

BEGIN AGAIN

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ARCHITECTURE & PLANNING BEYOND SUSTAINABILITY

examiner: Johanna Eriksson supervisor: Elke Miedema

BEGIN AGAIN

Monika Ewa Luśnia's master thesis project at

> Chalmers School of Architecture

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CHALMERS

abstract

We stumble upon them, unpredictably, in certain life situations or during a side course of professional research. In both cases, with an unpleasant surprise. The blank spots on the map of groups represented by the built environment. Rehab care sector is one of them. It is often dealing with social stigma, to such extents, that even deliberate research leaves one with an impression, that there is very little straight-forward talk on the subject.

The hope that an example of thoughtful and inclusive design for a rehab facility can contribute to changing this state of things and providing a more supportive built environment for the troubled members of the society, became the point of departure for this research.

This work's overall intention is to find solutions which will provide suitable rehab care, to those previously underserved. This includes rural communities and, among and beyond those, the patients with dual-diagnosis, women around pregnancy, underaged children of the patients and multiple cases of co-dependance.

The research process involved gathering information from written sources, direct and indirect case studies, along attempts of getting in contact with authorities in the field, to retrieve practical information. The collected knowledge was first translated into a set of goals and strategies for the project and later on resulted with a design proposal, of a modular facility, which could be adapted to most given sites and have a potential for going from no infrastructure to a network of locally oriented facilities.

The research investigation was limited to the extents of what proved to be useful in creating a general 'know how' for the design, leaving space for further iterations and clarifying the technical details. The generic elements were, however, designed in a way to never contradict the assumptions of sustainable design.

At the moment of submitting this work, I can tell that it only touches the surface of what is a very broad and complex topic, but I do hope that it can help establishing a more open atmosphere for discussing issues connected to addiction treatment and the ways in which architecture can support addiction patients.

research question : How to make rehab more accessible in rural areas and for the underserved groups of patients with the development of dedicated infrastructure?

	female patient care	keywords* :	modular design		
BEHAVIORAL SCIENCE		REHAB FACILITY		environmental psychology	Y
	non-definitive site		co-dependance		

Certain vocabulary used in the project from this moment on can be unintuitive for a reader from outside of the healthacre sector. For clarification check the glossary : p. 77.



method - summary

The fundamental method of realizing this project is *research for design*. It focused around the theme of rehab patient care, including the cooccuring problems and diseases, with the special attention paid to the issues steming from co-dependance.

After completion of the general research on the addiction problem, I looked into the operational methods of facilities which have a programme that partially overlaps with this of my project (look p.20,21) and treated those as a type of case studies, due to the lack of precedence in designing a facility with exactly same function as the one proposed in this study.

The collected knowledge was processed with a range of tools and resulted with the diagrams, which aim to summarize and explain the findings of the research.

The concept and the design proposal followed as the consequent steps, attempting to respond to the questions and challenges posed during the research phase.



delimitations

In order to manage the project within the timeframe of 4 months and the workforce of one person, delimitations had to be enforced. Some of them were stated beforehand, at the start of the project and some came up as a natural consequence of the ongoing workflow or as result of the theoretical research.

The project investigation was limited to the extents of what proved to be useful in creating a general 'know how' for the design, leaving space for further iterations and clarifying the technical details.

The technical aspects were investigated to such extents, that allowed to make sure that the already taken design decisions would not cause major problems when trying to develop the details. The same applies to the environmental assessment of the design. The project leaves space for, but does not develop specific sustainable technical systems, dealing with such aspects as eg. water management or indoor climate. It also does not develop more than very basic LCA analysis for builiding components. necessary to design the latter and use the specific dimensions (eg the external walls and indoor divisions), in the project, making sure that the dimensions of (especially the COMPACT facility version) are realistic.

