This chapter will reflect on the project. To begin with the process of the project will be explained, after which the results will be discussed based on the research questions.

Process

Different methods have been used to get a grip on the potential to design the fifth façade, for example literature studies, questionnaires, and participatory research (at the municipality of Rotterdam). An established scheme was not inappropriate, because of the methods are influenced by the interim results. Some will be further discussed:

Internship

Looking back at the method of research, I can conclude that the cooperation with the municipality of Rotterdam was a valuable choice. By this participatory research, I did not get a lot of direct information on designing the fifth façade itself, but I got a grip on the subject in its situation. Especially in the starting phase, the framing the project, the cooperation helped me. In this way I was in the position to be adaptive, but also could give new input.

> More detailed personal reflection about the collaboration can be read in the appendix.

Literature

Specific literature of this subject is lacking. Although there was not a lot of specific literature, I studied more literature on public space in general.

Involving people

Information collection methods I used, was for example a survey. The survey was for me a method to better understand the public roof. This survey was interesting, because I did not get a lot of direct information on designing the fifth façade itself, but I got a grip on the subject in its situation. Especially in the starting phase, the framing the project, the cooperation helped me. In this way I was in the position to be adaptive, but also could give new input.

> More detailed personal reflection about the collaboration can be read in the appendix.

Designing

Looking back on this project, I used the design tool much. By drawing different situations (in terms of extremes) I understood the design approach more and more. On the one hand, I think this is a good method, because designing the fifth façade is detailed customized work, on the other hand I am critical about the evidence by using this method. A lot of my argumentation is based on my own interpretation. I think it is therefore difficult to create a framework in this way, what works on other locations the same way.

Results

What is a public roof?

Public roof and the typologies of the Urbanisten

As said in the ‘Conclusion’, this project builds on the principles of the Urbanisten (2015). The public roof is seen as a base for the development of the fifth façade. One can ask whether the starting-point of the public roof is always the best option to activate the fifth façade of a city. In my opinion it is in the case of Rotterdam a good starting point in relation to densification goals of the municipality. From the analysis of other locations one might conclude that there is no need for this system of public roofs in the city. In a city centre where the amount of residents and public space is in good balance, but has to deal with an enormous wateratrek, the creation of the public roof can create lesser value as starting-point than this location.

Beside the question whether the public roof has to be the starting point of every activation process of the fifth façade, it can be asked what the value of the public roof on the location will be. From this project, I conclude that the public roof has to be well connected to its surroundings, what even can result in a whole new pedestrian system. It could very well be that in another location, the public roofs function in another way. For example, the public roof that functions in a Dutch ‘hofje’, a place less visible, has a whole other quality. This public roof is not less an element of the public realm in the city, but it fits a completely different approach.

What are potential places to design public roofs as a contribution to the city centre of Rotterdam?

Potentials for other cities

Rotterdam was the location for this project, to discover the potential of designing the fifth façade in order to efficiently use land and to add environmental quality. As said before, it is hard to make one framework that fits other city centres as well, because every location has its own specifics. The way the public space is used, is dependent on the location.

It can be said that a city who wants to develop its unused fifth façade as public space, needs big, flat, structurally sound roofs. Next to this, the city should be in a situation where it has to deal with a pressure corresponding to human activity. These are the favourable conditions for a city wanting to develop the fifth façade.

An interesting city in the Netherlands could be Almere, because of its ‘new town’ character. However, the city has a vast character, which reduces the pressure on using land efficiently. Further research however is needed to establish this. Other interesting cities can probably be found in Asia where the benefits of efficient land-use will be very much higher as a result of the much higher density of these cities.

Potentials for new cities

After this plunge in other locations for creating the fifth façade and having concluded that the possibilities of the fifth façade are very depending of the characteristics of the location, an interesting next step would be to discover the features of a newly built city. How does the newly built city looks like when integrating the fifth façade into the city?

After this project, I suggest that other dense cities that will be build, to have to think 3 dimensionally about the city. The city should not be designed horizontally (as in historic cities), nor vertically (current approach), but diagonally. By designing diagonally, the city creates dense location, but also locations with enough light, that can connect these places.

This results in different qualities in the city centre (Figure 169).

Potential starting points

Reflecting on the interventions of the design, it can be pointed out that other locations could be more feasible, taking into consideration the ownership issue. The Lijnbaan is, e.g. a good starting point. This was pointed out in the discussion with urban designer and planner of the municipality of Rotterdam, Emiel Arends (Arends, 2017). This enormous roof is owned by one person and has a strong connection with pedestrian place, and high residential buildings surrounding. In this design it is not a starting point in phases. In my opinion it is a more logical step to develop this first, rather than the complex systems of roofs North of the Lijnbaan.

