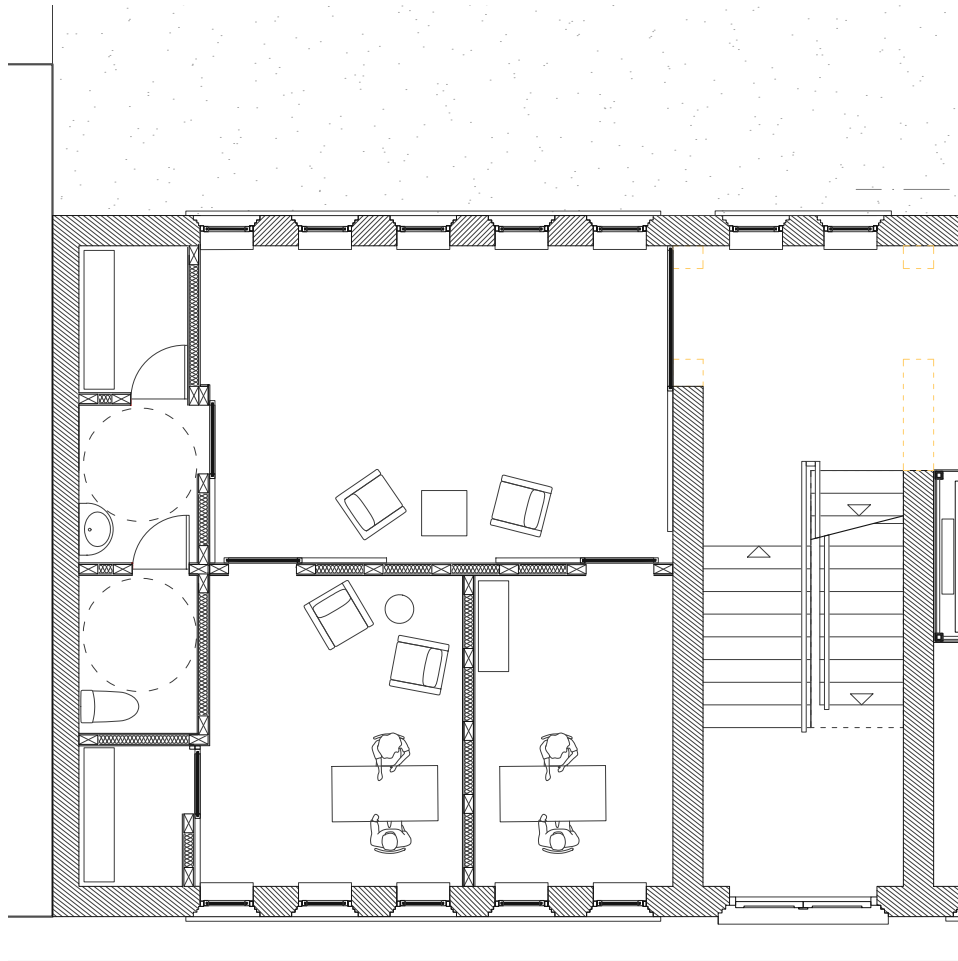
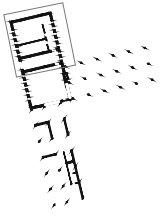
II Adapting to the current needs

The technical space as an elevator and toilets were introduced.



III Ensuring outside space

The roof of the new building was used as a terrace complementing the common space.

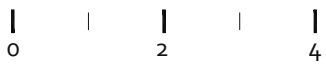
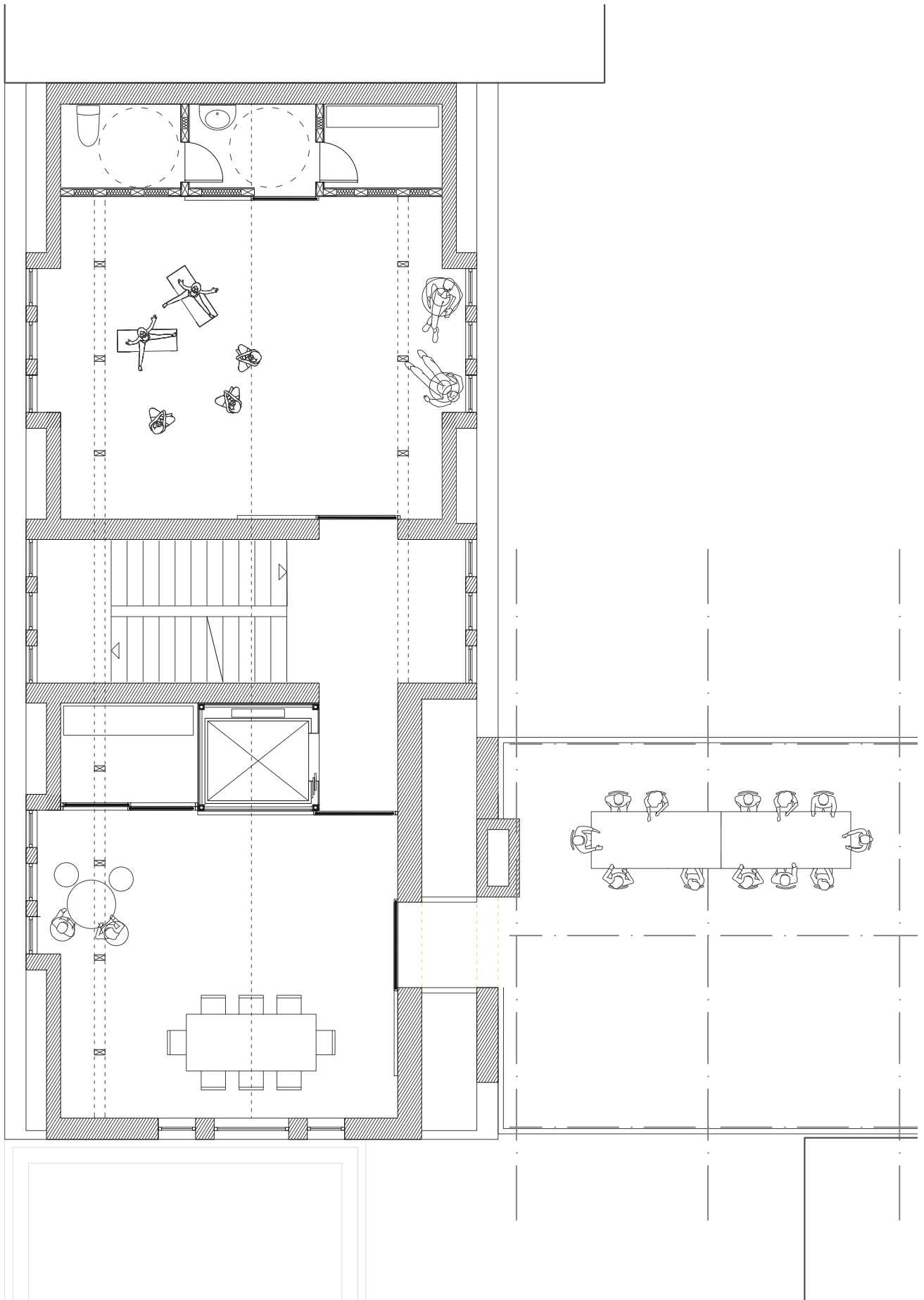