In terms of the patient care, in the course of finalizing the project, it appeared that the facility should be mostly intended for voluntary patients, as an unvoluntary stay brings in a new scape of issues, which may require a different operational method, types of spaces and more of specialised personell.

my background



THE COURSES THAT I HAVE COMPLETED AT CHALMERS

Planning and Design for a Sustainable Development

in a Local Context

Managing Design Projects

Sustainable Architectural Design

Norm-critical Approach

Residential Healthcare

POTENTIALLY RELEVANT PROJECTS THAT I HAVE DONE SO FAR

artist's solitude

housing

a number of repurposing / renovation of buildings during my internship

community centre

sustainable building (preschool function)

motivation & process

begin again

At the very start, the point of departure for this project was not the function it was going to serve. I wanted to work with an architectural intervention such as renovation of an exisiting site, which would stand against the widely spread philosophy of disposable goods. I needed to find a function, which would go hand in hand with it, or better, emphasize my call for second chances. This is the way in which my attention got drawn to rehab facilities and the issues connected. I found the concept of the double beginning, for the building and for its users powerful. It was only later, when in the process of researching the needs of rehab patients, I discovered the scope in which this sort of institutional help was lacking in the rural areas, internationally. Among the rural communities in general, I was able to spot the patient cases which were particularly underserved: the women around pregnancy having very little rehab opportunities and dealing with especially strong stigma. In consequence or later in time, their underaged children often needed help too. Having identified that problem, the angle of my work turned towards developing a modular, expandable design which most compact version could be affordable for the rural communities. Parallel to this important thread of patient care and social sustainability, it was still important to me to enforce sustainable building technology and make sure that my design is in line with ecological principles.

the author

project in context of healthcare architecture & rehab care





In the course of research, I found that rehab patients who suffer from co-occuing mental disorders, often are not able to receive suitable care for both conditions, at the rehab-oriented facilities.

At this time, the first cross-sector bridge was drawn in my mind. In terms of the function that I wanted my building to serve, it appeared crucial to join parts of rehab care and psychiatric treatment facilities operations, binding together two sectors of healtcare. Within the rehab care, understood as inpatient treatment in the process of going out of addiction to various types of substances. there are groups of patients, who need specific type of treatment, requiring conditions or infrastructure, which almost all of the exisitng facilities can not provide. As the result, many of those patients experience such barieer to accessing treatment, that they end up receiving no help at all.

Among those groups we can list pregnant women, previously mentioned, patients with dual diagnosis (co-occuring mental disorders) and parents caring for small children.

As those patients lack representation in the built environment, it was difficult for this project to find facilities to serve as accurate case studies. In the end, the used solution was to look at facilities which have programme that partially overlaps with this project's assumptions, but the project in itself is a concept for an entirely new type of facility, which bridges two sectors of healthcare with the care usually provided by social services.

data retrieved from https://americanaddictioncenters.org

https://stopuzaleznieniom.pl/fakty-o-alkoholu/statystyki-spozycia-alkoholu/

https://www.researchgate.net/publication/237468221_Predyktory_ukoaeczenia_terapii_mOEczyzn_i_kobiet_uzalenionych_od_alkoholu_Predictors_of_treatment_completion_in_alcohol_ dependent_males_an_females

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PROBLEM, DIAGRAMMED

In this chapter I intend to gather the thoughts and conclusions drawn during the phase of research done for this project. It is to present the aspects which will later directly influence the design cocept, in a summarized and diagrammed form.

GENERAL STATISTICS

BARRIERS TO ACCESSING HELP

CO-OCCURING PROBLEMS

UNDERSERVED CASES

The general data collected from Poland Sweden and the US, showing the substance abuse problem in numbers.

The showcase of factors several which most often contribute to avoidance or lack of possibility to access treatment and help in addicitons.

Many of the patients struggling with abuse substance issues, experience cooccuring problems. Understanding what they might be can help in providing thorough help to those who need it.

consequence of the preceeding information, I was able to identify cases of patients, dealing, in one way or another, with substance abuse problem and whose needs remain, in my opinion underserved.

general statistics

By exposing the statistical data from three different countries, I intend to showcase the versatility of the problem and the sheer value of the solutions proposed later in the project.