Looking more on a city scale, it can also be suggested to focus on the ‘hofpleinlaan’. This is just one route through the city still without program and one owner, and therefore relatively easy to realise. This could
be an interesting test to start the fifth façade. Against this suggestion it can be argued, that this location is outside the city centre, and therefore has lesser potential.

> See conversation summary Enrol Arends in the appendix

**What could a (semi) public fifth façade look like in the city centre of Rotterdam?**

**Form**

After designing the fifth façade in the form of a tripod structure over almost the whole city centre, one can ask whether this is the best option. During the discussion with municipality-designer Enrol Arends the question was raised: How important is the connection between Central Station, the Markthal and the Erasmusbridge to create a useful fifth façade in order to add environmental quality (Arends, 2017)? The route is interesting as an icon for the city, and will probably mostly be used by tourist. The question is: is it so valuable to the city that they will do everything to connect all the roofs to make one structure? The goals, to use the land more efficiently by using roofs and adding environmental quality, can probably also be reached without designing this complex structure of linked roofs. Should the development of the fifth façade be exclusively limited to roofs? Adding the first floor to the route, will result in a more integral approach between various levels of the city. This can be seen for example in intervention 4, where a route starts on first floor, and ends on the roof. Is it more likely to involve the first floor on the scale of the whole tripod structure?

This difficulty of connecting roofs on this scale can be seen in the connection between the building block Westblaak/Keerweer and the buildingblock Westblaak/ Schiedamsedijk (Figure XX). This is a difficult connection because of the long distance, the angle, and the differences in height. It may be questioned whether we have to pursue these different connections

**What is the potential to design a (semi) public rooftop landscape in the city centre of Rotterdam?**

In this paragraph some bottlenecks and requirements will be pointed out.

**Kadaster**

Developing the fifth façade cannot be done without a 3D-kadaster. A 3D kadaster gives the possibility to virtually disconnect the roof from the building, and to look at the roof as a new plot. By this new way of administration, new destination plans can be made for the roof, but also new owners can be introduced.

One topic which was underexplored in the project has been the fact that the roofs are privately owned. By using the 3D kadaster, possibilities will become available to develop it. Because of this new perspective the possibility of selling or hiring the roof to another emerges (Figure 171).

**New collaboration forms**

In this paragraph some bottlenecks and requirements will be pointed out.

Defined rules of vegetation/water/energy depending on roof (location)

Defined rules to create structure

Type of use: Public, Semi-public, Private

Size of path

Type of raisepoints

3D-kadaster have to be developed further to realise the fifth façade of Rotterdam.

**Monuments**

Another difficulty that the project did take into account is the fact that it has to buy/rent certain roofs and develop elevation points and pedestrian bridges.

**Municipality makes a new development plan:**

Combination per roof/zone between private/semi-public/public:

Defined rules to create structure:

Type of path

Type of raisepoints (use of material)

Defined rules of vegetation/water/energy depending on roof (location)

According to the research of Rem Koolhaas, now 12% of the real-estate worldwide has been labelled as monument (Metropolitaan). Also city centres are full of heritage, but also must adapt to new times (Baarveld, 2011). How do we have to handle this conflict of interests?

The current approach of heritage today is ‘maintaining value’, and has to change to ‘increasing value’, to maintain the value of heritage in society. The method of preserving heritage has to become more flexible. The connection with initiatives of inhabitants has to be valued as more important to assure the value of society (Metropolitaan, pp. 26-30).

This method is also needed to create the useful fifth façade of Rotterdam. Looking at the ‘Heritage’ map shows a lot of monuments in this location as well (Map: see appendix). The Doelen, Lijnbaan, Bijenkorf, WTC, the previous Rotterdam Bank, the building on the Korte Hoogstraat are all monuments, and therefore difficult to develop with the current policy.

Designing roofs does not have to influence the structure of the building itself, what is an important topic by saving heritage (Monumenten). Therefore, are there a lot of possibilities to develop roofs of monuments.

In my opinion the heritage, in particular that of Rotterdam, is well suited to adapt itself to the requirements of this project. The visions of the Modernistic movement put forward the ‘roof garden’. The city centre of Rotterdam has been built according to the vision of the Modernistic movement, but without the ‘roof garden’. Re-launching the ‘roof garden’ will complete the visions of the Modernistic movement, and will create new function, that fits today’s society.

> See map ‘Heritage’ in the appendix

> See principles Modernistic Movement in the chapter ‘Framing the project’

**Conclusion**

After reflecting on the project, it is clear that a lot of fields needed to be studied in more detail before the design can be realized. The perception of people, heritage, the lack of a 3D-kadaster have to be developed further to realise the fifth façade.

This design can be seen as one of the options to create a useful fifth façade of the city in function of public space. The question is whether we have to strive for this particular design. The fact that the design is a route, which does not adapt exactly the city structures, can be discussed. Probably an approach which is more connected to the roof-blocks, and where the first floor is integrated in the route is more realistic.