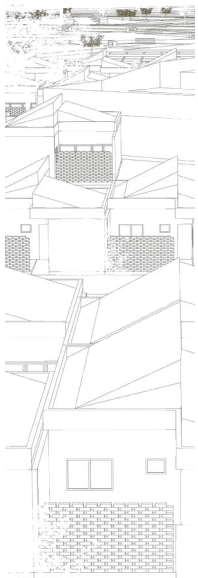
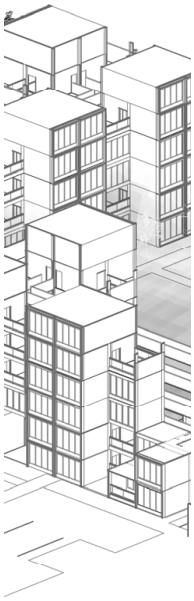
PORTFOLIO

BRISA BØHLE



SELECTED WORKS 2009-2018

Table of Content


01


02


03


04


05


06


07


08

BRISA BØHLE

MASTER OF SCIENCE IN
SUSTAINABLE ARCHITECTURE

Full name: Brisa Oliveira e Silva Bøhle
Date of birth: 16.03.1990
Nationality: Brazilian
Status: Married with one child

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brisa.bohle@gmail.com
Waldemar Aunes Veg 5B 7027
Trondheim

LANGUAGE

PORTUGUESE ●●●●●●

ENGLISH ●●●●●○

NORWEGIAN ●●○○○○

SOFTWARE SKILLS

●●○○○○ Rhinoceros

●●○○○○ Grasshopper

●●●●○○ Ladybug

●●●○○○ Honeybee

●●●●○○ AutoCAD

●●●●○○ SketchUp

●●●○○○ V-Ray

●●●●●○ Adobe Illustrator

●●○○○○ Photoshop

EDUCATION

2016-2018 Master of Science – Sustainable Architecture, NTNU, Trondheim - NORWAY

2009-2014 Bachelor's Degree – Architecture and Urbanism, Universidade Belas Artes de São Paulo, SP - BRAZIL

2004-2007 High School - Colégio Oswaldo Cruz, São José dos Campos, SP - BRAZIL

EXPERIENCE

2013-2014 (1 year)
Biselli Katchborian (www.bkweb.com.br)
Project Intern
Producing technical drawings and mock-up.

2012-2013 (9 months)
Even Construtora e Incorporadora (www.even.com.br)
Product Analyst Intern
Assisting architects in comparing technical drawings, 3D models and mock-ups, ensuring that the project requirements were met.

2011-2011 (4 months)
Officina Arquitetos e Associados (www.officina-arquitetos.com.br)
Construction Assistant Intern
Monitoring construction work, purchasing, control and delivery of materials.

2010-2011 (1 year)
Brandão & Marmo (www.brandaoemarmo.com.br)
Engineering Assistant
Assisting engineers while working in the field (ordering materials and deadline supervision).

01 LCA and adaptability studies

Professors
Inger Andresen and
Anne Grete Hestnes

Group members: Brisa Bøhle and Ida Hallebrand

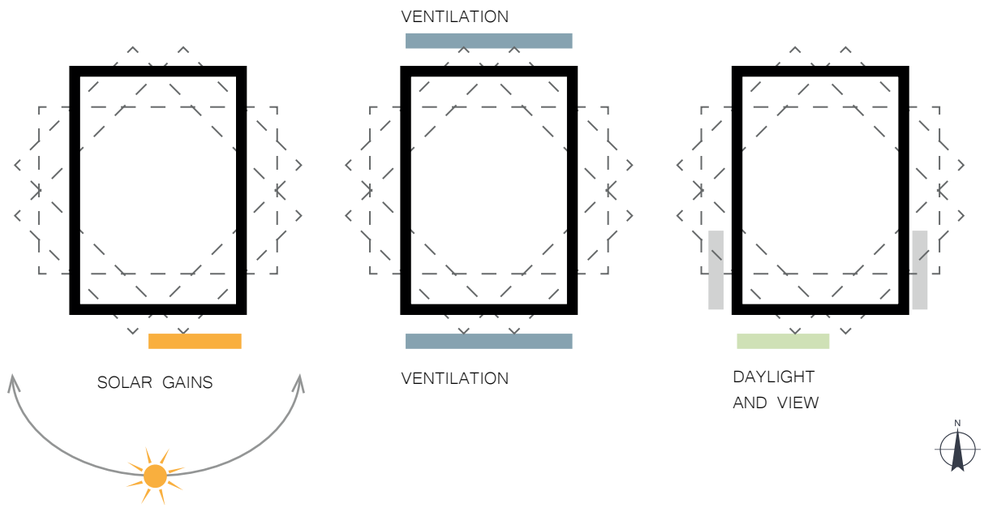
This thesis involves discovering approaches for a project within a zone rather than a site. The goal was to propose an adaptable Attefalls house concept, minimizing the environmental impact that a building can generate. This has been done by testing the adaptable concept in three different sites in Norway and Sweden.

My input to this project was the adaptability, user experience and architecture.
I compared and analysed climate data from the sites and after that started developing the design strategies.
For the adaptable strategies I tested the concept with "Human Centered Facade simulation" developed by Chris Mackey for Ladybug. I also tested the view access from different orientations, daylight, and natural ventilation strategies.
I researched pre-fabricated cabin projects in wood to use as references for the architecture design, taking into consideration the material choices that would affect the embodied emissions. The end result was a pre-fabricated cabin with changeable facade elements for better view and energy efficiency. As for the user experience the goal was to offer a comfortable environment and smart solutions for compact living.

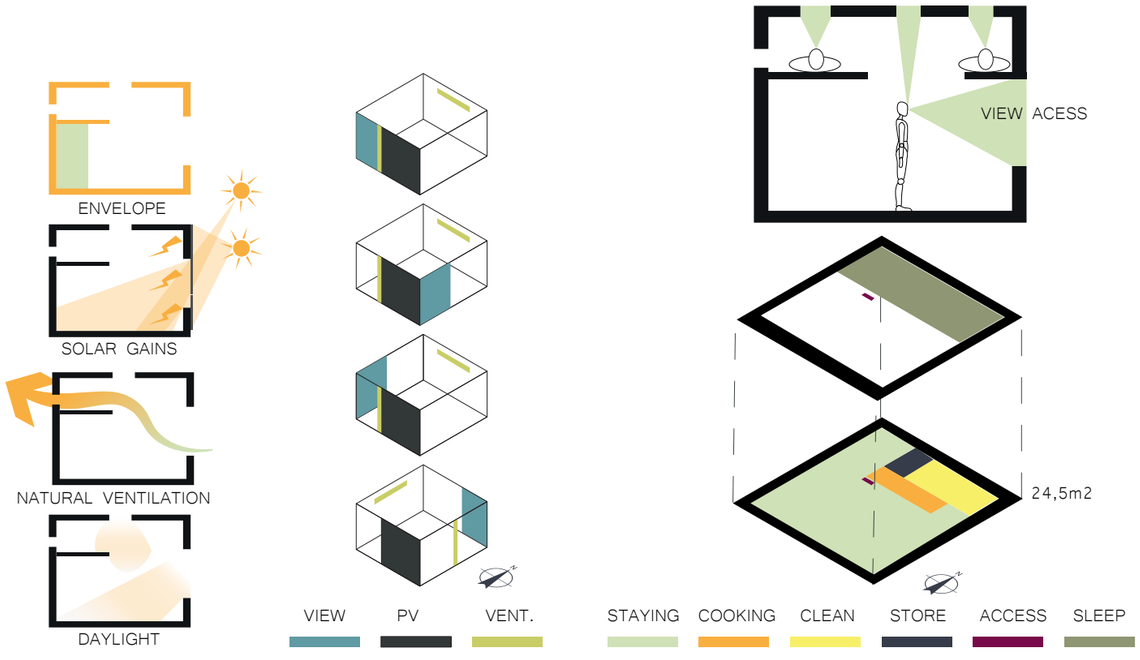
Life Cycle Assessment calculations were done by Ida Hallebrand during the design process and at the end, to minimize the embodied emissions, replacement of materials, and operation of the building. Simulation tools were also used to provide the building energy operation results.

