

GREEN BUILDING FESTIVAL 2016



APPLIED SCIENCES TECHNOLOGY, BUSINESS AND DESIGN, HOCHSCHULE WISMAR UNIVERSITY
APPLIED SCIENCES, HOCHSCHULE NEUBRANDENBURG UNIVERSITY
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GREEN BUILDING FESTIVAL 2016
SUSTAINABLE DESIGN - ECOLOGICAL ARCHITECTURE AND CONSTRUCTION

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SUSTAINABLE DESIGN - ECOLOGICAL ARCHITECTURE AND CONSTRUCTION

Department of architecture, Montfort del Rosario School of architecture and design intends to reflect the application and integration of culture and art with science and technology knowledge, through the effective and creative management system. Our program curriculum was approved and monitored by Thai Ministry of Education and Architect Council of Thailand (ACT). The ultimate goal is to enable human being to achieve standard of living and environment. This program is hoped to enlighten a life-long development of knowledge and competence in the learners.

This book is published in conjunction international workshop 2016

Green Building Festival Wismar 201: Sustainable Design - ecological architecture and construction

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INTRODUCTION

The collaboration program of 'International Study Tour' for Academic Year 2015 in Germany during June 2016, has given our students a better understanding of green building project in many aspects. The students' achieved an essential knowledge in 'sustainable design' as well as other aspects in design, including high quality livable spaces, building regulation in Germany, landscape design, and an efficiency in urban design to create an efficient energy student apartment project in Wismar and a school project in Neubrandenburg. All the workshop's participants have exchanged and developed their design knowledge, skills, and experiences on the key design issues regarding architecture, interior architecture, landscape architecture, and urban design within 5-days workshop in Wismar and 2-days workshop in Neubrandenburg. These two satisfaction workshops were another confirmation of our relationship that we have strengthened a greater academic opportunity between all three schools (Montfort del Rosario School of Architecture and Design, Assumption University, Faculty of Architecture and Design, Wismar University of Applied Sciences: Technology, Business and Design, and Faculty of Landscape Sciences and Geomatics, Neubrandenburg University of Applied Sciences).

Two workshops were conducted at the Faculty of Architecture and Design, Wismar University of Applied Sciences and the Faculty of Landscape Sciences and Geomatics, Neubrandenburg University of Applied Sciences in June 2016. The first workshop at the Faculty of Architecture and Design, Wismar University was conducted under the event 'Green Building Festival Wismar 2016: Sustainable Design –

ecological architecture and construction'. Sixteen students from Assumption University and twenty seven students from Wismar University participated in the workshop (approximately 15 different nationalities). The selected project for the workshop has challenged the students in many aspects in term of 'Green Design' as well as creative design to promote a comfortable living student apartment. The task was to redesign a student apartment for Wismar University's campus which has to address the issue of 'architectural identity' for the campus and provide design concepts according to the given design approaches.

The second workshop has been organized at the Faculty of Landscape Sciences and Geomatics, Neubrandenburg University, on the topic of sustainable design school under the disciplines of architecture and landscape architecture. The workshop consisted of sixteen students from Assumption University and five students from Neubrandenburg University. The students were assigned to design a new renovation of the elementary school with the additional program of kindergarten and some functions for the community and university. The main objective was to improve the environmental condition of the existing school and provide better uses for the building. The workshops at the two universities were organized through the design studios, excursions, lectures, and research seminars in relation to the disciplines of architecture, interior architecture, landscape architecture, and urban design toward the efficient energy design concept.

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Assoc. Prof. Dr. Nitichan Pluemarom

Dean

Montfort del Rosario School of Architecture and Design, Assumption University

This is the third year of our school's collaboration with our partner universities from Germany for another interesting workshops. We have successfully signed MOU with the two partner universities (Faculty of Architecture and Design, Hochschule Wismar, University of Applied Sciences: Technology, Business and Design, and Faculty of Landscape Sciences and Geomatics, Hochschule Neubrandenburg, University of Applied Sciences) to collaborate and organize the international workshops together for the future. These workshops are part of the activities to strengthen our long term partnership in teaching and learning, researches, and international exchange programs

Our students have gained valuable experiences working with international students (fifteen different nationalities), including the German students, and have also gained more experiences in term of problem solving in an unfamiliar environment which will help them to develop their skills and understanding in order to work in the different environmental contexts. This international program will provide great benefits to our universities in many levels, particularly to the school's development plans in promoting international multi-disciplinary design collaborations. As such, our school will provide all the needed supports for this program and extend a further collaboration with our German partners



Jaturont Boonla-or

Chairperson, Department of Architecture

Montfort del Rosario School of Architecture and Design, Assumption University

We have strengthen our relationship with our German colleagues by having our international workshop together for the third time. This year workshops have been set up by our academic partners - Hochschule Wismar, Faculty of Architecture and Design, and Hochschule Neubrandenburg, Faculty of Landscape Sciences and Geomatics, on the interesting topics of sustainable housing and school designs. The collaboration program of 'International Study Tour - Germany' between the three schools has provided us opportunities to develop further exchange teaching and learning, researches, and resources in sustainable design knowledge. This year, our workshops consisted of various interesting lectures, excursions, discussions, and design examples which allowed our student to learn about high quality living space with sustainable design concept. I believe this workshop has accomplished a great program on teaching and learning for students and to exchange knowledge and experiences for the faculty members



Dr. Sanphawat Jatupatwarangkul

Full-time Lecturer, Department of Architecture

Montfort del Rosario School of Architecture and Design, Assumption University

It has been three years of strengthen our international collaboration and academic relationship among Germany and Thailand. This year, Montfort del Rosario School of Architecture and Design, Assumption University of Thailand has chosen 16 international students from Thais, Chinese, Burmese, and Bhutanese in the junior level who have completed only academic of 4 semesters. They are young in skill and experience but fully of passion waiting for a new exploration. They have been working and competing among international students from Wismar University and Neubrandenburg University in master level. It was a tough love challenge that could gain and pain but lean in near future. The most challenge was involving the realistic issues on redesign and reconfiguration of the current building design proposal in Wismar and existing building in Neubrandenburg.

Nevertheless, the hosts, university administrators, and public organizations have been impressed all products, which derived on the new conversation of design and development. Believing in all young designers to all universities who have involved in the program would gain another great experience and sharpen their critical thinking, thus the most important was gaining and building up passion in design and collaborating skill in multicultural disciplines.

Benjarit Nimboonchaj

Full-time Lecturer, Department of Architecture

Montfort del Rosario School of Architecture and Design, Assumption University

Germany as a country which reaches 100% Renewable energy production capacity stages a very hollistic learning environment for architectural sustainability workshops. Our students have a resourceful opportunity to cultivate energy awareness both academically, socially and culturally.

With impecable hospitality and organization, our collaborative workshops at Wismar University and Neubrandenburg University were design intensed, feasibility focused and above all enjoyably successful.

Our 3 years of fruitful connection solidly paves a path to a strong future international cooperations.



WISMAR

SUSTAINABLE DESIGN WORKSHOP



Schmalz
kuchen
Kaffee

Schmalz

Steinofenbrat
leckere Rauchwurst
Zuckerbuchen
Laugengebäck
Flammkuchen
Fladenbrat
Schmalzstull
Kaffee
Brezeln
Paulette
L...

GREEN BUILDING FESTIVAL

WISMAR 2016

Lecturers



Marcus Hackel
Prof. Dr.-Ing. Architect
Wismar University of Applied Sciences,
Technology, Business and Design
Chair of Building Practice and Design
Vice Dean Faculty of Architecture and Design



Alzbeta Krizánková
-Ing. Architect
PhD Student at Faculty of Architecture,
Slovak University of Technology in Bratislava
DBU scholarship holder at Hochschule Wismar,
University of Applied Sciences, Technology, Business and Design



Julian Kruger
Prof. Dr.-Ing. Architect
Wismar University of Applied Sciences, Technology, Business and Design
Full-time Lecturer



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INTERCULTURAL COMMUNICATION AND ARCHITECTURE

Marcus Hackel, Prof. Dr.-Ing. Architect

Communication is crucial for the success of architecture. Looking deeper into the forms and needs of communication we can identify three different important questions that have to be discussed:

Does architecture communicate?

Umberto Eco said: "Architectural language is an authentic linguistic system obeying the same rules that govern the articulation of natural languages.".....

With the growing globalisation it is important for architects to understand the effects of different cultural background on the reading and understanding of architecture. Different cultures will interpret the architectural language using their distinct background of symbols, old identities and current development.

Can you encourage and foster communication thru architectural design?

Communication is one of the elements of culture and the importance of communication for innovation as well as for the society at large is growing. We live in the information age and international connectivity is growing. Nevertheless the importance of person to person communication is of extreme value and cannot

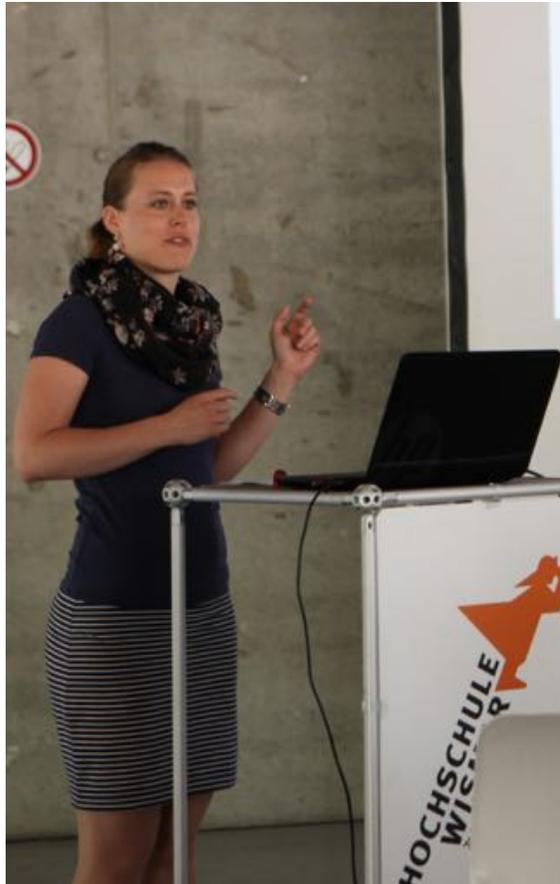
be replaced. Urban design and architecture should provide the means to enhance this face to face interaction.....

Specific design even for kinder-gardens, schools or student homes can enhance communication and communication skills... All these concepts use communal space, open floor plans and a 3-dimensional design to create these communication "landscapes" and "hubs"...

How should you communicate your architecture?

Communication for architectural services is very complex, as it has to be planned strategically. It has to consider all effected levels individually (communication-level-mix), using ideally successful projects as references, as rational arguments are preferred by all levels and target groups.

The communication of architecture gets even more complex in international and intercultural context as different cultures use different general approaches on communication. Some societies as for example the German use a very direct and fact oriented approach (Low Context Communication) while others use an indirect approach focussed on politeness and face saving (High Context Communication).



READY

Alzbeta Krizánková

Ing. Arch.

We build wrong houses. Only very few houses and apartments are suitable for life-long living. Especially older people's needs for life and space change over time, but even younger people are no exception. However, there are missing flexible, affordable, barrier free apartments, practical standards and solutions.

How does a housing suitable for life-long living look like? The inspiration for this question arises from the research about suitable housing for elderly people, carried out by Institute for Housing and Design from University of Stuttgart. The aim was to find a solution for proposing houses 'ready' for their future needs and adaptations. The result is a conception of 'ready' standard.

'Ready' standard is a regular 3-stage concept:

- 1 ready minimum standard
- 2 ready plus standard
- 3 all ready superior standard

While the first stage specifies the minimal standard (ready) that could to be efficiently implemented into new constructions taking into account also social and economic respects, in higher stages (ready plus, all ready) more complex requirements and solutions are demanded.

'Ready' design concentrates on the whole building. It combines the main principles, methods and quality requirements for housing suitable (not only) for the elderly.

- Suitable for the elderly ~ suitable for any age
- Suitable for any age ~ suitable for whole life
- Suitable for whole life ~ adaptable

Sustainable housing adapts to the individual life story, simply and efficiently. It satisfies people's needs as they arise, with little structural alteration. Buildings are usually designed for long time periods, so the future possible adaptations need to be taken into consideration already at the design stage. Converting a student housing into housing for elderly is just one simple example. Therefore, all newly built dwellings have to be designed as suitable for the whole life, thus following the requirements of 'ready' design concept.

EFFICIENCY IN URBAN DESIGN

Jaturont Boonla-or

The efficiency in urban design lecture is set to explore students perspectives on urban development in another dimension: larger scale design with a more concern with other elements in the environmental context. This lecture is aimed to provide students with a better view of how city or town get developed by starting with the meaning of the urban area, town making fundamental, traffic networks, public spaces, and examples of projects in relation to the content. Eventually, an efficient urban design application will always be implemented according to the needs of public.

The meaning of the urban area meant to provide students a clear identification of city's environmental context in comparison to rural area in term of functions, being the centre of all important activities, and most importantly being the point of maximum concentration for the power and culture of a community. In many kinds of human relationships it is the function of the active person to establish the creative force and also to develop receptivity to it. On the other hand, environmentalist suggested that The urban area is a place of high density living with great number of people sharing resources. It is the place where symbolizes the congestion,



pollution, and waste that modern culture has created. A compact alternative to the constant invasion of open space represented by modern sprawl. High density but low quality of living. So it is the function of the designers to conceive an idea, implant it, and nurture its growth in the collective minds of the community in such a way that the final product has a reasonable chance of coming close to a 'utopia living place'. This has opened up the issues of discussion for the topic and questioning the 'efficiency in urban design'.

The "Town Making Fundamental" lecture presented the students a clearer view of how the cities or towns were planned, the significant basic elements of town making. Street and pedestrian hierarchies and networks are the key element to provide a better understanding for students about the linkages between building, urban spaces, public open spaces, parks, courtyards, and land marks. Different streets and pedestrian routes design typology can also suggested effective language in influencing traffic behaviors.

Example of Melbourne Dockland Development was presented with the urban design guideline and some design implementations to demonstrate students the steps in urban design in the real practice. The city development concept for place marketing to attract private investment is always an effective strategy and the result is that the public benefits are the second priority. However, the case study provide a good example of sharing benefits between public and private and still able to gain private investments. The topic 'efficiency in urban design' has set opening answers and discussions to question whether or not urban design process can provide an effective urban development strategy and balance the benefits between public and private.



GREEN DESIGN & STUDENT LIVING

Julian Kruger

Prof. Dr.-Ing. Architect

The presentation of vernacular architecture with the uses of available local natural material such as wood and bamboo to build primitive hut, tree house, or bamboo bridges, has demonstrated local knowledge for the use of available resources with cultural influences. Green design has long been integrated in our built environment and it has proved to be a great solution to harmonize our living environment.

Green space has been associated with an increase in stress-related diseases and mental disorders in people living in urban environment. The increasing needs for outdoor open spaces where urban residents can find some relief from the demands of urban lifestyle and stress such as noise pollution, air pollution, traffic congestion, fear of crime, and crowding accessible to natural green spaces which can cause vital for mental and physical health in rapidly growth of urbanization.

All the above discussions have led to the final questions: "How can you use new technologies?", "How do you react to the change?" and finally "How Green is Your Garden?"



DESIGN AND CONSTRUCTION OF BAMBOO

Benjarit Nimboonchaj

Bamboo is one of popular building materials abundantly found in tropical regions. With its high regeneration ability, excellent physical properties and construction versatility, this tall grass found its way into various elements of architecture throughout the history. However, industrialization of construction systems, modernization of urban lifestyles and capitalization of building industry have ruled out this natural wonder. Bamboo is not recognized as an industrial standard building material by the current building regulations in Thailand.

The presentation has demonstrated this versatility of bamboo from the AAU Design + Build summer workshop that aims at exploring tectonic possibilities of Bamboo in contemporary architecture through trial-error design process, hands-on experiments and FUN learning atmosphere. The “Sor Sala” project involves 5 professors, 3 interns and 20 volunteers 3rd year student from four departments of Montfort del Rosario School of Architecture and Design, Assumption University over a period of 10 weeks; 2 weeks for design, 4 weeks for development and prototyping, and 4 weeks for construction and assembly. The final outcome is a 30,000 Baht (800 Euros) 4 x 12 meters bamboo pavilion and smiles on everyone's face



GREEN CITY, GREEN LIVING"

Dr. Sanphawat Jatupatwarangkul



The global future challenge has risen for all cities due to increment of urban living density, demographic change, special care demand, and climate change. Targeting cities, because they are rapidly urbanization growth and industrial change in the fast pace. Cities across the world are nonstop consuming the energy for mega demands while there are limited resources. Improper balance future needs and habitats are causing wide damage to the environment.

Nevertheless, there is hope among crisis; certain cities across world have awakened by projecting and finding the long term solution towards to sustainable living balance. From the past decade, one of success independent research and advisory firms worldwide, the Economist Intelligence Unit (EIU) has been criticized cities how sustainable worldwide by designing an indicator called "Green City Index". It aims to compare major cities in Europe, Asia, Africa, and Americas in aspect of environmental performance and policies, and also understanding own strengths and weakness of each city and comparing their performances. The index is categorized, for instance; the environmental governance, CO2 intensity and emission, energy consumption, buildings efficient standard, transport, waste and land use, water consumption and treatment, and air quality. The quantitative

analysis results have shown the factors of Wealth (GDP per head of cities), Historical attitudes, inefficient infrastructure, People, Correlation of city size and performance index, Public funding and culture, Location (resource availability), and Cities' implementation are significant play importance role indicate cities more success than others.

"If you make cities more efficient, you make the world more sustainable" said Prof. Ricky Burdett (Urban Studies at the London School of Economics and Political Science). Good tip is to start evaluate own city, perhaps take any possibilities to provoke the sustainable attitude with green living balance. Jennifer Hattam (Design / Urban Design, 2009) said there are 10 things that make a great green city. First, Green space is a "lungs of the city" Frederick L. Olmsted said green open spaces where city dwellers could breathe clean air. Efficient public transportation is wide connected to nodes and decentralization. Quality of public space provides the potential of new public life styles and creates awareness of social values and contribution. Proper bike lanes must be achieved in any metropolitan area in order to promote a good health and energy management. High-profile green buildings are to demonstrate the public awareness and concern to building and industrial operation. Promote comprehensive

recycling and compositing programs for reduce the waste deploy and damage to environment. Build more mixed-use and infill development provides a vibrant of highly integration of economic and community values. Promote green leadership for self-awareness and social responsibility to people, community and environment. Smart energy policies must demonstrate the high potential of green development road map and implementation plan. Last, promote idea of livability is to create a good green fun starts from social and public activities while parents and children can contribute and enjoy.

Therefore, the wealth factor measured GDP and GDI may not always response to the qualitative living. What is the possibility of green living? "Bhutan measures prosperity by gauging its citizens' happiness levels (gross national happiness or GNH), not the GDP" presented UN climate change conference in Doha. Bhutan has been setting the global sample in way finding of the spiritual, physical, social and environmental health of its citizens and natural environment. We have known for a long time that there is more to life than GDP, The Organization for Economic Cooperation and Development (OECD) report shows where even the richest countries still have room to improve the well-being of their citizens in the inequalities. How's life, How do you live overall? Let's build and promote inequalities in well-being, monitoring resources for the future, projecting how life is for children, volunteering and well-being, and where people live can strongly affect their well-being.

WORKSHOP INTRODUCTION

How do students of different nationalities live together? What are the requirements to an international student hall? Is there a sustainable student hall? Sustainable development, energy efficiency, zero emission, low CO2-emissions - there are key words that are becoming increasingly important in architecture concepts. What is the building of the future? How have common areas to be designed? Sustainable and energy-efficient building concepts cannot be developed through simple, recurring identical planning instructions. You have to adapt the concept to local and climatic conditions. Together we want to discuss challenges, positive examples and ideas.

Course Description | The workshop includes a session focusing on future living concepts. Discussions and impulses during the workshop will include the need to think about our future and the possibilities and chances of ecological architecture and construction and energy saving concepts. Students get the possibility to work with experts and gain own ideas of sustainable concepts for a new student hall next to the campus.

Aims of the workshop | Students get in contact with experts and topics, they do not get in touch during their study time. It brings sustainable and green design issues into focus; develop an individual concept for a new student hall next to the campus, according to ecological criteria, inspire new types of interdisciplinary and international collaboration between students, scientists, planners and mavericks and find out new guidelines for forward-looking concepts.