SWEDEN USA POLAND as of 2019: as of 2019: as of 2019: treatment facilities were 92% of Poles abused alcohol In the age group of 2% 15-44 located in urban areas on a daily basis and were vears old the most and diagnosed as addicted common reason for of medical specialists inpatient care is mental 90% approved to prescribe million people lived in and behavioural disorders. 3-4 specific rehab medications a family struggling with 25% of the patients who practiced in major cities alcohol problem voluntarily submitted for and institutional care, were of the people with 3,4% 4% of Poles are a child female substance abuse problem brought up by a drinking were diagnosed with person, while in the mental disorders whole country there and were only of them didn't receive any 52% child-support centers, 5 treatment at all majority of which was located in districts with major cities.

data retrieved from parpa.pl and

https://stopuzaleznieniom.pl/fakty-o-alkoholu/statystykispozycia-alkoholu/

data retrieved from https://www.socialstyrelsen.se data retrieved from https://americanaddictioncenters.org

barriers to accessing help

PHYSICAL DISTANCE

Most of the rehab clinics are located in major cities (in 2019 it was 90% of the facilities in the US) and the study shows that many of the struggling people substance with abuse don't decide to start treatment physical due to which distance. would mean a long commute.

FINANCES

Financing the treatment often becomes a barrier to accessing help, as in many cases the costs extend patients' financial abilities. On top of that. deterioration of one's finance situation is often a co-occuring factor in substance abuse problem.

'SOFT' COSTS

The fear of stigmatization and loss of one's established life order, such as a potential need to pause working or to inform one's social circle about the problem is often a blocking factor. 12% of the patient query respondents in the US stated that they are afraid of losing friends or experiencing stigma, if they confirm adddiction their problem.

GENDER-RELATED BARRIERS

Women in general experience more trouble getting support in treatment. They tend to be more stigmatized, also by their closest relatives. Statistically, they report experiencing more financial trouble when trying to cover their treatment, Additionally, most of the rehab facilities don't offer suitable programs for women around

CO-OCCURING DISORDERS

the Some of substance abuse patients struggle with mental disorders as well. This group is less likely to enter rehab and to receive appropriate care. In 2016, in the US, only 7,4% of them got suitable treatment for both conditions.



CONCEPT - PATIENT CARE

The concept for the patient care is a the part of the work where the thoughts on the needs of the future users of my design are gathered, discussed and exhibited. It exists parallel to the Concept for Design chapter (p.20), to highlight the equal importance of the two and the way in which they influence each other.

FOCUS, GOALS & STRATEGIES	R E M O V I N G T H E B A R R I E R S	PERSONAS & USER EXPERIENCE <	LEARNING FROM EXPERIENCE CASE STUDIES>
Stating the priorities of the projct and the way to way to pursue the assumed goals, in terms of the patient care.	Project's response to the barriers to accessing treatment, identified earlier on, backed up with the project strategies, assorted to the barriers, treated as problems.	An attempt at identyfying several probable cases of a patient's profile and experience scenario, in order to empathize with their problem in a better way.	The useful experience of existing facilities serving partially similar function as the one planned for the project.

FOCUS

- 1. To investigate methods of helping the substance abuse patients, identified earlier as 'underserved', with the particular focus on female patients around pregnancy and caring for small children.
- 2. Children of the patients would get a chance to receive help and support during their parent's inpatient treatment. Other cases of co-addicted family members would be able to receive out-patient help.
- 3. The goal is to create a versatile design, which could be easily adapted to any site and therefore help with providing a network of rehab facilities accessible for the population of the less urbanized or completely rural areas, even when facing the lack of big funds.