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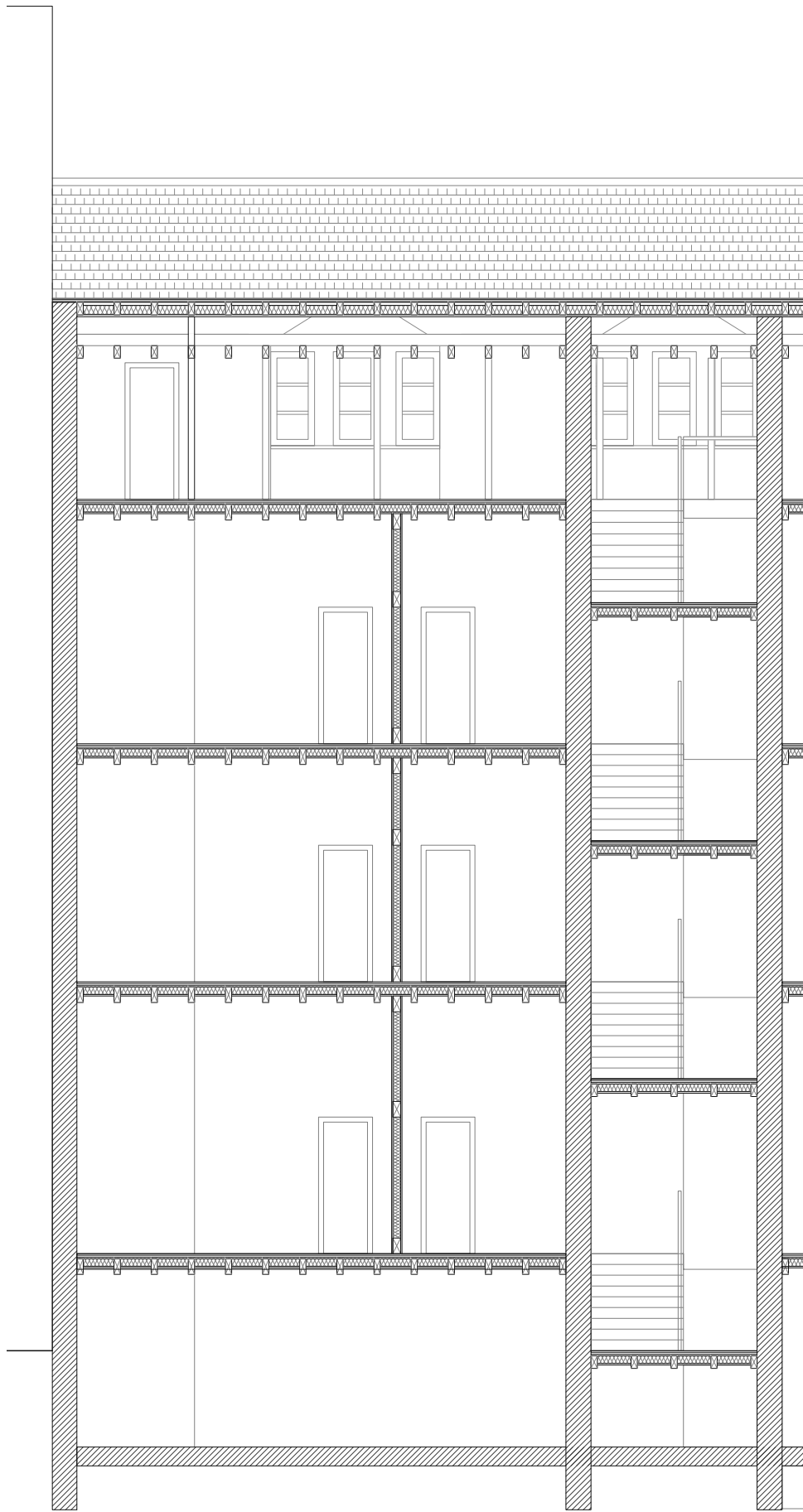
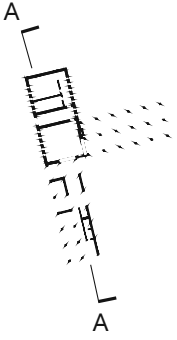


1:100 | Reintegration space: therapy rooms (first and second floor)

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1:100 | Reintegration space: common space (third floor)

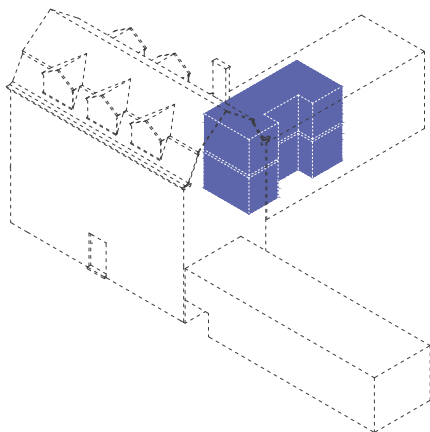
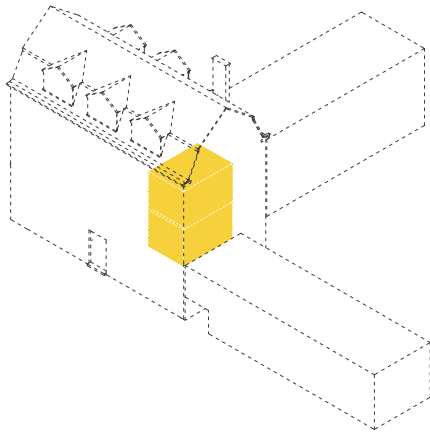
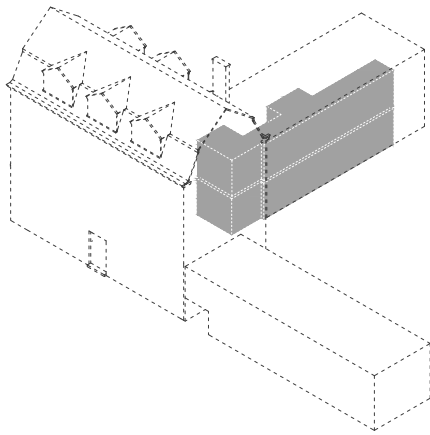
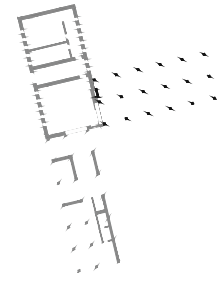


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REHABILITATION BUILDING

The rehabilitation ward is meant for stationary patients. It is located on the side of a pedestrian street and forms the inner courtyard of the clinic.

The private rooms are located on the first and second floor.



1. Hospitable circulation

To ensure easy orientation, the rehabilitation space has a corridor layout. However, to avoid claustrophobic corridors, the daylight is introduced. The user has visual contact with the surroundings both in the old and in the new building.

Due to corridors large width and niches with seating possibilities, circulation space can also become a relaxation area.



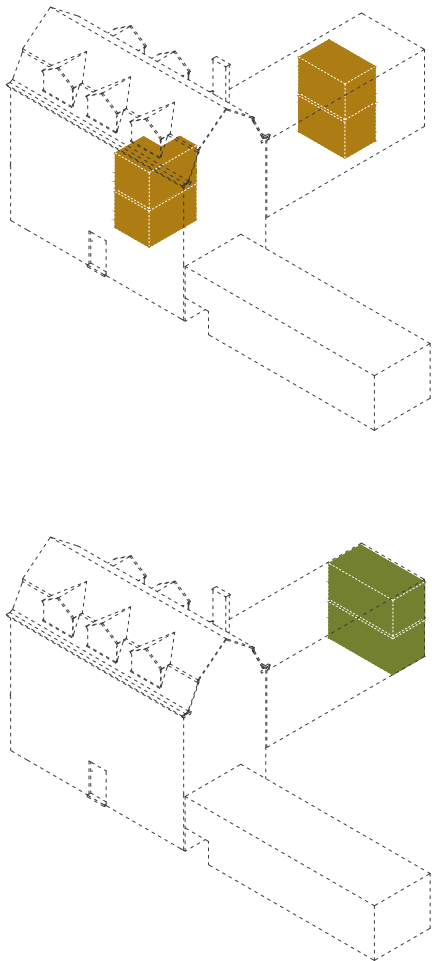
2. Common area as a buffer

The common space for in-patients precedes the private rooms, giving users the ability to control the exposure as well as isolating the private space.