Martin Wollensak

Prof. Dipl.-Ing. Architect

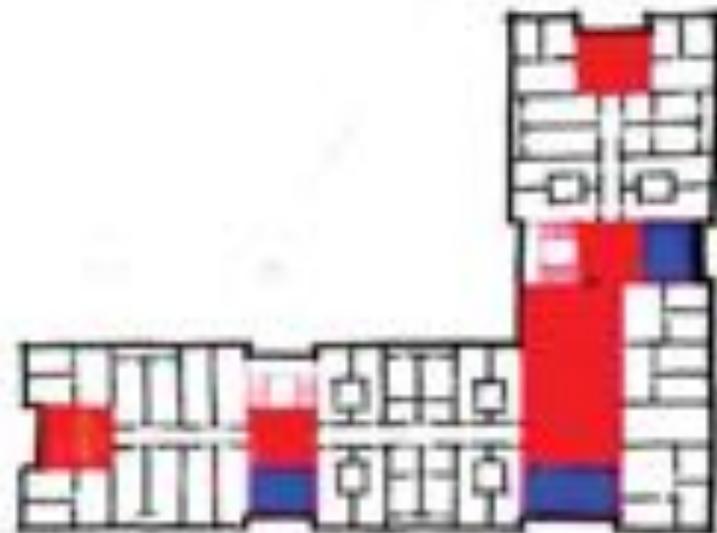
Wismar University of Applied Sciences, Technology, Business and Design

Full-time Lecturer



WARUCH C.
VASINEE M.
TED SANDY KOKO
PETRA PECA
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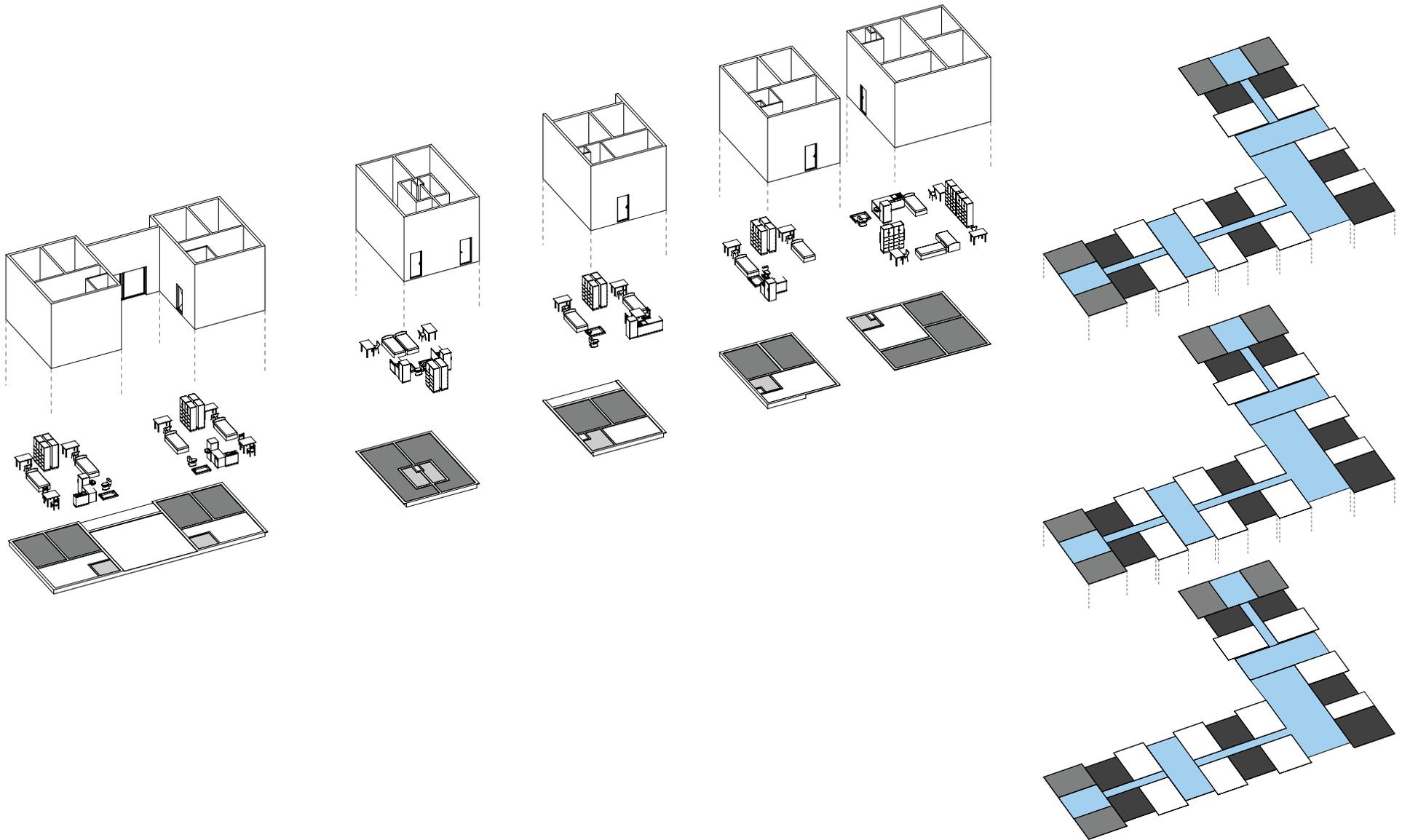
ZONE DIFFERENTIATION



■ COMMON SHARED SPACE
■ COMMON SHARED KITCHEN

The main task for this typology 3, zone differentiation is to redesign the space, based on the students' demands, Wismar identity, and most importantly is need to be sustainable; to minimize the environmental impact with less use of energy, to produce the better quality outcome with less effort.

The core notion to design this student apartment is to increase more common spaces in order to improve the social interactions between residents.



ZONE DIFFERENTIATION

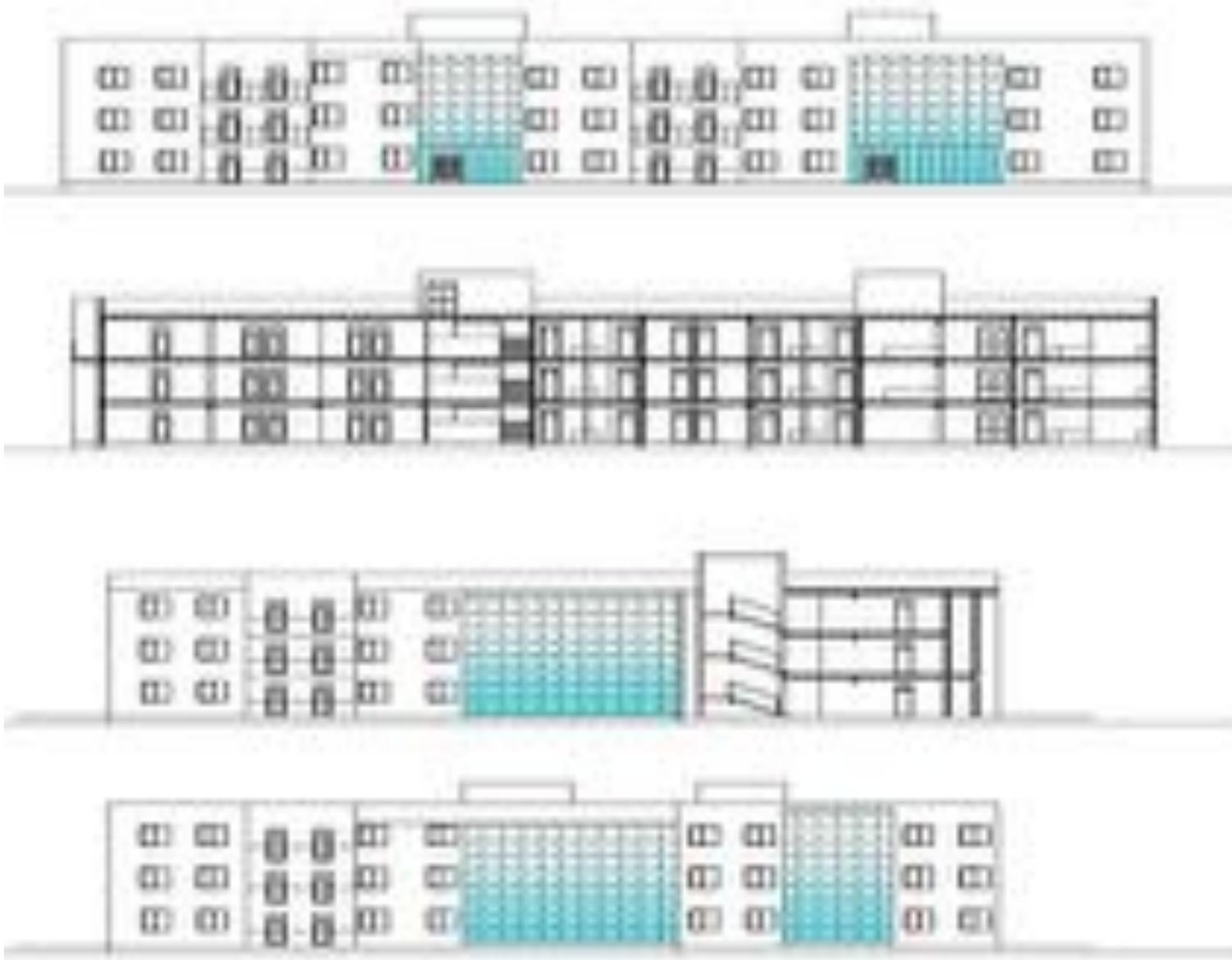
DESIGN PROCESS

The middle courtyard was mainly to maximize shared space and highlighting the space with natural lighting. It also will help to have more public space compared to the existing dark space. The shared space will also be incorporated within the bedrooms to create more shared space for student residents. The typical unit would consist of three units sharing one common space. Each unit will house 6 individual bedrooms, with shared open balcony, kitchen and toilet.



The two main selling points of the design orientations are the various type of rooms and common spaces to improve the student life, by giving them the homely warming and lively environment. Second is the roof top garden, here we have the green area which also provide bungalow-like communal units where people can go up and enjoy the sunset. It is the most spacious gathering space so the residents can chill out.

We enlarge the public places by adding common rooms after eight to 10 rooms. And also, in order to trap the heat inside, the corridor ends are all opened to let the light enter. Also the two big balconies are attached to the common rooms for better ventilation.



We enlarge the public places by adding common rooms after eight to 10 rooms. And also, in order to trap the heat inside, the corridor ends are all opened to let the light enter. Also the two big balconies are attached to the common rooms for better ventilation.

ZONE DIFFERENTIATION

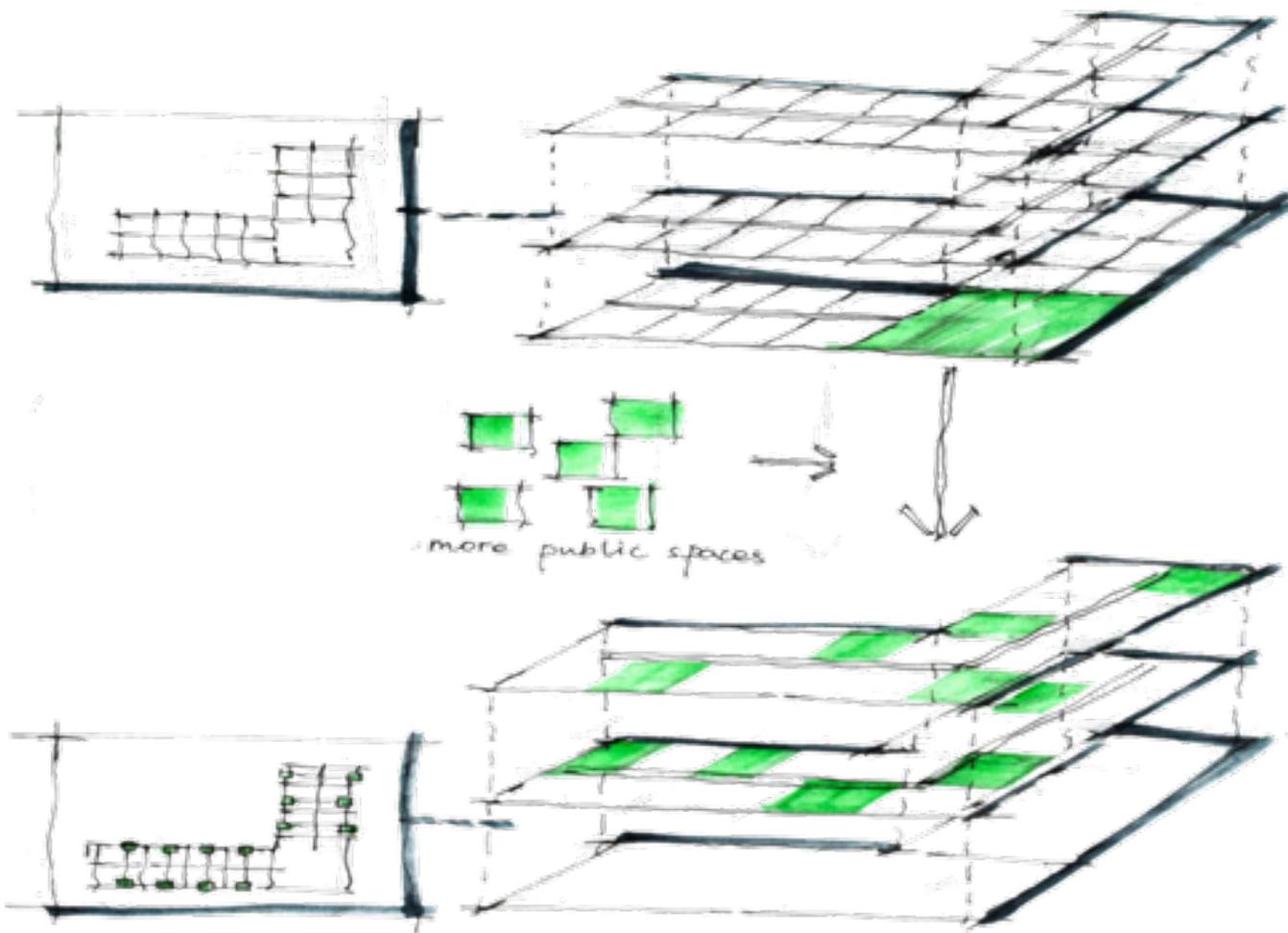


For the outdoor circulation, most of the cars parking are removed since Wismar students do not use car in most of the time but bicycle as a main transportation. So more bicycle parking is added. The two main selling points of the design orientations are the various type of rooms and common spaces to improve the student life, by giving them the homely warming and lively environment. Second is the roof top garden, here we have the green area which also provide bungalow-like communal units where people can go up and enjoy the sunset. It is the most spacious gathering space so the residents can chill out.

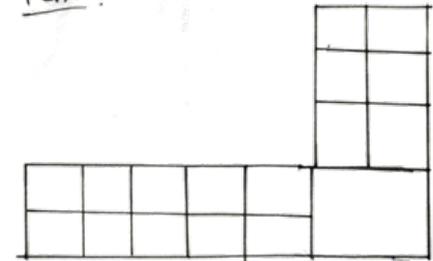


RUI QI L.
YUN YU HUANG
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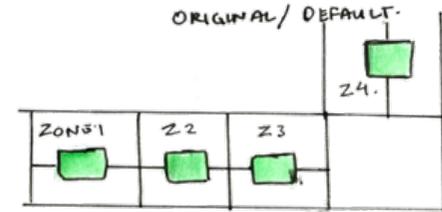
SPACE RECONFIGURATION



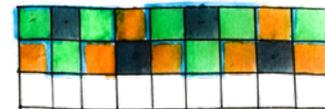
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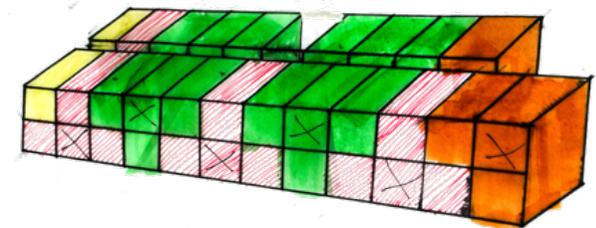


SHARED SPACE

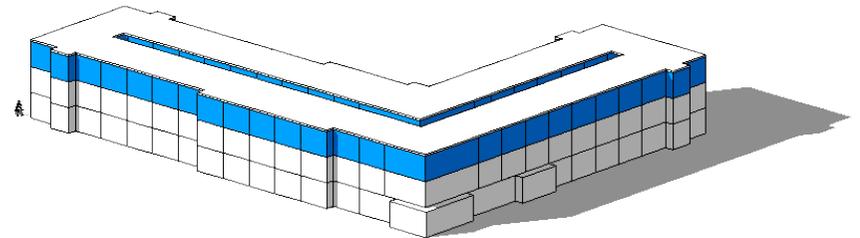
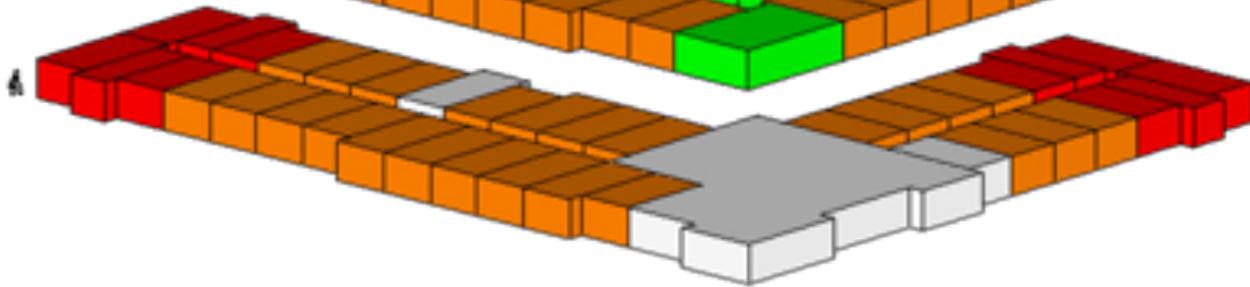
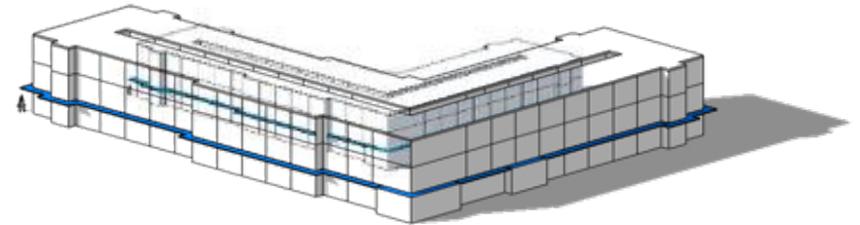
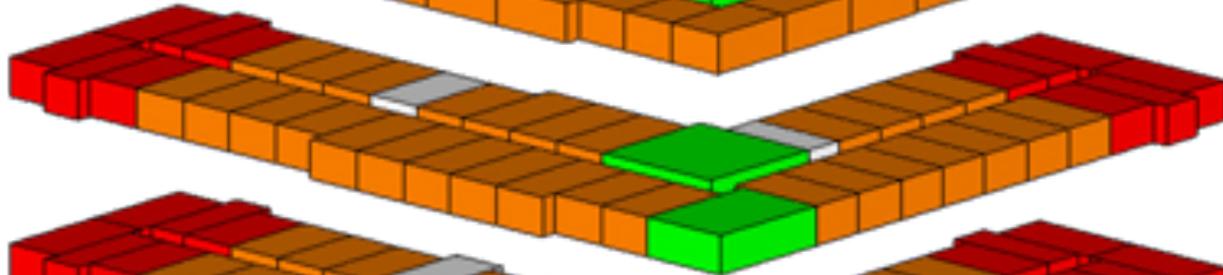
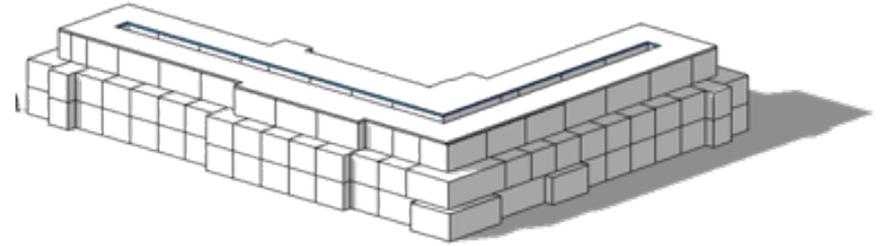
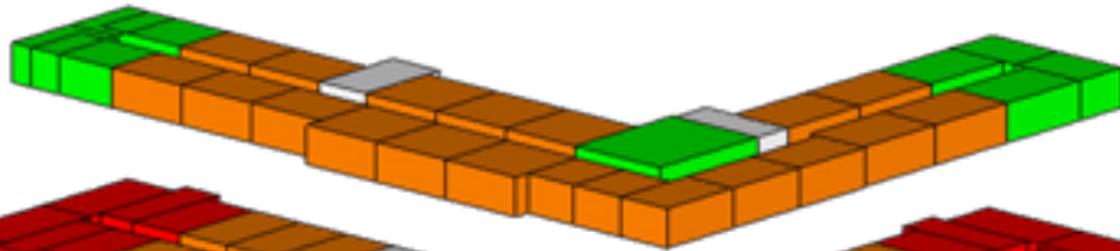
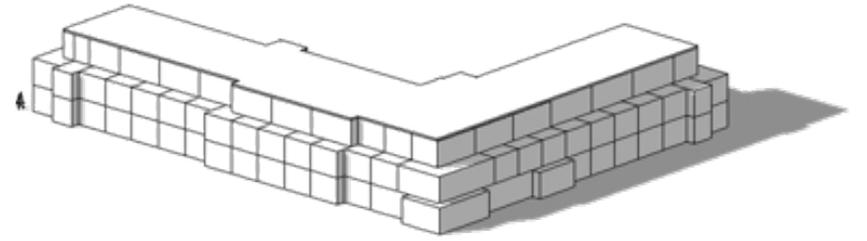
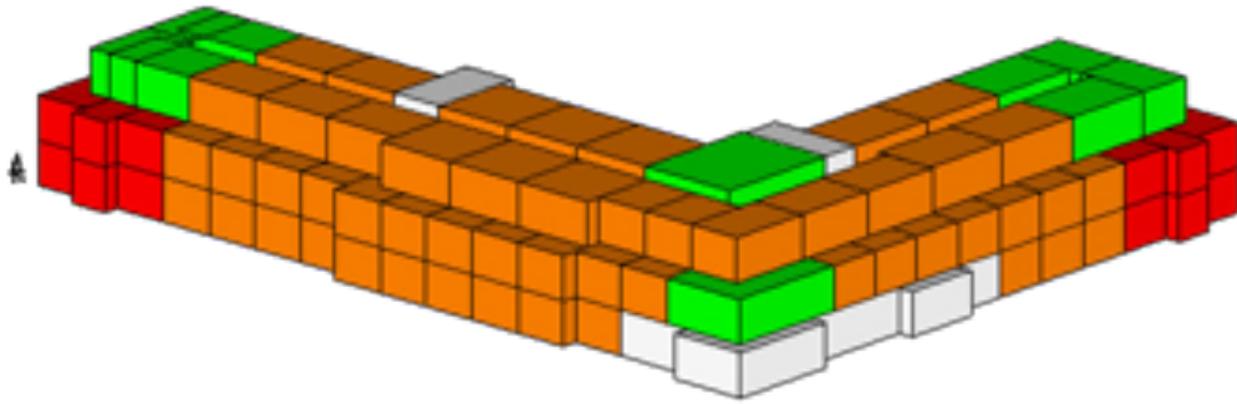
ROOM

