

# **VALUES OF NON-INTENDED ARCHITECTURE**

LOGBOOK





## CONTENT

1. Introduction

2. Up to P1

3. Up to P2

4. Up to P3

5. Up to P4

## Introduction

The logbook gives a glimpse into the design process of the Lisbon Graduation Studio. All final results are presented in the Architectural and Technical Analysis, the report of Cultural Value, the position paper for Research Methods and the presentations.

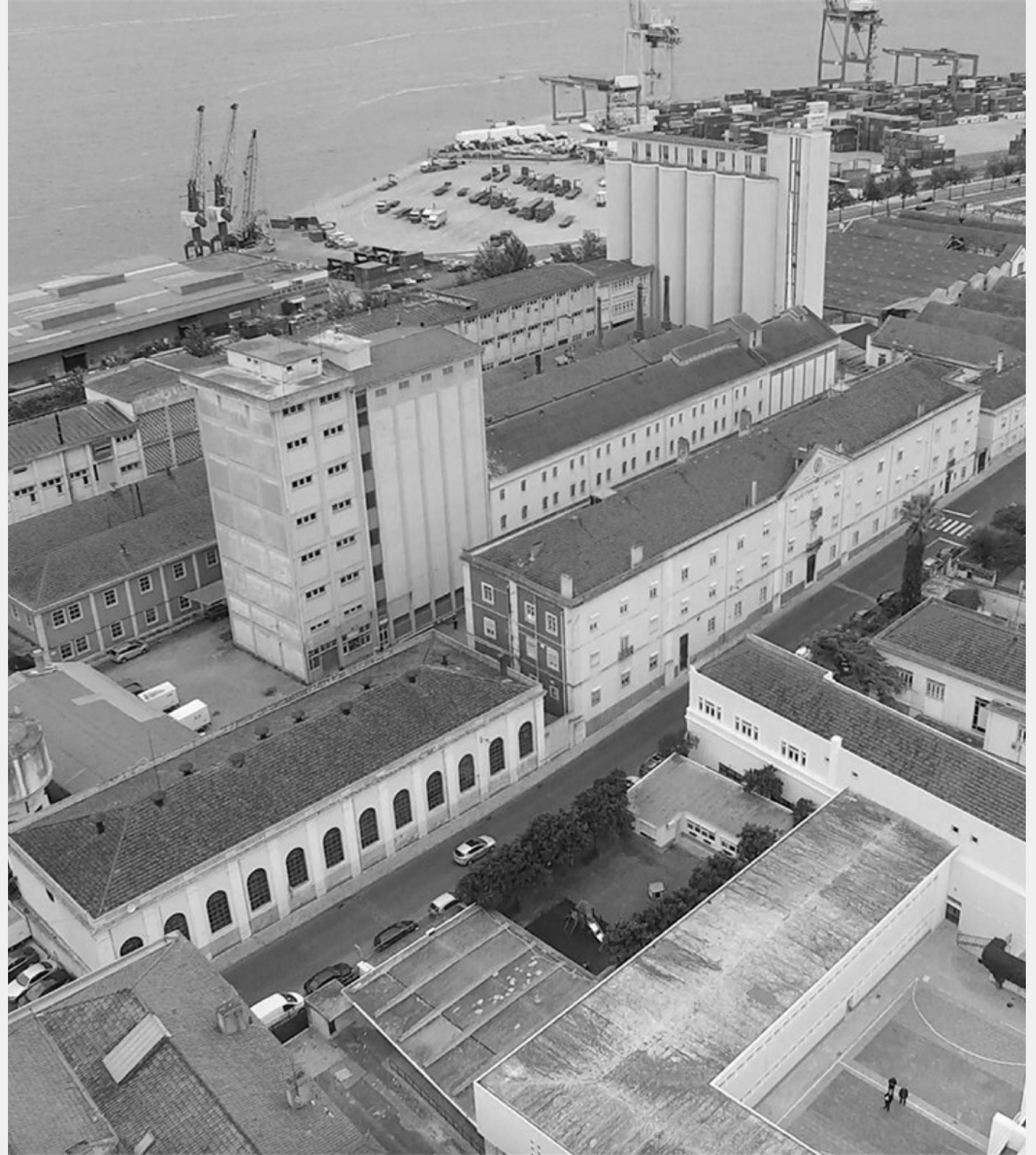
The topic of the Graduation Studio is the Manutencao Militar Complex (MMC) in Lisbon, Portugal. The MMC was an industrial facility that produced food, uniforms and other goods for the Portuguese Army. Whilst the Portuguese Army reached 200.000 men in the 1960s, it is now reduced to 20.000 active soldiers. Gradually, the factories closed and Manutencao Militar was finally substituted by a public enterprise in 2015. The termination of the industrial production raised the problem of finding new sustainable uses for this area.<sup>1</sup>

### Text

1. Graduation manual Lisbon. Accessed on January 2nd, 2016, <https://blackboard.tudelft.nl/>

### Image

Overview complex (photo mid-term presentation workshop group 6, own editing)





## Plan area

The MMC is an area on the Tagus riverfront, between the Pombaline City Harbour and the Contemporary Parque das Nacoes. A lot of developments are taking place along the riverfront, like the MAAT museum near the Belem district in the west of Lisbon.

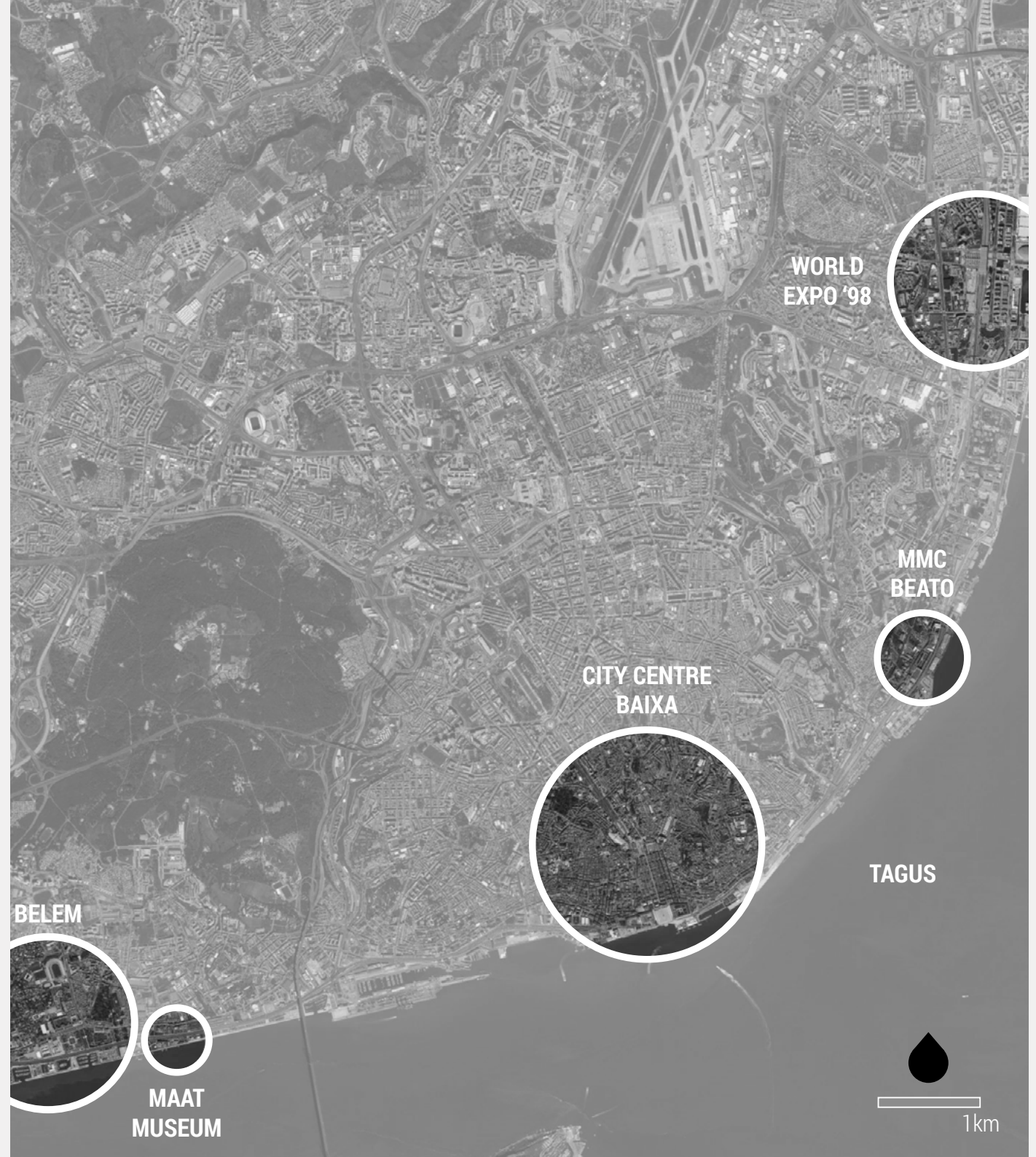


Image  
Areal view (screenshot Bing Maps, own editing)

### Plan area

The MMC is located in Beato, an area with both industry and historical housing. The decline of the MMC caused a void in Beato: social functions, the employment and (some) activities dissapeared. This is probably the reason why people have left Beato and a lot of buildings are vacant. The waterfront of Beato is used for cargo-shipping.

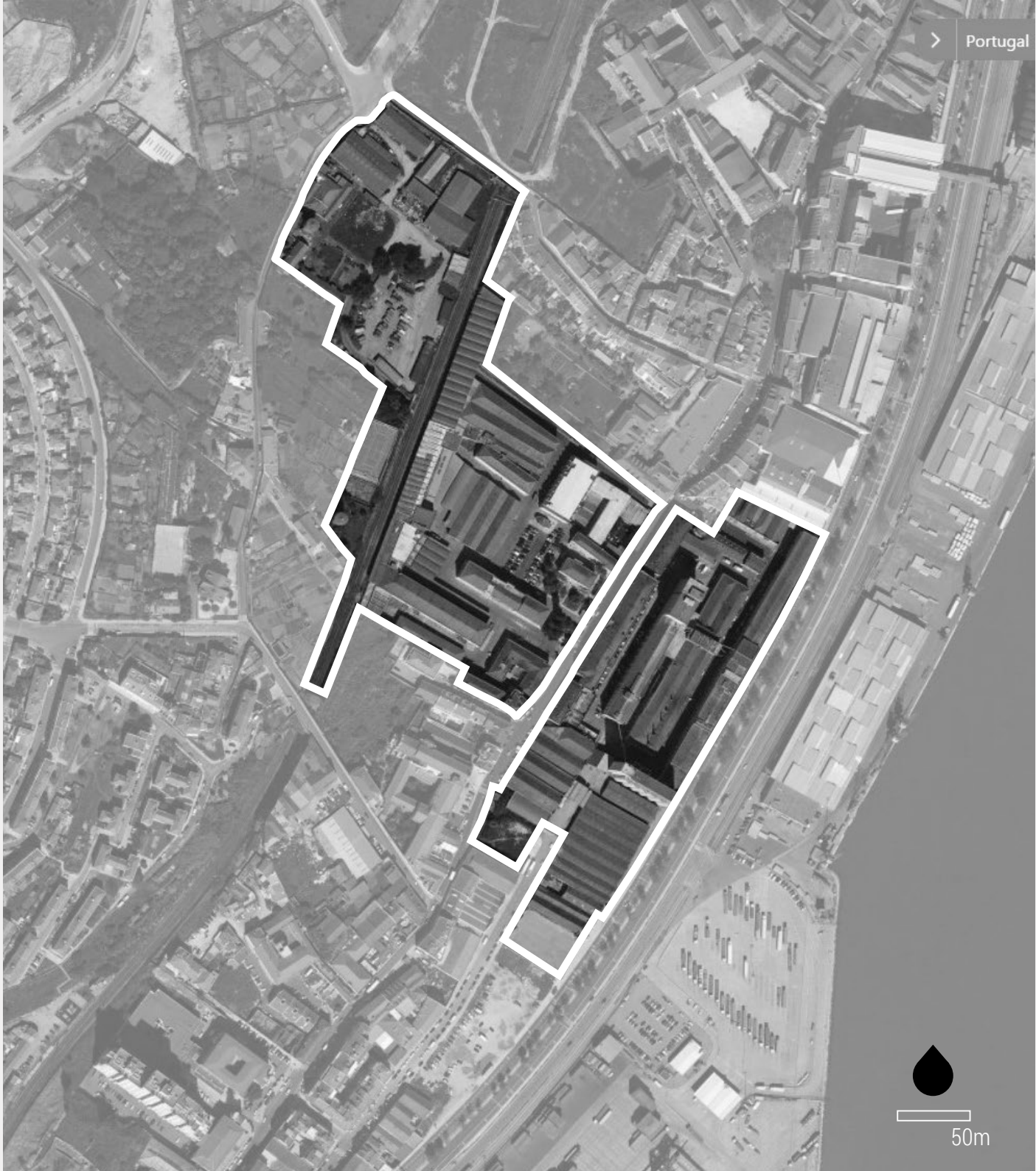


Image  
Areal view (screenshot Bing Maps, own editing)

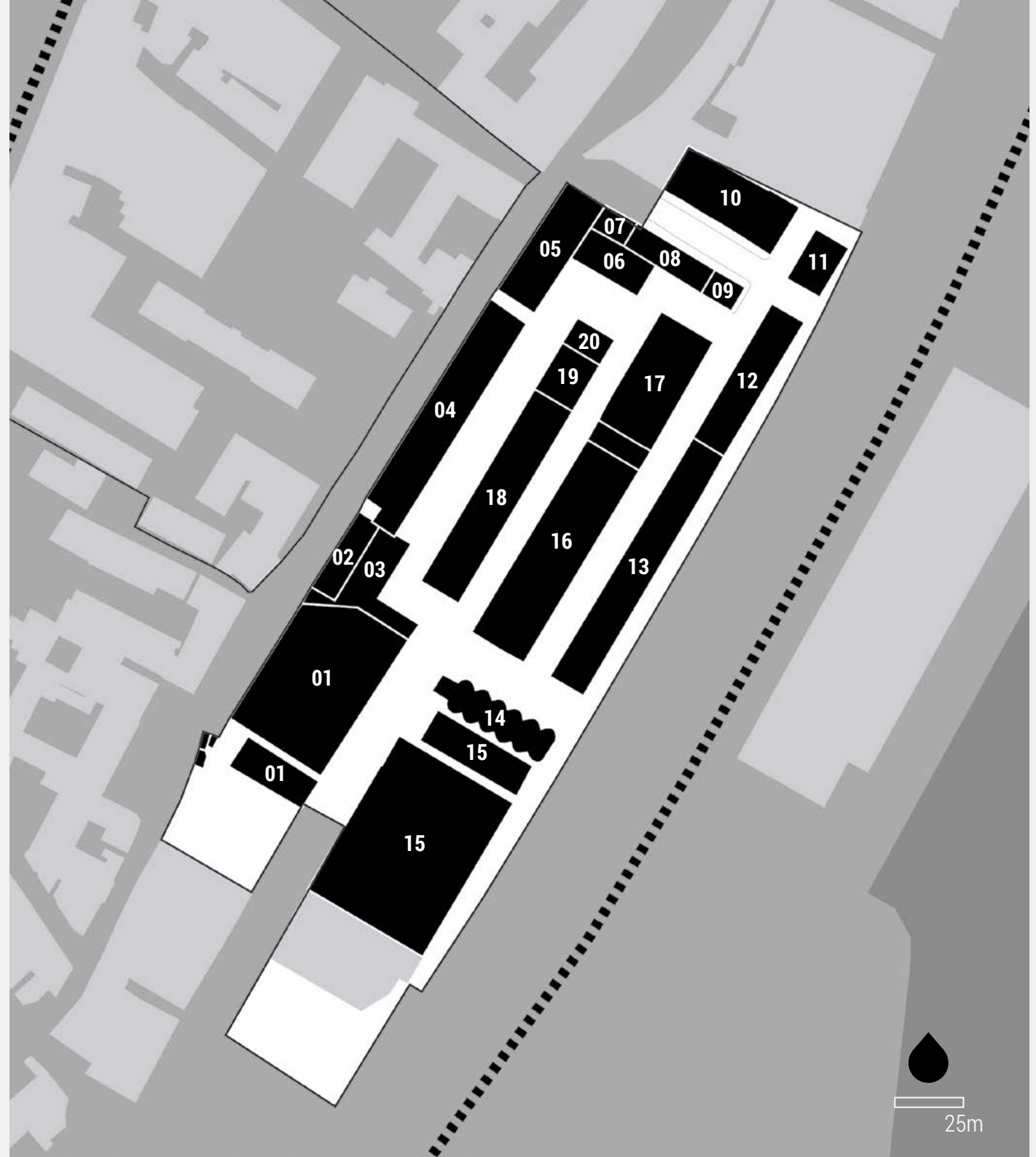




## Relevance

The strong population growth of the sixties has led to large urban extensions. This is the reason why many industrial sites nowadays have become part of the urban fabric. Therefore, many buildings from the industrial era are in the 'wrong' place. A lot of these buildings are vacant right now.

In the Graduation Studio I focus on the southern part of the MMC.



## Docomomo Workshop I September 1st - 5th

In the context of the Docomomo Conference in Lisbon a international workshop was organized. The chair of Heritage & Architecture used this workshop as a starting point for the graduation studio. During this workshop we've made an urban analysis and a masterplan/strategy. Little attention was paid to the individual buildings. The concept of our final masterplan was 'bridging'. We would reconnect the complex with both the city and the Tagus riverfront. The workshop was a very learning experience. Personally I'd never attend such a international workshop before. Besides social things, the workshop has produced a lot of valuable information that can be used during the graduation project.

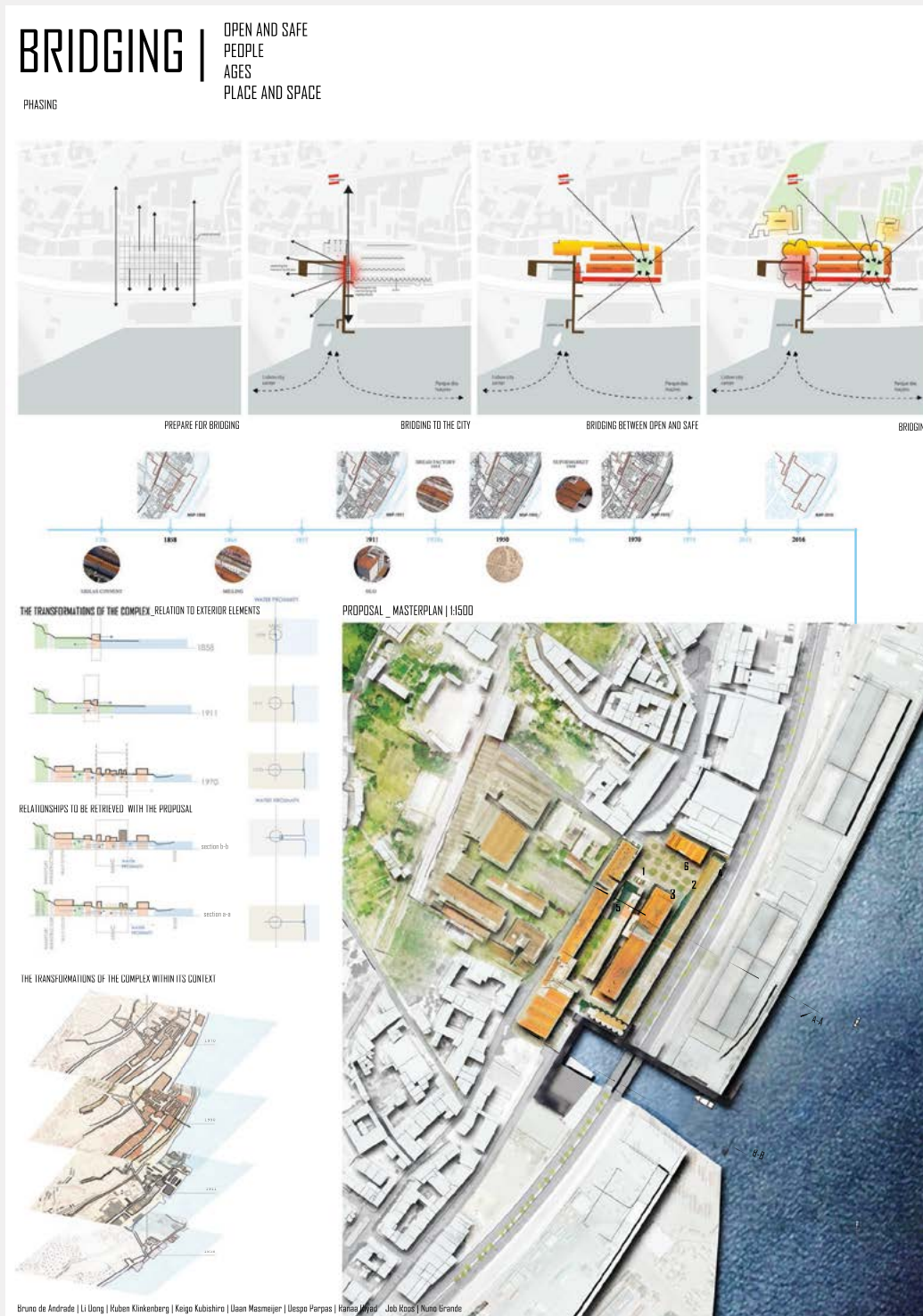
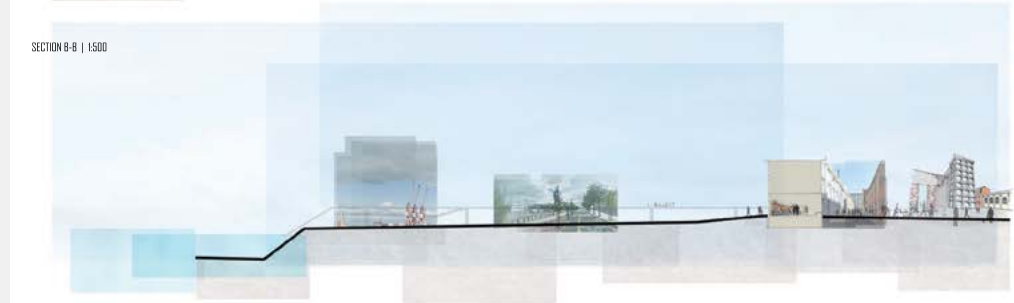
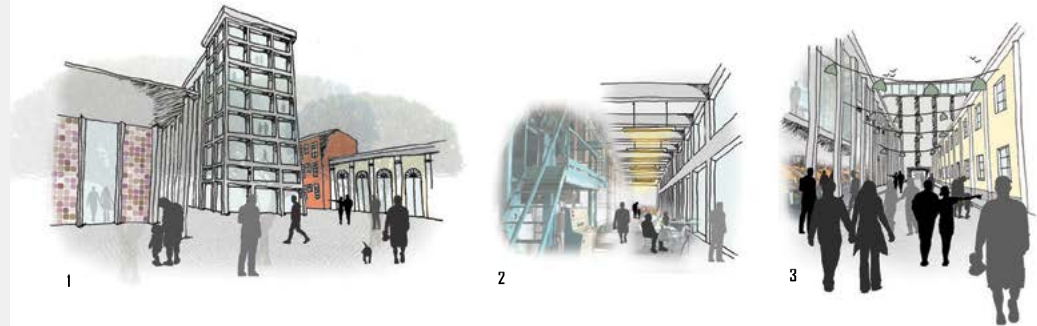


Image  
First poster final presentation Docomomo workshop  
(group 4)



IMPRESSION VISUALISATIONS 1-8



MODELLING VISUALISATIONS : GAME BASED LEARNIGN EFFECT\_ BRIDGING AGES



Image  
Second poster final presentation Docomomo  
workshop (group 4)



## Observation

On the site and in the buildings I experienced the industrial atmosphere and military history, while the surrounding is empty and meaningless. This is probably the consequence of the decrease of population in Beato.



## Images

1. Rua do Grilo (photo by Hielkje Zijlstra, 04-09-2016, own editing)
2. Manutenção Militar Complex (photo by Hielkje Zijlstra, 04-09-2016, own editing)
3. Ground floor milling (photo by Hielkje Zijlstra, 04-09-2016, own editing)



## Fascination

During the site visit I was intrigued by the different construction typologies. What is the reason for this? I was also fascinated by the machinery. Their appearance and state of conservation impressed me.

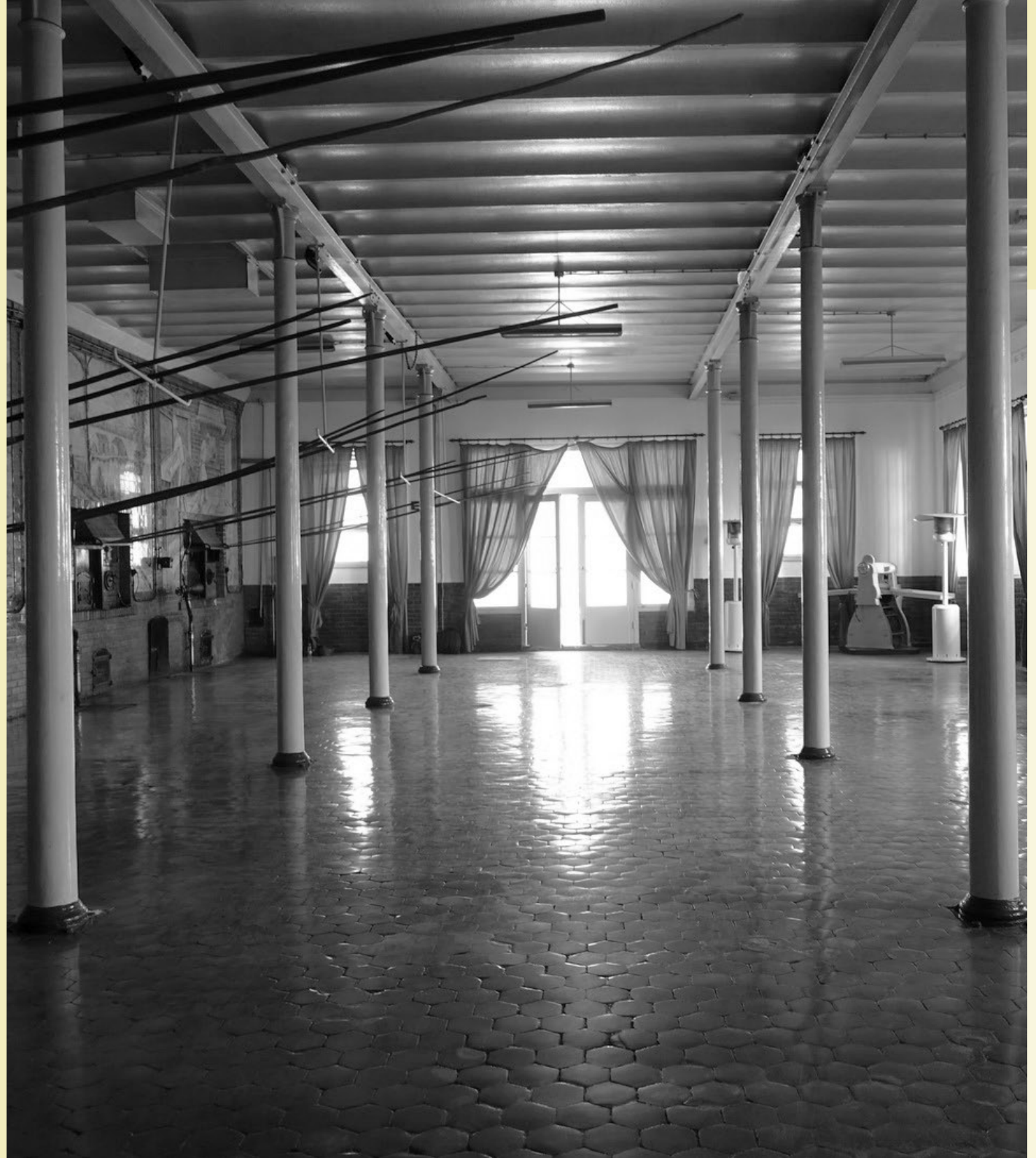


Image  
Construction bakery (photo by Hielkje Zijlstra, 04-09-2016, own editing)

Ruben Klinkenberg | Process Logbook



Image  
Construction middle part milling (photo by Hielkje  
Zijlstra, 04-09-2016, own editing)



Image  
Machinery milling (photo by Ruben Klinkenberg, 25-11-  
2016, own editing)



## Mindmaps | September 13th

As preparation for the first tutoring I've made mindmaps on three different scale levels: the complex, one building and a specific part of this building. The maps of Jan Rothuizen served as inspiration. With regard to the mindmap of the complex it can be noticed that I've drawn every building in its own specific way, like a section, floor plan or perspective. I've chosen for the milling (building 18, 19 and 20) because this building impressed me the most. The milling is one of the buildings that I'm going to analyze the coming months (architectural and technical analysis).

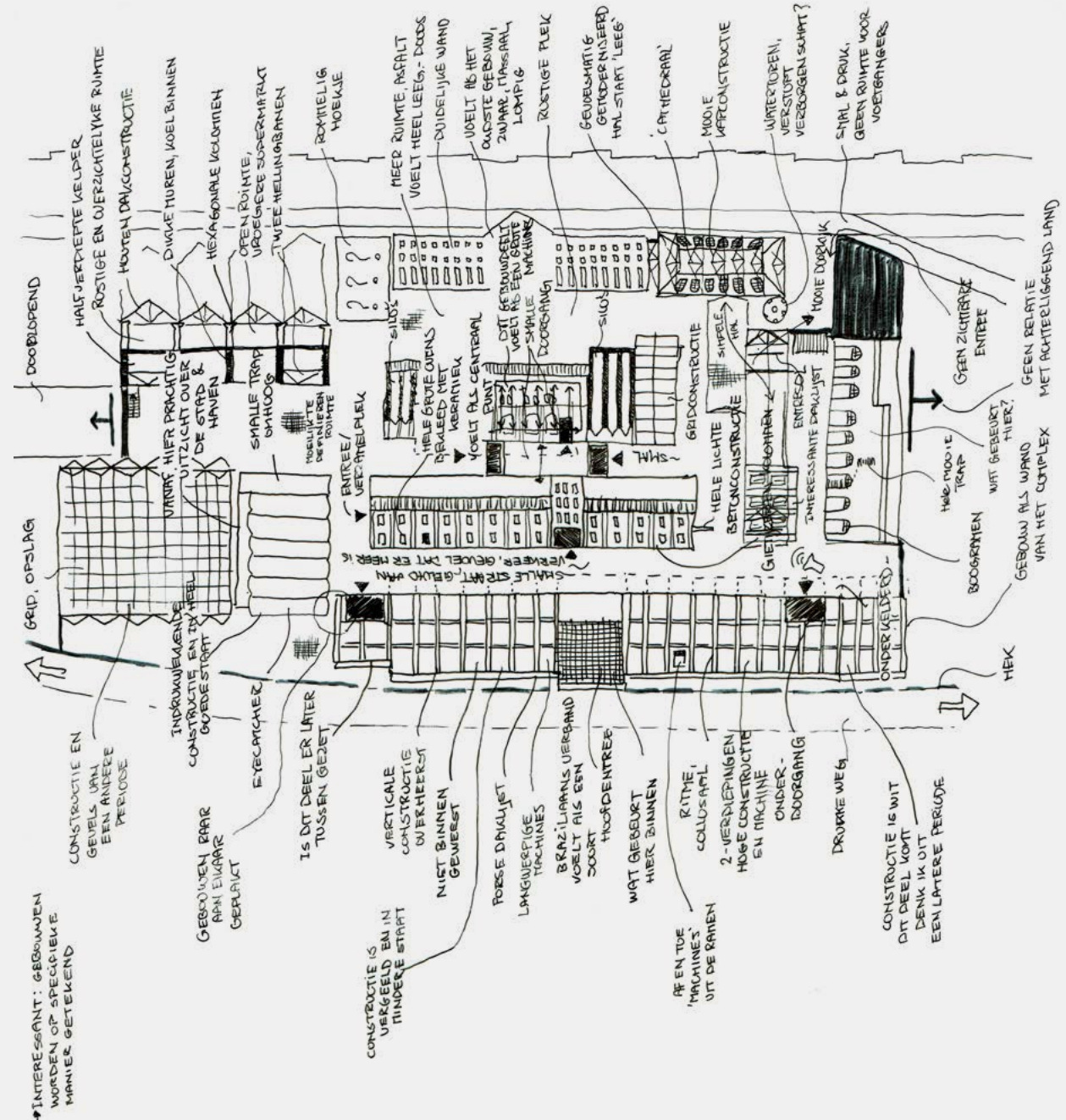


Image  
Mindmap complex (own image)

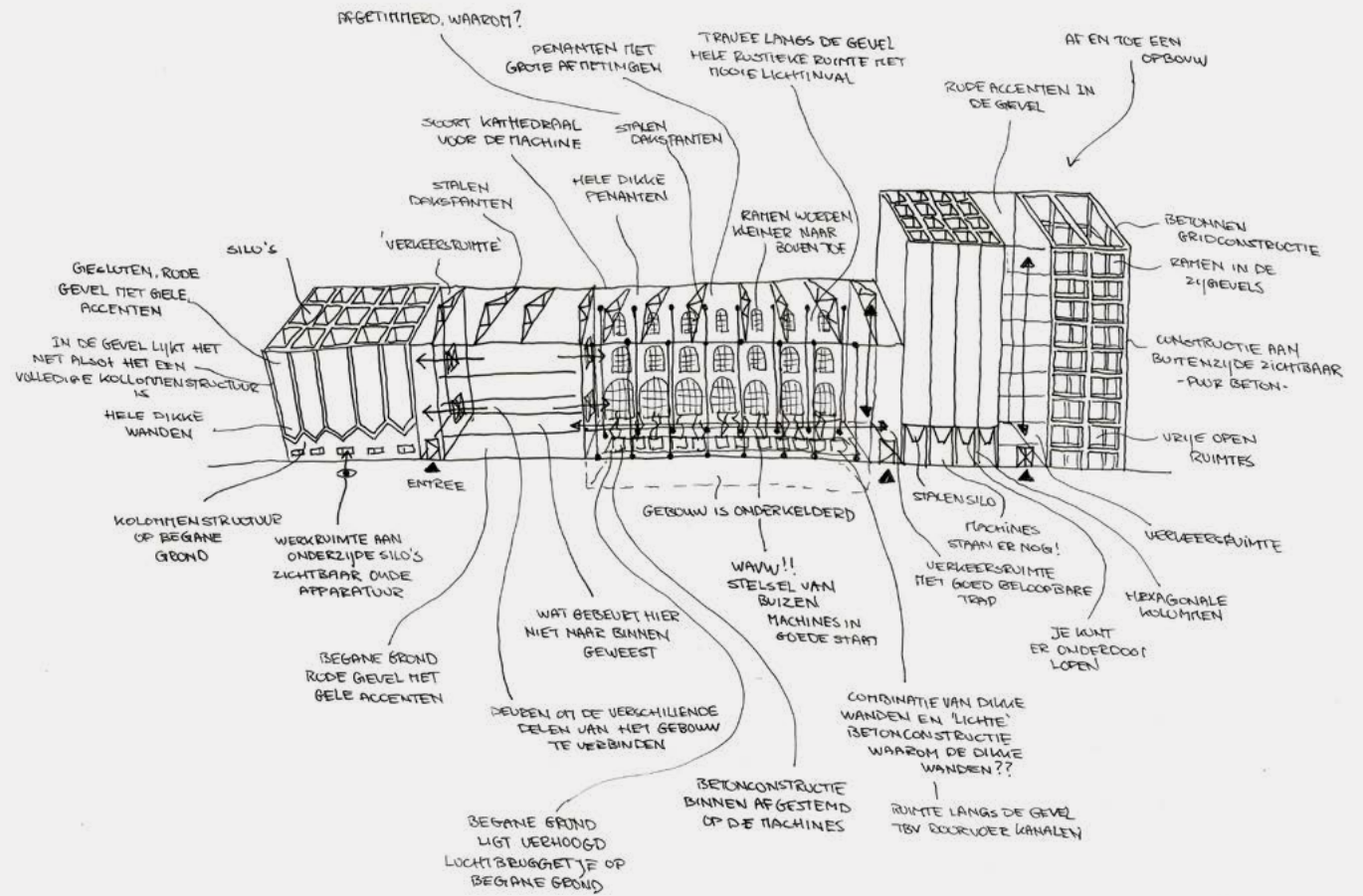


Image  
Mindmap building (own image)

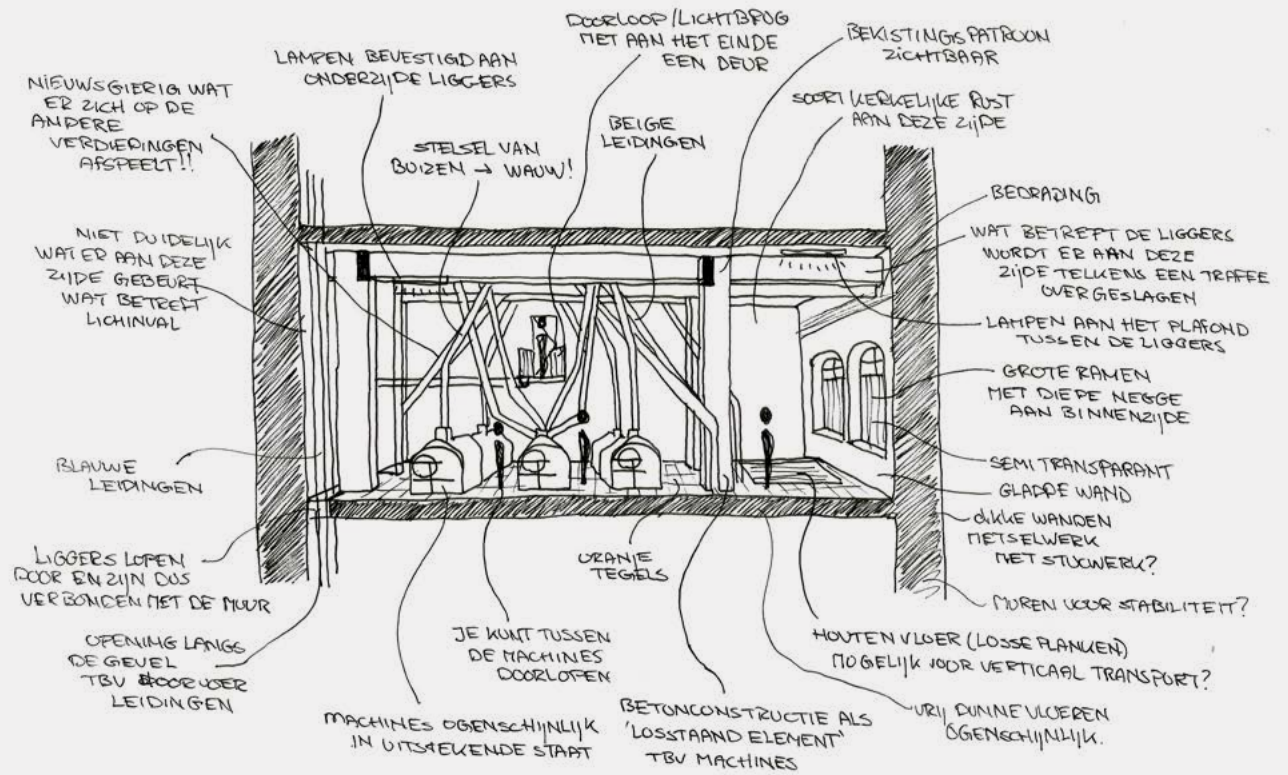
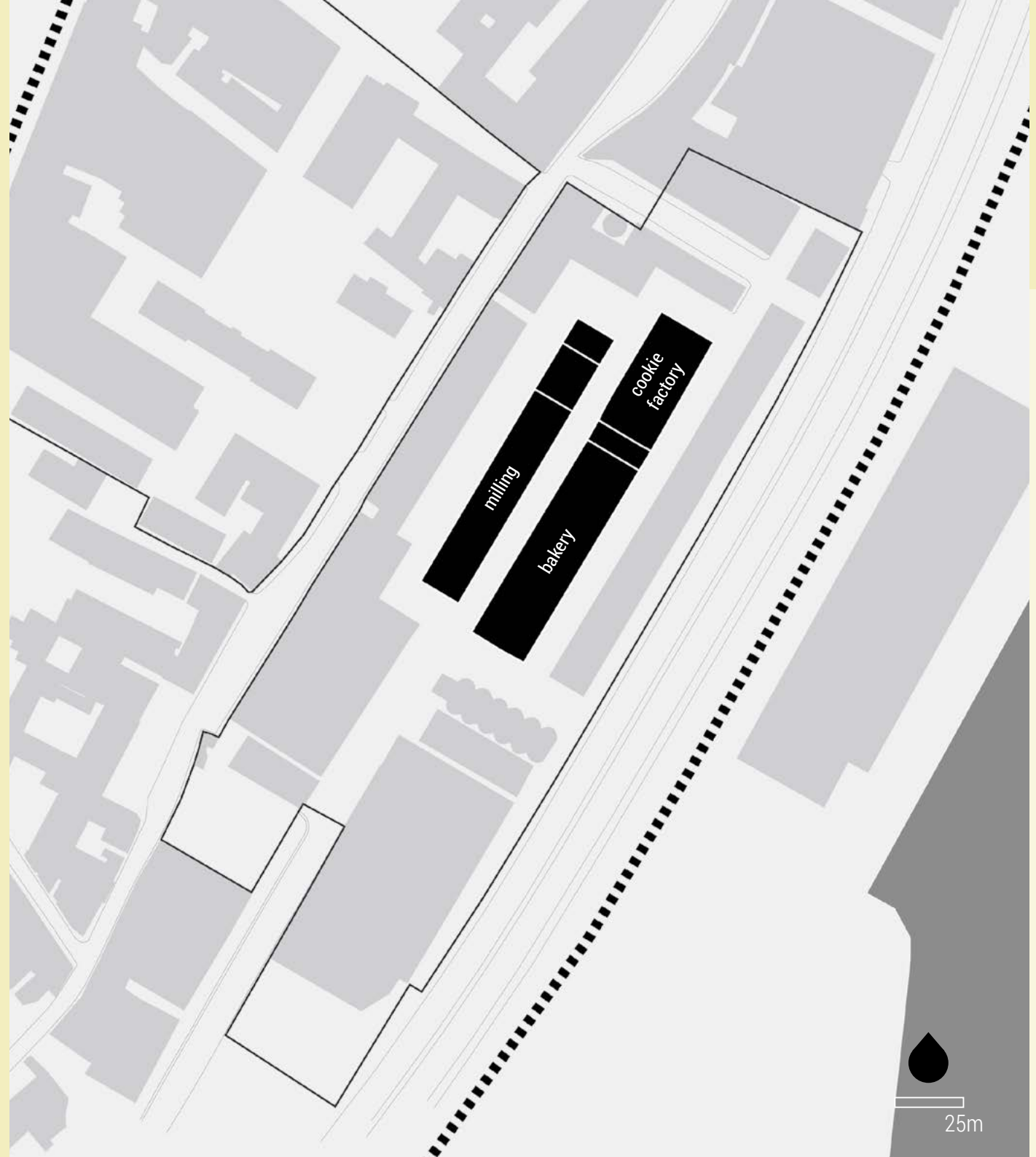


Image  
Mindmap specific building part milling (own image)



## Building choice

Although it was not necessary I've made already a choice which buildings I want to continue working on. All the different construction typologies and machinery are especially present in the central buildings of the complex. This ensemble consist of the bakery, cookie factory and milling.