3. Sheltered private rooms

Private rooms open onto the inner courtyard and the quiet pedestrian Pankiewicz Street.



4. Accessible therapeutic spaces

Formal and informal therapy spaces are located on each floor. The informal space (kitchen) extends to the winter garden.

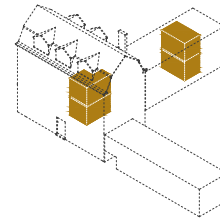


5. Providing access to greenery

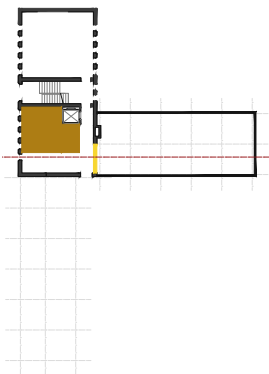
Directly on the street opens the winter garden which can be fully opened on warm days. It is located on the circulation axis and extends the space of occupational therapy.

REHABILITATION BUILDING | Therapy space

The in-patient therapy room is located in the existing building and it adapts to the existing space.

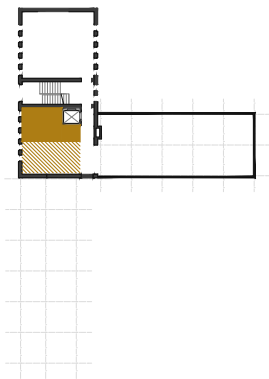


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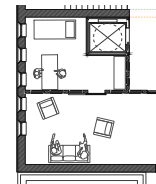
I Uniting the buildings

The axis provides the user with contact with the outside and organizes the functional layout of the rehabilitation space.



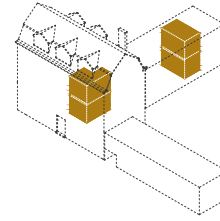
II Withdrawing

The withdrawal of the therapy room allows to define an informal common space.

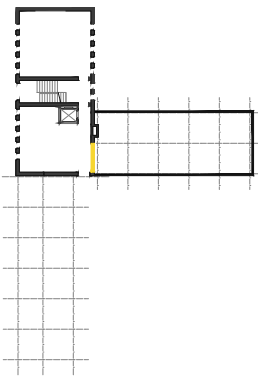


REHABILITATION BUILDING |
Kitchen (as a therapy space)

The kitchen is connected to the dining room and has direct access to the terrace. The terrace opens onto a quiet pedestrian street and overlooks the hills surrounding the city. In winter, the terrace can be closed to form a winter garden.

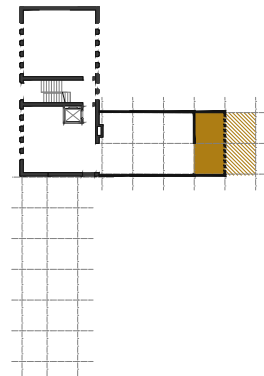


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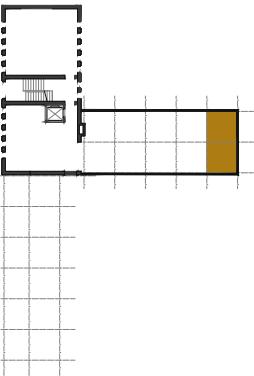
I Anchoring new building

The connection of the new volume with existing building takes place in a blank wall.



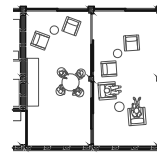
III Providing outside space

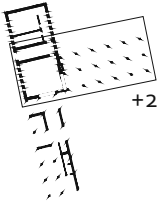
The kitchen and dining room has been pulled back to free space for a terrace, which will turn into a winter garden in the cold season.



II Connecting with outside

The kitchen as a common space is located at the top of the building, giving all users the opportunity to use the viewing opening towards the hills.