GOALS



PROVIDING DIFFERENT LEVELS OF ACCESSIBILITY:

GEOGRAPHICAL, SOCIAL, FOR PEOPLE WITH CO-OCCURING DISORDERS



CREATING A FACILITY TYPOLOGY WHICH COULD FORM A NETWORK

STRATEGIES



care for the co-addicted and co-dependant



care for patients with dual-diagnosis

friendly and supportive space in a local help unit

removing the barriers

ADAPTABLE DESIGN

The proposed facility should come as a modular design, which should be affordable and adaptable to any given community. Therefore, receiving help in rural areas should become more accessible.

LOW-COS OPTION

The facility should have a variant composed of only most needed functions, modest materials and basic forms, not to generate extra costs which should be later covered by the patients. Additionally, there could be extra sources of support for its maintenance, such as charity catering etc.

INCLUSIVE POLICY

ф

The response to the problem of previously unattended problem of treating substance abuse outside of major cities would hopefully contribute to minimizing the stigma around it and treating it more like a curable disease.

CARE FOR FEMALE PATIENTS AND THEIR FAMILIES

Women around pregnancy and those with young children should become the focus for inpatient care in the facility. Their children should be able to receive appropriate help, support and accomodation during their mother's treatment. Other members of the patients' families showing signs of co-addiction should be able to receive outpatient care.

DUAL-DIAGNOSIS TREATMENT

The facility would be asssumed to provide help for patients with dual-diagnosis. There should be psychiatric counsellor's service available at the premises. See: doctor's office p. 59).





user groups





A PREGNANT PATIENT

A PREGNANT PATIENT with support person

ENT A with su

A PATIENT with support person

MEDICAL STAFF a nurse, a doctor, a therapist



A YOUNG SINGLE PARENT





... OR A FEW



*check : glossary (p. 77)

solutions used in the case studies, to be re-implemented

The project aims at combining certain aspects of three related, yet differently-profiled facilities, in order to create a new typology for treatment and care for specific patient cases.





CONCEPT - ARCHITECTURAL

The concept for the design project aims at being a response to problems and challenges identified in the research phase of the thesis and illustrated in the preceeding chapter. It will later translate into architectural solutions used in the development of the building design.



FOCUS

- 1. The goal is to create a versatile design, which could be easily adapted to any site and therefore help with providing a network of rehab facilities accessible for the population of the less urbanized or completely rural areas, even when facing the lack of big funds.
- 2. There should be modular way of thinking, which should allow for creating several sizes of the facility, from which the community and their administration unit could choose, depending on their own size and needs. There should be a possibility for expansion, in case of a growing need.
- 3. The project should provide a summary of realistic recommendations for choosing a plot for the facility, in a way that would make the most efficient use of the design.



STRATEGIES



replicable design



low-cost COMPACT option with potential for expanding



providing recommendations for choosing the plot

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following guidelines of how to fit with most rural scapes^{*}

*look : page 35

removing the barriers

ADAPTABLE DESIGN

The proposed facility should come as a modular design, which should be affordable and adaptable to any given community. Therefore, receiving rehab in care rural areas should more become accessible.

LOW-COST OPTION

The facility should variant have a composed of only needed most functions. modest materials and basic forms, not to generate extra costs which should be later covered by the patients Additionally, there could extra be sources of support for its maintenance. such as charity catering etc.

INCLUSIVE POLICY

The response to the problem of previously unattended problem of treating substance abuse outside of major cities would nopefully contribute to minimizing the stigma around it and treating it more like a curable disease. In certain cases parts of the facility could be used by the local community after nours, to accustom ocal people to the ssue.

CARE FOR FEMALE ATIENTS AND THEIF FAMILIES

Vomen around pregnancy and those with young children should become the ocus for inpatient care in the facility. Their children should be able o receive appropriate nelp, support and a c c o m o d a t i o n during their mother's reatment. Other nembers of the patients' families showing signs of co-addiction should be able to receive putpatient care.