Project exterior render [SketchUP, V-Ray and Photoshop]

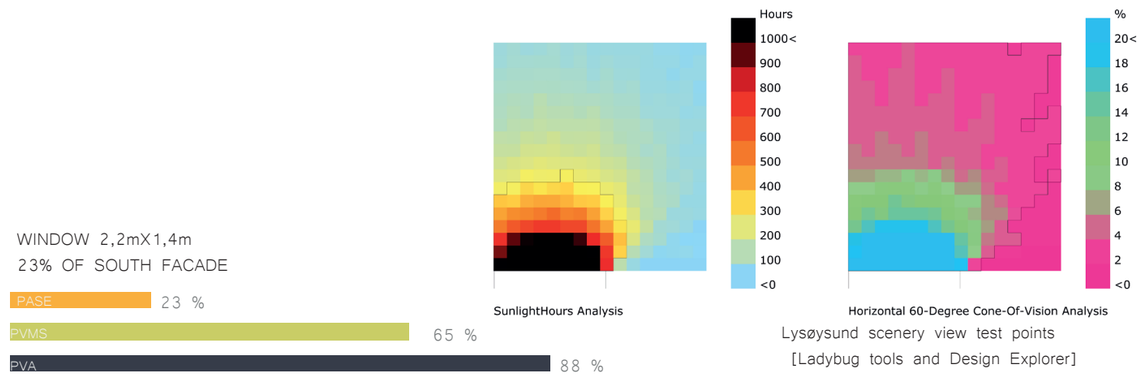
DESIGN STRATEGIES



ADAPTABILITY STRATEGIES

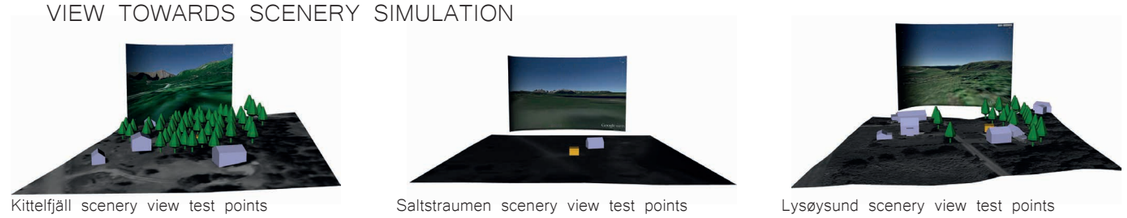


HUMAN CENTERED FACADE SIMULATION RESULT



Lysøysund scenery view test points
[Ladybug tools and Design Explorer]

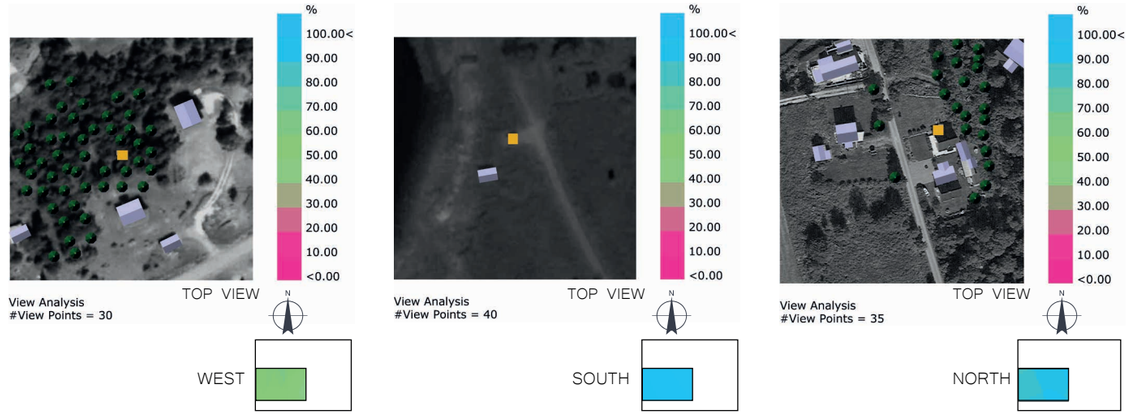
VIEW TOWARDS SCENERY SIMULATION



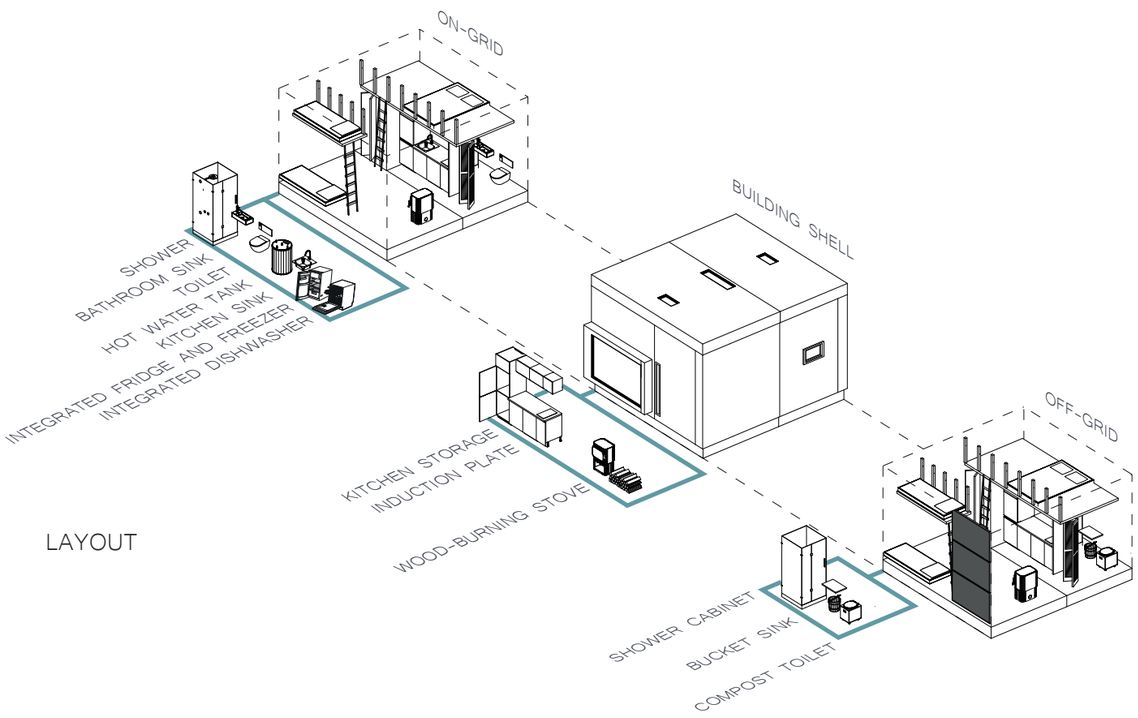
Kittelfjäll scenery view test points
[Rhino5, Ladybug tools and Lands Design]

Saltstraumen scenery view test points
[Rhino5, Ladybug tools and Lands Design]

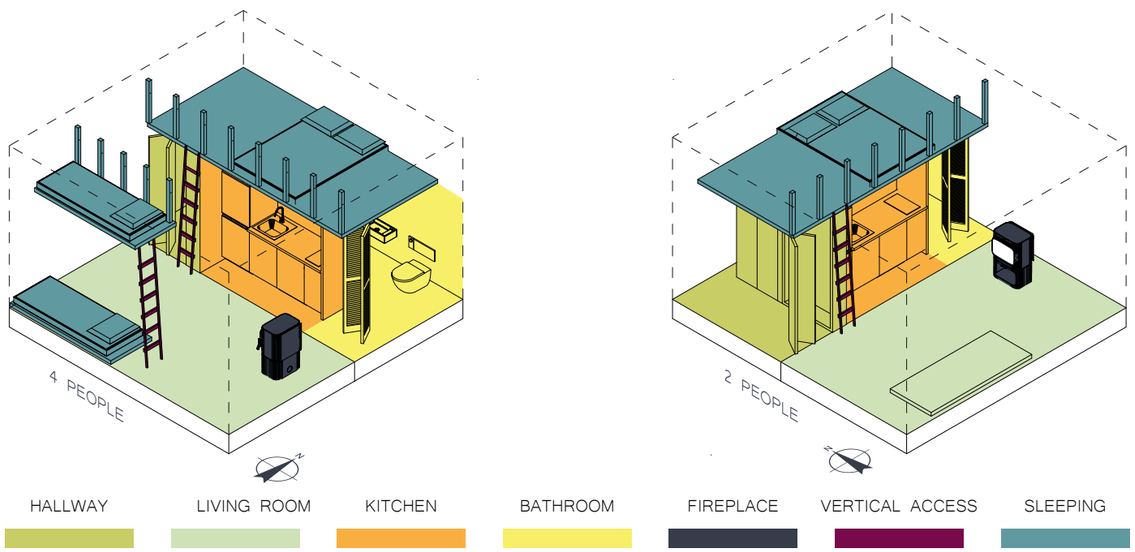
Lysøysund scenery view test points
[Rhino5, Ladybug tools and Lands Design]