## Reflection Workshop I September 13th

For the first meeting we were asked to reflect on the workshop. I made a short analysis of the final presentations. For each presentation I noted some remarks, things that I like and things that I didn't like (left image). I've made a short list of conclusions:

- Not every building have to be preserved, more buildings can be demolished for the purpose of future use.
- The plans are sometimes too ambitious. General problems of Lisbon can't just be solved with just this complex.
- It is obvious that every group started on the bigger scale. Less attention is paid to the (character and qualities of) individual buildings.
- It is not just a matter of fitting in functions in the existing buildings.
- A lot of same ideas to create a connection between the complex and the river (bridge).

After this reflection I drew and wrote some things down of elements I think are important (right image). Instead of inserting the city into the complex I think it's better to use the character of the complex to give the neighbourhood a positive boost. These thoughts stroke with my observation as discussed earlier. Can I use the qualities of the buildings and the complex as a basis for my strategy?

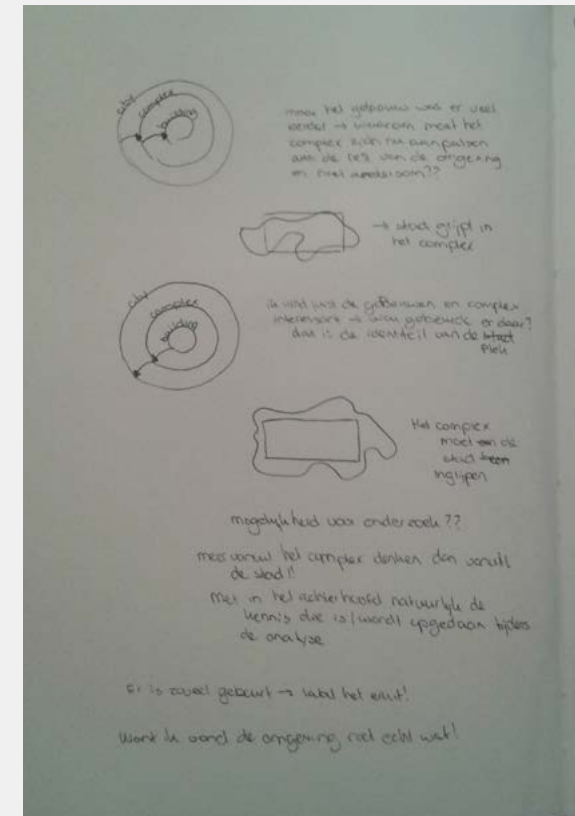
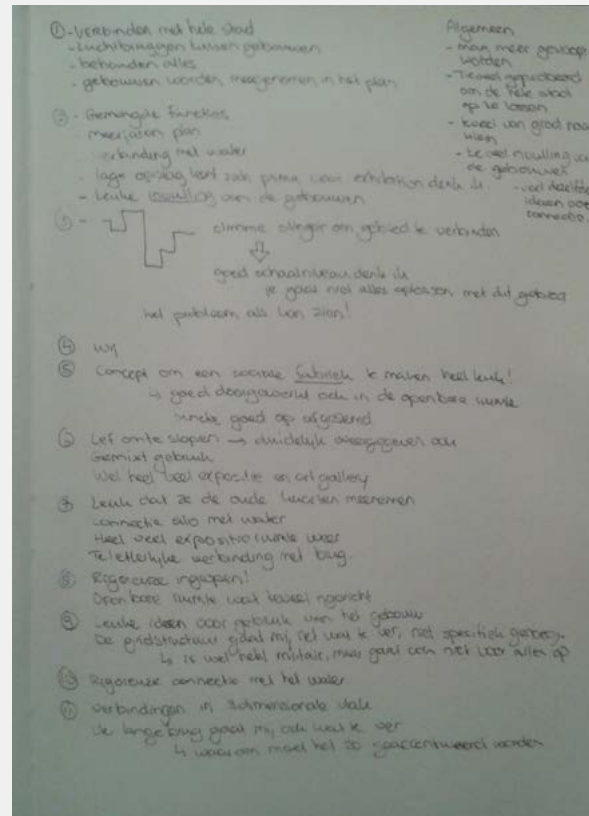
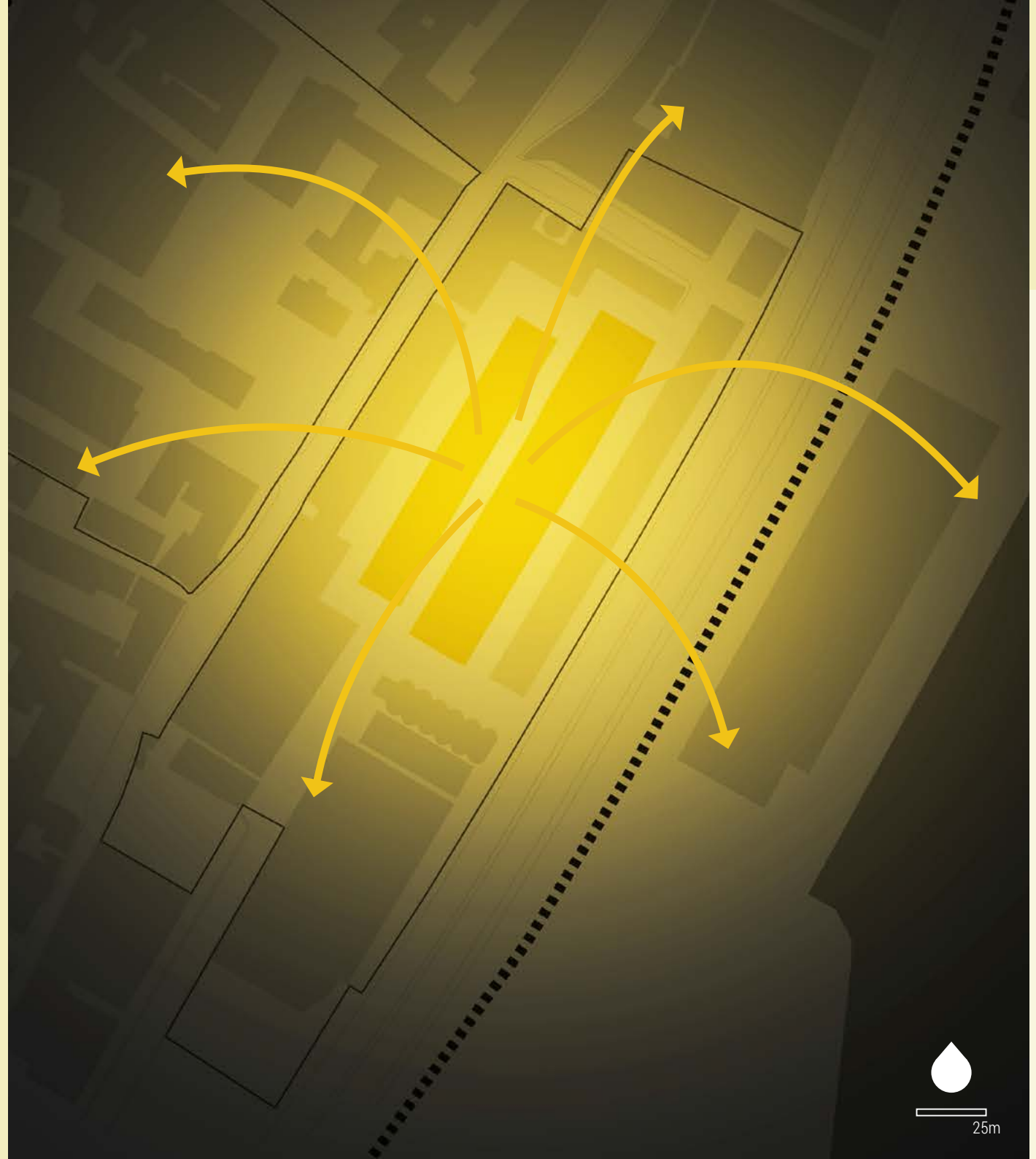


Image  
Reflection workshop (pages sketchbook, own image)



## Approach

Because the ensemble constitutes the heart of the complex and has more qualities than the surroundings, I want to approach the project from the smaller scale: spreading the qualities from the interior of the buildings and site throughout the surroundings.



## First analysis | September 14th

As a group we started with the first analysis. Personally I was fascinated by all the different construction typologies that were present in our ensemble. I really wanted to find out the reasons behind this phenomenon. In general, my research was related to the history and development/evolution of the buildings. I started my research using old maps and the drawings of the buildings that were provided by Docomomo during the workshop. From the maps I made some scenarios of the development of the ensemble. Then I started analysing the construction typologies of the different buildings. Can they be related to a specific period of constructing? Or can I compare the construction typologies with each other? For this week I will continue working on these analysis, together with Guido. Noëlle and Amela will start with the architectural analysis.



1858



1911



1950



1970

Image  
Historical maps of the complex (from [lxi.cm-lisboa.pt/lxi/](http://lxi.cm-lisboa.pt/lxi/))



## The first results | September 15th

After an initial examination of the old maps and the different construction typologies we noticed some remarkable things. It looks like the structure of some buildings does not match with the age of the building. What is the cause of this? We had already read that the buildings were known because of the technical evolution, which is considered exceptional within the industrial heritage of Portugal. Is the building adapted to modernized production processes? From which year date the machines that are currently present in the buildings? What is the relation of this development with the military history? We began drafting a timeline in which we can record our findings. Literature and (historical) images will be used as sources. The adjacent image is probably the most valuable discovery of the day: it is an original image of the milling on which a structure is visible which differs from the current construction. This can mean that internal changes have taken place over time, possibly due to the modernization of the production process.

Image  
Picture of the former interior of the milling (photo provided by Docomomo)

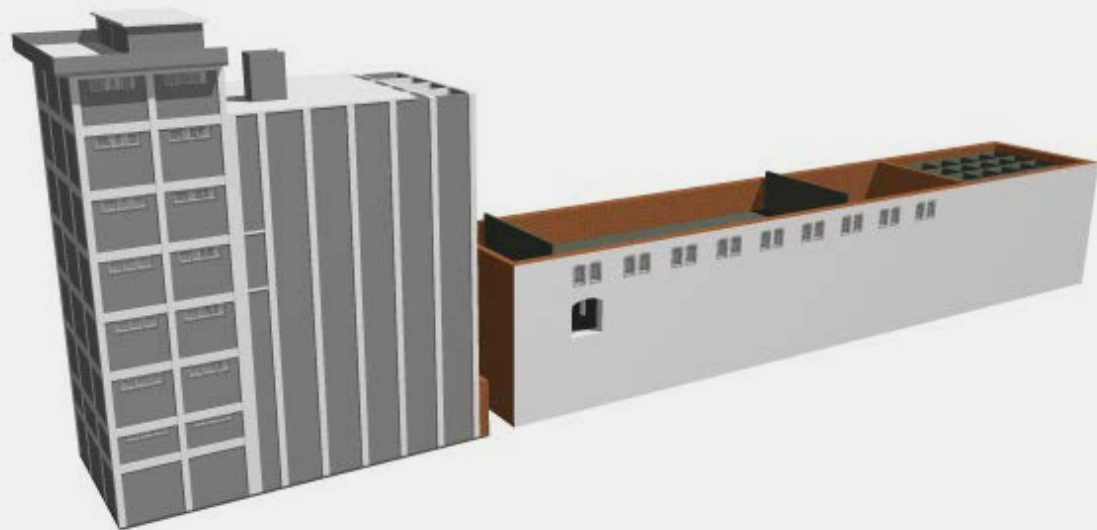
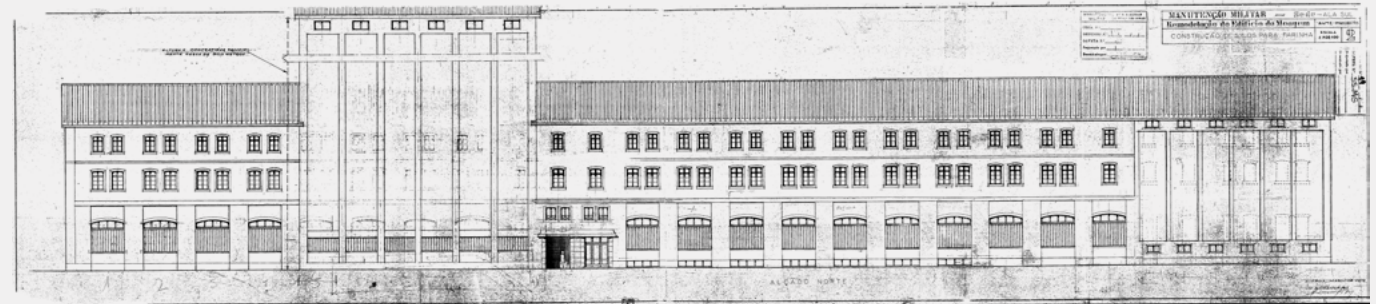
Ruben Klinkenberg | Process Logbook



## Historical analysis | September 16th - 19th

In what year have the silos been built and why? During the search we came across a very interesting drawing, titled 'remodeling of the mill building'. It looks like both silos have been built afterwards. The dotted windows in both silos support this presumption. The texts which are provided by the University of Lisbon sometimes contradict. In one text it is said that the silos were put in operation in 1970, while the drawings were made in 1971/1972. I also continued working on the technical analysis and I started making a 3D model of the milling. It is not sure yet if we want to make a model of the bakery and cookie factory as well, because of its complexity and the fact that drawings of the existing situation are missing.

We found some documents about the machinery that are/were present in the milling. The construction seems to be built according to a hungarian/austrian principle. The mills asked for a five-story building with a structure tailored to the machinery. This is all input for the guidance of tomorrow.

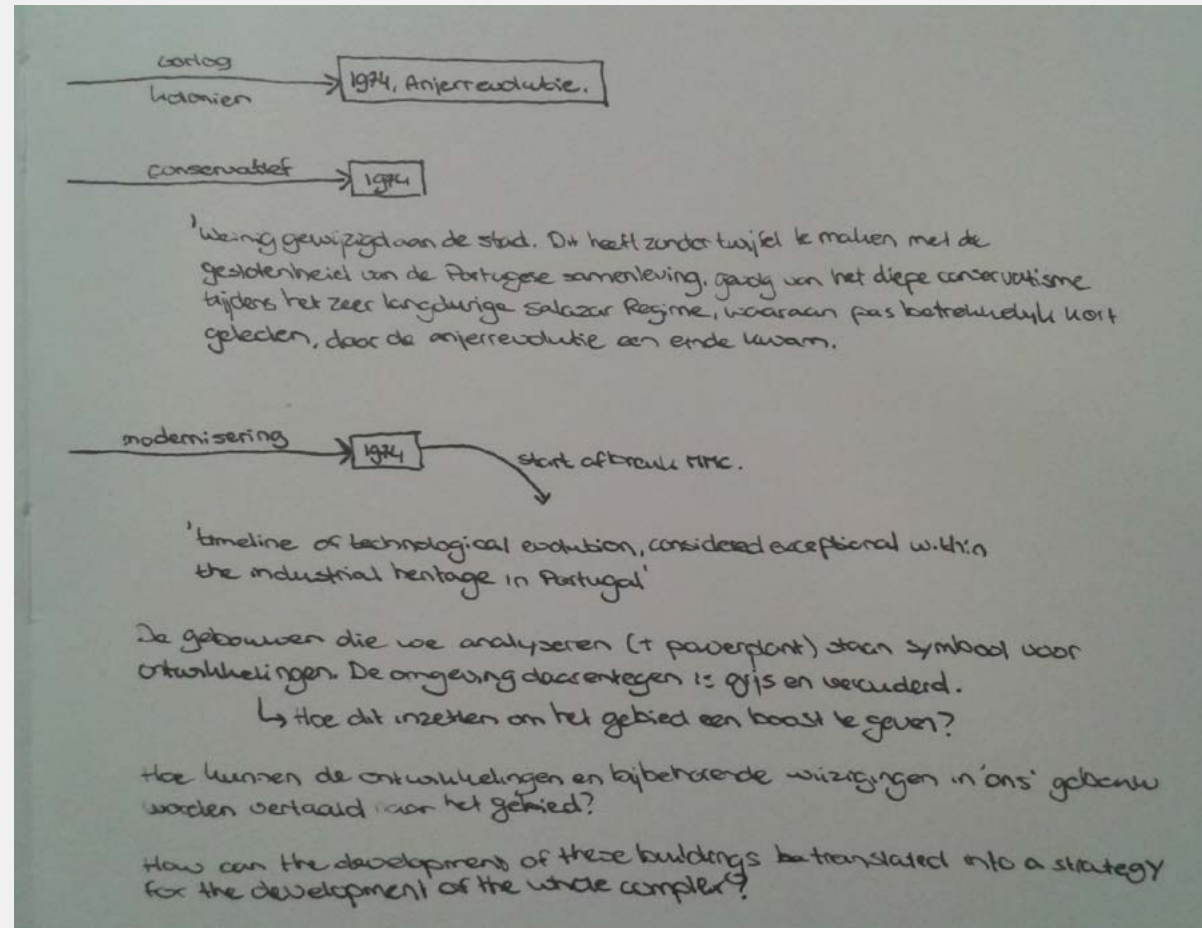


Image

1. Remodeling of the mill building (drawing provided by Docomomo)
2. Status 3D model (own image)

## Tutoring I September 20th

This morning we had our second official guidance. We discussed the work with Hielkje and Job. Guido and I told about the historical analyses and the evolution of the buildings. After the tutoring we discussed as a group about the way of presenting during P1. We decided to link everything to the historical development of the buildings. Our research question is: how did the buildings become as they are right now and what are the characteristics of it? I will mainly focus on the technical aspects of the buildings. After this we attended the presentation of Anne Lacaton. In the evening I focused on the graduation plan and the research question for the Lecture Series on Research Methods. Based on the current research and experiences during the site visit I formulated a first research question for my graduation project: how can the development of 'our' buildings be translated into a strategy for the development of the MMC?



Image

Reason/justification research question (page sketchbook, own image)

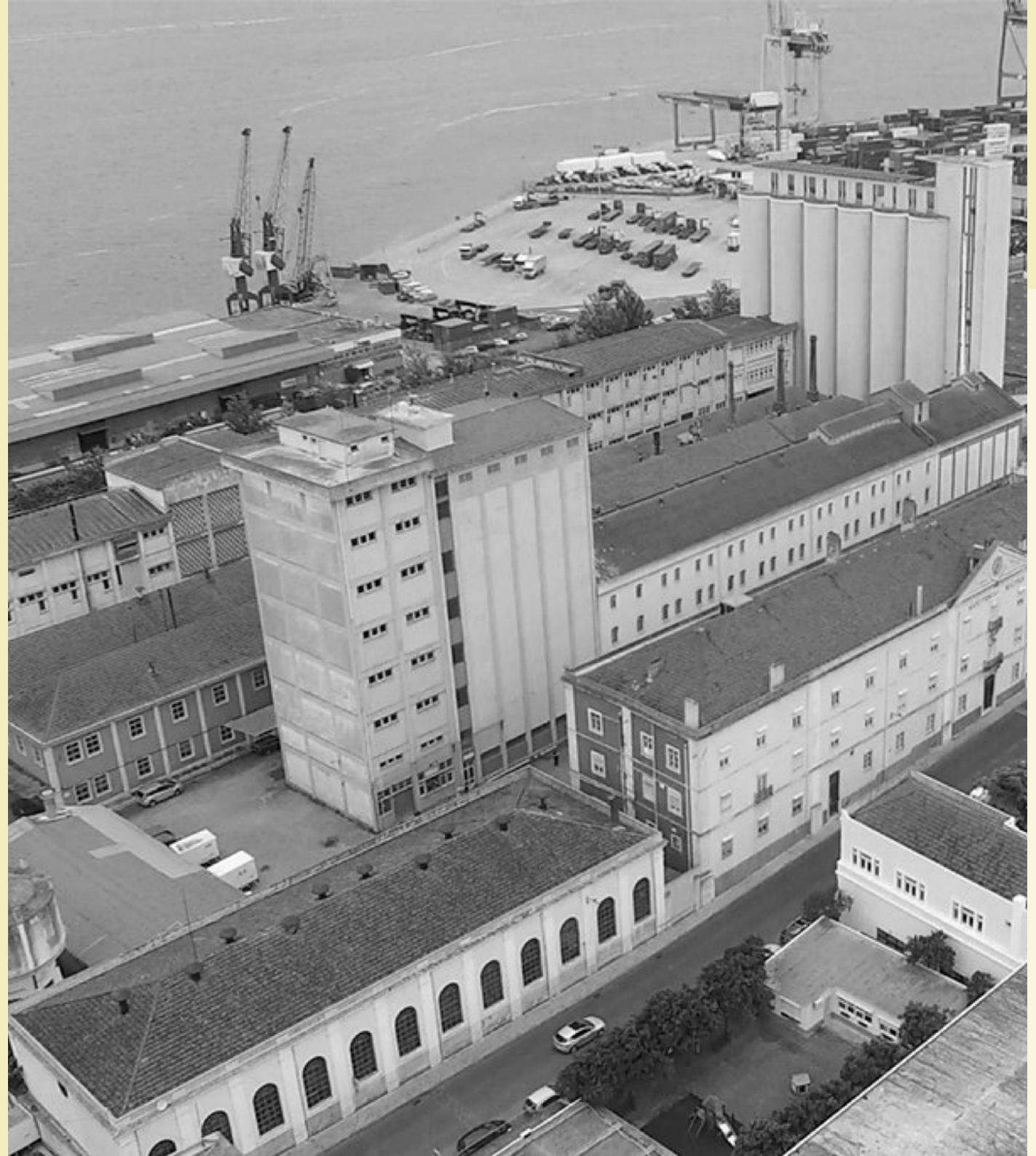


## Historical development

During the upcoming period we did further research to the development and evolution of the ensemble, consisting of the bakery, cookie factory and milling. We continued the way of working, using literature, texts provided by the University of Lisbon and Docomomo, old maps and images. Also the technical analysis played a significant role in this research: the history of the buildings can be derived from the different construction typologies. The evolution of the building will be explained in six stages. Each stage is illustrated with a historical map of the complex, which show the buildings that have been added in that particular stage, and (historical) photos and drawings.

Image  
Overview ensemble (photo mid-term presentation  
workshop group 6, own editing)

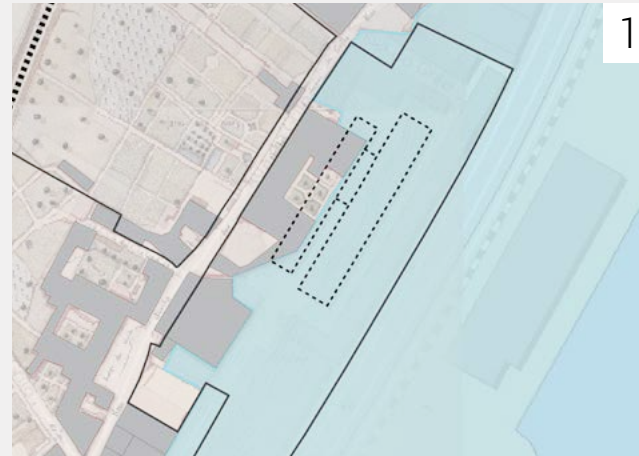
Ruben Klinenberg | Process Logbook



## Stage 1

Ministerio da Guerra takes possession of the site. The former convent is converted to Manutenção Militar to provide the Portuguese army with all kinds of products. In this stage no building of my chosen ensemble was built yet.

34 years earlier, in 1862, an experiment was carried out to manufacture and supply bread to the army. A military bakery was created on a site now known as Rocha do Conde de Obidas named "Padaria Militar".<sup>1</sup>



### Text

1. Folgado, D., & Custódio, J. (1999). *Caminho do Oriente – Guia do Património Industrial*. Lisboa: Livros Horizonte.

### Images

1. Map of 1856-58 by Filepe Folque (own editing)  
2. Front facade former convent (photo by Hielkje Zijlstra, 04-09-2016)

## Stage 2

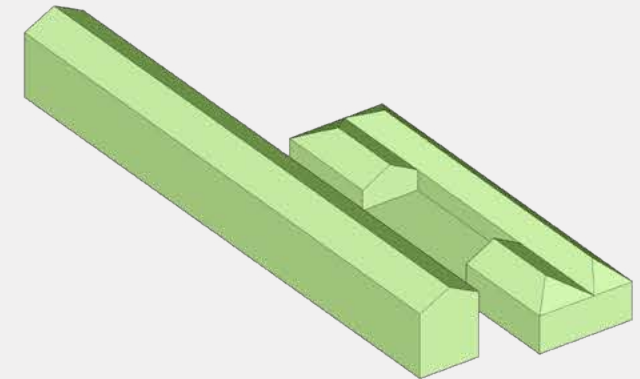
Between 1898 and 1910 construction of several factories, including the mill building and bakery.<sup>1</sup>

### Bakery

Cast iron columns and brick vaults (except lower part).

### Mill building

Cast iron columns, brick vaults and wooden floors.



### Text

1. Folgado, D., & Custódio, J. (1999). *Caminho do Oriente – Guia do Património Industrial*. Lisboa: Livros Horizonte.

### Images

1. Map of 1911 by Silva Pinto (own editing)  
2. Ground floor bakery (photo by Hielkje Zijlstra, 04-09-2016)

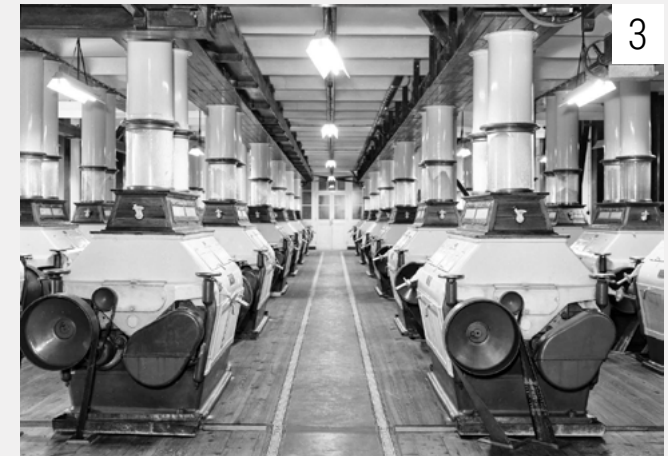
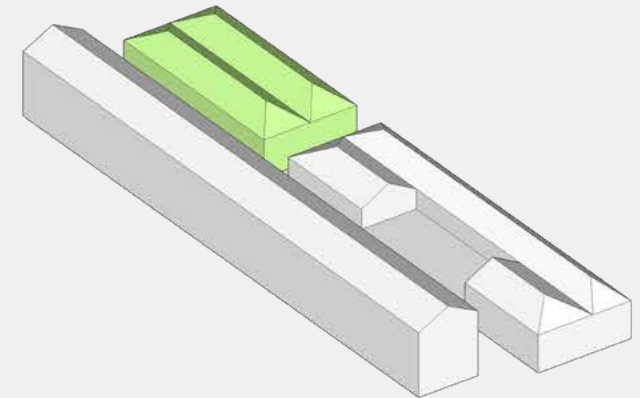


### Stage 3

The period between 1920 and 1935 can be indicated as a period of industrialization. For example, the baker system was implemented in the bakery, the cookie factory has been built and the milling was distributed over three floors (22 mills).<sup>1</sup> The sweets factory had a connection with both the bakery and mill building.

#### Sweets factory

Cast iron columns and wooden floors.



#### Text

1. Folgado, D., & Custódio, J. (1999). *Caminho do Oriente – Guia do Património Industrial*. Lisboa: Livros Horizonte.

#### Images

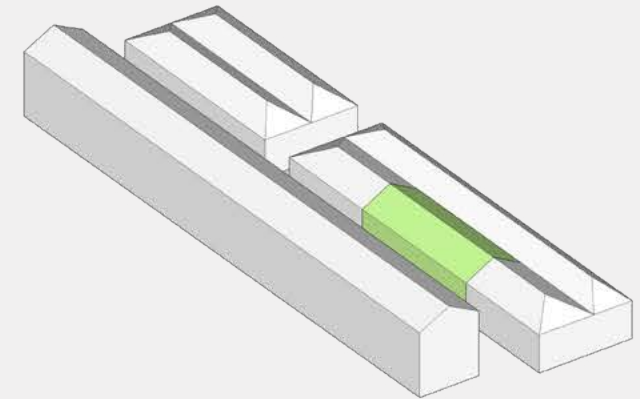
1. Ground floor sweets factory (photo provided by Docomomo)
2. Baker sytem bakery (photo provided by Docomomo)

## Stage 4

In the bakery the baker system has been replaced in 1955 by two automatic ovens. <sup>1</sup> Because of the need for a column-free space and the addition of a floor they chose for a monolithic concrete construction. For this the old ovens in the middle part have been removed.

### *Bakery*

Cast iron columns, brick vaults and a monolithic concrete structure.



### Text

1. Texts exhibited at Manutenção Militar Complex by Lisbon Municipality

### Images

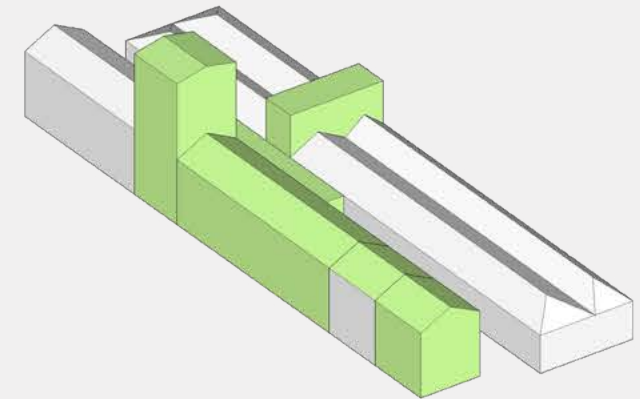
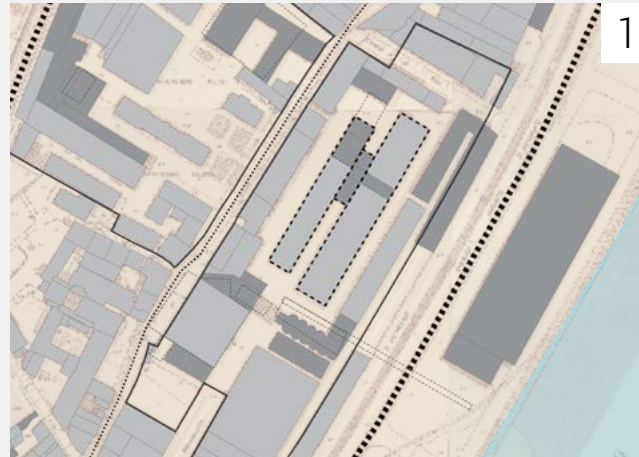
1. Map of 1950 by unknown (own editing)  
2. Automatic ovens bakery (photo provided by Docomomo)

## Stage 5

During the Ultramar War, Manutenção Militar (MM) is very active in the provision of food for the troops. In this period the MM reached its maximum level of production: silos were built and the production process was modernized, especially in the mill building.<sup>1</sup> The new machines asked for a specific concrete structure, for that reason most of the original floors were removed.

### *Mill building*

Cast iron columns, brick vaults, wooden floors and a monolithic concrete structure.



### Text

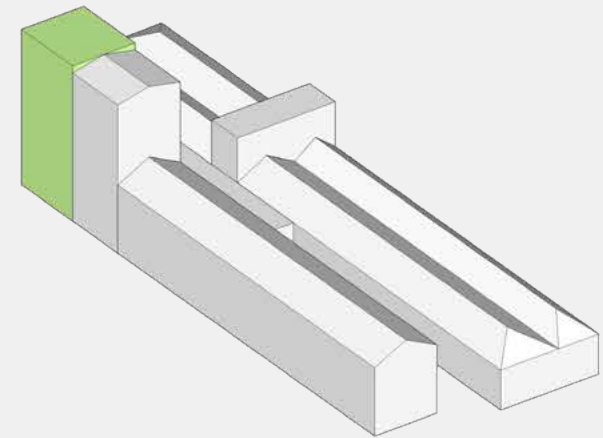
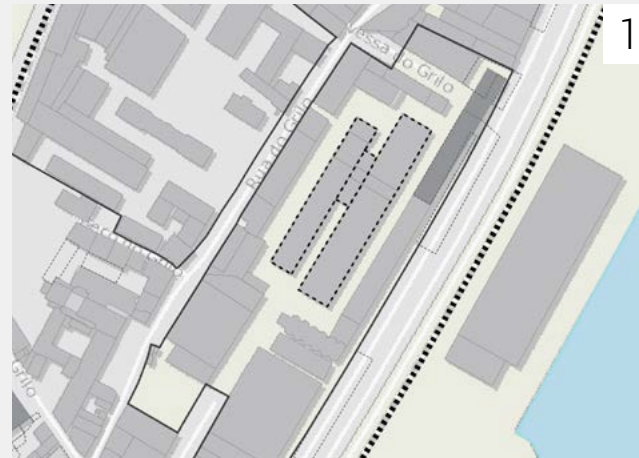
1. Texts exhibited at Manutenção Militar Complex by Lisbon Municipality

### Images

1. Map of 1970-1983 by ART 91 - PDM (own editing)  
2. New mills and concrete structure mill building (photo by Hielkje Zijlstra, 04-09-2016)

## Stage 6

In 1975 independence of the former colonies: MM had to reduce the production. However, in the 1980s a warehouse has been added to the ensemble. This is probably done because the products were not shipped directly anymore, but stored and spread inland. In 2011 the complex officially closed most of the factories, of which the bakery was the last.



Images

1. Map of 2015 by LXI (own editing)

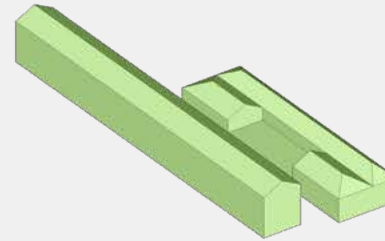
Ruben Klinkenberg | Process Logbook



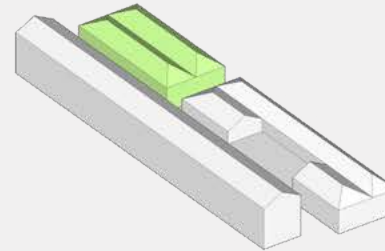
## Historical development

Modernization of the production process played a significant role in the development and evolution of the ensemble. The production process is hereby strongly related to the military history, the spatial character of both the buildings and site and it reflects the pragmatic attitude.

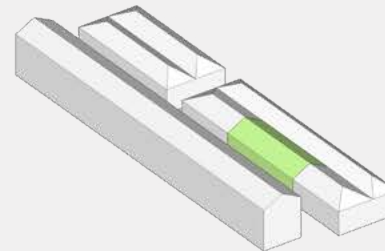
<1911



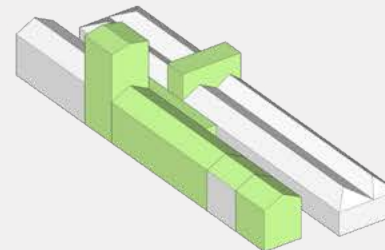
1920s



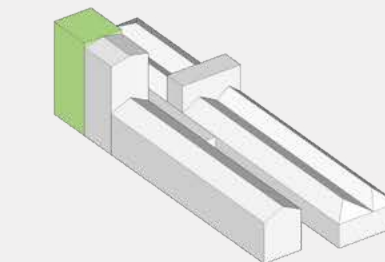
1955



1970s



<2016



## Cultural Value I September 22nd

This afternoon we had an introduction of Marieke Kuipers about Cultural Value. In two weeks we have to present our cultural values as a group. For this we can use the CultMatrix. This matrix combines the theories of Alois Riegl and Stewart Brand. I also spoke with Marieke about the research question of my position paper for the Lecture Series on Research Methods. Since Portuguese people are very conservative, I would like to discuss whether to demolish or maintain industrial heritage. During the conversation we came up with other ideas. As explained, I was impressed by the different construction typologies and the machinery. What are the values of the machinery in industrial heritage? I would like to connect this with the CultMatrix. The following question was drawn up: what is of more value, the commemorative values of the stuff or the present-day values of the skin, structure and space plan?

	SOCIAL	SURROUNDINGS	STORY	STUFF	SPACE PLAN	STRUCTURE	SKIN	SITE
AGE								
HISTORICAL								
ARTISTIC								
COMMEMORATIVE								
USE								
NEWNESS								
CONFLICT								
NOSTALGIC								

Image  
CultMatrix (own image)

## First presentation | September 27th

Today we had our first presentation: explaining the analysis so far. We were aware of the fact that we did not have a consistent story yet. So far, we have collected a lot of data and it is now time to take the next step. Together with Noëlle I will focus on the spatial character of both the buildings and the complex in general. For this we make use of the technique of Choisy. This afternoon I've made the first drawings of this on the scale of the complex. We can also use the drawings that have been made during the Docomomo workshop. At the end of the afternoon we had to tell our first thoughts about the building choice and research question. As explained I want to focus on the bakery, cookie factory and milling and I want to approach the assignment from the smaller scale, because I think the buildings and complex have more qualities than the surroundings.