DUAL-DIAGNOSIS TREATMENT

The facility would be asssumed to provide help for patients with dualdiagnosis

adaptable design - delimitations

SITE - contextual study of the chosen exemplary site for the facility will be limited to minimum. There will, however, be a list of recommendations for chosing a plot, instead. FUNCTIONS - there will be space and possibility for swapping functions withing the common areas, depending on a local need (eg. some skill being particularly useful in the area, which could be taught and practiced there). THE MATERIALS proposed in this study are an example of eco-friendly and widely accessible solutions, which can and should however be substituted, if a certain case allows for usage of more local materials.



form simplified to maximum for low-cost construction;

design aspects affected by the facility size:



availability of functions (p.33)



a fully formed and equipped 'quarter' of a facility;

EXTENDED

premium functions, introducing extra comfort for patients, available only in this size option;



recommendations for the plot (p.47)

architectural features (p.35)

positive & negative references

atmosphere



The feeling of seclusion and isolation from the world. https://plpinterest.com/pin/364369426109925130/



The feeling of being embedded in nature. https://pLpinterest.com/pin/364369426109925092/

materials



Timber finishes.





Meaningful windows. https://pl.pinterest.com/pin/364369426109925061/

Cold minimalism and repetition. Excessive paving.

https://pl.pinterest.com/pin/364369426109924996/



Simplicity, yet characteristic features. https://pl.pinterest.com/pin/364369426109924932/

facade expression

Concrete.

geometry S form



Interesting geometry of modules. https://pl.pinterest.com/pin/364369426109926290/



https://pl.pinterest.com/pin/364369426109926334/



https://pl.pinterest.com/pin/364369426109926338/



https://pl.pinterest.com/pin/364369426109926381/



https://pl.pinterest.com/pin/364369426109927209/



https://pLpinterest.com/pin/36436942610992739

Village-like look from the outside.

interiors



Luminous spaces.



Room in a room.





Simple furniture.



Natural and neutral finish materials.

FUNCTIONAL PROGRAMME

Analysis of the functions required in the designed facility, their sizes and their mutual links and connections.



A sketch, picturing the functions required in a rehab facility. Schematic picturing of the functions embedded in a rehab facility , their sizes and their mutual connections. Sorting the functions in accordance to the requested size of the facility (introducing several options).





size options : functions

COMPACT

max. 6 patients + 12 co-patients the space compacted to the maximum for low cost construction and maintenance



REGULAR

max. 14 patients + 36 co-patients facility size meant for a town typology



EXTENDED

> 22 patients + 52 co-patients extended scope of staff and infrastructure, meant for bigger funds & more urban setting



FORM DEVELOPMENT

The documentation of process of coming up with the form for the building.

SIZE OPTIONS: ARCHITECTURAL FEATURES GUIDELINES TO FIND THE MODULAR GEOMETRY

SKETCH STUDY OF MODULES THE CHOSEN GEOMETRY

The expression of the building will vary, depending on its size. The smallest facilities will have a clear focus on being affordable for rural areas, while the big ones will allow for more investment into architectural expression. General ideas for how to make the building flexible and fit any given site (with regard to the size options). Diagrams and sketches regarding form of the modules, leading to conclusions for design. Schematic drawings, showing in what way the geometry facility the of changes, growing Compact from EXTENDED, to advantages of the chosen geometry and connected strategies.



ways to make the design universal (not one site specific)

the small-sized facilities should be of compact shape, to fit on a narrow plot;

there should always be a double pitched-roof to ensure at least one PV-profitable direction; there should be a possibilty of mirroring the design in accordance to views on a given plot;



- (+) suitable for a narrow plot
- () easy do divide into units
- () have to arrange central common-space
- () not very PV-efficient

- (+) easy to add modules / functions
 (-) many corners expensive
 (-) long 'corridor' / sequence of spaces





There should be more than one fitting option for the main entrance;

It should be possible to expand the facility beyond the REGULAR with geometrical ease.