ON AND OFF-GRID



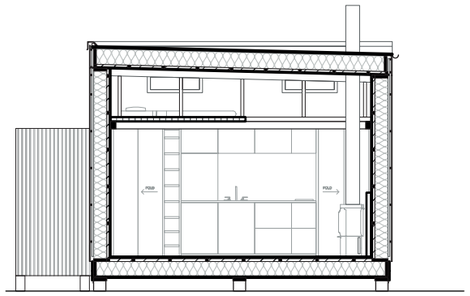
LAYOUT



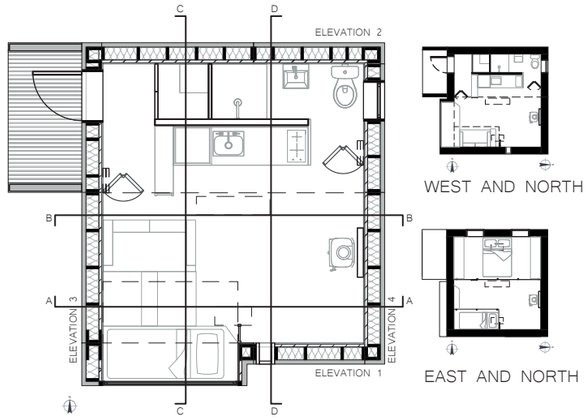
Project interior render [SketchUP, V-Ray and Photoshop]

Project exterior render [SketchUP, V-Ray and Photoshop]

ARCHITECTURAL DRAWINGS



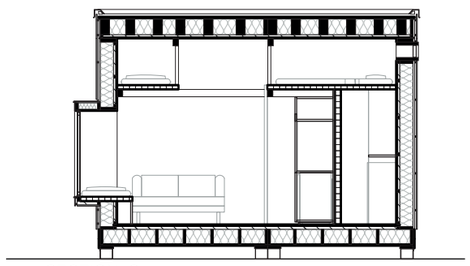
SECTION A



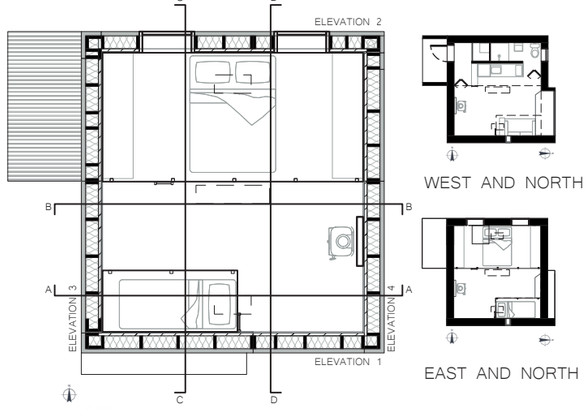
GROUND FLOOR

WEST AND NORTH

EAST AND NORTH



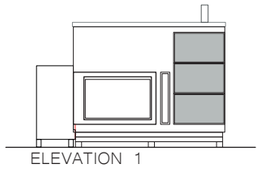
SECTION C



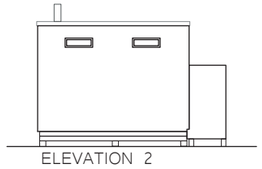
LOFT

WEST AND NORTH

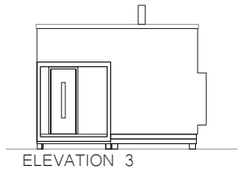
EAST AND NORTH



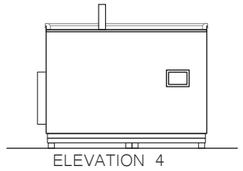
ELEVATION 1



ELEVATION 2



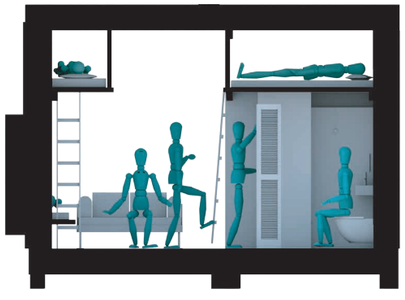
ELEVATION 3

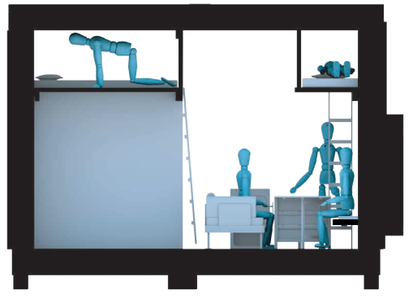


ELEVATION 4

Project exterior render (SketchUP, V-Ray and Photoshop)

MOVING INSIDE THE SPACE





02 Senja

Professors Inger Andresen, Tommy Kleiven and Michael Gruner

Group members: Brisa Bøhle, Ida Hallebrand, Janja Radivojevic and Kari Tarnstrom.

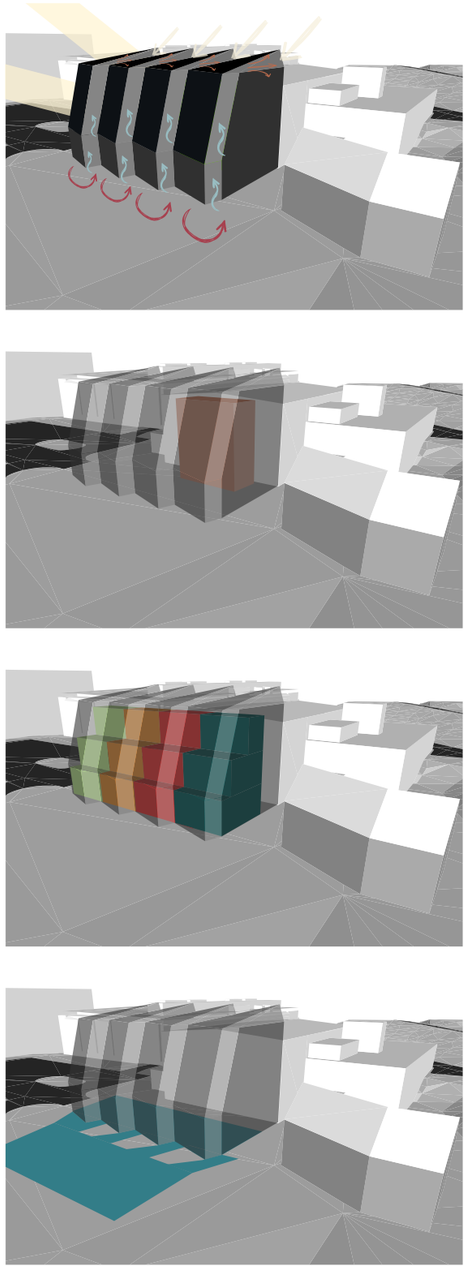
The ZEB Flexibility Lab was a project focused on integrated energy design to create a zero emission building through passive energy design, reduction of thermal losses, and production of renewable energy on the site, while maintaining a comfortable indoor environment. The ultimate challenge of a zero emission building is to develop a balance between a building's energy expenditure and the energy that can be produced on site. The design goal of this project was to create a laboratory that attains the status of ZEB-COM and provides a comfortable and flexible environment for the researchers and students in the building.

Upon analysis, it was determined that primary drivers of a building's energy consumption occur in the heating and ventilation of the building, while the most promising renewable energy resources available on the site were solar power and geothermal heating. During the design process, computer simulations were used to determine the thermal efficiency of the building, leading to an evolution of the shape, layout, and structure of the building, as energy production techniques were evaluated, analysed, and optimized. We attempted to reduce the building's energy use by establishing an effective thermal envelope, implementing a hybrid ventilation system, and using a geothermal heat-pump for the generation of heat for the building; balancing the building's energy requirements with electricity produced by photovoltaic panels mounted on the facade of a building.

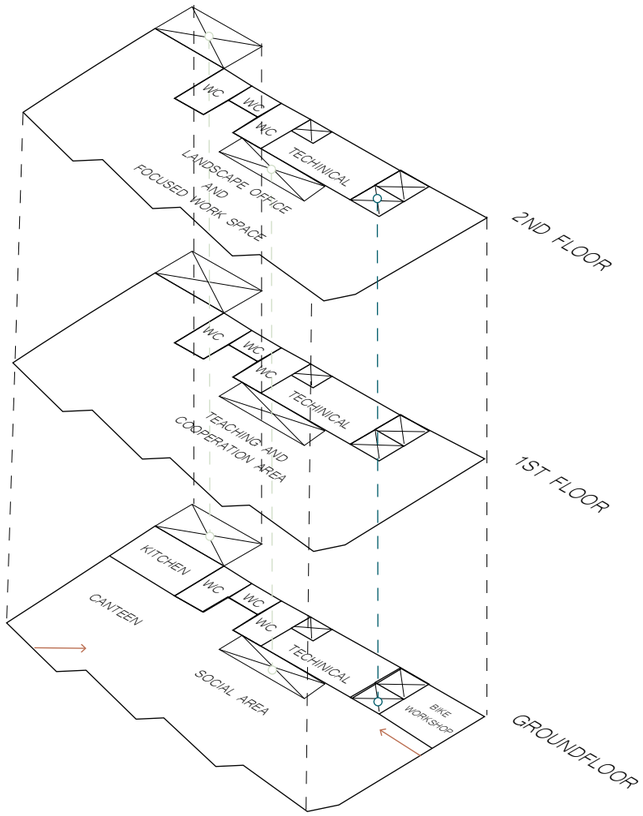
My contribution on this project was site analysis, architecture design, furniture layout, 3D renders, drawings, graphic representation, presentations and posters.

