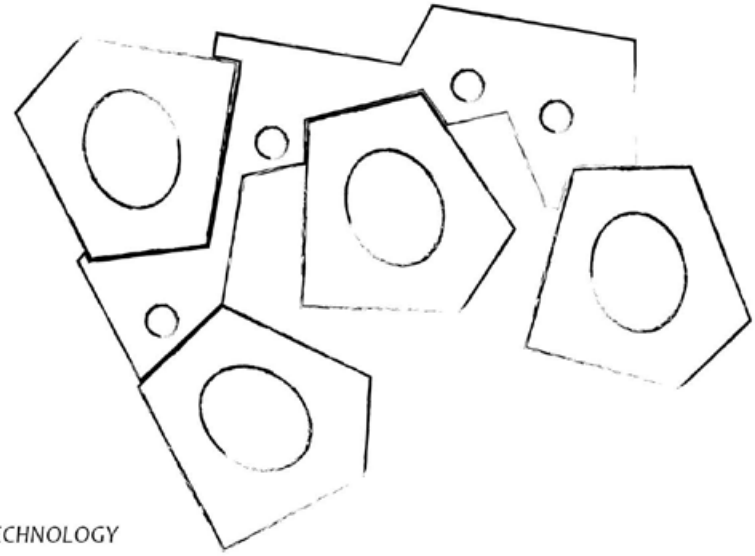

FOUR STONES & A RIVER

SUNDERBYN HOSPITAL NEW PSYCHIATRIC BUILDING

MASTER'S THESIS / SPRING TERM 2014 / CHALMERS UNIVERSITY OF TECHNOLOGY

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Department: Future visions for Housing, Healthcare & Work
Spring 2014 / January 2014 - May 2014

CHALMERS

To be a mental patient is to be stigmatized, ostracized, socialized, patronized, psychiatrized.

To be a mental patient is to have everyone controlling your life but you. You're watched by your shrink, your social worker, your friends, your family. And then you're diagnosed as paranoid.

To be a mental patient is to live with the constant threat and possibility of being locked up at any time, for almost any reason.

To be a mental patient is to live on $82 a month in food stamps, which won't let you buy Kleenex to dry your tears. And to watch your shrink come back to his office from lunch, driving a Mercedes Benz.

To be a mental patient is to take drugs that dull your mind, deaden your senses, make you jitter and drool and then you take more drugs to lessen the "side effects."

To be a mental patient is to apply for jobs and lie about the last few months or years, because you've been in the hospital, and then you don't get the job anyway because you're a mental patient.

To be a mental patient is not to matter.

To be a mental patient is never to be taken seriously.

To be a mental patient is to be a resident of a ghetto, surrounded by other mental patients who are as scared and hungry and bored and broke as you are.

To be a mental patient is to watch TV and see how violent and dangerous and dumb and incompetent and crazy you are.

To be a mental patient is to be a statistic.

To be a mental patient is to wear a label, and that label never goes away, a label that says little about what you are and even less about who you are.

To be a mental patient is to never to say what you mean, but to sound like you mean what you say.

To be a mental patient is to tell your psychiatrist he's helping you, even if he is not.

To be a mental patient is to act glad when you're sad and calm when you're mad, and to always be "appropriate."

To be a mental patient is to participate in stupid groups that call themselves therapy. Music isn't music, its therapy; volleyball isn't sport, it's therapy; sewing is therapy; washing dishes is therapy. Even the air you breathe is therapy and that's called "the milieu."

To be a mental patient is not to die, even if you want to -- and not cry, and not hurt, and not be scared, and not be angry, and not be vulnerable, and not to laugh too loud -- because, if you do, you only prove that you are a mental patient even if you are not.

And so you become a no-thing, in a no-world, and you are not.

To Be a Mental Patient
by Rae Unzicker (1948-2001)

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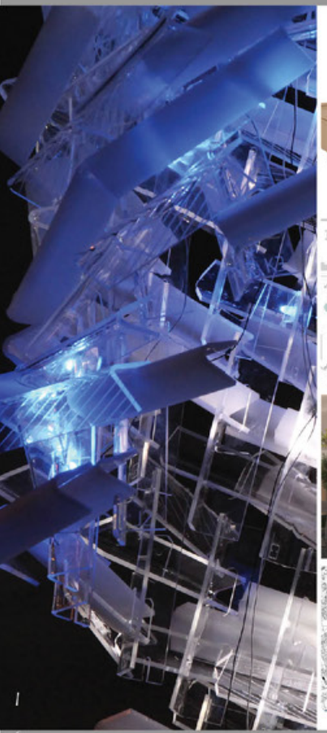
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V

I'm Lorenzo Lanzani and I'm an Italian student from Milano. I moved to Göteborg in September 2012 in order to start my Master Program at Chalmers University of Technology, under Architecture & Urban Design.

Before moving to Göteborg I graduated, on bachelor level, at Politecnico of Milano as Civil Architect and I've been studying architecture on all levels: from construction details to Urban Planning.

This Master's Thesis project has been running from January to May 2104, working on a real situation and future project possibility. The idea was to develop a strong and original design in a specific field of architecture, proposing a valid piece of research in the spatial quality of architecture research.

I. Material and Detail Course / Chalmers University of Technology / Light Fixtures
II. Architectural Competitions / Chalmers University of Technology / Architecture School Building
III. International Workshop Halle Neustad / Halle Neustad 3.0 / Chalmers University of Techonology
IV. Healthcare Architecture / Chalmers University of Technology / New High-tech Building for Orebro Hospital
V. Architectural Composition / Politecnico of Milano / Towers Project

"To be a mental patient is not to die, even if you want to – and not cry, and not hurt, and not be scared, and not be angry, and not be vulnerable, and not to laugh too loud – because, If you do, you only prove that you are a mental patient even if you are not. And so you become a no-thing, in a no-world, and you are not."

To Be a Mental Patient
by Rae Unzicker (1948-2001)

I've chosen to start with quote to introduce you as a reader to a common feeling and sensation that a mental ill patient can suffer due to his/her illness. The patient point of view has been really important for the overall image and concept of the project as well a specific point of view to look from while discussing and designing my project.

INTRO

As an architect I got in contact with healthcare design in September 2013 while I was attending a fall semester course at Chalmers University of Technology: Healthcare Architecture. While I was attending the course I understood the possibility and the challenge of this specific field of architecture and I started thinking about my Master's thesis.

After I discovered my interest for healthcare architecture I got in contact with my Tutor Peter Frost who proposed me several ideas for a Master's Thesis on healthcare architecture. Between the possibilities I picked what I thought be an interesting, challenging and specific topic; and that's how I started my journey in the Master's Thesis development with Sunderbyn's Hospital request for a New Psychiatric Facility in Luleå.

WHY I'M DOING MY MT?

One of the first reasons why I've chosen to work with healthcare topic thesis is the challenge of being able to control a project where a functional and effective design might collide with an architectural and more quality based design. I was interested in being able to take together the duality of such kind of project which from an architectural point of view might be considered limited but where it's not and it is really interesting.

Designing a building keeping in mind that you design is supposed to deliver heal and quality space to suffering people is giving me an extra challenge as a person more than as an architect. This very category of architecture healthcare has the potential to show how deep the relationship is between the spaces in which we live and our behaviour, being and health.

The possibility to work on a thesis researching for an alternative design to the functional planning of a healthcare design was also a plus in my master's thesis choice. I truly believe that as an architect I should try to "embody" in each wall of my project and idea or concept a quality that I want to achieve, the project should try to share an idea of quality healthcare design.

WHY A STUDENT PERSPECTIVE?

Sunderbyn Hospital is going to build a new Adult Psychiatry Facility in the next five years and they want to have a student perspective and vision on how the new building might look, a first draft or mock-up or idea. The hospital has started its process and program about building a new facility for the expansion of Psychiatry.

The Management have already planned a timeline for the project but because of other expansions and movements, going on in other units of the hospital, the program has been delayed by one year.

The actual stage is in-between "Program Work" & "Design" so this is one of the main reasons why they are interested in a student proposal for a vision about how it might look like the new psychiatry building. My project will be a first draft or vision of


VI

VI. Healthcare Architecture / Chalmers University of Technology / New High-tech Building for Orebro Hospital / Exterior View of the proposal
Students: Lorenzo Lanzani, Giada Albonico, Javier Perez Sota

the new facility and will give strength to the idea of expanding the building with a new one, in the discussion with the County.

The Original Timetable

A strategic decision / October 2012
Program Work / December 2013
Design/ May 2014
Construction /February 2016
Moving / October 2017

At the same time my position as a student will allow me to play a role on the border between a consultant and a researcher on the topic of Psychiatry; I'm not bonded with the Hospital and I can look for a vision that might point out some limits of the actual program and way of working of the Sunderbyn hospital.

Sunderbyn hospital has already asked Sweco Architects to develop a gross plan design to understand to total amount of sqm that were needed for the psychiatry new building; the study ended up with a rough proposal focus on the amount of sqm more than on the quality of the building, for a total amount of 10340 sqm.

My aim was to end my thesis project with a similar amount of sqm but focusing much more on the design quality and alternative solutions to a functional and rather boring building than a functional approach to the program, which could have brought to life.

WHAT KIND OF NEW FACILITY ?

The hospital has some visions for the new building and also a general vision of "Sunderbyn Hospital Future Development", which works on several aspects of the healthcare daily activities & qualities.

Adult Psychiatry's future vision is to conduct a patient safety and evidence-based care; in addition to the current capabilities needed further functions to be created:

- PICU and emergency department by ambulance hall, for appropriate care of the most urgent ill psychiatric patients
- Abuse and dependency unit, where there are synergies in collecting the closed care
- ECT and on-call services, where the good function relationships for these activities can achieved

Main strategies:
- Separation of acute and elective care
- Increased surface area for a single specialty clinic
- A better design for the psychiatric inpatient and more beds
- Inpatient care is placed in the new building
- Misuse Unit moved to the hospital
- Parts of current psychiatry can be used to other activities

The needs of new premises for the reception and inpatient care can be solved by an extension to the North West and rebuilding the existing premises. Hereby also the acute and elective care have to be separated.

The new facility should be an example of quality both on spaces and care giving not only on national but also international level. Sunderbyn psychiatric unit want to be an example of excellence in the field of psychiatry.

BACKGROUND OF SUNDERBYN HOSPITAL

In order to know the Sunderbyn Site and understand the dynamics of the hospital it was important to know the hospital history and why the building is looking for expansions and new implementations, as well as being importatn to learn from the past.

In early 1900's, there were hospitals in Boden, Luleå, Piteå , Kalix , Haparanda , Gällivare and Kiruna. Garrison Hospital Boden, established in early 1900s in the context of building Boden large garrison . It came to be the county medical centre and later county hospital.

1986 - Beginning of restructuring
In 1986, the county council decided for a structural model for the surgical, medical and gynaecological areas of activity, which involved cooperation among hospitals in Boden and Luleå developed, including pooled the three mentioned operational areas under joint clinic lines.

1989 - Review of hospital care
The County Council decided in October 1989 to check on the hospital care quality in Luleå and Boden. The investigators observed: a single hospital has a greatest possibility to develop high quality and safety of healthcare, is the best in terms of possibilities to recruit staff and is most advantageous to the County Council economy in the longer term.

1991 - decision on a hospital
In March 1991, the county council decided that in the future there will be a hospital in Lulea Constance region.

1992 - three investment alternatives
Feasibility studies continued, now with staff from various activities and architect. The conclusion was that for the proposed scope of the various activities areas, the total gross area to be 84.400 sqm.

In December 1992, the County Council approved the reports as the base for the crucial question of where the hospital would be placed. The work on the new hospital began.

Three different alternatives were studied: redevelopment of Lulea Hospital , redevelopment of Central Hospital Boden and a new construction in Porsön in Luleå.

1993 - Decision on hospital placement
The studies of various siting options were presented in the final report " The hospital placement." The team thinks that a new building is the best from a medical point of view, but advocates of economic reasons to another hospital is being rebuilt. In June 1993 the council decided to build a new hospital in Sunderbyn, between Luleå and Boden. There were large discussions regarding the hospital's position and Sunderbyn was the compromise that could garner a majority of the County Council members. The hospital size was decided to include 73,500 sqm gross floor area and got the maximum cost 1.3 billion kr.

1994 - programming, preliminary planning
In 1994, lasted the design, and partly procurement of contractors and the County was enable an early start of construction.

Inauguration
Queen Silvia inaugurated the hospital in September 1999.

Subsequent rebuilding
Since the hospital was opened, some new expansions and conversions occurred to fit he new request from the staff and patients. The main change implemented is the advent of rehab, medical clinic, and the expansion of the gynaecological care beds in 2001. Other additions had a variety of local implementations within the different departments, for example, the expansion and remodelling of the lab on X-ray, pathological unit, maxillofacial surgery, recep


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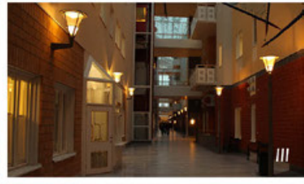

III


IV

I. Outside of the Psychiatric Unit
II & III. Main Connector
IV. Main Entrance

tion / waiting room at the ENT, and an expansion of psychiatric hospital beds. On the service side, changes as addition to heaters, exterior lighting and car parks implemented. A renovation of the patient waiting rooms, garment machines for staff clothing and storage areas (in culvert plan); data centres and training centres have been also implemented.

The conversion and extension of the kitchen, with a production implementation The Premises for medical training and provincial technology was created on the 2nd floor and was inaugurated in December 2010. The Construction of patient hotel and redevelopment in connection with this extension has commenced in 2012.

THE HOSPITAL TODAY

Building
Total floor area: 78,100 m2
Ground floor area: 25,000 m2
Artificial lake: approx. 54,000 m2
Hospital park: 340,000 m2

Construction figures
Cost: MSEK 1,579
Architect: Tage Isaksson, FFNS Architecter AB

Population of the Pertinence Area
Luleå and Boden, population approx. 100,000
Norrbotten County, total population approx. 190,000

Activities & Services
Emergency care
General surgery/urology
Children's unit
Women's health unit
Laboratory
Medicine
Radiology/clinical physiology
Rehabilitation and rheumatology
Orthopedics
Adult psychiatry
Eyes
Ear, nose and throat unit, and jaw surgery
Hospital chapel
Hotel for patients or their relatives

Spaces
Rooms 3700
Lifts 28
Toilets 900

Materials
Yellow and red brick facades
Plasterboard 300000 m2
Concrete 30000 m3
Windows 3000

Hospital Capacity
Beds 441
Operating theatres 19
Dialysis units 13
Intensive care 6
Intensive care for heart patients 9
Delivery rooms 7
Restaurant with approx. 20 seats
Lecture hall with 150 seats
Parking space for approx. 1050 cars

Staff
Visits to doctors: 119,117
Inpatients: 27,060
Days in care: 157,964
Average time in care: 4.7 days
Number of births: 1,119
Study visits: 5,500 visitors
Total number of employees: 2,347
Stand-in staff, included above: 231
Average age: 45 years
Full-time employees: 1,801
Doctors: approx. 239
Nurses: approx. 826
Assistant nurses/assistant children's nurses: approx. 599
Administrative personnel: approx. 230
Works and maintenance personnel: approx. 40
Others: approx. 413

I. Bird Views of the Hospital

HEALTHCARE DEVELOPMENTS

Before introducing Psychiatry as a profession and all the problematic and potentials related with it; I'll introduce you to the actual discussions and improvements that are affecting the healthcare and which are influencing even Psychiatry profession and facilities.

The actual healthcare trend is based on the concept of healing. It is rather important to understand this passage to make it clear why we are renovating and building new series of hospital and healthcare facilities in the last 10 years.

Definition of Heal by Wikipedia
Healing, literally meaning to make whole, is the process of the restoration of health to an unbalanced, diseased or damaged organism. Healing may be physical or psychological and not without the mutual reception of these two dimensions of human health. With respect to physical damage or disease suffered by an organism, healing involves the repair of living tissue, organs and the biological system as a whole and resumption of normal functioning.

The healthcare system is no longer focusing only on physical aspects about also on psychological ones that influence and are related with the body and the healing process: restoring a balance in an unbalanced system. The patients are now part of a system, which work as a whole to bring out the best cure for each specific situation; looking for answers not only in the medicine field but also in psychology

and the quality of the facilities.

*"We spend upwards of 90% of our lives within buildings, yet we know much more about the effects of ambient environmental conditions on human health than we do about how buildings affect our health."*1

More and more researches are now going to be done on hospital environment qualities and needs in order to understand how this is influencing the daily work and medicine and also the other way around, how the environments can be shaped on hospital needs.

*"Some environmental influences we can see or touch, such as seeing the aesthetics of a space or touching an upholstered ergonomic chair," says Irving Weiner, AIA, an environmental psychology professor at Massasoit Community College in Middleborough, Mass. "Some of these environmental influences we cannot see or touch, yet they have a direct influence on our behavior or mood."*1

The system is not the aim but a vehicle to get the best results, at the same time the attention for the efficiency of the system and the quality of staff work is now taken in consideration as part of the process to get to the best result.

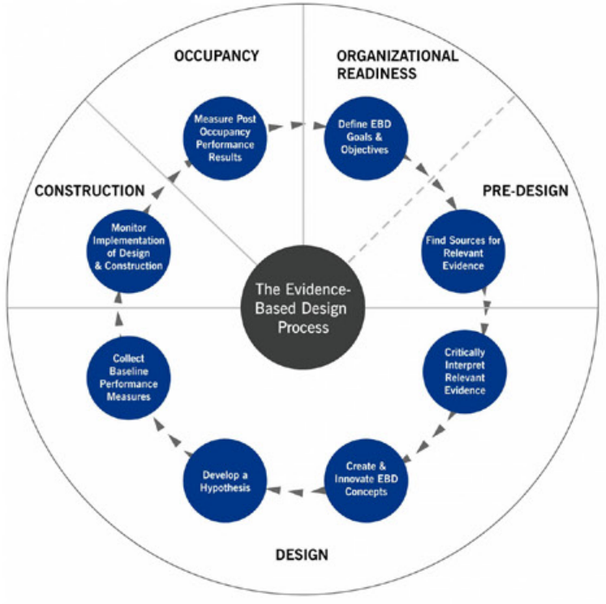
LATEST APPROACHES ON DAILY PROFESSION IN HEALTHCARE

Evidence Based Design

The most influential introductions in the hospital design and daily work activity has been the EBD or Evidence Based Design, which is a form of research and work, brought together in order to get scientific answers with data from hospital questions and doubts.

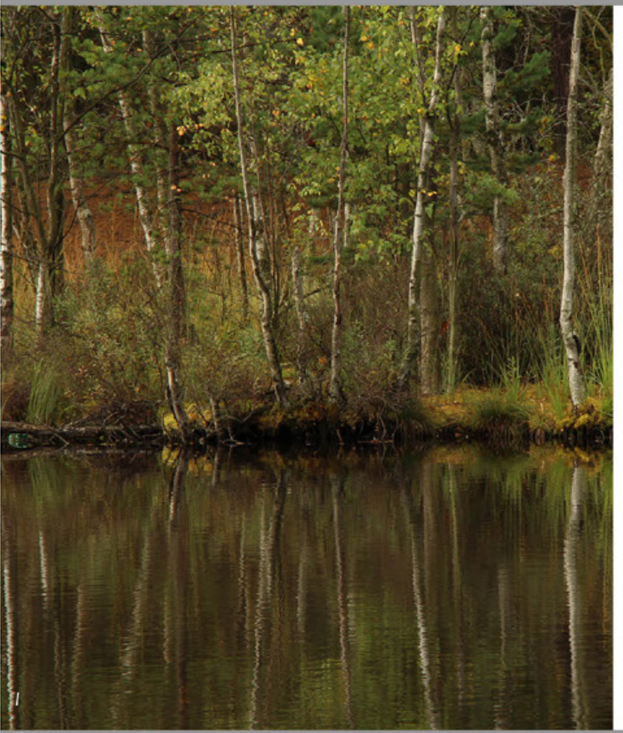
The main idea is that the environment is affecting the healing process way more than what we were thinking before EBD was introduced to the hospital design.

Several researches have been already performed and the results are nowadays well know and summarize in scientific articles; between these new approaches these are the most influential on the hospital facilities: single patient room, improve privacy, improve patient-doctor discussion, easy way finding,



II

II. Evidence Based Design Conceptual Diagram
1.When buildings don't work: the role of architecture in human health / G. W. Evans & J. M. McCoy



light quality, noise control, nature presence, positive distraction and provide social support.

"The research team found rigorous studies that link the physical environment to patient and staff outcomes in four areas:
1. Reduce staff stress and fatigue and increase effectiveness in delivering care
2. Improve patient safety
3. Reduce stress and improve outcomes
4. Improve overall healthcare quality"2

Healing Process

The healing process is part of the new approaches proposed by the EBD with the difference being that it is a more complex and not yet always scientific proved. As said before healing means restoring an unbalanced system (human being) taking in consideration several aspects and not only the physical one.

The theory back the healing process is based on two theories about the potential of nature on human being: Stress Reduction Theory (SRT) and Attention Restoration Theory (ART). Both of them work on the concept that nature is able to influence in a deeply way our body and mind, and it able to help the process of healing with its presence and experience. They both work on changes in attention and stress loads based on the way in which we are going to related with nature, but they differ from a mechanism of how this process is working.

SRT
"it posits a healing power of nature that lies in an unconscious, autonomic response to natural elements that can occur without recognition and most noticeably in individuals who have been stressed before the experience." 3

The main idea is that only being at the presence of a nature setting can relieve our body and mind from stress and can help the healing process.

