

# Reforge

## Sustainability through transformation

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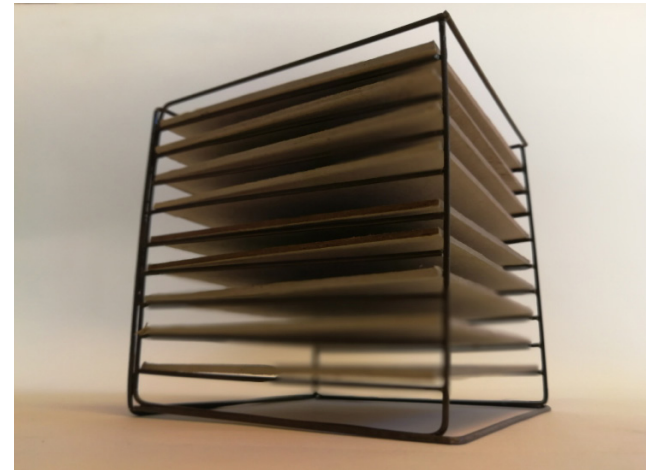
Dancer at Carte Blanche

Task: Painting plan drawings

- Aslak Nygård

Dancer at Carte Blanche

Task: Painting plan drawings



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This booklet should be read as an introduction to the project REFORGE.

Hopefully it will spark your curiosity and bring up some questions that will be answered during my presentation.

It should be read from start to finish.



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Tim lives on the southern side of the city centre. The shop where he works is located on the opposite side. Everyday he walks back and forth to the shop through the city. The route between his home and the shop varies from day to day. Some days his route passes the town hall which is being refurbished, while other days he passes the cafe that opens early where all kinds of individuals reside to get a wake-up coffee. He sees the same woman in the same place during his route, walking the opposite direction. They have done this so many times that they now nod to each other. Two strangers giving a signal of recognition, a beautiful representation of everyday urban life. During the route his pace varies depending on the sequence of space which he travels through. He walks faster in the large open areas, and slower in the small street with all the local shops where he often gazes inside, both to see the products and the people. At the end of the journey through the urban jungle he arrives at the store where he works. He puts on his uniform and shifts into the role of an integrated part of the city landscape.

- Excerpt from the social anthropology essay

# Project Description

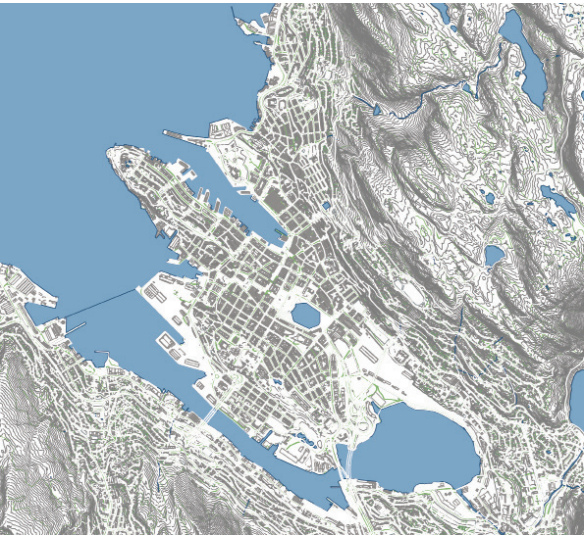
## Bergen, Norway

Bergen is one of the oldest cities in Norway. During medieval times, the city grew rapidly and Bergen became an important center for international trading and shipping. It was the largest city in Norway until 1830.

In 1972 the municipalities Arna, Fana, Laksevåg and Åsane were incorporated under Bergen. Due to this Bergen has a total of 283 000 inhabitants, but only 42 000 of these live in or near the city center.



Satellite city centers



Bergen city center

Bergen's infrastructure has been based on the car, and this has facilitated for the satellite cities surrounding central Bergen. In the mid 20th century, the people who lived in the outskirts of Bergen still traveled to the city center to do their shopping. In the later years this has changed as the hubs in the outskirts have grown with shopping malls, cultural centers, and cinemas.