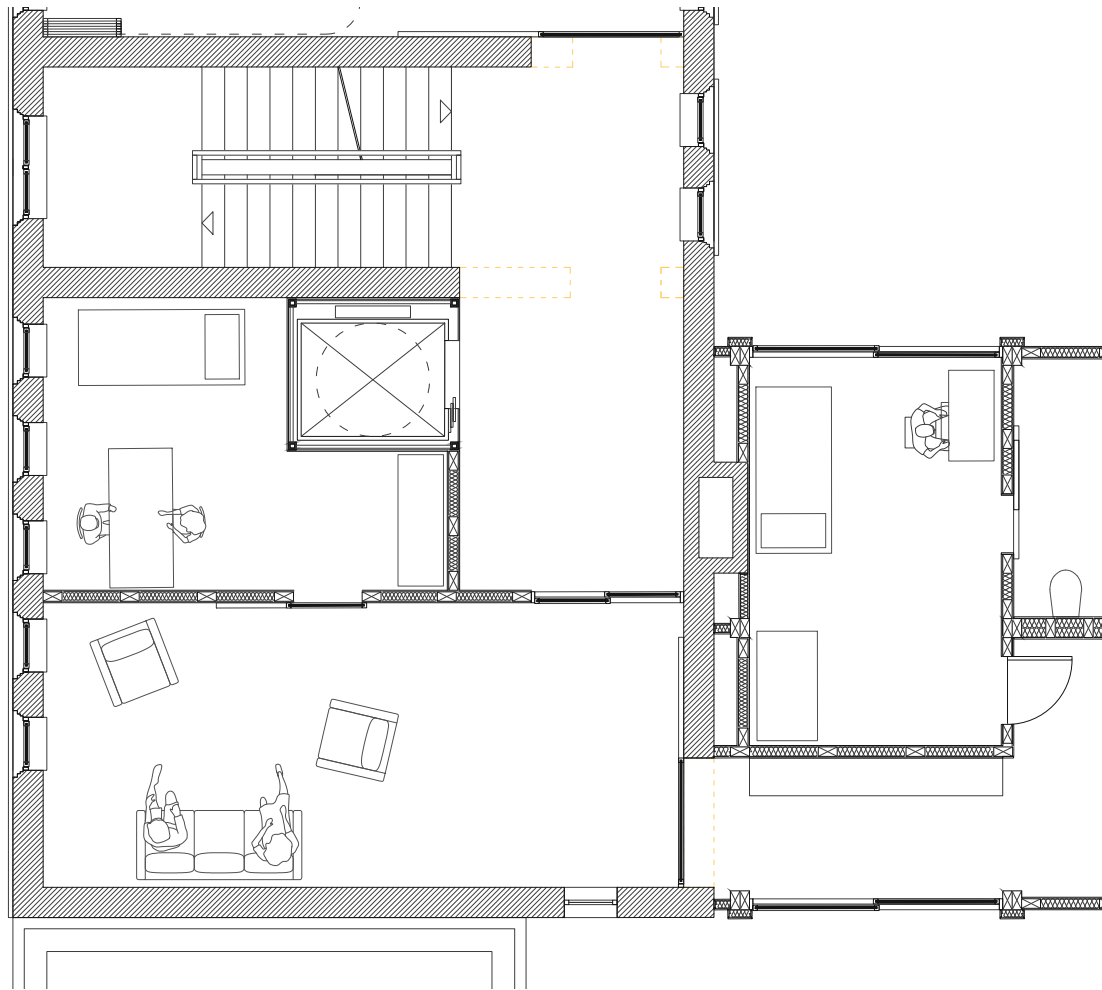


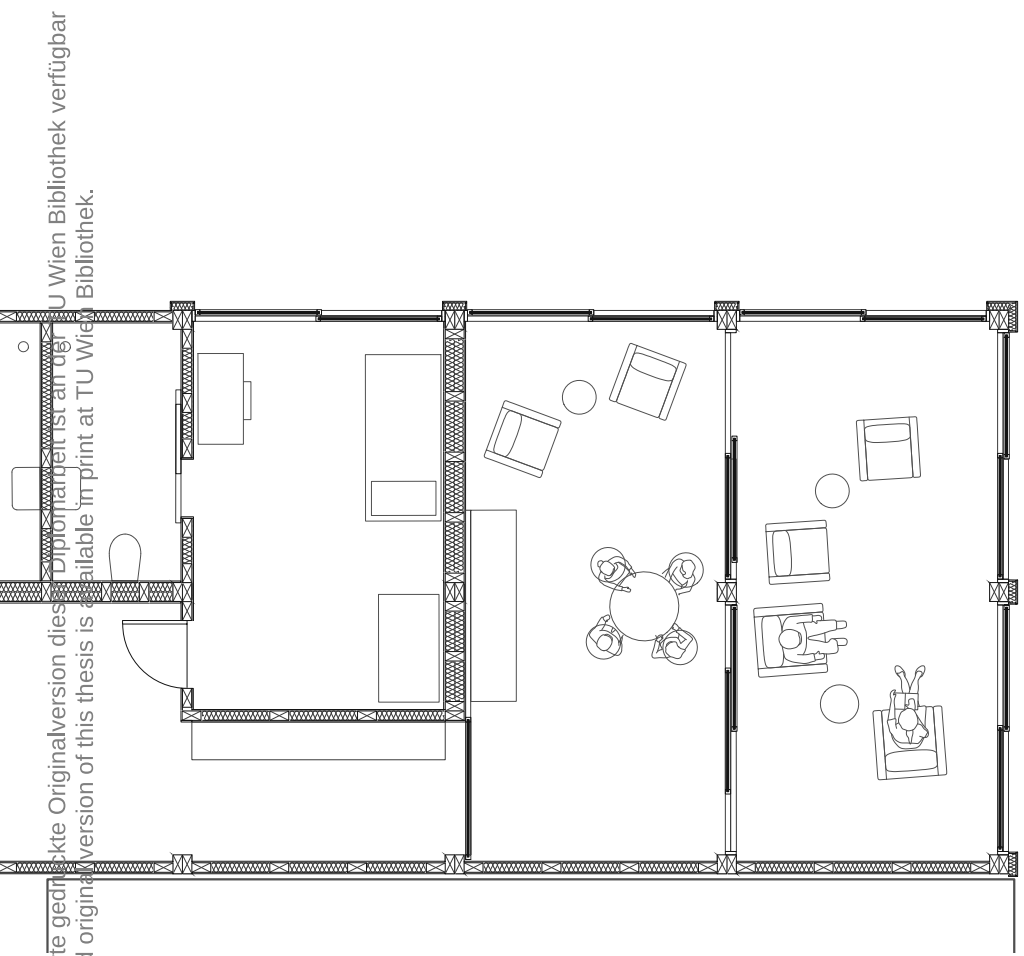


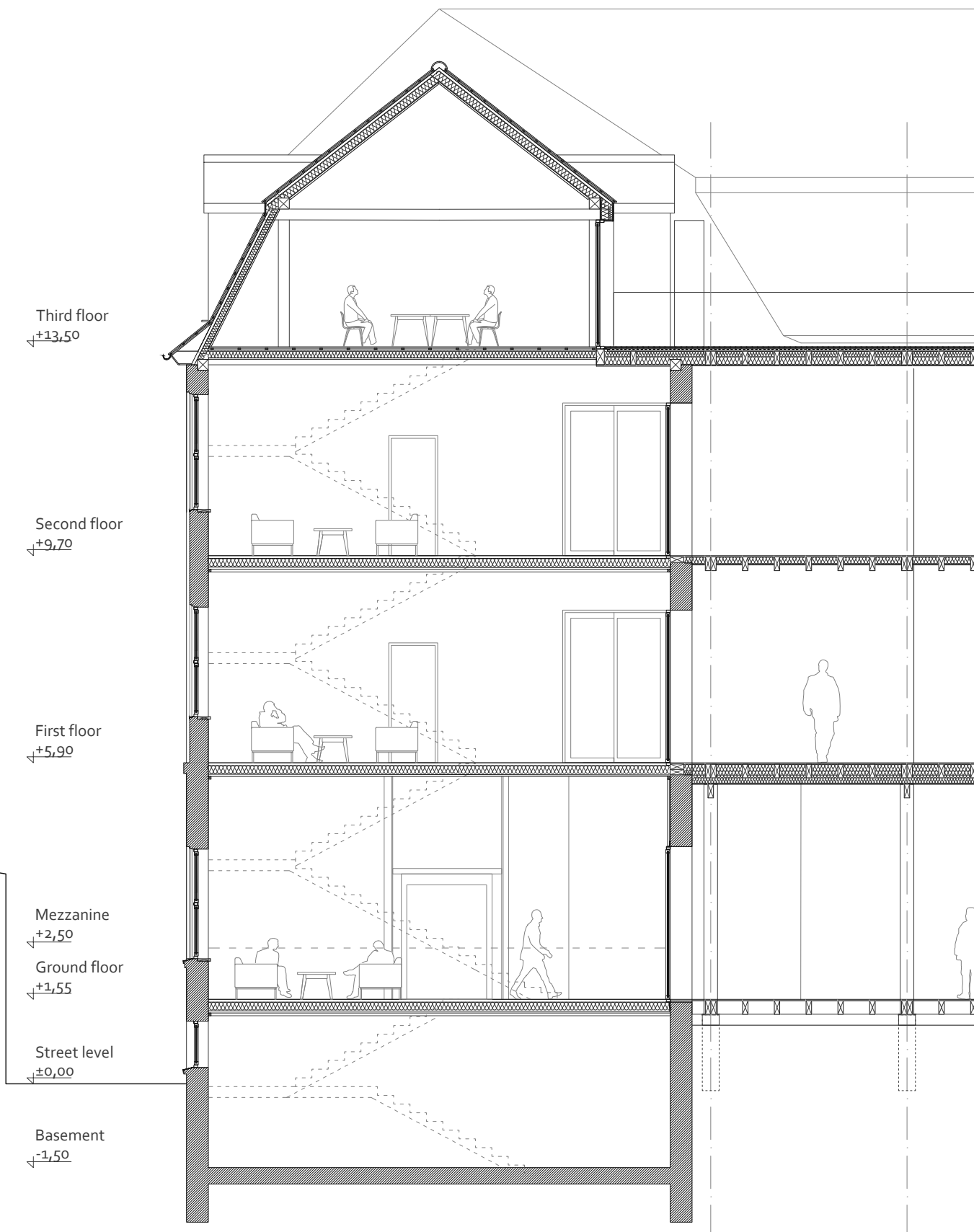
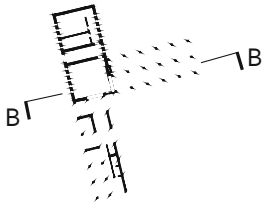
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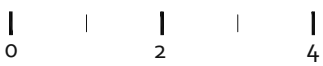
1:100 | Rehabilitation space