ROOM

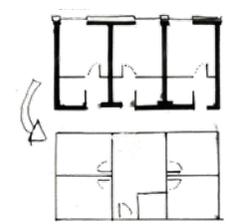
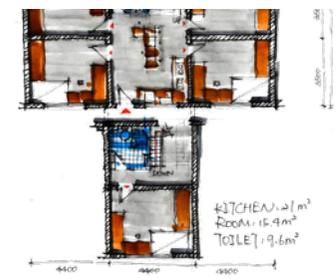
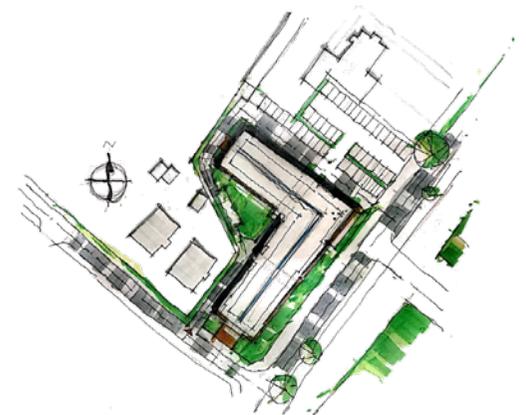
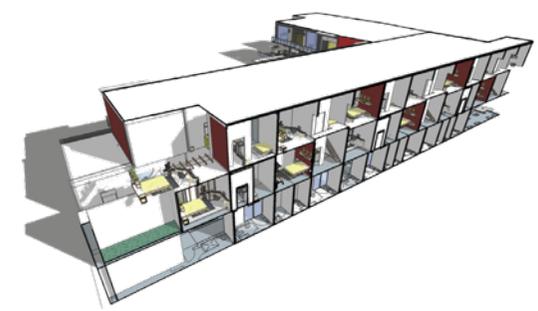
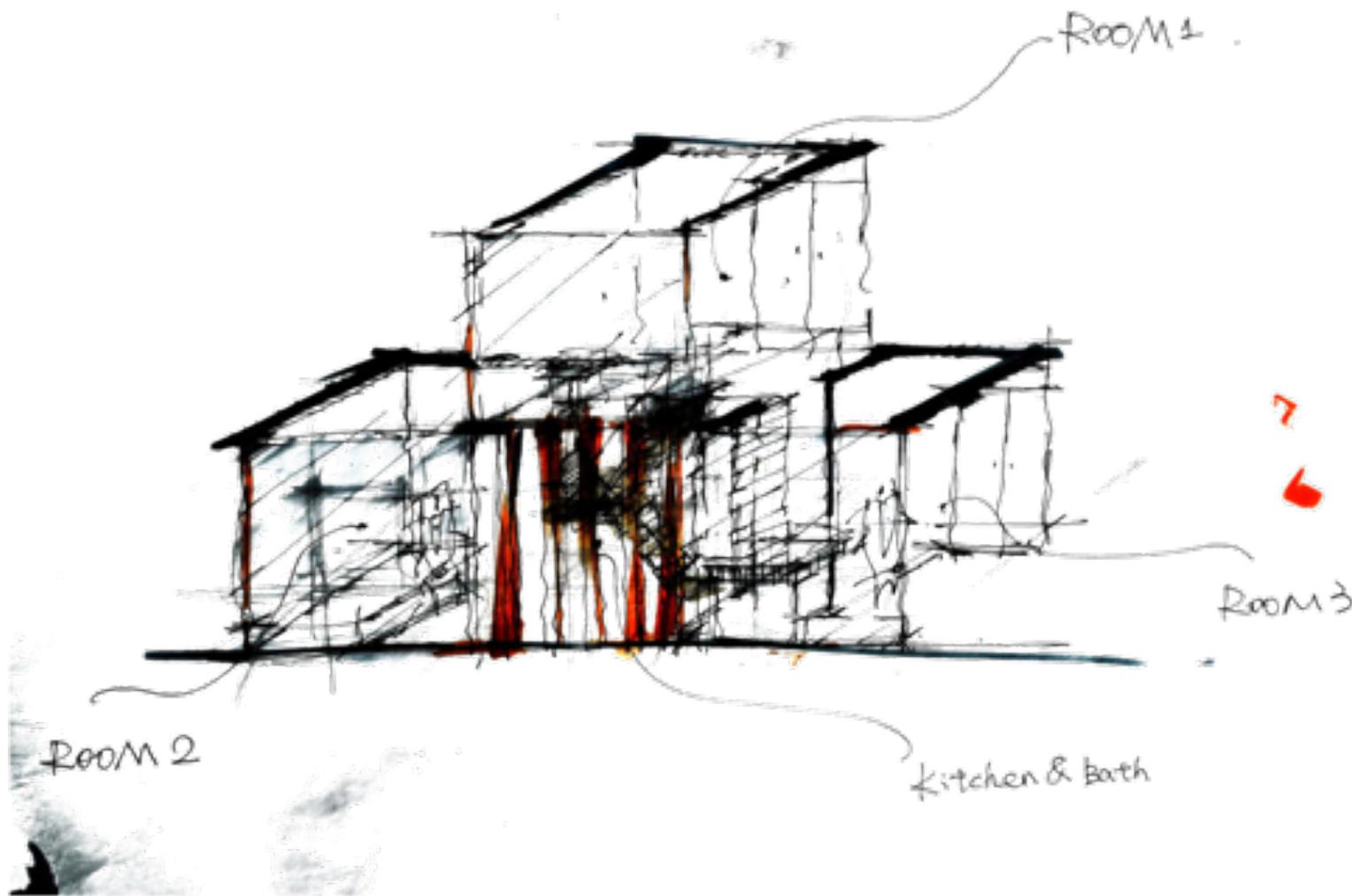
120



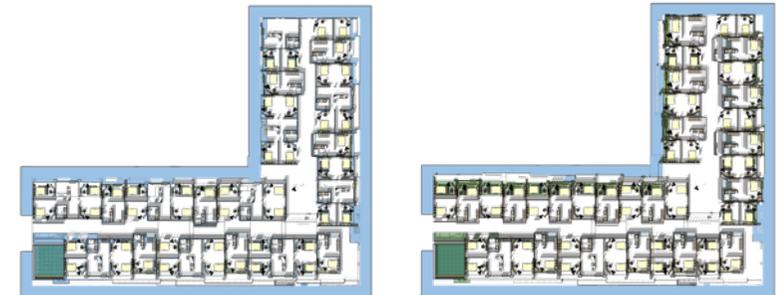
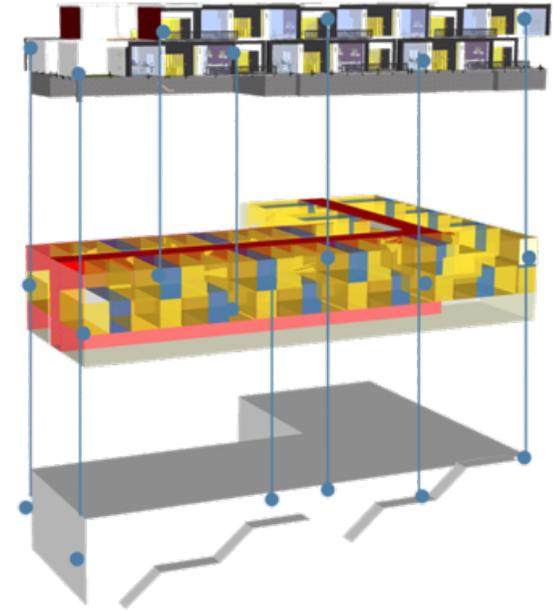
Space reconfiguration group identified the main existing problems as dark corridor, no shared space, small individual kitchen and lack of interior space separation. After a brainstorm among the group members, the conceptual idea was to have an open middle shared space and reconfiguring the space of existing bedroom units to incorporate more shared space.



SPACE RECONFIGURATION

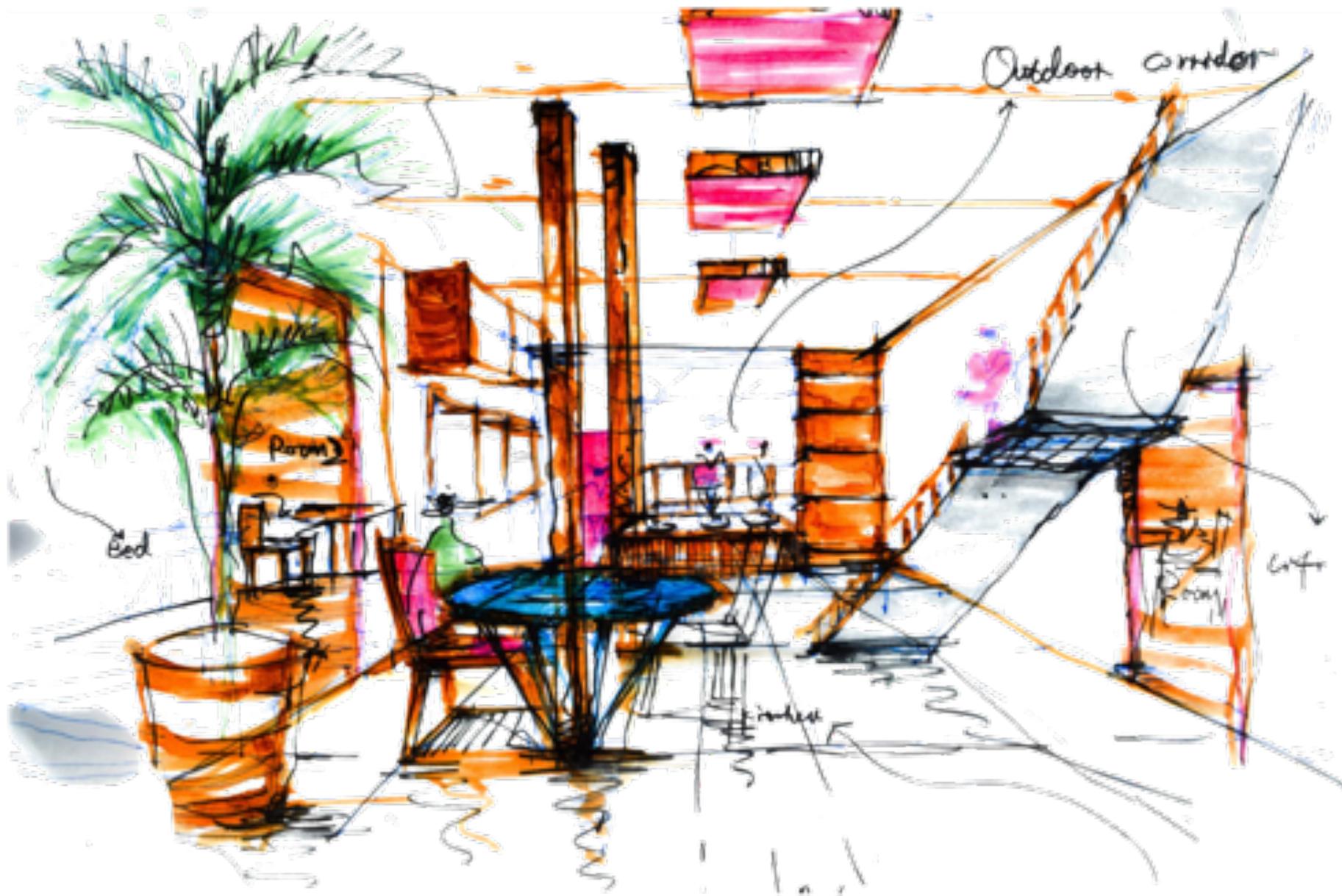


The middle courtyard was mainly to maximize shared space and highlighting the space with natural lighting. it also will help to have more public space compared to the existing dark space.



The shared space will also be incorporated within the bedrooms to create more shared space for student residents. The typical unit would consist of three units sharing one common space. Each unit will house 6 individual bedrooms, with shared open balcony, kitchen and toilet.

SPACE RECONFIGURATION



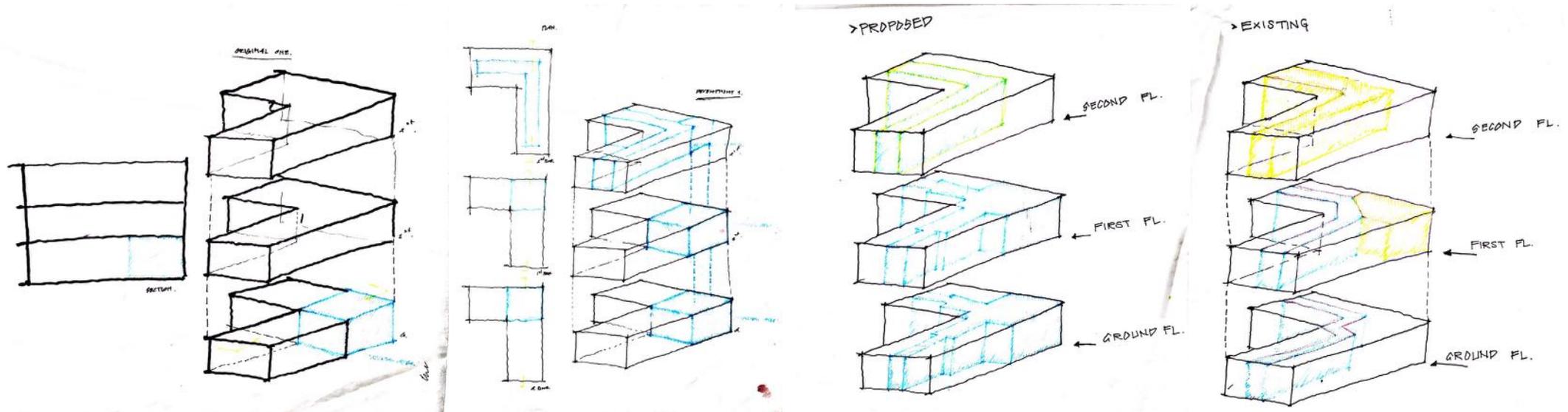
For the circulation, the existing middle corridor is shifted towards the side which faces the open courtyard, maximizing the visual space and also receiving more light. This would light up the dark corridor with the natural lighting and also connect the circulations with the middle open space.



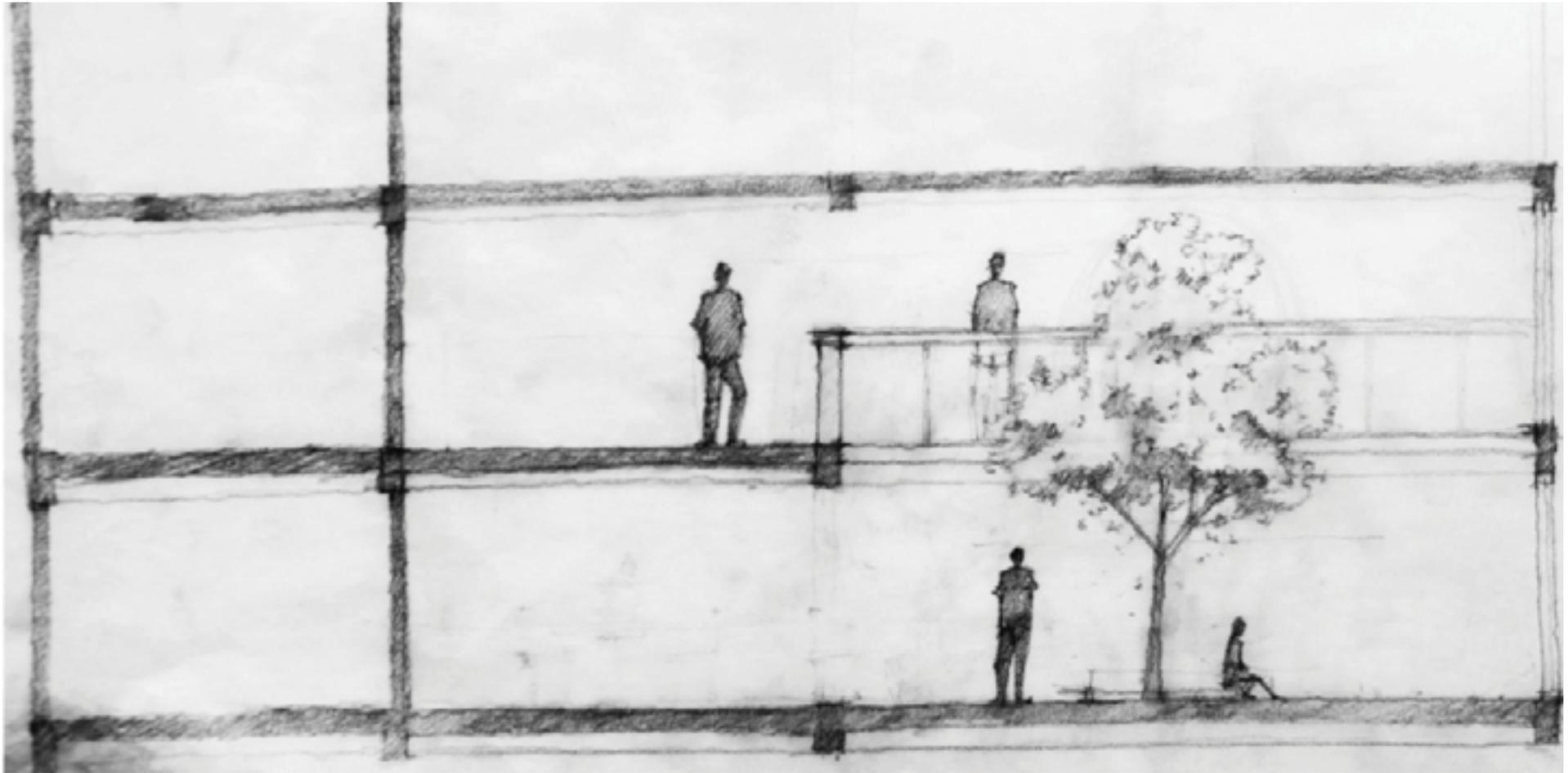
CHAWAKORN H.
THINLEY JAMTSHO TSHERING
JUN YAO SHEN
PRAG RAWAL
BAHADIR N.
MAROS MAJO

MAXIMIZE COMMUNAL SPACE

In building the international student dormitory, this forth typology proposed to maximize and create a bigger communal space, to mainly allow more interaction and socialization between the users of that space. It focused to create this vast shared common space and encourage greater conference of the users.

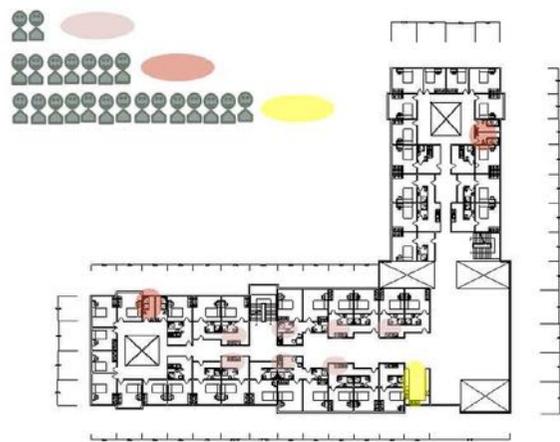
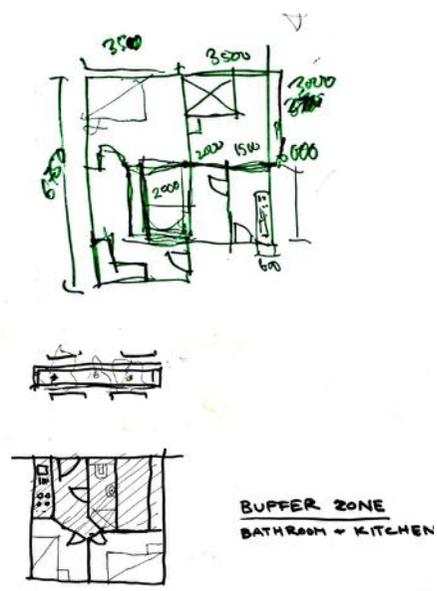
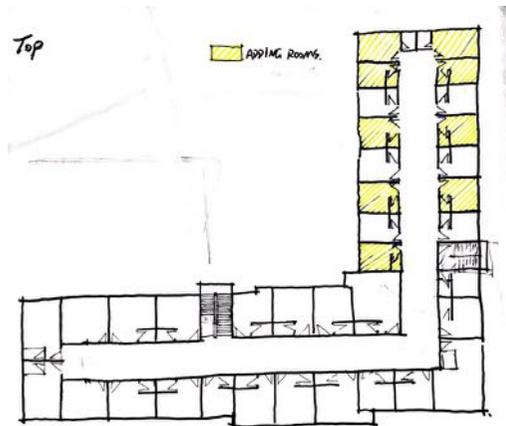


To achieve this idea of maximizing share communal space, the group members worked over and analyzed the existing plan and studied the possibility of improving over the previous built structure to mainly create a maximized communal space.

