

TU Delft

Heritage & Architecture Graduation Studio

Vacant Heritage Politie Bouwmeester (2021/22 Q1)

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Collective housing project

Several successful initiatives have shown that there is a need for collectiveness in society. Due to the aging of society, loneliness is an increasing problem in our society. But this loneliness does not only occur in the elderly. Due to the increasingly digital world, there are also many younger people who are feeling lonely. The COVID pandemic has ensured that many people are (alone) at home more, which only aggravates this problem. This need for social interaction in the city asks for a new form of housing. There are already several initiatives looking for collectiveness in housing projects. Like the Nightingale project in Melbourne and Project Together in collaboration with the TU Delft.

This new form of housing does not only address the loneliness of society, but also offers an affordable form of living by offering smaller private apartments and communal areas that can be used as an extension of your private home.

Project Together is an example of a collective housing initiative in the Netherlands, were they try to find out how this form of housing can work in the future. In this project, a lot of their research is used to substantiate how the building could function. In one of the BK Talks on Project Together, an initiative of the municipality of Delft and the TU Delft a quote was shown: "in the context of widening political divides and growing economic inequalities, we call on architects to imagine spaces in which we can generously live together... more than ever, architects are called upon to propose alternatives." Hashim Sarkis, curator 2021 Architecture Biennale. (Sarkis, 2021)

A very successful example of a communal housing project is the Nightingale project in Melbourne. The future inhabitants are central to the functioning of this project.

These two for example are both very successful, but did this formula work for the police headquarters in Rotterdam? Was this building suitable for transformation into a collective housing project?

Location

Rotterdam has traditionally always been a socially oriented city and is therefore a good location to try-out this new way of living together, forming a community.

The Woonvisie Rotterdam states that an aim is to achieve a city where people can live and participate together. But also a city for younger and older people, with many self-reliant residents, who have an eye for each other and their environment. (gemeenteraad Rotterdam, 2016, p. 11)

Building

The 1993 redesign by Maarten Struijs was designed to be flexible in the future. The architect came up with the so called 'onder-orde', a social idea on the functioning of society based on facts and not his own philosophy on the truth. (Galema & Tijhuis, 2006) And this idea is in the police headquarters in Rotterdam mostly visible in the possibilities for transformation in the future. Rooms can be easily changed and the routing is more important than the character of the police in the interior. We can now benefit from these design choices in the design for a new intervention.

Although the interior appears perfect for transformation, the facades are load-bearing and therefore difficult to adapt. The reinforcements in the concrete prefab elements make it difficult to even enlarge the existing openings. The only way to get more daylight into the building is to extend the windows into doors. However, this does not provide enough added value to make an intervention worthwhile. This limitation to transform the exterior effects the flexibility of the interior. The openings in the façades determine the dimensions of the spaces.

Nevertheless, the general routing and layout of the building has proved useful for creating a housing project. The inner courtyard that could easily be created by demolishing the middle part on the ground floor functions as the new hart of the building. As a space to meet, connect and

interact. The form of the building, surrounding this new courtyard, has been proven well suited for the perception of community.

The endless hallways on the other hand create an anonymity and unpleasant atmosphere due to the dimensions. By dividing these long lengths, different subgroups are created on each floor. The composition of the target groups in these subgroups has been considered based on their needs in terms of making noise, during the day or in the evening, needing a babysitter for children in families, need for interaction with others, etc. For this I made an analysis for which target groups could support each other and this resulted in the students getting their own wing, the elderly looking on to the communal courtyard. Around the elderly apartments on the outside are families placed on one side of the building and the outer apartments for starters are located on the other side of the building. Looking back, I think these assumptions could have been better substantiated by doing a deeper investigation into their needs. Now the needs of the different target groups are based on assumptions and personal experience.

Studio

In the Netherlands we are dealing with a housing shortage. Due to, among other things, the increase in single-person households. Especially in the cities, there is a need for dwellings for low-and middle-income families. The social rental sector has long waiting lists in many large cities, while the owner-occupied sector is inaccessible to many target groups. Over the next 10 years, 1 million homes must be built to meet the growing demand.



Figure 1; volkshuisvestingnederland.nl/onderwerpen/berekening-woningbouwopgave

Sustainability in the building industry does not only mean making energy neutral houses. It also means reducing construction waste and smartly reusing what we already have. An important task for future architects will be sustainable development, because we can no longer ignore climate change.