Although adminitratively connected with the center of Bergen, these previously independent municipalities have retained their commercial hubs, which have easy access by car and are close to the housing areas. The shopping malls offer free parking and accessibility to customers, while in the city center the stores are more scattered, car users have to pay tolls, and parking is not free. This has resulted in a rise in vacant stores in the city center and a decline in activity. In response to these developments, the municipality has a strategy to increase the number of inhabitants in the city centre through densification. The current approach to achieve this is mostly through landfills and tearing down existing structures to build housing and offices.

The municipality in Bergen wishes to decrease the number of cars in the city and is encouraging the use public transport. Also, big investments are being made to strengthen the public transport, mainly through bybanen which is connecting the satellite cities to the city center.

By 2030 Bergen city center is to be emission-free as well as being a compact, walkable city where everything one may need is easily accessible. With this vision of the municipality and the rising awareness of climate change, the number of cars will be radically reduced in the future.

The city is an organism that has the ability to adapt, and due to the municipality`s intent towards sustainability, it needs to adapt to an increase in population, and to changing lifestyles.

With the change of time, some functions within the city center are not as much needed today as they were before. With the decline of car usage in the future, the need for parking garages will diminish.

## Where

## Why



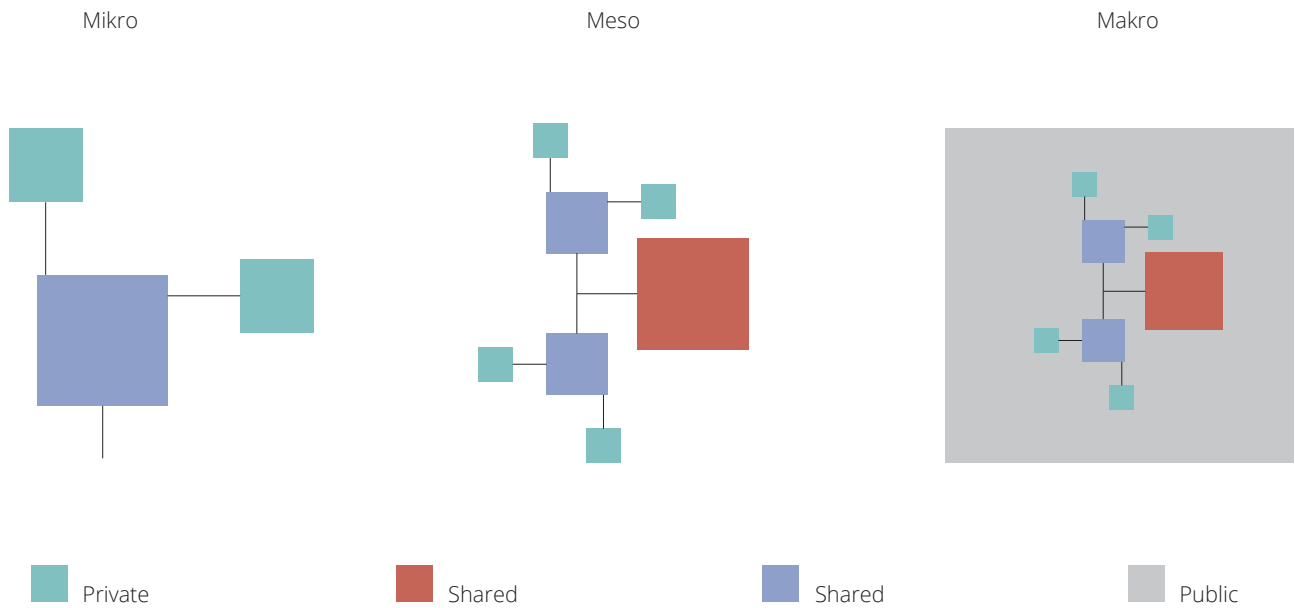
My diploma project investigates possible transformations of parking garages from a building for cars into a building for people, and explores how a building relates to and complements its context. Where the city ends and the building begins will be tested, borders will be diminished and the threshold between the public and the private sphere will be challenged.

The urban context is dense and diverse. To supplement the context, the apartments within the building will consist of cohousing.