Project exterior render [SketchUP, V-Ray and Photoshop]

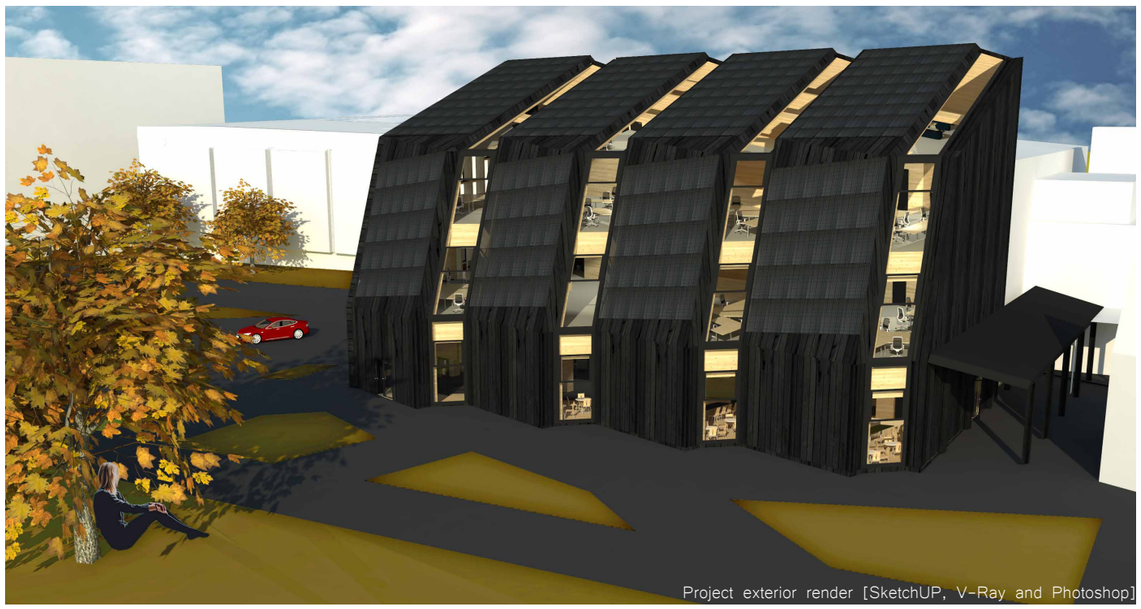
CONCEPT



ACCESS

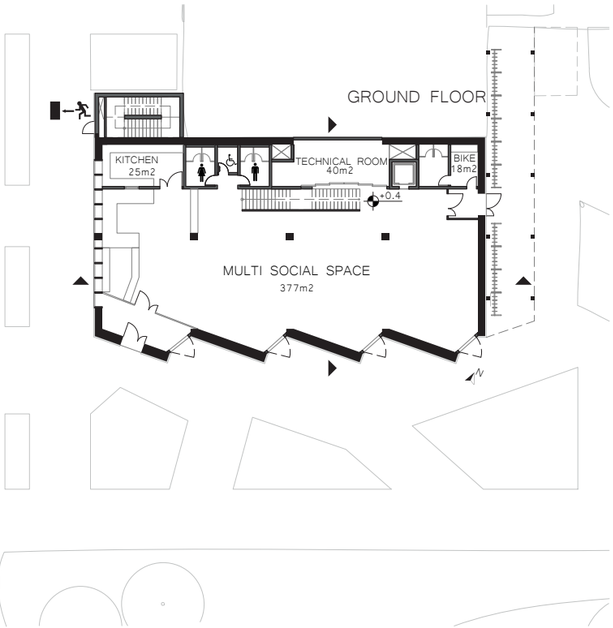


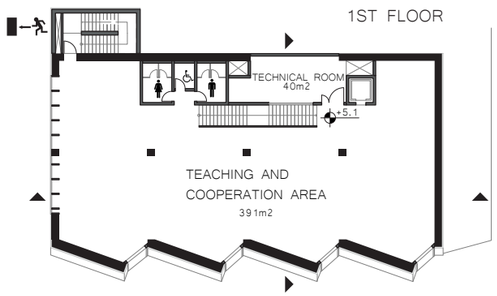
Project exterior render [SketchUP, V-Ray and Photoshop]

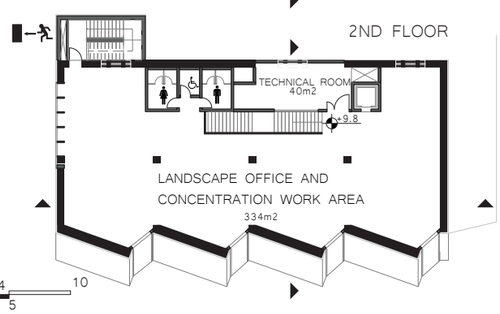


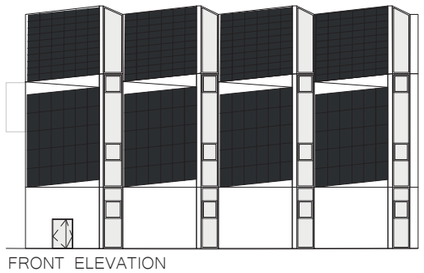
Project exterior render [SketchUP, V-Ray and Photoshop]

ARCHITECTURAL DRAWINGS

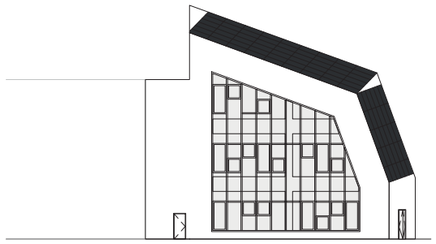




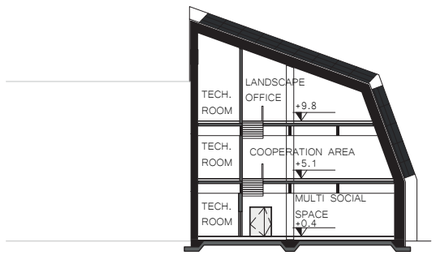




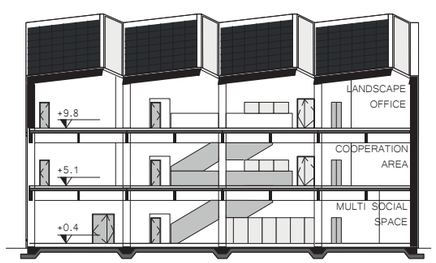
FRONT ELEVATION



SIDE ELEVATION

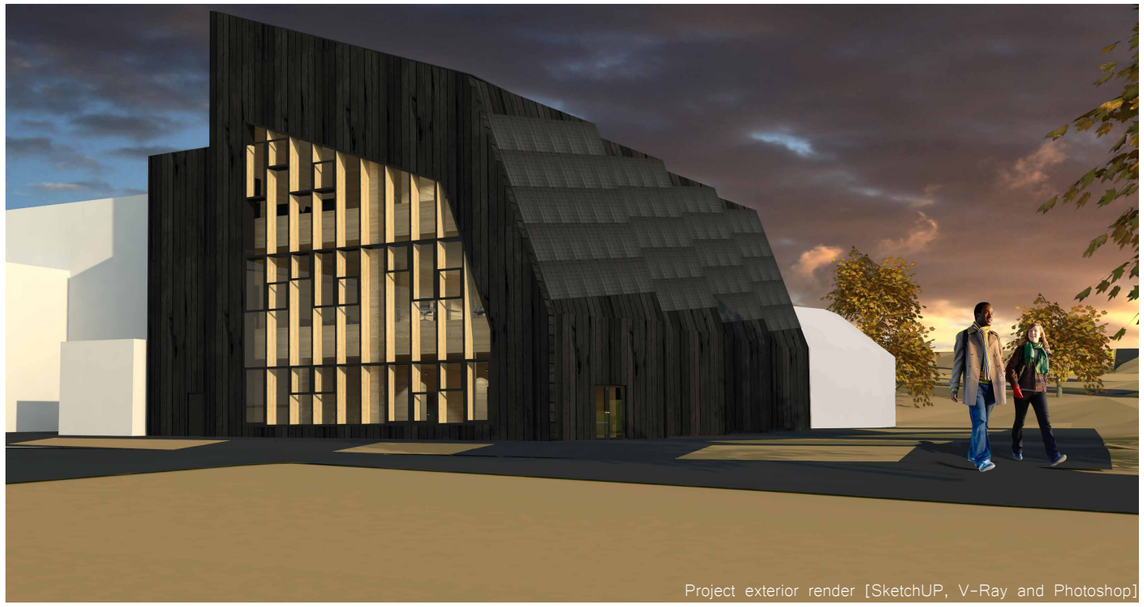


SIDE SECTION



LONGITUDINAL SECTION

Project interior render [SketchUP, V-Ray and Photoshop]