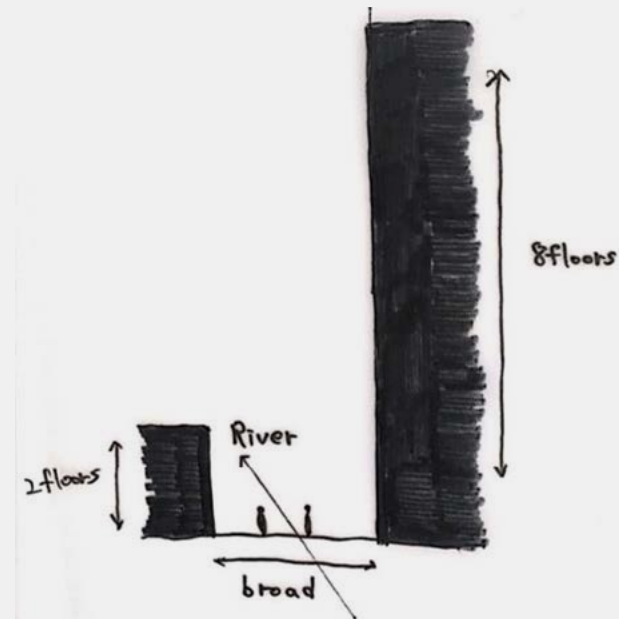
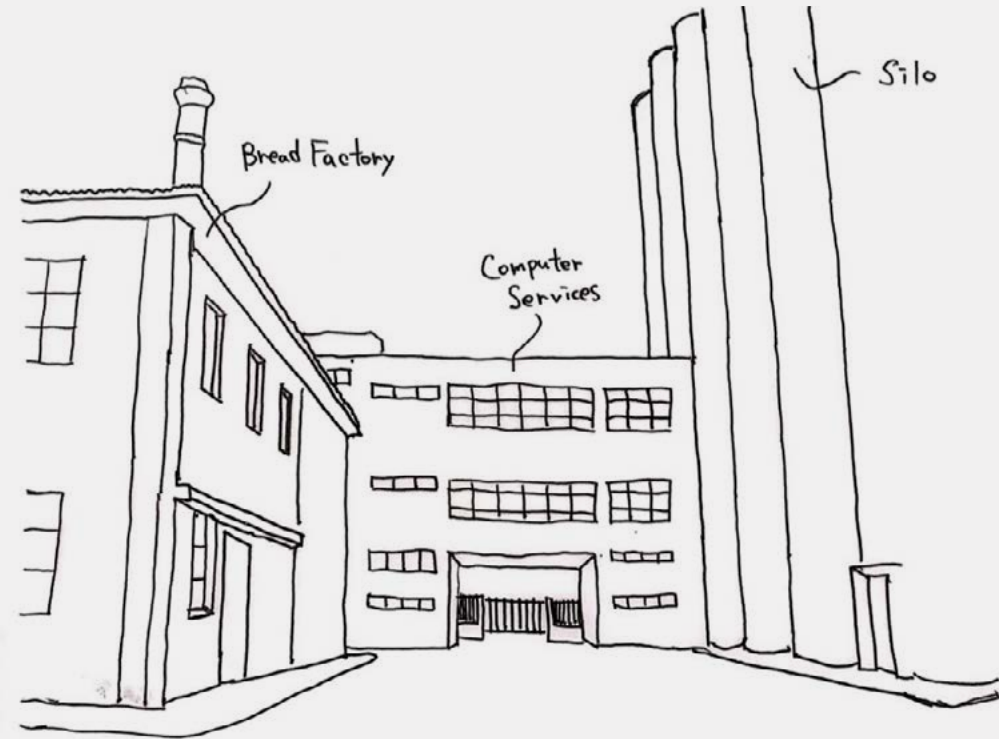


Image  
Analysis of the (spatial) characteristics of the complex  
made during the workshop (own images)

## Section I September 28th

The main missing drawings during the presentation of yesterday were the sections. Today I've made a longitudinal section of the mill building. I tried to give a feeling of the atmosphere as well, so it can enhance the Choisy drawings that I will make the coming few days. I think this drawing is very helpful, because it's actually the first time I clearly see the relation between the silos and the original mill building.

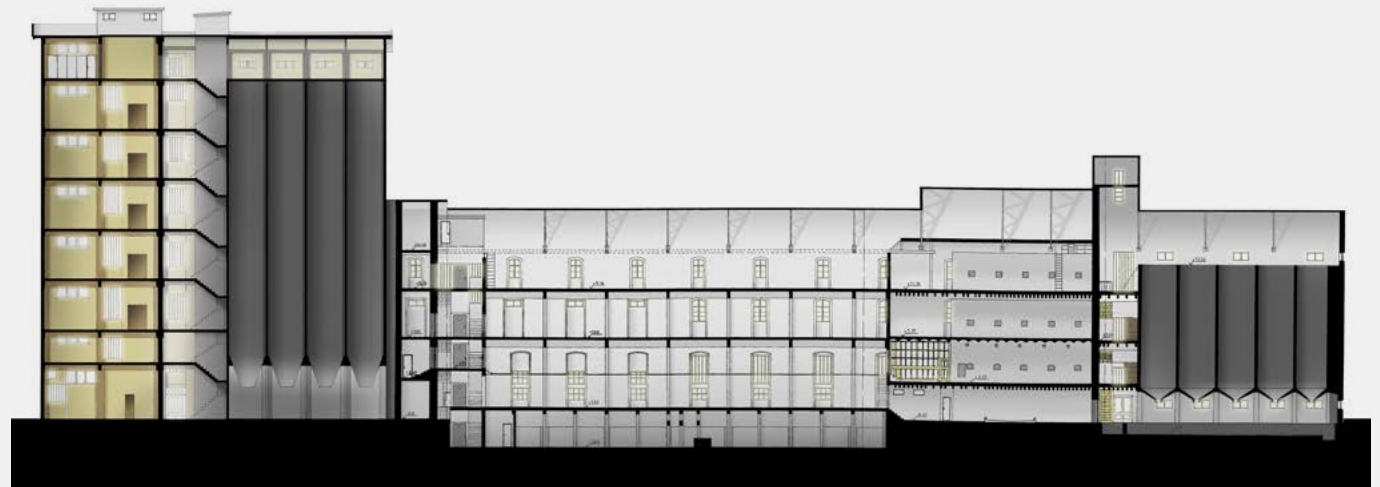


Image  
Longitudinal section mill building (own image)



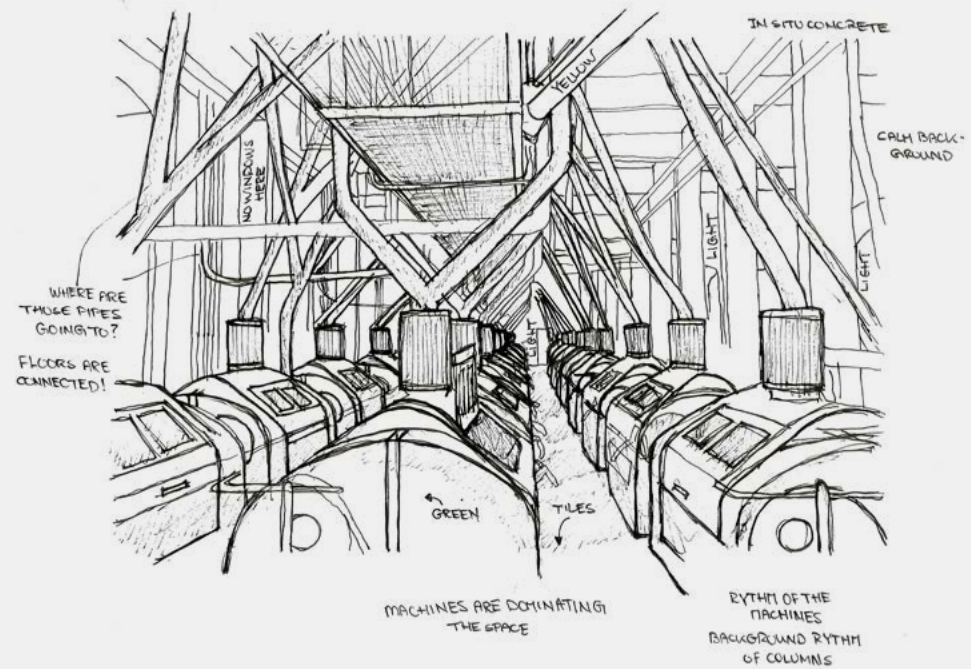
## Cultural Value I September 29th and 30th

We discussed the matrix we have to present next thursday for Cultural Value. As a group we filled in the matrix for both the site and the buildings. To create clarity, we searched for some common themes to present all the values. Otherwise it will be an enumeration of all kinds of values. We came up with the following themes:

- Beato (history and possibilities of the area)
- Memory
- Layering
- Character

Next week we will continue working on the CultMatrix by making drawings, icons, etc.. I also made some drawings to define the character of the milling. I made some interior sketches, with and without the machinery, and tried to determine the character of it. In the weekend I will do the same thing for all the other accessible spaces of the milling. One of the conclusions that can be drawn from all this is that the character of the space is currently dominated by the machinery, but also that there is an oversize of space when removing the machinery. All other conclusions can be read in the Architectural Analysis.

Image  
Interior sketches milling, with and without the machinery (own images)



## Character of the site | October 3rd

We elaborated on the cultural value matrixes. We finished the one on the level of the site. Next to this I've been working on the character of the complex as a whole. During the workshop we had already made some perspectives which visualizes (parts of) the character. I changed and added some. At the end I made some conclusion drawings and named some characteristics of the different spaces (linear, broad, etc.). Very important for the site are the different characters of both the squares and the streets (space plan of the site). All these different characters can be of importance for a future strategy of the site.

The linearity is a general characteristic of the streets. The street between the bakery and milling has a intimate character. Based on the characters and use of the streets three layers of intimacy can be distinguished:

### First layer

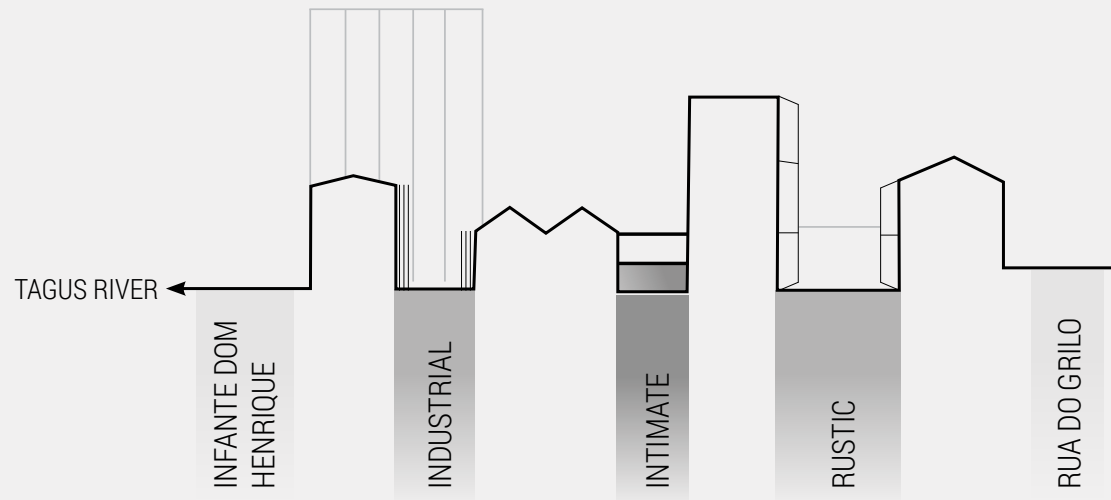
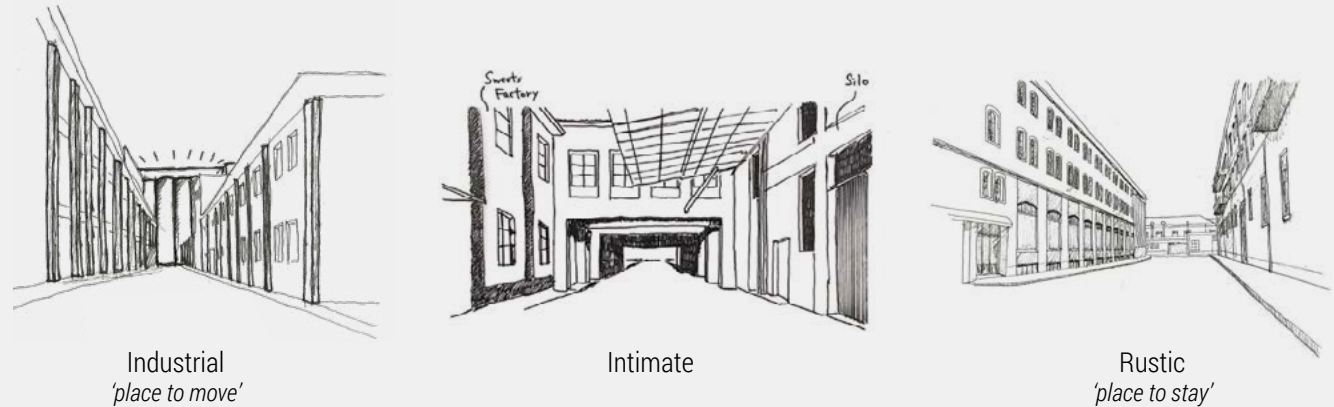
Intimate street

### Second layer

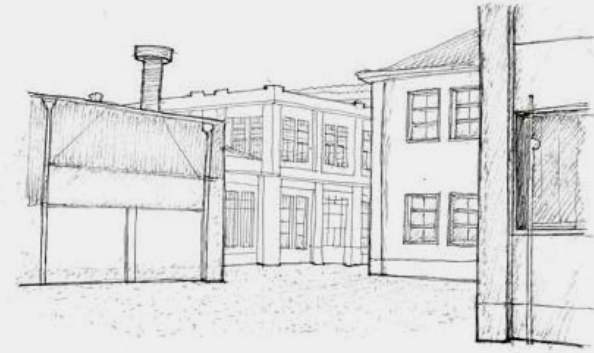
Industrial and rustic street

### Third layer

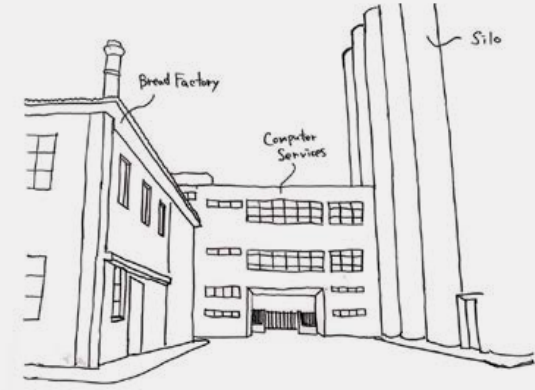
Infante Dom Henrique and Rua do Grilo



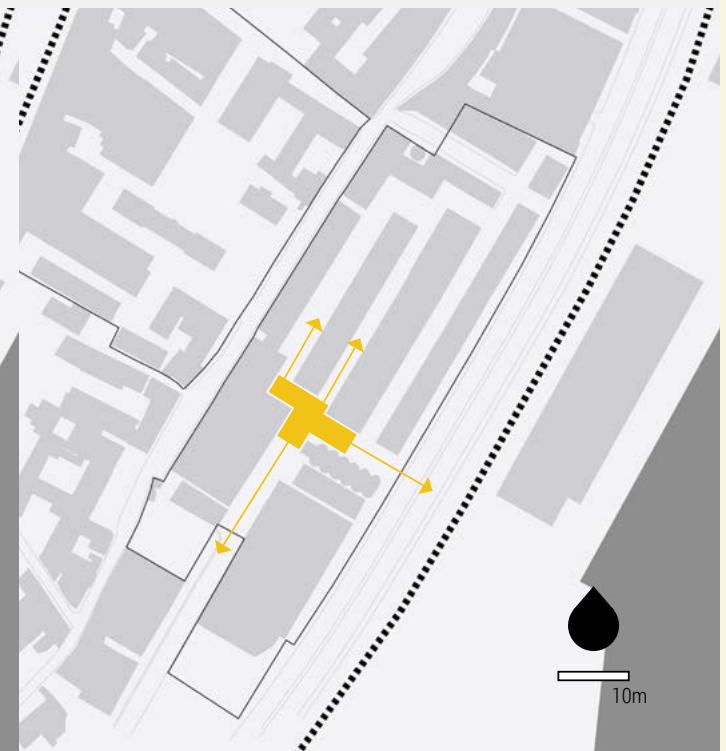
The northern square on the MMC has a closed and private character: it is not connected with the surroundings. The square in the south has a more open and public character. From this square there is a visual (and physical) connection with the surroundings. Both squares are part of the second layer of intimacy.



Closed  
*'private character'*



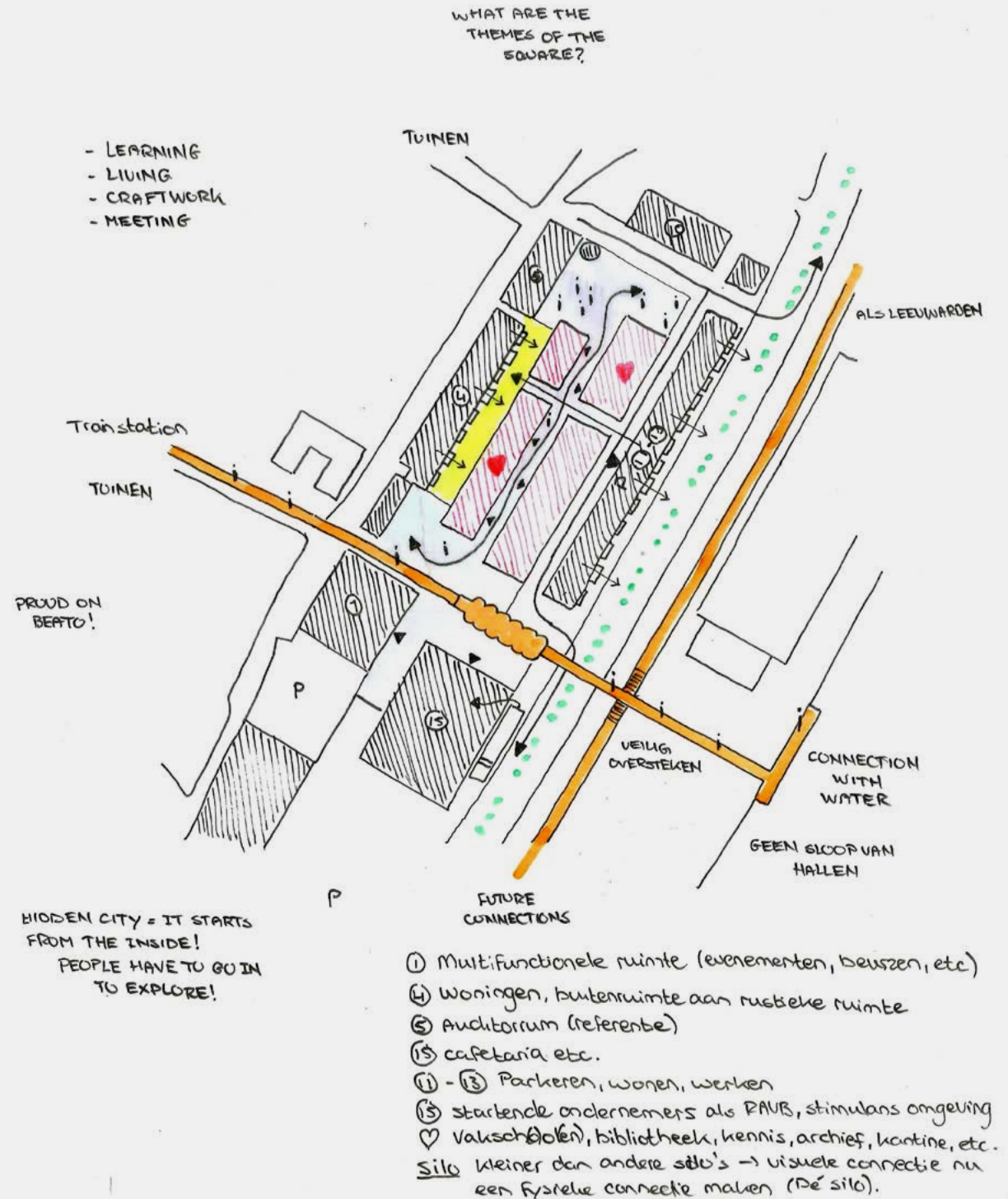
Open  
*'public character'*





## Masterplan and character | October 4th

I've drawn the first ideas for the strategy. I think the complex can be seen as a kind of hidden city. Few people know what has happened/is happening inside the defensive walls. This is especially true for the bakery, cookie factory and milling, since these buildings constitute the heart of the complex. Development has to start in these buildings, for example by positioning a school in it. After a couple of years students can start their own company in the warehouses, like is the case in the architecture academy in Rotterdam. There are also buildings reserved for dwellings and offices. The function of the space plan is determined by their character. For example the industrial street, which can be called a place to move, is translated into a street for motorized vehicles. Today we had also tutoring from Wido and Job. With Wido we spoke about the different construction typologies, development of the buildings and necessary analysis for the final product. With Job I spoke about the graduation pla. From the start on I was fascinated by the different construction typologies and machinery. With Job i talked about the dilemmas if we look at future use of the buildings: can you maintain all the machinery? Why should we conserve all the machinery which by themselves were replaced all the time? I will elaborate on this topic in my position paper. With the group we spoke about the matrixes for cultural value. Tonight and tomorrow we will continue working on this.



## Cultural Value Assessment | October 5th-7th

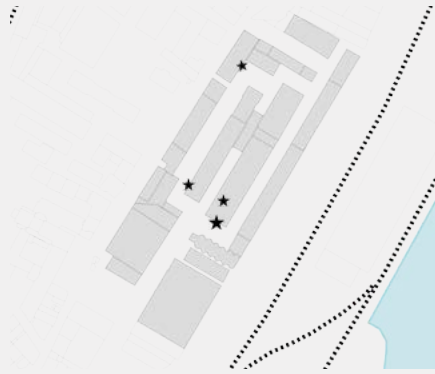
We have been working on the presentation of Cultural Value for tomorrow. We illustrated the most important values. Most of the values are related to the layering and character of the interior (machines from different periods, different construction typologies). A lot of changes occurred in the interior due to the modernization of the production process. Instead of form follows function we can speak of structure follows function. I think the machines determine the character of the place. I'm not sure if it are the machines itself or the influence they have had on the spatial character and atmosphere of the buildings. There are also some conflicts. The development of the area and the buildings is very much related to the military and war. This is a negative side effect. Our ensemble forms the heart of complex. In contrast to the interior I think the skin has little value. Because the buildings are in the center of the complex, people do not have any memory with them. Does the skin has any value? They tried to pimp the facade with plaster, and sometimes it is fake as well. Why the plaster? This is maybe a nice topic for the cultural value paper.

### NON-VALUE

The aging of the facade is rather a non-value than a value. Most of the damages are due to bad water drainage and orientation. With the plaster they tried to hide the historical development of the interior (conflict).

### VALUE

Incidental elements with a specific artistic value.



### VALUE

In the building you still feel the industrial atmosphere: the machines and structure are in a good state of preservation and also the indoor climate is acceptable. The factory can run again!

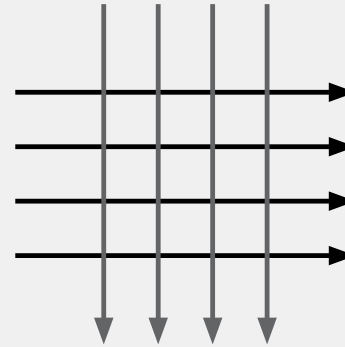
### VALUE

The 'layering' of machines show development of the process over time. The process in the milling is constituted by machines from different periods (one process). In the bakery new ovens replaced the old ones (two processes). It's not the age value that shows the history of the buildings, it are the machines.



### CONFLICT / VALUE

The spaces in the milling are very linear, which corresponds to the process of the milling as a whole. However this is in conflict with the vertical processes of the separate buildings: conflicting directions.

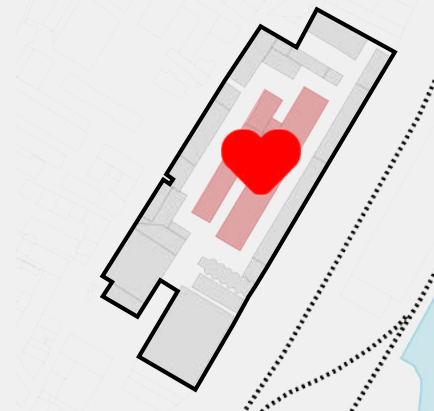


### NON-VALUE

The aging of the facade is rather a non-value than a value. Most of the damages are due to bad water drainage and orientation. With the plaster they tried to hide the historical development of the interior (conflict).

### VALUE

Knowing that the buildings are isolated (no connection river, innerland, traffic road) and the start of the process, they can be seen as the heart of the complex. What is the cultural value of the skin (because it's hidden)?

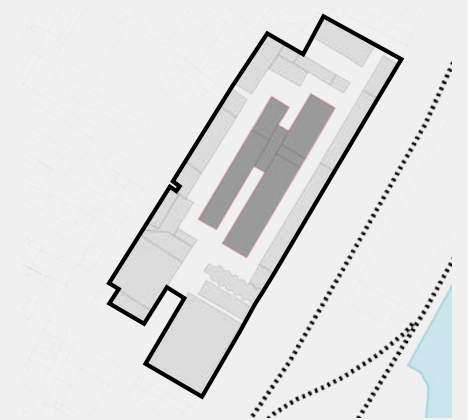


### VALUE

The streets can be seen as part of the production process (in- and output). The layering of the pavement is a consequence of change used (rails, trucks, etc.). In this way the pavement tells something about the development of the process.

### CONFLICT

Due to the harbour industry the site has become an isolated area. Since our buildings are in the center of the complex there's no connection with the river anymore. This can be seen as a non-value, but the development of the harbour industry is of value for the economy of Lisbon.



VALUE

The building is very pragmatic.



CONFLICT / VALUE

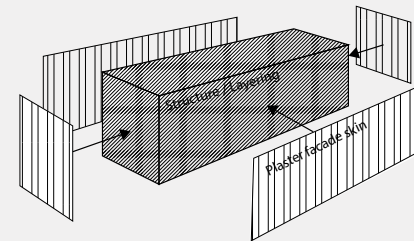
The character of the spaces is determined by the machines. Removing the machines means a total different atmosphere of the space. What to do with the machines in relation with the new function?

VALUE

It's not the age value that shows the history of the buildings, it are the different materials and details. Layers of different construction through time are visible. This is the consequence of the modernization of the production process. When the machines are removed, the construction materials still show (part of the) history of the buildings.

CONFLICT / VALUE / NON-VALUE

There is a conflict between the outside and inside. From the inside a clear development is visible (machines, construction, etc.), but from the outside they tried to mask this. The color of the facade is similar to that of other millings in the world. At this moment we see the interior as a value and the 'mask' as a non-value.

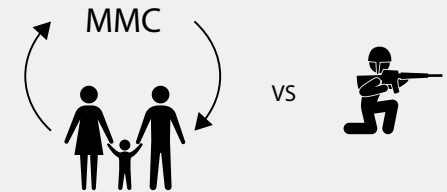


VALUE

As said, they really tried to keep the milling as one building from the outside (plaster). In 1972 two silos have been added (production capacity). The production is more important than the aesthetics of the building (form follows function): it was all about the production process.

CONFLICT

Community vs. War





## Technical analyses | October 10th

This morning I started with my position paper for the Lecture Series on Research Methods. My first opinion of a few weeks ago, to keep all the machinery, has slightly changed to a more radical approach. What can you 'learn' from the machines? How do they influence the spatial character? And how can this be of inspiration for the design? In the afternoon I went on with the technical analysis. The drawings I've made can be discussed tomorrow with Wido.

## Tutoring | October 11th

Wido advised us to add sections and details to the technical analysis. In the details we can specify the dimensions of different elements, like the columns, floors and walls. After this we had tutoring from Job. He thinks that we've made a very inspiring document for cultural value. However, because it is such a pragmatic building, we can hardly speak of cultural values. At last I had personal tutoring from Job. I changed my research question and made it more general: how can the spatial character of industrial heritage, which is mainly determined by the production process, be translated into a spatial design that facilitates future use of both the buildings and site? In the afternoon I went on with the drawings for the technical analysis. I also found a really nice reference of how to deal with silos (Adambräu in Innsbruck). In here the silos are used as an archive because of climate issues. This is the reason why I want to add some pages about climate in our technical analysis as well (building physics, what are the qualities of the existing buildings?).

Image

Sudhaus Adambräu, Transformation House of Architecture, Innsbruck (photo Lukas Schaller. Accessed on January 6th, [www.miesarch.com](http://www.miesarch.com))

Ruben Klinkenberg | Process Logbook

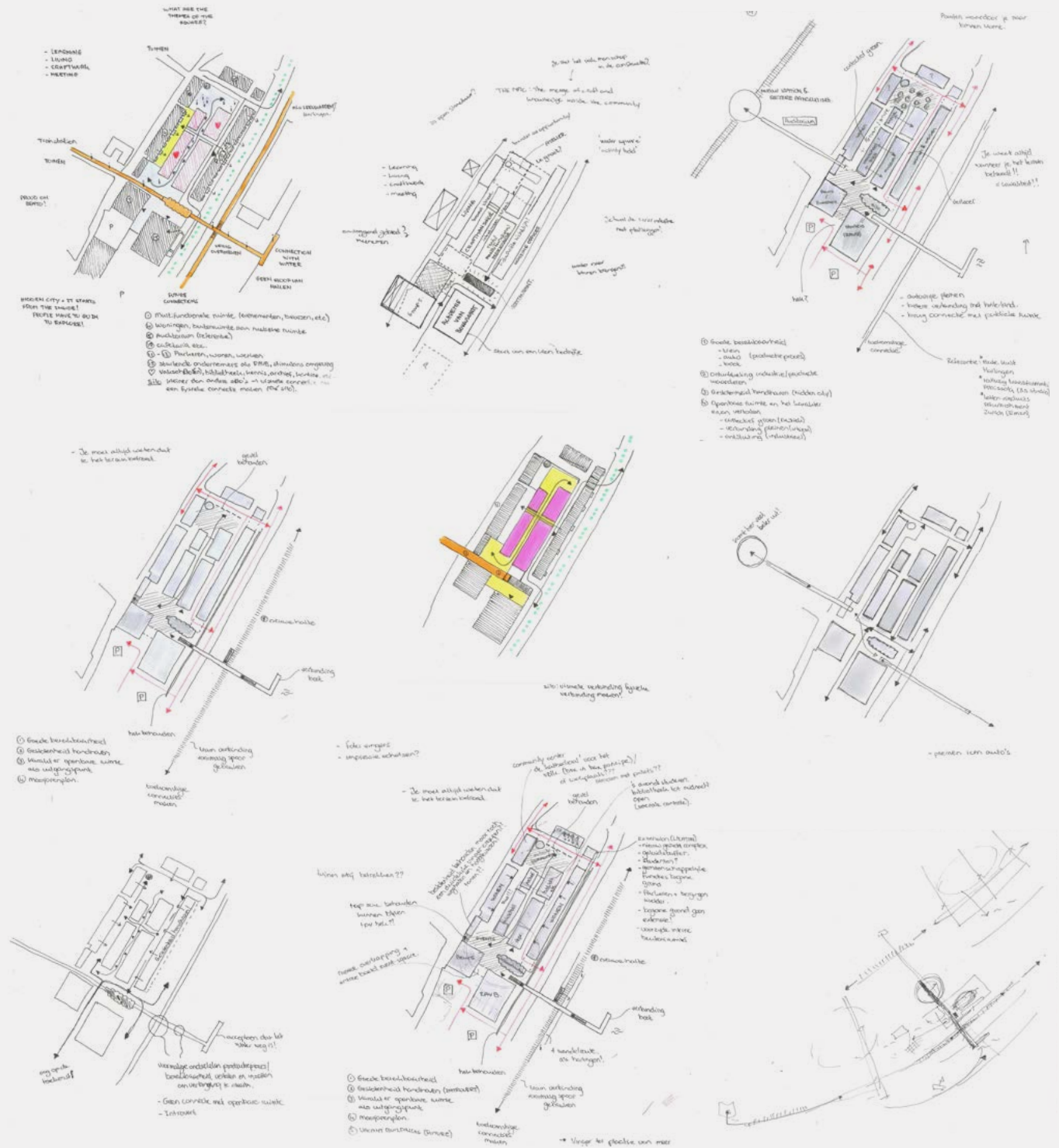


## Working day I October 12th

Today I worked on the masterplan. I continued designing with some already stated values. One of these values has to do with the former accessibility of the complex. Due to the reclaimed land, because the harbour activities asked for more space, the complex is no longer accessible by boat. I tried to improve the accessibility of the complex and the connection with both the city centre and the world expo. Inspired by the masterplan we'd made during the workshop, I made some alternatives of connecting the complex with the water by making a bridge. Like we did with the workshop, I added a new railway station as well. This connection is based on the former production process. By introducing a busstop and waterbusstop the complex could easily be connected with the city centre and the world expo. I also want to transform the existing railroad into a bike and footpath. The new bridge can be connected to this path. Finally I did some research to the traffic on the site itself (one-way traffic or no traffic at all?). I would like to ban motorized vehicles from the two squares that are already present on the site.

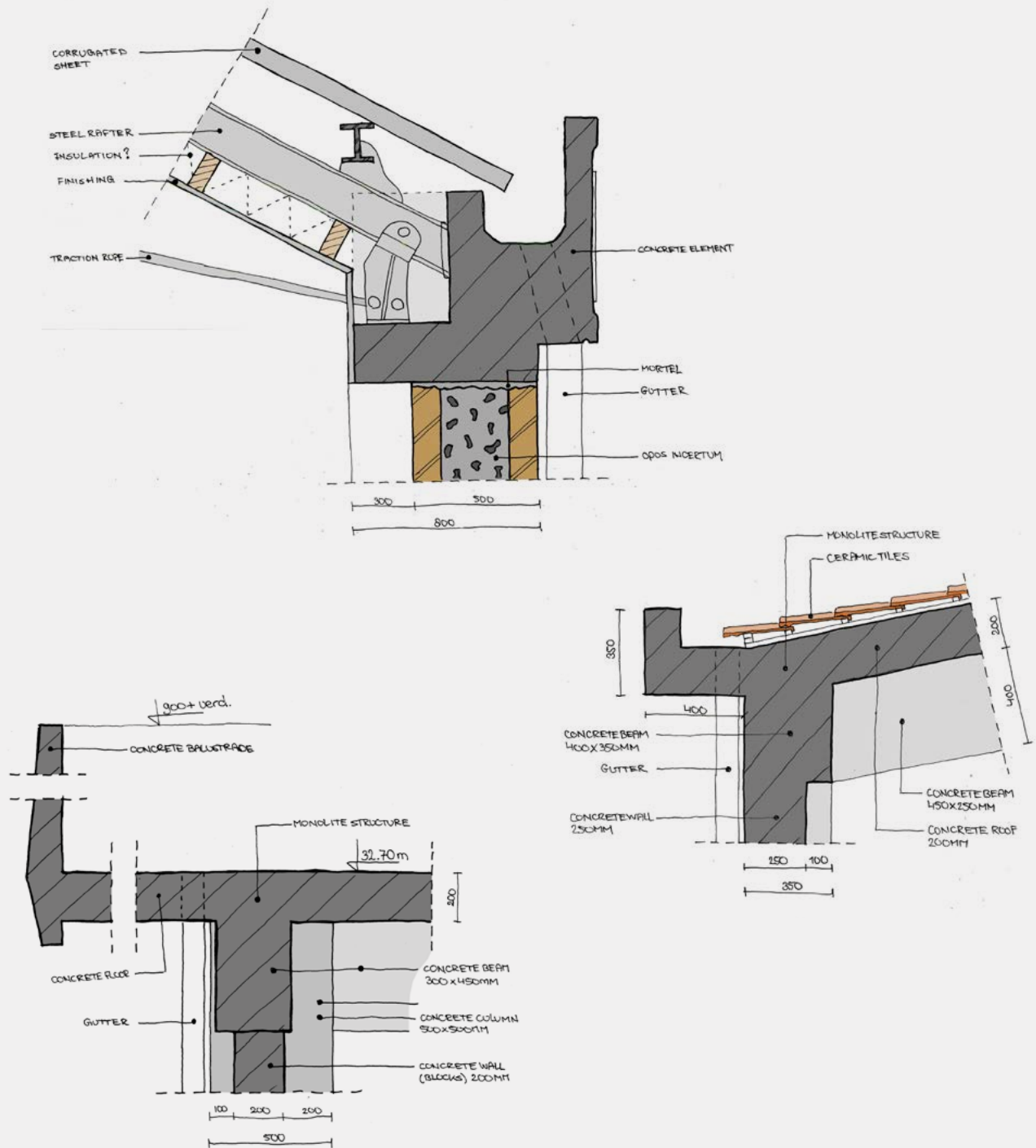
## Cultural value I October 13th

In the afternoon we had some lectures related to cultural heritage (Wessel de Jonge and Suzanne Fisscher). Coincidentally the first lecture was about writing as an architect. During this lecture I saw a connection between my position paper and analysis. In the chosen buildings it is about pragmatics and character. It are not the machines which are valuable, but it is about the influence they have on the (spatial character of the) building. Industrial heritage can be seen as non-intended architecture. Two presents of this architecture are the character of the spaces, which are mainly determined by the production process, and the load-bearing capacity of the structures.



## Research Methods | October 17th - 21st

This week I have to prepare the counterlecture for the Lecture Series on Research Methods. I also started making details of the milling. For this I make use of photos, references, drawings and my sanity. Next to the counterlecture and the details I've focused on the P1 presentation. I made already a storyline which I've presented to Job. He thought the story was consistent and I can further elaborate on it.