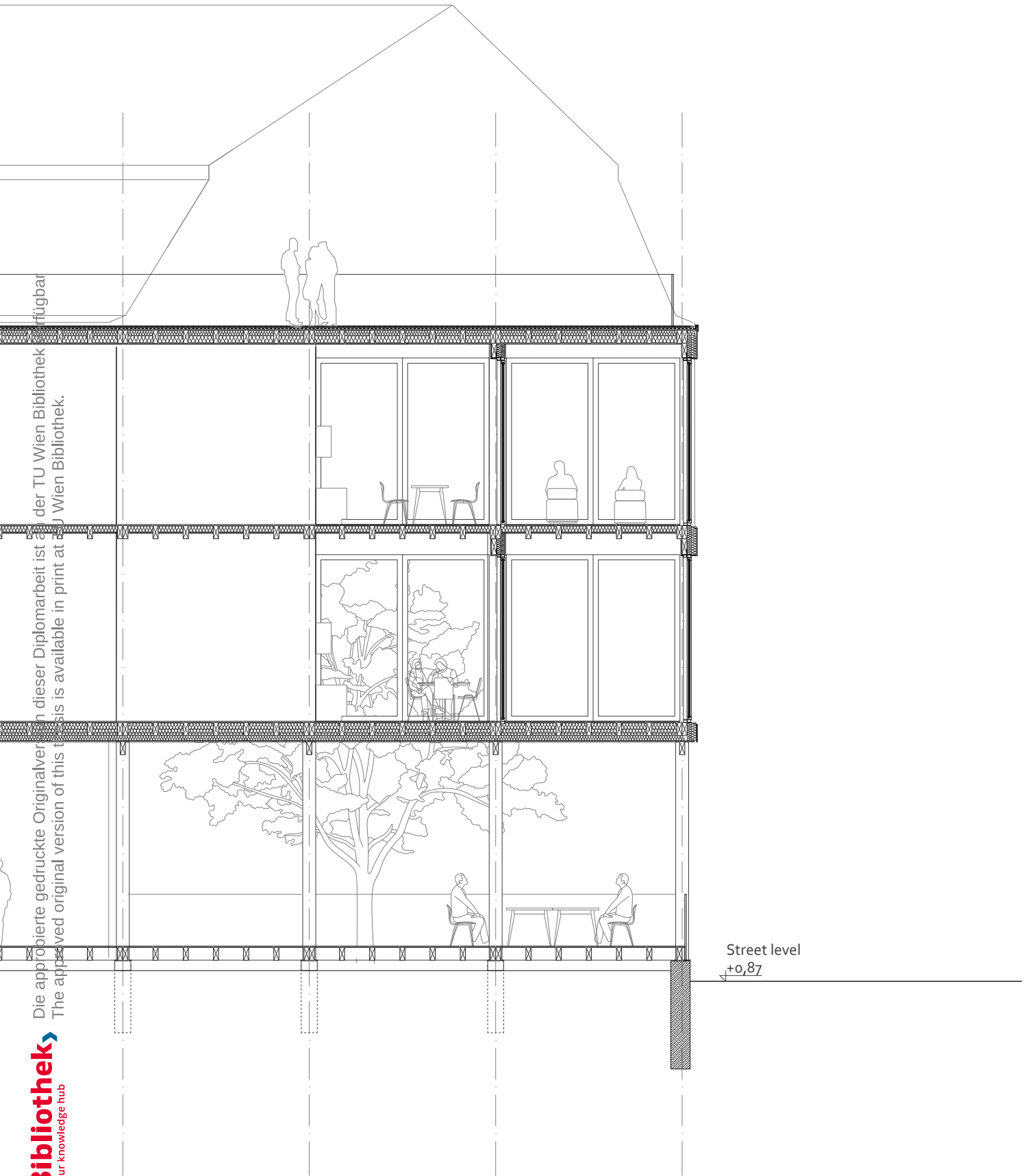




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1:100 | Section B-B: rehabilitation space



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View from Kossak Street



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View from Kossak Street



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OPERATION AND FUTURE USE

Development of the mental health facilities

In the project two clinics were developed to offer rehabilitation, reintegration and prevention spaces, while acute cases will be treated in already existing hospital.

The next important step of future development of the clinic is to facilitate supported housing, necessary to ensure a sense of stability to the clinic's users.

For this purpose, existing, unused buildings, which were already identified at the stage of finding a location for the project, could be use and developed in accordance with the structure system proposed in this project.