Ulrich is one of the main supporters of this theory, which explain the effects of nature on man as able to create emotions and reduce stress. The theory states also that city environments are not able to create such kind of feelings and emotions and people that are living in these environments are not get used to stress factors spread all over the cities.

ART
"It centers on the power of nature to replenish certain types of attention through unconscious, cognitive processes in response to natural landscapes."3

It affects the focus and concentration, working on intentional and involuntary attention. The first one is direct form of attention that after prolonged use can cause fatigue while the second one is a form of attention that is not causing fatigue and stress. The theory supports the idea that natural environments are able to enhance the second form of attention and let the patient mind to relax and let go the stress. Kaplan and Kaplan were two of the main supporters of this theory

Nature contact

"Many of us have experienced an emotional fulfillment from viewing, or being physically present within, natural environments."3

Indeed nature experience and contact is important for the haling process, no matter which one of the two theories one can support, SRT or ART.

"What happens to our cognitive abilities, emotional states, and mental health if we are deprived of experience in nature?"3

Roger Ulrich was one of the first to propose studies about nature effects on hospital patients. The most famous one studied patients facing a wall or a tree from a window during their time at the hospital; the results showed that nature has an impact on patients making shorter the average stay at the hospital of the tree ones facing compare with the wall facing one. 4

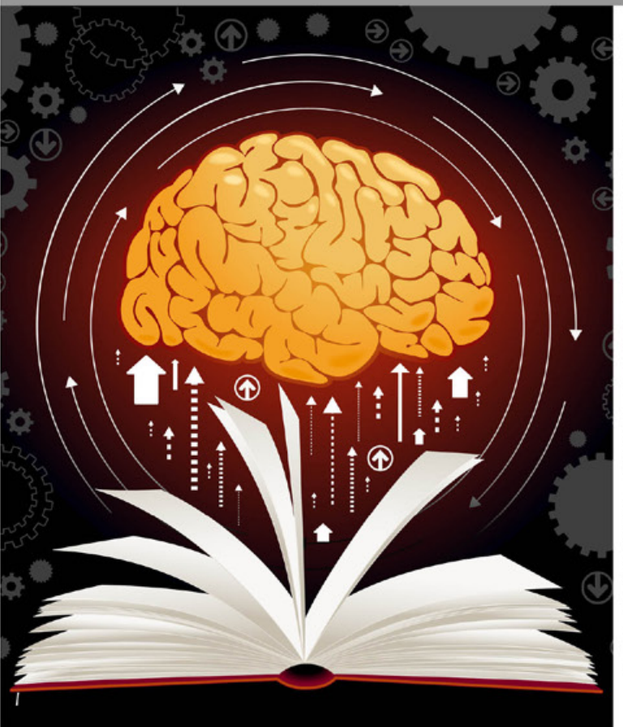
Nature is not the only one aspect able to influence our healing process, but other aspects such as light quality, noise control, privacy and treatment qualities are also important to define an healing process and understand how to perform a better care system.

FLEXIBILITY

Another important aspect of today healthcare design is the possibility to change the building based on new needs and tasks, as well new technologies and treatments. The building should be able to be changed without building a new one but only renovating the existing, changing the interiors or just moving staff and furniture. When the building will be finished, the program that was set during the design phase will have already changed several times since 5 years might have passed in-between the design and the inauguration. The building must be able to change with the hospital professions changes.

So while architects are looking for the best design to satisfy needs requirements of a program the have to keep in mind that the very same program and even the requirements might change in the process; it a challenging aspect of healthcare design trying to grasp a stable design based on an unstable program.

1. Anngarden, Goteborg, Sweden
2. The Role of the Physical Environment in the Hospital of the 21st Century: A Once-in-a-Lifetime Opportunity / R.Ulrich, X. Quan, C. Zimring, A. Joseph and R. Choudhary
3. The impacts of nature experience on human cognitivefunction and mental health /G. N. Bratman, J. P. Hamilton and G. C. Daily
4. The Role of the Physical Environment in the Hospital of the 21st Century: A Once-in-a-Lifetime Opportunity / R.Ulrich, X. Quan, C. Zimring, A. Joseph and R. Choudhary



While I was starting to introduce myself to psychiatry I realized how important was it to understand what was about the profession, how it has been developing in the past and recent years, what patients and staff think about the profession and the facilities.

I've been doing research all the way from conceptual to specific solutions on architectural environments related with healthcare trying to look at the scientific researches as a method to rely on the results. What I ended up with is a more complex reality than what people in general thought about psychiatry and mental illness; the connections between the environment and the care given quality is even stronger than in other units of an hospital due to its deep psychological impact.

But first of all what is a mental disorder?

In Wikipedia, mental disorder is defined : "A psychological or behavioral pattern generally associated with subjective distress or disability that occurs in an individual, and which are not a part of normal development or culture." 5

The definition shows that mental disorders are very subjective, since it depends on judgments including what is normal and what is not within a culture or even religion.

At the same time even the definition of health is not either clear or specific; even in the World Health Organization (WHO) definition of mental health as «a being of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community» there is still space for interpretations.

"Mental health can therefore be seen as a lifelong process. In each phase of life we have to face different challenges, which we may or may not feel capable of overcoming. But mental health is not only an expression of strength, well-being and good mental capacities. It is also the capability to accept our own weaknesses and limits, and to effectively deal with them." 6

Understand patients and staff need was one of my first aims in order to be able to control the quality of my project, but even before getting to this level of knowledge I needed an introduction to the history of psychiatry was necessary to understand what have been done and what was or is missing in the facilities.

I. Psychiatry Interpretation
5. Wikipedia
6. Architecture for pyschiatric treatment / B. Schütz & L. Wicki

HISTORY OF PSYCHIATRY

Psychiatric evolution and history can be divided in several steps based on changes in the building, practise or way of thinking about mental illness. The relationship between what was the consideration about the mental illnesses and the care given systems is important to understand why in certain situations the designs developed in a way and not in another one.

The first step takes place when psychiatry first appeared but not as a form of treatment but more as control over ill, different and uncommon persons. This attitude was really frequent during the early Middle Ages where psychological issues were considered as results of sins and so sort of God punishments. The theological and moral frame was so strong that only religious activities such as monasteries were involved in "cure" system where people were kept and lived inside the walls of the premises. Even if the monasteries were really influential, due to lack of space in the buildings, most of the mental ill persons were living with their family and being marginalized and excluded, or even locked up in prisons, since considered dangerous.

This kind of approach was still the main approach to mental illness even in the Renaissance. During this historical periods the first forms of hospitals took place, e.g. Ospedale degli Innocenti, Florence 1429 by Brunelleschi, but because these places were built and run as royal places, only for rich and important citizens could get access, so the less fortunate faced another reality. At the same time these forms of hospital were only taking care of physical illness, since the mental and psychological aspects of the illnesses were not yet considered as part of the care given.

In 16th century, where the number of unattended mental ill grows and the straying mob was composed by vagabonds, prostitutes, unemployed, criminals, idiots and epileptic; the answer to the mental ills was still to choose between being in a monastery, live with the family or risk to be imprisoned if considered dangerous to the society.

Only in 1656 under Louis XIV's regency the first "Hôpital Général" was founded in Paris. It was the first form of "Psychiatry" Hospital, which unfortunately was not concealing any kind of form of treatment but was only a form of confinement for poor, vagabond and mental ill persons. The answer to the mental illness is here again a form of confinement since there were not available any form of treatments to deal with such kind of illnesses, rather than religious answers or some herbs.

It was in the Enlightenment period that the mentally ills begin to be seen as human beings suffering and in need of treatments. The mental illness was for the first time recognised ad a form of illness and with these ideas taking place in philosopher minds, as J.R. Tenon or Philippe Pinel, was around the end of the 18th century that architecture started to be involved in the healing process.

"In 1773 a radical plan was drawn up for rebuilding Hôtel-Dieu with single-storey, freestanding care units grouped in horizontal rows on each side of a large court. The courtyard entrance was flanked by frcee-standing E-shaped service buildings. At the far end of the courtyard stood the church. Thus there were three innovations here: the care unit buildings were single-storey, freestanding and separate from the service units. Here, in other words, we see the genesis of the pavilion hospital, the type established in earnest through Florence Nightingale's nursing reforms during the Crimean War in the second half of the 1850s."7

The built environment started to be seen as part of the cure process and the building where mental ill persons where located as prisons and not hospitals. The perspective on the illness started to move from the moral treatment perspective in which mental illness was a subsequent of a sin to a perspective that mental illness was a form of disorder of the mind.

II. Trend Persists Of Prisons As Mental Health Housing / Don Thompson
III. Dr. Benjamin Rush's (1745-1813) tranquilizing chair
IV. Oskar Diethelm Library, Institute for the History of Psychiatry, Weil Cornell Medical College
7. Architecture as Medicine / Lena From

It was a big step for psychiatry and it involved changes all the way from environment solutions to the approach; science started to recognized psychiatry as a form of medicine and researches became on this specific field of the human body.

One of the first answers was the Asylum, which became the solution to the "problem" of managing mental ill persons. It was a building that evolved from the prisons concept to a place whit the goal of care about mental ill persons and capable of providing some kind of therapy to the "patients". In theory was no more a form of seclusion but the answer to the awareness of mental illness as a form of mind disorder that might be healed. It was supposed to be place of peace and release from pains and difficulties for the patients, but unfortunately history tells another reality than the one expected.

"The treatment of the insane is conducted not only in, but by the asylum." William Dean Fairless, 1861

The asylums were based on two main concepts: isolation, in order to have therapeutic procedure removing the patient from his daily life ambience, and the moral treatment.

Jean-Etienne-Dominque Esquirol, Philippe Pinel student and designer of the typical asylum plan, placed a big effort in designing the new building in order to give patients more life quality, introducing a scheme of 2 wings and one storey only. The scheme works diving the patients by gender, social status and behaviours: from the most wealthy and calm close to the entrance to the most agitated and poor far from the entrance and isolated.

Unfortunately the living conditions of the patients barely changed from before the appearance of the asylums, the scheme were not always been applied in the right way and this cause a lot of undesired situations in the building, like people been segregated and isolated because of their behaviour or social status.

"Almost as soon as they were built, facilities became overcrowded. The hierarchal distribution of the plan led to abuses (the public would only be shown certain, well maintained wards) and manipulation (difficult patients were threatened with movement to the outer wings, even if their illness did not warrant it)." 8

At the beginning of the 20th century the asylums start to decline in prestige since the patients were not able to leave the premises and they building were overcrowded, placing patients in living conditions not acceptable for an human being. Even if in the first 20 years of the century a restoration and revolution started in the Asylum procedure, changing the name in hospital and proposing a more human approach to the illnesses; the conditions inside the buildings were the same as before, form or social prisons with few and barely effective forms of treatments.

It was only after the Second World War, thanks to the introduction of new antidepressant and antipsychotic drugs; a lot of mental ill patients were able to go back to their homes or families.

"The field of psychiatry has rapidly grown, and different branches like the forensic, the military or the pathological psychiatry, were formed. Today, the field of general psychiatry is divided up into three age branches to better respond to the respective age-related needs. With the deinstitutionalization process, psychiatric treatment was split up into different institutional types."9

At the same time with the deinstitutionalisation came another problem called "revolving door-effect" which consists in a lot of patients or families unable to handle the illness outside the hospital or asylum because of the lack of any sort of treatment. So most of the patients that were freed, came back to the institutes in order to be cure or handle.

"Ever since the dawn of culture, ethics has been an essential part of the healing art. It is the view of the World Psychiatric Association that due conflicting loyalties and expectations of both physicians and patients in contemporary society and the delicate nature of the therapist-patient relationship, high ethical standards are especially important for those involved in the science and practice of psychiatry as a medical specialty." 10

From 1960 to 1980 the situation was still with different situations about how to treat mental ill persons, from situation of people standing in-between hospital and families, some patients totally isolated form reality in closed building and other patients missing treatment; there was a lack of solutions between the family and the hospital.

An important step was the Declaration of Hawaii in 1977 of which I report below the 10 main points.

1. The aim of psychiatry is to treat mental illness and to promote mental health. To the best of his or her ability, consistent with accepted scientific knowledge and ethical principles, the psychiatrist shall serve the best interests of the patient and be also concerned for the common good and a just allocation of health care personnel, patients and the public.

2. Every psychiatrist should offer to the patient the best available therapy to his knowledge and if accepted must treat him or her with the solitude and respect due to the dignity of all human beings. When the psychiatrist is responsible for treatment given by others he owes them competent supervision and education. Whenever there is a need, or whenever reasonable request is forthcoming from the patient, the psychiatrist should seek another colleague.

3. The psychiatrist aspires for a therapeutic relationship that is founded on mutual agreement. At its optimum it requires trust confidentiality, cooperation and mutual responsibility. Such a relationship may not be possible to establish with some patients In that case, contact should be established with a relative or other person close to the patient. If and when a relationship is established for purposes other than therapeutic, such as forensic psychiatry, its nature must be thoroughly explained to the person concerned.

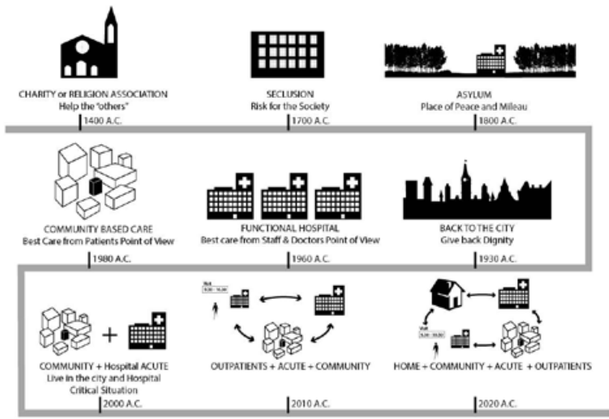
4. The psychiatrist should inform the patient of the nature of the condition, therapeutic procedures, including possible alternatives and of the possible outcome. This information must be offered in a considerate way and the patient must be given the opportunity to choose between appropriate and available methods.

5. No procedure shall be performed nor treatment given aganinst or independent of a patient's own will, unless, beacause of mental illness, the patient cannot form a judgement as to what is in his or her best interest and without which treatment serious impairment is likely to occur to the patient or others.

6. As soon as the conditions for compulsory treatment no longer apply, the psychiatrist should release the patient from the compulsory nature of the treatment and if further therapy necessary should obtain voluntary consent. The psychiatrist should inform the patient and/or relatives or meaningful others, of the existence of mechanisms of appeal for the detention and for any other complaints related to his or her well-being.

7. The psychiatrist must never use his professional possibilities to violate the dignity or human rights of any individual or group and should never let inappropriate personal desires, feelings, prejudices or beliefs interfere with the treatment. The psychiatrist must on no account utilize the tools of his profession, once the absence of psychiatric illness has been established. If a patient or some third party demands actions contrary to scientific knowledge or ethical principles the psychiatrist must refuse to cooperate.

8. Whatever the psychiatrist has been told by the patient, or has noted during examination or treatment,



I.Photo taken from: Psychogeddon in the UK: The manipulation of mental health discourse / By Dominik Ritter
8. Building as Cure: The Evolution of Architecture for the Mentally Ill / E. Danze
9. Architecture for pyschiatric treatment / B. Schütz & L. Wicki

10.Hawaii Declaration, 1977

must be kept confidential unless the patient relieves the psychiatrist from this obligation, or to prevent serious harm to self or others makes disclosure necessary. In these cases, however, the patient should be informed of the breach of confidentiality.

9. To increase and propagate psychiatric knowledge and skill require participation of the patients. Informed consent must however, be obtained before presenting a patient to a class and, if possible, also when a case history is released for scientific publication, whereby all reasonable measures must be taken to preserve the dignity and anonymity of the patient and to safeguard the personal reputation of the subject. The patient's participation must be voluntary, after full information has been given of the aim, procedures, risks and inconveniences of a research project and there must always be a reasonable relationship between calculated risks or inconveniences and the benefit of the study. In clinical research every subject must retain and exert all his rights as a patient. For children and other patients whom cannot they give informed consent, this should be obtained from the legal next on kin. Every patient or research subject is free to withdraw for any reason at any time from any voluntary treatment and from any teaching or research program in which he or she participates. This withdrawal, as well as any refusal to enter a program must never influence the psychiatrist's efforts to help the patient or subject.

10. The psychiatrist should stop all therapeutic, teaching or research programs that may evolve contrary to the principles of this Declaration.

This declaration was an important step because with these ten point even if it was recognized the special situation of each case, a guideline on the ethical was written down and make valid for all the people involved in the psychiatric field; a sort of guide of how to be as a doctor or nurse with mental ill persons. The Declaration was updated in Vienna in 1983, updated in Madrid in 1996, in Hamburg in 1999, in Yokoham in 2002, in Cairo in 2005, and in Buenos Aires in 2011.

The situation after this declaration got better and better for the new approaches and facilities spreading in the countries but still there was some situation in which coming back to the society was not possible for some patients.

"Many mental hospital inmates at that time had been there from an early age and could expect the mental hospital to be their "home" for the remainder of their lives, even though new medicines and new ideas of rehabilitation and treatment outside the mental hospital environment had by then been gaining some ground for a number of years." 11

At the beginning of 1980 in USA and some European country started spreading a series of facility, called Community, which tried to place themselves in-between the home and the hospital; most of the time were places where mental ill persons can just have some activities or time to spend together to help each other or overcome everyday life problems. They were not treatment places but more leisure and activities meeting places.

This solution was not adequate for all the patients and the most acute can't take part in this part of the treatment since they were not allowed to leave the hospitals; that's why the psychiatric hospital started moving back to the city and being involved more often in the outpatient system since was not anymore necessary to keep all the patients inside the hospital but some of them were able to move back to their houses during night.

The shape of Psychiatry is changing and become more complex than the really first hospital idea, the asylum, where all the patients were in the same building, just divided internally, and treated almost in the same way.

"For the first time in 30 years, medical buildings are being designed specifically for the new ideology of medical care, "the patient in the centre", and this affects the way in which buildings for care are fashioned, with intimate transitions between public, semi-public, semi-private and private spaces and with abundant access to greenery and daylight." 12

The treatment system is becoming more and more complex with shades of approaches based on the different treatment: from the acute hospital unit to the home treatment. Each hospital and municipality, together with the national system, is choosing the best answer to specific problems.

"Today the people who design and run psychiatric facilities still put their ideas of how to care for patients into the very walls of their buildings. Over the last two decades, the design of new psychiatric hospitals and new psychiatric wings of general hospitals reflects the emphasis on recovery, shorter stays, and the patients' role in their treatment" 13

TODAY PSYCHIATRIC FACILITIES

"Today's facilities still have their boundaries but, more than ever before, are less places of confinement and more places of treatment and preparation for return to the outside world" 14

The field of psychiatry has changed a lot during the century and has now reached a point in which the outside world is the final goal for each treatment, even when the situation is dramatic the hospital or care given is always trying the best to let the patient live without continuous contact and treatment from a clinic or healthcare facility: the final aim is to let the patient live his/her own life.

"A psychiatric hospital should recapitulate a real community in which patients will live after treatment," said Richard Lippincott, M.D., a professor of psychiatry at the University of Arkansas for Medical Sciences, articulating the views of many architects and mental health professionals.

" You make the inside represent the community outside."

At the same time since the '80 solution of a stationary clinic as the only solutions to all the problems has been abandoned and now psychiatry is facing a moment in which there might be multiple solutions to a single problems, thanks to the different facilities that are spreading all over the world.

The Stationary Clinic
It remains the form of the total institution, caring for the patients 24 hours a day and it plans all his/her life. These facilities can be divided in two kind of hospital: acute care and rehab care. The first one has the goal to calm down or take care of crisis and emergency situation where a patient is in urgent need of been hospitalized and treated, while the second one has the purpose of helping certain patients who can't handle their daily life and are in need of being taking care 24 hours a day or need to be followed. These clinic are not to be meant for life treatment but for long or rather long period of treatment which doesn't allow the patient to come back to his/her place during the night or while not under treatment.

The intermediate structures
This kind of facilities usually take care of daily activity for patients which are able to live by themselves but still in need of treatments or spaces where to spend time during the day. The idea is that this kind of clinic are placed in the city and support the patient day life and give them treatments and activity without oblige patients to leave their home and families; this clinics work on the outpatient system.

The intermediate structures are: clinics, sheltered workshops and therapeutic clubs. The first works as described above given treatment and activities, the sheltered workshops are solutions for small working tasks in a protected environment while the therapeutic clubs are patients' associations with the intention of re-integrated the patient in the society.

11. Architecture as Medicine / Erik Brenner

I & II. White Architects / Psychiatric Building Boras / Competition
12. Architecture as Medicine / Lena From
13. Building as Cure: The Evolution of Architecture for the Mentally Ill / E. Danze
14. Psychiatric Hospital Design Reflects Treatment Trends / A. Levin

Ambulatory Units
This form of support is not to be considered as a hospital. It is a form of support conformed in places where patients can book an appointment or can ask for a chat with a psychiatrist or psychologist or for social supports. They are more a form of consultation and they don't interfere with patient treatments.

Long-Term structures
These clinics are designed and built for patients that will not be able to go back to their normal life due to the severity of the illness. These kinds of facilities are usually placed outside the cities in calm environments and usually they can take care of patients for years.