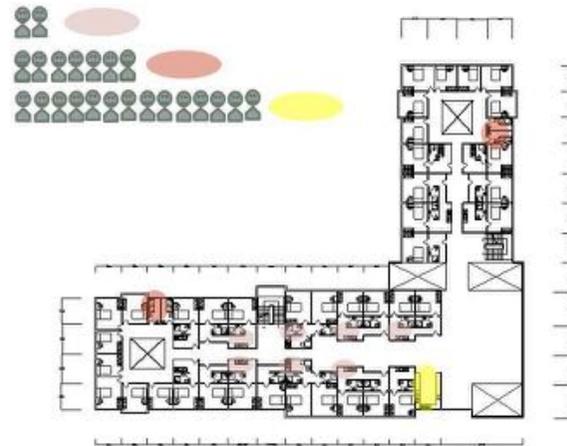


The first observation on the existing plan was that the third floor actually had very large balcony space for each single room and very tight space for the corridor. The communal space maximizes in both vertical (ground floor to top) and horizontal directions. (top floor large space)

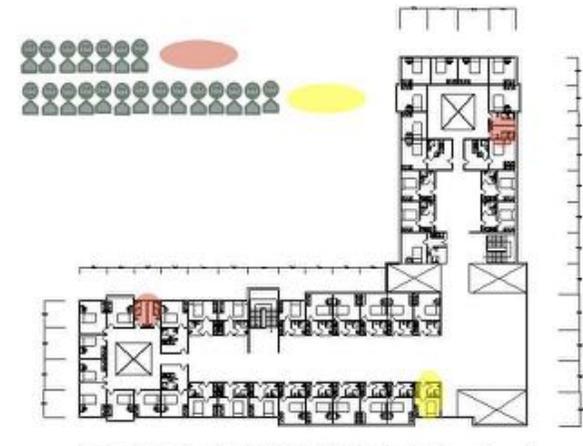
MAXIMIZE COMMUNAL SPACE



Ground Floor Plan

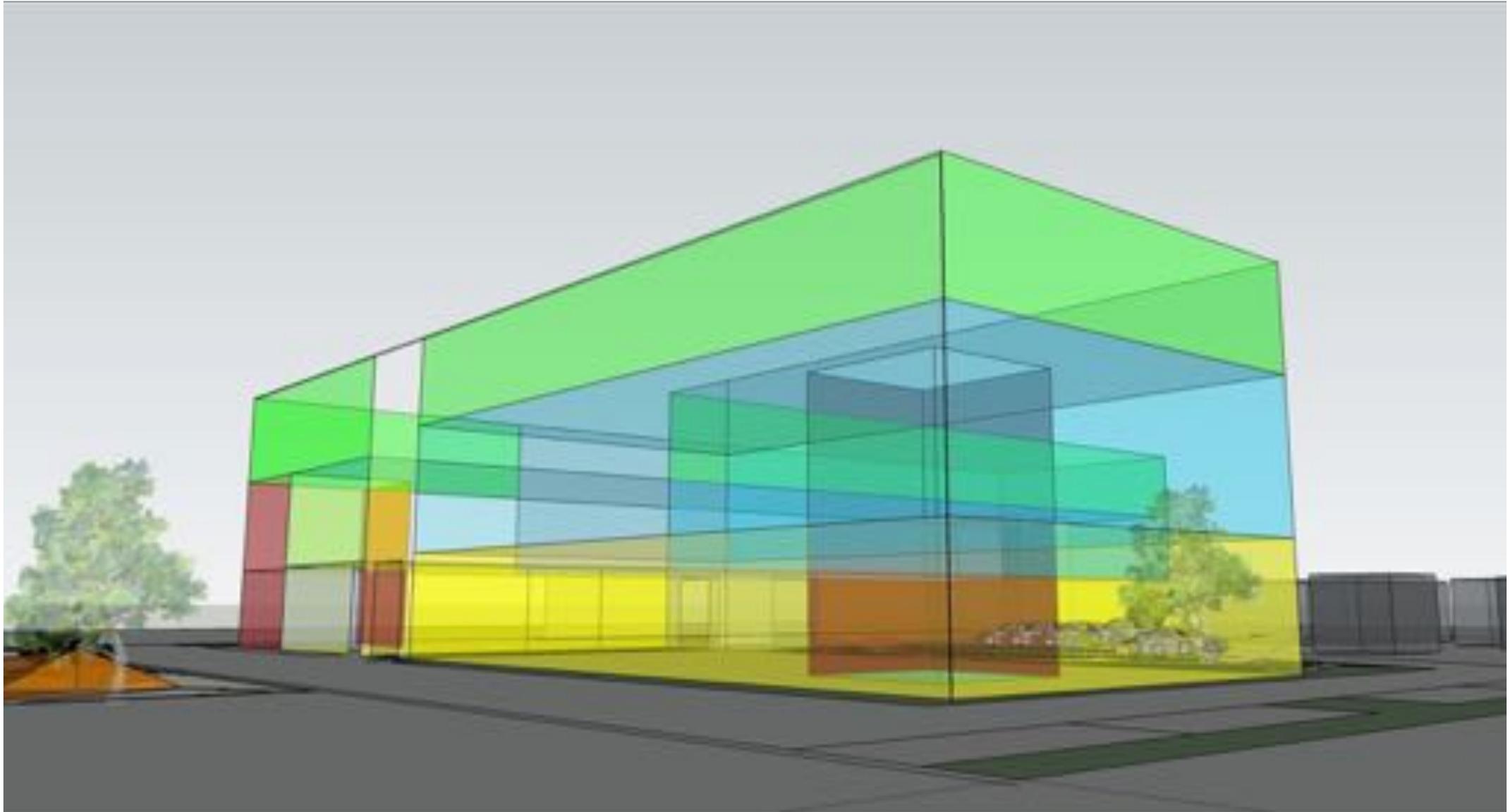


First Floor Plan



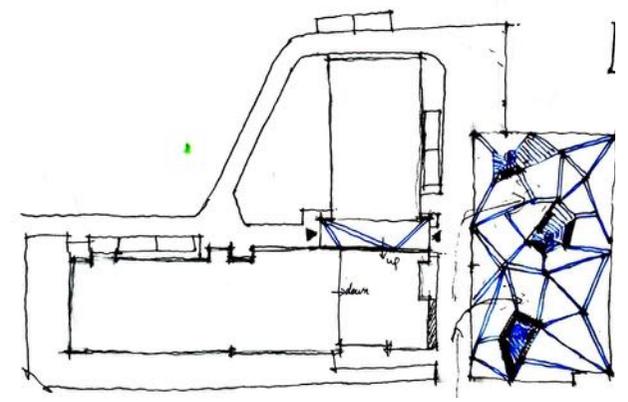
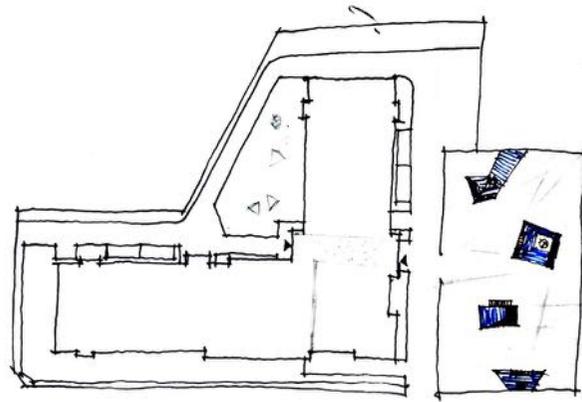
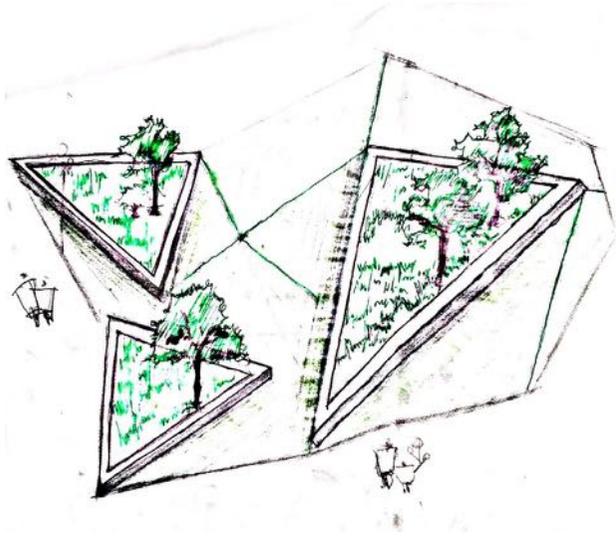
Top Floor Plan

The group used this to advantage, cut down the space from the out balcony and pushed the balcony toward the corridor, turning the corridor into a large space, which could accommodate a large number of people. This served as potential space for communal space, and hence the small corridor turned into a large space for gathering and socialization. ger communal space.



Since the middle space was converted into the share communal space on the first floor, which was previously individual rooms for the students, the team discussed on ways to compensate the lost space and find ways to fit into more room.

MAXIMIZE COMMUNAL SPACE



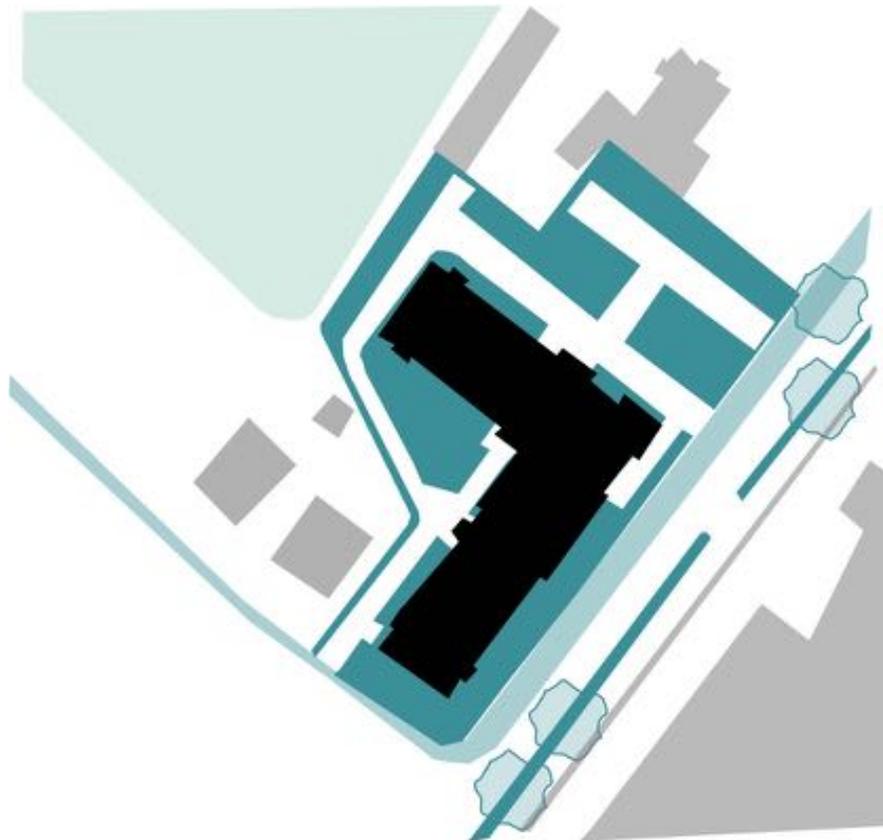
Since rooms at the ends of corridors on the first floor and second floor were smaller in size, the team provided one shared common room and connected all the floor by opening up a small portion of the floor on each level. In section view, a long narrow channel of space can be seen running down from the top floor to the ground floor.

Even the stairs for circulation were placed through the main communal space, so that the users are automatically directed in through the communal space even when they are going to their respective floors. This way the circulation will actually maximize the use of the communal, intentionally and unintentionally and increase the chances of more interaction between the users.

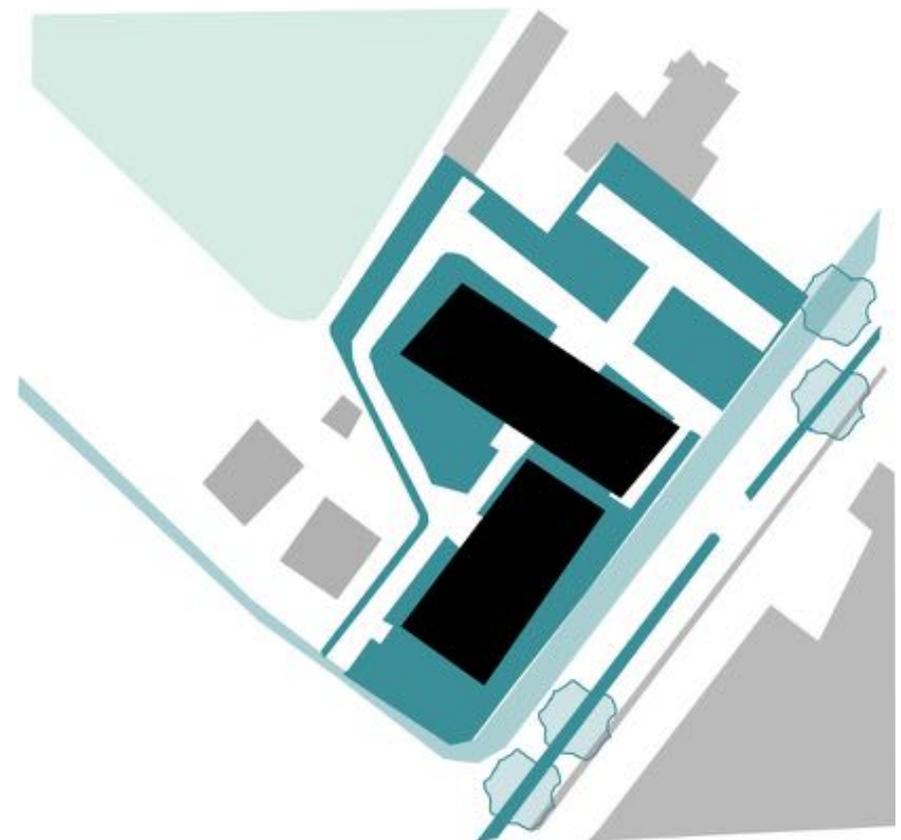


JUTHATIP P.
BOUNTHANG GUY
DYNARONG KHIM
SUKALYA T.
HENRITA

DETACH



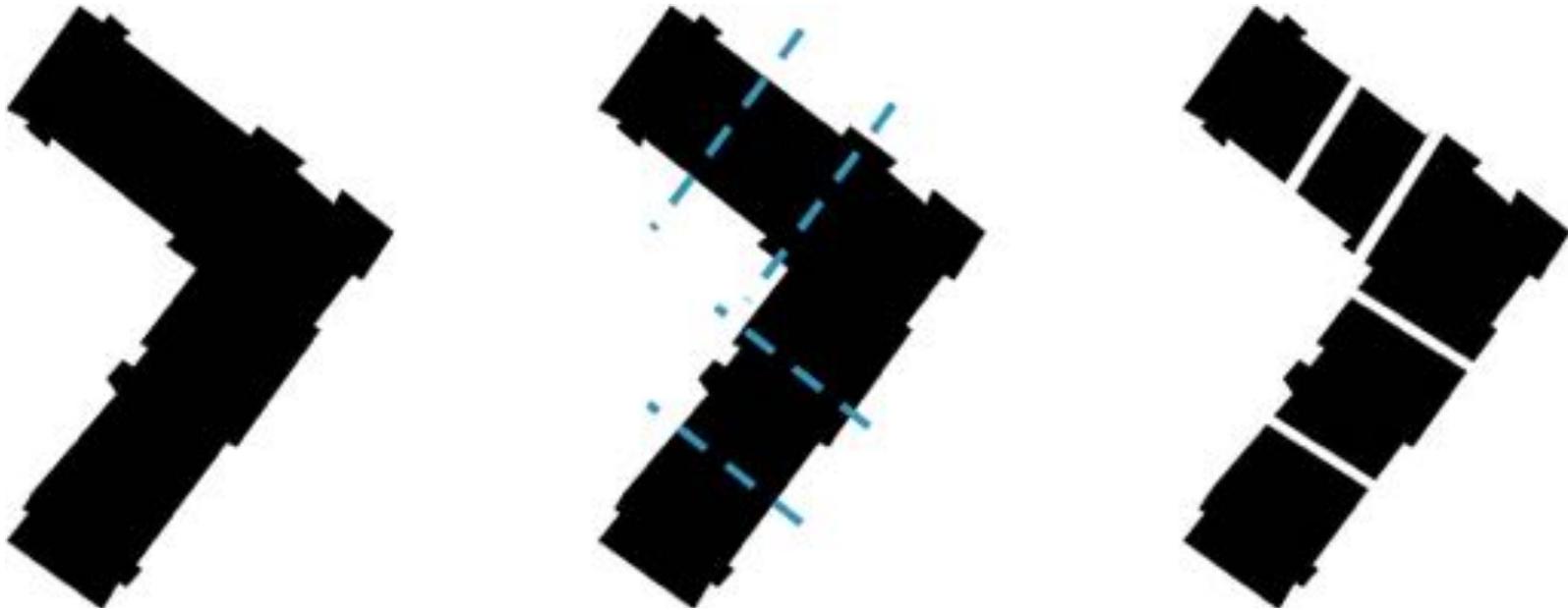
ORIGINAL



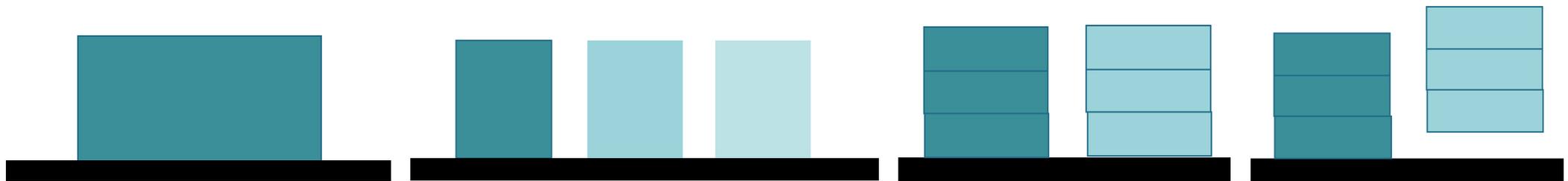
DETACH

This typology concerned about the individuality of the user, user comfort, building sustainability and suitable living atmosphere for the user. From the analysis of existing condition with the previous concept design. The idea of detached was to create a space which gave an individual privacy to the occupant.

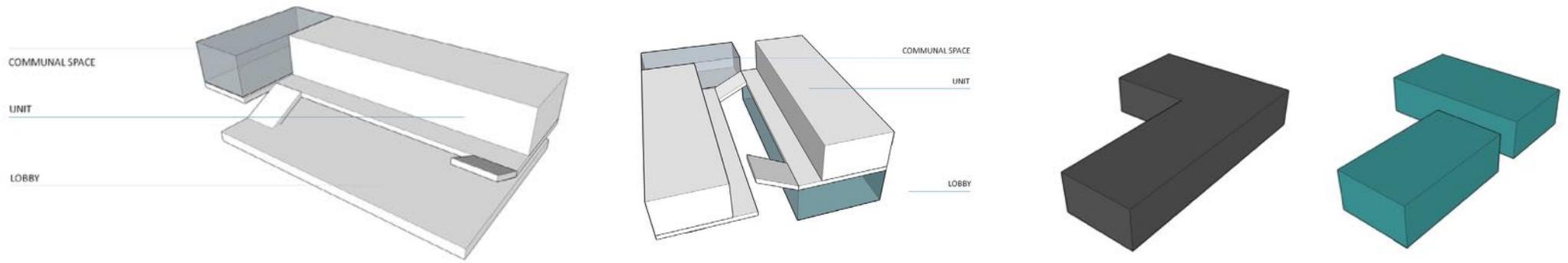
This typology helps separating the building into a smaller scale and reducing the number of people using the sharing facilities. The concept design has divided one gigantic structure into 6 compact buildings with 3 storey. A typical building offers 20 individual rooms with sharing bathroom for every 2 units. Also providing a sharing facilities consisted of kitchen and communal space for each storey.



From the diagram, the original building design would be sub-divided into six smaller scale. Each building would be divided into six storey to create more unit for the living area.



As the building have been sub-divided into small plot, so the gab between can allow more ventilation to flow as well as to let the sunlight to penetrate inside the space.



An additional for communal space and kitchen would be located at edge of each storey.

Though the building is detached, still it is connected by the long corridor. Therefore, all user can commute to different function and occupy the space according to their need.

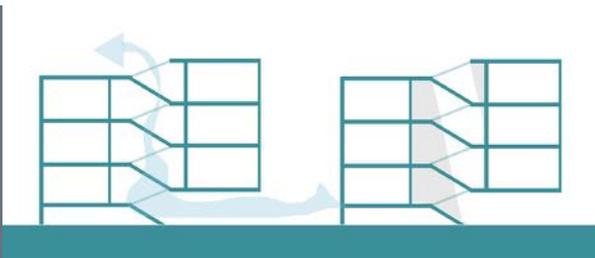


DETACH



SUMMER

WINTER 

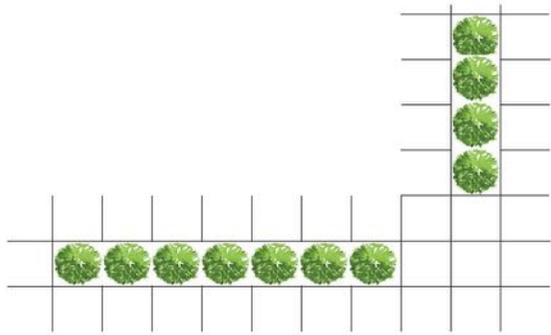


Our team were intended to create the main circulation at the centre of the building. Hence, we keep the flow of the user to commute to sub-area of each functions. Further more, the centre circulation also can allow the sunlight to sneak in the space during winter season as well as to release the heat through the centre of the building up to the open skylight. Yet not to mention, there is a green space on the roof top where people can gether and have the party.