Project exterior render [SketchUP, V-Ray and Photoshop]

03 Natural History & Science Center

Professors
Aoife Houlihan Wiberg and
Chiara Bertolin

Group members: Brisa Bøhle, Ida Hallebrand, Janja Radivojevic, Kristel Reseke, Mathilde Le Levereur, Martin Boullay and Nikolaj Petersen

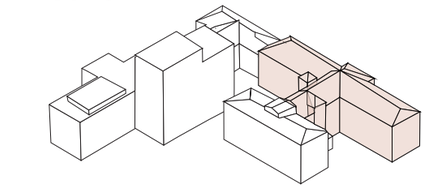
This project was a proposal for the Vitenskapsmuseet, the NTNU campus closest to the city center located at Kalvskinnet – An idea of a cultural district in a very valuable part of Trondheim. The intention was to attract public interest and exhibit innovation for students, researchers and employees and share functions with the public. The project goal was to portrait NTNU's sustainability approach and goal of building in Zero Emission Neighbourhood (ZEN) – in this case particularly in a context of cultural heritage. The project was to include innovation and optimization of the existing buildings and design of additional exhibition and collection areas (4000 m²) with predicted area for temporary exhibition (800-1000 m²) for about four months per year and a 3D cinema. Led by the character and cultural significance of the site. The design emphasises importance of existing buildings, connects the Museum and Science center with the city and offers new public spaces to the residents. This project was composed with the museums Natural History and the Science center wrapped with an urban intervention.

As a group we work together on the main sustainable strategies on urban scale and design. The architectural project was split into two subgroups, Mathilde, Martin and Nikolaj worked with the Science Center. I worked on the Natural History museum with Ida, Janja and Kristel.

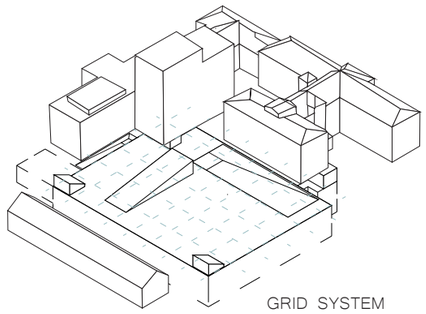
My main contributions for this project were related to urban and architectural ideas, diagrams, and architectural drawings of the Natural Museum. The 3D models were made by Nikolaj and Martin.

Urban intervention [Nikolaj Petersen]