In the Vacant Heritage Studio the focus is on adaptive re-use projects. 2,7 percent of all buildings in the Netherlands were administratively vacant in the beginning of 2021. 40 percent of these building were already vacant the year before. (CBS, 2021) These vacant buildings offer opportunities for transformation. By using what we already have, we do not only waste less building materials, we can also find values in existing buildings that are not present in new constructions. Narratives and memories, history that perpetuate through the buildings and their location.

These narratives through time fascinate me and that fascination has been the starting point of my research. When I first saw the Police headquarters building in Rotterdam, I was amazed at the size and the multitude of colors and textures on the facades. When I discovered that an older building was still present under this redesign, my first reaction was: what a shame that the building has been modified in such a way. The in my opinion failed redesign from 1993 was a literal new time layer for the building. In order to understand how this design came about and how it could be improved in the future, I studied the importance of layering of time and how it can be valued. By using the building as a case study, I hoped to create a framework that enables the appreciation of the layering of time in (heritage) buildings.

Layering of time

Although the layering of time is a known concept in architecture, it remains a relevant theme when we talk about heritage. As Meurs says in his book 'Heritage Based design': "each intervention adds a new 'layer' of history to the building" (Meurs, 2016, p. 36) The approach of my research was that it will add knowledge to this field by distinguishing two forms of layering of time: the tangible and the intangible layering of time. Where the tangible layering of time are the physical interventions which Meurs describes. The intangible layering of time describes the narratives that add a new 'layer' of history or memory to a building.

Where the literature often talks about the way in which this layering of time should be interpreted, I started looking for both the values of the tangible and the intangible layering of time in the Police headquarters in Rotterdam. By using this case study, I found answers to the research question: How does the layering of time expresses itself in the facades of the police headquarters in Rotterdam, and how does it influence the perception of the building?

The layering of time, both tangible and intangible, I have found are specific for this building. It appeared to be difficult to create a general framework from this building specific method. Still, this method, looking for the intangible layering as well as the tangible layering of time in a building and valuating their visibility in the current state of a building, can be seen as a new angle that can be applied for several buildings.

By doing archival research and a literature study, different narratives of the building in former times were revealed. These stories formed the base for valuation of the intangible layering of time. In order to gain an overview of the visibility of the stories about the building, an attempt was made to make the intangible layering of time tangible by looking for connections between narratives and physical building parts. However, it turned out that none of the narratives could be linked directly to the physical building. They related, for example, to the presence of the police at this location or to the collective memory of the inhabitants of the city.

In the design, the outcome of the research is taken into account. The valuation of the tangible and intangible layering of time has formed some design guidelines for the redesign.

For example, there were some narratives relating to the building during World War II, these stories tell more about the police being present at this location, than the physical building. The importance of the presence of the police at this location is a design guideline taken from this intangible layering of time.

The image that the police want to propagate is mentioned by both Ad van der Steur, the architect of the original design and Maarten Struijs, the architect of the redesign. Retaining the police in part of the new design must therefore also take into account what the image is that the police want to propagate at this time.

Process

Starting this project, I knew it would be a challenges dealing with a building of this size. One of my personal learning goals for this graduation project was to challenge myself since it is the last project of my studies. I prefer to work on smaller projects in which you are able to understand every part of a building down to the last detail, this 20.000 square meter building is therefore very much outside of my comfort zone.

In the real world a project of this magnitude would never be completed by one person let alone within one year. The biggest challenge was therefore making choices relatively quickly and switching between different scale levels. Especially during the analysis of the building, I struggled with the shifting between the scale levels. I lingered for a long time on the conceptual level when making the design. Often because I switched too late between floor plan and cross-section and back and from large to small scale. I learned a lot from this and by the end of the project I feel like I do understand the building at every level.

Another challenge in this project was the expression of the building. I started off disliking the facades, but since the building is located at a prime location in the city and covers a large amount of usable square meters. That is why I wanted to take on the challenge of transforming this building into a pleasant appearance with a suitable function. The end result of the design embraces the valued points of the current building and provides an new layering of time. Even though the new interventions again add a new layer to the building, they are designed to give the building as a whole more cohesion.

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