"But just seeing the building from the outside and comparing it with the other buildings round about enables me instantly to attest that here we have a healing curative environment." 15

TREATMENT APPROACHES

"Treatment methods, then, have improved. Public health, by contrast, has deteriorated. Mental illness and morbidity today is increasing both in real terms and as a proportion of total morbidity. At any given point in time, some 15% of Sweden's adult population are suffering from a mental illness. Persons with serious and prolonged mental illness/functional impairment – constituting the target group of the Psychiatry Reform – comprise some 2% of the population. Depressive disorders are noticeably on the increase, especially where younger persons are concerned. Alcohol abuse and abuse of drugs, opiates especially, are both moving down the age scale and increasing in total figures. The classical mental disorders, such as schizophrenia and manic-depressive illness (bipolarism) show an unchanged morbidity rate, although treatment possibilities and prognosis have, as already mentioned, improved dramatically. And in the population aged up to 45, suicide is the commonest cause of death!"16

The treatments can be group in 4 categories based on the method and they have been developed since the variety of mental illness and the singularity of each human being mix together make it necessary to approach the same kind of illness of different illnesses with different strategies.

The psychotherapeutic approach
It is a form of psychological treatment that works on the patient-physician's relationship to discover the source of unrest, freeing mental functioning and promoting healing. There are several types of this approach but the most know and recognized are the psycho-psychoanalytic therapy (derived from psychoanalysis), family psychotherapy and systemic cognitive-behavioral psychotherapy. Mindful awareness has scientifically been shown to enhance our physical, mental and social well-being. At the heart of this synthesis of science and practice lies the idea that awareness of our ongoing experience creates attunement, or resonance, within us that harnesses specific social and emotional circuits in the brain.
Most of these therapies can be done in an office or in the patient's room.

The physical approach
The approach consists of relaxation of the body trough a series of massage or exercises. A skilled staff or a physiotherapist is involved in the therapies and usually this kind of treatment take place in a gym inside the clinics or even in the patient's room.

The pharmaceutical approach
The goal of this approach is to decrease symptoms of the patient and is usually one of the first steps to calm down a patient before even start any other therapies.

Ergotherapy
This form of therapy works on daily life activity, which the patients have to learn or relearn improving motoric-functional, psycho-functional and sense-motoric abilities. This is usually a group activity therapy a re involved not only the patient but can involve some of the relatives of people familiar with the patients.

PSYCHIATRY TODAY IN SWEDEN

"In 1860 the Swedish Minister of Justice, G. A. von Sparre, made a speech at Royal Academy of Science on the measures made by the State for the care and treatment of the insane. It was a duty for the State to provide for the insane people, and the minister praised the self-sacrificing attitude of the State in its care for the insane. Of course, this description was rather dubious, being more ideological than historical. But it is very interesting to see that history can be used for political reasons, even when it is concerned with such an unglamorous thing as taking care of the mentally ill." 17

Before the main reform of 1980, the Swedish system was following the international trend of deinstitutionalisation in order to give back quality to patients' lives, but as in other countries, this created a series of unsolved situations in the treatment system.

"In the 1980s a so-called sectorisation of psychiatry was introduced, whereby each department was made responsible for both outpatient and in-patient care within a sector of the population. This facilitated targeted co-operation with neighbouring fields of care and various social inputs, leading to a rapid expansion of various forms of outpatient care."

"The beginning of the 90s brought the ÄDEL reform, as a result of which the greater portion of dementia care was hived off from psychiatry."

Reducing the number of patients that require assistance at the facilities helped to reduce the work load on the staff and increased the quality of the care, but at the same time some patients were denied the assistance or the treatment since considered less acute situations.

" The 1995 Psychiatry Reform, finally, affected some 10 or 15% of psychiatric patients and among other things meant the municipalities, through their social services, taking over responsibility for housing and occupational arrangements for this group of patients. The care units today are grouped into substantially sub-specialised caring chains comprising both in-patient and outpatient care and at the same time serving a geographically limited area ("sectorisation")." 18

With the reform the healthcare facilities could have focus only on the treatment and care of the patients while the housing and other activities were placed under social services and municipalities. This brought us to today situation where psychiatry practised is dived in what are called the "Inpatient & outpatient system" and the "Community & Social Services". While the first is run by hospitals, which are responding to the County and the Community, the second one is run directly by the municipalities, which are in charge of the services for mental ill patients. As services we can count work opportunity, daily activity, consultation and tutoring; of course for not seriously cases which does the Institute or Hospital treat.

*"Not surprisingly, then, mental illness tops the list of public spending, amounting in 1999 to MSEK 45,000, with circulatory disorders, locomotor disorders and then cancer as runners up."*18

The system leads to much exchanging of patients between the two systems and these may create some frictions if the municipalities are not able to handle the services or are not offering these kind of services, or the hospital doesn't rely on these kind of approaches and want to take care of all the treatments, case, this second one, that is really not realistic due to costs problems and staff lacking in the facilities.

So one of the main aim of the Psychiatry is try to find solutions within these two system to implement the services and make it work for the good of the patients; one of the solutions is to implement the outpatients system and help municipality building a system based on the local conditions to help patients in their daily ambience.

I & II. Human Approach with support and discussion
15. Architecture as Medicine / Maria Backlund
16. Architecture as Medicine / Erik Brenner

III. New Uppsala Psychiatric Unit / Tengbom / Uppsala / 2010
17. History of psychiatry in Sweden / R.Qvarsell
18. Architecture as Medicine / Erik Brenner

*"At the time of writing, more than one out of every ten Swedes is mentally ill, and yet there still exist prejudices causing many people to feel ashamed of their suffering and making them reluctant to seek care. Giving psychiatry a position of parity as one of many illnesses treated by specialists at the Östra Hospital will, it is hoped, counteracts such prejudice."*19

DISCUSSIONS IN PYSCHIATRY

Today both on international, national and local level there are different discussion going on about specific solutions, approaches, designs or staff attitudes that might influence, change or implement the psychiatric treatment results.

This is a list, with small description, of some of them, which I found more interesting for my personal knowledge and experience on the psychiatric field and my specific topic and design:

Inpatient / Outpatient system
The actual discussion is how to deal with the outpatient and inpatient and which solutions are going to be the best to solve the needs of the future psychiatry field. This specific topic has been discuss in the last years in different ways based on national trends and needs, while international researches are showing how the costs of inpatient system are not anymore sustainable for psychiatry.

Forced or Coercive Measures
The use of the force and coercive measures will be impossible to be removed from a unit in which people might be committed and so obliged to stay there against their will, so the discussion is now focus on how to avoid such kind of solutions when it's possible to deal in other way with aggressive patients. Most of the time the discussion even in the research is ending saying even the best design solutions won't be enough without a skilled team working in the unit able to understand and predict situations of danger or stress.

*"The justification for compulsory treatment rests on the idea that people who have a serious psychiatric disorder may be treated against their expressed wishes, if this is in their best interests or for the protection of themselves or others (Fulford & Hope 1994). It has been shown that patients may receive compulsory treatment but not experience coercion, whereas others experience coercion in voluntary care (Eriksson & Westrin 1995)."*20

Smoking in the Institutes
Most of the patients that have a mental illness are smokers or they become smoker after been committed of after entering a psychiatric unit due to several factors: biological, psychological, and social conditions. What some researches are trying to show is that the link between mental ill persons and smoke can be broken and that mental ill patient can overcome the smoke attitude, even during treatments and in the clinics. Of course the researches showed that a stronger will than usual and good care system are needed to quit smoking. 21

Nature presence in psychiatric unit
Of course as part of the healing process nature presence in the units is nowadays almost a must. Architects have been working on different solutions to place nature in the healthcare treatment facility, but the most effective seems to be the involving one. The patients that are involved in the vegetation caring are the most satisfied by its presence.

"Perhaps the patients can take part in the day-to-day tending of the garden? This would guarantee maintenance, give the patients access to the spaces concerned and serve a therapeutic purpose. Three birds with one stone. The choice of plants for the indoor environment is also important. Most often in a hospital environment one sees something growing rigidly straight up care units, or at the very worst something made of cloth or plastic. Plants should sway in the wind or have leaves which flutter from the draught when somebody walks by. One must be able to see that there is life in the plant – something which is is greatly and potently symbolic." 22

Lock and Unlock Units
The discussion about lock and unlock unit is not an easy answer one. Since some of the patients might get committed and force to stay at the clinic or institute they might try to escape, and at the same time in the very same building free willing patients can stay for their treatments.

"The advantages were categorized as: protects patients and staff from the outside (e.g. unwanted visitors, thieves), provides staff with control over the patients, provides patients with a secure and efficient care, provides staff with more time for patients." 23

*"The disadvantages were categorized as: makes patients feel confined, makes the patients feel dependent, makes the patients feel worse emotionally, cause extra work for staff, creates a non-caring environment, makes patients passive, makes staff's power obvious, causes concern for visitors, causes concerns about visitors' reactions, makes patients feel frustrated and forces patients to adapt to other patients' needs."*23

Should or should not be lock each door of the unit? Which one should be lock and which one not? Why if I'm in the clinic by my will should I not be able to walk around freely? These are some of the question that the discussion is trying to give an answer.

"A locked door may be provocative, reminiscent of prison and cause more anger and aggression than among patients at wards were permanently locked." 24

Open or Closed Nurse Station
The nurse station is considered to be one of the main gather points for patients seeking for staff or attention. They usually spend time around the nurse station looking for the staff or trying to understand what's going on behind the walls of the nurse station. Open or closed nurse station is a discussion that involves not only a social attitude but also security and a general attitude of the institute. While open nurse station are more exposed they give an idea of transparency between the nurses/doctors and the patients and a more human dialogue, at the same time the close station are safer but less open to a dialogue and show a sort of defensive attitude towards the patients.

19. Architecture as Medicine / Erik Brenner
20. Forced medication in psychiatric care: patient experiences and nurse perceptions/ K. Haglund, L. von Knorring & L. von Essen
21. Management of smoking in people with psychiatric disorders / D. M. Ziedonis & J. M. Williams

22. Architecture as Medicine / Maria Backlund
23. Psychiatric ward with locked doors- advantages and disadvantages according to nurse and mental health nurse assistants/ K. Haglund, L. von Knorring & L. von Essen

CASES STUDY

I've been looking at and visiting healthcare facilities and psychiatric units in order to understand the actual going on practise in the Nordic countries and all over the world. I've been trying to catch the main achievements and qualities of each case study.

These cases study are both Psychiatric and General or Specific Healthcare facilities in which a detail or an approach took my attention on specific problem-solution relationship or qualities and new way of designing.

I will introduce each of the design using the architects words or their website description trying to sum up at the end what I think they have managed to solve in a good way and what in a bad way. This approach will let you even judge later how far a firm want to go and where it has arrived. Unfortunately not al the project chosen are realized so for some of them I was able only to grasp to good aspects and I had difficulties getting a lot of bad solved points due to lack of final solutions.

Östra Hospital Psychiatric Unit

Göteborg
White Arkitekt
2010 /Building
Visit

"White's assignment to draw Östra Hospital's new Heathcare Building for acute psychiatry was much needed, having been run for far too long in outmoded premises at Lillhagen. At the same time, there is little scientific knowledge about how a good care environment should be designed. It is quite clear that the buildings' aesthetics and function play a major role in the recovery process. Unlike before, we have brought all categories of ward staff closer to the patient and we have also tried to create a more equal conversational environment by designing special chat rooms.

The wards are based upon three pillars: the garden, the heart and the residential group.

The Garden
A lush oasis surrounded by buildings. The program requirement's "sheltered outdoor area" has been given a freer role even for patients who are admitted for compulsory treatment. No staff escort is needed and some patients even have their own access to the garden. "We believe this is the single most important solution," says Stefan Lundin. "We started out with the goal of creating a free and open atmosphere, to avoid any associations with force and power," says Stefan Lundin, Lead Architect.

The heart
The central area of the ward department with living room, kitchen, dining room, and activity room and department station grouped around a small glazed conservatory.

Residential group
The traditional Swedish glazed veranda has inspired the common social corner in the residential group accommodating 4-5 people.

The residential group is visible from the "heart", but can be separated and used for patients with similar diagnoses.
With regard to the individual care rooms, the idea was to offer multiple spaces. The design is intended to gradually increase patients' personal space, from their own room, to the garden, café and public components, in order to finally "break the bubble" out to us, and to a normal life." 24

Good / Interesting
Gardens
Central light courtyard in the unit
Entrance Material

Bad / Limits
Not well-solved entrance
Outside quite massive impression

I. One of the courtyards of the building
II. Day room
III. Patient's Room
IV.Covered courtyard in the unit
24.White Website


I


II


III

Uppsala new Psychiatry Building,

Uppsala
Tengbom
2010
Building
Visit

"The new building is a long continuous structure with a large skylit courtyard at its core and two smaller courtyards. The lower level includes the emergency room/intensive care, a psychiatric observation ward, and somatic care services. At the entrance level the important general- and public functions like information, a library, restaurant, café, lecture hall, teaching rooms, and a waiting area are located. Floors 1-4 include in-patient and outpatient care. Research and teaching rooms are distributed among all the floors. Workplaces for the various departments and patient care areas, as well as group rooms for research and education, are located near each other and around the courtyards. Vertically the building's structure is in principle identical on each floor level. "25

Good / Interesting
Challenging Building
Courtyard Material and Feeling
Outpatients System
Landscape office solution

Bad / Limits
Hotel Feeling
Not well-solved Entrance
Room Design & Furniture

Helsingor Psychiatric Hospital

Helsingor /Denmark
Bjarke Ingels Group and JDS
2006
Building

"Contextual disguising Grounding Ellsinore Psychiatric Clinic on 2 different levels makes the building literally grow into the green and hilly landscape. Half hidden in nature the clinic thus avoids spoiling the view from the existing somatic hospital and at the same time provides its users with a multitude of experiences of the lake and woods. The roof construction of the building is another key element in the clinic's contextual disguise. At places where the building is half rooted underground the green lawn slips over the roof, this way making the clinic a natural environment for the cure of mental illness.

To many psychiatric patients a safe and calm environment is crucial to their well-being. Surroundings, that reminds them of their illness, cause instability and the feeling of being insecure. Besides, to meet the requirements of modern psychiatric treatment, an architectural redefinition of the traditional hospital typology was necessary. In the design concept for Ellsinore Psychiatric Clinic we have avoided all clinical stereotypes: the traditional hospital hallway without windows and rooms on both sides; artificial easy-cleaning materials like plastic paint, linoleum floors or ceilings made of gypsum, etc.

Functionally the psychiatric clinic is organized into 2 main programs: a program for living and a program for treatment. The two parts consist of many different and individual functions that nevertheless must work together. First we carefully designed each program and then transformed them into an integrated, but differential whole. By using a clover structure in organizing the residential program we managed to orient each patient's room toward its own part of the landscape - two sets of rooms facing the lake, and one set of rooms facing the surrounding hills.

That way the intimate living program has been folded into the landscape being on a level with the lake. Between the functions emerges a new collective space that is embraced by offices and bed units, and populated by small patios. The public treatment program on the other hand is placed on a level with the existing hospital and is organized as 5 individual pavilions, combined into a snowflake structure by the central space. Day sections, outpatient's clinic and department of district psychiatry gather around the arrival areas. The individual units contain offices and treatment rooms to one side and waiting areas to the other side.

All parts of the building are fused at one single point, right above the center of the clover structure. The galleries of the treatment program propagate as a snowflake crystal in all directions and in varying lengths according to the size of the individual units. One of the galleries breaks off as a bridge to the existing hospital and becomes a flexible structure for expansion due to future development and needs." 26

Good / Interesting
Control over Patients
Easy Connection System

Bad / Limits
Rather small outside spaces


IV


V


VI


VII

I. Waiting Room
II. Patient's Room Furtniture
III. External Facade
25.Tengbom Website

IV. Model of the building
V. Day Room
VI. Common Space
VII. Day Room Detail about the Glass Facade
26. BIG & JDS Arkitekt Website

Health Care Center for Cancer patients

Copenhagen
Nord Architects
2011
Building

"Nord Architects is not unfamiliar with reinventing institutions. They are almost the ghost busters of Danish architecture. The guys you call in when you are tired of looking at the same old bricks and need to reshuffle your organization. The healthcare center is no exception.

The demand was clear and simple: create a healthcare center, which is more like a home and less like a hospital. The building should be iconic and create awareness of cancer without stigmatizing the patients. In many ways a contradiction in terms, but Nord Architects solved the puzzle by designing a series of smaller houses shaped like traditional houses. A raised folded roof shaped like the Japanese paper art origami then connected the houses. In that way the building becomes a landmark with plenty of space without losing the comforting scale for the individual.

"As a new cancer patient it can be a great hurdle to come to the center and take on your new identity as a cancer patient. Therefore we have done a lot to make the building as warm and welcoming as possible. There are no large reception areas and no secretaries. You enter through a lounge area and are welcomed by volunteers who help you get the assistance you need. The volunteers are all people who have dealt with cancer, so they know some of the feelings you are going through"

Like the monasteries the healthcare center has an inner courtyard where you sit in silence and meditate. Other activities include patient groups, psychologists, groups for relatives and advice groups run by the Danish Cancer Society.

The house also offers activities such as climbing and training:

"Many young people have cancer and it is important for them to know that rehabilitation is not only about resting. They can also be very active and actually it is quite good for them. Therefore the building offers a range of psychical activities. There are also kitchens where people gather to cook and learn how to make healthy food. Food is a very important when you have cancer, because you often lose your appetite during the chemo therapy. Knowing what to cook and how to make it delicious can help recovery" 27

Good / Interesting
Alternative Design
Home Feeling
Protection
Material Quality

Bad / Limits
Too irregular insied for a Psychiatric building
Irregular windows - scary

Extension of Helsingborg Hospital

Helsingborg
Schmidt hammer lassen architects / Aarhus Arkitekterne / NNE Pharmaplan

Competition

"The extension of Helsingborg Hospital is designed as a single building, whose architecture relates both to the existing hospital and the surrounding city. The building houses three areas of activity: the out-patient clinic and laboratories in the lower and compact levels of the building, while the top levels containing the psychiatric ward open up to a more transparent structure.

Key to the whole design has been flexibility, a clear layout, variety, human scale, green courtyards and optimal conditions for daylight.

The building is flexible and therefore sustainable with regards to future demands for changing use and functions. It has a uniform sculptural expression, which adapts to the various functionality needs but at the same time corresponds with the scale of the surrounding buildings. The shifting and indented façade creates varying spaces and makes it possible to adapt the structure with open and closed parts depending on the functions behind it.

A hallway makes up the spine of the building and gathers together the different functions in a clear fashion. It has the double function of a dynamic urban street with a fine net of intersections, squares and views to green courtyards.

In the psychiatric ward, the emphasis is on an environment that allows for both relaxation and activities. This will have both a calming and inspiring effect on the patients, who are thereby challenged in a secure setting. The layout of the ward is clear, and the green roofs establish a distinct, undisturbed landscape. The composition of the bed wards creates sheltered, inner courtyards signalling calm and

I. Common Open Space
II. Particular Roof
III. Different Openings
27. Nord's Architects Website

IV. Bird view of the extenstion
V. Exterior Facade
VI.Patient's Room
VII. Courtyard
28. Schmidt Hammer Lassen architects Website

I

II

III

New Forensic Psychiatry Facility

Trelleborg / Sweden
BSK Architects
2012
Competition

"Region Skåne launched in 2011 an architectural competition for a new forensic psychiatric facility in Trelleborg - a cohesive unit and the center for forensic psychiatry in Skåne. The goal has been to innovate and develop business with safe and good working environment for staff , combined with a healing care environment for patients.

Four agencies were invited to participate in the competition . BSK Architects won with his entry " Frontline " - a name that alludes to a forward-looking vision on both welfare and architecture. The new facility is important for Trelleborg city and will offer 150 new jobs when completed .

BSK Architects' proposal was based on the idea of space, light and nature, both outside the window and under the feet , provides the basis for a healing care environment . Meanwhile, it was also important to provide a safe and efficient working environment. All houses should have a balance between privacy , visibility and proximity to staff.

The building will consist of three wings on two floors , gathered around a common courtyard . The different wings have separate activities for patient departments , rehab respective staff and visitors. All moves around the common yard , but only in their own part of the plant.

All parts of the new building is imbued with high environmental standards and sustainability. The technical design is aimed at minimizing energy consumption. The facility will also be the largest so-called passive house in Sweden and the first to be built for health care operations." 29

Good / Interesting
Outside spaces quality
Roof Design

I & II. Model of the Project
III. Plan
29.BSK Architects Website

Maggie's Gartnavel

OMA

Building

"The aim of a Maggie's is to provide an environment of practical and emotional support for people with cancer, their families and friends. Since the opening of the first Maggie's in Edinburgh in 1996, the Maggie's Cancer Caring Centres foundation has grown substantially, commissioning and developing a series of innovative buildings designed by world class architects.

While contemporary architecture has a reputation, deservedly or not, for being at times cold or alienating, the goal of each Maggie's – whether in Glasgow, London, or Hong Kong – is to provide a space where people feel at home and cared for, a space that is warm, receptive, and welcoming. Maggie's rely on the fundamental precept, often overlooked, that exceptional architecture and innovative spaces can make people feel better – thereby kindling the curiosity and imagination fundamental to feeling alive. Grand in their ambitions, but designed on a small scale, Maggie's provide a welcome respite from typical institutional hospital architecture.

Their spaces are more than merely functional; they serve as a haven for those receiving treatment. In creating a place to connect and learn from others who are going through similar experiences, Maggie's help patients to develop their sense of confidence and resourcefulness. In 2007, Maggie's approached OMA to design a new centre on the grounds of Gartnavel hospital in Glasgow, close to the Beatson West of Scotland Cancer Centre. OMA designed a single-level building in the form of a ring of interlocking rooms surrounding an internal landscaped courtyard. Seemingly haphazardly arranged, the building is actually a careful composition of spaces responding to the needs of a Maggie's and providing a refuge for those coping with cancer.