CONCEPT

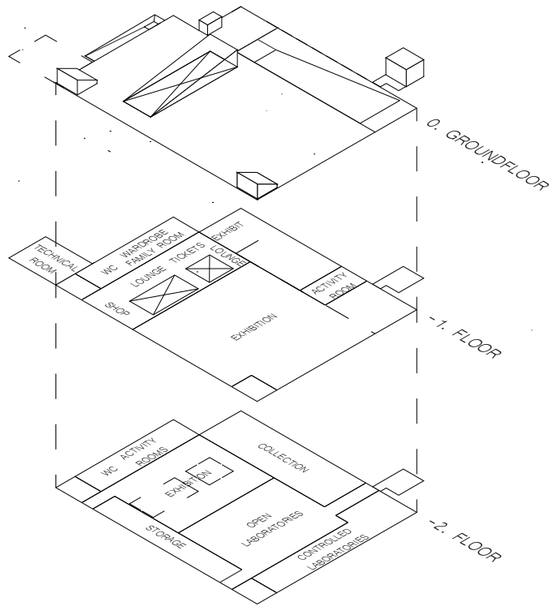


PROTECTED BUILDINGS

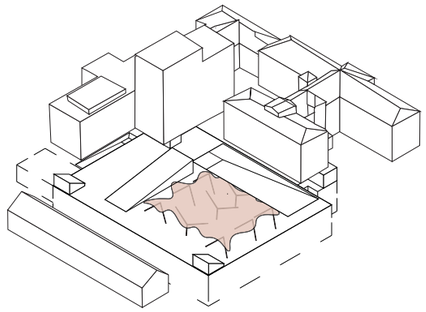


GRID SYSTEM

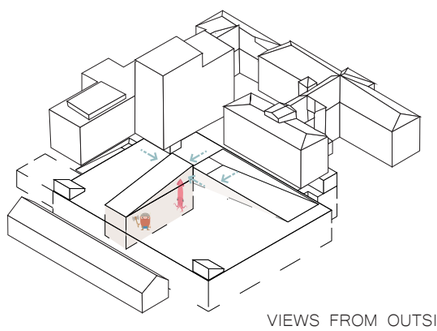
FUNCTION DISTRIBUTION



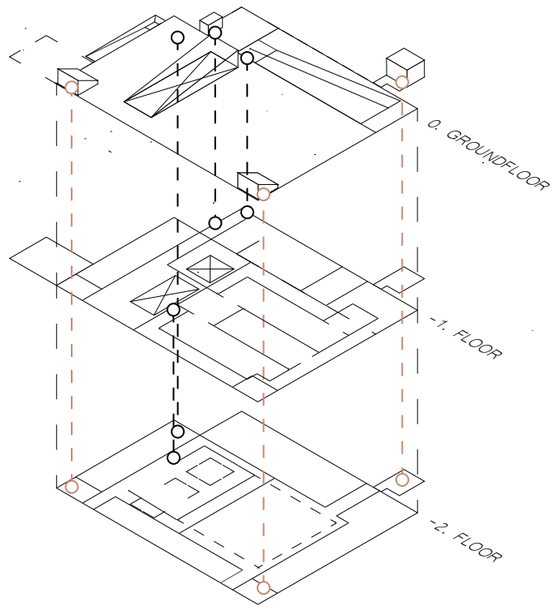
ACCESS



TEMPORARY EXHIBITION



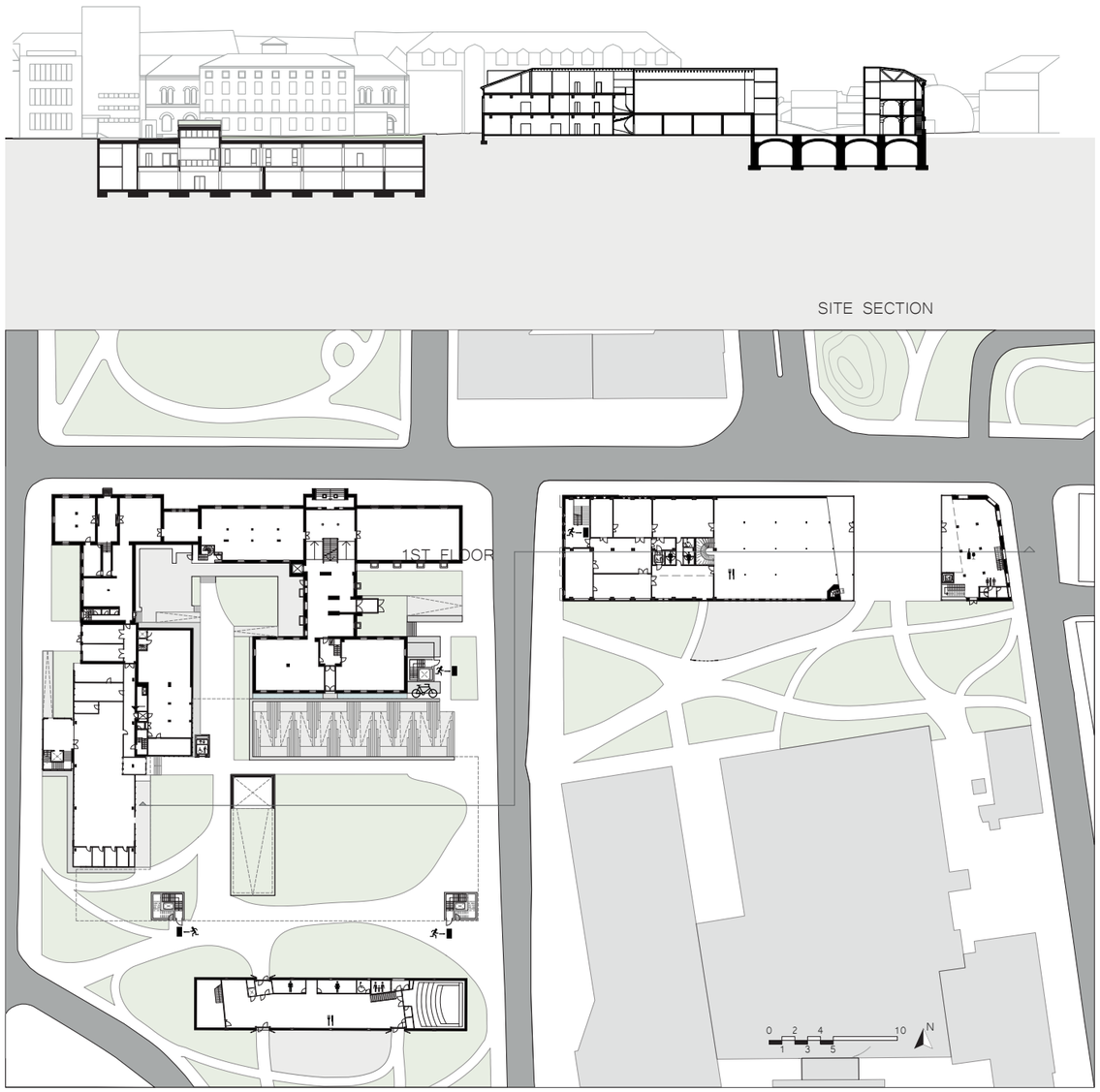
VIEWS FROM OUTSIDE



Natural History museum, interior [Martin Boullay and Nikolaj Petersen]

Natural History museum, exterior [Martin Boullay and Nikolaj Petersen]

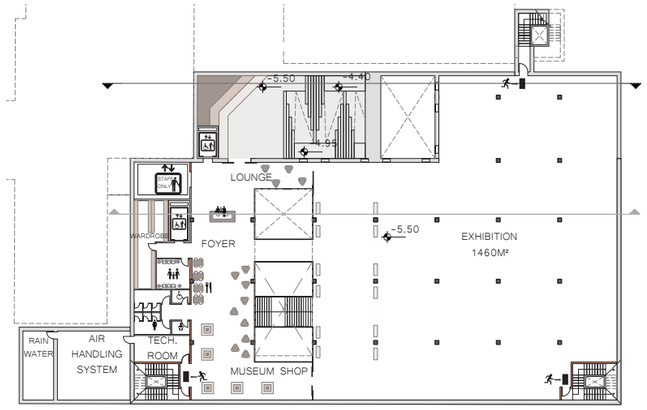
ARCHITECTURAL DRAWINGS



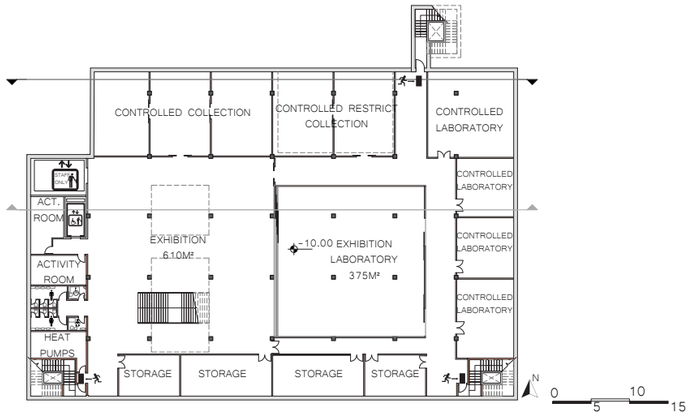
SITE SECTION

SITE PLAN

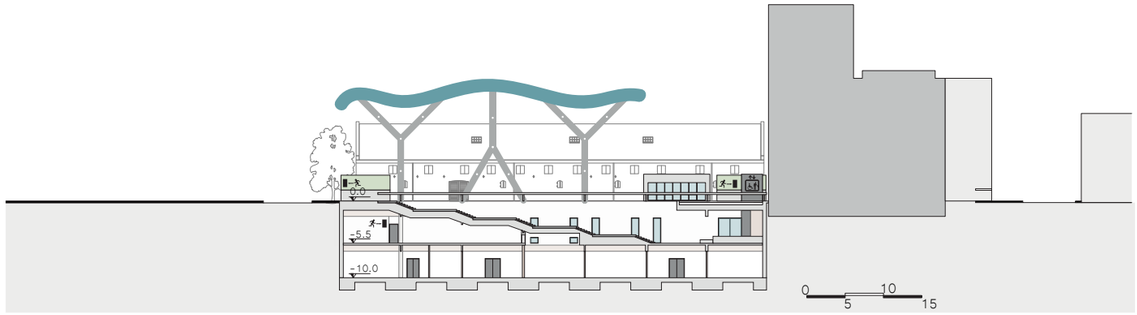
NATURAL HISTORY MUSEUM



1ST UNDERGROUND PLAN

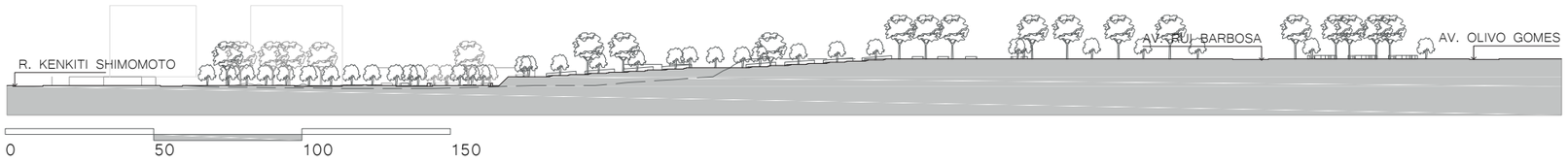


1ST UNDERGROUND PLAN



LONGITUDINAL SECTION

SITE FLOOR PLAN



SITE SECTION

04 Cerâmica Weiss Thesis Project

Professor
Luiza Iwakami

Architecture and Urbanism bachelor thesis project

The bachelor project was a combination of cultural heritage, urban planning and architecture in the city of São José dos Campos, Brazil. Located close to the city center, the propriety had an old the pottery factory called Weiss (active from 1942 to around 1990) and a workers village, which was home to 21 families.

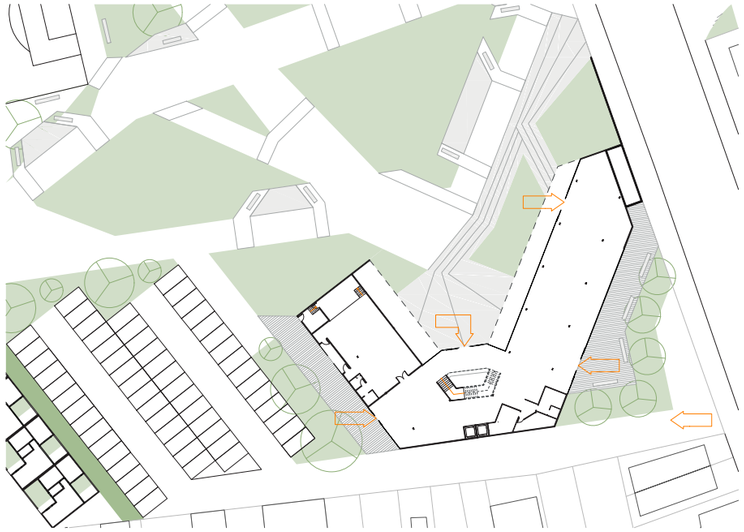
The ceramic produced in this factory was individually hand painted and the unique pieces were mostly used for indoor decor. In addition, they also produced ceramic elements for building facades, which can be seen on the remaining factory building. Thus, the factory carried a special historical and cultural value.

To better understand the cultural value, I studied the story of the factory and visited one of the families that still lived in the same village. The condition of the houses were bad and after the factory bankruptcy, the property was auctioned. Therefore, the residents were apprehensive about losing their homes.

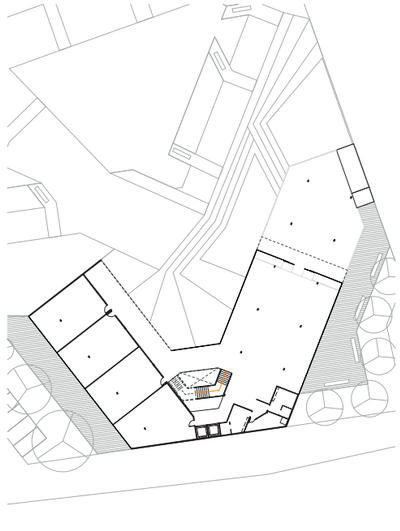
The ultimate challenge of this project was to combine the cultural heritage of the factory together with designing a Cultural Center of Craftsmanship(1), and to create an urban landscape that also included better housing (2) for the residents.