Psychiatric Hospital

Clinic unit in landscape

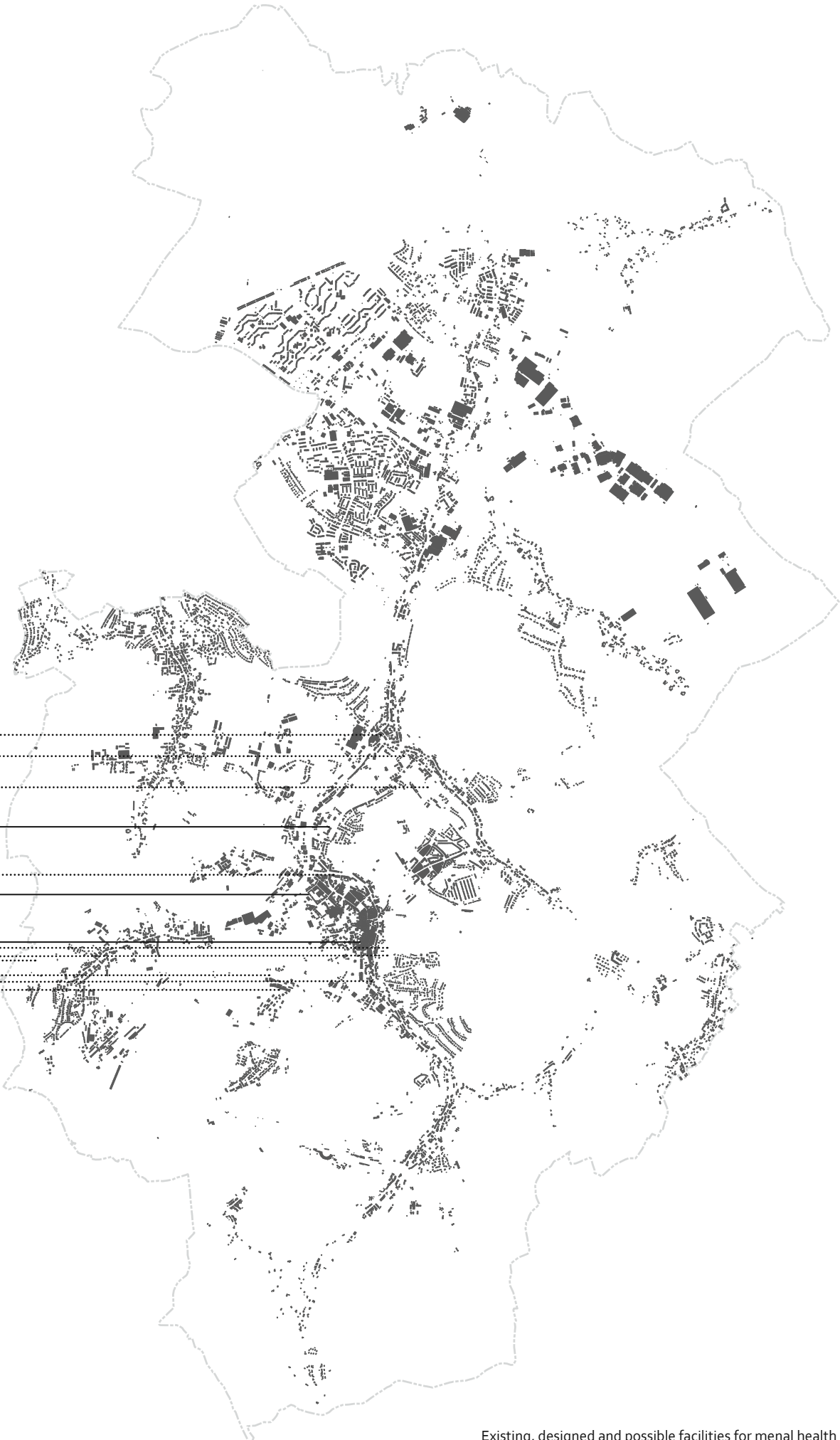
Clinic unit in urban tissue

existing facility

designed facility

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of supporting facilities



Existing, designed and possible facilities for menal health in Wałbrzych

Programme change and reuse of materials

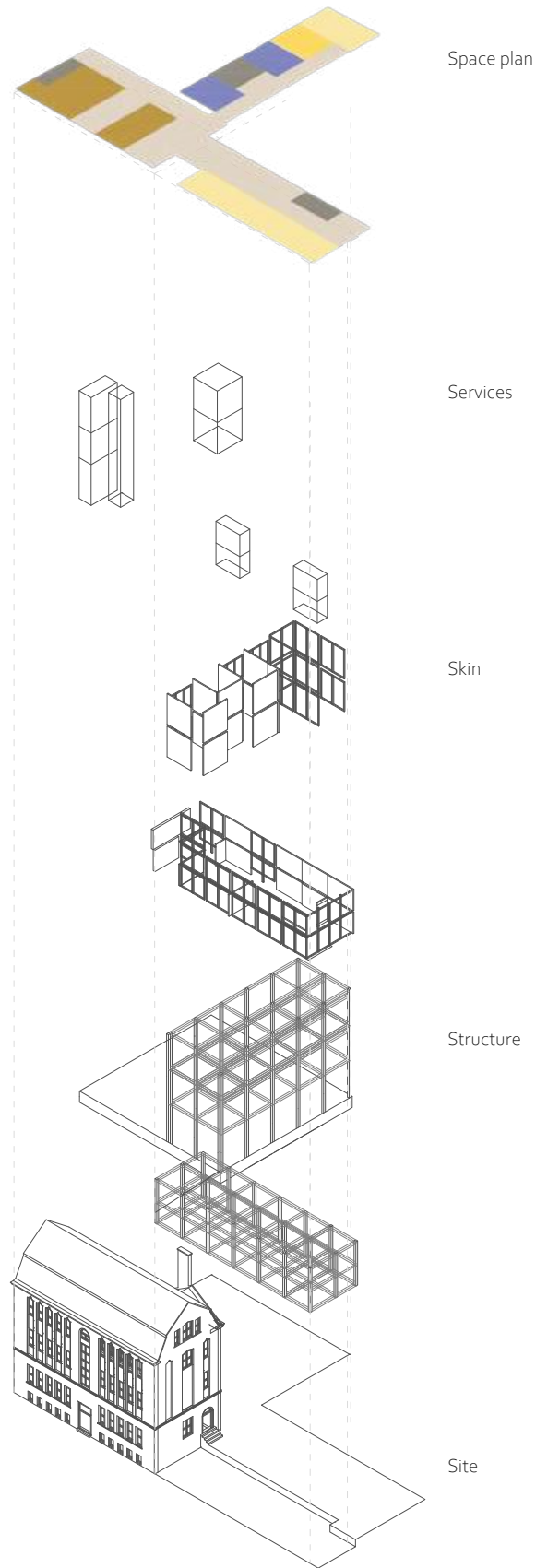
Our basic argument is that there isn't any such thing as a building. A building properly conceived is several layers of longevity of build components.

Due to the use of layers and modularity, architecture can develop gradually and allow flexibility and adaptability both in use and material with little energy expenditure.

A regular grid that does not react to the programme allows to easily change programme of the building. Due to the lack of wet joints, the elements of the structure can be reused in a different configuration.

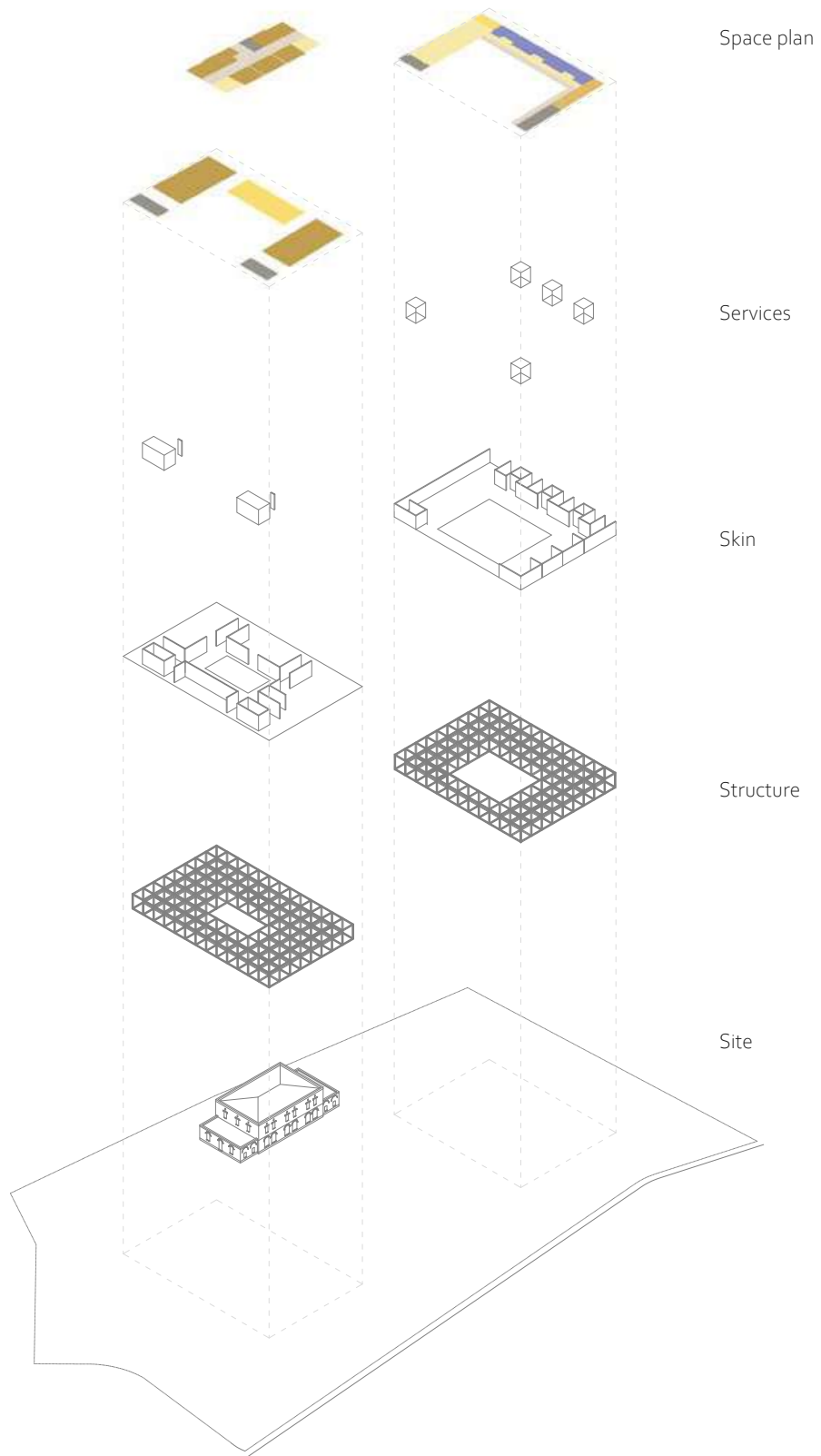
Light column foundations do not disturb the plot structure.

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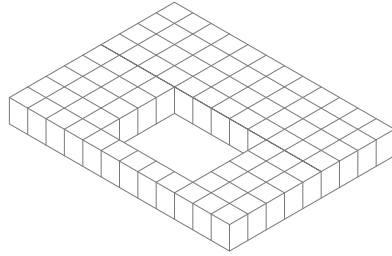


Separate layers defining the building based on the concept of Shearing Layers by Frank Duffy

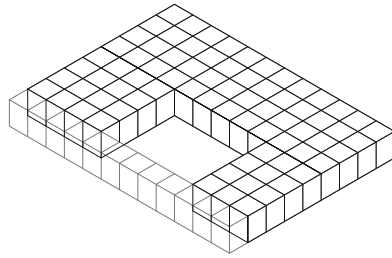
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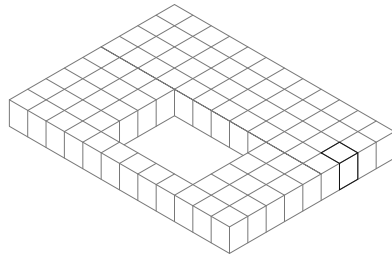
Separate layers defining the building based on the concept of Shearing Layers by Frank Duffy