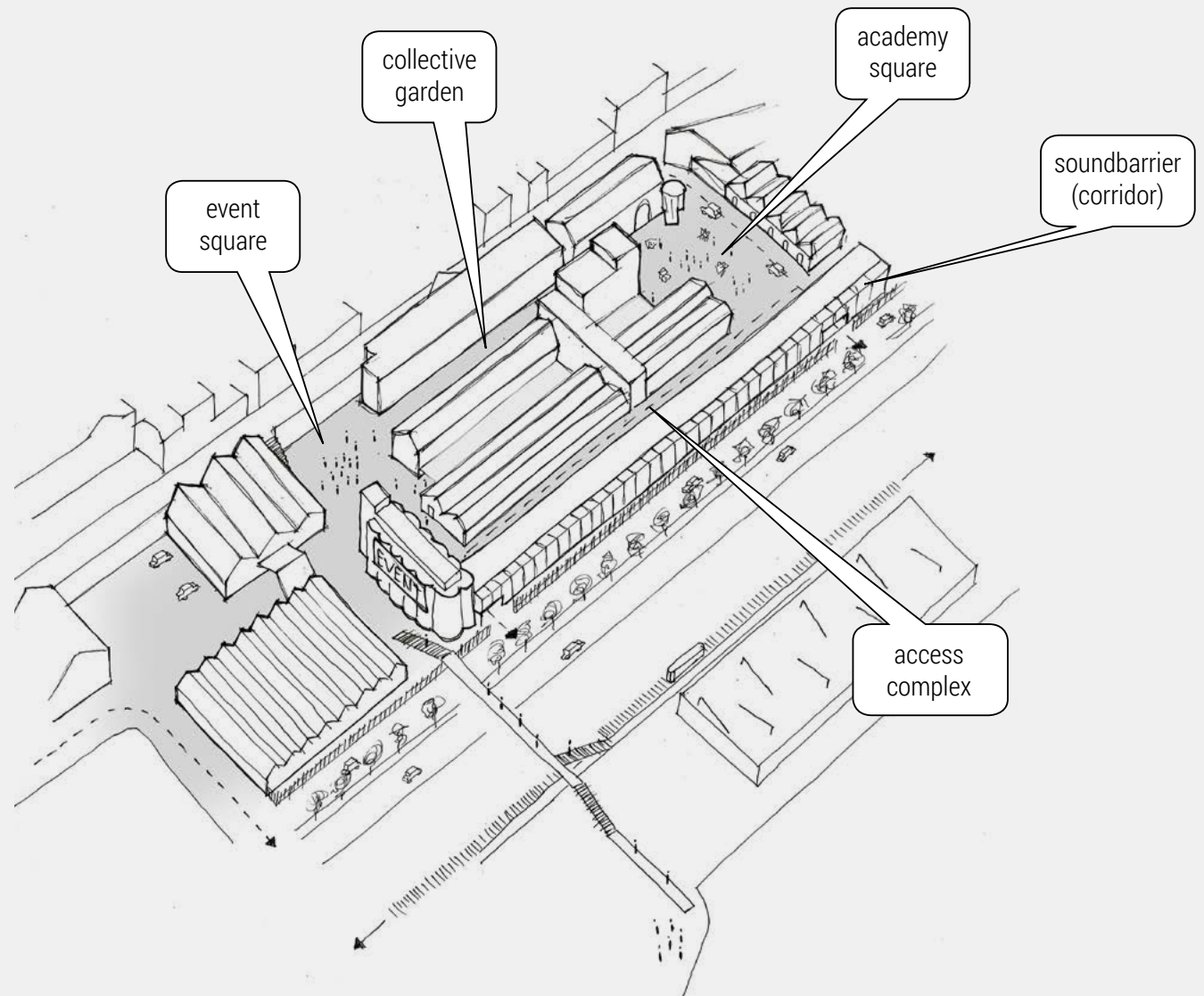


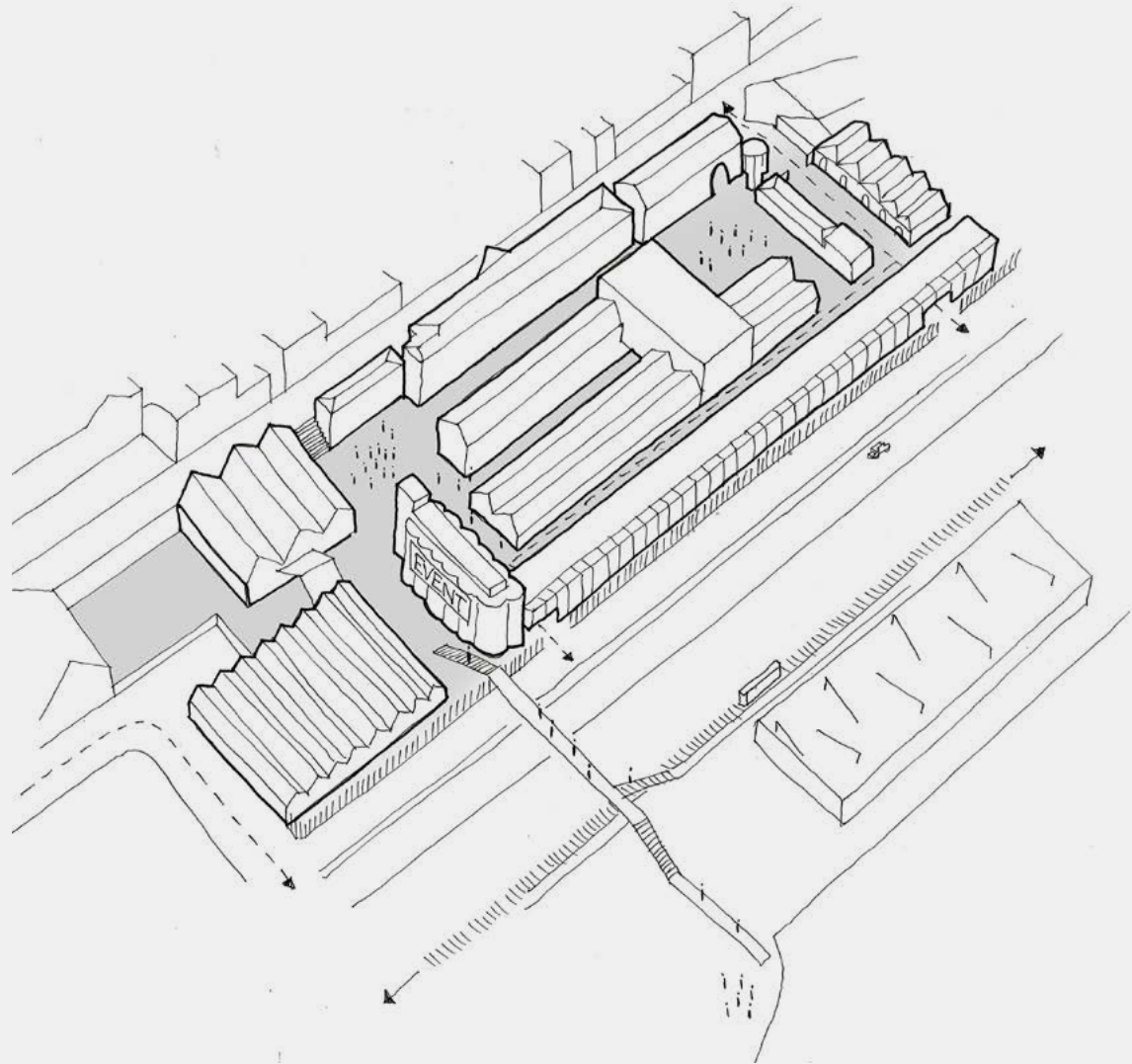
## Tutoring I October 25th

Today we had tutoring, both of Hielkje and Job and Wido. We discussed the status of the Architectural and Technical Analysis, including the details. Concerning the Architectural Analysis we have enough data, now we have to make conclusions: it is an enormous amount of information which is not clear formulated yet. Besides that we have to elaborate on some parts, like the spatial character, cross-sections and a summary of the historical development. Regarding the Technical Analysis we mainly discussed the details. We 'changed' the massive wall construction of the milling from the *opus incertum* system to a massive stone construction. I updated all the details and I will try to explain them a bit more by using photos and summarizing our thoughts. Why is it like it is?

## Presentation P1 I October 26th - November 2nd

The last couple of days I worked on the P1 presentation. I also continued working on the masterplan. Which buildings can or have to be demolished? How to translate the spatial character of the space plan of the site? And how to use the three layers of intimacy in my strategy? Do I influence the spatial character in a good way if I demolish buildings that are part of the border of complex? These questions have to be answered.





# P1 presentation | November 3rd

Today I had my P1 presentation. Fortunately it all went well! I received good comments and they liked the fact that I approach the assignment from the smaller scale, spreading the qualities throughout the surroundings. Job recommended to elaborate on the analysis of the character of the spaces, both of the complex and the buildings: go into the deep! I can also continue working on the drawings I've made based on the traffic light method of Suzanne Fischer, because they're not complete yet. Another interesting assignment could be to increase the total surface area of the building. In this way I have to deal with the same problems as the engineers had to when the complex was still active: because of the implementation of often large machinery they had to create more space. The same evening I received the comments of Hielkje (picture).

P1  
PP2 Student: Ruben Klinkenberg d.d. 3/11/16

1. GRAD.PLAN  
 RQ  
 Planning  
 Res. Method  
 + Design  
 Theme  
 Status Quo  
 Personal Drive  
 You are showing us, what others still have to do.

2. RESEARCH & ANALYSES  
 → ARCH Res  
 → BT Res  
 → CV Res  
 → Relations

3. TRANSFORMATION FRAMEWORK  
 Traffic light drawing + text +  
 → from Research → Design

4. NEXT STEPS  
 5. PRESENTATION  
 6. FINAL REMARKS  
 Ask Job

Personal Conclusions  
 Explained by Nicholas Clarke very well

Starting Points for Design  
 Learning at Academy of Programs  
 Relations from A/B/C

Master plan  
 2 scenarios  
 1. choose a building  
 2. choose program  
 just do it!

Notes: "now a brief" addressed  
 → sources named scientific approach.  
 Focus on your Building + SITE  
 Matrix of heads the presentation.  
 use full vehicles to guide you.

3. Job: - summarizing for CV is good.  
 - Spatial analysis, sections + text + images  
 Characterizing needs more reasoning. More expressions.  
 - Process of ind. production understanding the building.  
 - TR FR → test in drawing like S. Fischer.  
 @ Just an Academy of Alex? not a simple in fill but another level needed.  
 Good Start! YES

4. - Scenario's ok → dilemma's make them explicit  
 - explain Traffic lights.  
 red ... yellow ... green ...

Hielkje: - start with the boundary?  
 - technical part of it (detail)  
 - sources named  
 - program out of the blue, but based on "some thing" a step ahead.

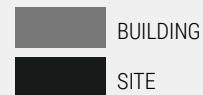
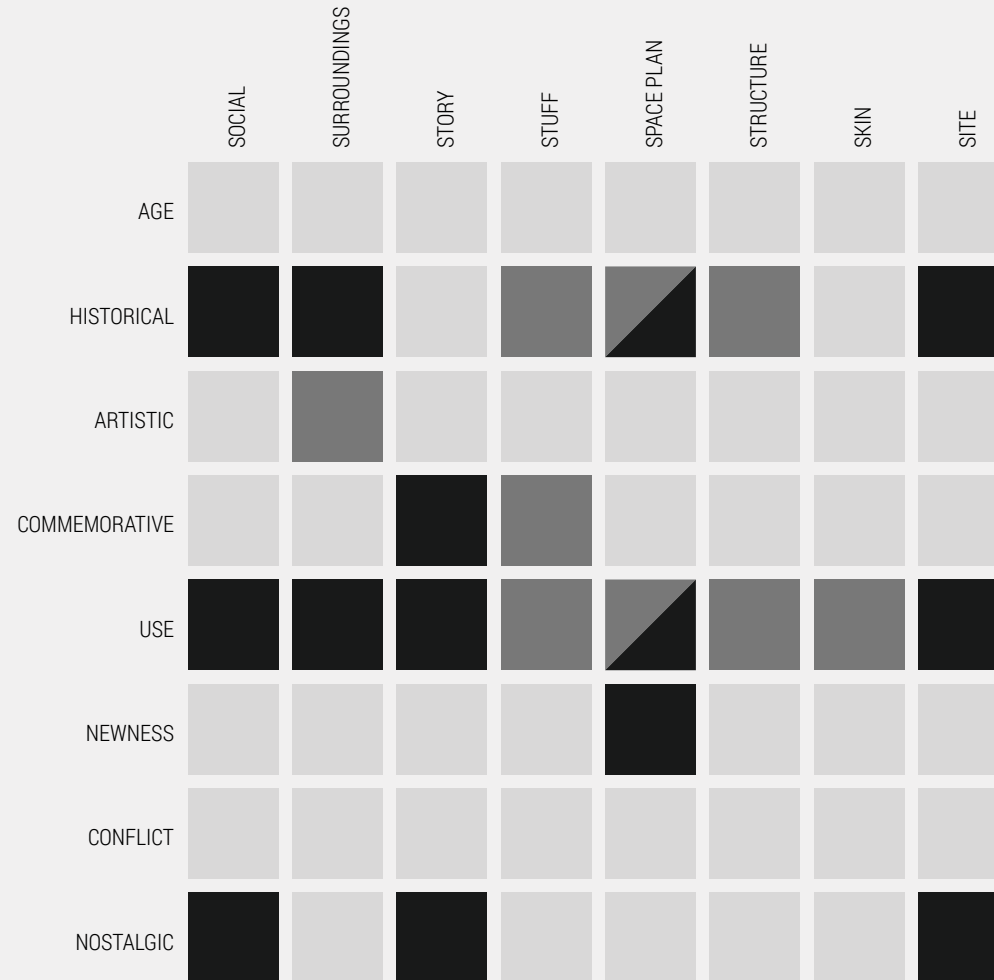
Marieke: - "non intended architecture"  
 → " " heritage.  
 - Utrecht University Complex  
 - Cott bush

Image Scans notebook Hielkje Zijlstra (received from Hielkje Zijlstra, 03-11-2016)



## P1 Presentation

As explained, the modernization of the production process played a significant role in the development and evolution of the ensemble. This is related to the military history, the spatial character of both the buildings and site and it reflects the pragmatic attitude. During the P1 I used these three themes to present my cultural values, because all values relate to them.



- 1. PRAGMATICS
- 2. SPATIAL CHARACTER
- 3. HISTORY

## Transformation framework

So far the transformation framework consists of nine elements.



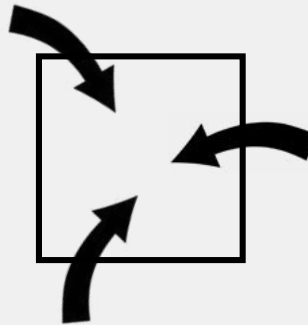
Oversize of space  
(buildings and complex)



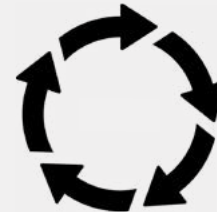
Contraform machines



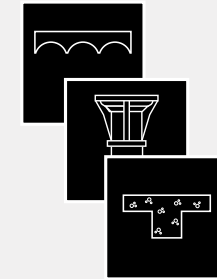
Closed / isolated character



Former accessibility complex



Anti-conservative attitude



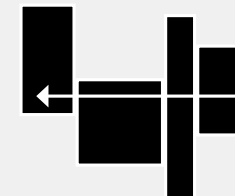
Layering structures



High bearing capacity



The ensemble is the heart  
of the complex

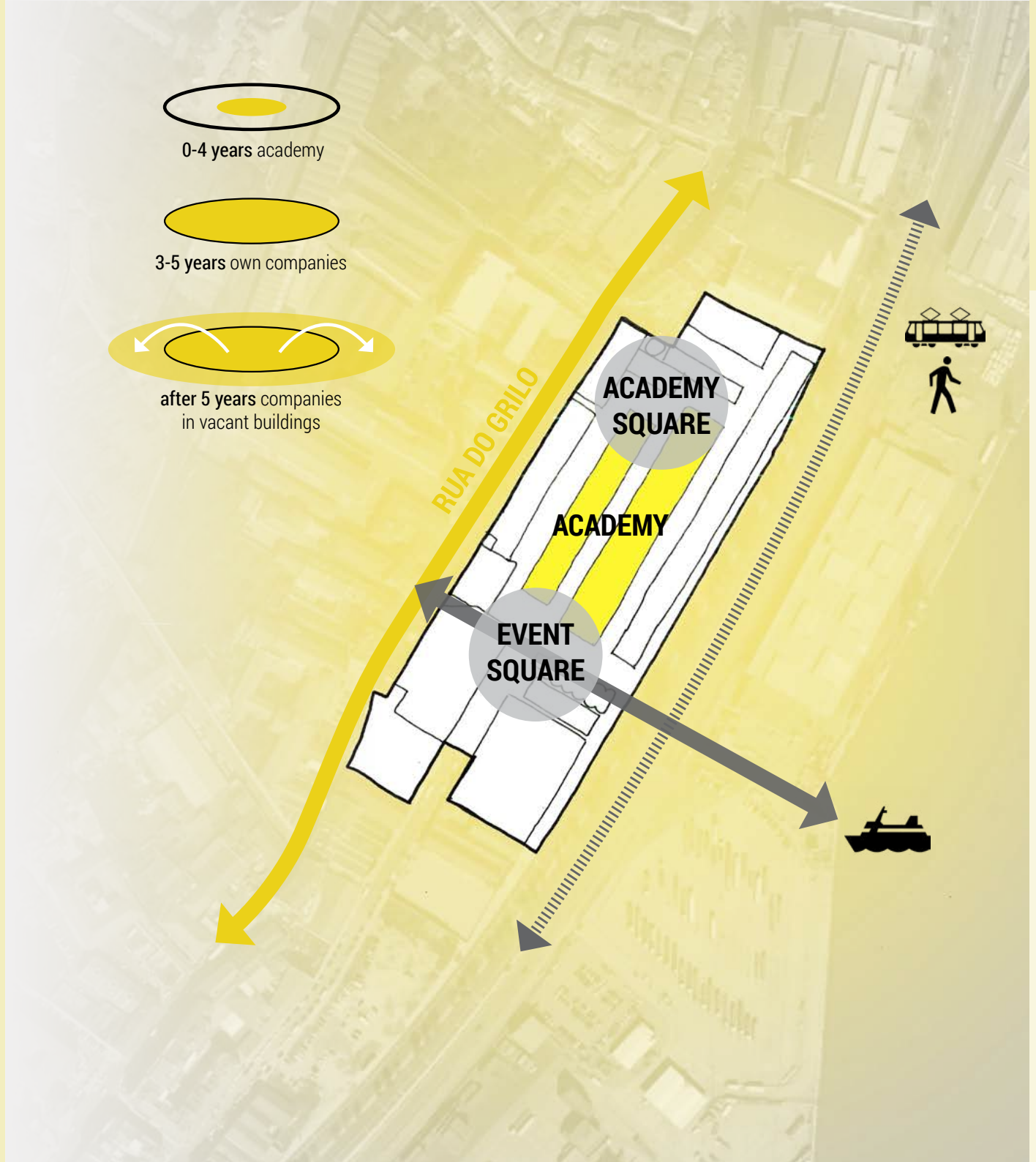
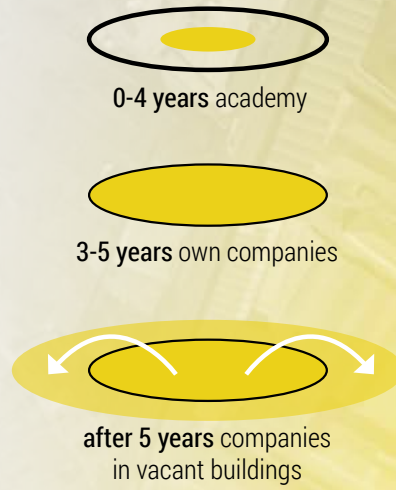


The production process  
creates unity

## Strategy

This is the strategy I presented during the P1.

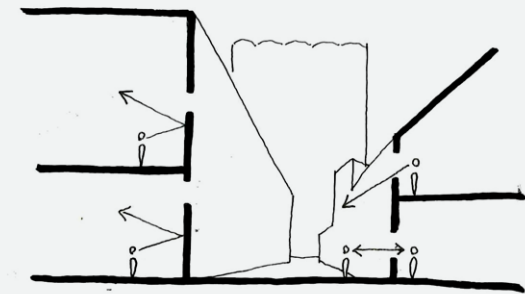
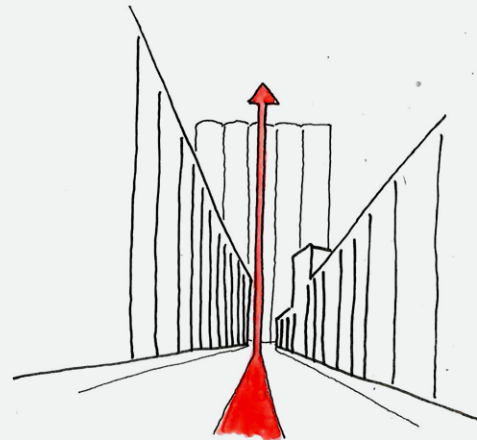
- Improve the accessibility
- Increase status Rua do Grilo
- Maintain closed character
- Translate spatial character space plan site





## Program I November 8th

During the P1 I proposed an academy of architecture, like the one in Rotterdam. I did some research to the education system in Portugal and found out that it works totally different as in the Netherlands. After nursery and kindergarten kids start at an age of six year with the basic education (9 years). After this they go to secondary school, which take three years. During secondary school the student can choose a specific programme, like higher education oriented, work-oriented and an artistic-oriented program. After secondary school one can only choose for the polytechnico or university. There's a big gap between secondary school and (possible) further education (a gap between practice and theory). Because a lot of young Portuguese people are unemployed, it is better to focus on them instead of international students. Although an academy is practice oriented, it is probably better to propose a vocational school. This school can be related to the restauration of buildings. Lisbon can function as the perfect object for research and maybe students can restore (vacant) buildings as part of their curriculum. Both the city/owner can student benefit from this. I also started to elaborate the analysis of the character of the space plan of the site. We've chosen to add a reduction of the already made perspectives and a section to illustrate the relationship between the indoor and outdoor spaces.

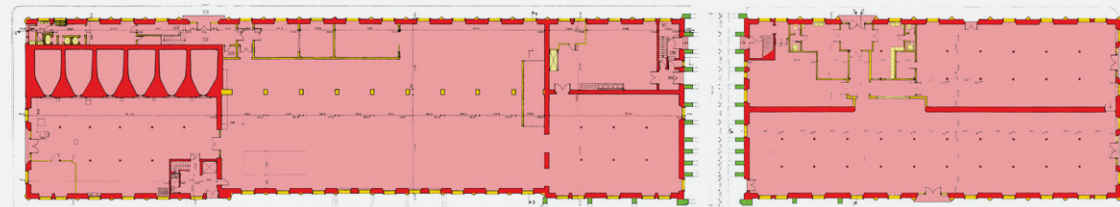
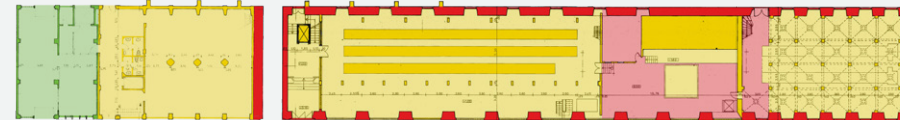


## Chronological evolution I November 9th

Today I made drawings of both the bakery and mill building in which I valued the age of the different construction parts. As an inspiration for this I used the drawings of Suzanne Fisscher she made for the Unilever building in Rotterdam. As you can see the bakery and cookie factory are almost original, while in the mill building a lot have changed: construction parts from different ages are combined, except from the silo and storage.

At first sight I did not agree with this way of valuing, but I have to admit that it can be helpful: you have to colour every single piece. For this reason you have to take everything into account. I can use these drawings for my own design, but also as conclusion drawings for the Technical Analyses. Besides this I made some scenarios to increase the total surface area of the ensemble. As explained, this is one of the interesting assignments during my graduation project. I made a lot of sketches of it and Friday I will make some first simple models of the different scenarios.

- High value
- High value (in view)
- Average value
- Average value (in view)
- Low value
- Low value (in view)



I made a similar drawing of the whole complex. The age value is determined by the period in which the building is constructed.

#### *Monarchic Period*

The oldest part of Beato. The character is embedded in convents, palaces and the connected outdoor space that was mainly used for agriculture. Some traces are still left in the surroundings and on the site itself.

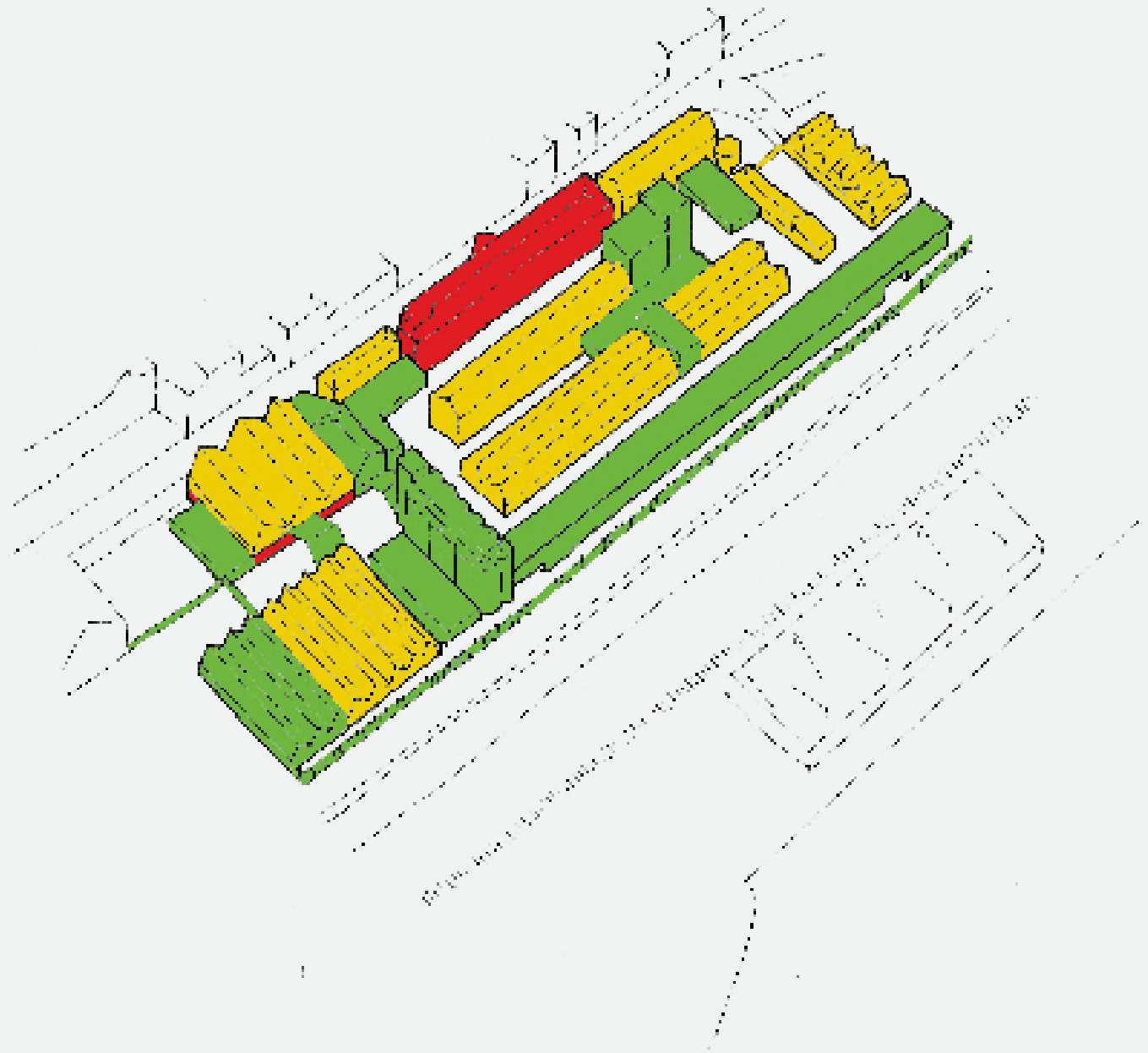
#### *Republican Period*

The first industrialization of Beato. The character is embedded in relatively small volumes and detailing of the buildings (cast-iron). Most of these buildings have been reconstructed over time to keep up with the production process.

#### *Dictatorial Period*

The optimization of the production process and the introduction of social facilities. The character is embedded in the grand scale and use of modern building techniques. The scale and way of buildings is in contrast with buildings from the republican period.

- High value (monarchic period)
- Average value (republican period)
- Low value (dictatorial period)



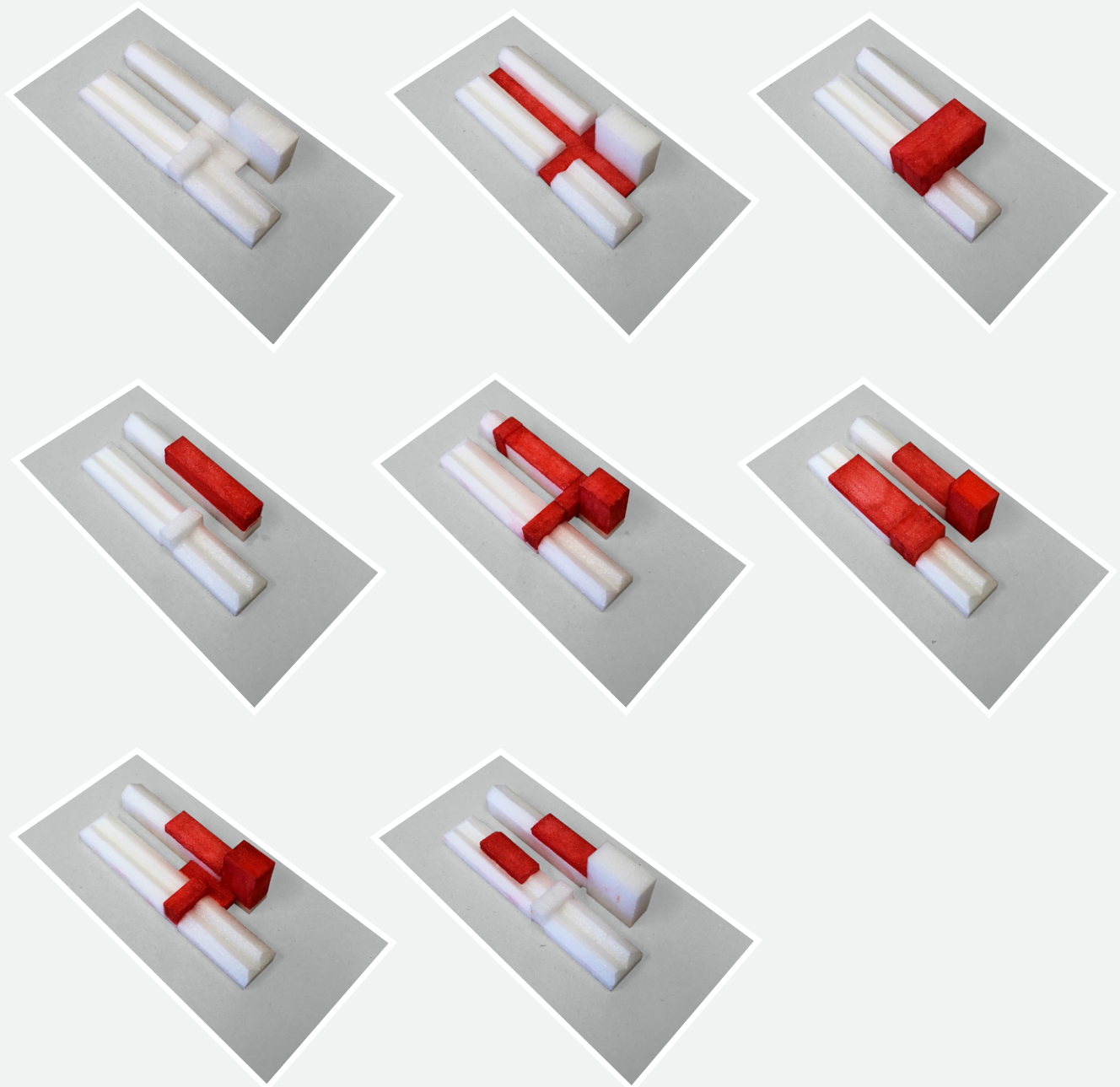


## Models | November 11th

Today I made some scale models (1:1000) of variants to increase the total surface area of the buildings, because my program will have more square meters than the existing buildings (milling, bakery and cookie factory) have. These are the first models, I hope I can add some in the coming week! As a result of these models I've added some elements to my transformation framework (linearity of the streets, intimate character of the in-between street and the fact that the silos are landmarks of the MMC). Next week the focus will lie on finishing the analysis!

## Feedback reports | November 14th

Today we've discussed the 80% of the Architectural and Technical Analysis Reports with Job, Hielkje and Wido. The comments were quite positive! Concerning the architectural analyses we have to elaborate on the characteristics of our ensemble. Besides that we have to finish the separate parts of the report. This means that we have to organize our findings. We will do this by starting every part with a specific research question. Concerning the technical analysis we have to add the parts that are missing, like the state of conservation, and elaborate on the texts and the relation of it with the images. Still a lot of work that has to be done for next week!



Lisbon is a 'sloping city'. Therefore, despite the limited height, the silo and storage of the milling constitute a landmark of the MMC.



Image  
The silo and storage of the milling as landmark (photo  
by Ruben Klinkenberg, 05-09-2016, own editing)

Ruben Klinkenberg | Process Logbook

The large silo functions as a face to the city.



Image  
The large silo as a face to the city (photo by Daan Masmeijer, 27-11-2016, own editing)

Ruben Klinkenberg | Process Logbook



## Tutoring I November 15th

Today I discussed my findings with Job. First I explained my new program: I switched from an architecture academy to a craftsmanship school. I need to get know the program of requirements. But what are the related functions? I mentioned the word campus or 'leerfabriek', so I need to think about the other functions (dwellings, sport, shops, etc.). Because if it's becoming a campus, I do not focus only on the central intimate street. For this I have to make scenarios, which I want to work on this week. We also discussed about my model variants. Job think this is a good practice. The 'pragmatic' idea about reusing and adding quality to the concrete structure is a good starting point. He also mentioned other projects, Nantes school of architecture by Lacaton and BK-City by Braaksma & Roos architectenbureau, to do research to. First-mentioned projects has an oversize of space, while every square meter in BK-City is used for the new program.

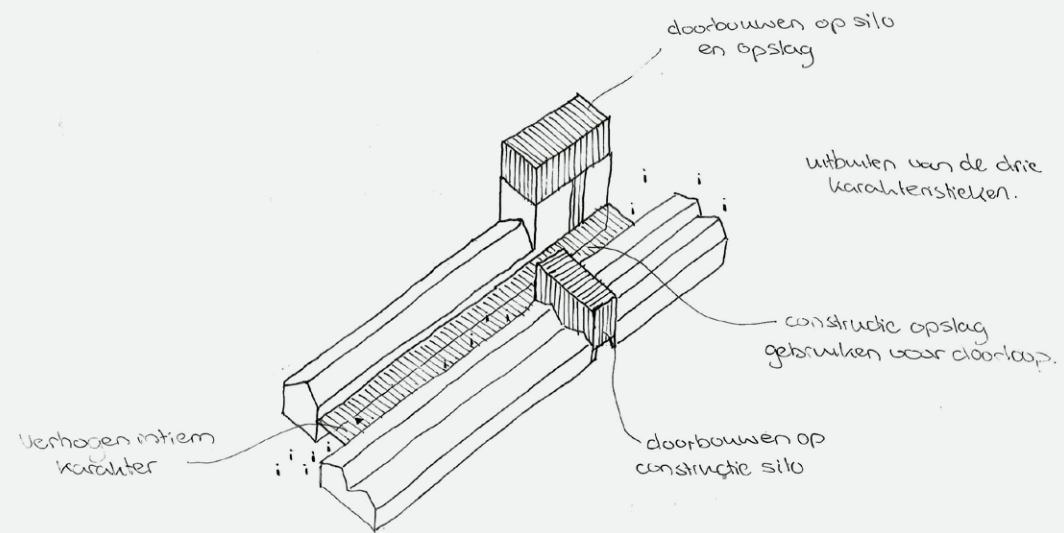
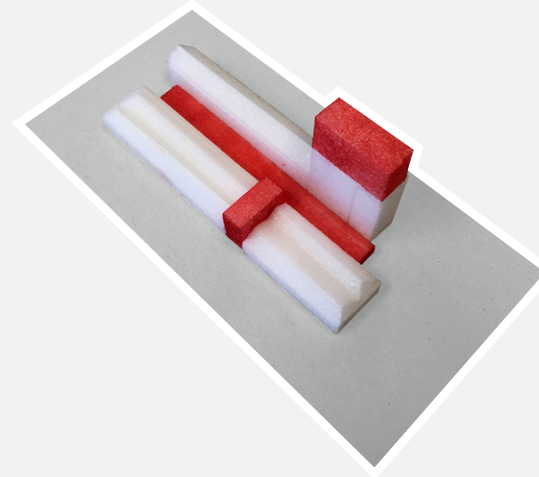


### Images

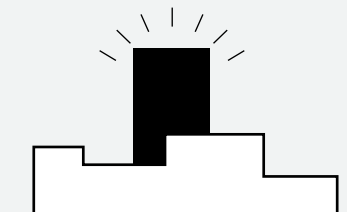
1. BK-City, Delft (photo by Arjen Veldt, Accessed on January 5th, [www.braaksma-roos.nl](http://www.braaksma-roos.nl))
2. Nantes school of architecture by Lacaton & Vassal (photo by Philippe Ruault, 2012. Accessed on January 4th, [www.archdaily.com](http://www.archdaily.com))

## Technical Analysis - November 16th- 21th

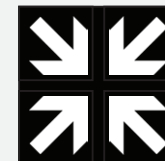
As a group we decided that I will finish the technical analysis this week. I worked on the remarks Wido made and supplemented the analysis. For example, I calculated the total weight of the wheat that was once inside the silos. This was so much that it is possible to make an addition on top of the silo. Ironically, these silos are only used for a few years: the Ultramar War ended a few years after they were built and the production rate decreased. Besides the technical analysis, I made an overview of the characteristics of our ensemble for the architectural analysis. Some of these characteristics are the silos of the milling (landmark), the intimate character of the in-between street and the connection between the cookie factory, milling and bakery for the purpose of the production process. I've added these elements to my transformation framework as well, because I think these characteristics are real qualities of the buildings that should be taken into account. This information, together with the calculation of the weight that was once in the silos, has brought me a new variant to increase the total surface area of the buildings: an addition on top of the silo and cover the in-between street. In this way I emphasize the landmark, the fact that the buildings constitute the heart of the complex and the intimate character of the in-between street. I also make use of the high-bearing capacity of the structure.



High bearing capacity



The silo and storage are a landmark



Intimate character of the in-between street

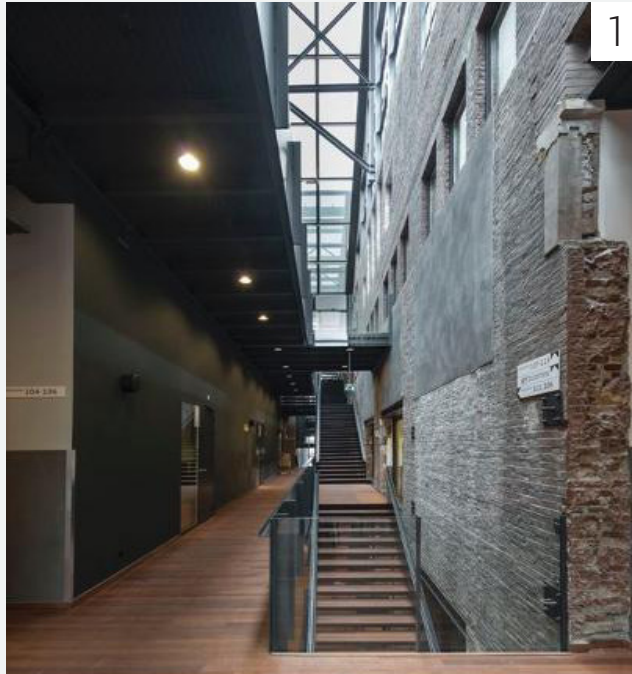


The ensemble is the heart of the complex

## Tutoring I November 22nd

The tutoring went well. I showed the model and perspective (previous page) and explained the thoughts behind this design. What is the character and function of the in-between street? Job mentioned a project he worked on by himself: the KNSF terrain in Oudekerk aan de Amstel (NL). Another example is the Energiehuis in Dordrecht (NL). We also spoke about the program. I wasn't satisfied with the switch to a vocational school. Especially after seeing the project of Lacaton & Vassal I went back to my first idea: an academy of architecture.

Regarding the masterplan/strategy, Job was wondering if it is necessary to make the complex accessible for motorized vehicles. What could be the function of the 'industrial' street? Finally I've chosen to transform it into an activity street (place to move). In this way I emphasize the character of both the complex and buildings (student housing).



### Images

1. Energiehuis, Dordrecht (photo by Christiaan de Bruijne. Accessed on January 5th, [www.dearchitect.nl](http://www.dearchitect.nl))
2. KNSF terrein, Oudekerk aan de Amstel (Accessed on January 11th, [www.braaksmaroots.nl](http://www.braaksmaroots.nl))



## Program

The program is based on the demographics of Beato. The level of high educated people in Beato is significantly lower than in the whole of Lisbon. In addition, the unemployment rate (16%) is higher than the unemployment rate in Lisbon. To boost the surroundings I've chosen to design an academy of architecture. This educational institution can bridge the gap between practice and theory and attract young people to Beato (26% of the population in Beato is 65 years or older).

The program is based on the Nantes school of architecture and includes:

- Ateliers
- Auditorium
- Exhibition
- Restaurant
- Library
- Classrooms
- Multimedia
- 'Espace libre'

I added workshops and shops, like is the case in BK City.

Image

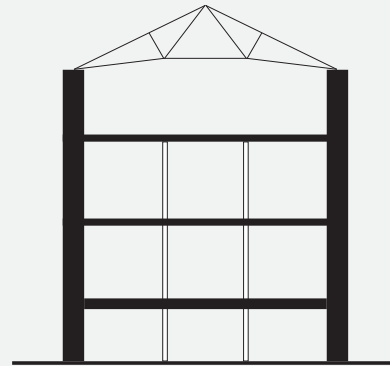
Nantes school of architecture by Lacaton & Vassal  
(photo by Philippe Ruault, 2012. Accessed on January 4th, [www.archdaily.com](http://www.archdaily.com))

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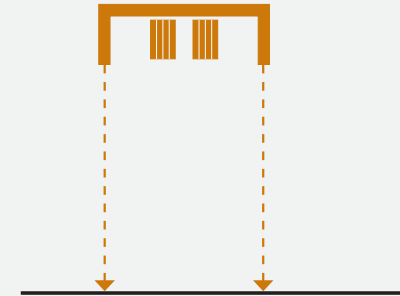


## Program

The academy does not fit in the existing buildings. This dilemma is deliberately created to deal with similar problems as in the past: the modernization of the production process, and thus the implementation of often larger machines, asked for more space. The milling is probably the best example of creating more space, by adding a basement, to be able to implement the bigger machinery.