(+) nice patio (7) good proportions of buildings + expandable (1) big spaces, if neccessary



the chosen geometry







space



REGULAR EXTENDED two floors, three floors, two floors, two rows of apartments two rows of apartments one row of apartments

advantages of the chosen geometry

there is a clear scheme for expanding from COMPACT to EXPANDED and the modules are easy to spot

the daycare and medical staff unit are located centrally and equally acessible to all residents

and

the children playing in the daycare can access the inbetween wings garden directly



there are always roof surfaces oriented towards south or west. for efficient PV-placement

there are two, mirrored 'wings'

all the apartments can look out at greenery, if there is a garden between the wings

there is a clear organisation and communication scheme and the apartments have entrances independent from the main



functions -> modules



SITE RECOMMENDATIONS

Thoughts about geometry of the expandable facility and recommendations for placing it on various plot cases.

FACTORS TO BE CONSIDERED

CONDITIONS OF FACILITY PLACEMENT DIAGRAM

SUM UP ΟF RECOMMENDATIONS

The element that add up to forming the recommendations for chosing an optimal site.

Different aspects to be revised while placing the facility, illustrated on the building outline.

General findings as of recommendations for the site for the project, based on the study of possible cases.

factors to be considered





topography



The need to rehab supply facility for rural areas became the fundation for this study. The facility, in suitable size option, can be however placed in a peaceful district or outskirts of a more urban area.

A hilly or sloping site might mean a lot of need for design adaptations, so the preffered condition would be for the site to be flat or nearly flat.

The rehab process can be enhanced by exposing the patient contact to nature. with Therefore. it is advised that there are preferably two, but at least one. view lines going out to nature, on the plot.

surroundings

/ views

The developed design options take up a certain area, and the minimum dimensions for the plot must be taken into account.

The sun orientation at the plot affects many factors, such as building users' wellbeing connected daylight to exposition, indoor the environment quality and potential for producing solar energy on the site.

Certainelements of infrastructure such as a playground or a park near the facility are an upside, but other ones that link to the addiction record of patients can provoke old-way of acting and cause a relapse in treatment.



x [m]



nearby infrastructure conditions of the facility placement



sum up of recommendations for the plot

COMPACT

- the site should be flat or almost flat;
- the site can be a simple rectangle, size of 29 by 35 meteres, or 29 by 49 meters, in case there is a prospect of expanding to the REGULAR sized facility;
- it is best if the chosen site has a view over nature in two opposite directions;
- the longer side of the plot should preferably be on the east-west axis

REGULAR

- the site should be flat or almost flat;
- the site should be a rectangle, at least the size of 29 by 49 meters;
- it is best if the chosen site has a view over nature in two opposite directions;
- the longer side of the plot should preferably be on the east-west axis

EXTENDED

- the site should be flat or almost flat;
- the size of the required site is at least the same as for the REGULAR facility;
- it is best if the chosen site has a view over nature in two opposite directions;
- the longer side of the plot should preferably be on the east-west axis
- due to the 3-story height of the building, it should be located in the proximity of similarly sized volumes

DESIGN PROPOSAL

The chapter features in-depth development of an exemplary case of a REGULAR-sized rehab facility. Additionally, it showcases the design differences between the COMPACT, REGULAR and the EXTENDED design.



how to read the chapter

The project consists of three alternative design options for the building and each of them introduces a different size of a facility. This chapter attemps at exhibiting them all in a way, which allows for comparison of the three versions. When applicable, they will be dispalyed next to one another and labeled with the SIZE tag. In terms of the layouts, the REGULAR and the EXTENDED facilities share the same ground floor and second floor plan, while the third floor only exists in the EXTENDED version. In terms of the facades and section cuts, they are in some cases the same for the COMPACT and the REGULAR size options and then the repeated drawing will not be displayed. Due to the fact that depending on the type of view, there is a different expansion pattern, it is impossible to repeat the same layout on all the spreads. Please look for the size guides on the top of the spread and in the drawing labels, through the entire chapter.

picked exemplary site - presentation

LOCATION IN POLAND



SITE CHOICE - EXPLANATION

I have decided to place an exemplary facility on a site in a setting which I am familiar with, in order to understand the atmosphere, the needs and the dynamics of the place; it will be located in Mogielnica, my ancestrial town, located in central Poland, home to approximately 2300 inhabitants.





