Since this was an ambitious project considering the time frame, scale and multiple disciplinary work; the final result consisted of two architectural buildings at preliminary stage and urban intervention.

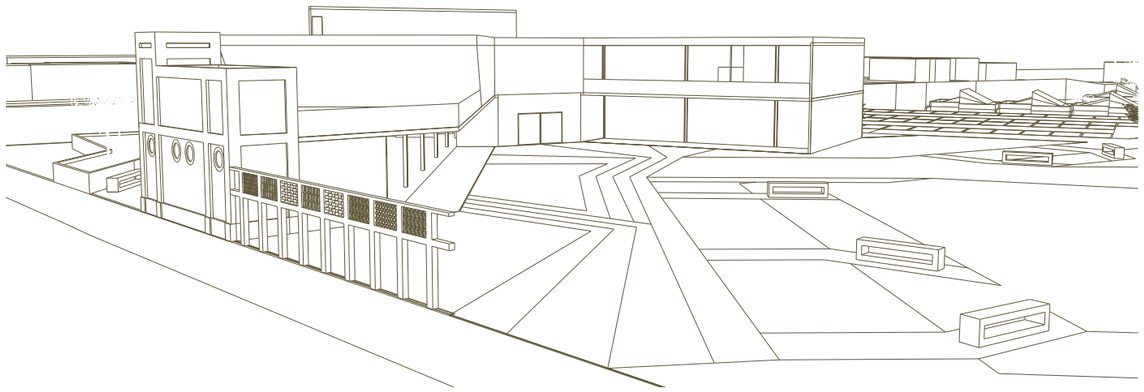
ARCHITECTURAL DRAWINGS
CULTURAL CENTER OF CRAFTSMANSHIP



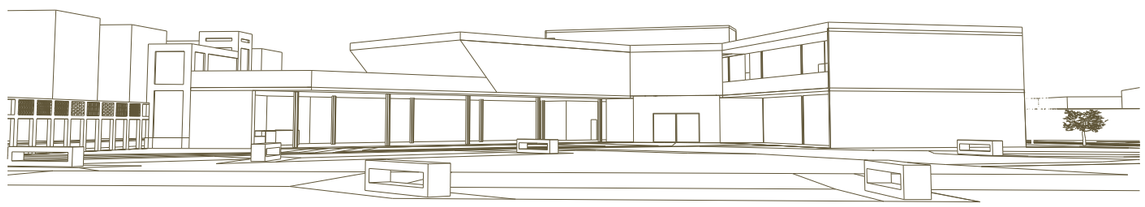
GROUND FLOOR PLAN



1ST FLOOR PLAN

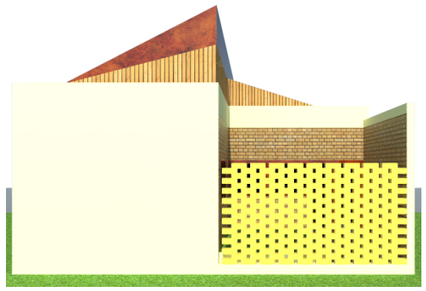


CULTURAL CENTER PERSPECTIVE

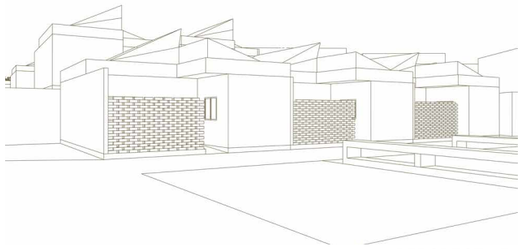


CULTURAL CENTER PERSPECTIVE

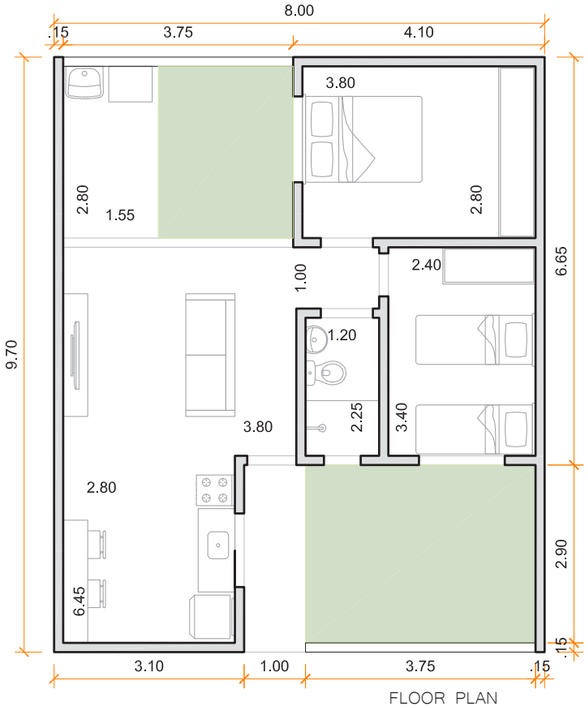
WORKERS VILLAGE



BACK RENDER

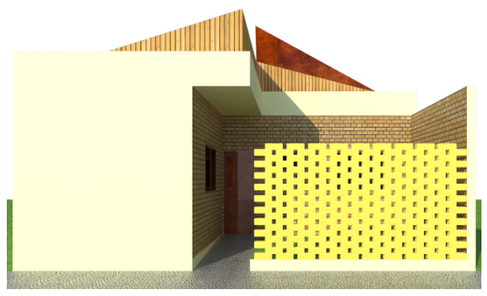


PERSPECTIVE



FLOOR PLAN

WORKERS VILLAGE FLOOR PLAN



FRONT RENDER

PERSPECTIVE

05 Praça mãe preta

Professor Iracy Sguillaro

Urban and landscape project

Our briefing consisted of an urban intervention located on the east side of São Paulo, with recreational areas, landscape, a selective waste collection station, high density social housing and parking for the residents.

During the landscape design, I researched local tree species and how to integrate them with the architecture and urban design. The trees were chosen based on the different seasons of the year, thinking on user sensation related to foliage colours and flower essence.

A requirement for the social housing was to design different layouts for different target groups, such as students, retired people, small and medium sized families. In addition, the apartment square footage should not exceed 100m^2. Thus, the apartment design was in “L” and square shapes for four different target groups, also providing privacy. The composition between apartment types resulted in a dynamic facade.

As the final result, on the main floor there is a boulevard with 8 shops, 16 apartments type A and 12 apartments type B. Under the main floor there are 6 apartments type A, 8 apartments type B, 14 apartments type C, 4 barbecue areas(1), one party room(2), landscape, skate area(3), two sports court(4) and playgrounds(5).

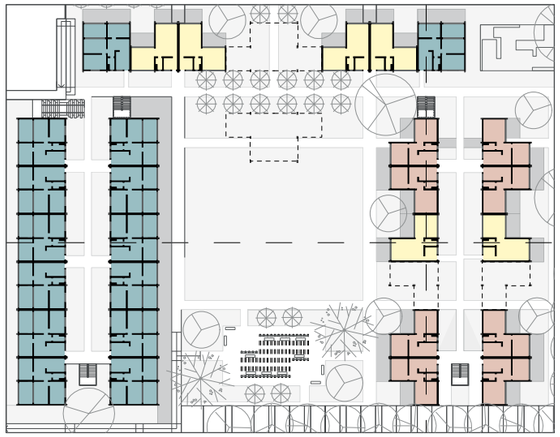
Above the main floor there are two floors with identical layout, each one containing 12 apartments type A and 20 apartments type B. The last two floors have 32 duplex apartments. In total there was 152 apartments.

Main materials for this building was concrete, metal and glass.