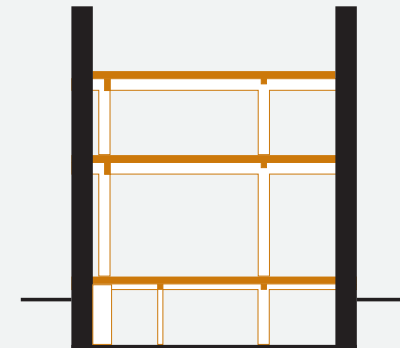
1. Existing



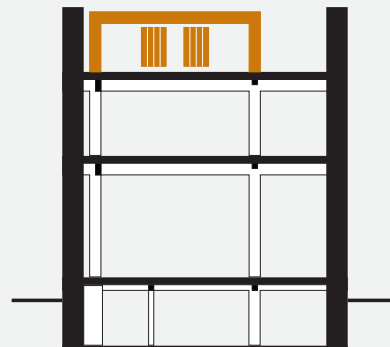
2. New machinery



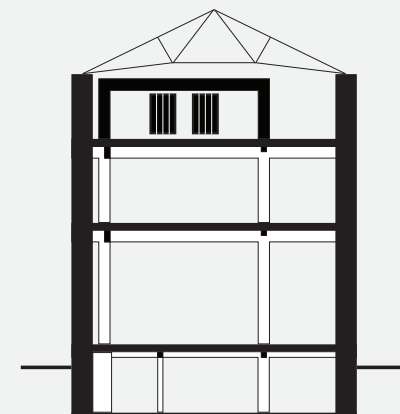
3. Removal of the floors



4. Basement and new structure



5. Installing machinery



6. Replacing original roof

## Site visit | November 23th - 28th

This week we went for the second time to Lisbon to visit the location and enjoy the city. I mainly focused on the surroundings of the complex, like the Rua do Grilo and the Av. Infante Dom Henrique. First-mentioned street used to have a lot of status, but nowadays this is totally vanished (vacancy of the MMC, not connected with the water anymore, etc.). I found out that the railway near the Av. Infante Dom Henrique is still in use. As presented during the P1, I wanted to transform this railway into bike- and footpath to connect the complex with the Expo and city center. But there is already a bike- and footpath which connects the complex with the city center. I can make use of this path as well. We went to the new MAAT museum in the district of Belem. The area of the museum is connected with the hinterland via a footbridge. This bridge can inspire me to make a comparable connection with the water. We also visited the site and we got a tour in the former convent: we didn't know there was a museum inside this building. We found out that the convent was used to house apartments. In the museum I saw a picture of the milling on which no underpass was visible. I also went into the connection (storage) between the bakery and milling. I found out that there have always been a connection between the buildings for the purpose of the production process. During this week I also made drawings of the street between the bakery, cookie factory and milling (height, length, etc.). I've added two elements to the transformation framework: the former status of the Rua do Grilo and the physical and functional connection between the bakery, cookie factory and milling.







Image  
Bike- and footpath (photo by Daan Masmeyer, 27-11-  
2016, own editing)



Image  
Footbridge MAAT museum (screenshot street view  
Google Maps)



No underpass visible milling.



Image  
Birds eye view MMC 1934 (photo by Ruben  
Klinkenberg of image in MMC museum, 24-11-2016,  
own editing)

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Already in the 1920s the bakery, cookie factory and milling were connected with each other (for the purpose of the production process). Because of this connection and the intimate character of the in-between street the buildings can't be separated: they constitute the heart of the complex.

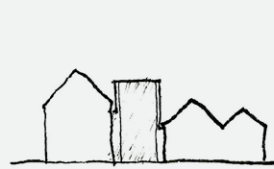


#### Images

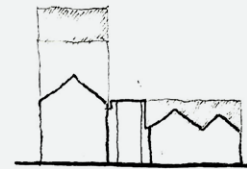
1. Connection bakery and cookie factory (screenshot video of 1927, [www.cinemateca.pt](http://www.cinemateca.pt))
2. Connection cookie factory and milling (screenshot video of 1927, [www.cinemateca.pt](http://www.cinemateca.pt))
3. Storage (photo by Hielkje Zijlstra, 01-09-2016, own editing)



Alternatives street between bakery and milling.



Glazen volume als verbinding met eigen constructie



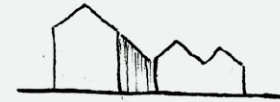
bruggen of een entresol?



Verschillende niveaus die via trappen met elkaar verbonden zijn.

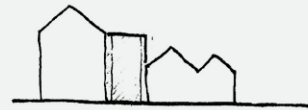


Verbinding ter hoogte van dakgoot bakkerij



Het dak past zich aan aan schuines/dakgooten gebouwen. is het dan een straat of een onderdeel van het volume?

open of een gesloten dak?



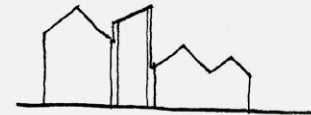
Verbinding ter hoogte van dakgoot milling.



De straat heeft eigen niveaus waarde andere gebouwen de as op aansluiten?



Verbinding met een eigen vorm, of te?



schuindak voor lichtinval of zonne-energie.



trappen die in de ruimte hangen.

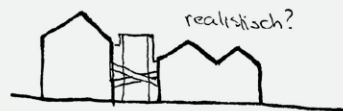


Wanden door laten lopen en af en toe connectie?



een volume dat rust op beide gebouwen

geen connection..



Bruggen in de straat die de verschillende niveaus verbindt?

realistisch?



Eén entresol die de boel met elkaar verbindt

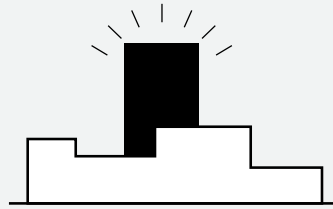


mezzanine in hallway?



Verschillende ruimtes stellen de verbindende straat. soort balkons

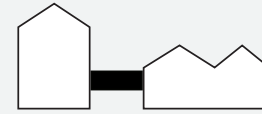
Transformation framework



The silo and storage are a landmark



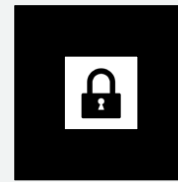
High bearing capacity



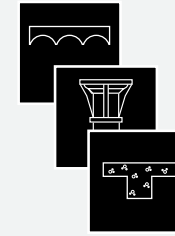
Connection between the buildings



Oversize of space  
(buildings and complex)



Closed / isolated character



Layering structures



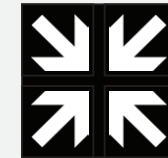
Former status Rua do Grilo



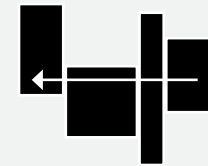
Anti conservative attitude



Contraform machines



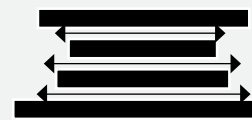
Intimate character of the in-between  
street



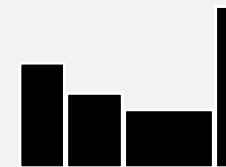
The production process  
creates unity



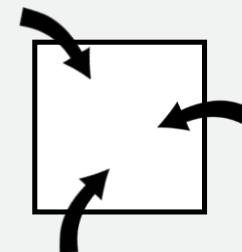
The ensemble is the heart  
of the complex



Linearity of the buildings and streets



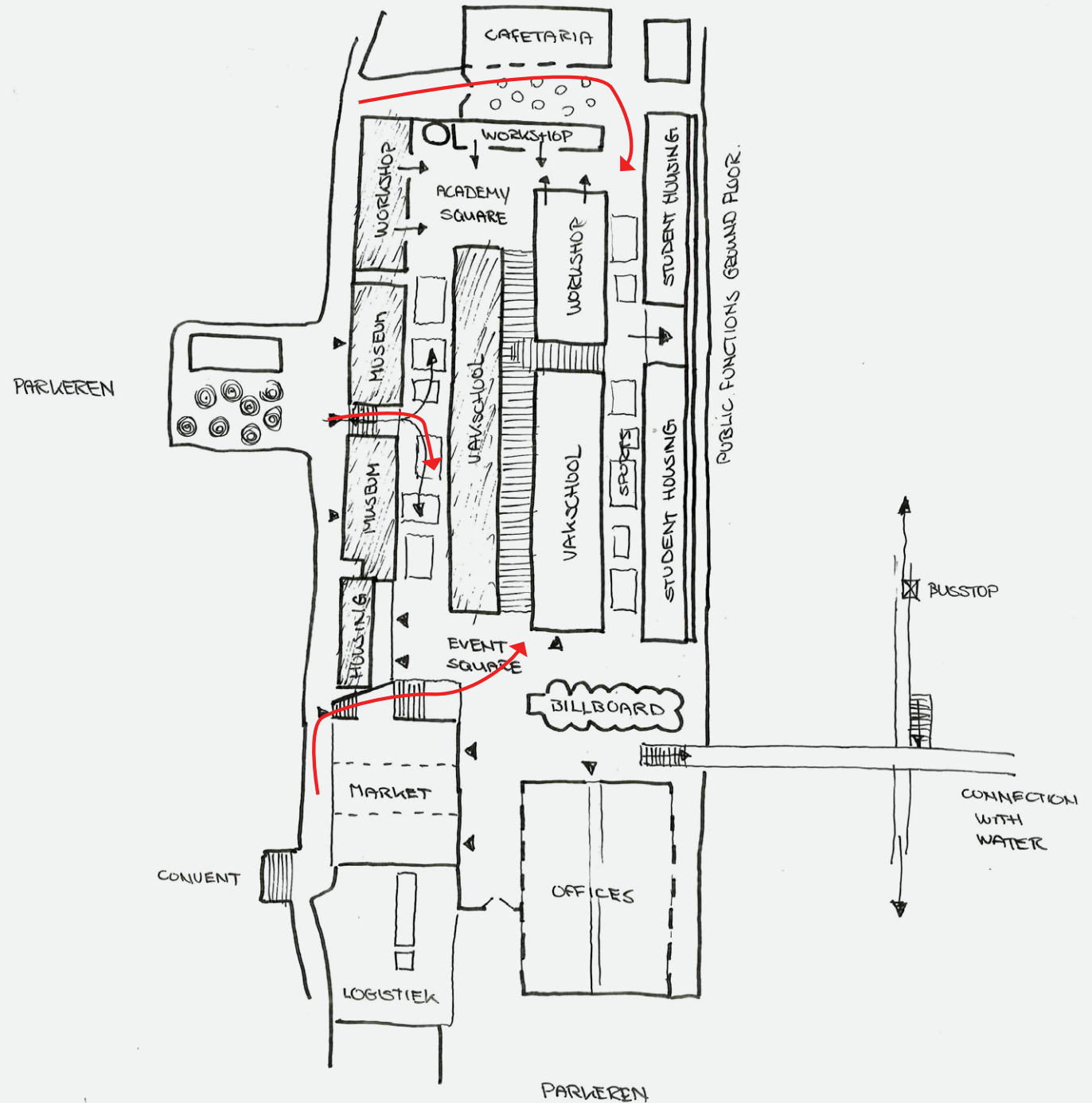
Different characters building  
components



Former accessibility complex

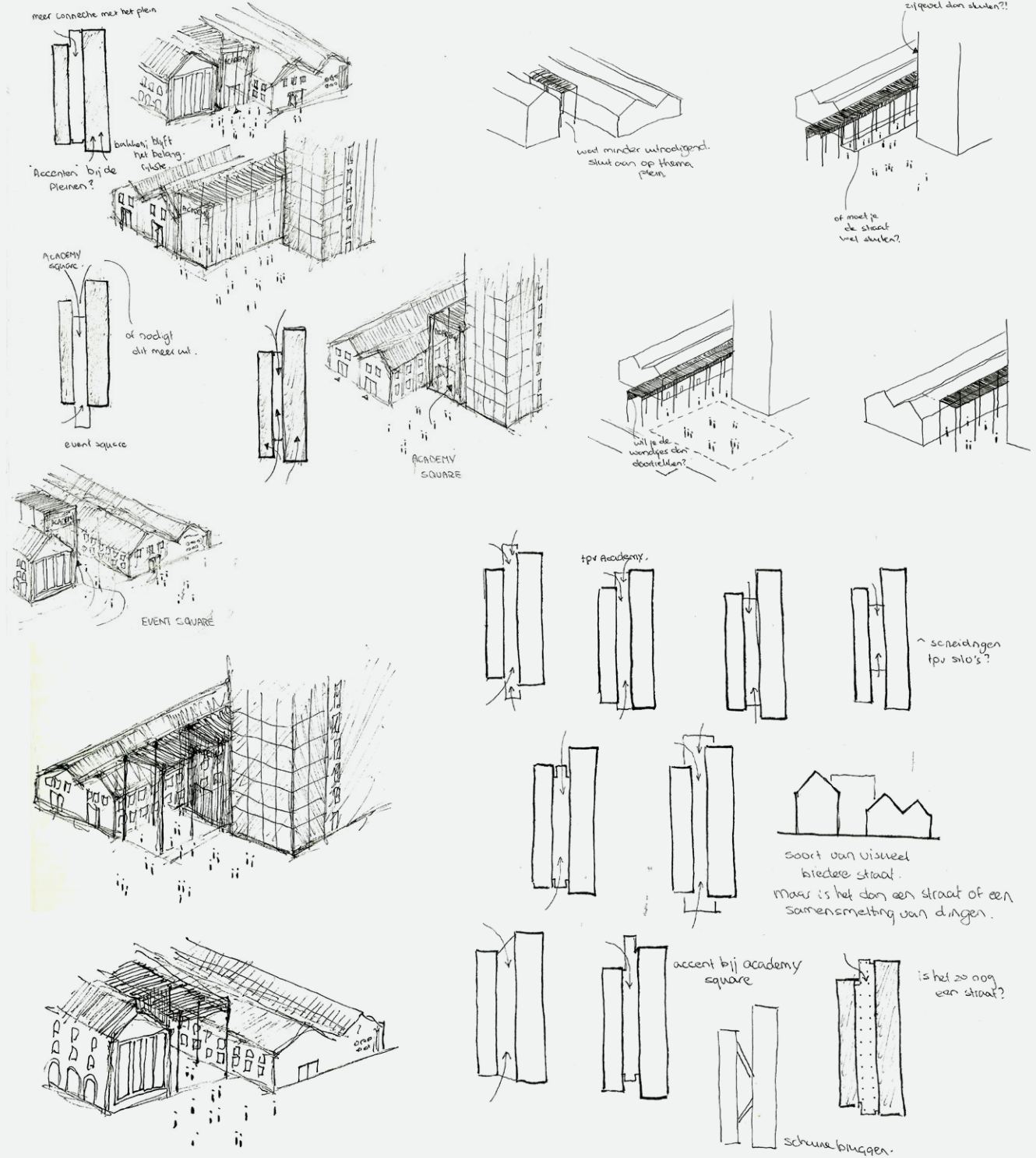
## Design I November 30th

Today I continued working on the Masterplan. I changed it based on the findings during the site visit. I made entrances to the complex on the Rua do Grilo to raise its status and positioned dwellings in the convent. These dwellings are oriented towards the Rua do Grilo to maintain the rustic character of the adjacent street. I also connected the footbridge to the existing bike- and footpath. Because motorized vehicles are banned from the complex, I changed the accessibility of the complex. Besides the masterplan, I worked on the design of the street between the bakery and milling. What is the length of the street and how does it respond to the two squares on the complex? Finally I worked on the division of the functions in the building. Can the auditorium be in the addition on top of the silo? Logistically this is not the best solution. The function of the street is to connect, should therefore the auditorium not be on this street? Does it have to be a closed auditorium or can it be open? Instead of the auditorium the library can be located in the addition on top of the silo. How can I use the silos? For an archive or vertical circulation? Nice references are the Sudhaus Adambräu in Innsbruck (DE) and the Ruhmuseum in Essen (DE). I decided that every building component, each with their own character, houses an own function/theme of functions.





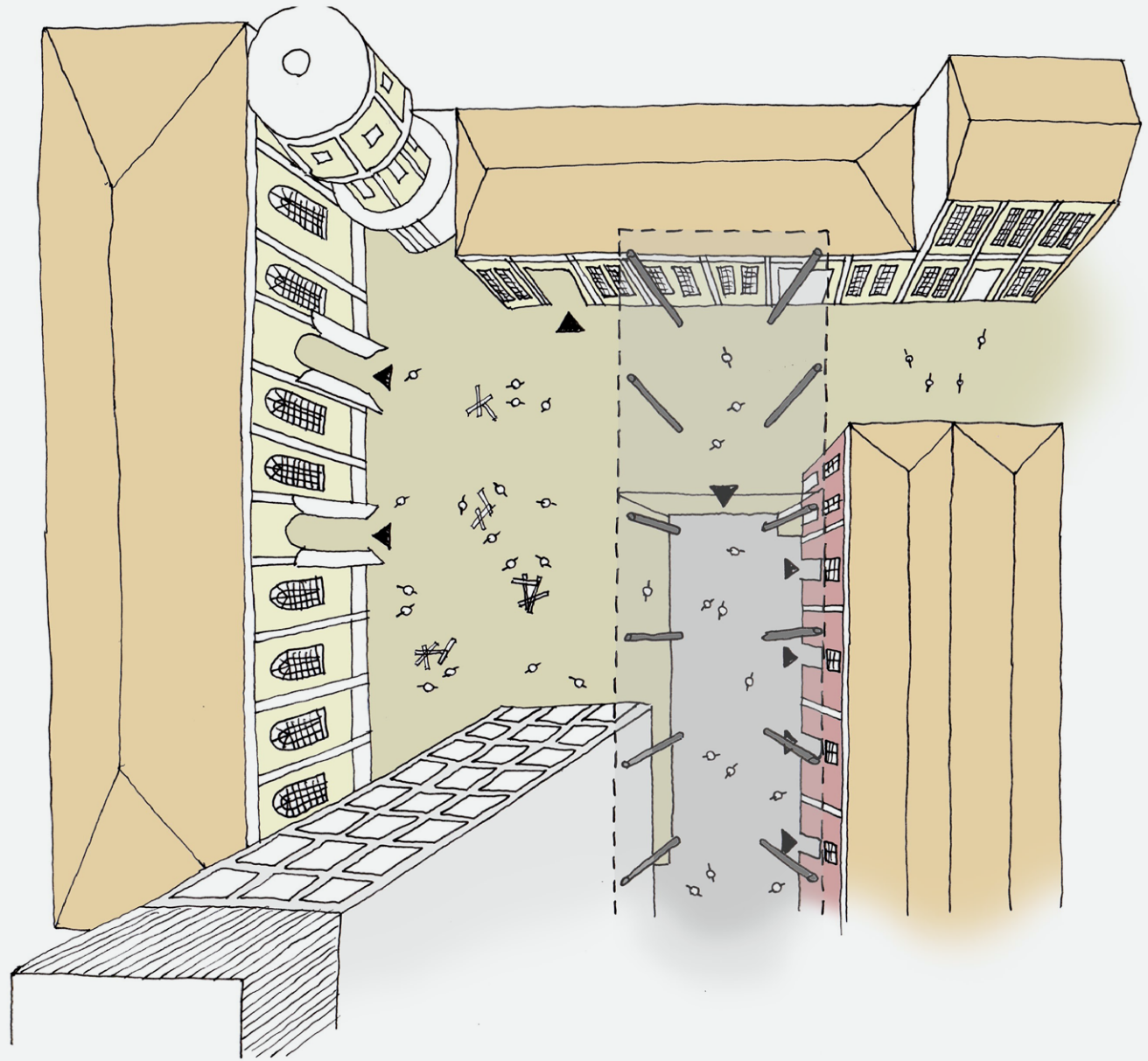
Study to the length of the street.



The length of the street is tuned to the function and character of the two squares. The street is extended to the north to emphasize the more closed and private character of the academy square. On the side of the event square the street is more subdued, this square is less defined.



The street is extended to the north to define the academy square.





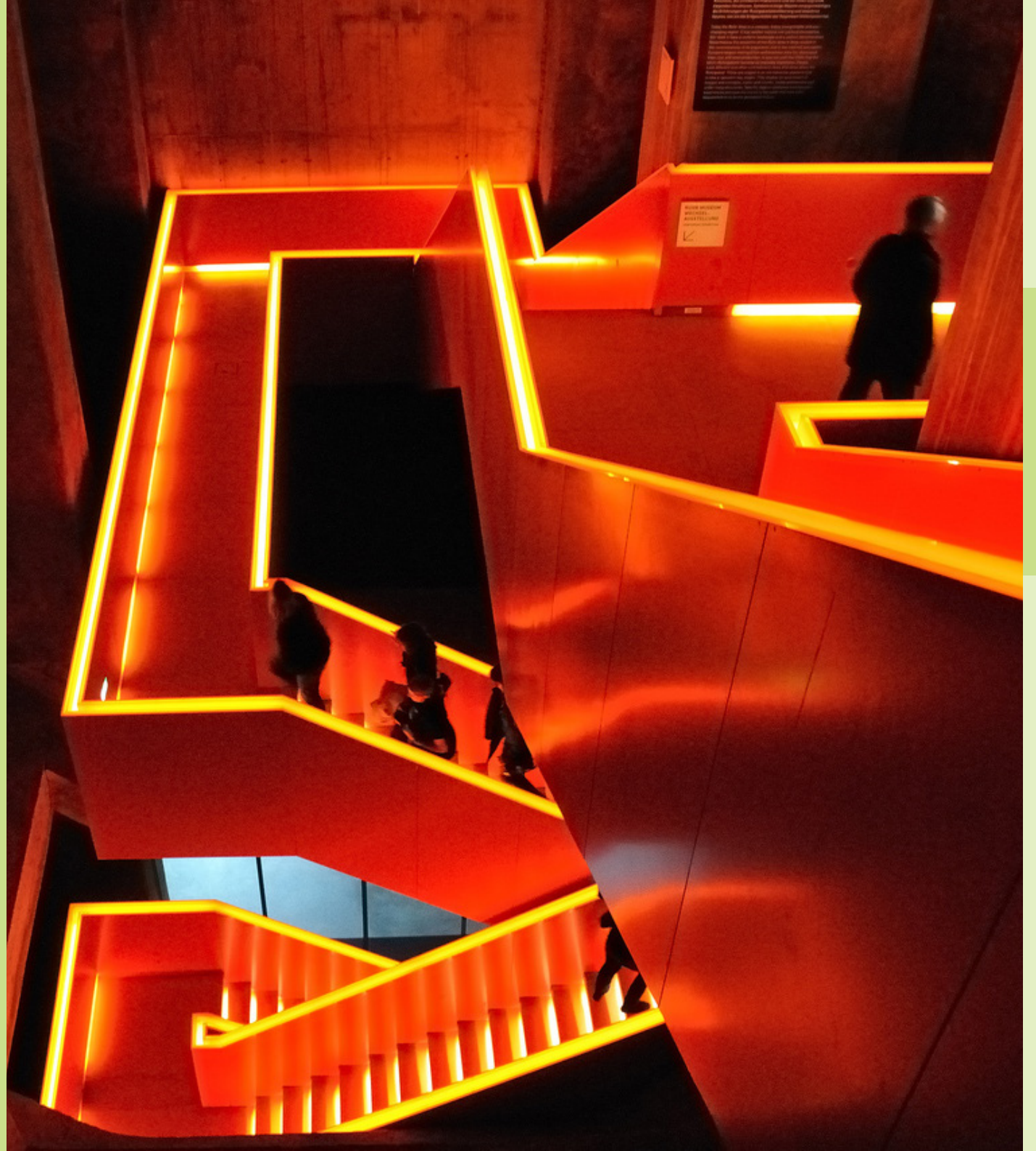
Images  
Sudhaus Adambräu, Transformation House of  
Architecture, Innsbruck (photo Lukas Schaller.  
Accessed on January 6th, [www.miesarch.com](http://www.miesarch.com))

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Images  
Ruhr Museum, Essen (Accessed on January 6th, [www.fotocommunity.de](http://www.fotocommunity.de))

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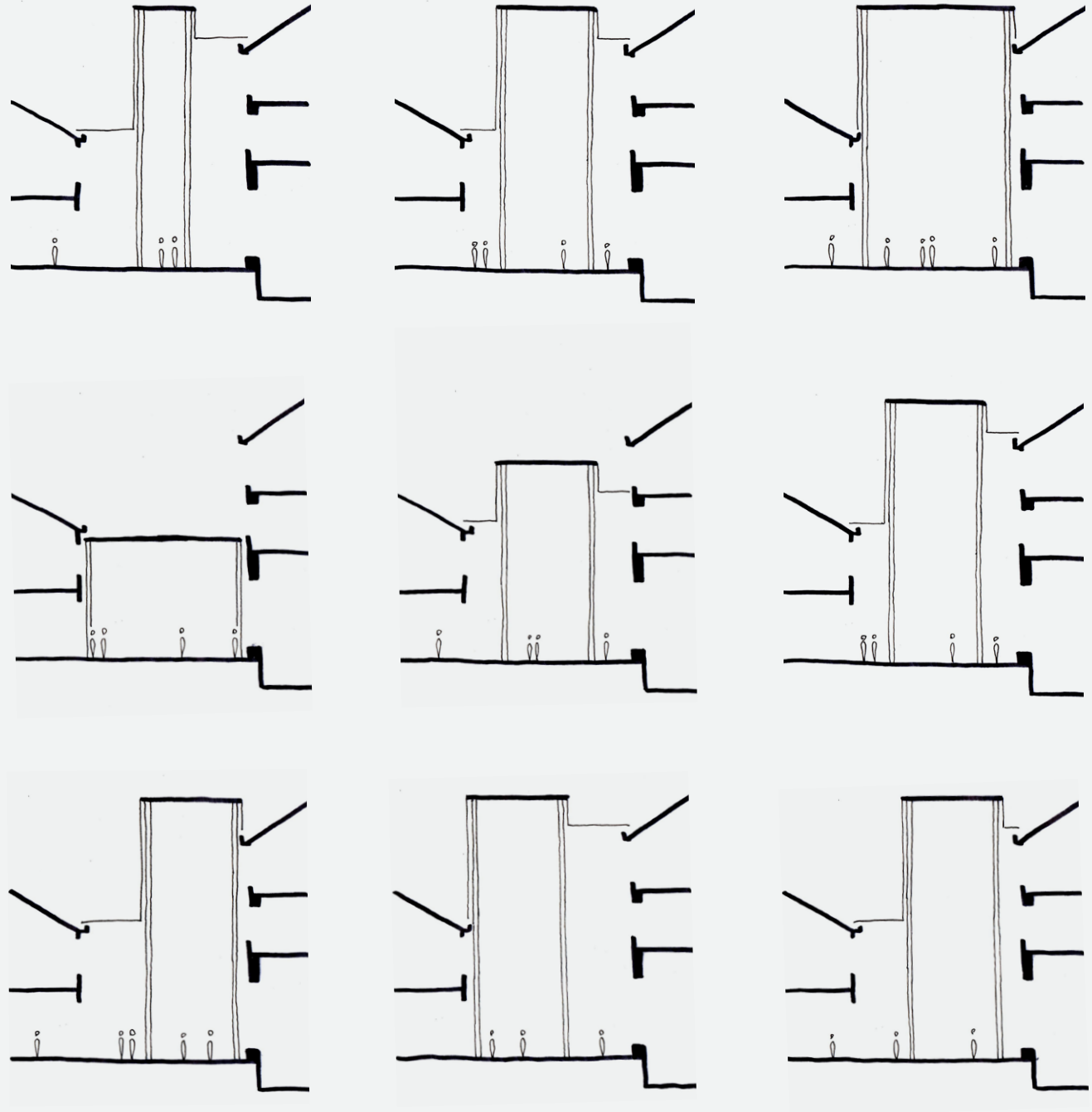




## Design street | December 5th - 7th

These days I focused on the design of the new street. What should be the height, width, position and atmosphere of it? This was also the main topic during the tutoring.

Adjacent several alternatives for the width, height and position of the street in relation to the bakery and milling.

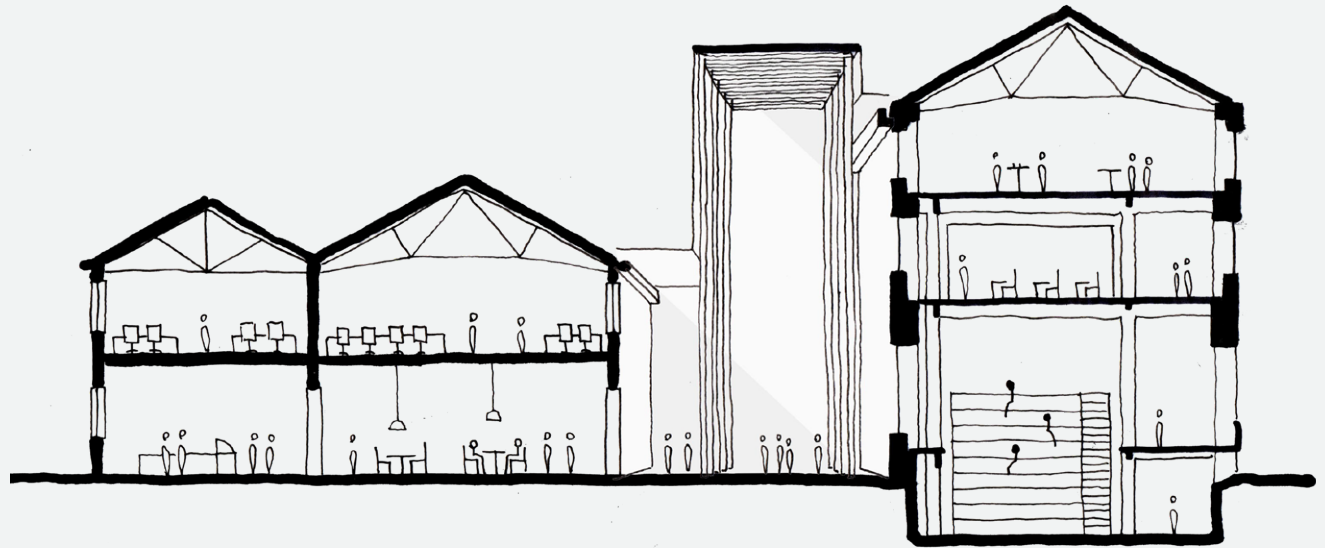


These models are made to determine the atmosphere of the street. Should it totally be closed off or entirely made of glass?



Finally I've chosen for this combination of alternatives, because:

- It is technically advantageous
- The Rhythm of the columns connects the buildings
- It has an own identity
- It has also an oversize of space
- The closed roof defines the street
- It is still open and light (street, public character)
- The position reacts to the functions (buffer)

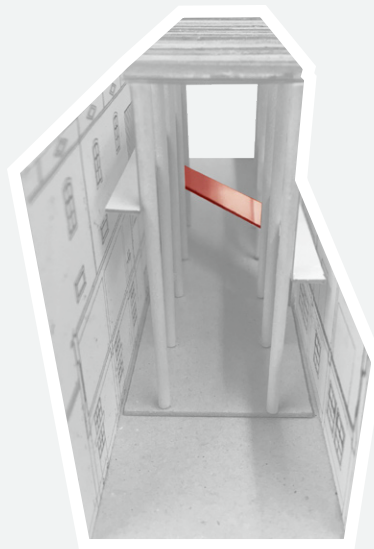
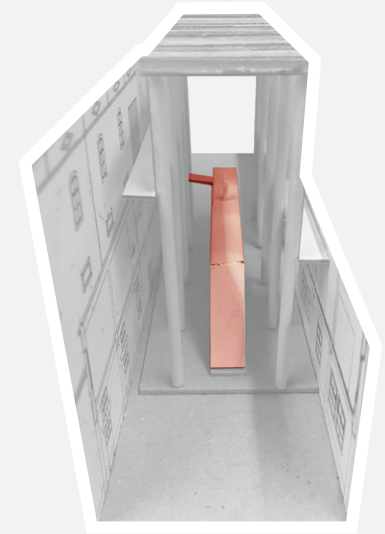
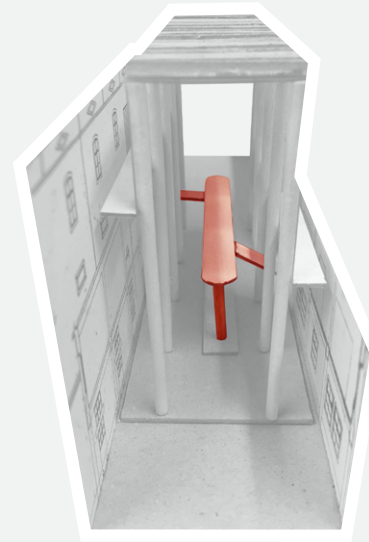






## Interior street | December 8th

Models are made of alternatives of how to emphasize the public character of the street and improve the circulation (creating shortcuts for the staff and students). I want to create this by making a connection on the first floor between the bakery, cookie factory and milling. Some of the alternatives are based on references, like The Resident in The Hague by cepezed. Can I reuse the existing concrete structure? The design also depends of the design of the side street, which will be discussed later.



Also drawings are made to define the 'interior' of the street.

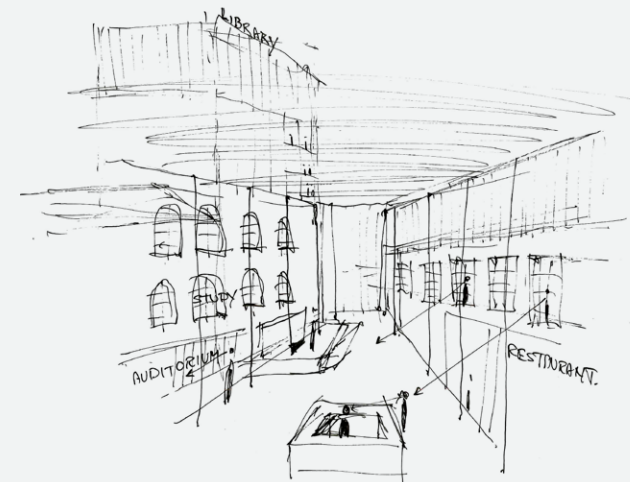
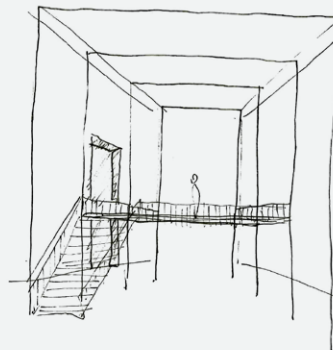
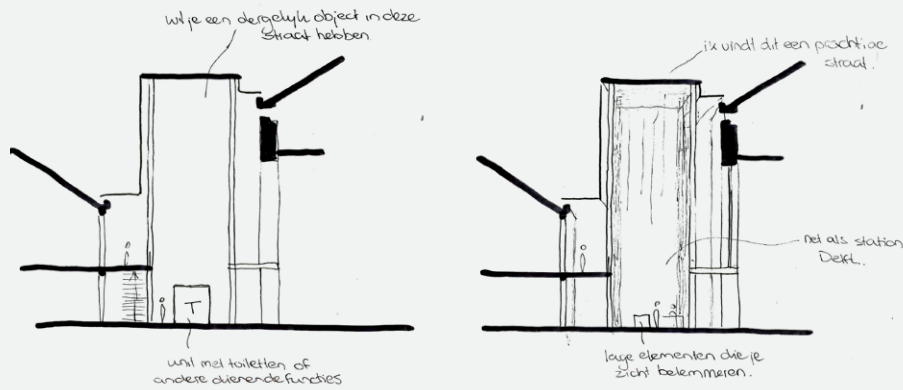
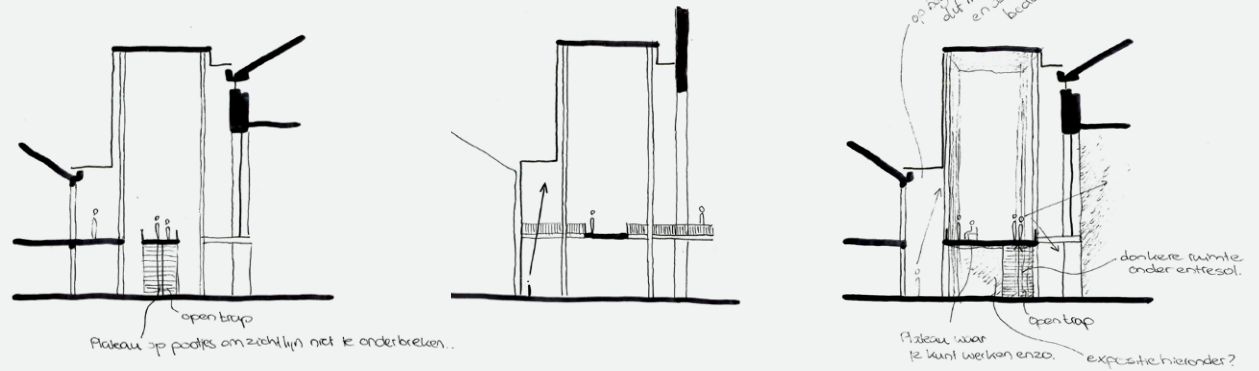


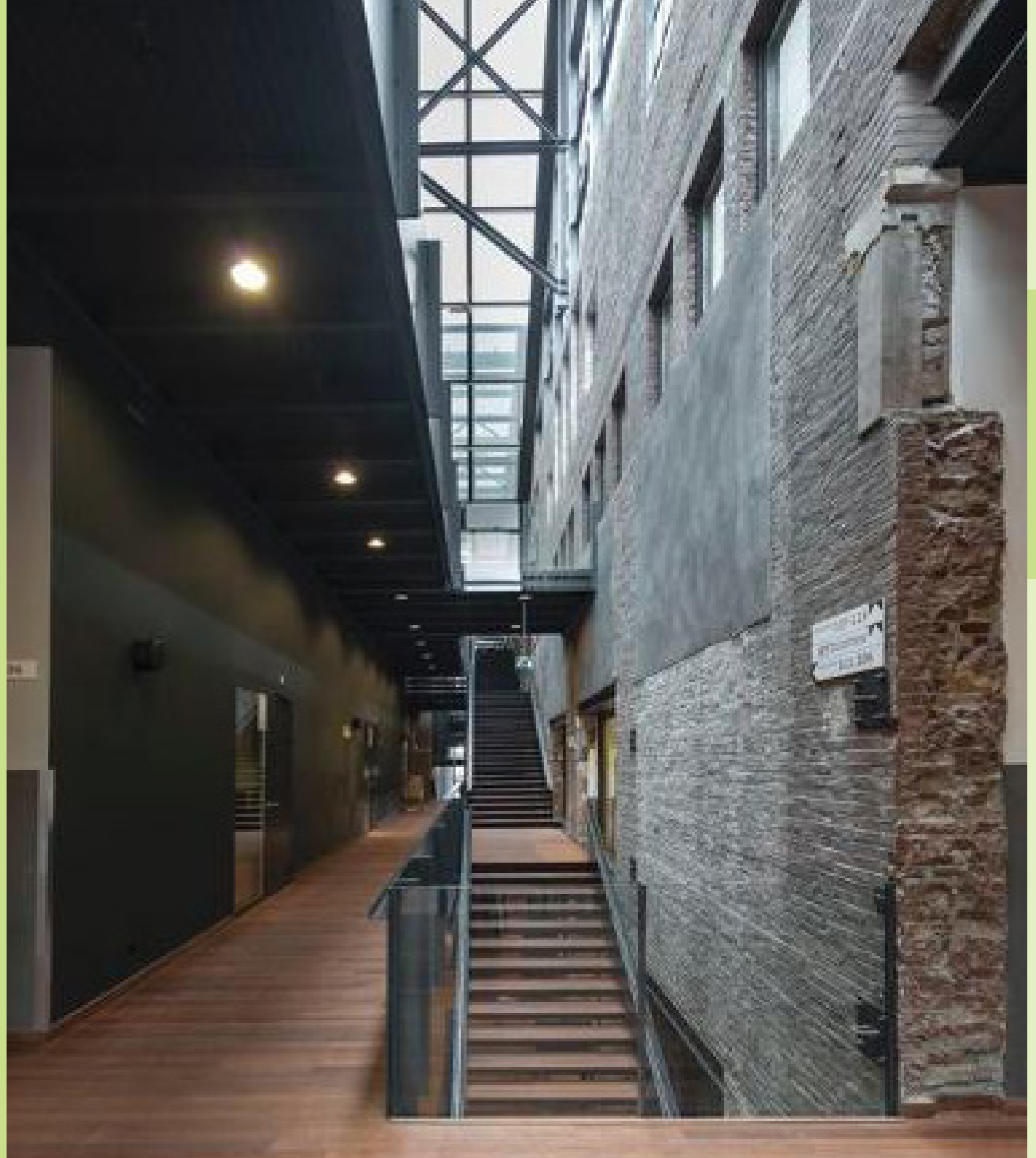


Image  
De Resident, The Hague (photo by Leon van Woerkom.  
Accessed on January 5th, [www.cepezed.nl](http://www.cepezed.nl))



Image  
Energiehuis, Dordrecht (photo by Christiaan de Bruijne.  
Accessed on January 5th, [www.dearchitect.nl](http://www.dearchitect.nl))

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As explained, every building component houses a different function. For example, an archive is positioned in the small silos of the milling and an auditorium and classrooms are situated in the 'concrete' part of the milling. Since I treat the building components as separate parts, every building component has its own vertical circulation as well, which has to be connected to the street. I really want to reuse the existing stairs. As you can see, not all staircases connect to the street. This forces me to create a kind of a side street. For this I made some alternatives.