Cohouses offer a wider diversity of inhabitants as well as giving a stronger community within the building. These are crucial values to accommodate if the building is to live in symbiosis with the city of Bergen and its inhabitants.

To achieve this symbiosis, my diploma project investigates the transition from private to shared spaces and shared to public spaces.

# What



Firstly, look at how the individual cohouses relates to the shared spaces

Secondly, look at how the different cohouses within the building relates to each other

Thirdly, look at how the inhabitants and the building as a whole relates to the surrounding public.



Footprint of the building industry

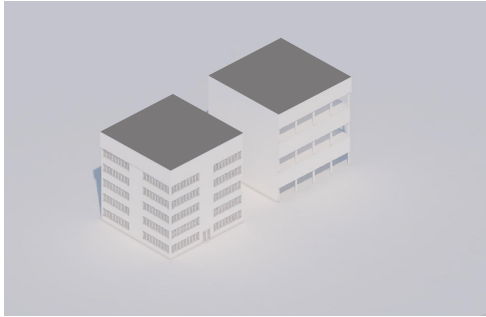
The Building industry stands for 40% of the carbon footprint, and 40% of the use of resources, globally.

Within these numbers, some go to develop new areas, while others go to replace existing structures with new ones.

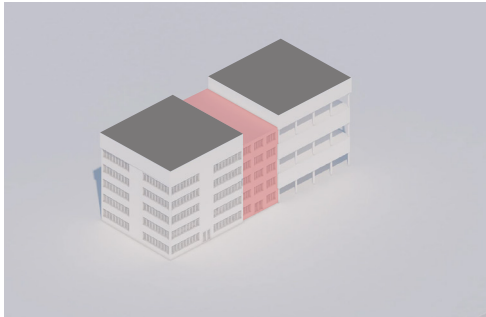
Many of the buildings we have today are torn down to be replaced by new structures. There are many causes for this, but a recurring cause is that it is cheaper to build completely new than to use existing structures and materials of a building.

As the world is becoming more aware of the climate crisis, we are taking sustainable measures throughout our civilisation. The building industry is also becoming more environmentally aware, but there seem to be a lack of opportunity when these topics are discussed; reduction of emissions at the building site and materials with lower Co2 emissions are good measures in regards to building new, but the potential that lies within existing structures is not being explored to the extent that it could be.

My diploma project shows what can be accomplished if we are to give an outdated building new life, and reflects both continuity and sustainability on different levels.



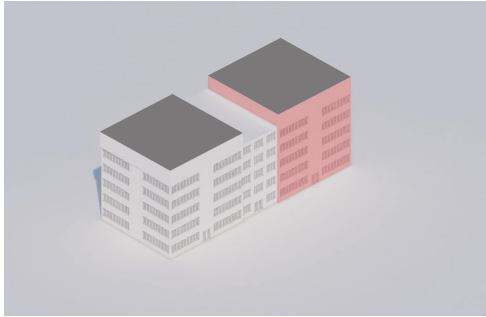
In the urban situation, where available space is highly sought after, an open lot will not stay open for a long time. The city is a growing organism that need spaces for its inhabitants and be prepared for the continous growth.



Thus densification happens. The open space is filled with functions; homes, offices, cafes, etc. At one point there are no open spaces left except the public spaces like plazas, squares, parks and streets. How will we be able to facilitate for an increased population within our city?

We can increase available open space through Landfills or expansion, but some challenges reveal themselves with these options:

- Landfills brutally change the topography, and may disturb the identity to a place. Also, it is irreversible.
- Expansion require more effective infrastructure, especially in terms of commuting so that the activity within the city center remains.



Transformation of existing buildings is a third option. As the city changes with the times, several existing programmes become outdated, and they become ready for a transformation. Transformation is also a much more environmentally friendly route to achieve an increased population.