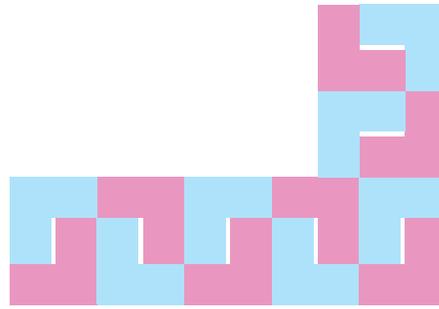


MANLIKA A.
HENRIETA RICHNAVAKA
KERATI C.
PAWINKATN B.
PAUL OLADIMEJI
ALICE COUCHMAN
HARRY CRAIGIR
HENRIETA RICHNAVAKA
AMANNOVA

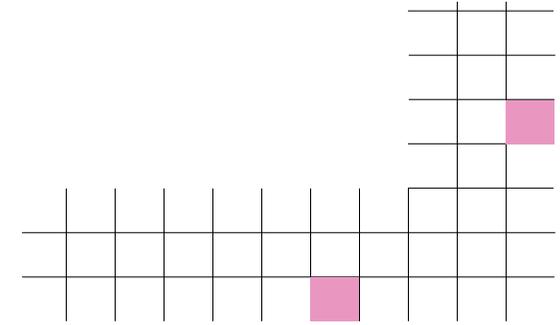
MODULAR UNIT



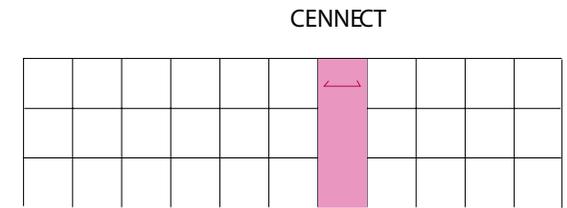
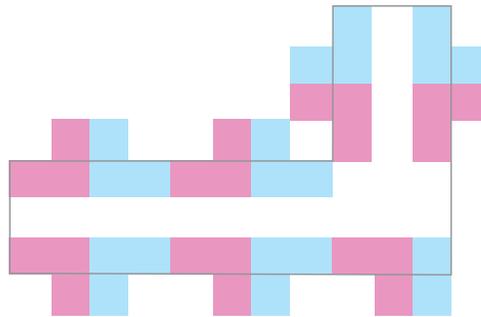
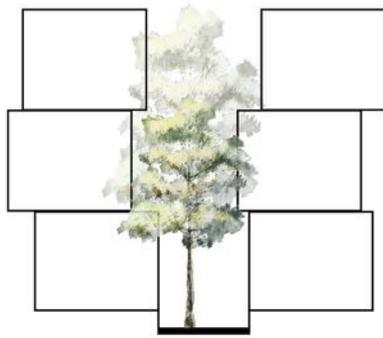
COURTYARD SPACE

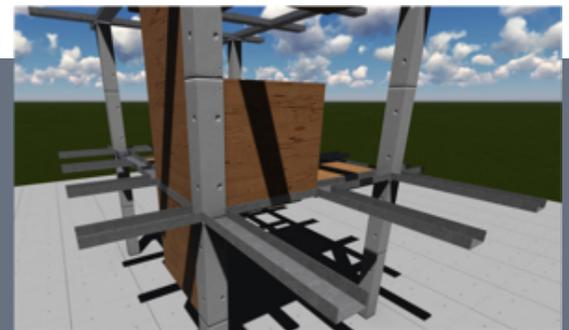
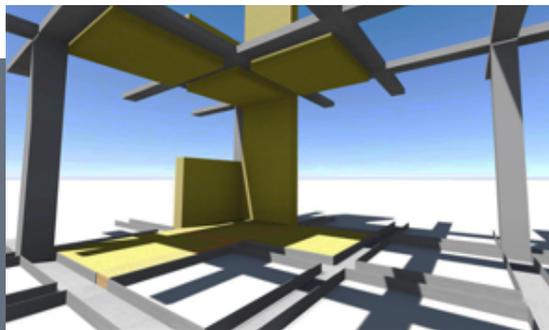
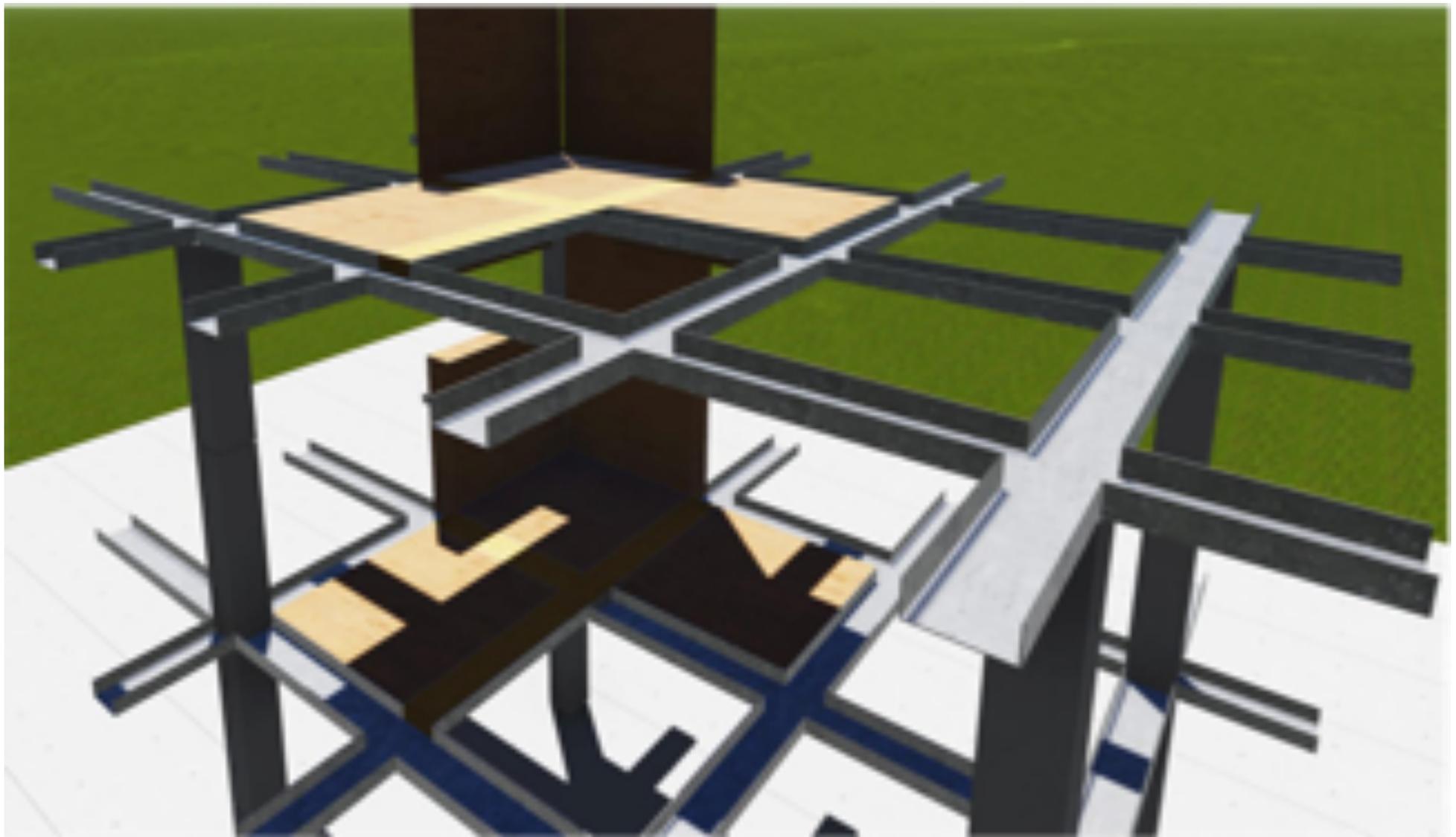


L SHAPE

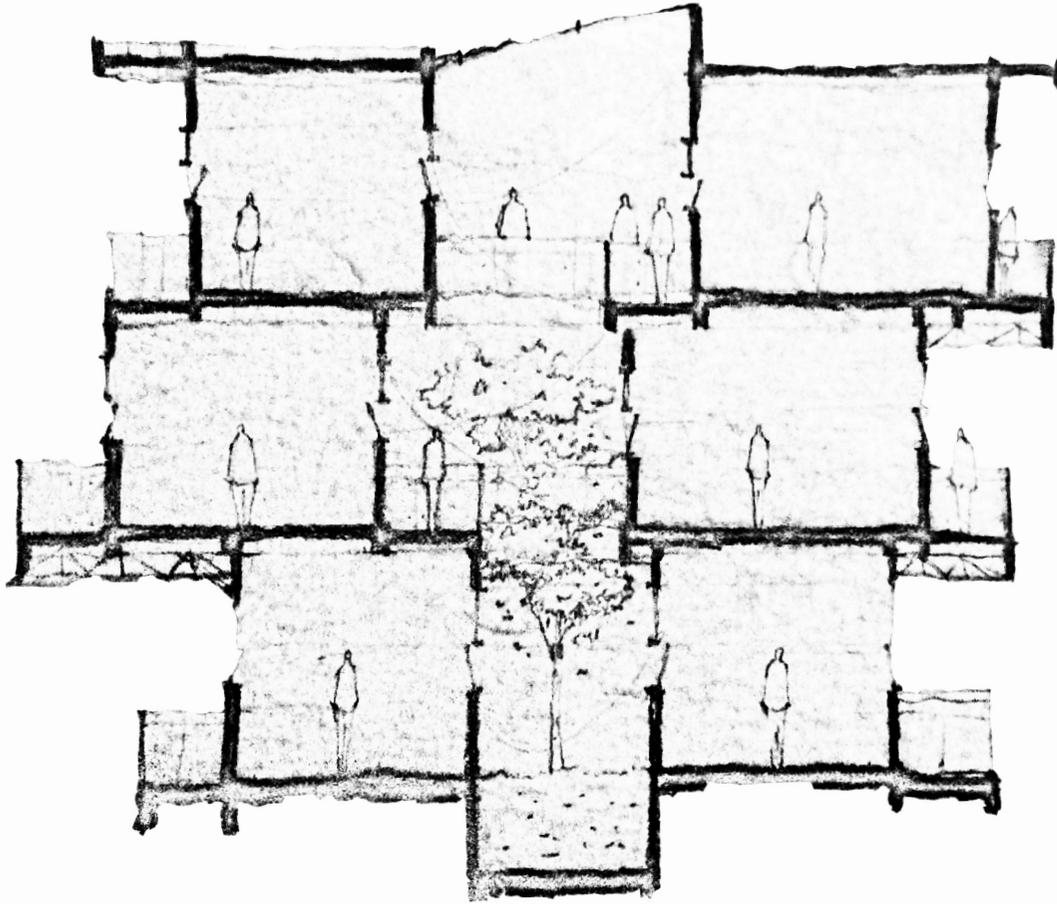


ATRIUM SPACE

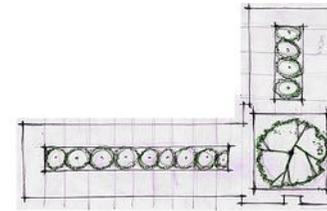




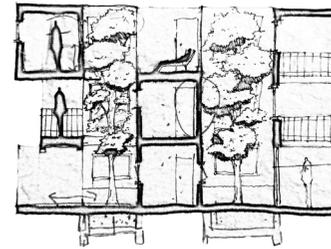
MODULAR UNIT



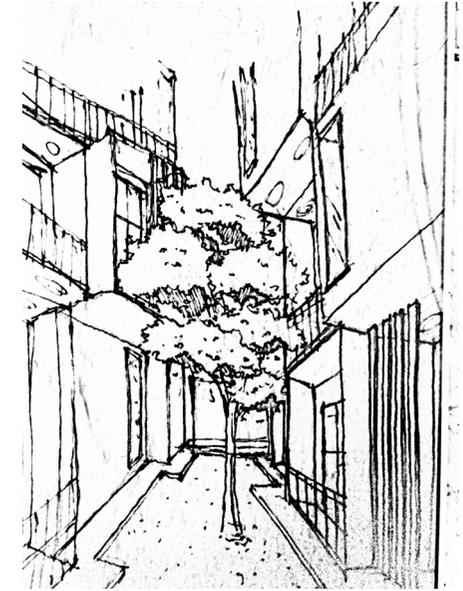
COURTYARD SPACE



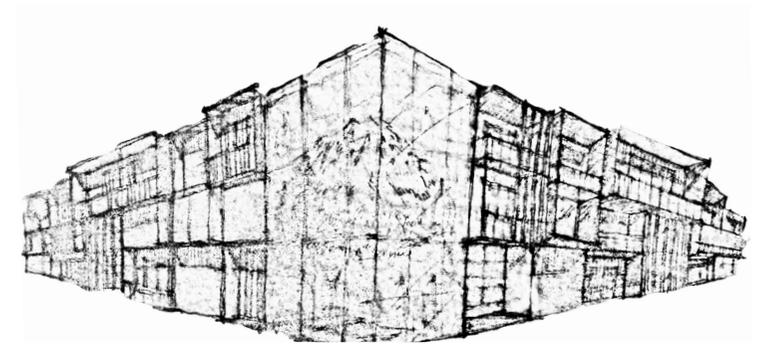
PLAN DIAGRAM



VOLUME SECTION

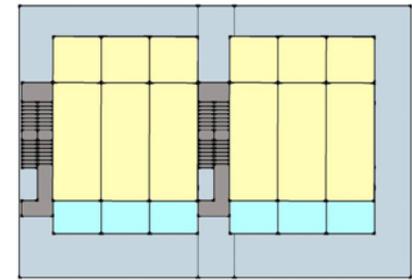


INTERIOR PERSPECTIVE

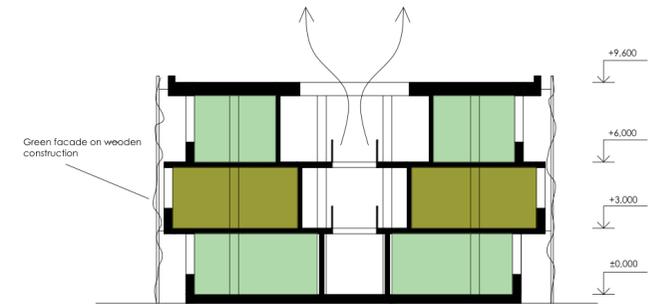


EXTERIOR PERSPECTIVE

The structural grid and the infrastructure are the only constant elements in the building. This framework is the basis for the housing that can be filled with prefabricated modules.



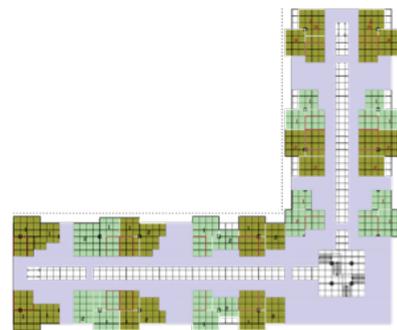
TOP VIEW



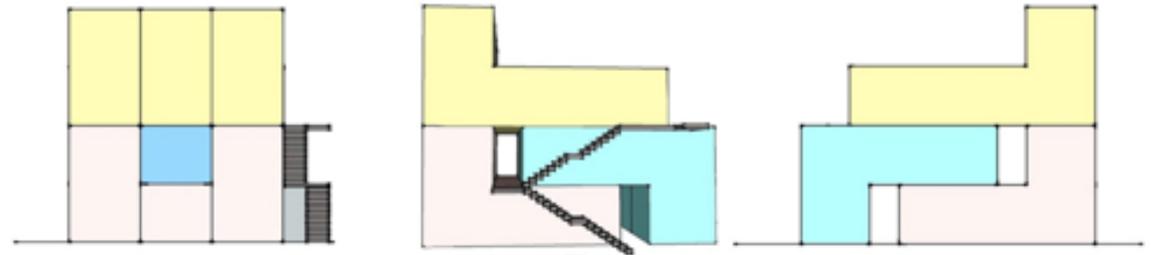
SECTION



FLOOR PLAN



FLOOR PLAN



ELEVATIONS

Breaking up the corridor
 Reducing the oppressing feeling of the long lightless corridor

Atrium spaces
 Creating a vertical space to break up horizontal spaces

MODULAR UNIT



GROUND FLOOR PLAN



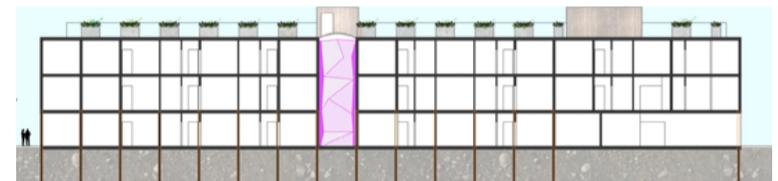
FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN



SECTION

Combining kitchen and common areas
Space saving and creating more communal areas

Green spaces
Including green areas in atrium spaces to improve mood and cleaner air in the interior of the building

Modular Components
Emphasis on individual components as opposed to the block modular rooms which caused issues spatially.



NEUBRANDENBURG

SUSTAINABLE DESIGN WORKSHOP



COURTYARD

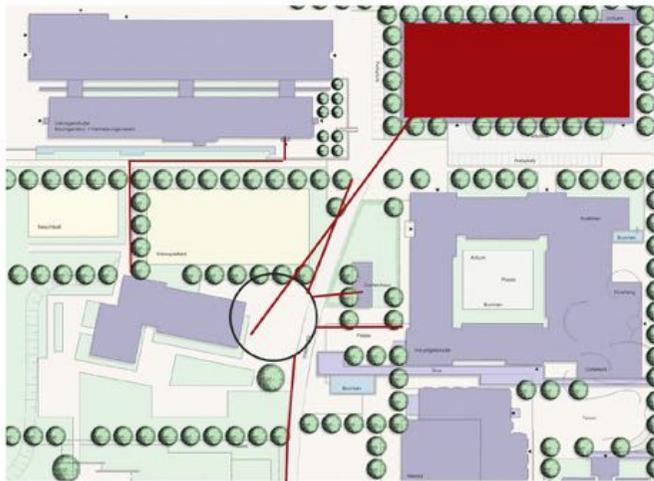
WARUCH C.
MANLIKA A.
CHANAKARN M.
DYNARONG KHIM



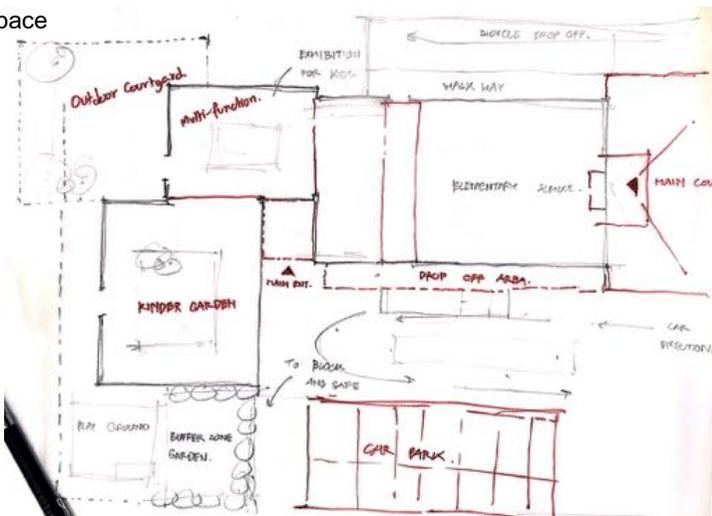
ANALYSIS :
TO CREATE THE PEDESTRIAN LINKAGE THAT NOT CONFLICT WITH OTHERS TRAFFIC. ALSO CONNECT THE NEW COURTYARD WITH THE EXISTING.

The typology of 'courtyard' was to help create a better environment for a renovation project of existing Middle school in Neubrandenburg into a learning center and School for Kindergarten and Middle ages children. The overall analysis of existing condition shows the lack communication between the building function and design. The whole structure was built completely with the prefabricated concrete which on that time was the most common type of construction. Thus during the time of GDR, to have the actual building being built was already good enough for the people. Additionally, the school had not express the sense of learning environment. There was no aesthetic to the building which reflect the functional use inside. Including with the safety factor, during lunch time student have to walk across the road to another building in order to reach the canteen which also shared with the public. The school composed of 5 indirect entrances.

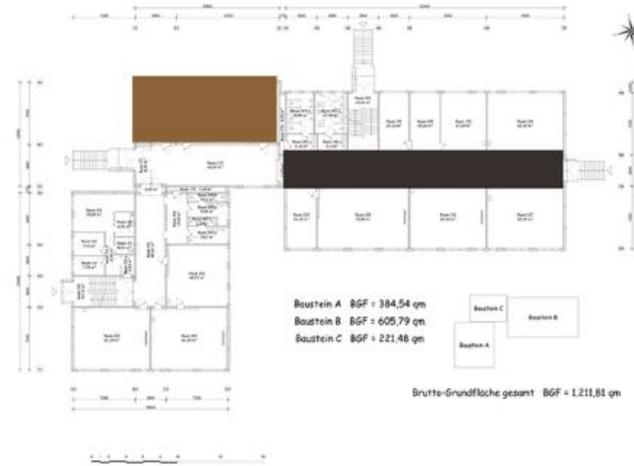
ISSUE 1



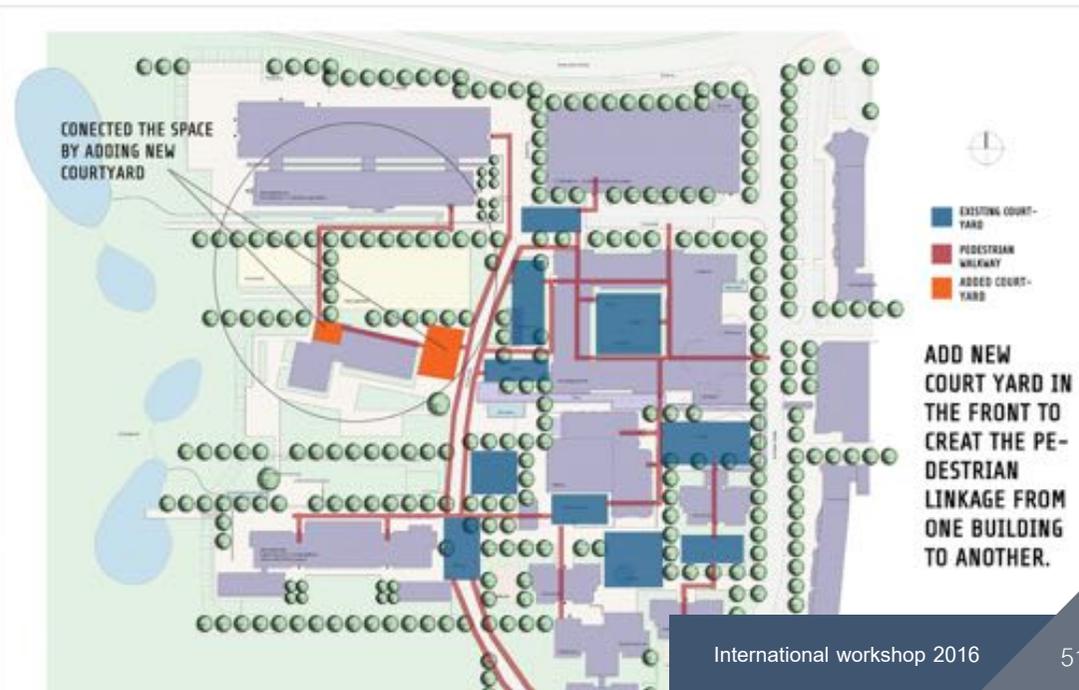
- Pavement and Environment are not safe for students
- No Connection with Other buildings
- Conflict with Other Traffic
- Far from Parking Space
- There are Linkage
- No Drop Off