Instead of a series isolated rooms, the building is designed as a sequence of interconnected L-shaped figures in plan that create clearly distinguished areas – an arrangement that minimises the need for corridors and hallways and allows the rooms to flow. The plan has been organized for the spaces to feel casual, almost carefree, allowing one to feel at ease and at home, part of an empathetic community of people. At the same time the design also provides spaces for more personal moments – either in the intimate setting of the counselling rooms, or in smaller nooks and private spaces.

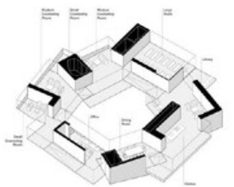
Located in a natural setting, like a pavilion in the woods, the building is both introverted and extroverted: each space has a relationship either to the internal courtyard or to the surrounding woodland and greenery, while certain moments provide views of Glasgow beyond. With a flat roof and floor levels that respond to the natural topography, the rooms vary in height, with the more intimate areas programmed for private uses such as counselling, and more open and spacious zones for communal use. More than any other space, the internal courtyard provides a place of sanctuary and respite." 30

Good / Interesting
Leading concept
Nature Connection
Interiors Solution

Bad / Limits
Small-scale example

IV

V



VI

VII

IV. Courtyard
V. Entrance
VI. Axonometry
VII. Meditation Room
30. OMA & Maggie's Association Website

Psychiatric centre Friedrichshafen

HUBER STAUDT ARCHITEKTEN

Building

"The new psychiatric center lies embedded into the campus of Friedrichshafen Hospital and follows the picturesque, orchard-laden, natural slope of the hill towards Lake Constance. The building encloses a generously dimensioned green courtyard and exploits typologically the contour of the hillside by providing entrances on two different levels. A wide spanning bridge frames the generous view into the undulating landscape and helps to emphasize the natural slope even within the sheltered courtyard. The psychiatric center can be easily perceived from the landscape while enabling picturesque views of the countryside from within. Large central therapy rooms with direct access to the patients' garden are arranged on the lower floor by exploiting the possibilities of natural illumination along the slope.

The main building of the hospital, constructed in the 1960s, dominates the extensive grounds of the campus. The adjacent singular buildings of both the Kindergarten and the residential developments relate orthogonally to the hospital. The proposed expansion of the campus through the Mother-Child Centre, the Medical Centre and the Radiotherapy Centre emphasize in their orientation the pedestrian-friendly character of the campus. The new Psychiatric Centre arranges itself as a significant figure in this system. The entrance area between the new build and the existing hospital provides a high level of amenity and invites patients, visitors and employees of the hospital to linger.

The two materials, fair-faced concrete and untreated wood, dominate the surfaces of the building both internally and externally. Concrete is treated in a sophisticated way: large flat board-marked concrete surfaces and fine horizontal linear prefabricated elements, corresponding with the vertical fins of the wooden cladding. The timber cladding is made of untreated silver fir as a reference to the local building tradition, particularly in the nearby Vorarlberg region of Austria. The vertical cladding, comprised of untreated wooden profiles, lends the building, through its transparency, an airy and open appearance."[31]

Good / Interesting
Home feeling
Material Contrast

I. Outside of the clinic
II. Interior Common Space
III. Dining Room
31. Schmidt Hammer Lassen architects Website

New Correctional facility in Nuuk

Nuuk / Greenland
Shmidt Hammer Lassen architects & Frils & Moltke

Competition

"In the design for the New correctional facility in Nuuk, the contrast between beauty and roughness is a guiding theme. Openness, light, views, security and flexibility are the leading values behind the design of the 8,000 square metre correctional facility in the capital of Greenland.

The project matches the unique and beautiful surroundings and supports the focus of the Danish Prison and Probation Service on the balance between punishment and rehabilitation. The belief that the physical surroundings have an important impact on human behaviour and the will to collaborate has motivated the client to initiate a project of high architectural quality. Moreover, the competition aimed at creating a good working environment for the employees.

The project consists of five residential units with rooms for 76 inmates, in both a 'closed' and an 'open' section. The project also includes work and leisure facilities as well as spaces for visitors to the inmates. In addition, there is an administration division and various technical and security installations.

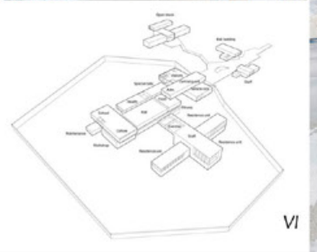
Architecturally the facility is composed of accurately shaped blocks, which in their positioning follow the natural contours of the rocky landscape. In appreciation of the lines and character of the landscape, the orientation and scale of the project makes the building appear subordinate to its surroundings. It will be a place with an identity – a small, well-defined area in a magnificent and vast natural setting.

The design of the residential units offers an experience of the changing daylight and the surroundings. The contrasts of nature – snow, ice, rocks, moss, blue sky, sun, night, day, birds and other animals – are brought into the complex by the way the buildings are arranged in relation to each other. Thus, a panoramic window in the common lounge area carries nature into each residential unit, and the inmates have an unrestricted view towards the landscape from the windows in their cells.

The contrast between beauty and roughness is also present in the choice of materials: concrete, wood and corten steel. The choice of materials is rooted in a desire to adapt the complex to the landscape.

New correctional facility in Nuuk is the first such facility in Greenland."[32]

Good / Interesting
Material
Landscape Integration



IV. Exteriot Views
V. Interior Common Space
VI. Axonometry
VII. Main Entrance & Exteriors
32. Schmidt Hammer Lassen architects Website

MY PERSONAL READING OF THE PSYCHIATRY

This short part of the text will be focus more on my personal thoughts about psychiatry and I've been perceived the subject and how I perceive it as an architect.

Since the very first being of the thesis, even when I was choosing the topic and which one of the proposed thesis I would have worked with Psychiatry was the one that attracted me most because of the mysterious fog that surrounds it due to the general and common knowledge that I have and in general people have about psychiatry due to movies, books and myths.

*"The most vivid recollection from that time is that the care unit had in-patients with psychotic tendencies, with the result that conditions in the care unit could get really turbulent from time to time."*33

This field of medicine is not well known and can be scary to people who doesn't know what we are talking about. I immediately started removing all my restraints on the subject, such as fear and misjudgements or prejudges; I refresh my mind and let my personal experience and specific literature to introduce me to the topic.

I've start learning how as any other field of the nowadays medicine most of the attention has been focused on the single patient and his/her feelings, emotions, perceptions and illness.

"I remember sitting on a chair that scraped when you moved it, outside a hatch to the office. Inside the hatch a mental nurse sat making notes as I described my symptoms. The office was just inside the outer doors, which ruled out any form of seclusion and privacy, with people coming in and going out all the time, and it was very unpleasant, sitting there describing one's situation in life. And every time the door opened a gist of cold air accentuated what I was already feeling deep down inside."33

Psychiatry is not anymore a close cage for disturbed people how someone can imagine after watching moving like "One flew over the Cukoo's nest" or similar movies in which the instate were described and visualized as prisons, as they were in the past.

Today my personal experience, short so far, but enough intense and real to let me judge this medicine field as full of contradictions and difficult decisions, especially when dealing with person that have troubles with their minds.

At the same I got to know how important is the ambience where the treatment take place since it's expression of the way in which the institute or hospital want to deal with the patient and how they are considering the treatment process.

"Interior design features are the less permanent aspects of the hospital environment. Planning for interior design should take into account the unit's symbolic meaning or the set of messages that the environment sends to its users. One of the most consistent recommendations in the body of literature on psychiatric hospital design is the importance of reducing the institutional feel of the facility and incorporating a homelike environment whenever possible. This type of atmosphere has been associated with enhanced emotional and intellectual well-being and improved patient behavior. Medical staff have also been noted to prefer non-institutional environments." 34

So as an architect I'm been dealing with the same questions from the beginning of my process:

What kind of message do I want to give to patients, staff or visitors?
How do I think this will influence patients, staff or visitors?
What are my limit as architect to influence the daily activity of Pyschiatry?

PROJECT INTRO

Profession Approach

The Adult Psychiatry Unit of Sunderbyn Hospital has a vision to be a model for psychiatry in Sweden. The ethical platform and prioritization Commission's underlying principles guide the division's work.

The priorities should be based on three basic ethical principles:

Human dignity: all people are of equal value and equal rights, regardless of personal characteristics and function in society.

The need and solidarity: resources should primarily be allocated to the areas of greatest need.

Cost effectiveness: efforts should be a reasonable relationship between cost and effectiveness when choosing between activities or actions, in terms of health and quality.

"Coming to a less threatening and more open environment located in the midst of the community and not set apart from it will in turn counteract various persistent fantasies and prejudices concerning mental patients." 35

Actual Building Facility

Adult Psychiatry in Sunderby serves an area equivalent to six municipalities: Luleå, Kalix, Överkalix , Haparanda and Övertorneå. During on-call hours (evenings, nights and weekends) with the catchment is expanded to include in Piteå, which corresponds to an additional four municipalities: Piteå , Arvidsjaur, Älvsbyn and Arjeplog.

Current adult Psychiatry building is named BY 105.

It stands North West from the main entrance. It extends with approximately 6000 sqm distributed on three levels but the premises of the department are not optimal for the task.

The design involves many nooks and crannies, which the structure will allow the department, which are difficult to monitor. A further complicating factor is that the patients in the current design of the department can move and reside throughout the healthcare environment. It also makes it difficult to cater to the different patient groups' needs. Man forced to shuffle patients who would benefit from being cared for separately. Patients with an acute psychiatric care along with general psychiatric patients and newly diagnosed in the same care setting as patients admitted for substance abuse and addiction indications. The acute psychiatric patients have in their several degrees of care needs that need to be distinguished in the care environment.

The department was originally built for 18 beds and has in recent years expanded to 24 locations on the same surface. A densification from 18 to 24 beds is already a form of overcrowding in existing premises.

In February 2011 the numbers of beds increased from 24 to 32 beds due to high occupancy in the ward for a long time. The consistently high occupancy of the department has meant that patients could only be entered in acute conditions and projected enrolments not been possible. Outpatient care has had a requirement to plan the care that needs inpatient decreases.

At the same time part of the Psychiatry activities take place in a temporary pavilion, which stands North West from the BY 105. In this temporary facility part of the Outpatient system has been located.

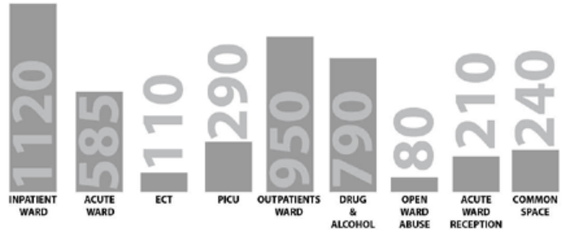
I

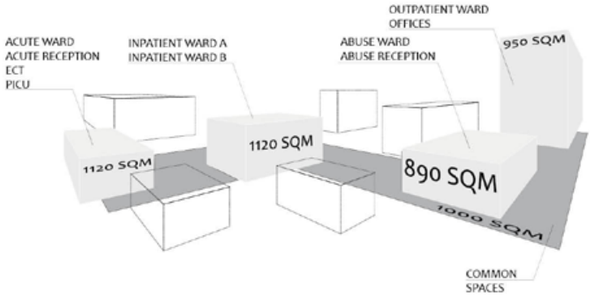
II

33. Architecture as Medicine / Maria Backlund
34. Environmental and Therapeutic Issues in Psychiatric Hospital - Design: Toward Best Practices / B. E. Karlin & R. A. Zeiss

I & II. Psychiatric Building

	2001	2001
Inpatient	218	97
Outpatient	517	1174
Total	735	1271





Today Activities

The daily activities influence the design and the space of the old facility and will take big part in the design of the new facility and that's why it's important to focus on what kind of service is supposed to take place in the new building.

While in the past the Inpatient system was taking most of the effort nowadays there's a change towards Outpatient and Acute system, which means a change in the building and way of working.

The introduction of the Outpatient system has been thought after reflecting on costs and effectiveness of some of Inpatients approaches in Luleå. The specific aim of Sunderbyn Hospital is to give more space in the future facility, to some of the Outpatient activities that nowadays are located in Luleå municipality.

This table on the left shows how is changing even today the system in the Psychiatry Unit of Sunderbyn Hospital; moving from Inpatient to Outpatient system. 36

One of the main challenge will be how to shape a building that in future will be able to move from Inpatient to Outpatient system more and more and expand, without rebuilding a new one like is happening right now.

Program

After meeting the Psychiatry and Management Team at the beginning of January 2014 I received what they call the "Program" of the future building. This program has been developed in collaboration with SWECO Architects and several workers both from the Management and Psychiatry Units.

The "Program" is a Programmatic approach to the planning of the future facility. The teams have placed on a table all the rooms necessary, with dimensions, without taking care of technical, outdoor and connective spaces; they ended up with 4000 sqm programmatic Program.

After the Steering Group review of the group's work, it revealed a need for:
- Two general psychiatric units with 10 seats each. 1120 sqm
- Acute psychiatric unit 10 locations associated with PICU device / 585 sqm
- A PICU unit with six locations / 280 sqm
- An emergency unit with psychiatric and addiction targeting / 210 sqm
- An ECT care units / 150 sqm
- An entity with common facilities for the specified devices / 300-500 sqm
- An Unit for Drug & Alcohol Abuse both Inpatient and Outpatients / 880 sqm

From this "Program" I started working on the concept and the design of the New Psychiatric Building, both trying to following the instruction given and to challenge them in order to question some of the rules and the limits.

My aim was to give them back not only a project but also create some new questions and thoughts about how they deal with everyday activities and how they can implement their way of work in the Psychiatric field.

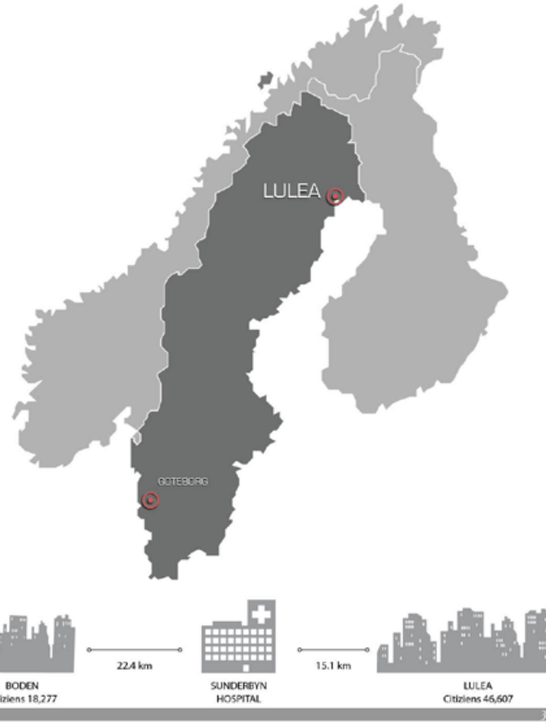
36. Data from the Pyschiatric Unit Report of Sunderbyn Hospital

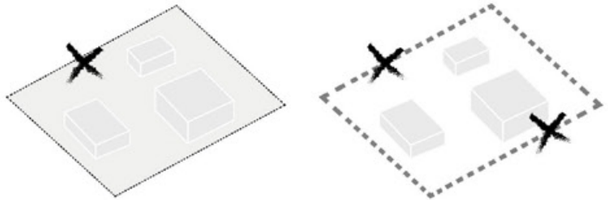
SITE

The city & Hospital Position

Luleå is situated close to the Baltic Sea while Sunderbyn Hospital has been built in-between Boden and Luleå, so 30 km form the coast in the middle of a forest close to the main highway that connects Boden and Luleå. The decision about the positioning was taken based on the idea of placing the new hospital at halfway from Boden and Luleå in order to solve a big political discussion between the two cities.

As results the hospital is not at all a city hospital but more a far city located institute which can enjoy the calm of the forest that surrounds the facilities but this means a lack of really fast connection how it could have been present in a city contest.





The Building Area

The site I've chosen is situated North West from the main entrance and is closed to the North Gate of the Hospital.

It's a rather flat area whit only 1 meter of altitude gap between the zone close to the hospital and the one far from it. The area is also facing the forest South West and North. It's a really quiet and calm area in which nature is really strong in presence and visual contact. It's also present an artificial lake close to the new future facility's area.

The main accesses to the area are a street coming from North West, the North Gate and the outdoor paths system that spread all over the open spaces facing the forest.

There was no specific limit or indication about this specific spot so I was free to spread on the area as I think is the best for solving the program given. At the same time I was aware of trying to limit myself

in order to save space for further developments or implementations; keeping this in mind my project is using a fair amount of sqm of the site to solve the program and it takes in consideration future possibilities.

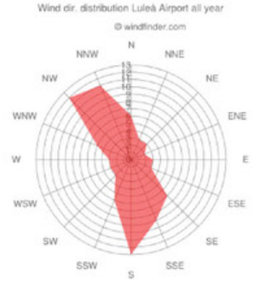
Climate Conditions

Luleå has a subarctic climate, which borders on a continental climate: with short, mild to warm summers and long, cold, snowy winters.

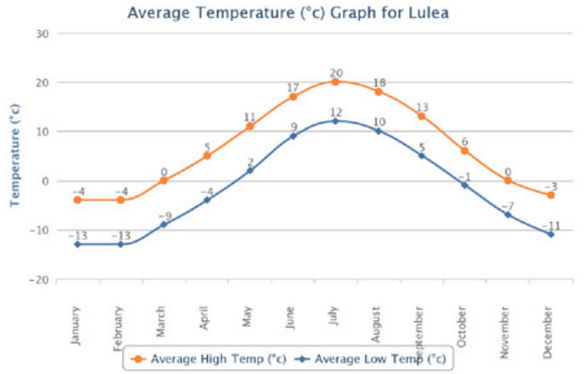
The area can benefit of the sun facing South without any building presence, but at the same time this make of it a rather windy spot with winds coming generally form North or South.

One of the main problems of this area, and this northern region, are precipitations, both in form of rain or snow, and the presence of the second one mostly all over the autumn, winter and spring; usually from October to beginning of May.

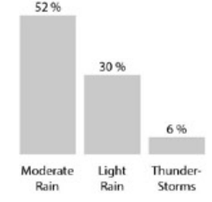
The temperature can be between -10°C and + 20°C, with extreme minimums of -25°C and maximums of + 25°C.



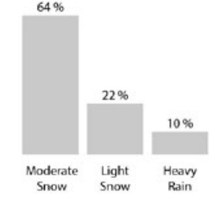
Wind Directions During the Year



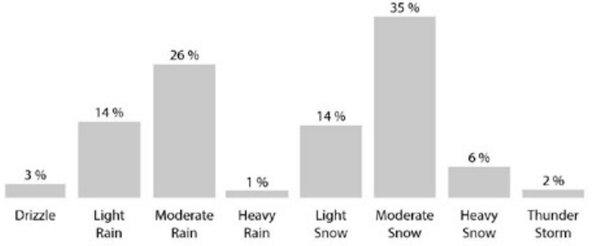
Average Temperature Values



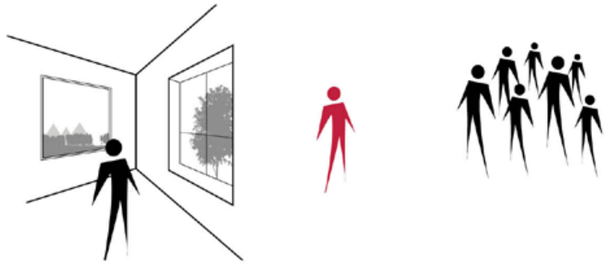
Summer Precipitations

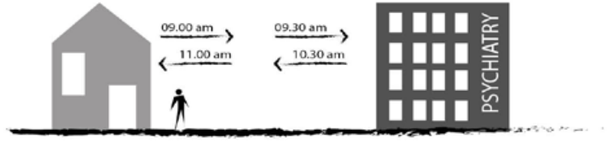


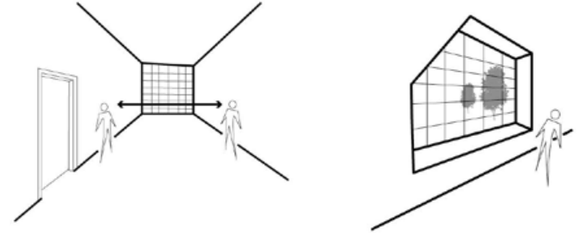
Winter Precipitations



Kind of Precipitations







PROJECT

Introduction of Concepts

My project evolved on several concepts that I will introduce and describe now in order to get an idea on how I've answered some questions and thoughts mentioned before in the text.

The main idea is to design a building that is able to change psychiatry perception and show it as any other illness and at the same time a form of architecture able to share with the patients experience and quiet atmospheres.

"The first thing one sees – whether as patient, member of staff or visitor – is the exterior of the building. This is the first signal transmitted to the person approaching. A beautiful building with care devoted to its design and materials conveys a sense of people having given the matter thought and signals: "I count for something." Psychiatry has long been a low-status speciality, even among other medical specialties, and this of course is also reflected by the image the staff have of themselves and the role they play." 37

The project is based on the concept of four stones (the units) and a river (the common space): the units are the four elements close on themselves and focus on the patients inside the unit but in contact between them thanks to the common element, which connects them physically.

In my process I've been working with several concepts and ideas that came out from articles, researches, discussion with Sunderbyn Hospital , from my tutor and other students; I will now go trough some of them trying to explain how they have influenced me and my design.