Sustainability

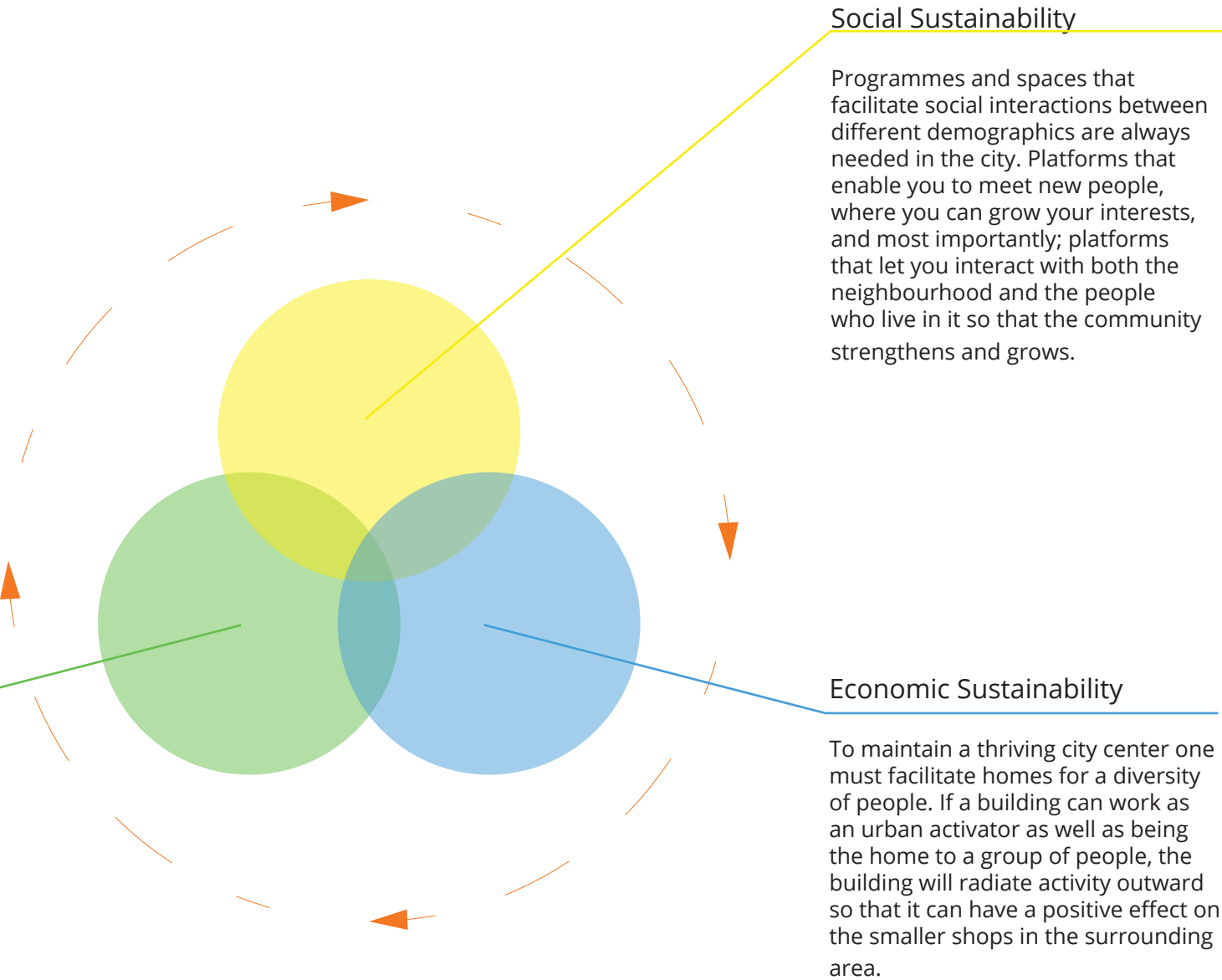
Reaching for sustainability is the most important task at hand if we are to coexist with this planet.

In the urban context these three subcategories are crucial to maintain a thriving and diverse city:

Environmental sustainability

Transforming existing structures that bring new life to the city reduces the emissions of building materials while also maintaining continuity in the history and development of the city.

Buildings that bring nature to the urban context is crucial for both the mental and physical health of the population. Nature may be plants and trees, but also urban community gardens.