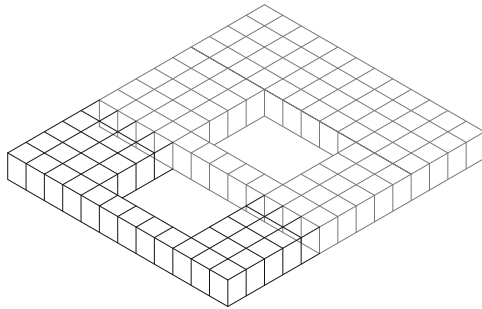
Original structure



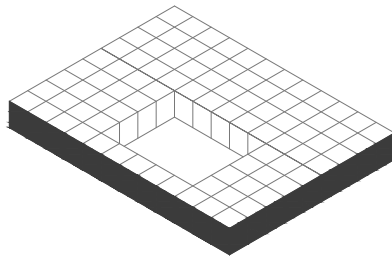
Reduce



Repair



Expand



Change facade

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LIST OF FIGURES

All images except the ones listed below originate from the author

- P. 25 **Barcola-Aurisina Mental Health Centre, Viale Miramare 111**
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- P. 30-35 **Plans of mental health facilities in Trieste**
 own illustration according to data of Institut für Architektur und Entwerfen Gebäudelehre und Entwerfen (WS2020)
Sozialer Brutalismus: Neue Mitte - Rozzol Melara
- P. 35 **Plan of Wałbrzych**
 own illustration according to data of Municipal Office in Wałbrzych (2019) *Study of the conditions and directions of development of the city of Wałbrzych*
- P. 44-123 see **Architectural References** (P. 290)
- P.133 **Construction diagram of the circular building by Arup**
 Arup Associates. <https://www.archdaily.com/943366/a-guide-to-design-for-disassembly>. Accessed 24.09.2021
- P. 145, 147, 151, 153, 155, 157, 161, 163, 166, 281 see P.35 Plan of Wałbrzych
- P. 148 **~1800; Stary Zródój [Old resourt]**
~1850; Wałbrzych
<https://tajemniczydolnyslask.pl/tajemniczydolnyslask/44-walbrzych-stary-zdroj-aqua-antiqua>. Accessed 27.10.2020
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- P. 149 **~1960; Greek refugees received in Wałbrzych**
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<https://polska-org.pl/653023,foto.html?idEntity=521215>.
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- P. 167 **Selected plots**
[google.com/maps](https://www.google.com/maps). Access 12.11.2020
- Former library**
<https://polska-org.pl/4076799,foto.html?idEntity=562784>.
 Accessed 12.11.2020
- P. 168 **Selected plots. View on the map from 1906.**
Übersichtskarte der Stadt Waldenburg in Schlesien
<http://igrek.amzp.pl/details.php?id=11775914>. Accessed 01.02.2021
 BCUWr id: 8200032694
- P. 169 **Selected plots. View on the map from 1937.**
 Plan der Stadt Waldenburg i./Schles.
<http://igrek.amzp.pl/details.php?id=11775913>. Accessed 01.02.2021
 BCUWr id: 8200036911
- P. 187 **Archival land development plan (state of 1911), with the current satellite image (state of 2018)**
<https://polska-org.pl/7207879,foto.html>. Accessed 09.01.2021
- P. 235 **West elevation (form Pankiewicz Street) see P. 168 Former library**
- P. 237 **Archival plan (state of 1906) see P. 168 Selected plots. View on the map from 1906.**

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aerial view: [google.com/maps](https://www.google.com/maps) [access 20.11.2020]photo p.: 44, 54 (therapy room): <http://jdsa.eu/psy/> [access 20.11.2020]p. 54 (relation to the outside): <http://theartofwhere.blogspot.com/2006/10/plotjds-big.html> [access 20.11.2020]data: www.divisare.com/projects/218546-big-jds-julien-de-smedt-architects-ellsinore-psychiatric-clinic [access 20.11.2020]www.psykiatri-regionh.dk/centre-og-social-tilbud/Psykiatriske-centre/Psykiatriske-Centre-Nordsjaelland/Undersoegelse-og-behandling/Indl%C3%A6ggelse/aabne-doenafsnit/Sider/Afsnit-2712.aspx [access 20.11.2020]www.jdsa.eu/psy/ [access 20.11.2020]plan: own illustration according to www.jdsa.eu/psy/ [access 20.11.2020]**2. Nuuk Psychiatric Clinic**

Nuuk, Grenland

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Vejle, Denmark

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London, UK

aerial view, satellite image, photo p.: 45, 60, data: <https://www.cfmoller.com/p/Tolworth-Hospital-i3201.html>, [access 20.11.2020]plan: own illustration according to <https://www.cfmoller.com/p/Tolworth-Hospital-i3201.html>, [access 20.11.2020]**5. Residentail Care Centre**

Noordwijk, Netherlands

aerial view: [google.com/maps](https://www.google.com/maps) [access 11.12.2020]photo p.: 46, 62, data: <https://rohmer.nl/en/projects/de-zeester-residential-care-centre-for-persons-with-a-mental-handicap/#> [access 11.12.2020]plan: own illustration according to <https://rohmer.nl/en/projects/de-zeester-residential-care-centre-for-persons-with-a-mental-handicap/#> [access 11.12.2020]**6. Psychiatric Centre Caritas**

Melle, Belgium

aerial view: [google.com/maps](https://www.google.com/maps) [access 28.11.2020]photo p.: 46 <https://www.detail-online.com/article/between-ruin-and-rebuild-psychiatric-clinic-by-de-vylder-vinck-taillieu-34194/> [access 28.11.2020]p.: 64 <https://www.publicspace.org/works/-/project/ko15-pc-caritas> [access 28.11.2020]data: <https://www.karus.be> [access 28.11.2020]<https://www.detail-online.com/article/between-ruin-and-rebuild-psychiatric-clinic-by-de-vylder-vinck-taillieu-34194/> [access 28.11.2020]plan: own illustration according to <https://www.archdaily.com/871034/pc-caritas-architecten-de-vylder-vinck-taillieu> [access 28.11.2020]**7. Sct. Hans Forensic Psychiatry**

Roskilde, Denmark

aerial view: [google.com/maps](https://www.google.com/maps) [access 14.12.2020]photo p.: 47, 66 <https://www.cfmoller.com/p/Sct-Hans-Forensic-Psychiatry-Hospital-i3004.html> [access 14.12.2020]data: <https://www.psykiatri-regionh.dk/centre-og-social-tilbud/Psykiatriske-centre/Psykiatriske-Centre-Sct.-Hans/English/Sider/default.aspx> [access

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plan: own illustration according to <https://www.cfmoller.com/p/Sct-Hans-Forensic-Psychiatry-Hospital-i3004.html> [access 14.12.2020]**8. Psychiatric Centre Ballerup**

Ballerup, Denmark

aerial view: [google.com/maps](https://www.google.com/maps) [access 28.11.2020]photo p.: 47, 68 <https://www.archdaily.com/579811/we-shares-first-prize-for-danish-psychiatric-hospital> [access 28.11.2020]data: <https://www.archdaily.com/579811/we-shares-first-prize-for-danish-psychiatric-hospital> [access 28.11.2020]<https://www.psykiatri-regionh.dk/centre-og-social-tilbud/Psykiatriske-centre/Psykiatriske-Centre-Ballerup/Sider/default.aspx> [access 28.11.2020]plan: own illustration according to <https://www.archdaily.com/579811/we-shares-first-prize-for-danish-psychiatric-hospital> [access 28.11.2020]**9. Children's Centre for Psychiatric**