COMPACT VERSION

corridor



EXTENDED VERSION

•••••

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workshop space

medium apartment (1+3)

middle-sized the apartment, added in the REGULAR version of the facility. Features one regular bed and two bunk beds for children.

dorm

a common dorm for children of the patients whose parents are involved in the detox treatment and can not stay with them.



SECTION CUT A - A

small apartment (1+2)

the smallest size of an apartment, available in all facility sizes. Features one regular bed and two bunk beds for children.

detox unit

single person detox units, equipped with a bathroom, accessible also for a handicapped person.

technical spaces

technical spaces are planned to be located in the attic.







COMPACT VERSION

therapy space



EXTENDED VERSION



activity space







SMALL SIZED APARTMENT (1+2)

MEDIUM SIZED APARTMENT (1+3)



COMPACT VERSION

EXTENDED VERSION



front facade





rear facade





front facade

VI



rear facade

REGULAR VERSION



FRONT FACADE (S-E)



SCALE 1:200





rain drainage scheme

All the facades in the project are to some extents protected from excessive sun glare, due to the use of the casings around the window frames, but it is recommended that in case of the chosen site being barely shaded, it is recommended to install extra shading on the southern facade.

The rain drainage gutters are designed to be hidden behind the facade finish material. The downpipesshouldbefittedinside the walls, between the wooden structure, with the proper insulation work to prevent the appearance of thermal bridges.



courtyard facade



gable facade

COMPACT & REGULAR VERSION



COURTYARD FACADE



GABLE FACADE (S-W)





strategies for facilitating the expansion

I. BUILDING COMPONENTS

CAN BE STRETCHED / EXTENDED

walls & divisions;

wooden casings;

columns;

railings

CAN NOT BE STRETCHED / EXTENDED

curtain walls; window panes; door segments

The expansion scheme takes into account this division, in order not to lead to eg. a situation when an entire curtain wall would need to be replaced, in order to get an EXTENDED size one. The expandable elements are planned to be stretched, but in other cases. elements are planned to be added (for example the skylights in the 3rd floor common spaces, instead of the curtain wall).

2. NO WASTE

The expansion is planned in such a way, not to waste building components my making the COMPACT elements redundant in the REGULAR option and the REGULAR ones in the EXTENDED one.

The exception is the corridor / balcony railing from the COMPACT version, but as it is designed as a wooden one, the material retrieved from it can be reused for other woodworks on site, during an upgrade.

expansion scheme - 3D



structure and materials - external wall

For the sake of providing realistic dimensions of the drawings and ensuring the environmental positivity of the basic construction element - the external wall, it has been designed carefully in terms of the used components.



basic startegies for cutting costs*

CONSTRUCTION

simplified facade version with possibility for an upgrade;

use of standard-sized elements (eg. wall openings);

avoiding complicated shapes and therefore unnecessary corners & joints;

only small adjustments to existing plans, when placing the facility

MAINTANANCE

use of a building with efficient shape factor^{**} guarantees more energy-efficiency in the use

due to the proposed structural elements disassembly and replecement of certain builing fragments should be an easy fix***;

OPERATIONAL

efficient use of spaces - overlapping functions;

if the facilities success at forming a network of care, certain staff-specialists could be shared between the nearby units;

some of the staff members could be formed with former patient volunteers, taking advantage of and benefitting the local community feeling;

*this applies mostly to COMPACT version of the facility, as it is the one that puts emphasis on the economic aspects. Some of the solutions can however be continued after a size upgrade ** see: glossary p. 77