Social Sustainability

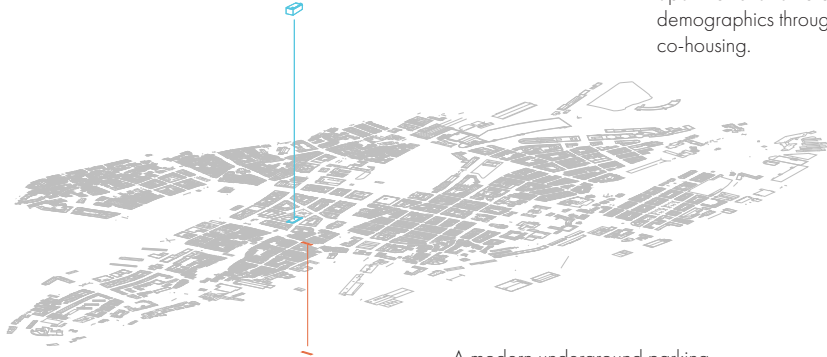
Programmes and spaces that facilitate social interactions between different demographics are always needed in the city. Platforms that enable you to meet new people, where you can grow your interests, and most importantly; platforms that let you interact with both the neighbourhood and the people who live in it so that the community strengthens and grows.

Economic Sustainability

To maintain a thriving city center one must facilitate homes for a diversity of people. If a building can work as an urban activator as well as being the home to a group of people, the building will radiate activity outward so that it can have a positive effect on the smaller shops in the surrounding area.