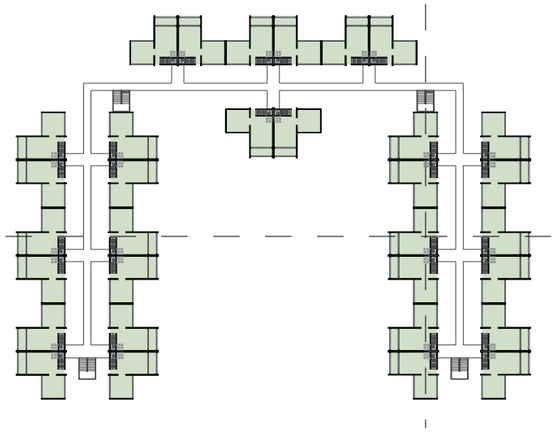
SITE FLOOR PLAN

SITE SECTION

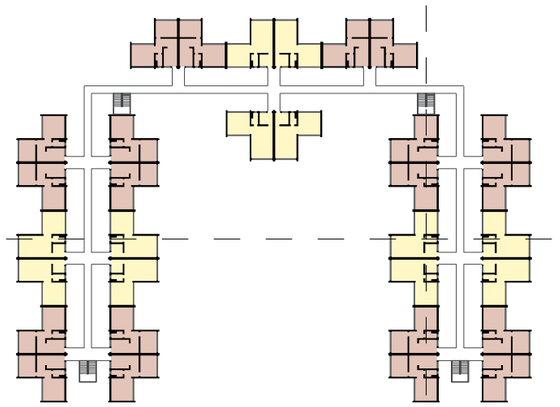
ARCHITECTURAL DRAWINGS



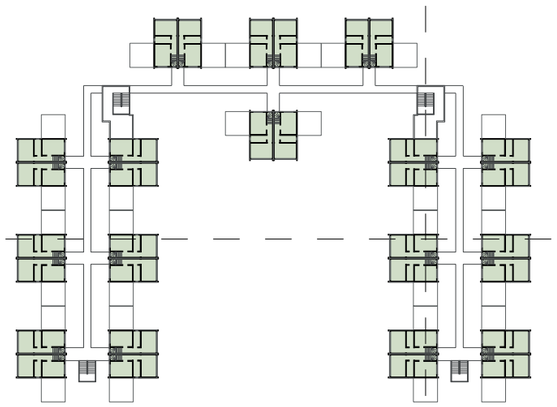
1ST UNDERGROUND PLAN



3ND FLOOR PLAN (DUPLEX)



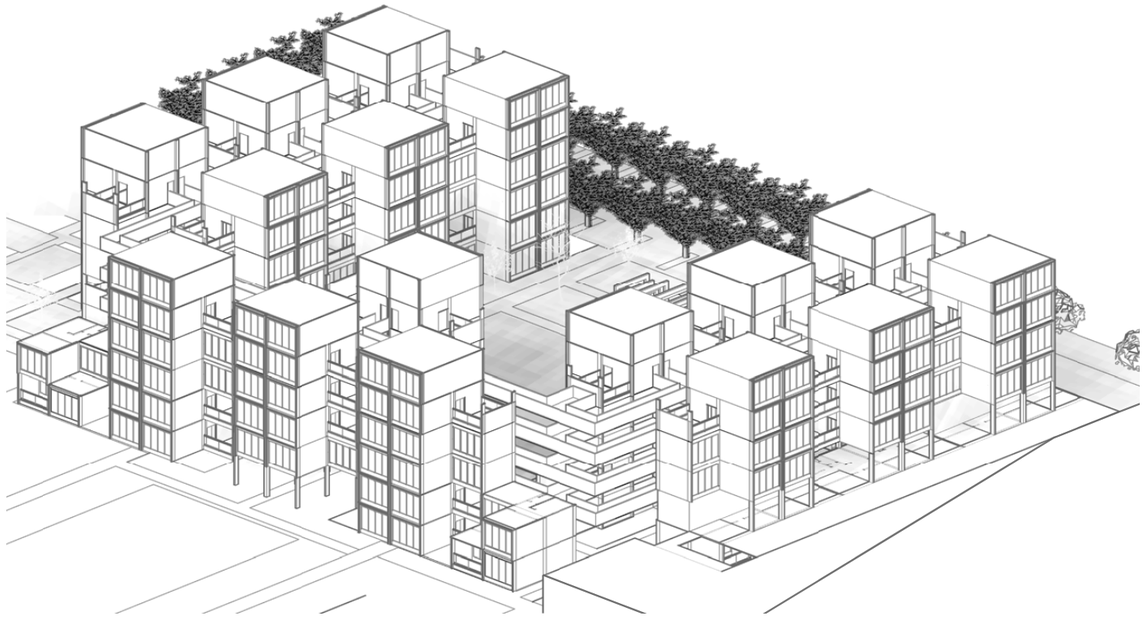
1ST AND 2ND FLOOR PLAN



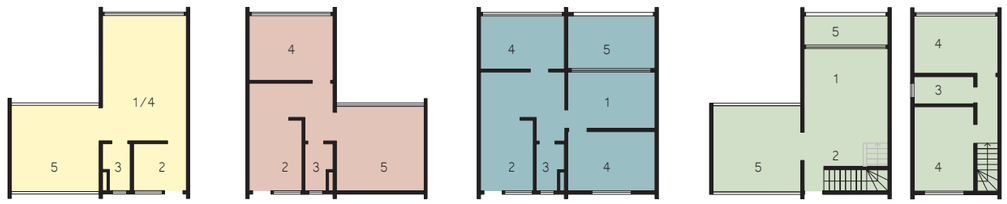
4RD FLOOR PLAN (DUPLEX)

LONGITUDINAL SECTION

APARTMENTS ELEVATION



APARTMENTS PERSPECTIVE



A 25m² B 50m² C 65m² Duplex 75m²

|1| LIVING ROOM
|2| KITCHEN
|3| BATHROOM
|4| DORMITORY
|5| BALCONY

APARTMENTS TYPE

06 Sacilotto shelf

Voluntary work

Professor
Denise Xavier

Group Members: Aline Marques, Brisa Silva, Caroiine, Andregheto, Jeicy Jansen and Rubia Almeida

This task was fun twist of creativity, hard work and solidarity. We designed, and produced this shelf, inspired on the sculpture Concreção 0005 by Luiz Sacilotto. After we finished the piece, we donated it to a kinder garden in São Paulo.

PHOTO BY JEICY JANSEN

07 Projeto a voz da criança na arquitetura

Voluntary work

Professor
Denise Xavier

Ana Andrade, Brisa Silva, Bruna Cavalcante, Camila Cabral, Camila Navarro, Denise Xavier, Fernando Albuquerque, Giuliana Ricci, Haroldo Mekaru, Juliana Rosa, Larissa Albuquerque, Marília Mesquita, Mayara Custódio, Natália Amaral, Patrícia Cavalcanti, Rodrigo Schoueri, Rodrigo Moura, Rodrigo Prata, Thaiza Falcone, Thayná Medeiros, Tatiana Marrocco.

The revitalization project of the José Luiz de Mello Malheiros square in the region of Glicério – an academic experience developed in 2014 by a group of students from the Architecture and Urbanism course of the Centro Universitário de Belas Artes de São Paulo – linked to the movBA extension project – held in partnership of the NGO Criacidade, and the PMSP in the program São Paulo Carinhosa.
We participated in workshops and lectures to stimulate the architectural action of the playful universe of childhood, having the children as interlocutors and interpreters for the design of a more creative city.
After workshops I and Mayara Custódio represented the project's design through the child's eyes with a colourful architectural model.

PHOTO BY JULIANA ROSA

PHOTO BY CESAR OGATA

08 BNDES

National Contest

Authors: Mario Biselli, Paulo Roberto dos Santos Barbosa, Tais Cristina da Silva e Fernanda Castilho , Cassio Oba, Cassia Lopes Moral, André Biselli, Ana Carolina Mendes, Adriana Godoy, Luiza Pillar, Daniela Dupta, Gabrielle Asselta Rossini, Brisa Silva, Maria Eduarda Furlan , Estúdio MI, Miguel Brazão , Paulo Freire e Jair Vieira Filho , José Medina e Leandro Rodrigues , Paulo Salles , Raul Bessa, Luís Oliveira e Rui Batista , Paulo Duarte Consultores, Gabriela Ornaghi, Ricardo Zulques e Carlos Fernando Rodrigues , Art Maquetes

A project of Mario Biselli, Paulo Barbosa, Taís da Silva and Fernanda Castilho, awarded the third place in the National Contest for the BNDES Annex, promoted by the National Bank for Economic and Social Development. The contest participants had the objective of proposing a building annexed to the existing building located in Rio de Janeiro.
My contributions for this project were with the architectural and technical drawings.

Exterior render by Estúdio MI

... Links and publication

Links about the BNDES competition project and a book by Biselli and Katchborian

ArchDaily Brasil. 2019. Terceiro Lugar no Concurso Nacional para o Anexo do BNDES / Mario Biselli, Paulo Barbosa, Taís da Silva e Fernanda Castilho | ArchDaily Brasil . [ONLINE] Available at: https://www.archdaily.com.br/br/756521/terceiro-lugar-no-concurso-nacional-para-o-anexo-do-bndes-mario-biselli-paulo-barbosa-tais-da-silva-e-fernanda-castilho. [Accessed 16 January 2019].

São Paulo Arquitetos. 2019. São Paulo Arquitetos. [ONLINE] Available at: https://www.saopauloarquitetos.com/Edificio-Anexo-BNDES. [Accessed 16 January 2019].

Biselli, B. and Katchborian, A. (2014). Estratégias do Belo a Arquitetura de Biselli e Katchborian. 1st ed. Brazil: J.J. CAROL.

Thank you

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