Stigmatization
Mental illness as been always subject to stigmatization due to general knowledge about the illness and prejudges. One of my first concept was to design a building able to break this condition and able to dialogue with the world about patients conditions and show itself as a building as any other, without specific restrictions due to the patients. Open up as much as possible part of the daily activities of the psychiatry unit has been a main effort from the beginning in order to show the normality of mental illness.

*"But is complete anonymity to be insisted on if we want to alleviate prejudice and stigmatization where psychiatry is concerned?"*38

Healing Process
"How many do not feel more inner tranquillity when close to still waters or a whispering woodland?" 37

The concept of healing process is now part of most healthcare facilities due to a lot of researches that are showing how important is the ambience and atmosphere in which staff are working and patients are being cured. For my personal approach I've always believe that nature contact is really important even in daily activities so the idea of bringing nature and light in the building as one of the main actor of the unit core was present since the very beginning of the design. I've been using the courtyard and the garden as the core element of the units since the first sketches arguing that such kind of space would have benefit the all building giving qualities in term of space and experience.

Landscape Relationship
I have a particular interest for landscape design and landscape relationship and so in all my project I tried to gain as much as possible, in term of references and qualities, form the space surrounding my building. In this specific situation the area chosen for the new building hadn't any particular terrain conditions but it had a presence that was and is surrounding the site: the forest. My project tries to gain as much as possible from the view and the visual contact with it and with the outdoor spaces that exist close to the site.

Personalise
As human beings we are all different and we all seek for different spaces and qualities, even if some of us are looking for similar qualities, the ideas that everyone of us is looking for a personal space to rely on is really strong in my design. The building is not looking to create thousands of different space but more for letting people take care of the spaces and personalise them or looking for their own spot.

Security & Coercion
The staffs is not always able to handle the patients without physical restrictions or coercive measures, but what I believe and a lot of researches have been showing is that the ambience together with the staffs attitude can help reduce such kind of situations in which coercive measures or aggressive attitude came out due to stress. The design has been focus on giving a space able to remove situation of stress and giving an ambience quality able to distress tensions.

*"Patients in a psychiatric care unit will by confronted in the course of their stay by people with a variety of problems and difficulties. Some of these confrontations occasionally lead to aggressiveness and even physical violence. Units with a fairly small number of patient equivalents (12-14 beds) and opportunities for seclusion can be a way of eliminating these risks. If, additionally, one can offer a range of opportunities for socialisation/non-socialisation, one can be certain of the ingredients of a secure and tranquil environment being in place."*39

Socialize & Retreat
Being a mental ill patient can be really stressful and not easy at all to handle it alone, and here it comes the others help. Not everyone is enjoying company and social life in psychiatric clinic or unit but it helps people overcoming situation and sharing experience and enjoying a little bit of the stay at such kind of hospital. My design is not forcing anyone to be social or to have daily contacts with others but is enhancing meeting situations and sharing possibilities giving at anyone the possibility to retreat back to his/her room.

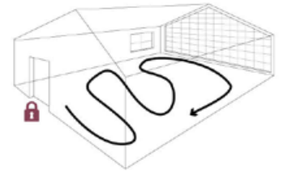
Easy visual contact
This concept is highly related with control and safety of the unit and as well with time consuming of staff about checking on patient's location in the building. The design should improve the visual contact between staff and patient in order help the staff saving time and let them focus on assisting the patients and at the same time for the patient to feel staff presence; patients need to know that the staff is checking on them and they are caring about them.

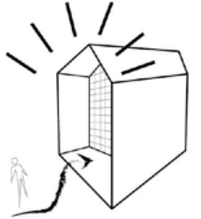
Welcoming & Clear space
Mental ill patients can be vulnerable due their conditions and to their insecure status. They can spend time wondering what's happening to their mind and life and so they don't need to be stressed or confused by the design or ambience in which they lived their stay at the hospital. The design should be able to let the patients feel comfortable and "home".

*"But what impression is the environment to make – homelike, cosy or professional? Probably professional in the treatment situation and more cosy for caring and residence, but it can be hard to pin down the qualities making one environment homelike or cosy and another professional. Most often, though, a consensus of perception is not hard to find."*40

Freedom & Control
These two words are not easy to be combined not even on a conceptual level but what I've been trying in my master's thesis is to combine these two terms giving freedom in each single unit locking the main entrance door and leaving the patients with a sort of freedom inside the block

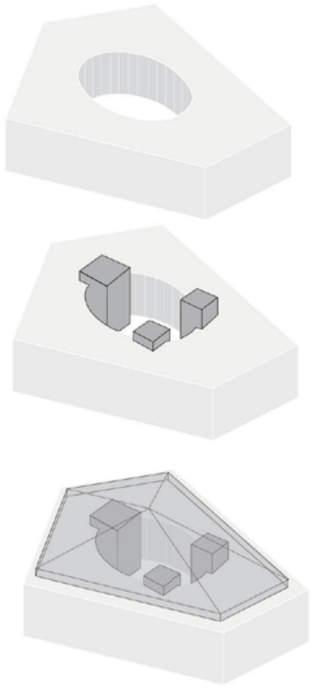
"The desire for a care unit, which will be experienced as open, is coupled with the need for a care unit which will be closed and locked. The desire to give the patient an identity of his or her own and the ability to choose, for example, between seclusion and sociability,





37. Architecture as Medicine / Lena Walther
38. Architecture as Medicine / Stefan Lundin

39. Architecture as Medicine / Lena Walther
40. Architecture as Medicine / Stefan Lundin



is coupled with the staff's need to know the patients' whereabouts."41

All these concepts and other not mentioned here were part of a step forward and coming back process, which takes 3-4 months to stabilize in a shape and architectural solutions. Each of these elements were a base for my personal decision and declaration on what kind of design I wanted to achieve.

Description

"You don't design or construct a building first and then add the colour and shape as an afterthought." 41

The building from outside doesn't look like a series of repeated elements thanks to the rotation of each unit, which appear to be unique and different. The four blocks or units, want to express protection towards the inside space with a rather close and regular façade, which might look like an operation of closing up the building on itself, but the responsibility of the relationship with the outside world has been given to the common spaces, which will handle the first meeting between the patient and the new building.

"Other patients, like the staff, also demand protection from patients with acting-out behaviour within the care unit itself, added to which, patients need in certain cases to be protected from their own self-destructive behaviour, the ultimate consequence of which is attempted suicide."41

The common block takes together the four blocks facing the outside with a wood façade towards North, West and the street access while it will open up to the South and the forest with a continuous glass façade. This operation on the materiality of the common block, in contrast with the units shingles façade, will make it easier for the visitors to walk around the common ground and facing this space as a public and totally open space; at the same this will let common space be a light and enjoyable public space, opening the façade to the sun and the nature view.

Walking from the entrance a visitor will be facing first the main reception, design as a low desk solution with light coming form above, and then will start facing the rest of the space. This operation have been done to make it clear where to go at the first moment and at the same time be aware of what's happening in the overall common space.

"Not infrequently, the entrance situation has been a neglected point in psychiatry. Descriptions from the world of psychiatry testify to obscure, shabby entrances next to loading bays and waste bin rooms. This has the effect of degrading the patient, making him or her feel unworthy of neatness and a decent reception. Basically, the thing is to make it as simple as possible for the patient to seek care."41

The common ground has several activities going on due to the public approach; between these activities I can list a library, three conference rooms, two cafes, to quiet rooms, a meeting room, two children meeting rooms, staff relax and eating place, a patient gym and toilets. This block is supposed to be the open part towards the outside, will be unlock all day long and is connected trough the North Gate with the hospital. The common ground or "river" will be the main spot of sharing and meeting between patient, visitors, doctors and people from outside with the Psychiatry.

After receiving instructions where to go or after have taken a coffee close to the entrance a patient or a visitor will go to his/her destination, which mean entering one of the four units. The entrance of each block has been design in the same way to make it clear where are the four main entrance, with a portal bouncing from the unit façade and welcoming the visitor or patient. One inside the patient will be facing another kind of space with more regard to the protection and private ambience.

Unit Axonometry / Elliptical Courtyard / Inner Rooms / Glass Cover
41. Architecture as Medicine / Stefan Lundin

Each unit has the same structure with rooms on the pentagonal perimeter and a central elliptical garden, which is the main actor of the space in term of quality. Three-square rooms have been designed on the elliptical garden perimeter in order to break apart the elliptical glass façade and create a series of ambience inside, instead of a single big ambience.

The units have the same structural solutions but the flexibility of the design will let the staff in the future change the actual design of the outer rooms to fit new needs. Even now the rooms following the pentagonal perimeter are not always placed in the same way in each unit, due to different specific programs; this is a prove that the unit is able to adapt to different requests and situations and able to react changing to fit the best response to a daily activity change. There are only two elements, which can't be changed or moved and these are the main stairs with an elevator, the fire staircase and the three inner square rooms. Except these elements the rest of the room are defined by internal walls, which can be moved, removed or changed, based on future programs.

I've been working on the possibility to access it freely the unit without asking permission to the staff and moving around the unit without being followed by a doctor or nurse. So the elliptical solution came out to be the best answer to problem such as control & overview of patients, avoiding dead-end corridors, soft ambience feeling, freedom to walk around the unit and creating a series of different space qualities. The spaces around the elliptical glass façade will be design as day room or casual meeting place for staff and patients; a wood seating solution will be place all over the round façade to let people sitting and have conversation in each point of the unit avoiding to force people to gather in a specific spot.

One of the main ideas of the unit design was to give everyone a favourite spot or place where to go, without forcing patients to stay together all the time but enhancing them with the power to decide whenever gather together or be alone. I was always keeping in mind the freedom is one of the main problems in a lock unit, where a patient loose his/her ability to decide whatever to do or to wherever to go due to the control of the staff.

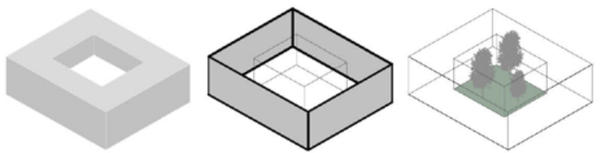
So in order to let patient be free and staff to check on them one of the three square rooms placed on the elliptical garden façade has been dedicated to a staff, nurse and control room, which has the position to both look at the central space, be a point of relax and break and let staff have a safe space where to retreat in case of threat.

Another unit's aspect that is constant in all of them, even if the specific programs are different is the ceiling heights, with a transition from 2.8 m in the rooms to 3.5 m Max in the common spaces. The rooms have 2.8 m, as standard, while just outside the patient's rooms a gap of 1 m will be 2.5 to create a protection and safe feeling in the patients while getting out the rooms. The rest of the space will have the ceiling going from 3.0 m up to 3.5 m high based on how close they are to the elliptical façade, since the concept is to open up the unit towards the core of the unit: the garden or courtyard.

As said above the central element of the unit is the garden. This space will be a moment of break and relax from the daily activities and routine of the unit, both for patients and staff: they will be able to get in the garden and look for a private or personal spot where have time for themselves.

The garden has three accesses, which let the patient to enter the space from one side of the unit and get out from the other making it more clear how much free they are to decide where to go. At the same time this solution will avoid situation of frictions between patients, which will be able to choose from where get access to the garden in order to avoid specific other patients or lacking of personal space.

In order to let patient have the opportunity to move



freely in this space all over the year a glass & steel roof have been placed on top of the unit. The roof will protect the garden from rain and snow but will let the light to get in; at the same time this space will be treated as a semi-opened space with different temperature and air control compare to the inside of the building. One of the idea is to let the patients be aware of the outside not only by a visual contact from their rooms but also experiencing temperature, humidity and comfort change in the garden during the year.

Another space, which has received a lot of attention, is the patient's room, where a lot of effort has been used to place them in the best orientation and designing it trying to get the best out of this space for the patient.

All patient's rooms will be facing, South, South East or South West; this in order to get as much sunlight and nature view as possible, since the area is facing the forest on that side and obviously the sunlight comes from those directions. In order to catch the maximum amount of light possible the patients' room are the only ones with three windows, this aspect is also related with the intention of giving different quality spaces based on what kind of window will be used.

There will to be a 1.5 m, a 1 m and a 0.6 m wide window and all of the 2 m tall: each of them with a specific aim or concept behind it. The widest will be placed centrally in the room and is going to be the main frame towards the outside with a small table integrated in the frame to let reading, looking outside or even eating from with a direct and exposed position; a place thought for the patients that are careless of the other looking at them form outside and not afraid of the out world.

The 1 m wide windows will have a seating place integrated in the frame in order to sit while enjoying the outside and feeling protected by the small dimension of the space. It's a less exposed windows where is possible to be seen but at the same time the patient will be able to look outside with possibility of retreat.

The smallest window will be an eye on the outside that "can't be seen" from outside. It's the expression of some patients to be afraid of people looking inside the rooms and so they need more protected solution. This window even if the other two will be closed with the roller blind will let the patient to be in contact with the outside and let the light get in without let any eye from outside to look inside.

Each of these windows frame will be integrated with a roller blind system to avoid patients placing sheets on the windows and to let them retreat in their own room without been seen from outside, if they don't want to.

While the window frames are going to be fixed, the inside of the room will be semi-permanent with part of the furniture fixed and part that can be moved. While wardrobes will be fixed and place in the same position in all the rooms, the bed, a couch, a couples of chairs and a small table will be at patients disposition. It will be possible for example to switch the bed and the sofa position to create two different situations based on staff and patients feelings, ideas and suggestions: a more hospital/control situation and a more home looking like.

The first one, called hospital/control solution can be created placing the bed near the room entrance door in order to have an easy control over the patient from the door instead of turning the corner to check on them. This solution might be necessary if the patient is unstable or at risk of hurting himself, or even if the staff don't feel safe leaving him/her more hide behind the corner. At the same this solution moving the couch out of the sight from the door create a private discussion area.

The second solution with the opposite disposition, bed far from the entrance and couch close to it create another kind of space, with a feeling of living room entering the room and a private night space for the space just over the room corner. This solution might be really appreciated from the staff for having meeting with the patient close to the door in their own room and the patients will enjoy more privacy during the night.

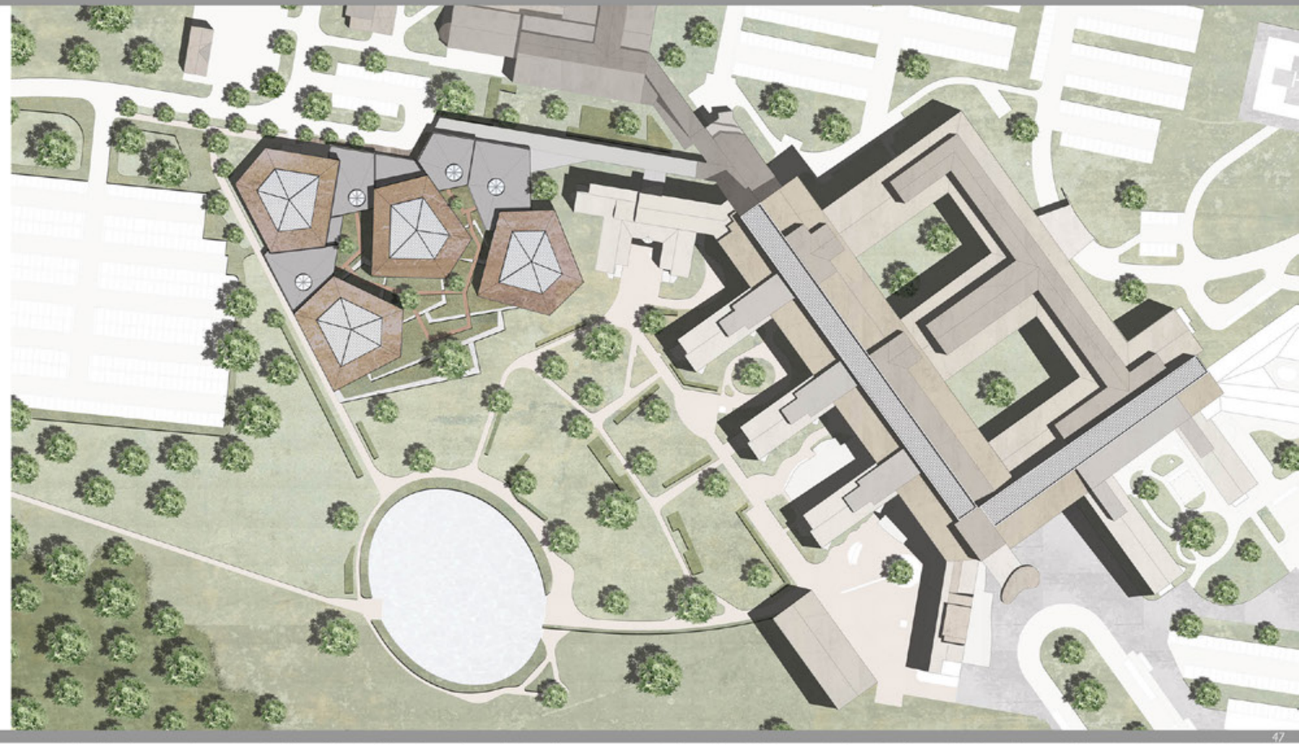
The decision on the specific positioning of each element should be taken by the patient and the staff in order to sort out the best solution for both.

The staff will be 24h present in the building an in the units, that's why they have a nurse station where back up if tired, or looking for a break, or to solve specific bureaucratic papers or other activities. This space is one of the inner square rooms and has been divided in three parts: a small break room, the patient contact point and the workstation. The three of them work as nurse station. The workstation is using half of the space and is a temporary station for two people that need to work with a computer or need a desk, the break room is a square space with a calm ambience, two chairs a small table and rug where take a break from the confusion and noise of the unit and the last but not least part is the patient contact point were the nurses can have a contact with patient and talk with them form the nurse station.

The units has said before are all similar but different in the interior specific wall placements. Between the 4 units the most different is the Outpatient, which works less as a unit and more as a daily activities hub for patients. This unit has a ground floor for the patients to come and have consultations and a first floor for the staff and for offices. The ground floor works as the other units with a central garden and the rooms spread on the borders. The three inner rooms are located in the same position as in the other units and are a meeting room, an activity room and a chat room, while the rooms in the perimeter are single office with a space for consultation with a small table and a chair.

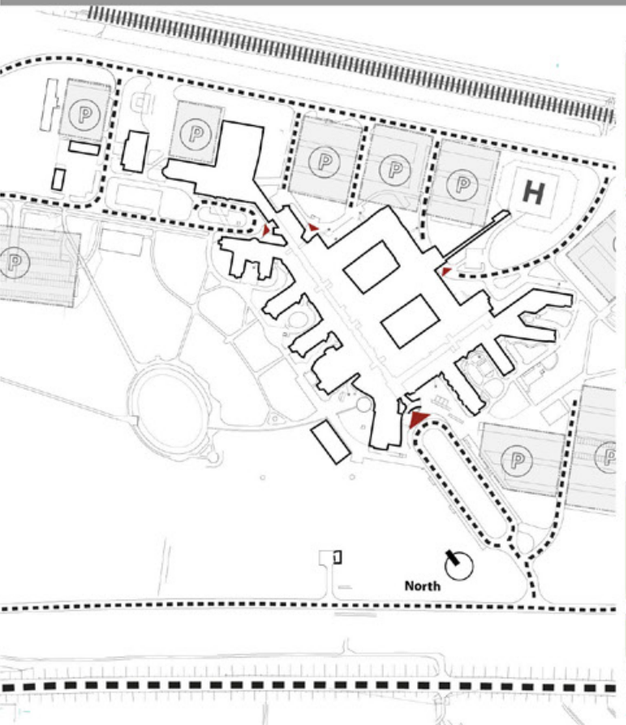
This floor will be mainly by patients for consultation; the patients will wait their consultation around the courtyard and close to the offices enjoying the relax ambience before having their consultation. The first floor is dedicated only to staff with permanent work position or continuous work at the desk without having a lot of consultations. This floor has on the perimeter a series of rooms of landscape or small units office with a small focus room. The centre of the floor with the three rooms and the day/relax space around the courtyard will be a space for break and casual chats.

The design is not completely solved and might not be the best answer to each specific problem but give an alternative proposal to conventional approach to the psychiatric buildings. What I mean is that the proposal that I'm showing today has reached a detail level and accurate precision on answering needs and problems but there's always space for improvements and changes in the units and that's one of the strongest point of this design.



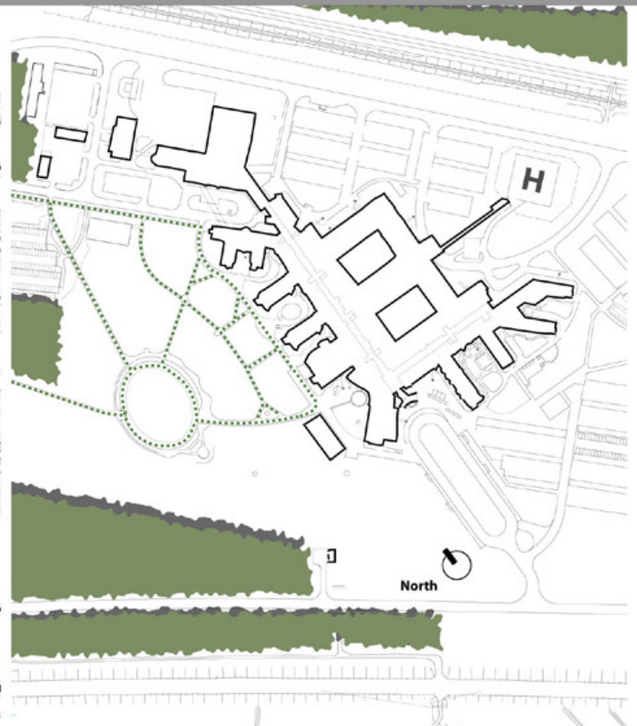
The building is proposed as an extension of the existing building using another architectural language compare to the existing facilities as way to show that this part of the hospital as special character. The material of the outside will try to match with the existing thanks to a dark brown shingle shell, which rapresent the intention of protection towards the patients. The units disposition and the common space wants to replicate a village or community sense.