Date, Japan

aerial view: [google.com/maps](https://www.google.com/maps) [access 28.11.2020]photo p.: 48 <https://www.subtilitas.site/post/91862414194/sou-fujimoto-childrens-Centre-for-psychiatric/embed> [access 28.11.2020]p.: 70 (relation to the outside) https://afasiaarchzine.com/2014/03/sou-fujimoto_20/ [access 28.11.2020]p.: 70 (common area) <https://www.architectural-review.com/buildings/childrens-treatment-centre-hokkaido-japan-by-sou-fujimoto-architects> [access 28.11.2020]data: <http://tarap.org/baumhaus/> [access 28.11.2020]<https://www.architectural-review.com/buildings/childrens-treatment-centre-hokkaido-japan-by-sou-fujimoto-architects> [access 28.11.2020]https://afasiaarchzine.com/2014/03/sou-fujimoto_20/ [access 28.11.2020]plan: own illustration according to https://afasiaarchzine.com/2014/03/sou-fujimoto_20/ [access 28.11.2020]**10. Psychiatric Centre**

Pamplona, Spain

aerial view: [google.com/maps](https://www.google.com/maps) [access 14.12.2020]photo p.: 48, 72 <https://divisare.com/projects/373175-vaillo-irigaray-architects-galar-velaz-ruben-p-bescos-psychiatric-Centre-refurbishment-extension> [access 14.12.2020]data: <https://divisare.com/projects/373175-vaillo-irigaray-architects-galar-velaz-ruben-p-bescos-psychiatric-Centre-refurbishment-extension> [access 14.12.2020]<https://www.area-arch.it/en/centro-psichiatrico-a-pamplona/>plan: own illustration according to <https://divisare.com/projects/373175-vaillo-irigaray-architects-galar-velaz-ruben-p-bescos-psychiatric-Centre-refurbishment-extension> [access 14.12.2020]**11. Residence and Day Centre for the Mentally Handicapped**

Barcelona, Spain

aerial view: [google.com/maps](https://www.google.com/maps) [access 28.11.2020]photo p.: 49, 74 <https://www.archdaily.com/342719/residence-and-day-Centrer-for-the-mentally-handicapped-aldajover-arquitectura-y-paisaje> [access 28.11.2020]data: https://treballiaferssocials.gencat.cat/ca/el_departament/adreces_i_telefons/seus_i_serveis_territorials/serveis_territorials/barcelona/ [access 28.11.2020]<https://www.archdaily.com/342719/residence-and-day-Centrer-for-the-mentally-handicapped-aldajover-arquitectura-y-paisaje> [access 28.11.2020]plan: own illustration according to <https://www.archdaily.com/342719/residence-and-day-Centrer-for-the-mentally-handicapped-aldajover-arquitectura-y-paisaje> [access 28.11.2020]**12. Psychiatric Centre Sint-Amedeus**

Mortsel, Belgium

aerial view: [google.com/maps](https://www.google.com/maps) [access 28.11.2020]photo p.: 49, 76 <https://divisare.com/projects/317456-tc-plus-luc-roymans-encounter-place-for-psychiatric-Centre-sint-amedeus> [access 28.11.2020]data: https://issuu.com/sint_amedeus/docs/20150309_onthaalbrochure_pz <https://multiversum.care/> [access 28.11.2020]<https://divisare.com/projects/317456-tc-plus-luc-roymans-encounter-place-for-psychiatric-Centre-sint-amedeus> [access 28.11.2020]plan: own illustration according to <https://www.tc-plus.be/nl/de-oase> [access 28.11.2020]**13.1. Maddalena Mental Health Centre**

Trieste, Italy

aerial view: [google.com/maps](https://www.google.com/maps) [access 19.11.2020]photo p.: 50 [google.com/maps](https://www.google.com/maps) [access 19.11.2020]p.: 78 <http://www.antoniovillas.com/altri/maddalena/pages/o20.htm> [access

19.11.2020]
[data:](http://www.triestesalutementale.it/guida/guida_unitaoperative.htm) http://www.triestesalutementale.it/guida/guida_unitaoperative.htm [access 19.11.2020]
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[plan:](#) own illustration according to *abitare la soglia - architettura e psichiatria*, Trieste, 2010, available on <http://www.starassociati.com/wp-content/uploads/2015/09/Book-PSICHIATRIA1.pdf1.pdf> [access 19.11.2020]

13.2. Via Gambini Mental Health Centre Trieste, Italy

[aerial view:](#) [google.com/maps](https://www.google.com/maps) [access 19.11.2020]
[photo](#) p.: 50 [google.com/maps](https://www.google.com/maps) [access 19.11.2020]
 p.: 80 (furniture) http://www.antoniovillas.com/habitat/realizzazioni/pages/real_012.htm
[data:](http://www.triestesalutementale.it/guida/guida_unitaoperative.htm) http://www.triestesalutementale.it/guida/guida_unitaoperative.htm [access 19.11.2020]
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[data:](http://www.triestesalutementale.it/guida/guida_unitaoperative.htm) http://www.triestesalutementale.it/guida/guida_unitaoperative.htm [access 19.11.2020]
[plan:](#) own illustration according to *abitare la soglia - architettura e psichiatria*, Trieste, 2010, available on <http://www.starassociati.com/wp-content/uploads/2015/09/Book-PSICHIATRIA1.pdf1.pdf> [access 19.11.2020]

13.3. Barcola Mental Health Centre Trieste, Italy

[aerial view:](#) [google.com/maps](https://www.google.com/maps) [access 19.11.2020]
[photo](#) p.: 51 [google.com/maps](https://www.google.com/maps) [access 19.11.2020]
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[data:](http://www.triestesalutementale.it/guida/guida_unitaoperative.htm) http://www.triestesalutementale.it/guida/guida_unitaoperative.htm [access 19.11.2020]
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13.4. Domio Mental Health Centre Trieste, Italy

[aerial view:](#) [google.com/maps](https://www.google.com/maps) [access 19.11.2020]
[photo](#) p.: 51 [google.com/maps](https://www.google.com/maps) [access 19.11.2020]
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[data:](http://www.triestesalutementale.it/guida/guida_unitaoperative.htm) http://www.triestesalutementale.it/guida/guida_unitaoperative.htm [access 19.11.2020]
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14. Centre for Psychiatric Rehabilitation Bolzano, Italy

[aerial view:](#) [google.com/maps](https://www.google.com/maps) [access 28.11.2020]
[photo](#) p.: 52 <https://www.miesarch.com/work/1288> [access 28.11.2020]
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[data:](https://www.sabes.it/it/ospedali/bolzano/2433.asp) <https://www.sabes.it/it/ospedali/bolzano/2433.asp> [access 28.11.2020]
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[plan:](#) own illustration according to <https://divisare.com/projects/268914-modus-architects-rene-riller-psychiatric-Centre-and-sheltered-housing> [access 28.11.2020]

15. Psychopedagogical Medical Centre Vic, Spain

[aerial view:](#) [google.com/maps](https://www.google.com/maps) [access 01.10.2020]
[photo](#) p.: 52 <https://www.archdaily.com/870911/psychopedagogical-medical-Centrer-comas-pont-arquitectos> [access 01.10.2020]
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16. Centre for the Mentally Disabled Toro, Spain

[aerial view:](#) [google.com/maps](https://www.google.com/maps)
[photo](#) p.: 53, 90 <https://www.archdaily.com/368694/intras-Centrer-for-the-mentally-disabled-amas4arquitectura>
[data:](https://www.archdaily.com/368694/intras-Centrer-for-the-mentally-disabled-amas4arquitectura) <https://www.archdaily.com/368694/intras-Centrer-for-the-mentally-disabled-amas4arquitectura>
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[plan:](#) own illustration according to <https://www.archdaily.com/368694/intras-Centrer-for-the-mentally-disabled-amas4arquitectura>

17. University Psychiatric Centre Gasthuisberg Leuven, Belgium

[aerial view:](#) [google.com/maps](https://www.google.com/maps) [access 28.11.2020]
[photo](#) p.: 53, 92 <https://www.archdaily.com/804323/university-psychiatric-centre-stephane-beel-architect> [access 28.11.2020]
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