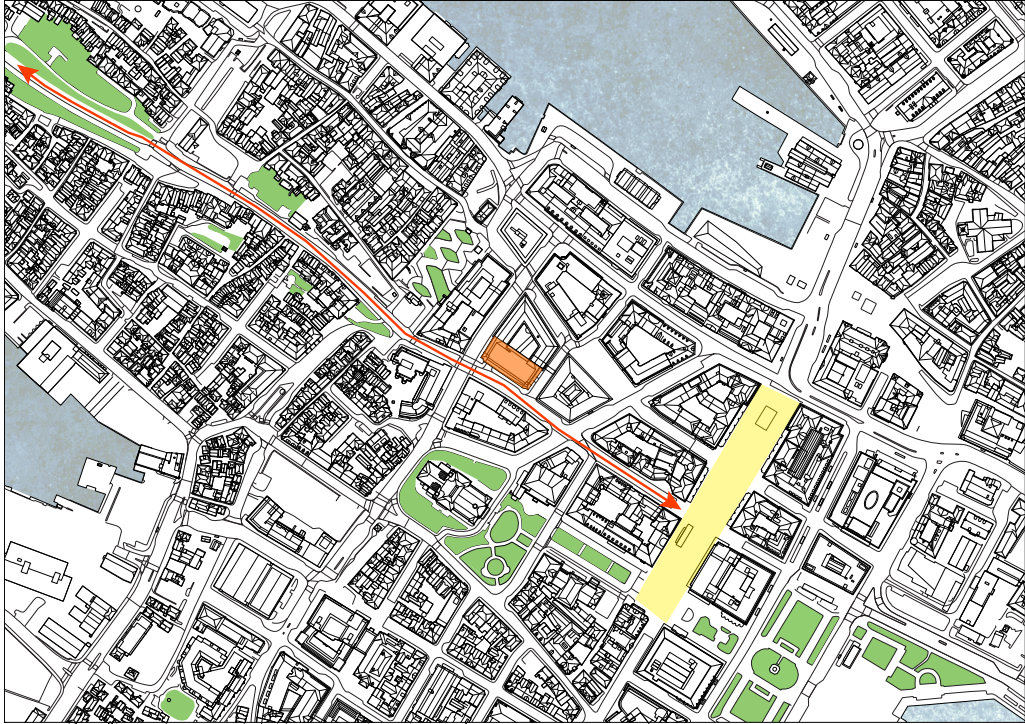


Object for Transformation

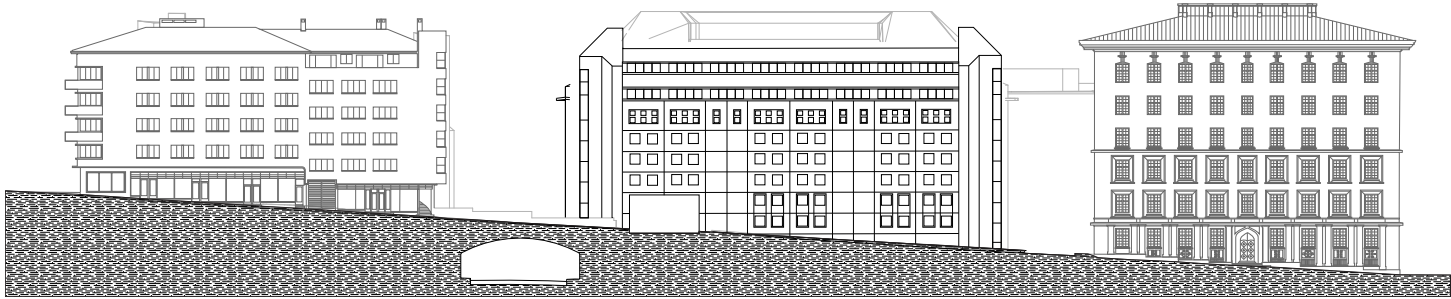


Markevein 7 is chosen as the object for transformation. With its prime location within the city center it has the potential to strengthen the foundation for activity, whilst also offer apartments for different demographics through co-housing.

A modern underground parking facility, Klostergarasjen, is situated right next to Markeveien 7. The transformation will due to this not have a big impact on the necessity for parking spots within the city center.



The building is situated on Markeveien, a busy street that works as the main connector between Torgallmenningen and Nordnes.



The building as an extension of the city

The transition from the city to the building is often coarse. While some buildings are publicly accessible, they are often restrictive in what you can do within them; the courthouse has certain demands in how you behave and what you can do. Therefore, you only visit these buildings if you have an errand that comply with these restrictions. Shopping malls are more freely accessible, but you enter as a consumer and the layout of the shopping malls are often designed so that you are more likely to shop.

My diploma project investigates how the city can extend into the building, giving people shelter from the weather while also facilitating urban dwelling.



Conceptual model of removing the barrier between the building and the street

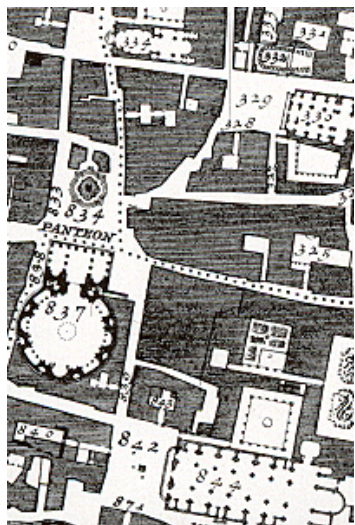


# Bringing the Nolli principle into a new dimension

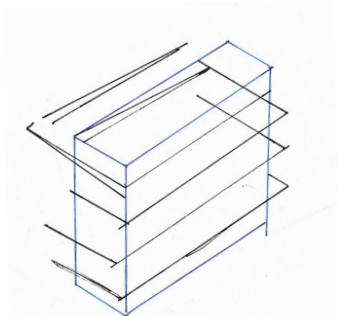
Giambattista Nolli was an italian architect that is known for his famous Nolli Map of Rome.

The map effectively shows open civic spaces with their incapsulation while non-public spaces are filled with black.

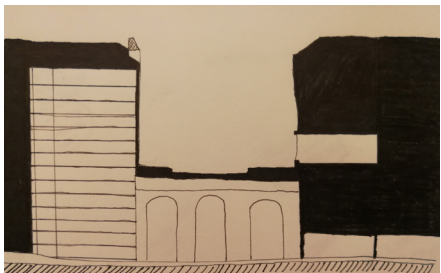
Detail of the Nolli map of Rome from 1748. Open civic spaces such as churches are shown in white with their incapsulations.



My diploma project invites the city in, not only at a horizontal plan, but also vertically. It establishes a spiraling street within the building with inspiration from the traditional streets of Nordnes.