Connections and Entrances



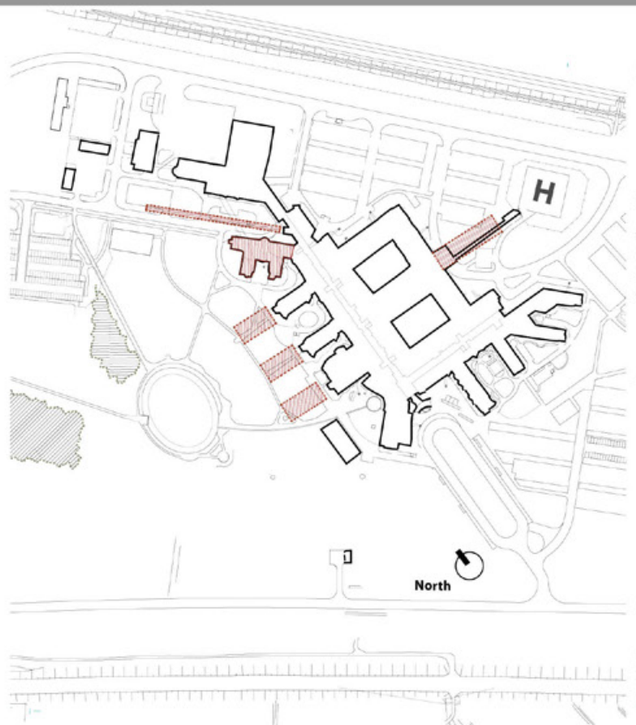
The hospital is connected to Boden and Lulea with an Highway that pass close to the Hospital site. The Main entrance is located South East close to the highway while the Emergency Entrance is located East; there are other two entrances located North West and North East. The main parking slots are distributed around the hospital but mainly on the East side.

Nature Presence



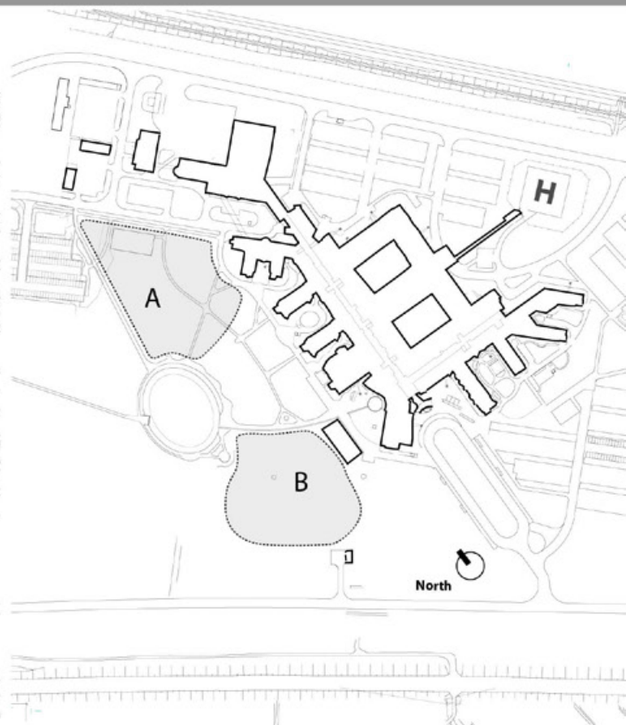
In-between the highway and the internal hospital roads system the forest takes place as filter and protection. The hospital is literally surrounded by vegetation and forest, which create a calm and healing ambience.

Future Developments



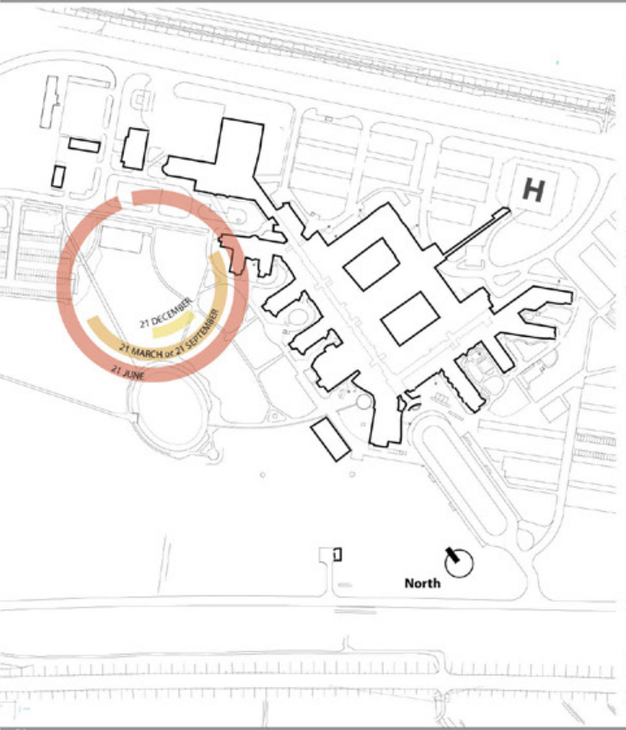
The hospital as already plan several expansion. South West the new wards, North East the new emergency unit and North the New Psychiatric Building and renovation of the old building for IT unit.

Possible Areas of Expansion



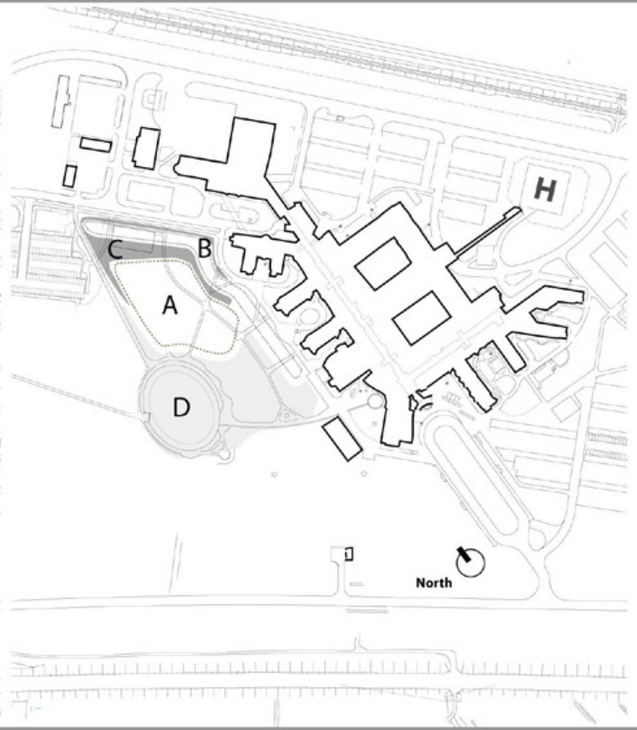
The areas of expansion indicated by the Hospital for Pyschiatry were two.
Zone A_ Nature Connection / Privacy / Quiet Location
Zone B_ Exposed / Easy Access / Public Spot
I decided to work on the area A due to its quiet, calm and private ambience.

Sun



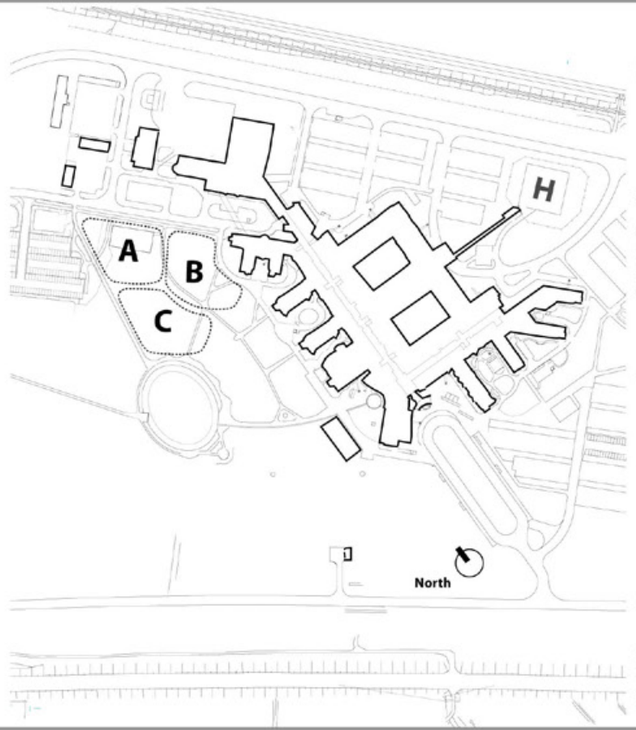
The area can joy sun presence but due to the latitude of Lulea this really happen only for 5 months a year while the rest of the time the sun presence is not that much strong and most of the time quite low and weak sun.

Zoning A



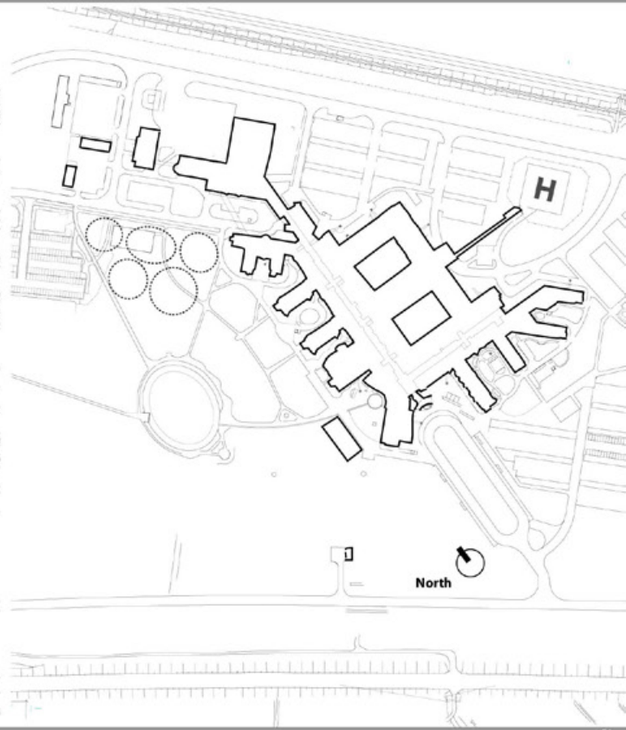
The area A can be divided first in 4 small zones.
A_Nature Experience / B_ Hospital Connections
C_Easy Access Zone / D_ Forest & Landscape Connection

Zoning B



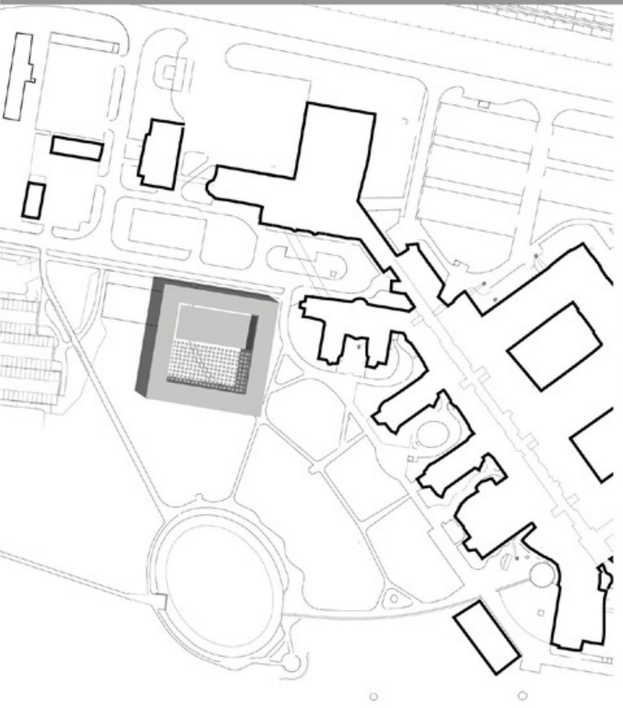
A second zoning
A_Easy Access & Quiet Area
B_ Hospital Connections & Public Area
C_Nature visual Contact and Relax Feeling

Zoning C



The final zoning and most specific.
A_Emergency Access / B_Public Access / C_Nature contact / D_ Nature Experience / E _ Hospital Connections

Compact



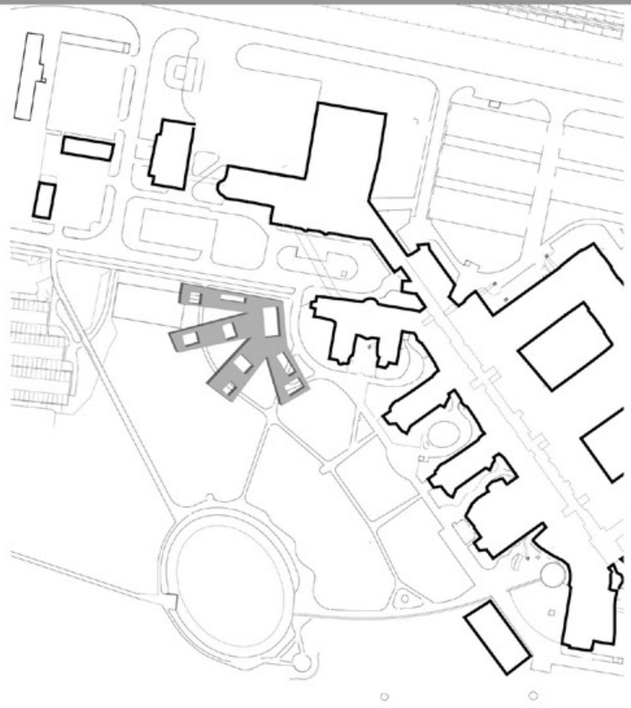
52

A compact solution with a big garden. It's the solution that saves most of the footprint but the division between the different illness results difficult. Another problem is the presence of only 1 garden/courtyard,which can create problem of managing the time of open spaces usage between the units.

Pavillions

The pavillions solutions is rather interesting since it's easy to split the patients and works on different units but the connections become too many and the distribution confusionary.

Radial



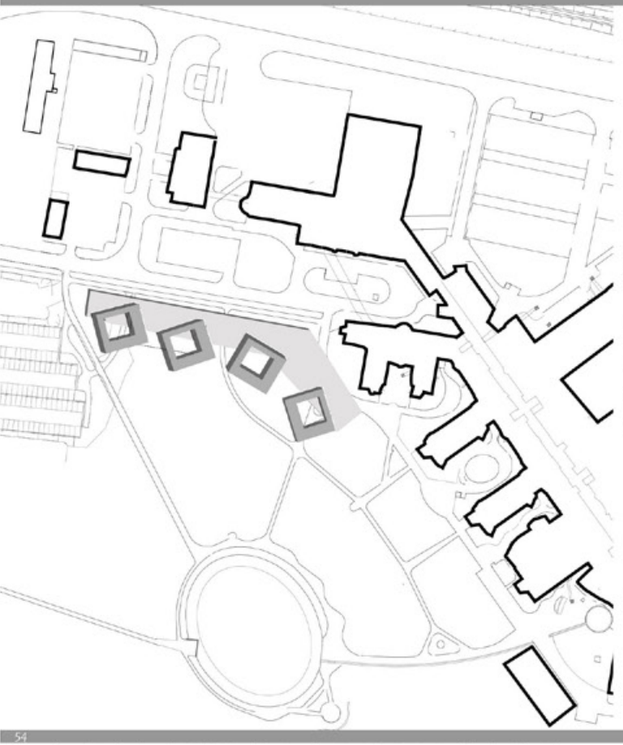
This radial solution is very efficient for the patients controlo but it lacks of courtyard of protected outdoo spaces.

Units + Connector

53

This solution suits the best the program dividing the bulding in 4 units with a connector. The contrlo results easier thanks to the reduced number of patients for each units and the dimension of the buildings. At the same time the units are facing the nature.

Turning



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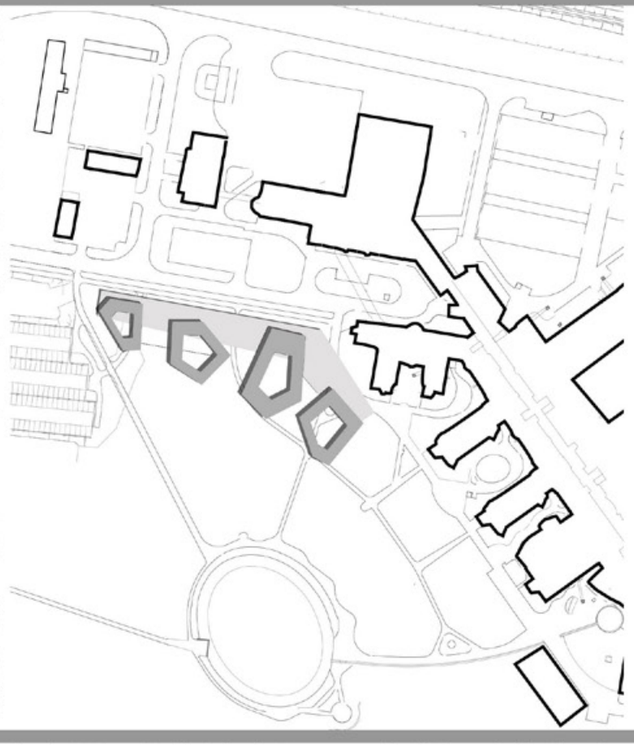
The action of turning the units will let the design to gain nature visual contact making less direct the eye contact between one unit and the other one and creates an interesting series of space in the connector building.

Adapting



The units starts to mould and developing trying to grasp a connection with the are and gaining the maximun amount of solar light and nature visual contact.

Adapted & Unique Units

The units results to be 4 similar but different elements connected by a series of spaces/rooms. This solution fits the landscape and create uniqueness but it's not efficient on the connections.

Adapted & Systematic Units

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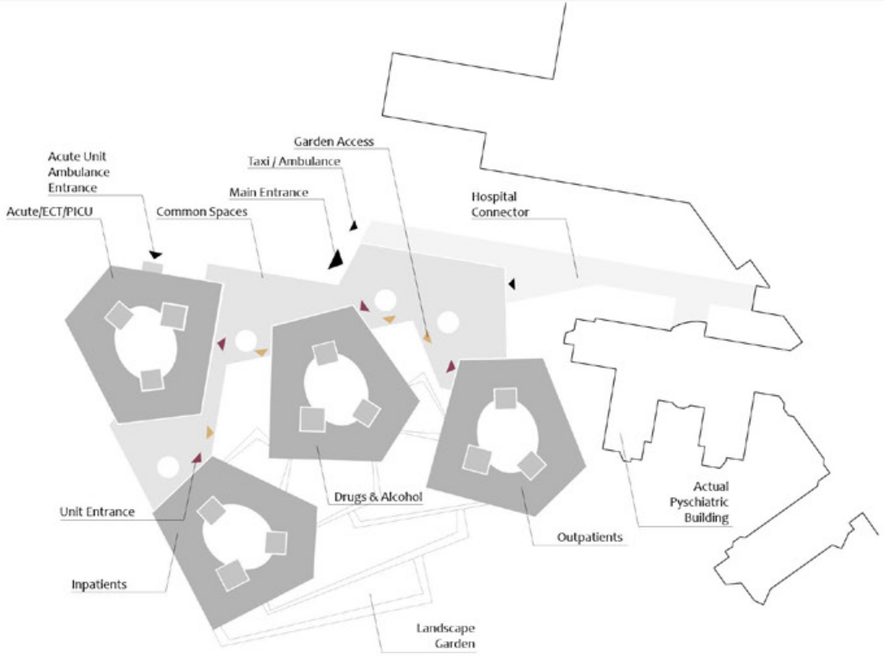
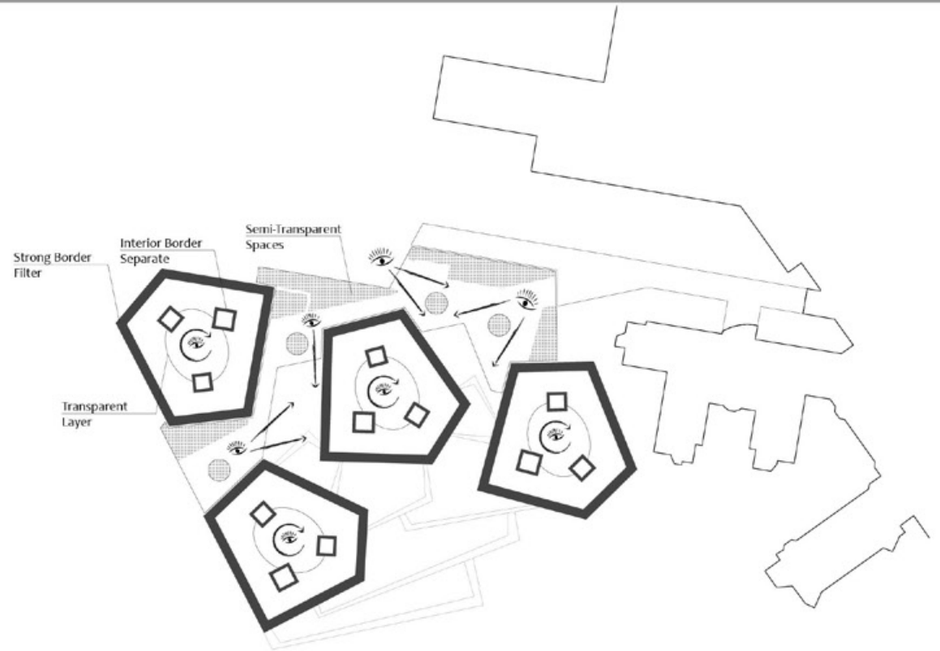
The solution developed in a system of 4 units with a connector. This design let the program be spread and divided and adapted to the landscape and still creating a feeling of single building.