ISSUE 2

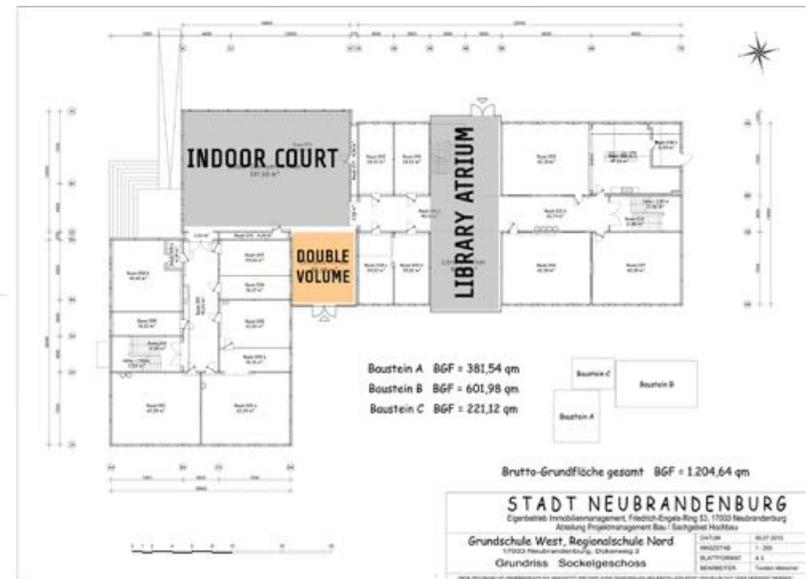
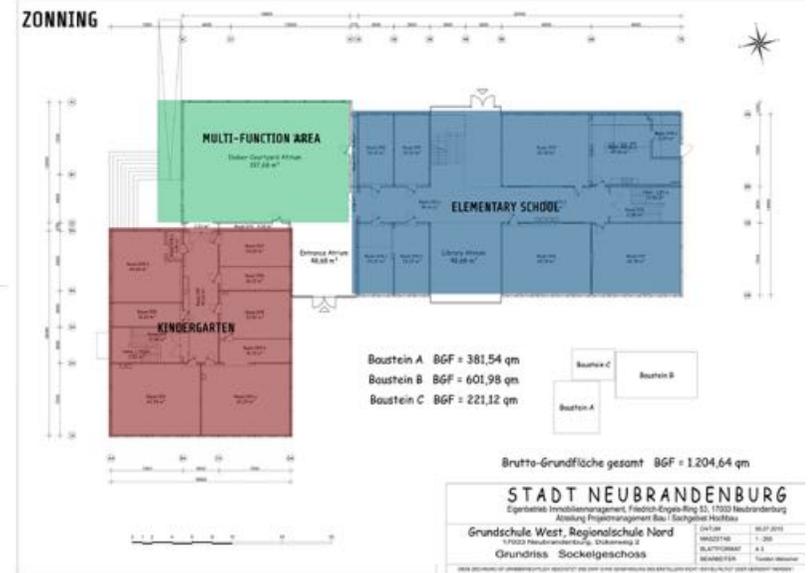
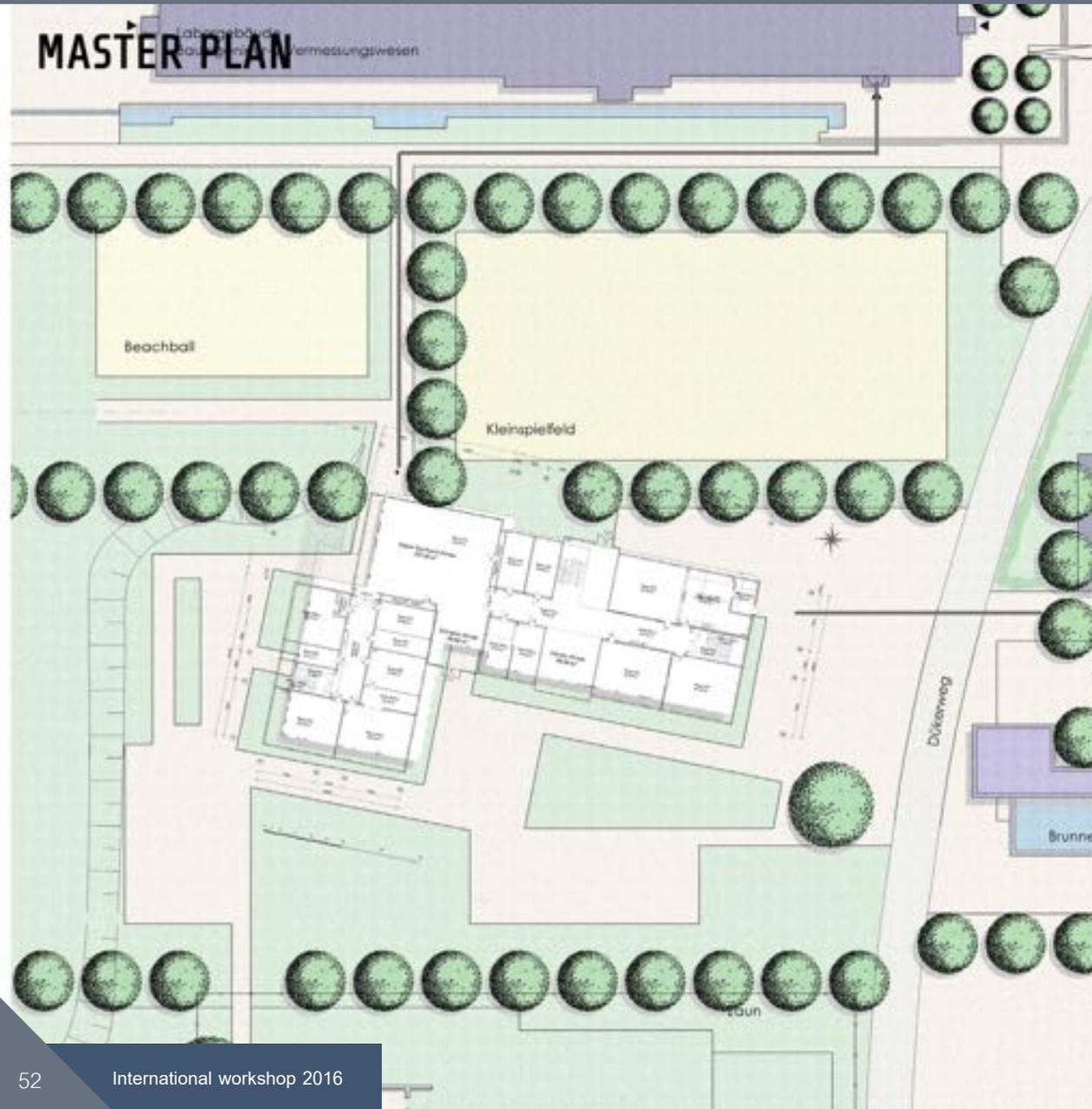


- No Natural Light
- No Multi-Function Space
- No Outdoor and Indoor Connection
- Not Enough Play Ground



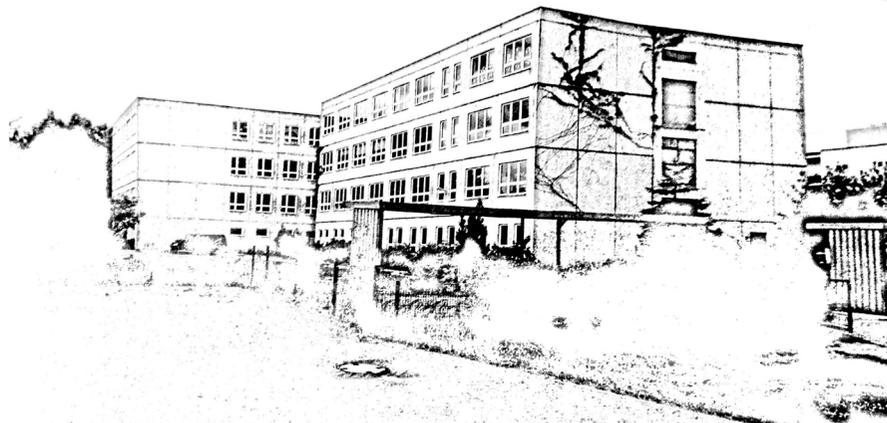
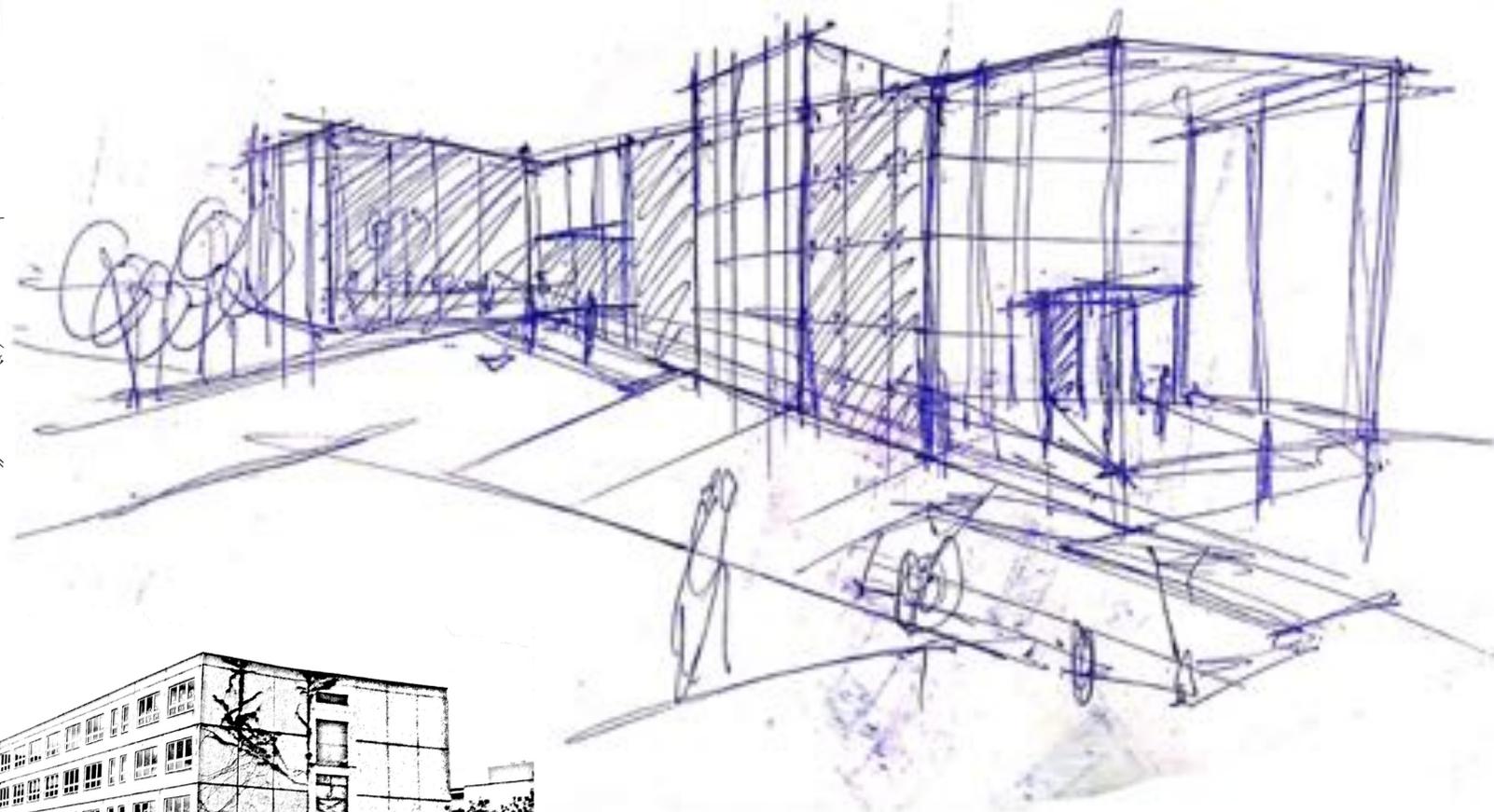
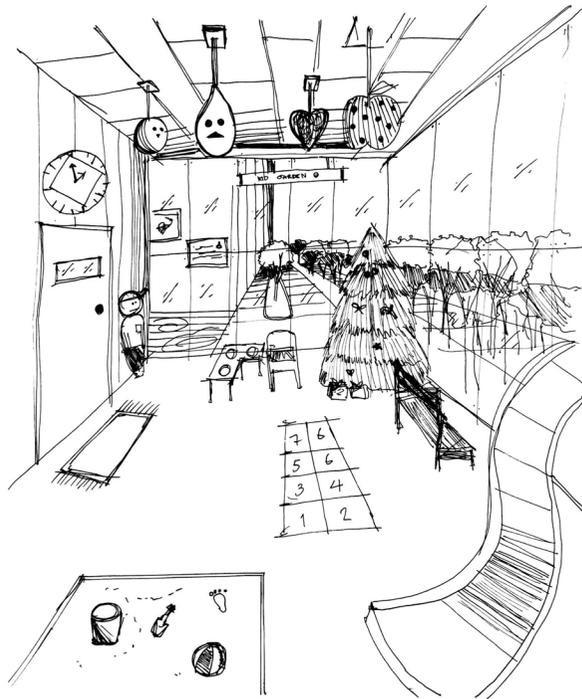
COURTYARD

A solution to the false design by using the concept courtyard was to create an aesthetic to the building which will also result with the better functional arrangement in the building. The new design composed of 4 main function including the existing Middle school, Kindergarten and learning center for public use and Library.



The building is including a Library and canteen. The building was now separating into 2 parts. The front part was used as a learning center and Library. The backward area was for a Kindergarten and Middle school.

With the new Design Proposal, it will separate the 3 main facilities which is the multi-func. area, school and kindergarten. Therefore, the building can limit the use of people who use a different facility and give more privacy to each part.



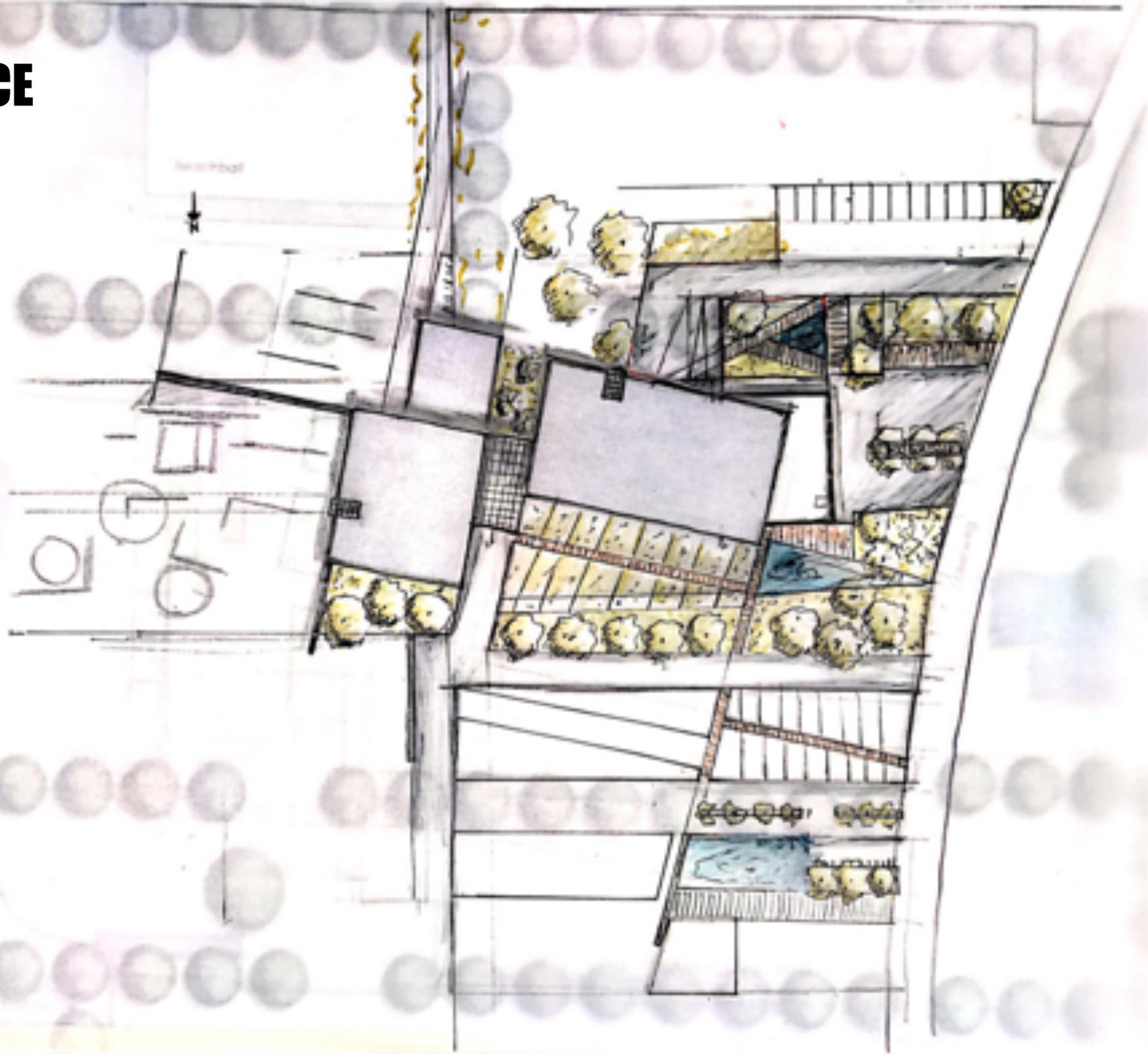
ADDING SPACE

KERATI C.

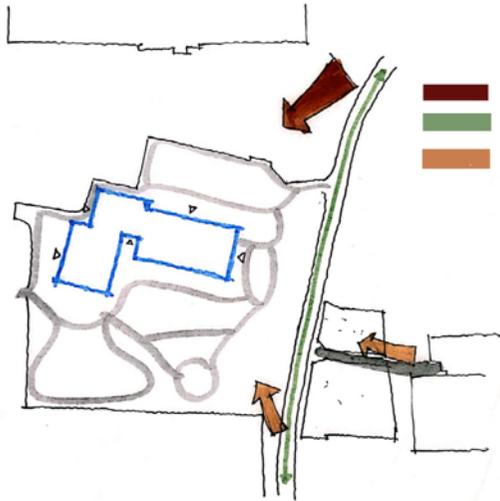
JUTHATIP P.

RUI QI L.

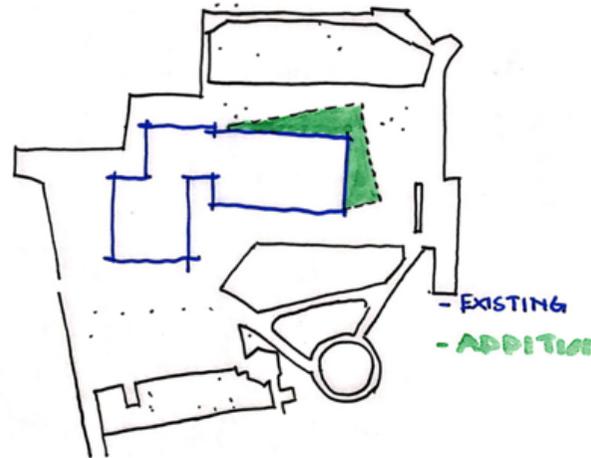
YUN YU HUANG



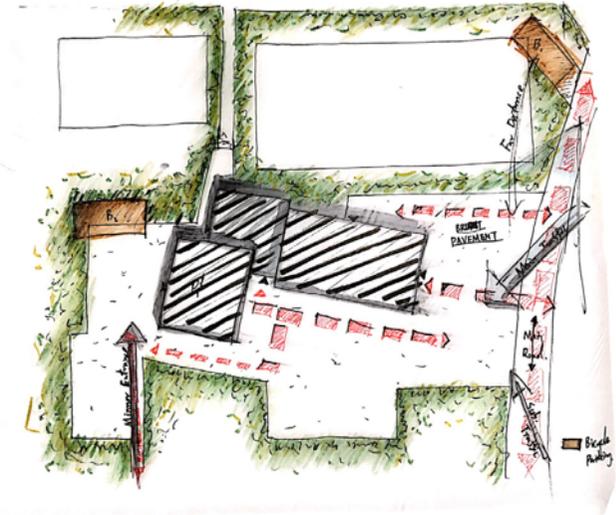
The typology of 'Adding' was to help create a better environment for a renovation project of existing Middle school in Neubrandenburg into a learning center and School for Kindergarten and Middle ages children. The overall analysis of existing condition shows the lack communication between the building function and design. The whole structure was built completely with the prefabricated concrete which on that time was the most common type of construction. Thus during the time of GDR, to have the actual building being built was already good enough for the people. Additionally, the school had not express the sense of learning environment. There was no aesthetic to the building which reflect the functional use inside. Including with the safety factor, during lunch time student have to walk across the road to another building in order to reach the canteen which also shared with the public. The school composed of 5 indirect entrances.