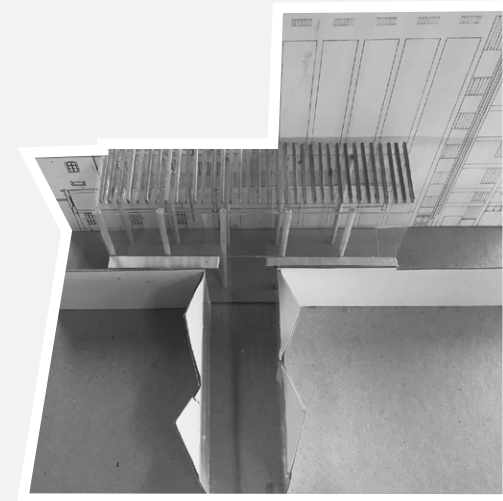
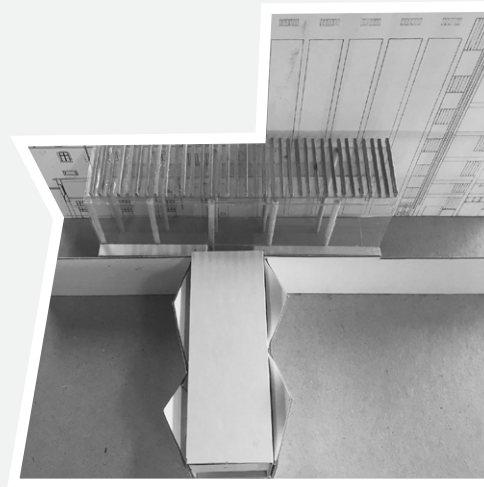
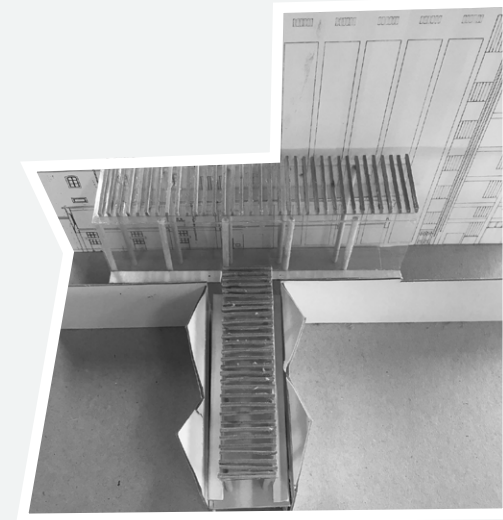
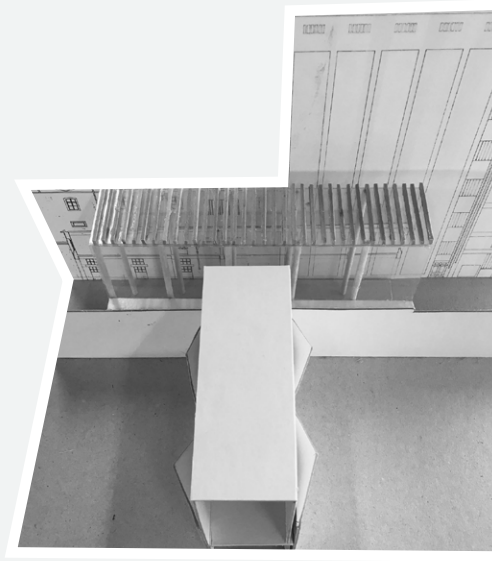


Image  
Staircase silos milling (photo by Hielkje Zijlstra, 04-09-  
2016)

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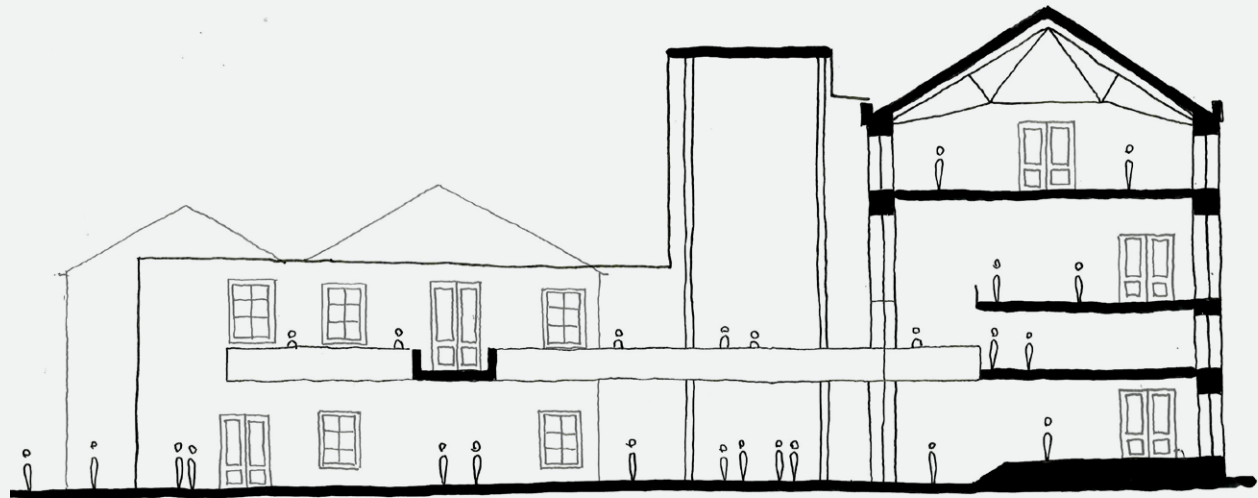


I made some alternatives for the design of the side street. What should be the height of this side street? If it has the same height as the main street, the side street can influence the linear character of the main street. There should be some hierarchy. I believe it is better to design the side street more restrained.



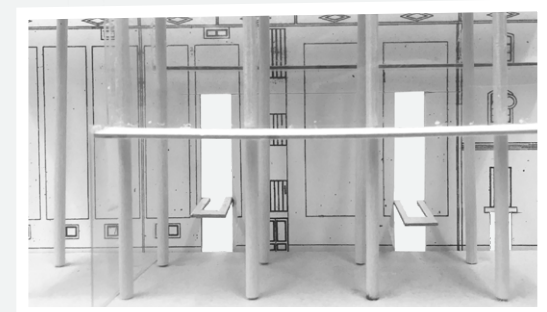
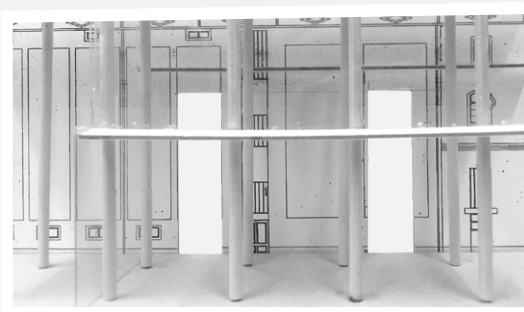
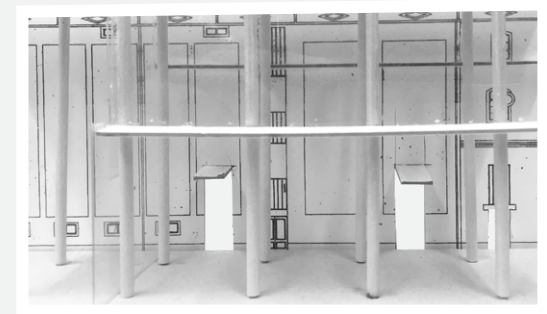
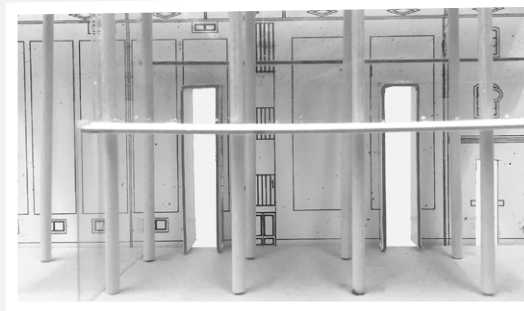
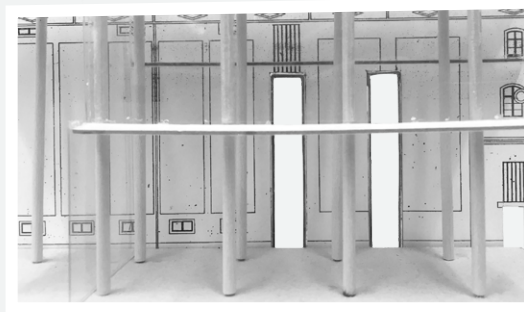


To emphasize the public character of the street I've chosen for simple walkways. These walkways create shortcuts for both the staff and students. This pragmatic way of connecting the buildings fits well with the buildings and former attitude. Visitors are not able to access the walkways. In this way I emphasize their role as visitor. The side street is designed as an extension of the 'buffer space' between the bakery and the new street.

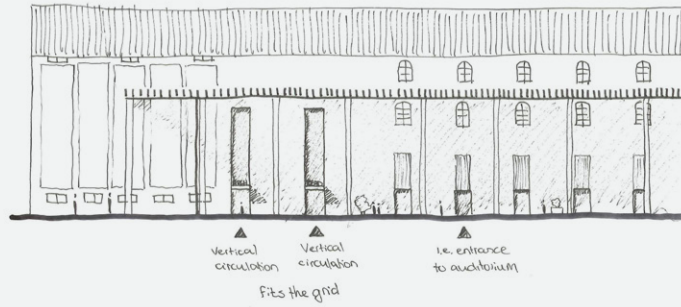


## Entrances | December 9th

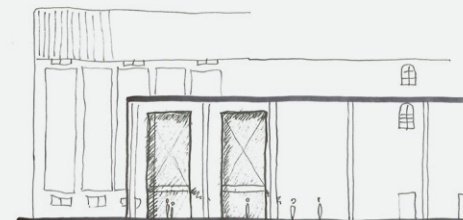
The street is not only a selfstanding structure: it has to connect the individual buildings and building components. I've made alternatives for the design of the entrances to the different building components. Do they relate to the street or to the existing buildings? I can emphasize the entrance by its height, width or depth. The height and width of the entrances could stroke with the proportions of the street. And is there a relation between the entrances and the rythm of the columns? If they are not part of the same structural scheme, they still act as separate elements. When the position of the entrances is tuned to the rythm of the columns, it could mean that the new openings in the facade are in conflict with existing openings.



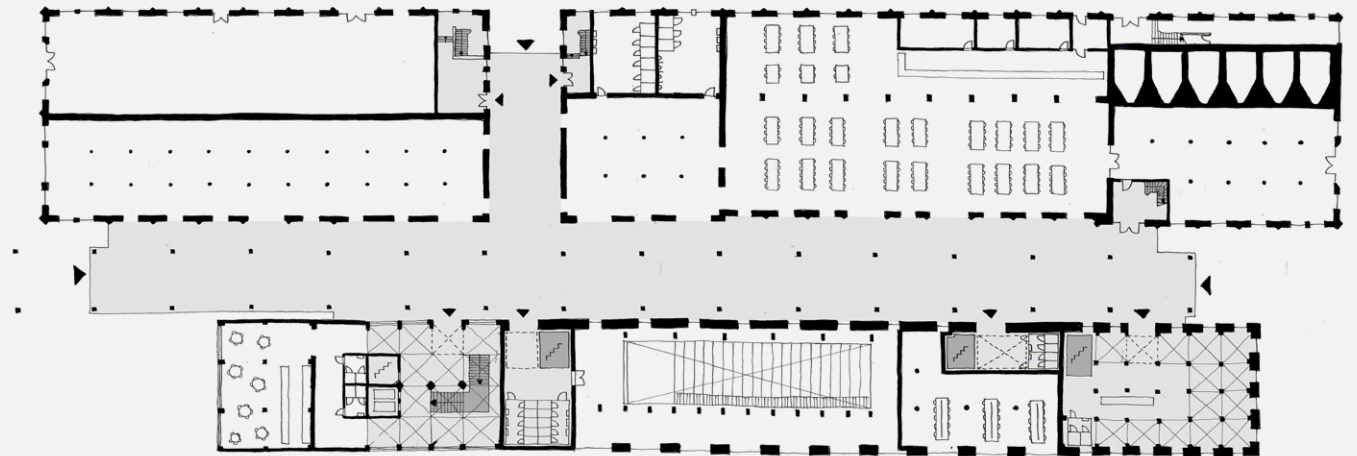
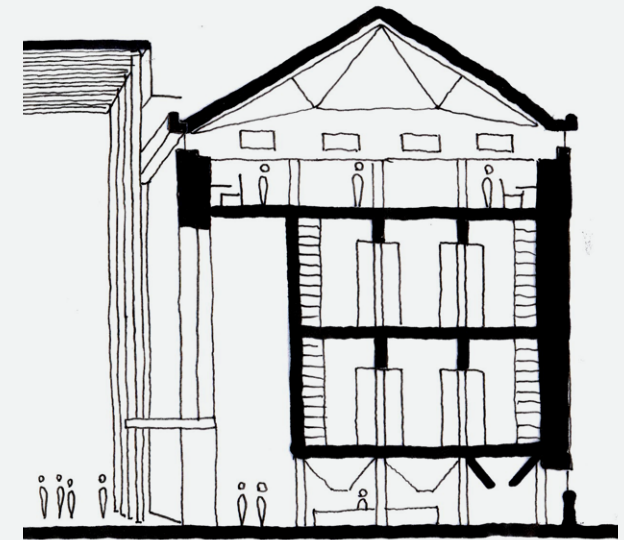
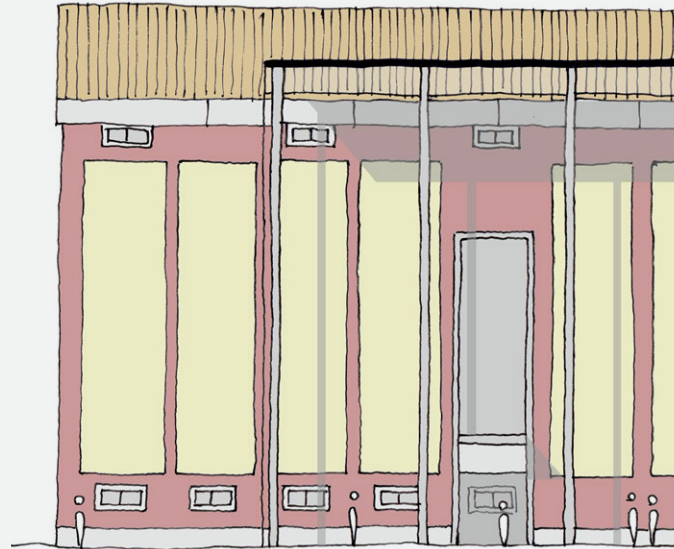
Also alternatives are drawn of the entrances to the different building components.



moet het perse in de raam  
midden zitten of is het voldoende  
als er geen kolom voor staat  
of maakt het niet uit??



The entrance fit within the grid of the columns of the street: they belong to each other. In addition, the design of the entrances is tuned to the design of the street: tall and narrow. Almost all entrances to the different building components of the milling are situated at the silos (except the entrance to the new circulation space of the auditorium and classrooms). The height of these space relates to the design of the entrances. As you can see in the floor plan every building component houses its own function and has its own vertical circulation. This circulation is situated near the entrances. I decided to position the toilets in the same space as the staircases.

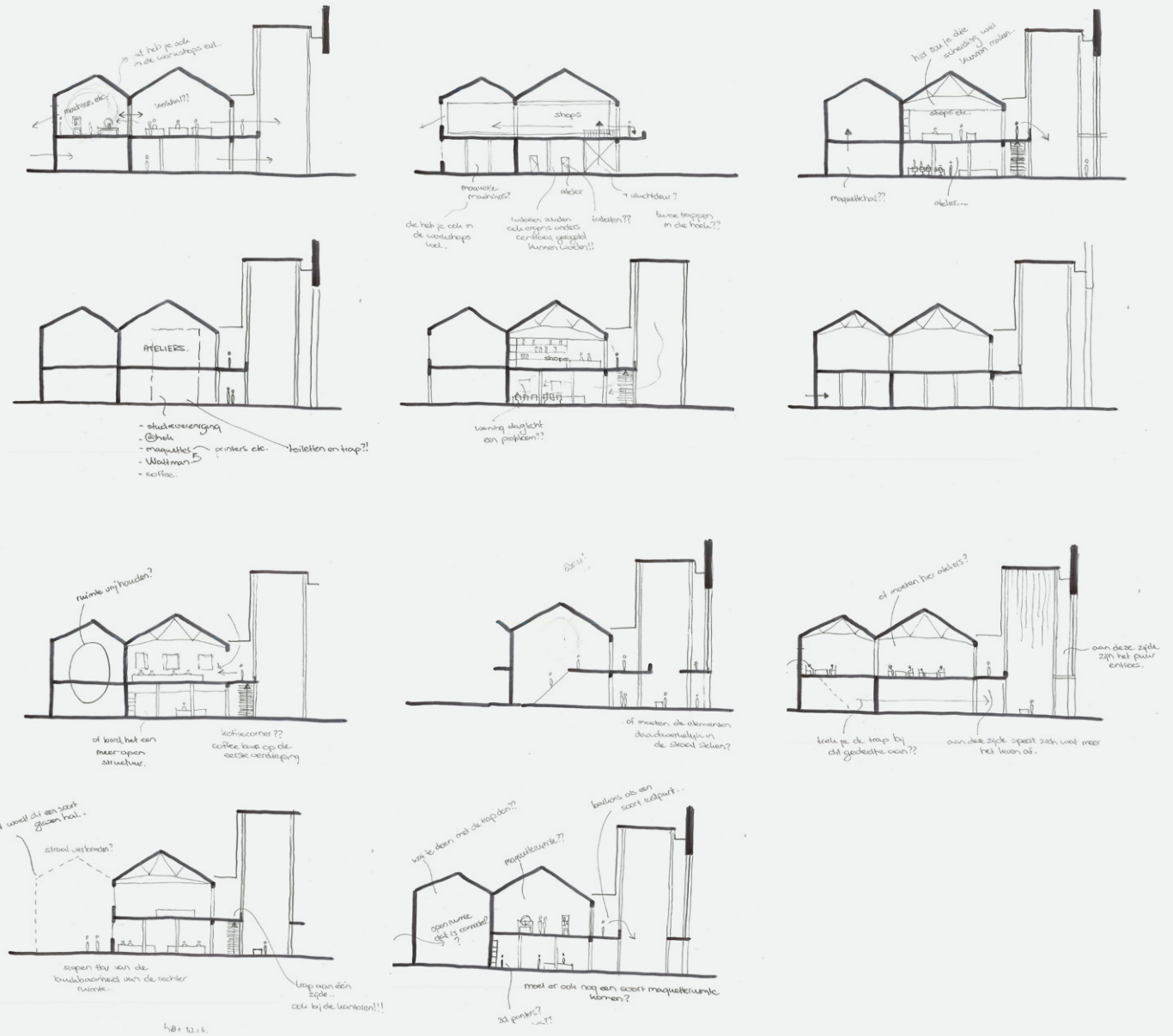




## P2 progress | December 12th - 15th

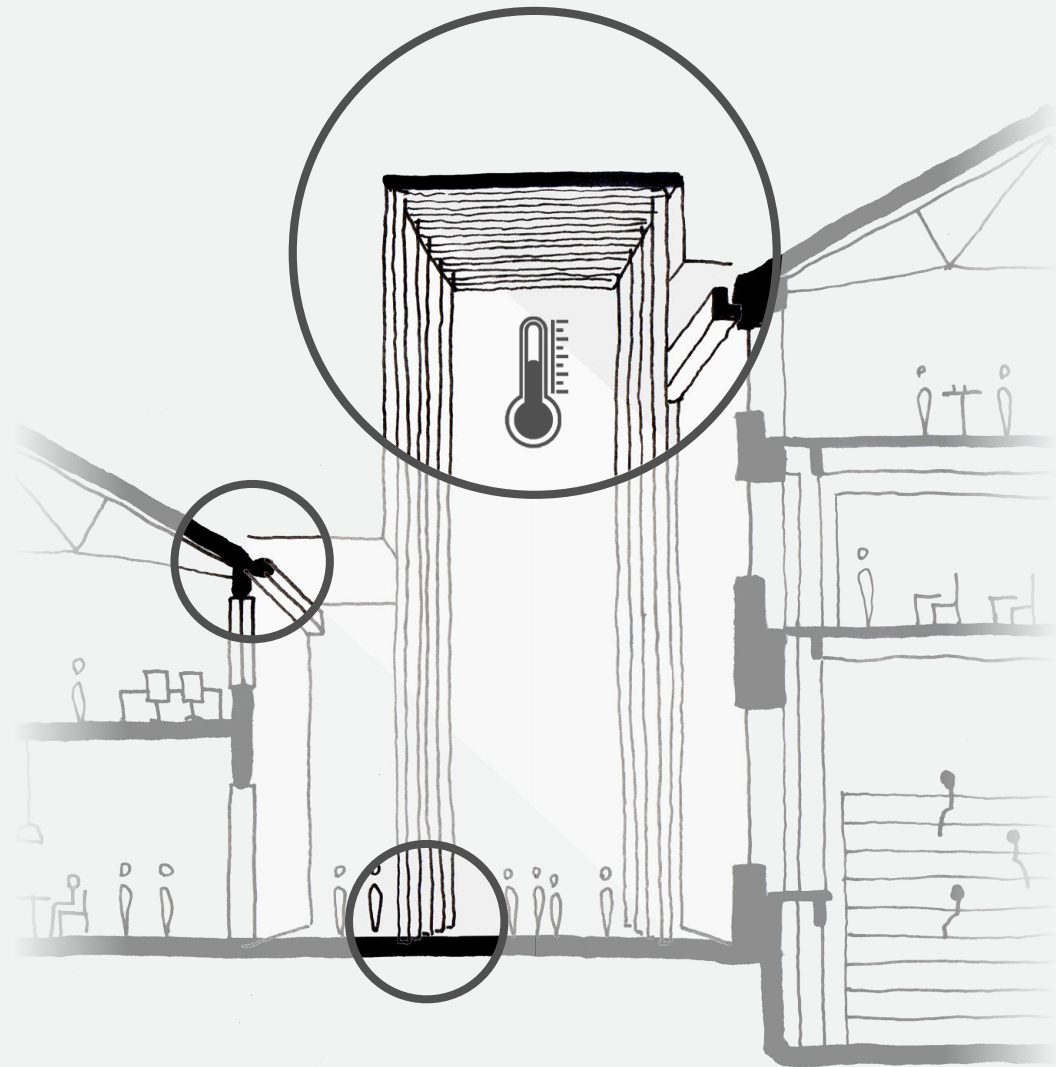
This week I prepared a short presentation of the progress for my P2 presentation. I have to work on my storyline. I do not need to explain *what* but *why* I do things. I have to convince everybody that this is the best solution for both the site (including surroundings) and buildings.

The last weeks I did not pay a lot of attention to the position of the functions in the bakery and cookie factory. Especially last-mentioned building has been relatively neglected. I need more space for ateliers and also the position of the shops is still not defined. Do the bakery and cookie factory need to be split up to react on both the intimate street and activity street. Does the activities need space for storage for example? Finally I've decided to situate the shops on ground floor, because these have a more public character and should be accessed via the street. On the ground floor there is also space for storage for the activity street. The first floor is completely reserved for an atelier. This atelier is connected with the other ateliers (walkways).



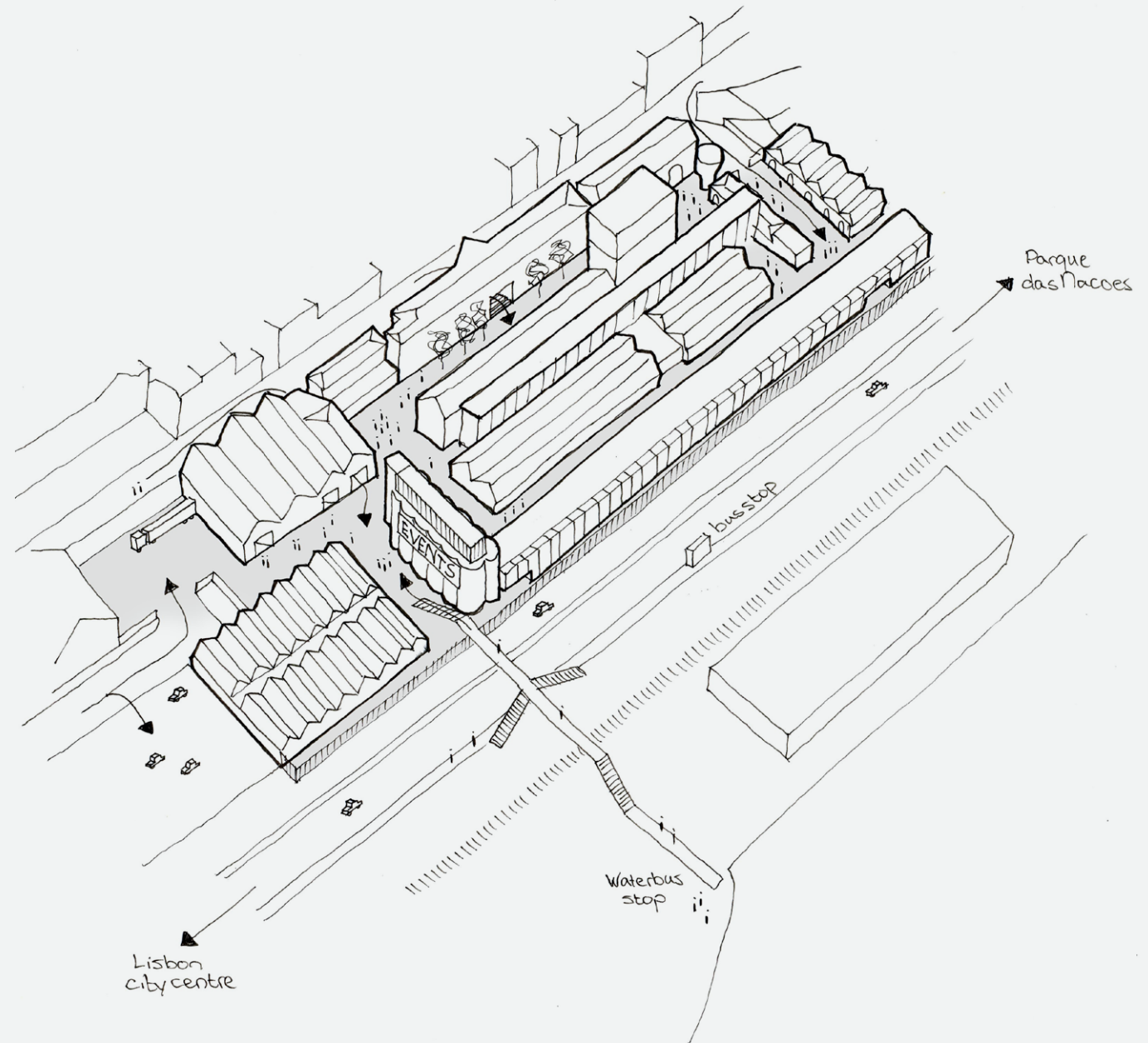
## Cultural Value I December 16th - 22nd

This week I worked on the Cultural Value report. Which dilemmas are most interesting to describe? This report can function as input for my P2 presentation. I had also a brief technical guidance of Wido. What are the opportunities and weaknesses of the street? What will be the climate in the street? Can it contribute to the climate of the whole building? What is the connection of the new street with the existing buildings? I already paid attention to this when designing the height of the street. What is the dimension of the columns? This is really important because it has a great influence on the spatial character of the street. I also have to think about the materialization. I will work on all these elements after the P2.

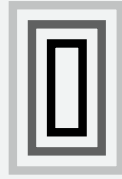


## Preparation P2 | December 27th - January 11th

In this period I prepared for the P2 presentation. The most difficult and important thing was the storyline. How to present all the work in just 30 minutes? Like we did during the workshop in Lisbon, I wanted to present my strategy and preliminary design in steps. This can make the presentation very clear. When 'designing' the steps of the strategy and buildings I rethought my transformation framework as well. I've deleted and added some elements. Also a differentiation is made between the elements by indication which are of high or medium cultural and historical value. The differentiation is based on the characteristics of military architecture: the isolated character determines the character of the space plan of the complex and the development in construction and technique determines the spatial character of the buildings. Based on my position paper, I give priority to the present-day values of the skin, structure and space plan (spatial character) instead of the commemorative values of the stuff (machinery).



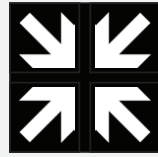
HIGH VALUE



Three layers of intimacy



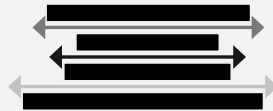
The ensemble is the heart of the complex



Intimate character of the in-between street



Anti-conservative attitude



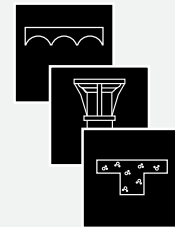
Streets with different characters



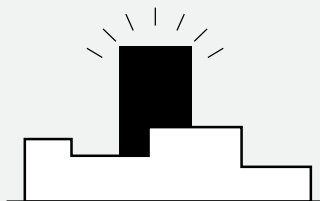
Oversize of space



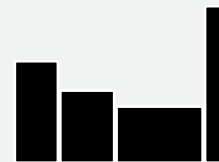
Squares with different characters



Layering structures

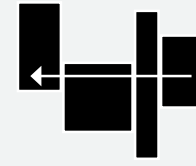


The silo and storage are a landmark

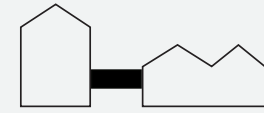


Building components with different characters

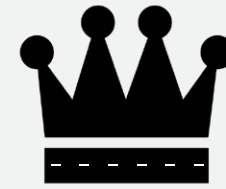
MEDIUM VALUE



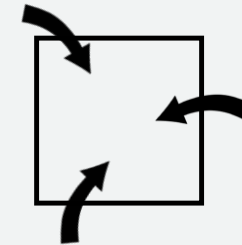
The production process creates unity



Connection between the buildings



Former status Rua do Grilo



Former accessibility complex



High bearing capacity



## P2 presentation | January 12th

I received positive feedback! GO! Ofcourse there were some remarks as well which I have to take into account:

- What is the relation with the campus and the surroundings? (Marlissa)
- Sick building syndrome?
- Facades or interior walls?
- Machinery versus building?
- Intended architecture vs non-intended architecture?
- What is the climate of the street?
- Positie functies ten opzichte van omgeving?

Ben

- Voorbeelden Alvaro Siza
- Geschiedenis productieprocessen hun weerslag te laten hebben in de straat (met eenduidige kantoren)?

Zelf

- De straat connect, het wordt een interieur. Maar tegelijkertijd veel bezig om het een exterieur te laten lijken. Moet het niet open zijn? Goed voor brandveiligheid, het is echt een buitenklimaat (net als een straat..) en geen sick building syndrom of course. Goed om te onderzoeken!

## Rua do Grilo

One of the remarks at my P2 presentation had to do with the relation of the university and the surroundings. In *Campus and the city. Urban design for the Knowledge Society* I've read that a campus/school/university contributes to the surroundings, especially the infrastructure. This positive 'side effect' can be related to the former accessibility of the site (transformation framework). Next to this the university will attract young people to Beato (26% of the population in Beato is 65 years or older) and improve the level of education (the level of high educated people in Beato is significantly lower than in the whole of Lisbon). The population growth will also solve the problem of vacancy (17% of the buildings in Beato are vacant).

I've also seen the documentary of Jan Gehl, called *The Human Scale*. It has to do with the influence of the car on the city. Some interesting quotes from the movie are:

"More space for people (...) you will have more public life"

"People need space to do things"

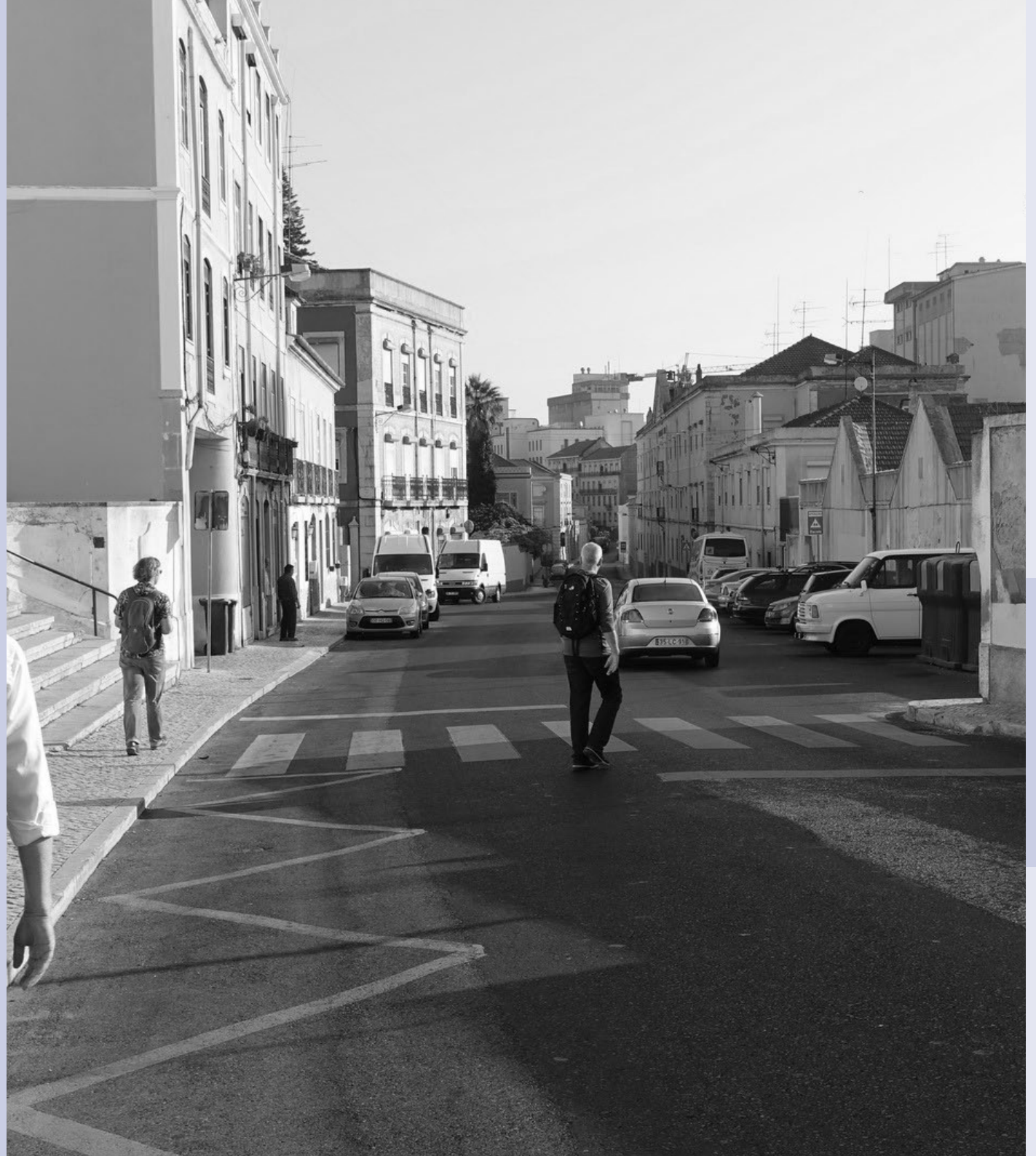
"Potential qualitative public space are taken by cars, because there are no rules for parking"

"No space to stay or meet (...) dominated for circulation and parking"

All these quotes are relevant for the MMC and surroundings. Because there are no rules for parking, all space is used for this. I want to create more space for pedestrians and spaces where people can meet. The intensive use of the Rua do Grilo can be reduced, because there is already a highway which connects the site with the city centre. In fact, it can contribute to social interaction in the neighbourhood.

Image  
Rua do Grilo (photo by Hielkje Zijlstra, 01-09-2016)

Ruben Klinkenberg | Process Logbook



## Rua do Grilo

Design of the Rua do Grilo: rules for parking, more space for pedestrians and places where people can meet and stay.



## Concept street

After the presentation I took some days to reflect on my design, especially the street. About the concept, I was not satisfied with the following elements:

### The definition of the street

The street is not clearly defined yet: it's just a roof on top of columns with a lot of glass.

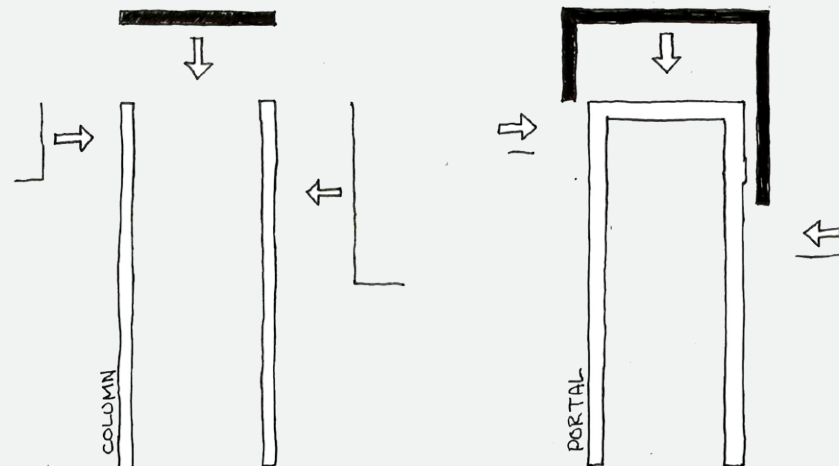
### Intimate character

The intimacy of the street is limited: the amount of glass creates a very light indoor space.

### Functionality

It is just a circulation space. In addition, the lightness of the space makes it not an attractive space to work in.

To define the street I want to create portals instead of columns. Also with the materialization I want to define the street, but also create intimacy by softening the light. This sun shading also transforms the indoor the street into a functional space.





## Concept street

This project inspired me: the 'street' is clearly defined. The brick (closed material) really creates a sheltered (intimate) space.



Image  
Yellow Submarine Coffee Tank, Nakhon Ratchasima  
(photo Ketsiree Wongwan. Accessed on February 23rd,  
[www.archdaily.com](http://www.archdaily.com)).