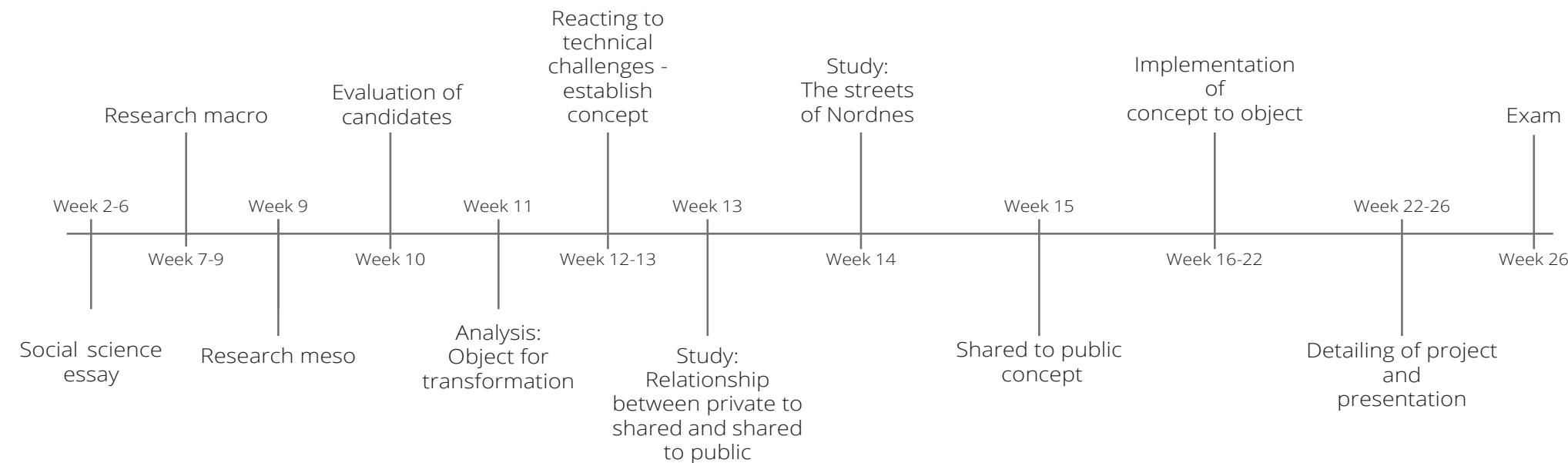
Spiraling street concept



Conceptual Nolli section



# Timeline



# Curriculum Vitae

Summer 2018	<p><b>Bachelor</b> My Bachelor project worked with creating a new center at Damsgård, right outside of Bergen. It was an old industrial area which had seen its peak of activity during the sixties. The project focused on densification and bringing important connecting programs to the area while optimising the relationship between new and historical buildings.</p> <p>With: Mats Engdal Johansen</p>
Autumn 2018 – summer 2019	<p><b>Intern at B+B Arkitektur</b> After my Bachelor I worked one year as an intern at B+B Arkitektur. During the year I worked on new projects, refurbishments, and historical buildings. My responsibilities varied between Conceptualizing and detailing on several projects as well as competitions (mostly large scale).</p>
Autumn 2019	<p><b>Complex Context</b> This course focused upon the elderly and ageism. In our project, we suggest a rerouting of the light rail that is to go through sandviken. By moving the light rail stop and making it the central point of a new, universally designed almenning, we optimized movement and facilitated experiences along the journey.</p> <p>With: Adrian Højfeldt, Christian Solbakk</p>
Spring 2020	<p><b>Meeting Rooms</b> Focusing on spaces of encounter, our project Presents the 21. century square. Through unification between the physical and the digital world, we created an interactive square which could connect to squares around the world, bringing the public space into a global context.</p> <p>With: David Valen Aedland</p>
Autumn 2020	<p><b>Masquerade</b> This project dives into the characteristics of facial expressions and the interplay between the exterior context and the internal mind. Through mask making, the project strives to encapsulate different facial expressions, their relationship to the internal emotions, and look at how it can be related to the architectural scene.</p>