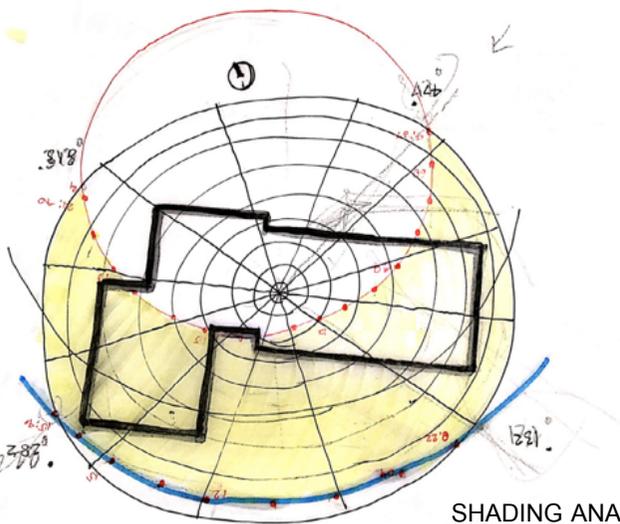
SITE ACCESS



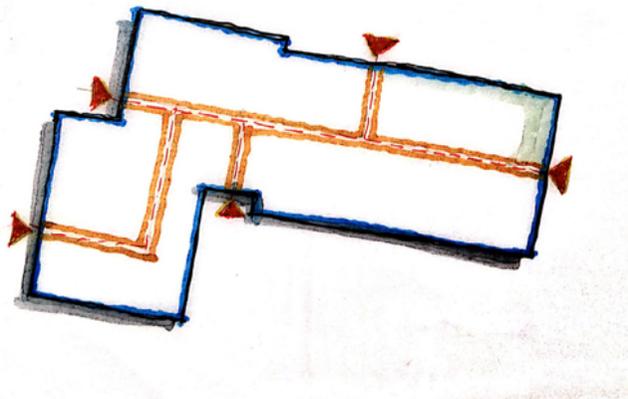
CONCEPTUAL IDEA



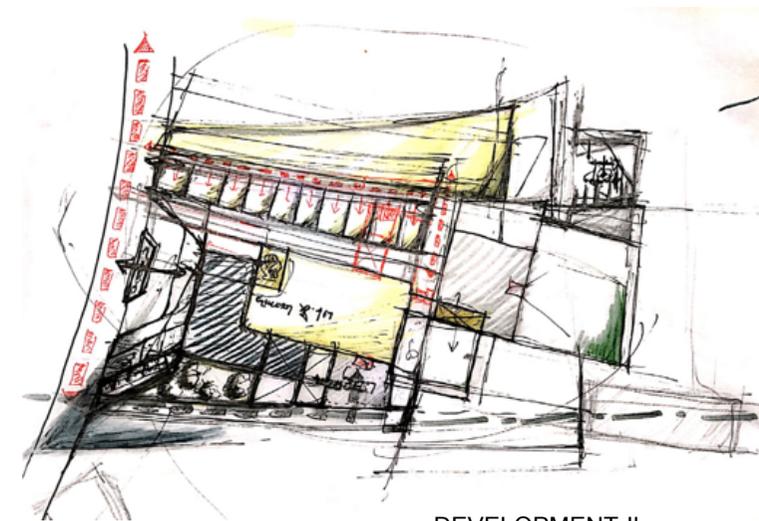
DEVELOPMENT I



SHADING ANALYSIS



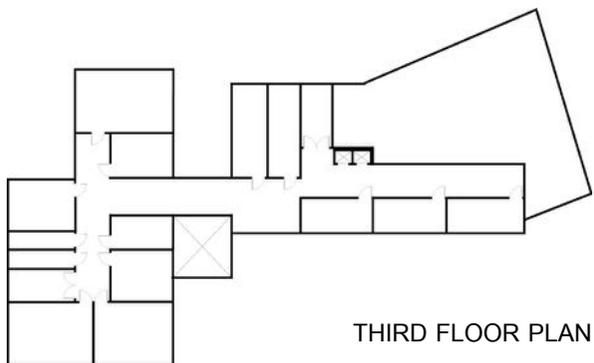
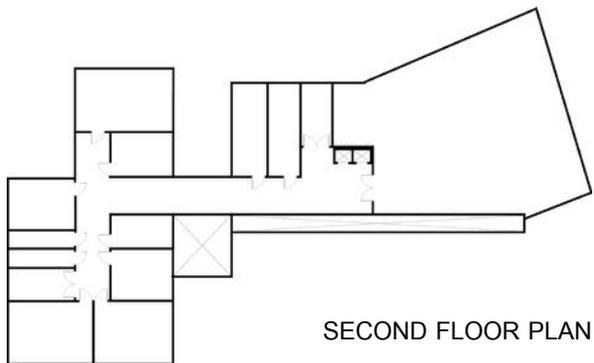
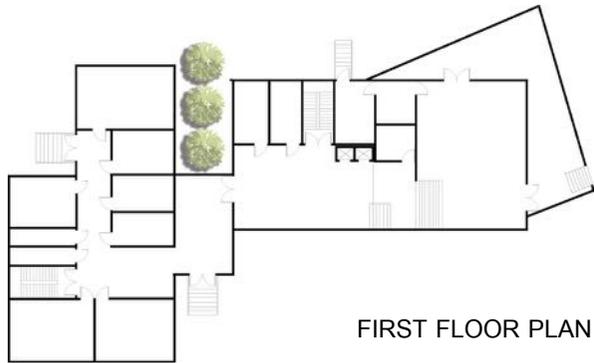
INTERIOR CIRCULATION



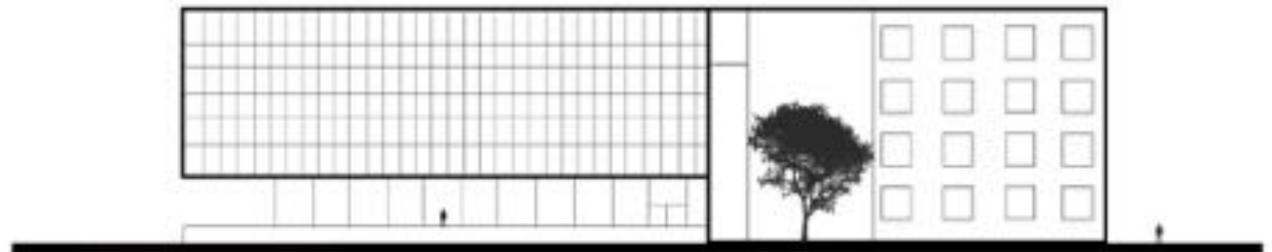
DEVELOPMENT II

ADDING SPACE

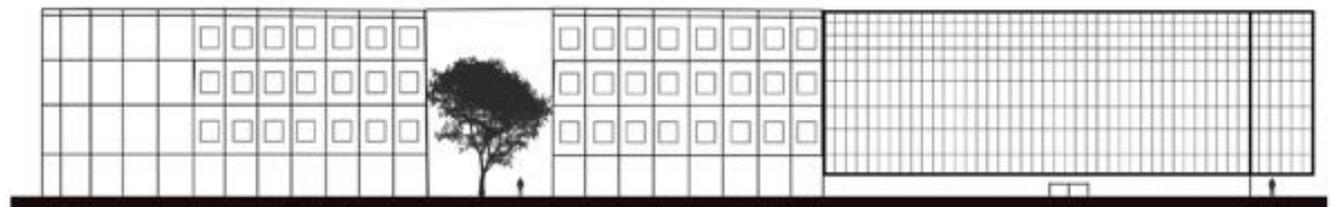
A solution to the false design by using the concept addition was to create an aesthetic to the building which will also result with the better functional arrangement in the building. The new design composed of 4 main function including the existing Middle school, Kindergarten and learning center for public use and Library.



SECTION



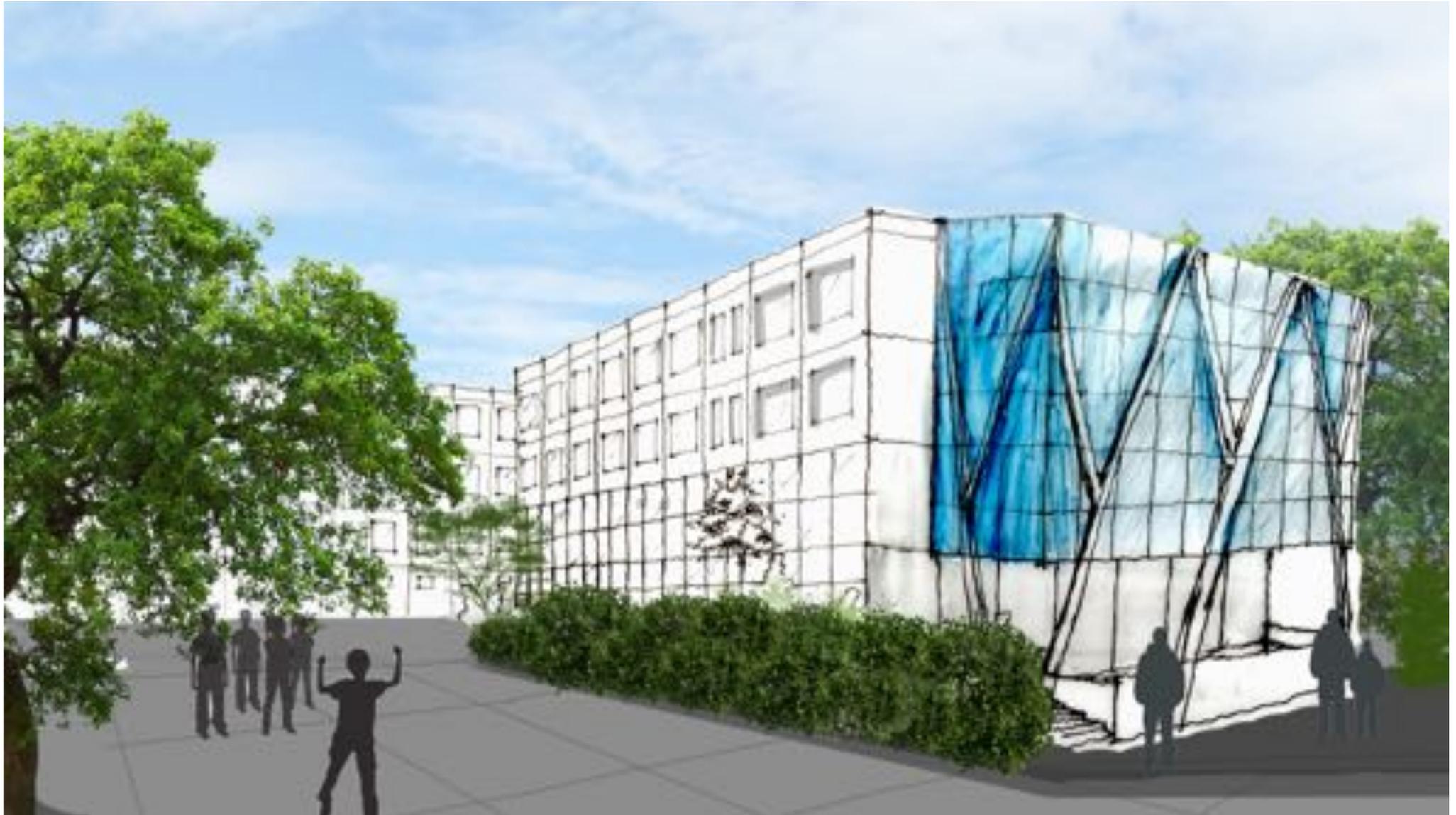
ELEVATION 1



ELEVATION 2

An additional space was attached to the north side of the building which including a Library and canteen. The building was now separating into 2 parts. The front part was used as a learning center and Library. The backward area was for a Kindergarten and Middle school.

With the new Design Proposal, it will separate the 2 main facilities which is the learning center and School. Therefore, the building can limit the use of people who use a different facility and give more privacy to each part.



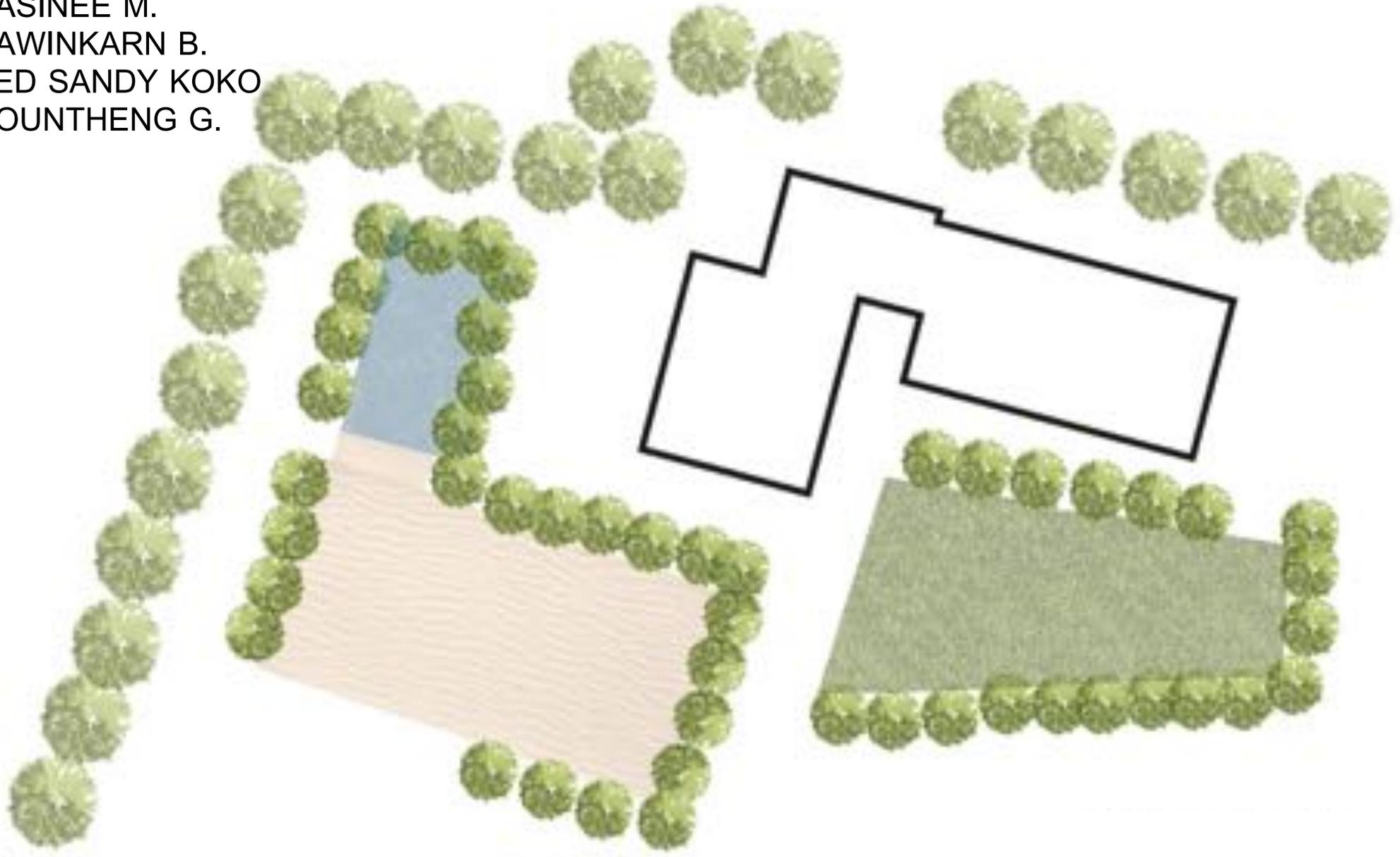
SUBTRACTION

VASINEE M.

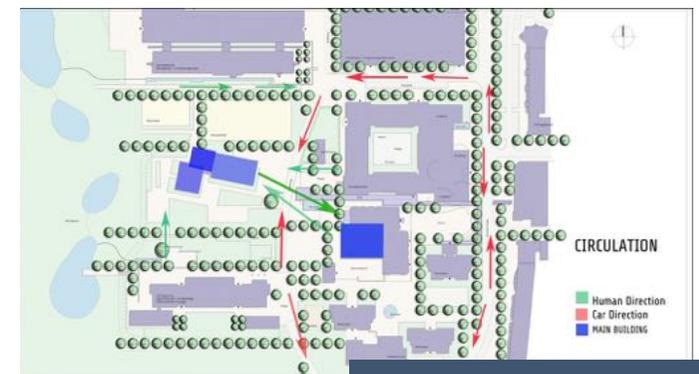
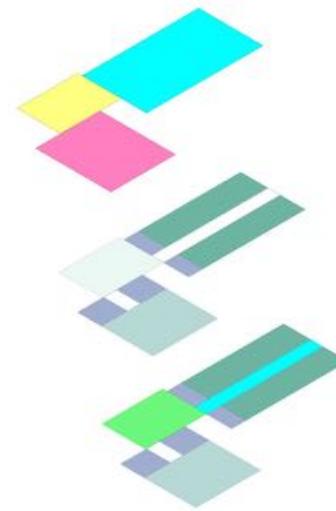
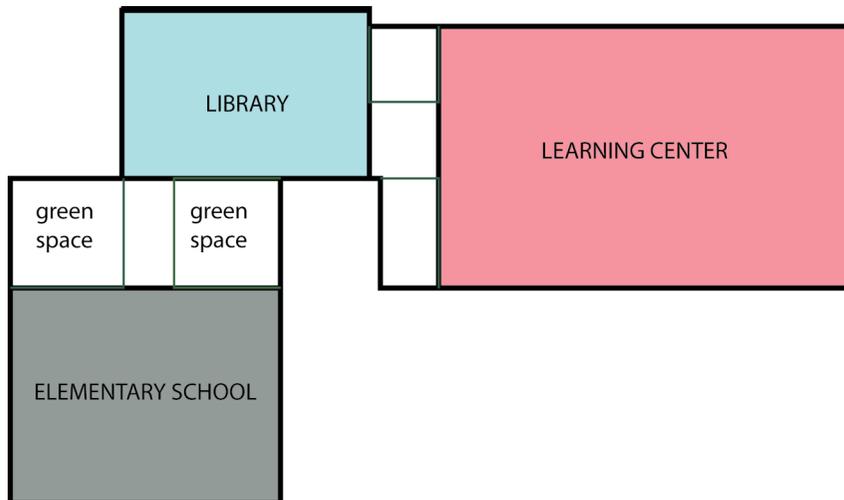
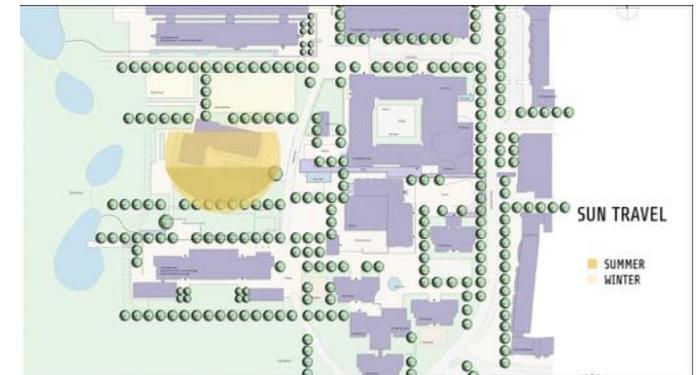
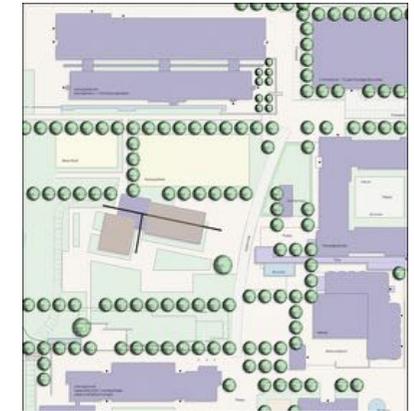
PAWINKARN B.

TED SANDY KOKO

BOUNTHENG G.

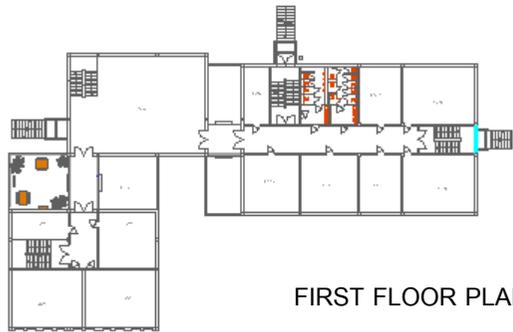


The ideology of Germany architecture is to be sustainable, green, less impact on natural as much as possible, and renovation. Here at this workshop we have assigned to design the existing three stories building which is serving as a junior high and a kinder garden for now. It has plentiful of outdoor activity space. But for the building itself, it has the dark and long corridor with formally arranged classrooms adjacent to it, without any open space. So, we start up by making the building livelier and less energy consuming. We efficiently used the given category "deduction", firstly, we differentiate the site into three zones and removing or demolishing the wall at the end of the corridors. Since the building is L-shaped, we got three walls to deduct, and glass will be used as a replacing materials to construct as a curtain wall. It might be a bit costlier to construct but by long terms strategy, it can save the energy consumption on both light and heater.

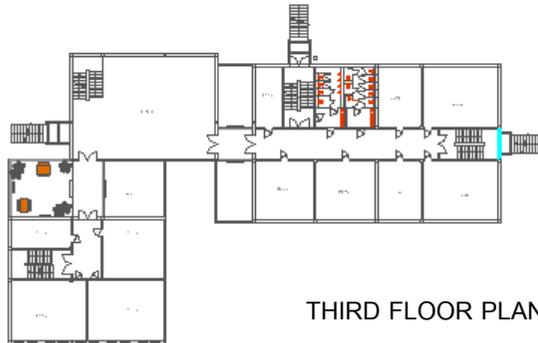


SUBTRACTION

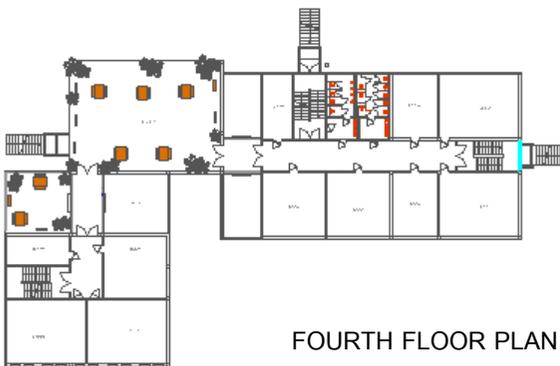
The second changes will be adding the green house or green area at the L corner. And the third will be the roof top terrace or garden where seats and tables are all provided for students to chill and relax. And the fourth will be the kinder garden, here we proposed to have the daycare center for the university professors and the students with family, to keep their kids during their working hours and classes.