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## Design street

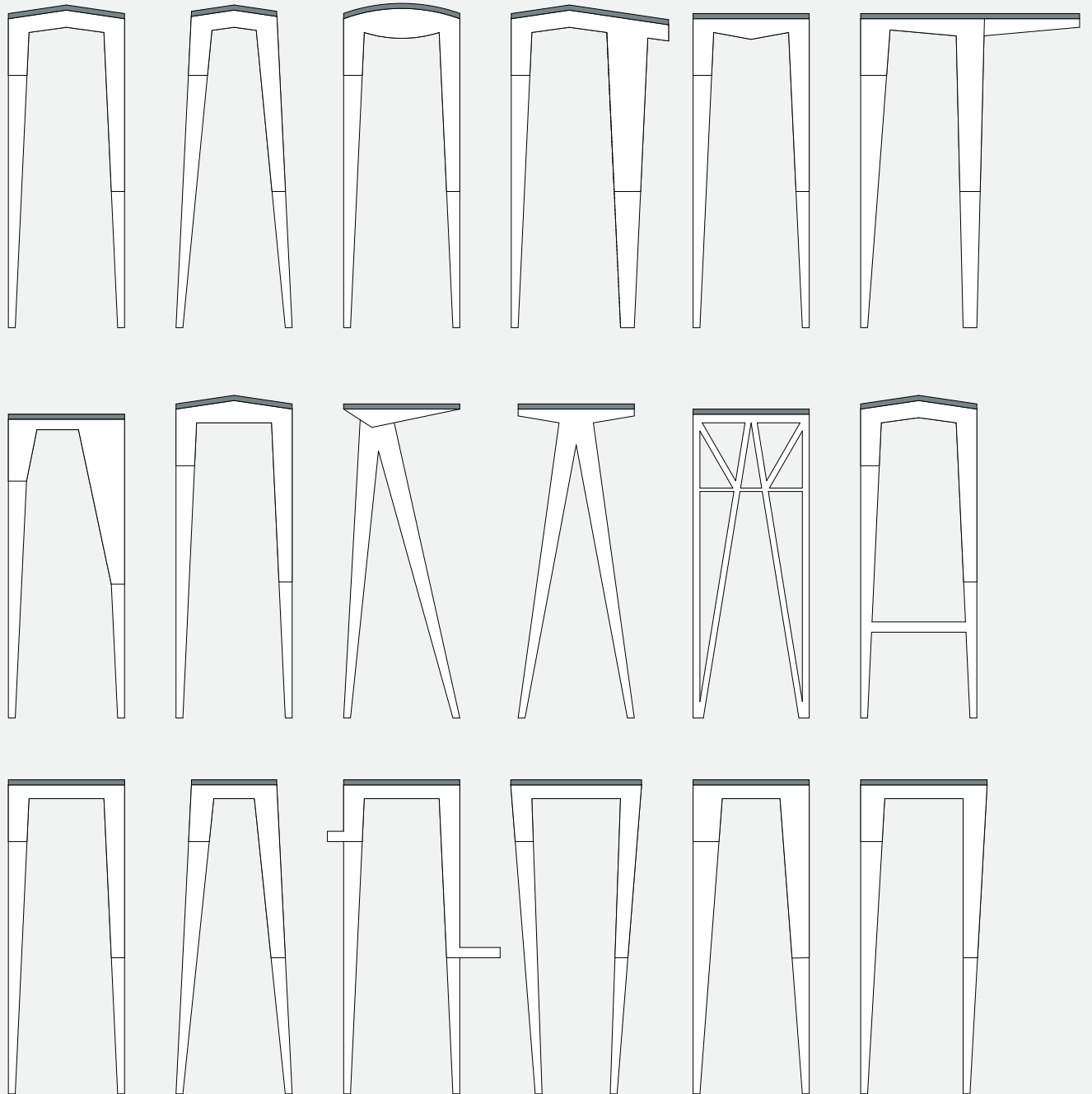
Three important themes, which I've filtered from the analysis and the cultural value, are (spatial) character, pragmatics and history. For the design of the portals I'm therefore inspired by Jean Prouvé. His structural designs are very pragmatic based: the dimension of the structure is adapted to the forces. At the same time the structure is very characteristic as well.



Image  
Ferembal Demountable House by Jean Prouvé (photo by Galerie Patrick Seguin. Accessed on March 14th, [www.patrickseguin.com/en/designers/architect-jean-prouve/available-houses-jean-prouve/ferembal-house-1948/](http://www.patrickseguin.com/en/designers/architect-jean-prouve/available-houses-jean-prouve/ferembal-house-1948/))

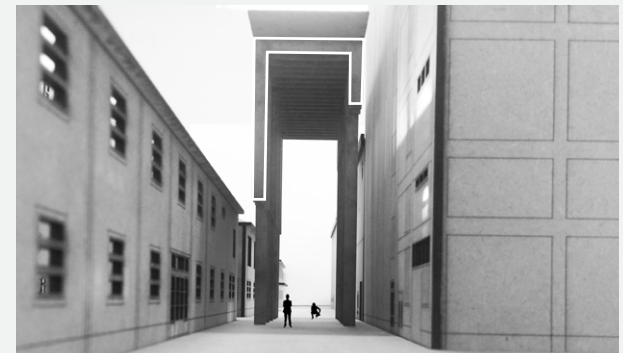
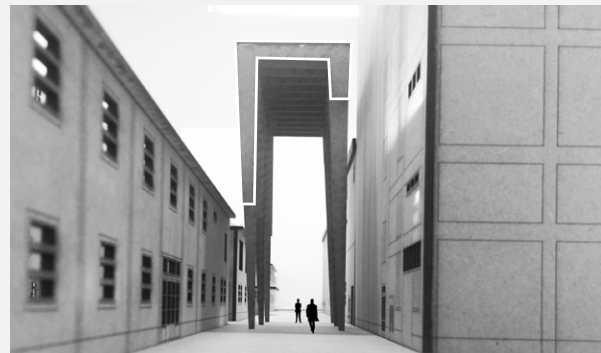
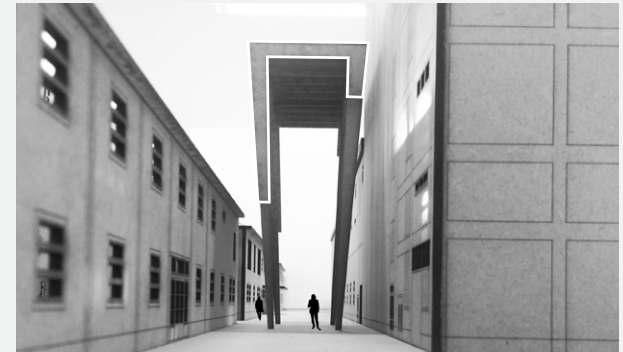
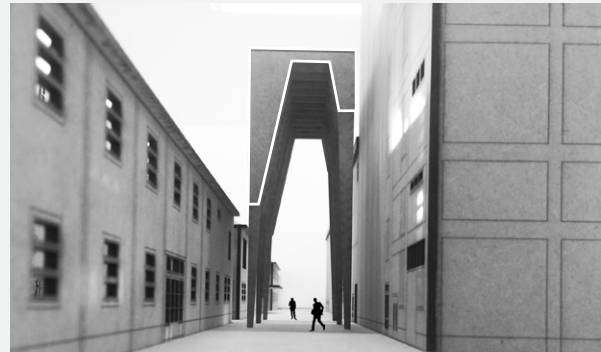
## Design street

I've made several alternatives for the design of the portals, which are inspired by the climate design (canopies), the form, the way they create intimacy and the relation of the portals with the existing buildings (mainly to do with form as well). At the end I think the portal has to be symmetrical, otherwise it reacts on one of the buildings and feels therefore not as a street anymore, and it has to be simple and straight. Regarding the last two restrictions, I think this is a quality of the designs of Jean Prouvé as well. Besides that, this fits the most with the character of the existing buildings of the MMC as well.



## Design street

I've tested some of the alternatives in the scale 1:100 model of the street between the bakery, cookie factory and milling.





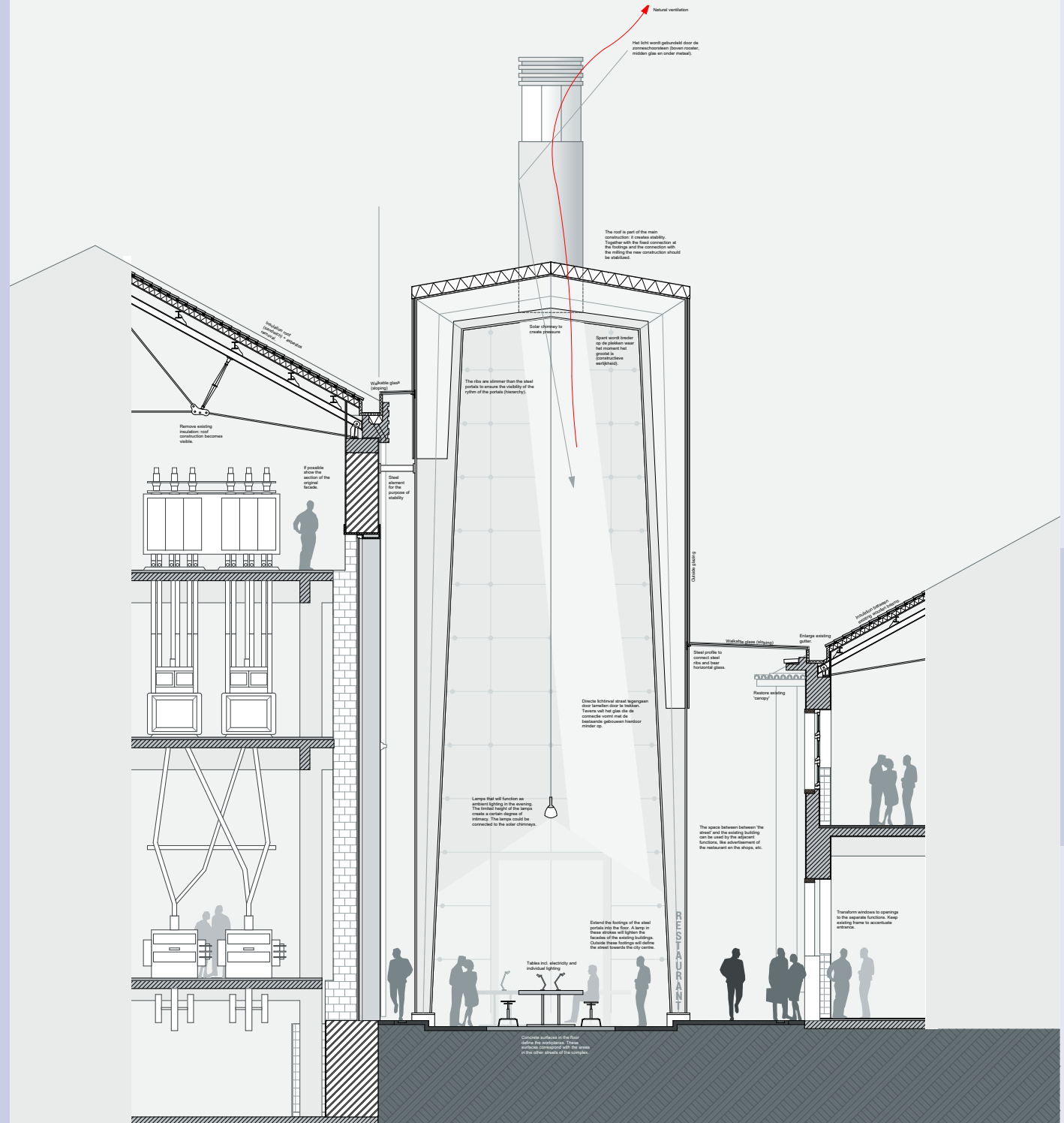
## Design street

I've chosen for this alternative because of the following reasons:

1. The straight contour reacts/strokes with the facades of the existing buildings.
2. The form of the portal is adjusted to the forces: this pragmatism strokes with the pragmatic attitude of the military engineers which were the 'architects' of the complex.
3. The form is characteristic and creates an 'own world' inside the portals. Like the structures in the separate building components, this structure has its own character as well.
4. The folded roof fits in/finishes the roof landscape of the site and the surroundings.

Next to the form of the portal, the street profile emphasizes/defines the street as well. This profile is inspired by the existing situation (walkways).

I've drawn the preliminary design in scale 1:20. First I made a drawing of the existing situation. The details and other technical aspect which we had addressed in the technical analysis were very helpful for this.



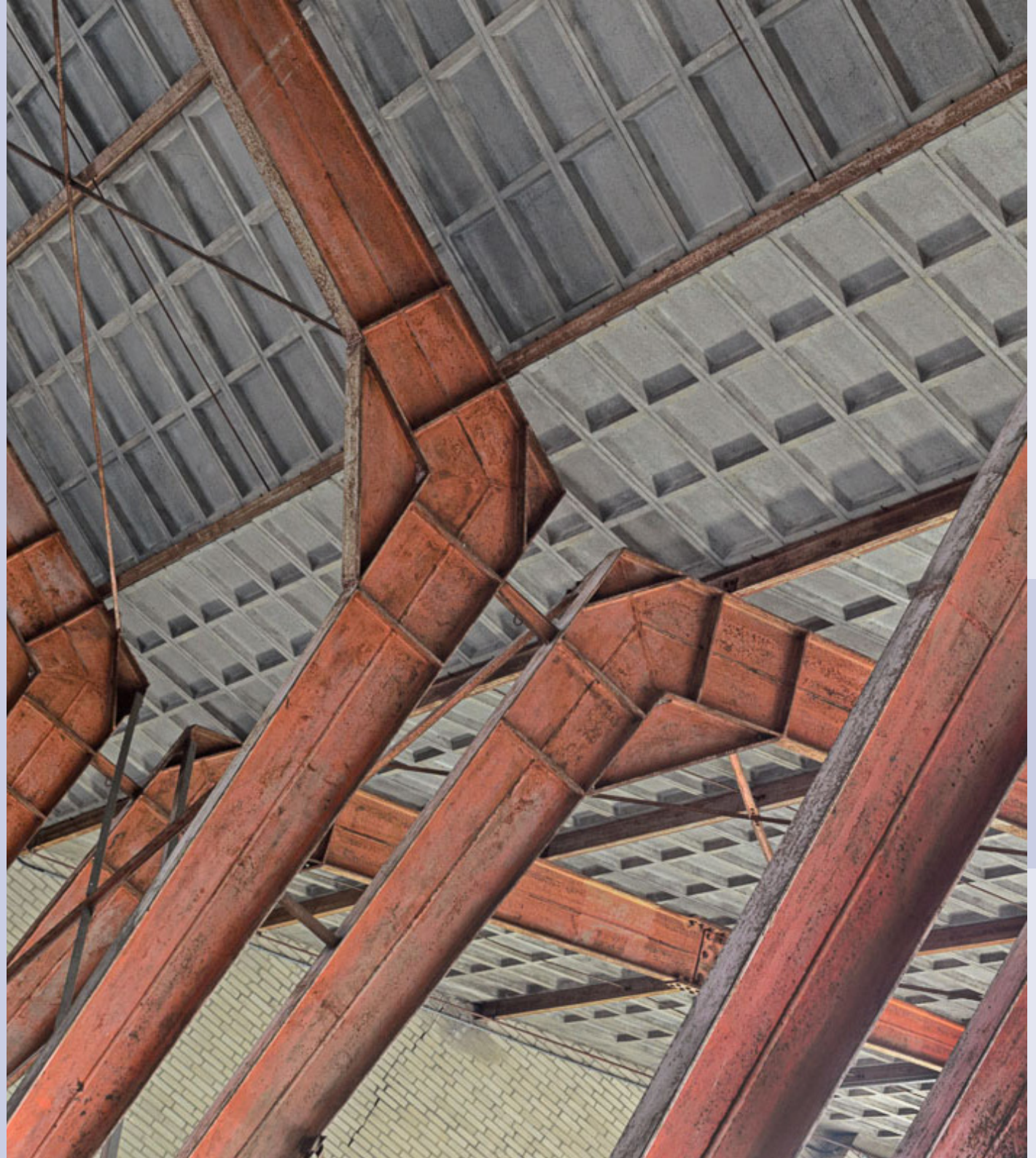
## Design street

For the materialization I think of galvanized steel or blue steel. The imperfection of these materials corresponds with the imperfection of the existing portals. The portals could also be painted: over time the paint will 'age'. After some years you will have the same result (imperfection, not any portal is the same). The colour of the portal could be based on the colours that are present on the facades of the buildings (coloured plaster) or could enrich the color palette.

### Image

Warehouse former Zwitsalterrein Apeldoorn (photo by Jan Hof. Accessed on February 21st, [www.janhof.nl/category/architectuur/industrie/](http://www.janhof.nl/category/architectuur/industrie/))

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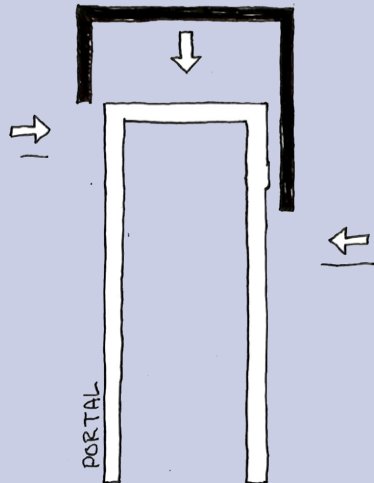


## Design street

As explained, I want to define the street and create intimacy as well. By softening the light I want to prevent excessive heat gain and transform the street into a functional space as well. Inspired by the Yellow Submarine Coffe Tank I looked at several materials, like:

- Steel mesh
- Vertical/horizontal blinds
- Perforated steel
- (Moveable) screens
- Fritted glazing
- Etc.

Important restriction for the choice of a material was the visibility from the inside to the outside. This to prevent the sick building syndrom, which was one of the questions during the P2 presentation. Knowing this, perforated steel and blinds are probably not the best solutions.



Metal Mess Facade



Arizona State University  
Fabric shades  
Lake/Flato Architects



Leibniz Institute on Aging  
Facade cladding  
Hestermann Rommel Architekten



Brazil Pavilion Milan  
Gevelbekleding  
Arthur Casas

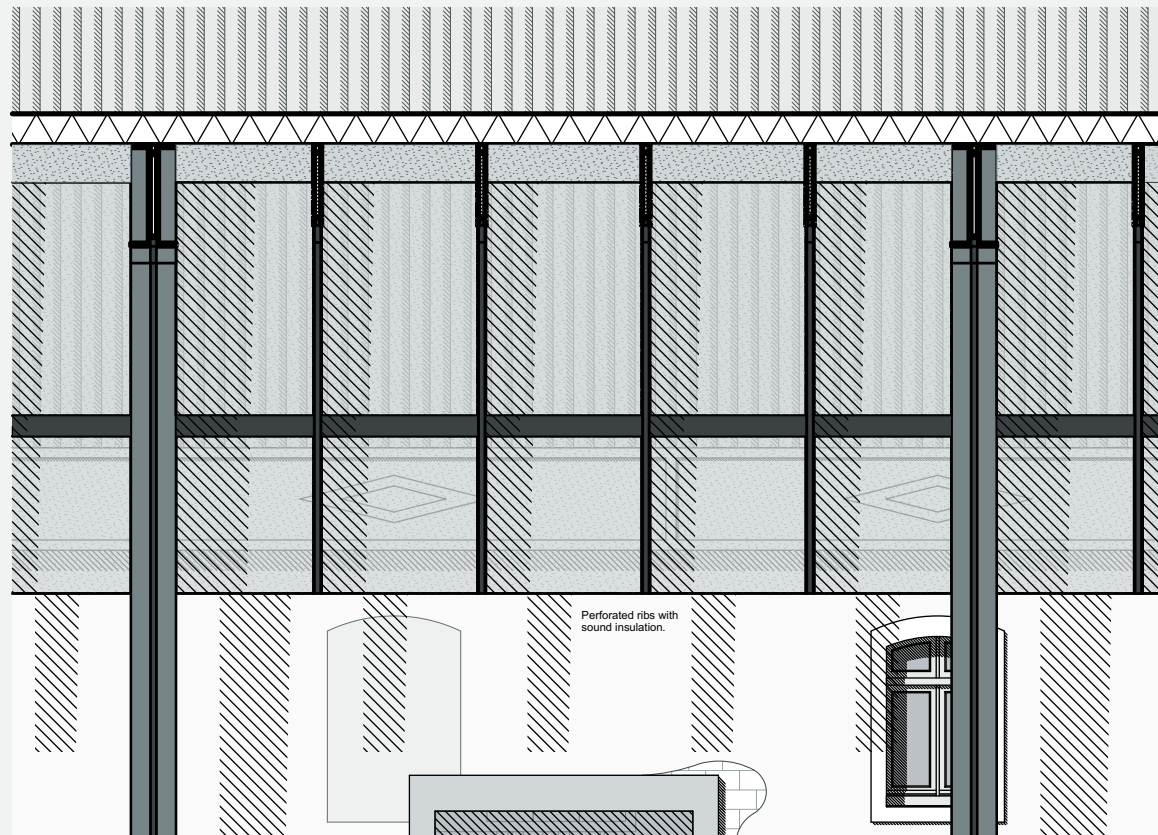
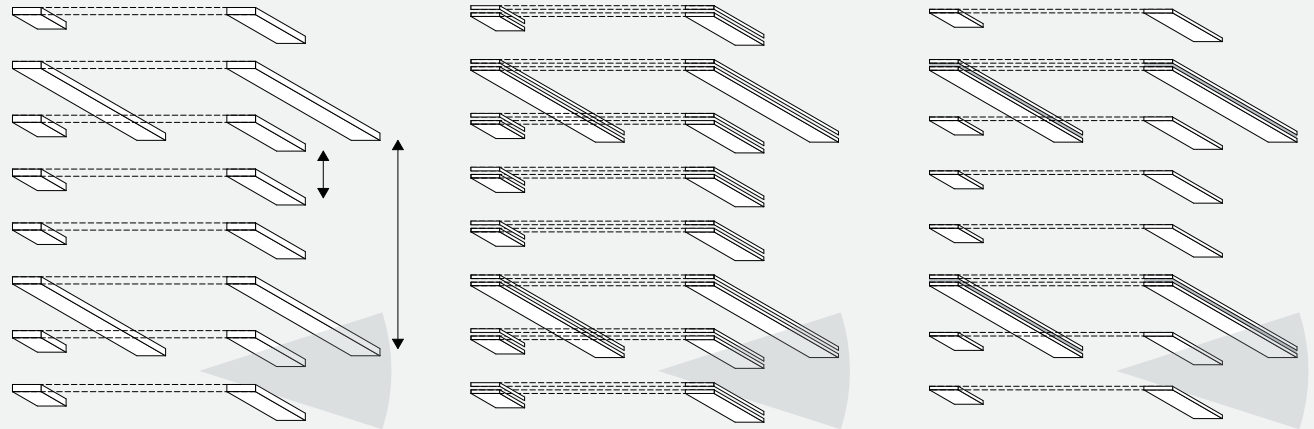




## Design street

Finally I've chosen for a (surprising) combination, namely: vertical 'blinds', which will function as window frames and define the street, and (fritted) glazing and/or a steel mesh. The pattern in the fritted glazing can possibly tell a story of the MMC, but a steel mesh maybe fits better with the character of the place (rough, etc.).

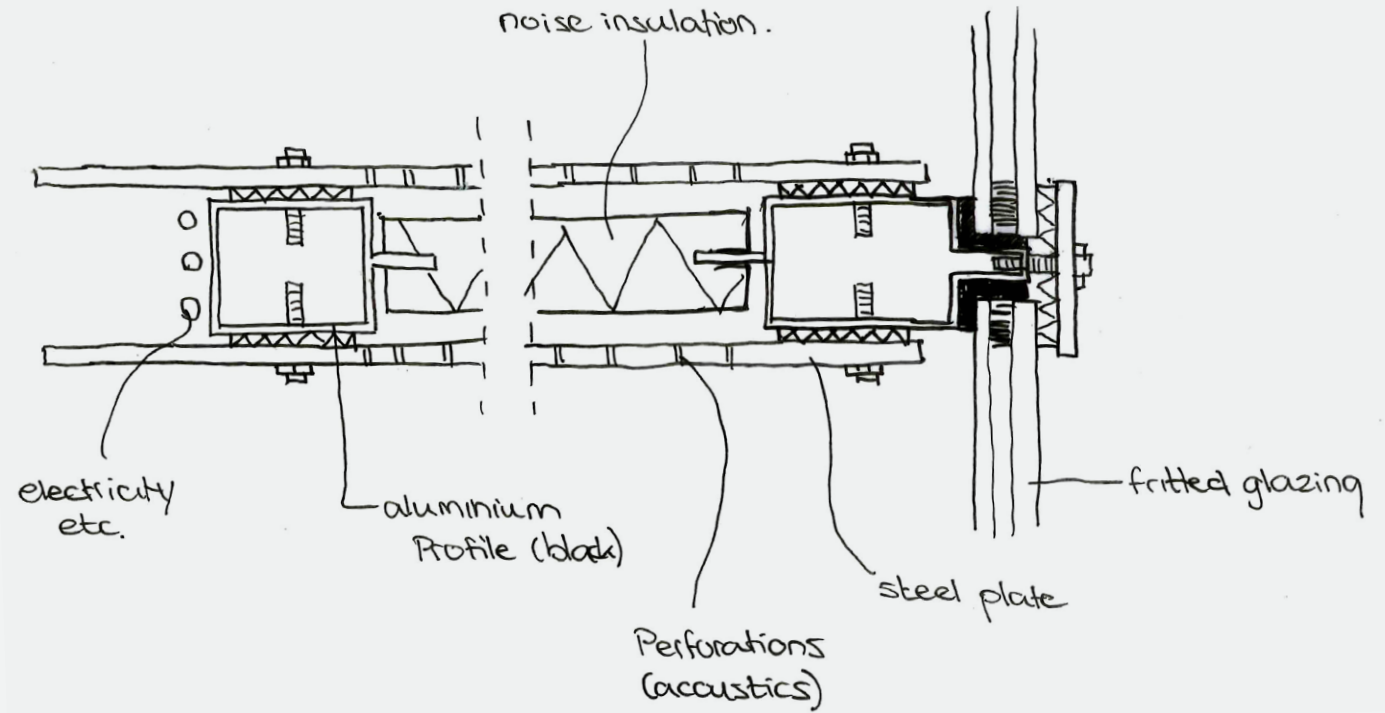
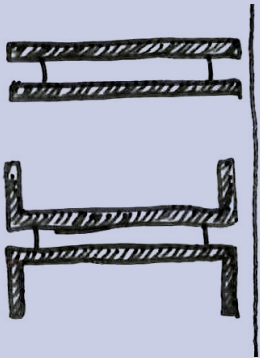
To keep/make it semi-transparent the shadow of the rythm of the portals and blinds is preserved.





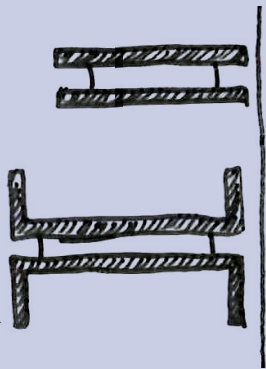
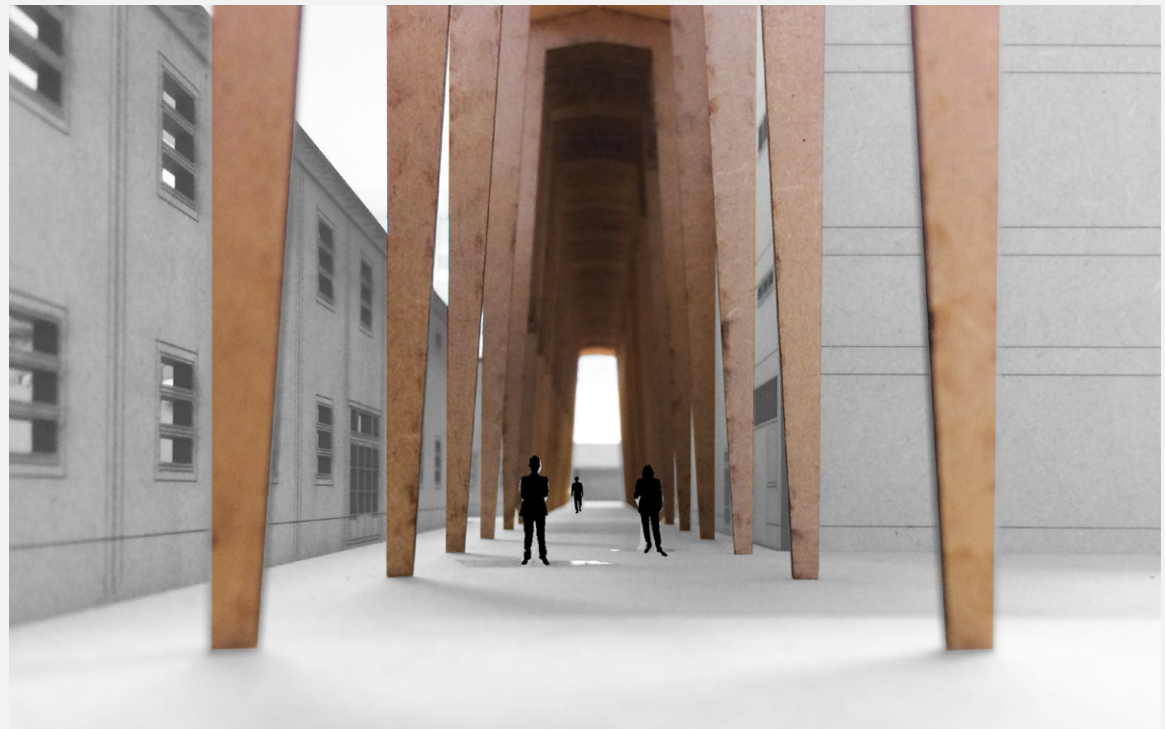
## Design street

The blinds are an addition to the original rhythm of just the column/portals. Together they constitute the backbone of the university. Therefore, I think the portal and blinds have to belong to each other. For example by using the same material or format. To limit the weight of the blinds, I've chosen for a aluminium 'infill'. The two thin layers of steel, which might be painted in the same colour as the portals, are perforated for the purpose of the acoustics. The detailing of the glass is inspired by the Havenpaviljoen in Enschede (NL).



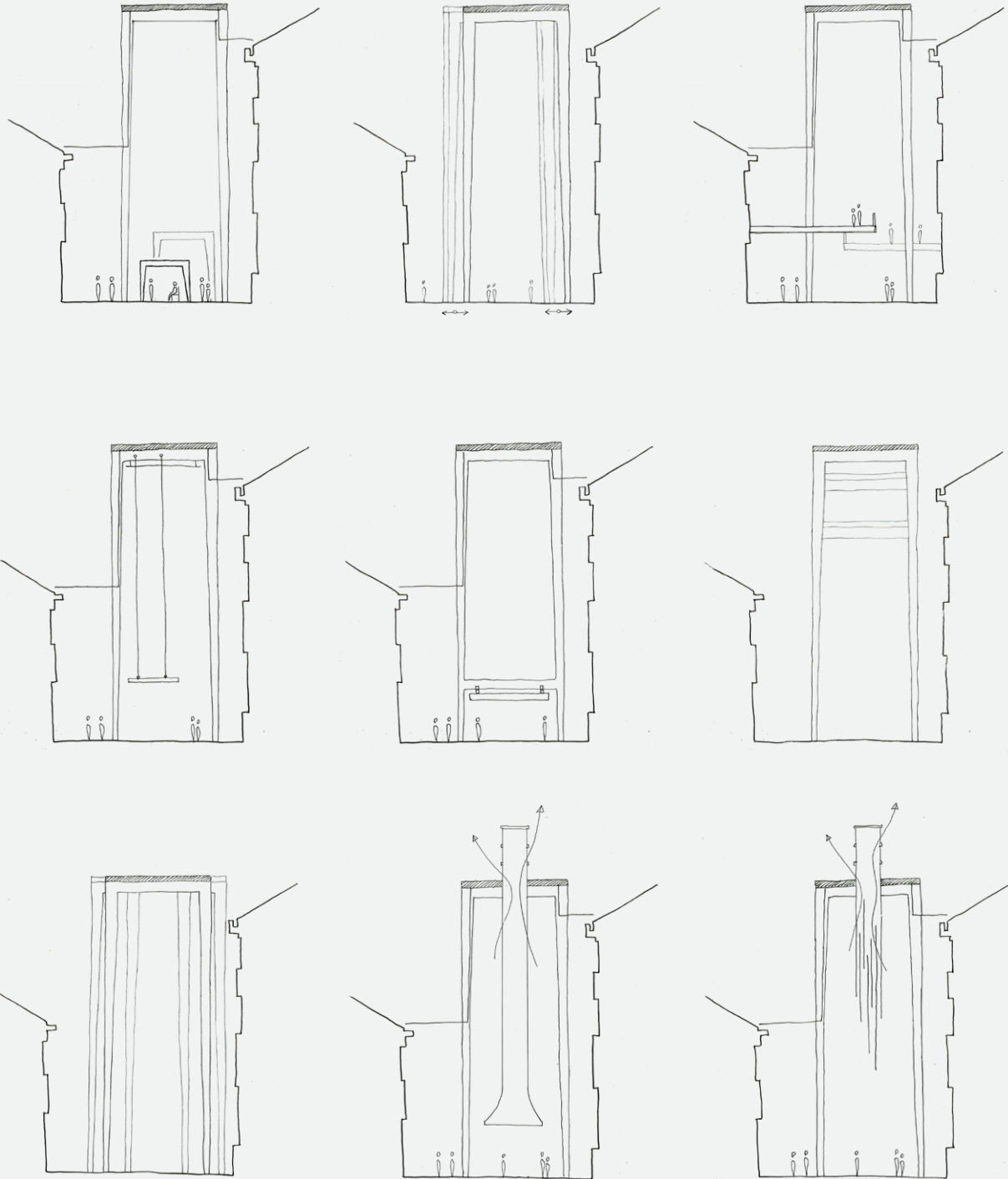
## Design street

When I was making the scale 1:100 model of the street I saw the influence of the blinds on the rythm of the portals. First, I glued the portals and the roof together. I was quite intrigued by the imposing effect of the portals. When I added the blinds, this effect was almost completely gone. For that reason I narrowed the blinds in order to maintain rythm of the portals.



## Design street

As explained, the degree of intimacy was limited. To create intimacy/introduce the human scale I came up with some alternatives. Most of them had to do with limiting the height of the street (locally). For example by making balconies, extend the solar chimney or just by hanging things at the ceiling.





## Design street

References are used to get inspired. In most cases a horizontal layer was introduced in the street/space to create intimacy and introduce a more human scale. I used this finding to make a new set of models.





## Design street

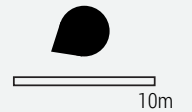
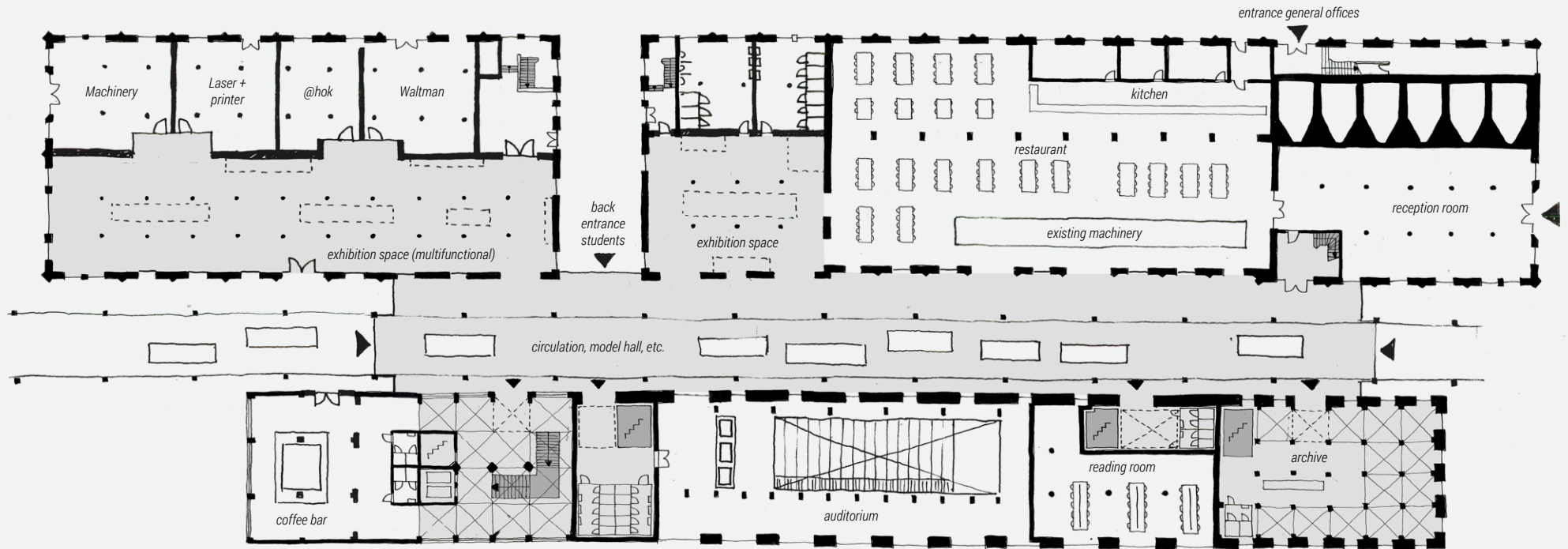
I've introduced a horizontal layer of wires/cables to create intimacy. This layer physically connects the two buildings and can be used for signing, lighting, advertisement, etc..

But in fact I'm trying to reduce the large space/ limit the height of the space I created myself. Isn't this weird? Yes. I stepped back from the project and reflected on the street: what is the goal?



## Design street

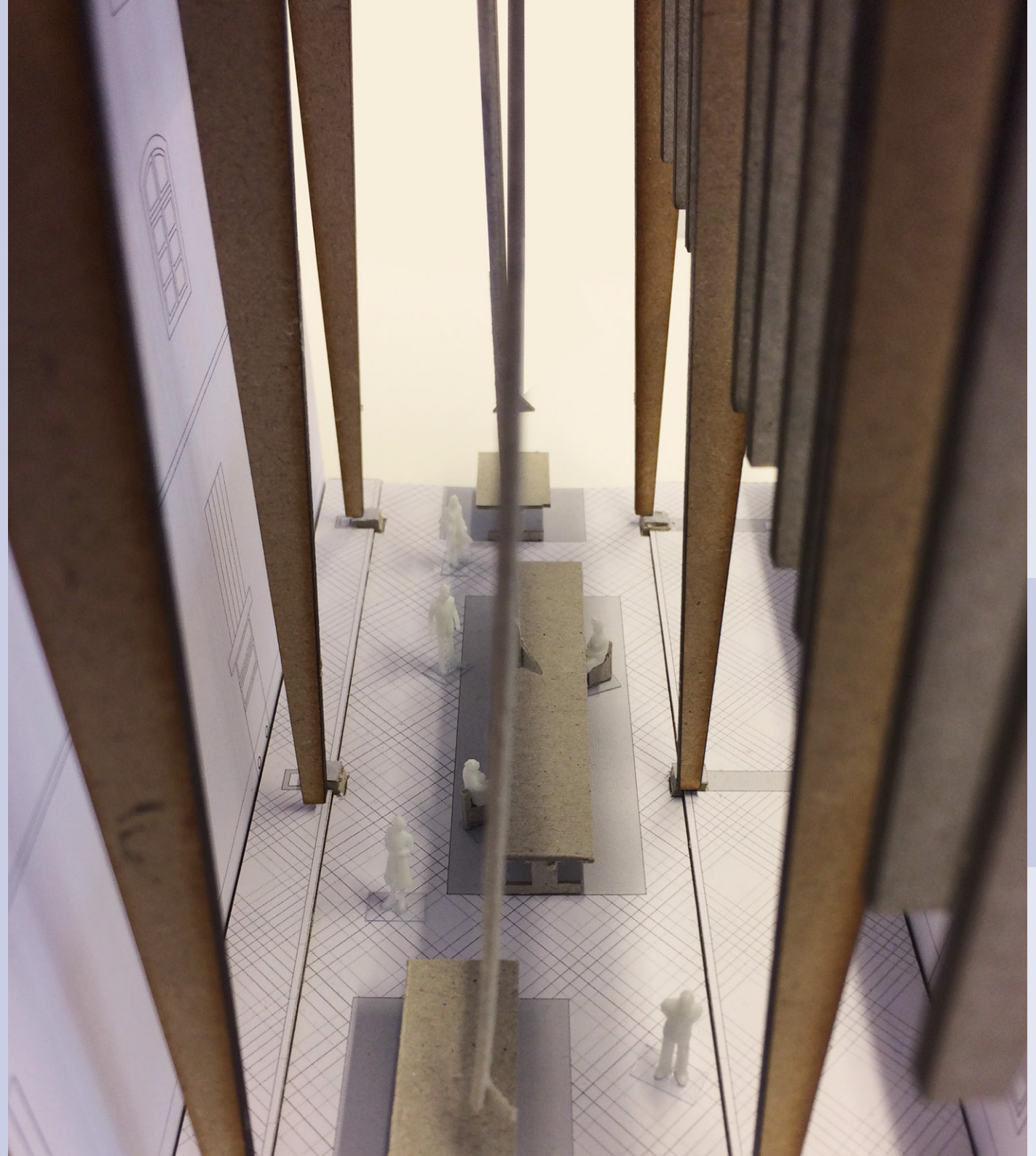
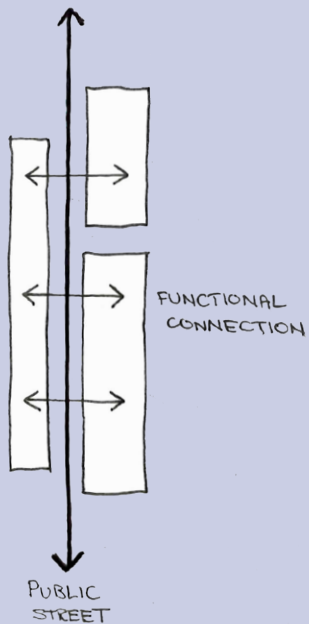
It shouldn't be wires that connect the buildings:  
it is actually the function that really connects the  
buildings: express them in the street. For example  
places where people can work (model hall), eat, drink,  
etc.. The street will be the heart of the university.