The building is divide in four units with a common block/connector. The Units are the Acute + ECT+ PICU one, the Inpatients one, the Abuse or Drug & Alcohol Unit and the Outpatient one. Each unit has its own entrance while there is a main Entrance situated North. The emergency entrance is located North close to the street while the hospital concetion are North East.

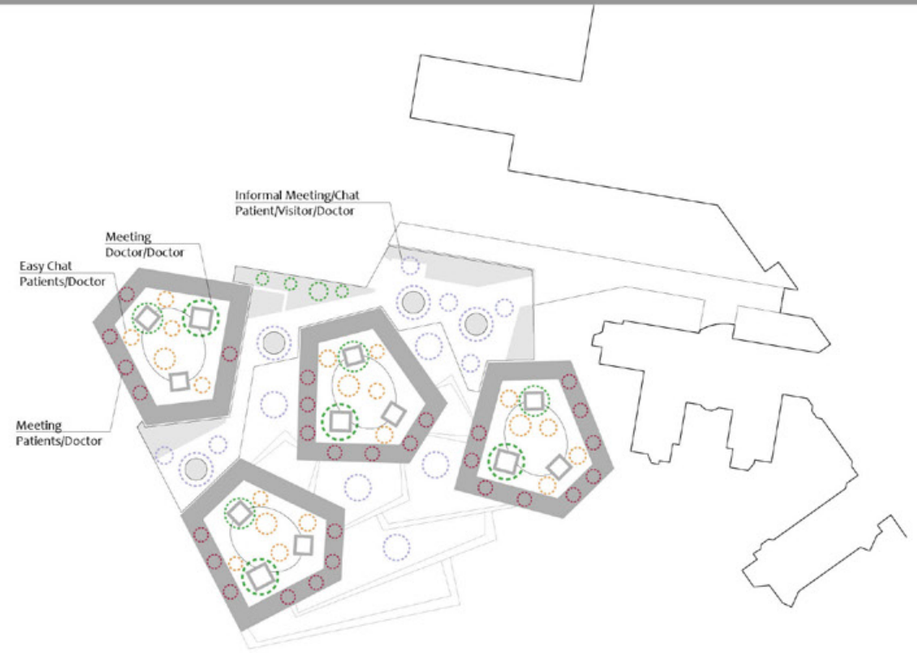
The distribution works on linear concept in the common block or connector and in circular way in the units. This will create possibility for the patient to avoid ending in dead-end corridors and make easier for the patient to get to theri rooms/dining room and easier the movements of goods and people in the common block.



The outside shell of border of the unit play a role of protector towards the patients, which are complete free inside the unit with a transparency towards the inside. At the same time the common block use the same system towards the stree but then it's open and glass towards the garden and South.

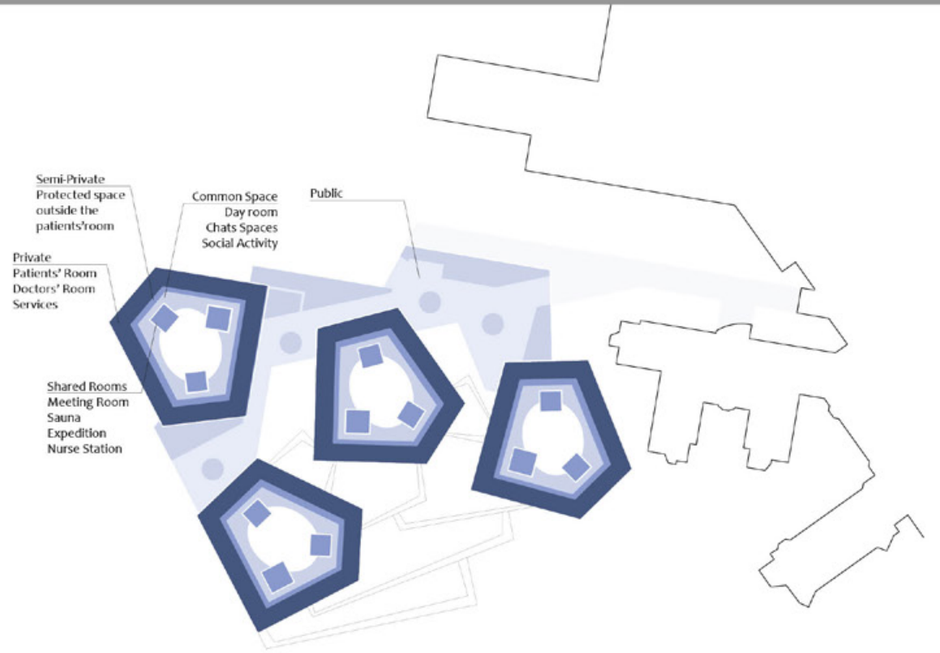
The design wanted to reduce the number of locked doors and so the solutions is to lock the main entrance of the units and then let the patient walk freerly inside of them. The common block is totally open and unlock with the only exception of the staff area.

Meeting & Social Points



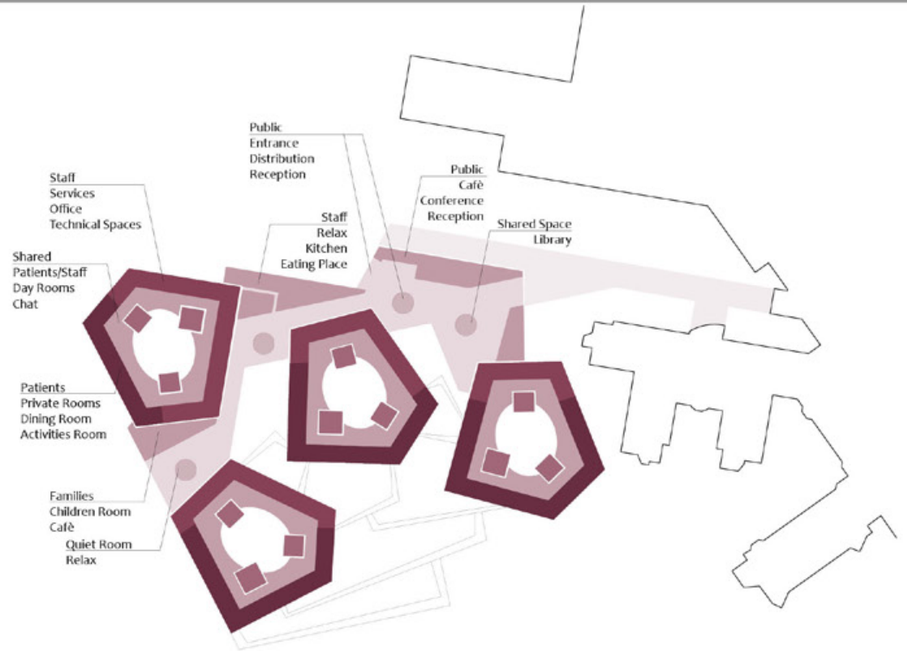
The chat or meeting moment is one of the most important moment for a mental ill patient and that's why the design focus a lot of attention in creating different shades of meeting point. The Most unplanned and casual ones in the common block, moving to a more daily and private meeting in the units with the staff and patients, going towards a planned and doctor-patient meeting in the chat rooms, conversation rooms or the patients' rooms and finally a staff meeting moment in the group rooms or in the staff rooms.

Private & Common



The privacy is considered to be one of the main reason of aggression for the patients, which they need their own space and time. The common block is public and design and a sharing ambience, while the units are based on different shades of ownership and privacy. From the borders with the most private areas, towards the inside with the day rooms and inner rooms, shared spaces, to end it up in the garden, the unit public and social hub.

Meeting & Social Points



The units are designed with a South facing side for patients and North facing one for staff and services. The common Block has the most public part facing South and the cafeè, conferences and meeting rooms facing North.

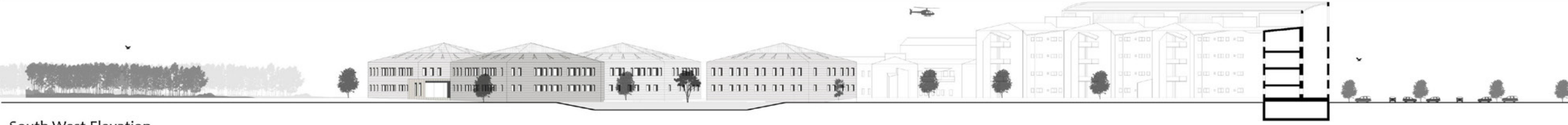
Private & Common

The outdoor spaces are considered one of the main aspect and strenght of this design. The idea of being able to get put and breathe fresh air is one of the first aim of the design. The courtyard are cover and protected areas for patients but even the outside park design works on the idea of a series of steps toward the public and open landscape, like a journey that takes steps & breaks to get to an end.

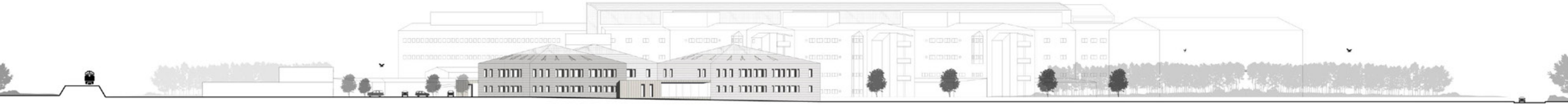
Ground Floor

First Floor

Elevations 1:500



South West Elevation

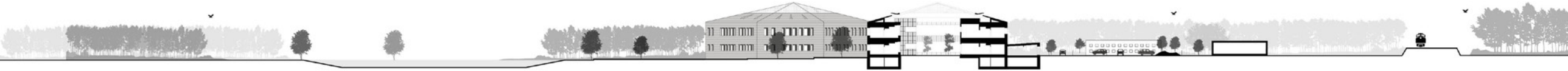


North West Elevation

North East Elevation

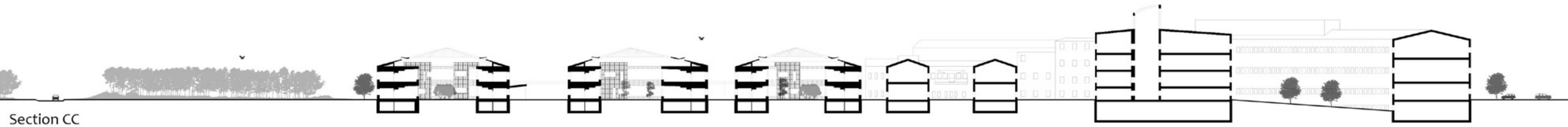
The building tries to be a transition between the existing and the landscape. The dark brown shell is a contrast against the trasparent and reflective top, which try to get as much light as possible inside.

Sections 1:500



Section AA

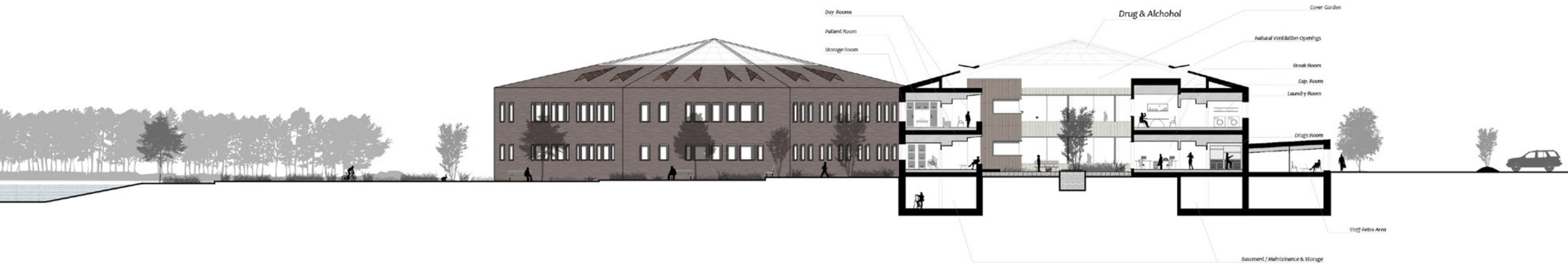
Section BB



Section CC

The sections show the interior quality of the units, which are aiming for a calma and quiet ambience connected with the landscape. The design is looking for balance between the rooms quality and the common spaces ambience, the units should act as small community and villages, with private and common grounds.

Section AA 1:200

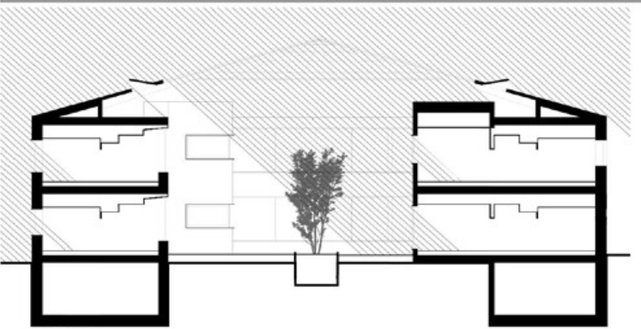


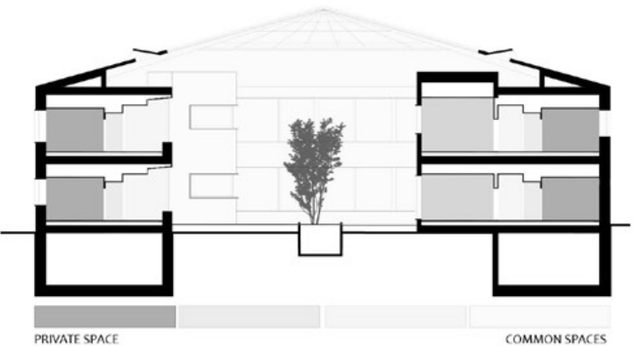
The spread day rooms are facing the garden and giving the feeling of being in a continuos space with the garden which remind of an exterior and the world ouside the unit.

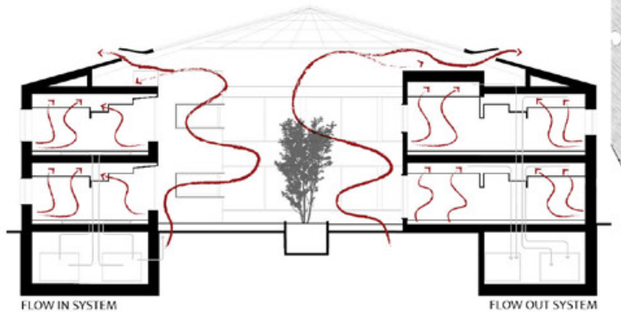
Section CC 1:200

The inner rooms facade material is a light wood that want to create a calm and warm ambience and want to be different from the outside shell. The interios has to be a welcome and warm place, a protection feeling is not anymore needed.

Section Schemes 1:200







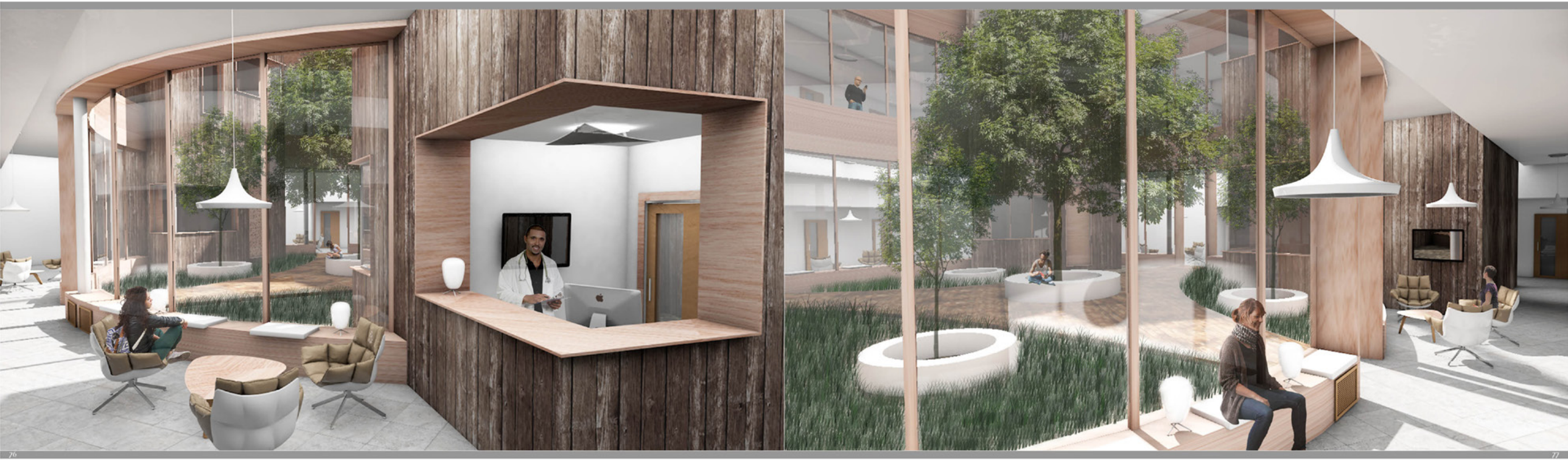
Due to Lulea's latitude, the sun is not that high in the sky and the sun rays come down with a maximun of 45° on the 21st of June and a Mnimum of 2° in the 21st of December. This conditions won't let the light to get directly over all the courtyard, so I took the choice to cover the courtyard to create a cover space, which can enjoy of the light but been an inside room. The light will get in courtyard, even if it's going to be indirect light this will bring quality in the space and make the ambience calm and comfortable.

The air system is divide in two main parallel system: the FLOW IN and the FLOW OUT. The air will get in the rooms from the wall down close to the ground and will be take out up, in the ceiling. Each one of the system, flow IN & OUT, are both divided in two similar system, one working for the close rooms and the other one is focused on the space around the courtyard, so called common space. At the end the courtyaed has its own system for taking in and out the air and control humidity.

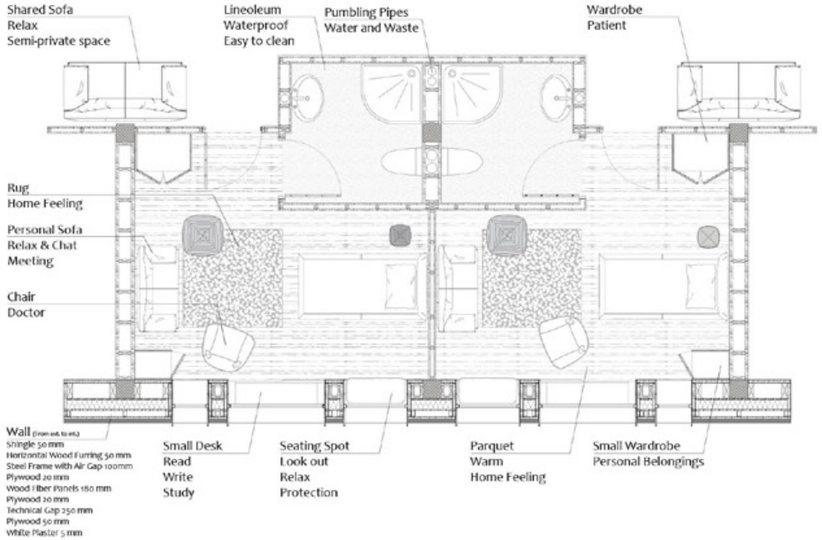
Plan 1:100

The zoom of the plan shows how the material use is important to denife different ambience and feelings. From a more public and formal spaces in the commons area sto a more cozy and home feeling ambience in the patients' rooms and staff areas, to a more functional and easy clean floor in the services and treatments rooms.