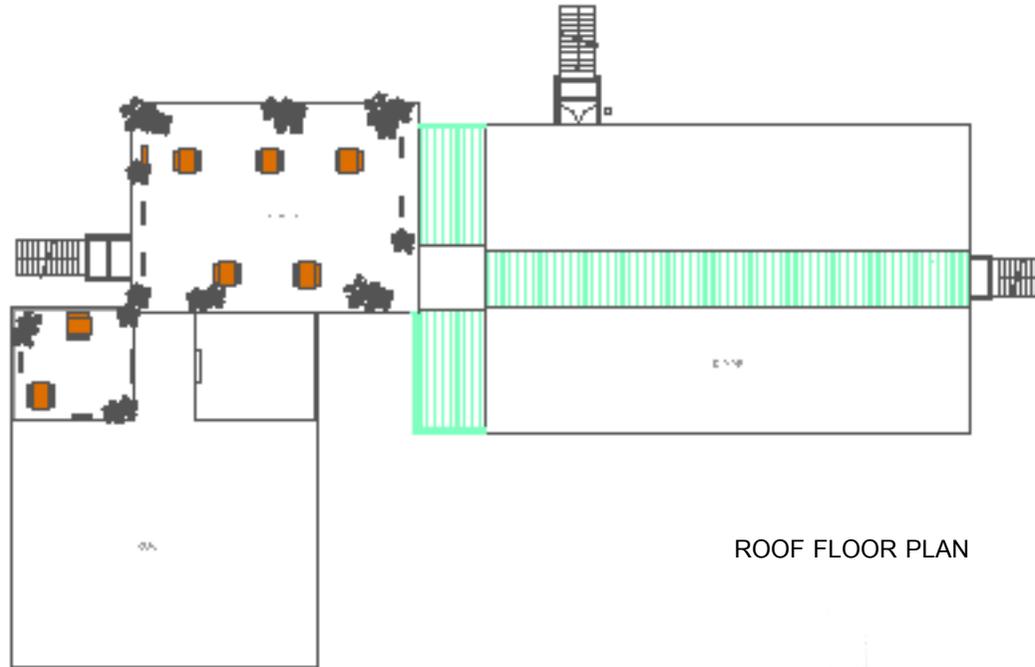
FIRST FLOOR PLAN



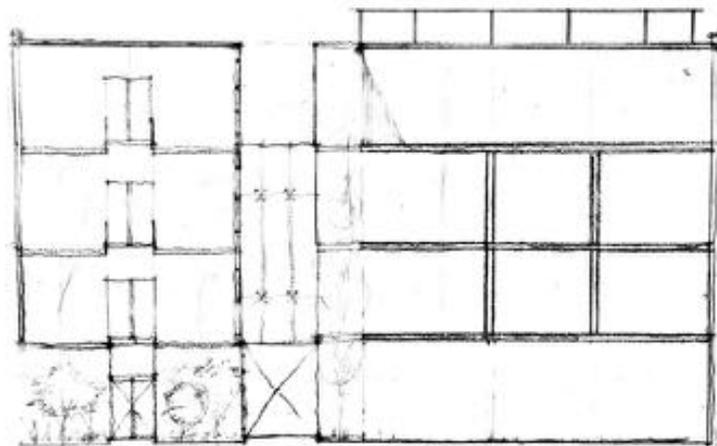
THIRD FLOOR PLAN



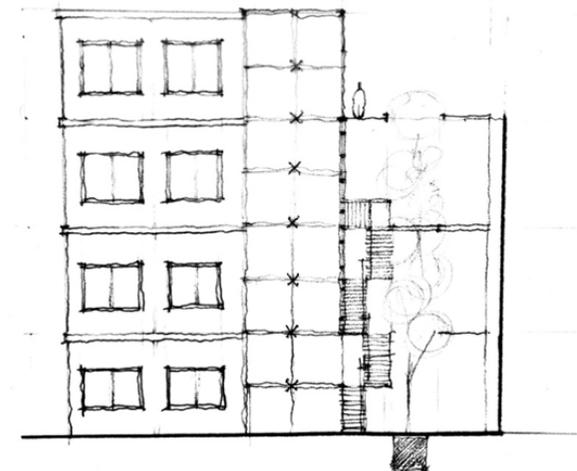
FOURTH FLOOR PLAN



ROOF FLOOR PLAN



SECTION



SECTION

The fifth changes will be the axis, we provide the direct access from the architecture building which stands next to the site but the future parking lot in between. And in terms of transportation, bicycle lane will be added to secure the children from the vehicle track.

The overall planning of the building mainly aims to create a social interactive and learning friendly area and space for all ages.



RECONFIGURATION

CHAWAKORN H.
SUKALYA T.
THINLEY JAMTSHO TSHERING
YUN YAO SHEN

GREEN SPACE

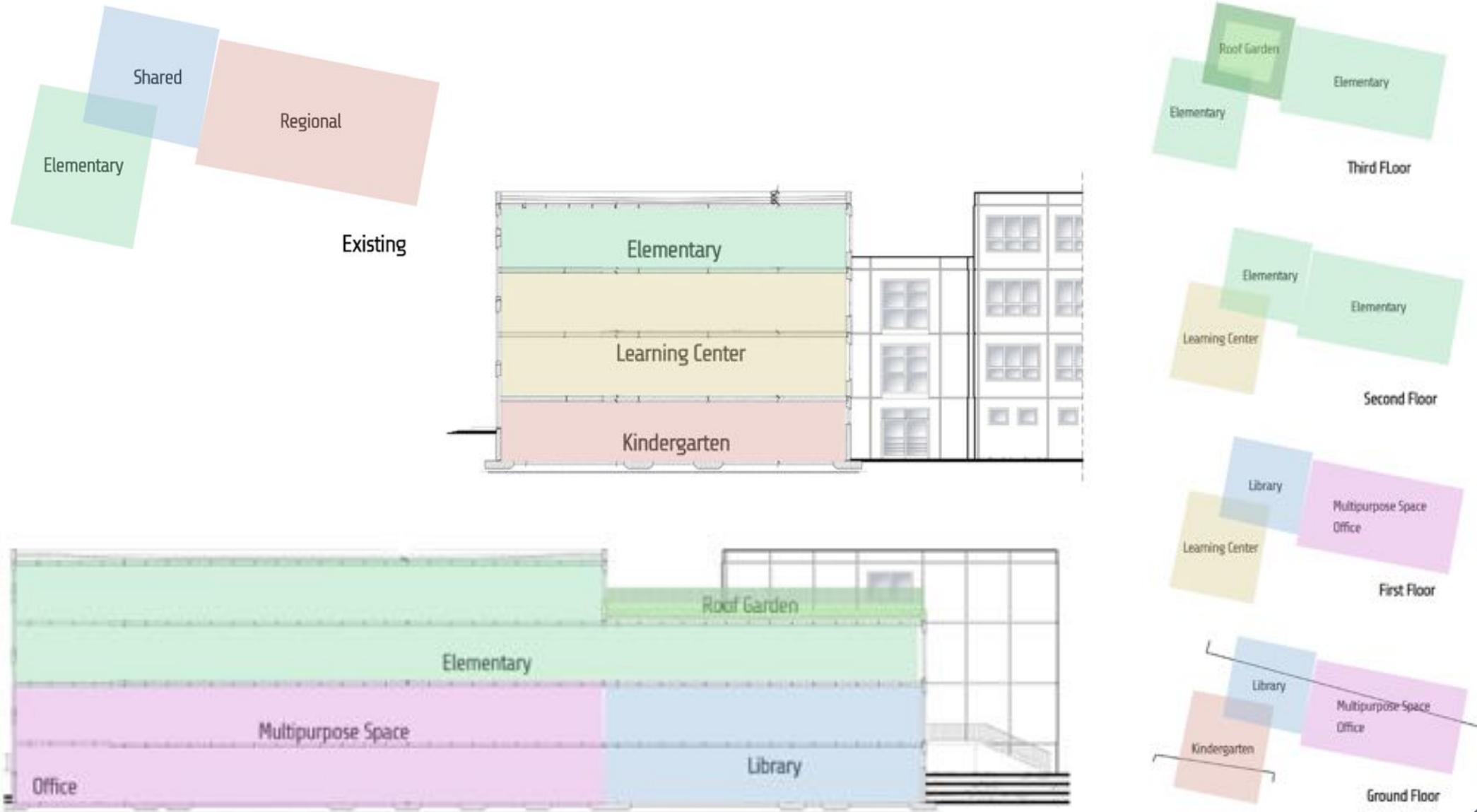
EXISTING BUILDING
(SITE)

MAIN ROAD

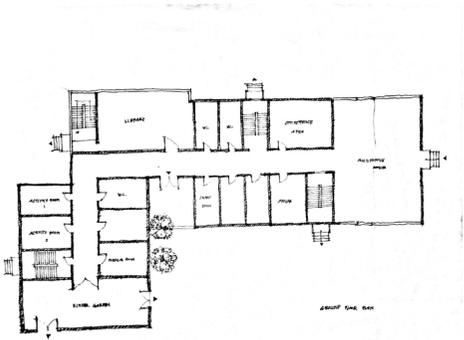
AGRICULTURE FACULTY BUILDING



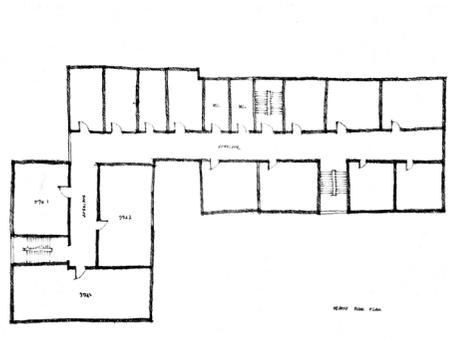
The programs were mainly a kindergarten, an elementary school, a library and a learning center for all ages. As the group focused on reconfiguring the existing space, the new configuration and arrangement was done over the existing plan and analysis over the old existing building was carried out. From the analysis, it was observed that the existing space was divided into three zone, an elementary school, a regional school and some shared space used as halls between them. The shared space was not very convincing as a communal space and hence not frequently used. Therefore, the group discussed into creating an effective communal shared space, which could bring together more people, and also is able to create the type of space that could be used for multiple functions conveniently. The team also came up with the idea to place the library in such a way that all the other learning programs in the building could access it with ease.



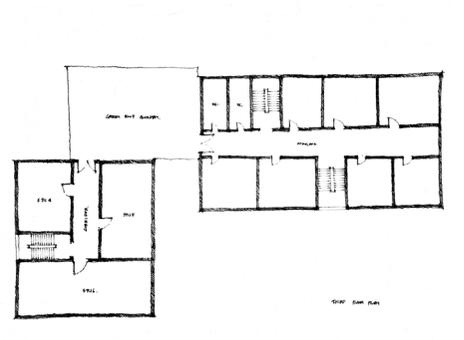
RECONFIGURATION



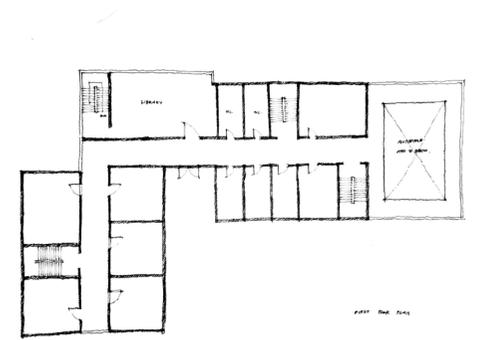
FIRST FLOOR PLAN



SECOND FLOOR PLAN

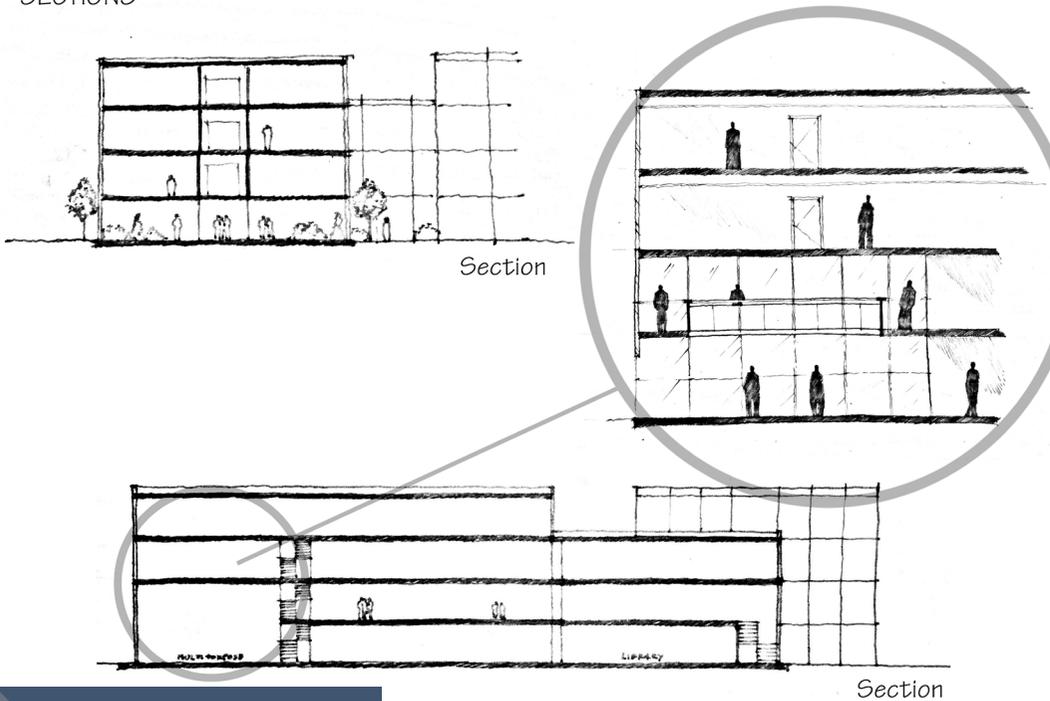


THIRD FLOOR PLAN



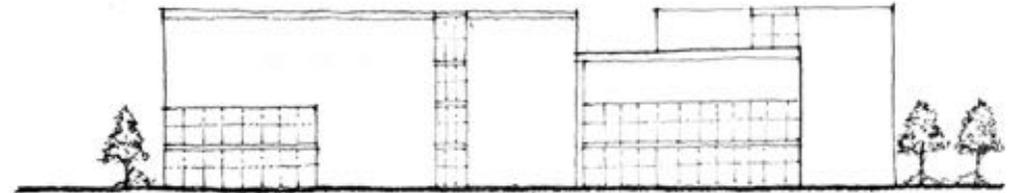
FOURTH FLOOR PLAN

SECTIONS



Section

Section



South Elevation



Interior Perspective



Exterior Perspective

In Neubrandenburg, the site already had the existing building being used as an elementary school on one side and a regional school on the other with common shared halls in the middle. This typology of reconfiguring the space in the existing building focuses to develop and improve over the old configuration of space, along with placing the new programs to create a safe, healthy and easily accessible learning environment for all ages.



EXCER

S I O N

SCHWERIN



The first image of Schwerin is gorgeous massive building with very classical Doric column facade and lake. Schwerin has the geographical advantages of having a lot of lakes, that it gives the cozy and pleasant environment to Schwerin. The buildings here are mostly well reserved and can see the trace of architecture transformation throughout the history.

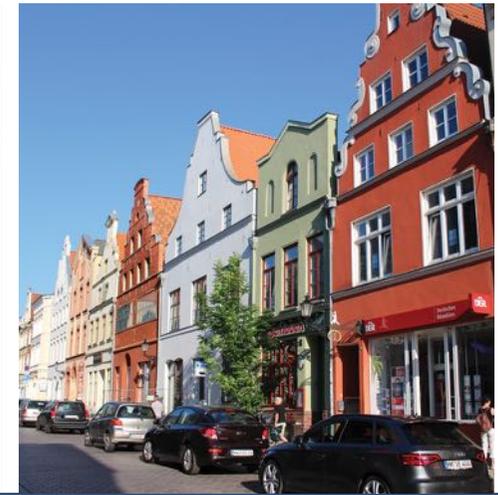


The most outstanding one will be the Schwerin Castle, the grand palace with both the architecture style of medieval and French renaissance. The castle is completely surrounded by the lake and form the isolated island and connect to the main land by the bridge. Another breathtaking of this castle is its French garden, here, vine tunnel, pond, lawn and fountain are all blended naturally.

WISMAR



Walking around the Wismar is like totally out of the daily images that we have being perceived since we have known. The city urban is focused mostly on the environment and the surrounding. The pedestrian, green environment and all the trees reserved are what we have lost in most of the Asia countries. The architecture there is not outstanding or contrasting to the surrounding content but it actually seem blend to it.



What I learnt from there is that architecture is not solely designing the fancy and fabulous building, the important thing is how architecture integrate with its surrounding, activities and local people to give the quality life.

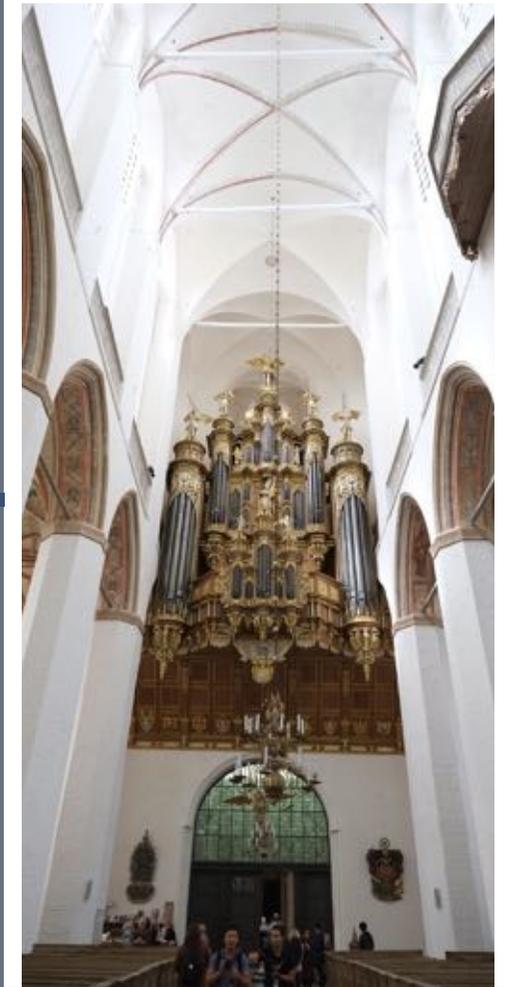


NEUBRANDENBURG



Neubrandenburg City Wall is the main evidence of the medieval city establishment which provided a historical background of Neubrandenburg. It took about an hour to walk the wall to experience the coexistence of the old and the new development. Beyond the city wall, there are the obvious linkages of streets and pedestrian network from the old city area to the extension of new development areas. A few cafes, shops, and restaurants settled inside the old fortresses.





STRALSUND

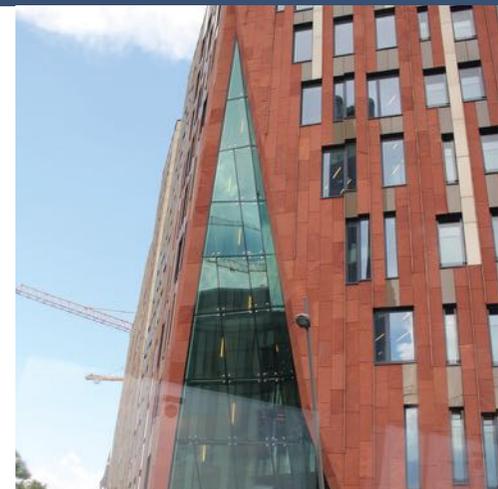
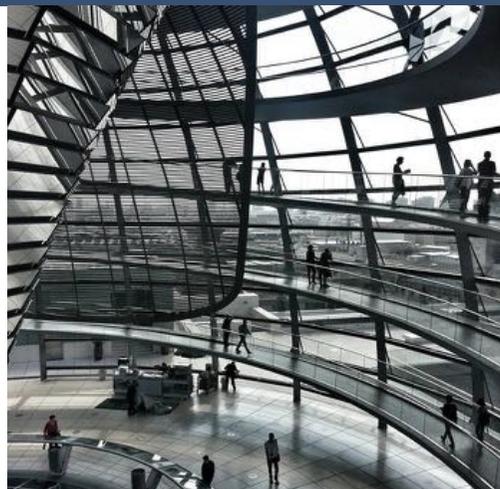
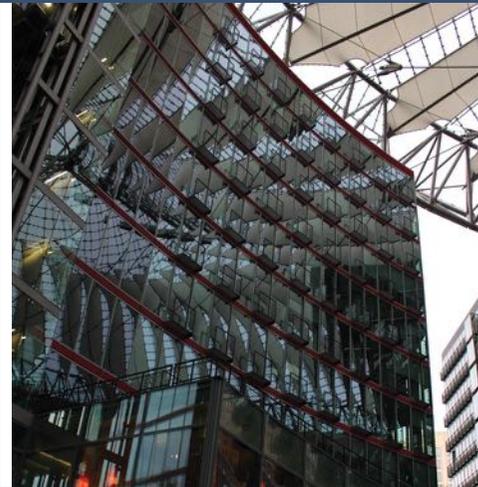
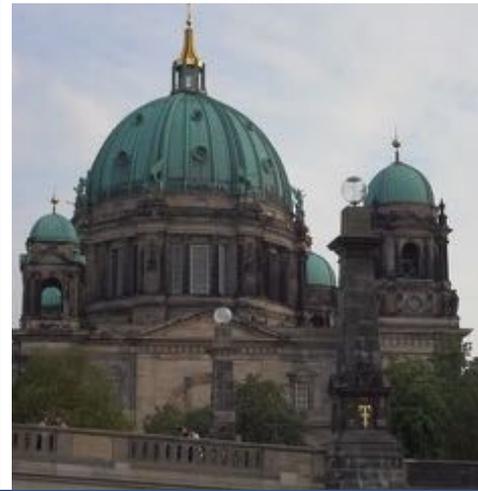
Ozeaneum is a public aquarium of Stralsund. The new museum was designed by architects Elke Reichel and Peter Schlaier, the Stuttgart architectural firm Behnisch, Behnisch & Partner. The public aquarium in the city of Stralsund is a main attraction of the German Maritime Museum, arguably one of the three largest institutions of its kind in Europe. The Ozeaneum is located at the historical Stralsund Harbour on the Baltic coast. It starts its operation in July 2008 with the displays of primarily sea life of the North Sea and the Baltic Sea.

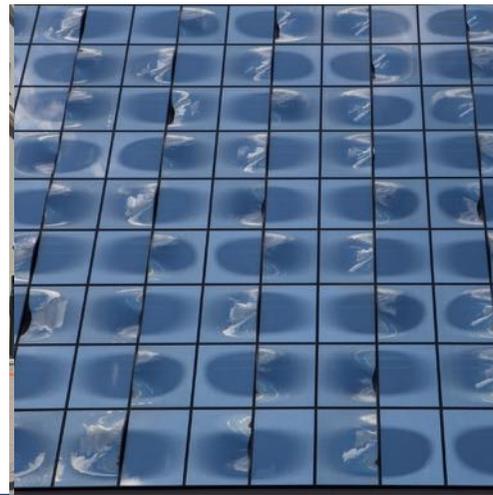


BERLIN



The capital city of Germany which was very busy with multi-cultured people. It had the busiest flow of humans, vehicles, trains, etc. and we could feel the full flow of the circulations around us, where ever we visited. Berlin City had sorted use of buildings, where you could see prominent amounts of traditional classical buildings alongside the modern build ones. Berlin as a city could be seen as more conservative as it had restored and retouched old buildings, the most notable being a Church which was half damage during world war II, is not standing tall again as a complete building.





HAMBURG



The best part about Hamburg was that as we gradually walked through the streets, we saw the Hamburg Elbphilharmonie building, reflecting in its full glory. It was right before its completion and was almost complete. This building made the cityscape of Hamburg even more beautiful and various streets narrowed to this view of the building. Hamburg was also notable for having a lot of bridges around.