*** in this work, this aspect is left in a stage of primary sketch. but it can be developed further in another project

OUTRO

Conclusions and an addition of auxiliary content of the project.



reflections & conclusions

There is no doubt that the process of developing a master thesis feels much less of a vast task at the moment of it's completion, than it does before and at the start of it. I believe that many students would agree, that due to time limitations, many of the threads that we pick up with genuine interest during the research and design phase, eventually have to be cut by the project delimitations and that almost always there is a desire to develop the work even further. I can, however, say that it was a rewarding experience to work with a design for a group of users that has a very scarce, if any, representation in the built environment and architectural studies.

The lack of such, leaves a lot of space for new findings and development of solutions to problems of various origins: practical, emotional and esthetic ones. The time of the COVID pandemic made it especially difficult to conduct interviews and fields trips at facilities which serve a function that overlaps, at some parts, with my project programme. At the moment of submitting this work, I can tell that it only touches the surface of what is a very broad and very complex topic, but I do hope that it can mean a small step towards establishing a more open atmosphere for discussing a range of issues connected to addiction treatment and the ways in which architecture can support addiction patients.

My angle of addressing this topic turned towards producing an adaptable. replicable, modular design, which could have the potential for going from no infrastructure for specific groups of underserved patients to a network of locally oriented facilities. I feel that I fulfilled my goal of delivering a design, which could provide the patients with different levels of availability: geographical, social and one that crosses the boundaries of handicap barieer. I like to think of this approach as a thorough attempt at socially sustainable architecture. I did, however, receive one more lesson, which proves that many of the truly eco-oriented and sustainable solutions in architecture have to be local, to such extent that it often gets difficult to exercise them in a generic, non-site specific design. I feel that there is a potential for at least one more similarly sized project, which would develop more on detailed, practical and technical issues steming from my design. I truly hope that I will have an opportunity in the future to pick the project at the point where I leave it now, and conduct a further in-depth study on the aspects which I need to leave as loose ends in the project, for the time being.

special thanks to:

Elke Midema

Johanna Eriksson

Agnes Engström Agnes Ståhl

Chalmers School of Architecture 2021



CHALMERS

"a concept that attempts to characterize imbalanced relationships where one person enables another person's addiction, poor mental health, immaturity, irresponsibility, or underachievement. Definitions of codependency vary, but typically include high self-sacrifice, a focus on others' needs, suppression of one's own emotions, and attempts to control or fix other people's problems. People who self-identify as codependents exhibit low self-esteem, but it is unclear whether this is a cause or an effect of characteristics associated with codependency".



CO-DEPENDENCY

DUAL DIAGNOSIS

"A person with dual diagnosis has both a mental disorder and an alcohol or drug problem. These conditions occur together frequently."

source: https://medlineplus.gov/ dualdiagnosis.html

MONAR

"Monar is a Polish non-governmental organization focused on helping drug addicts, the homeless, those who are HIV positive or who have AIDS, and many other groups of people who need help. The organisation employs around 700 professionals (medical staff, psychologists etc.) and it is supported by around 300 volunteers each year. Around 2,000 drug and alcohol addicts are recovered each year. Around 20,000 homeless people are using Monar hostels."

PERSONAS

"Personas are fictional characters, which you create based upon your research in order to represent the different user types that might use your service, product, site, or brand in a similar way. Creating personas will help you to understand your users' needs, experiences, behaviours and goals."

source: https://www.interactiondesign.org/literature/article/ personas-why-and-how-youshould-use-them REHAB

in this study: "a course of treatment for drug or alcohol dependence, typically at a residential facility."

source: OxfordLanguages

RURAL AREAS

in this study: a town of less than 5000 inhabitants

source: https://en.wikipedia.org/wiki/Codependency

source: https://en.wikipedia.org/wiki/Monar

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BEGIN AGAIN

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