Day Room & Garden

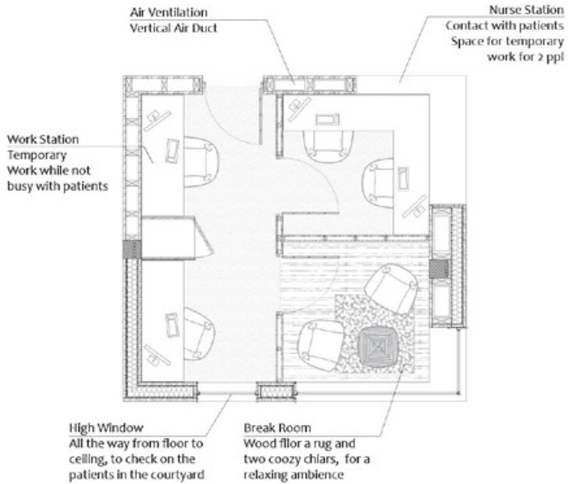


Patient Room 1:50



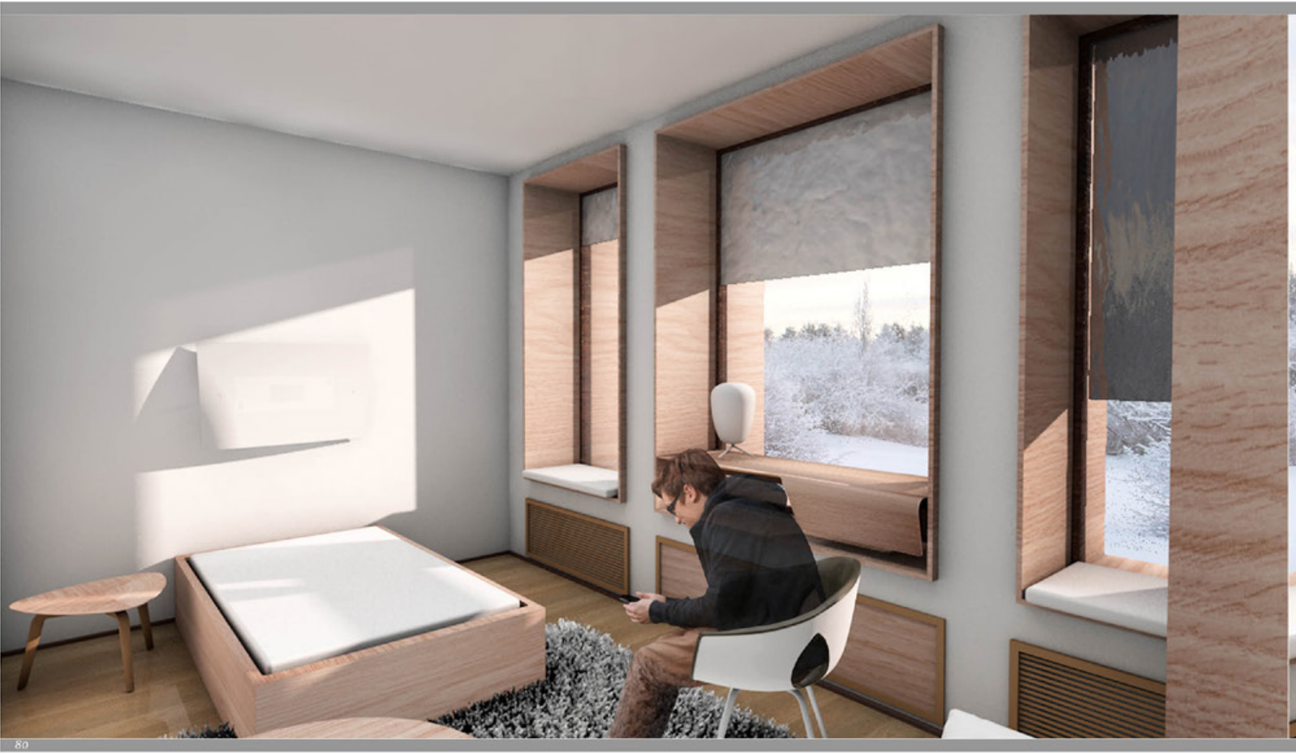
The patients' room work on pair with the bathrooms sharing a wall for the pumbling pipes. The room are the same just reflect on a vertical axis. The furniture are going to be alwasy to same but the possibilitiy of moving them based on the patients needs and request will let the patients feel more in possess of the room. It is their room even if it's only for a week.

Nurse Station 1:50



The staff will spend most of their time in the unit wlaking around, talking with patients but when they need a break or to work on some papers they can go to the Nurse Station. This room is divided in 3 small partsthe work stations, the control station and the break room. Each one of this room is essential for the staff and collecting them in a unique space will let the staff be more in contatc between each other and make it easier discussin privacy.

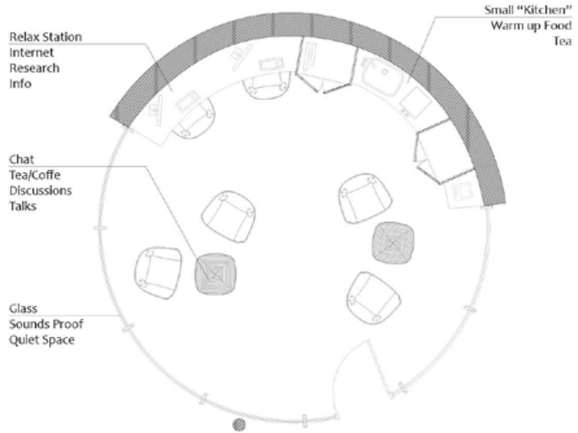
Patient's Room



Break Room

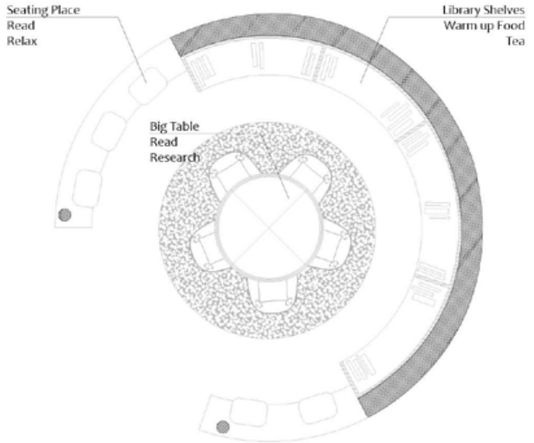
Work Station

Quiet Room 1:50

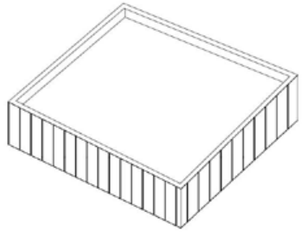


The Quiet Room is a place where take a break from the Hospital space and have a tea or a chat with relatives or doing some research, spend time; it's a relax ambience.

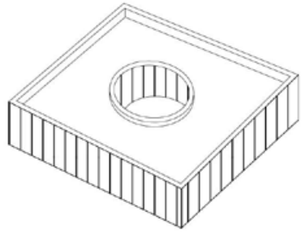
Library 1:50



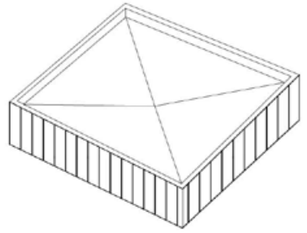
The library of the common space is a public and shared area. It will enjoy light from the sky window and the circular shape will create a feeling of welcoming and protected space.



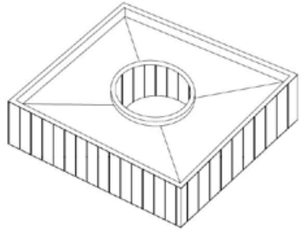
Flat Roof



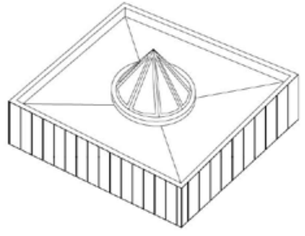
Round Courtyard



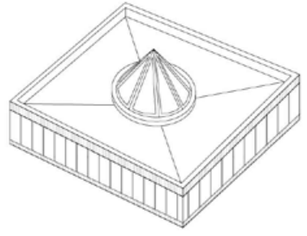
Slope Roof to the center



Round Courtyard + Slope

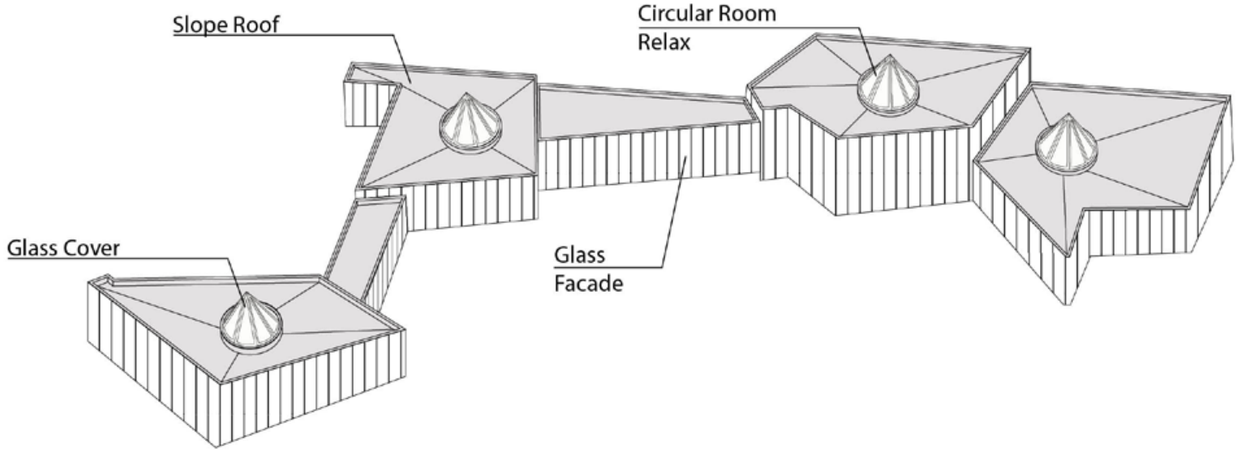


Round Cover Courtyard



Facade with glass and wood

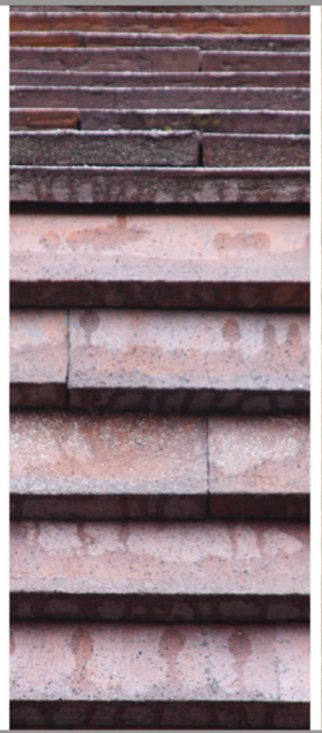
The common spaces roof is designed around the circular rooms. The slope has evolved from a flat solution to a pyramid reversed with a cilinder void in the middle cover by a cone of glass and steel.

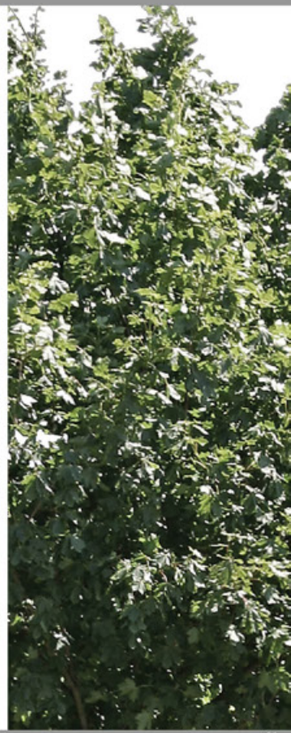


The common spaces are a continuous space, which is composed by a series of room of different heights. This will play a role in the interior to make it more clear the passage between the different areas of the bulding.


Abuse Unit

Materiality

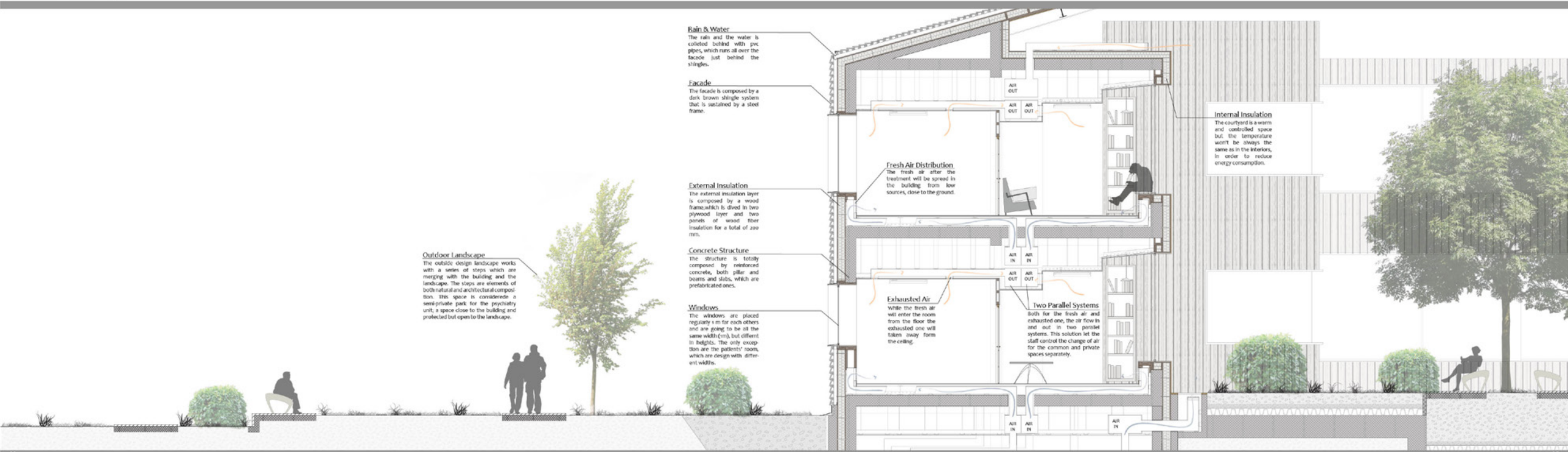




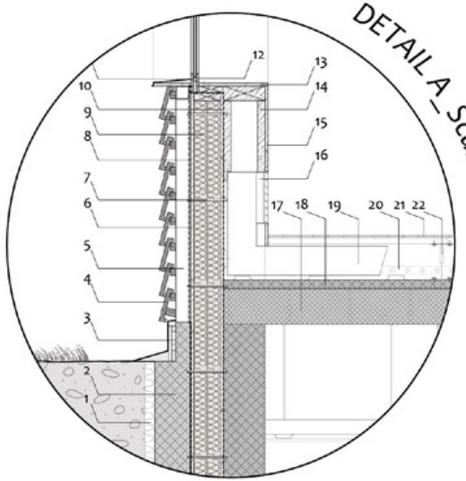
From the left:
The Stone pavements for the common space and day rooms. It's a material resistant but of high quality showing a feeling of interior and personal space.
Shingles facade is the shell of the building and the protection for the patients
The Dark Wood facade will make it easier to understand what it's unit and what is common space
The white painted walls will help patients to focus on the othe rmaterial to understand where they are and what kind of space are they dealing with

From the left:
The gravel will be use both inside and outside to create the landscape garden and the courtyard
Leather and high quality furniture for a resistant and comfortable series of furniture
The Light Wood floor will give a feeling of home and calm.
The vegetation is one of the main actor of the building in all the spaces

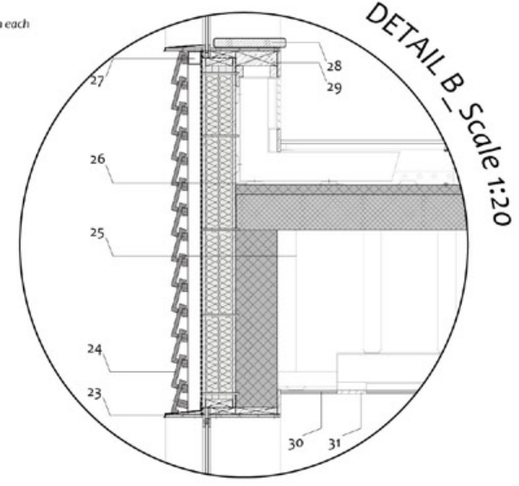
Detail Section 1:50

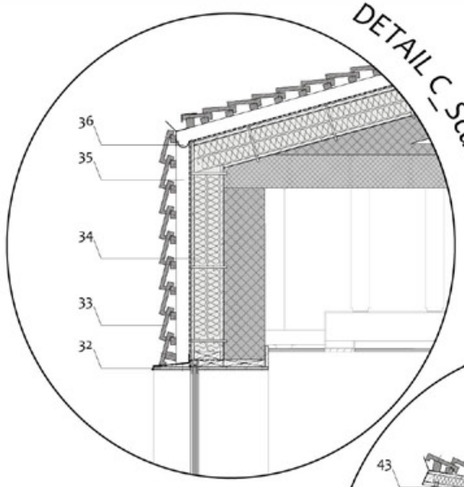


The units are supplied by a filtered and treated air, which will be taken from the top of the building, taken down in the basement. filtered and then push in the air system. At the same time Flow In and Flow Out are separated system and each one of them is divide in day rooms and close rooms to control in different ways the number air change during an hour of activity. At the end the courtyard has its own air system, both control by a air system and openings on the roof to let the air get out when too warm.

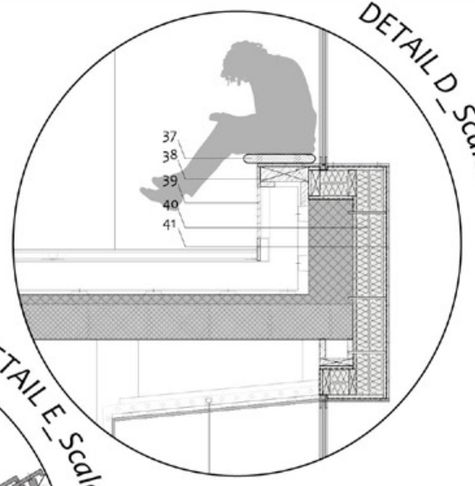


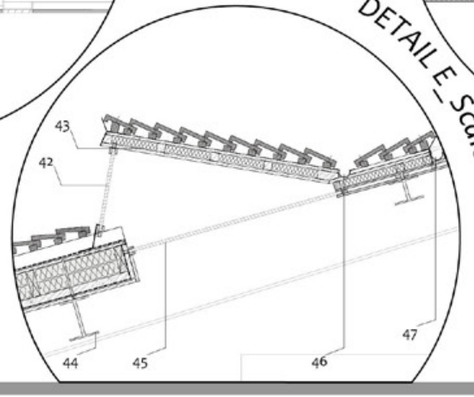
1. Protective Layer 50 mm
2. On site Concrete 250 mm
3. Water
4. Shingles
5. Steel Frame 100x100 mm
6. Bitumen Impregnated fiberboard 15 mm
7. Steel tie-rod
8. Plywood Panel 20 mm
9. Two insulation wood fibers panel 90 mm each
10. Plywood Panel 20 mm
11. Steel sheet
12. Openable Window
13. Wood Window Frame 20 mm
14. Wood frame for technical space
15. Wood panel 20 mm
16. Air Vent with filter
17. Prefab. Concrete Slab 250 mm
18. On-site Concrete 50 mm
19. Ventilation duct 200x200 mm
20. Cables rail
21. Wood Finishing 20 mm
22. Floating Floor 300 mm
23. Wood Window Frame + Steel Sheet
24. Shingle
25. Ceilgin Cables
26. Ventilation duct support
27. Steel Frame 100x100 mm
28. Seating Pillow
29. Wood frame for technical space
30. Ceiling Panel 20 mm
31. Air Vent with filter





32. Wood Window Frame + Steel Sheet
33. Shingle
34. Insulation
35. Steel Frame 100x100 mm
36. Drainpipe diameter 90 mm
37. Seating Pillow
38. Wood frame for technical space
39. Air Vent with filter
40. Insulation
41. Wood Panels 20 mm
42. Openable Vent
43. Sandwich Wood Panel 100 mm
44. Steel Roof Beam
45. Openable Vent
46. Drainpipe diameter 90 mm
47. Drainpipe diameter 90 mm





Outpatient Unit Office

Conclusions

I believe that my thesis has a value in the healthcare research as an example how to combine scientific approach and intuition, ending up with an original design solution.

I've supported my decisions with articles and researches about specific and general question on healthcare facilities and practise. I've balanced the intuition and scientific side of my design leading to bold and strong design able to collect qualities and real solutions.

At the same time my intuition has been a way of interpreting the scientific data and info. I totally support the scientific side of my research of my project but the intuition side is what make it different from any other; my personal experiences and idea are what mould numbers and words in a concrete proposal.

For this reason my design is unique and would not be never the same even if I would go again through the same process, since the moments and feelings of specific situation are part of the end result. At the same time a scientific side is supporting this emotional and more human side of my project.

My design answers to a specific and real situation and program without the burden and responsibility of a real construction to come in the future, so this is the reason why my experience let me push and experiment more on the intuition and quality space then in a possible real building design.

What I mainly learned from this thesis is how much complex and difficult can be such specific design, while at the same time how as an architect I can place my ideas and abilities to mould a building able to answer a program but at the same time giving back more qualities than even the ones expected.

Of course managing my time and my energies is what I was primarily concerned with ask to during these 4-5 months of my thesis and is what I learned is the most difficult part and the key to the success.

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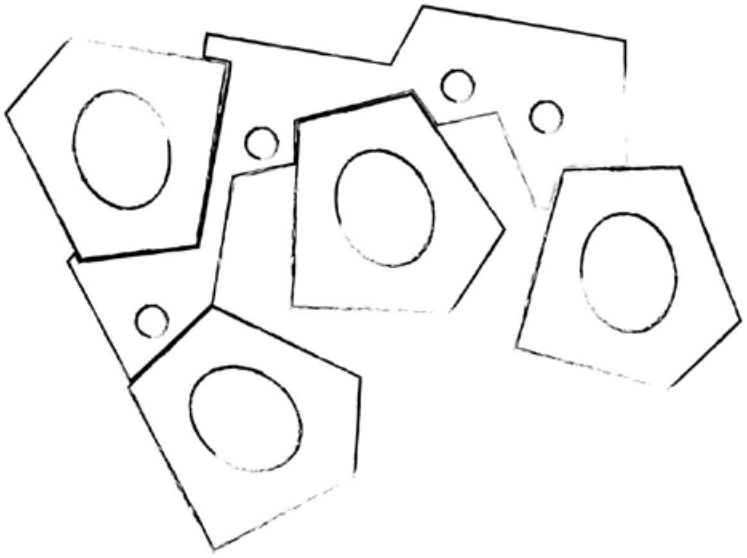

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