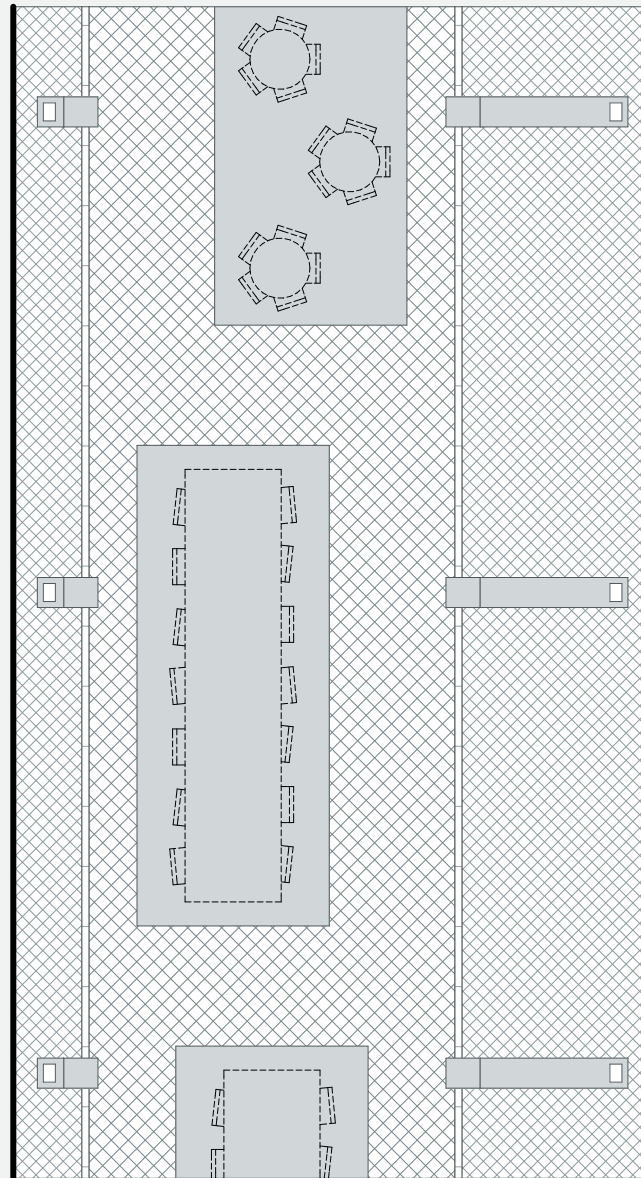
## Design street

The human scale/degree of intimacy is introduced by the furniture. Because there will be interaction between the students (cross arrows) and the public (longitudinal arrows) the street will become a very vibrant place instead of just a circulation space (functionality!).



## Design street

The places where people work, eat, etc. are also indicated in the pavement: Portugeuse pavement (in all streets) and concrete to indicate the workplaces. By doing so the three streets on the site have the same concepts: places in a place.





## Design street

The concept of the three streets on the complex is the same: spaces in a space.



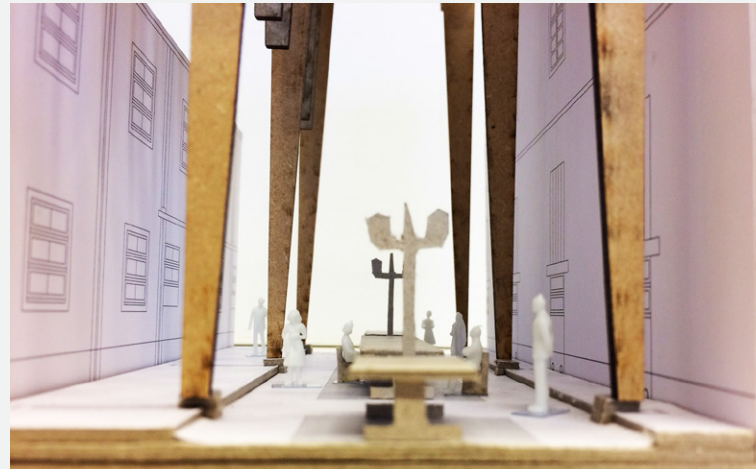


## Design street

The lighting can play an important role in the street as well. For example:

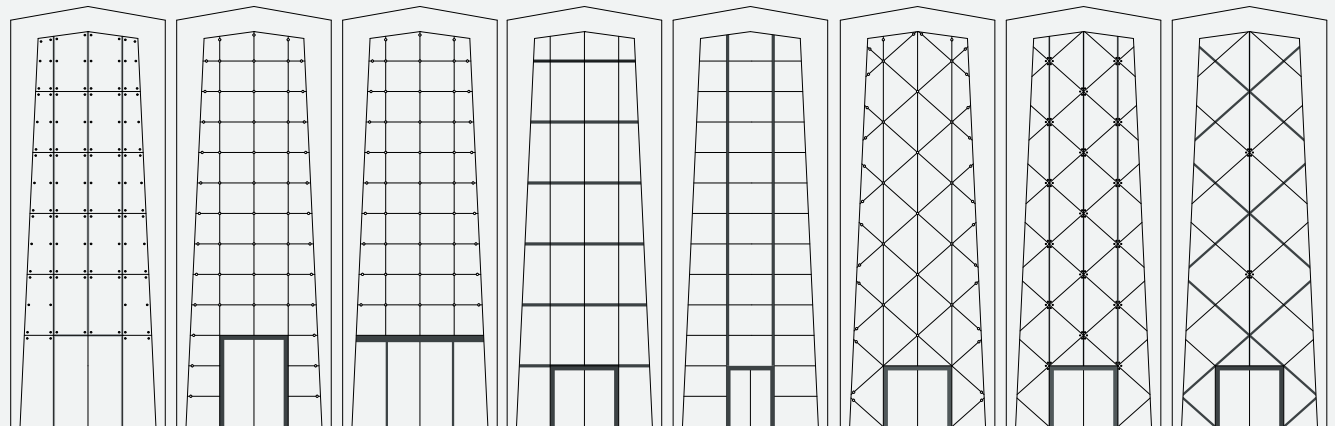
1. Portuguese lanterns or hanging spots
2. Individual lighting
3. Spots in pavement to illuminate the existing facades

Depending on the design of the street a choice for the lighting has to be made as well.



## Design street

Because I transform the street into an indoor street, I have to make/design new end facades as well. These facades have to be transparent in order to maintain openness and the feeling of a street. The alternatives mainly differ in the pattern of the facade and the size of the entrance. Does it have to be a sliding door or a tourniquette? Or something else?





## Design street

For the open ends of the street I'm inspired by the Markthal. Although this is a very modern example, it contradicts with the heritage buildings on the MMC, it is very useful.

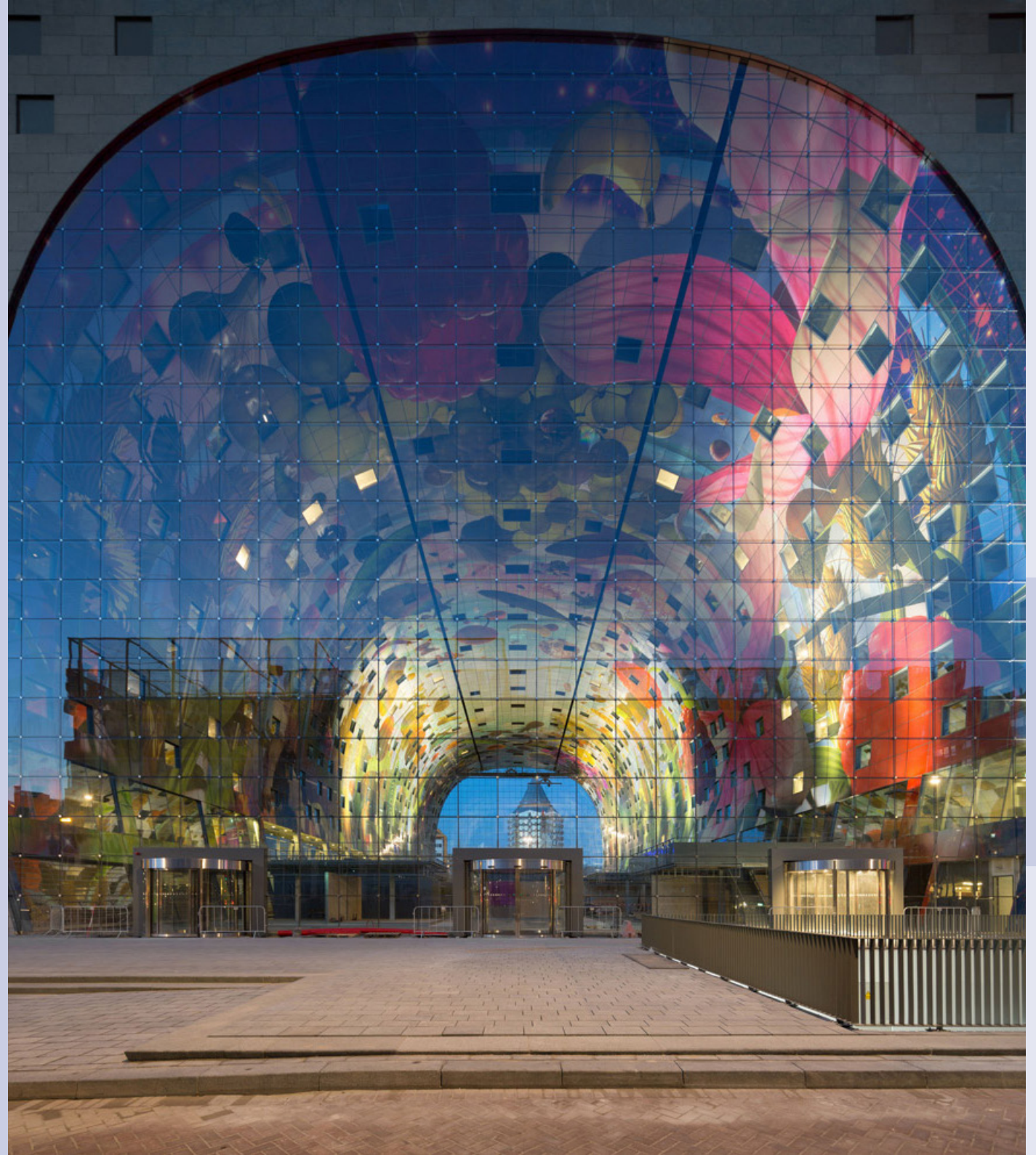
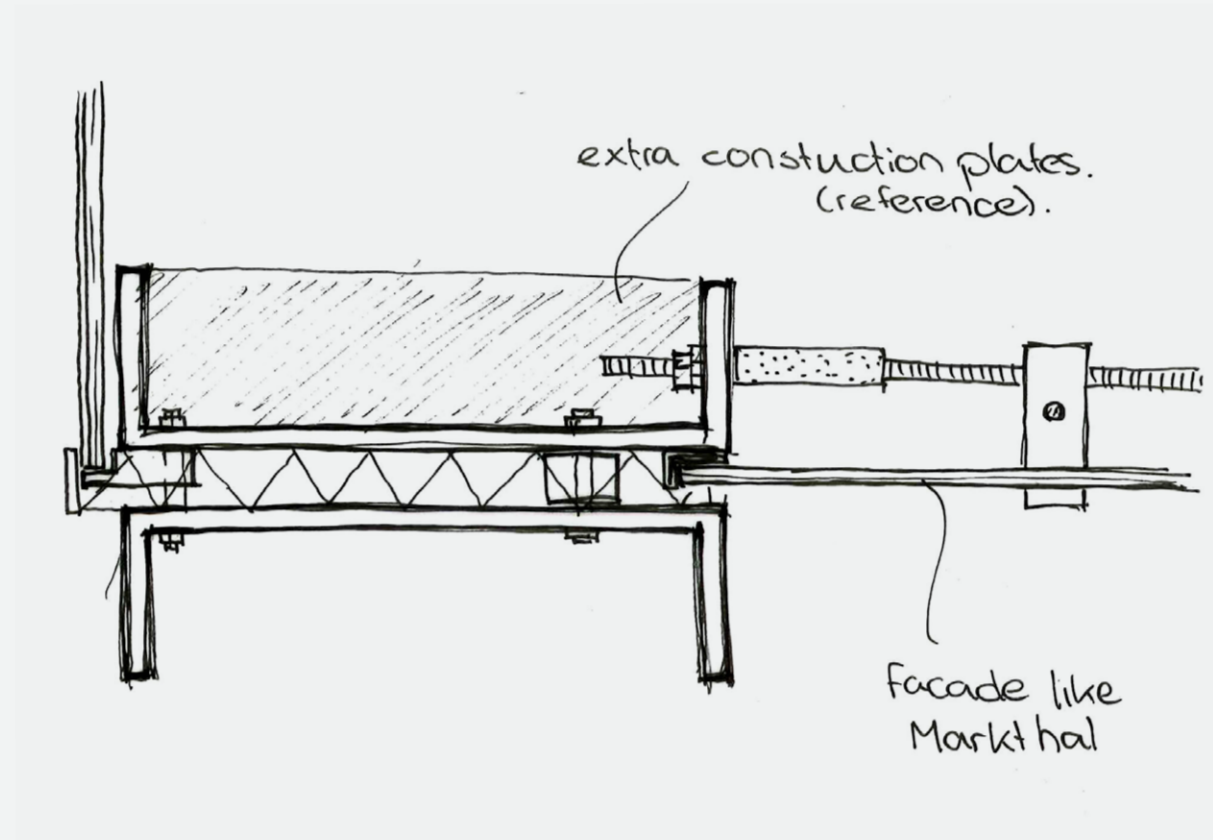
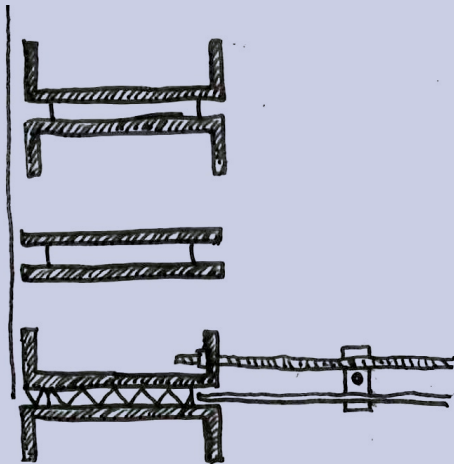


Image  
Markthal Rotterdam by MVRDV (photo by Ossip van Duivenbode. Accessed on March 14th, [www.detail-online.com/article/futuristic-food-shopping-market-hall-by-mrvdv-in-rotterdam-16819/](http://www.detail-online.com/article/futuristic-food-shopping-market-hall-by-mrvdv-in-rotterdam-16819/))



## Design street

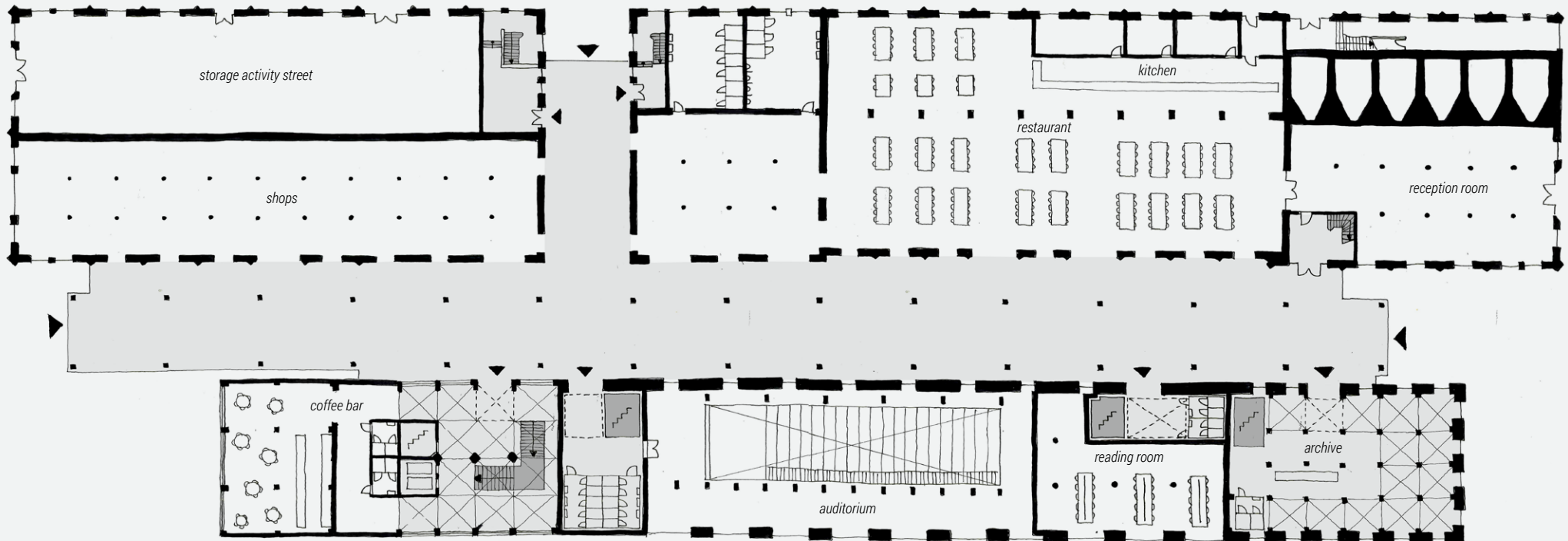
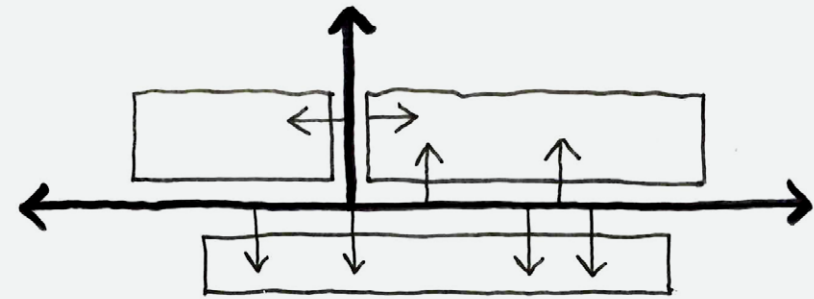
For now I've chosen for the Markthal-alternative. For the detailing I'm also inspired by the project of MVRDV. In my case, the steel portals can function as a large window frame. The 'double portal' makes it also possible to have an uninterrupted thermal line.



## Design street

This was the concept of the street as presented during the P2. Some important elements are:

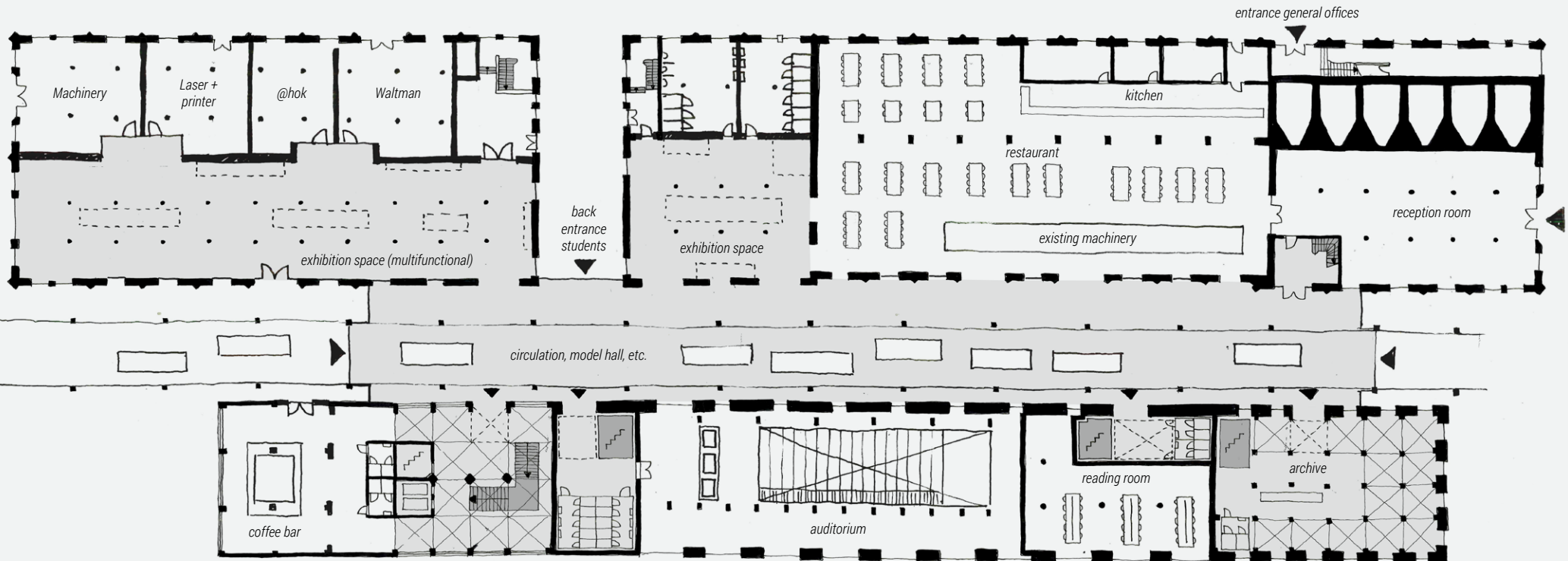
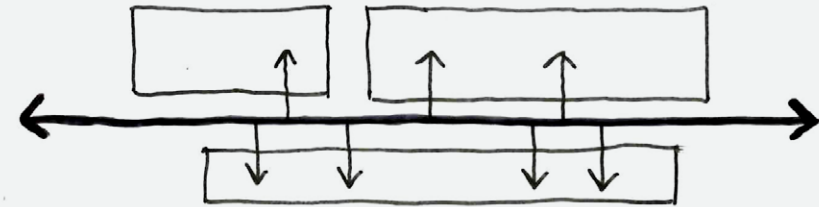
1. A main street and side street to connect the different building components.
2. Removal of all machinery.



## Design street

I reflected on the concept of my street and also my position regarding the machinery:

1. Elimination of the side street. By doing so, the concept of the street is much clearer.
2. The indoor space of the street is shortened to avoid useless space between the street and the existing buildings.
3. Conservation of some machinery. The machinery is the cause of the different construction typologies and the creation of building components with a different character. Therefore, the machinery can't be separated from the building: they belong to each other.





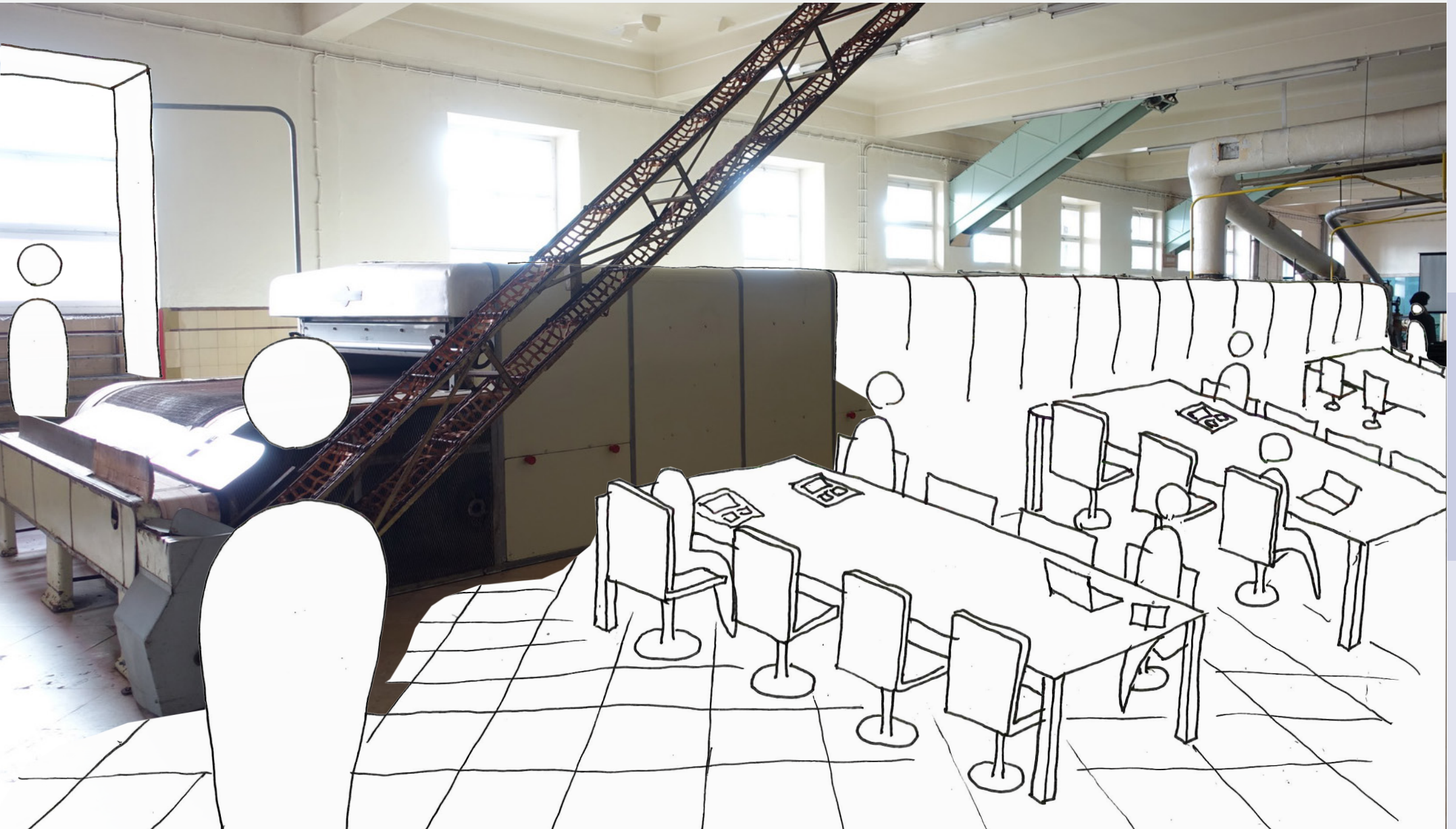
## Design

Automatic oven in the middle part of the bakery.



## Design

The automatic oven could be part of the restaurant.



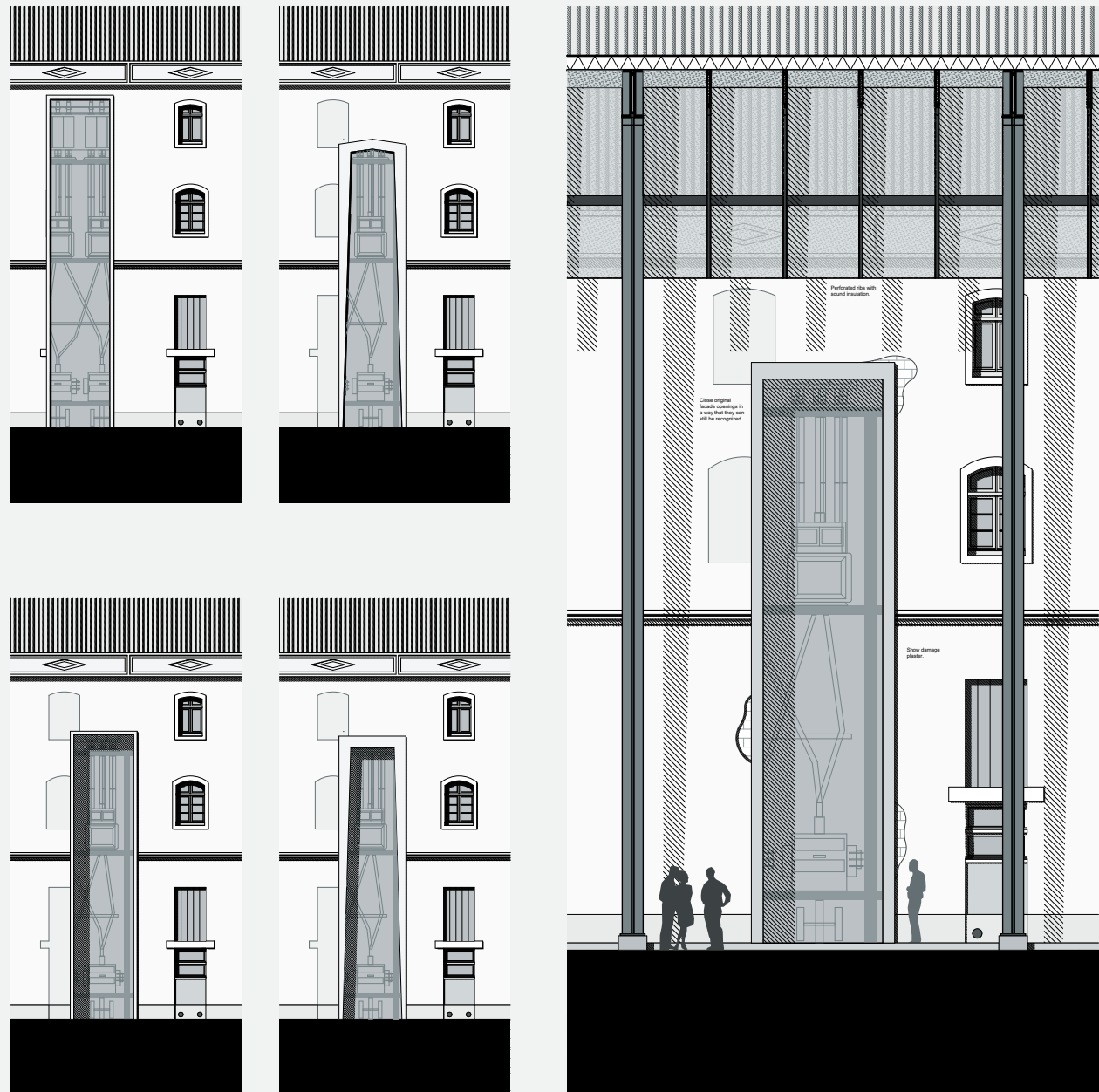


## Design street

During P2 I presented the design for the entrances to the different building components. The entrances fit within the grid of the portals of the street and are tuned to the design of the street. But the design (form) of the street has changed. Do I have to redesign the entrances as well? I made some new alternatives, they differ in height, depth, thickness of the frame shape. I decided to stick with the original design. The only thing I change have to do with the thickness of the frame: the top sill is thicker than the sides. This strokes with the natural stone frames of the existing windows.

There will be a clash between the original facade openings and the new entrances. I think it's nice to show this as well by filling in the original openings with a recognizable material and show the damage of the plaster which will occur when sawing the openings for the new entrances.

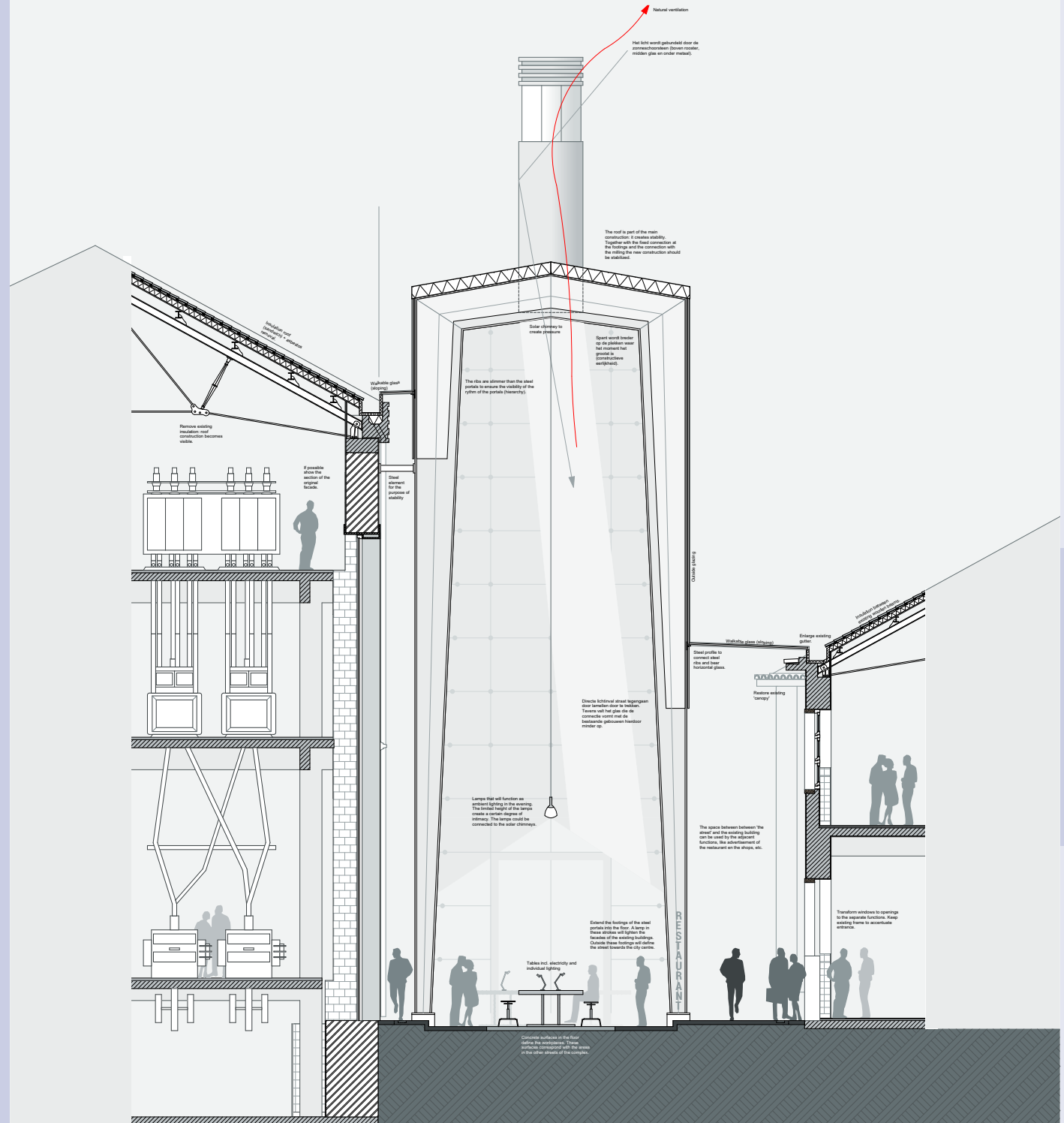
I've added one window, which is similar to the entrances, to display the machinery in the milling. By doing so, the street becomes a kind of a museum as well.





## Design street

The main interventions are the entrances to the different building components and the introduction of an indoor street (portals). Because it's going to be an indoor space, the new street has to be connected with the existing buildings. This connection will be at the location of the original gutter (schetsen aansluiting toevoegen?).



## Design street

For the connection between the street and the original buildings I'm inspired by The Resident in The Hague. There is space between the new added glass roof and the original gutter/eaves. In this way it feels like the new and the old are not glued together. I can use this principle by emphasizing the street as a self-standing structure.

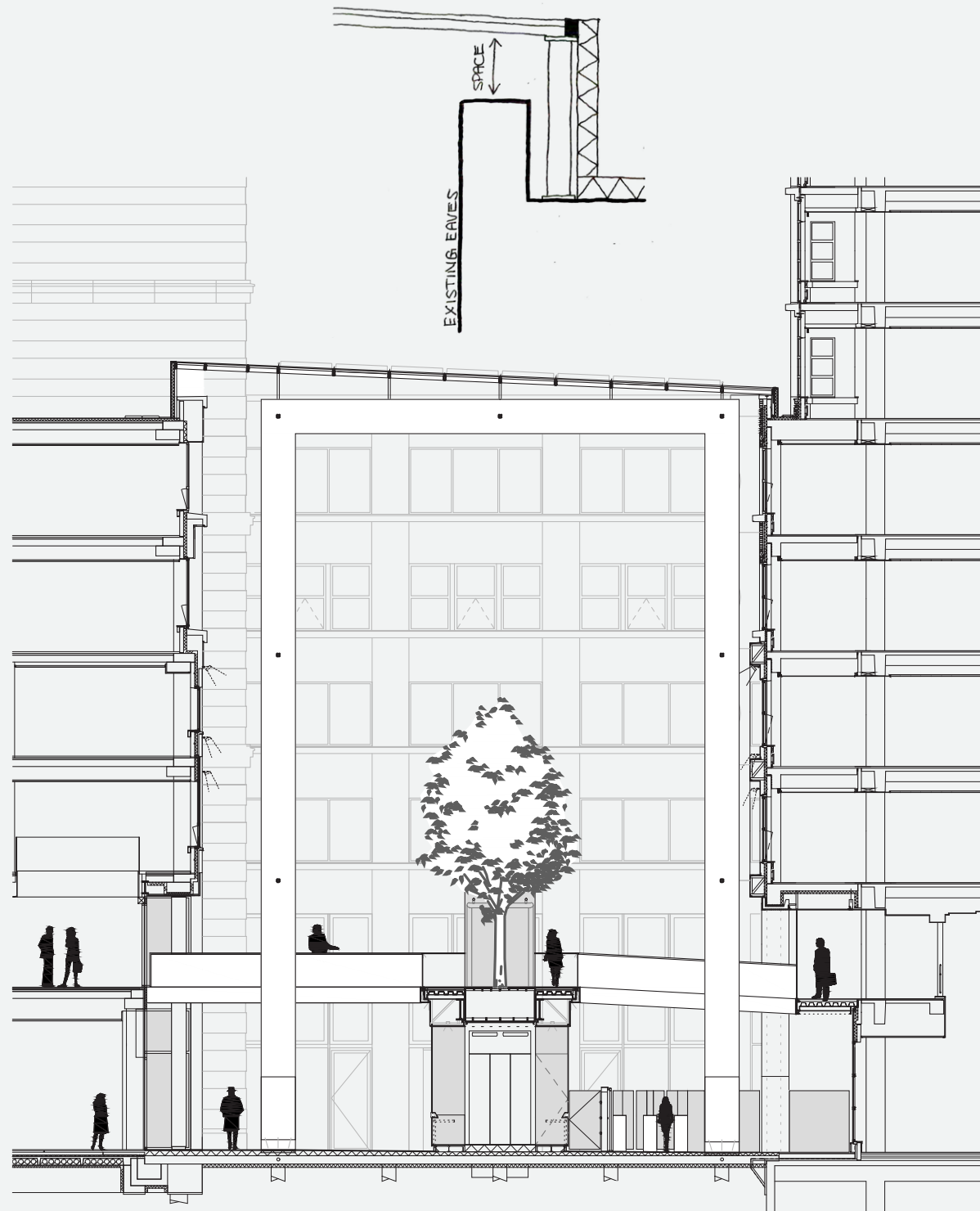
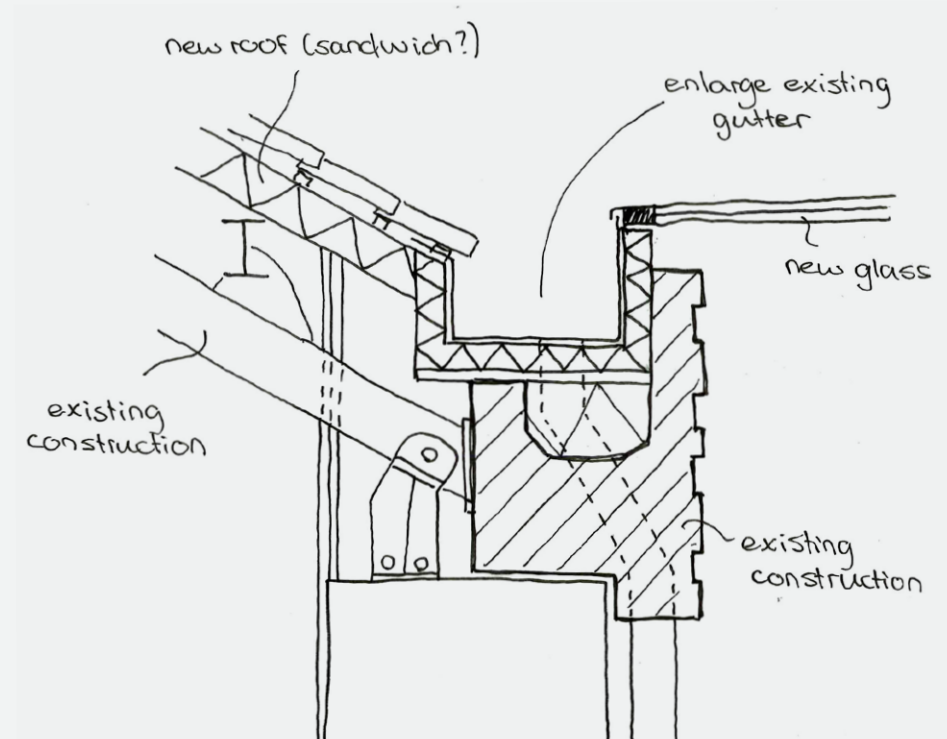
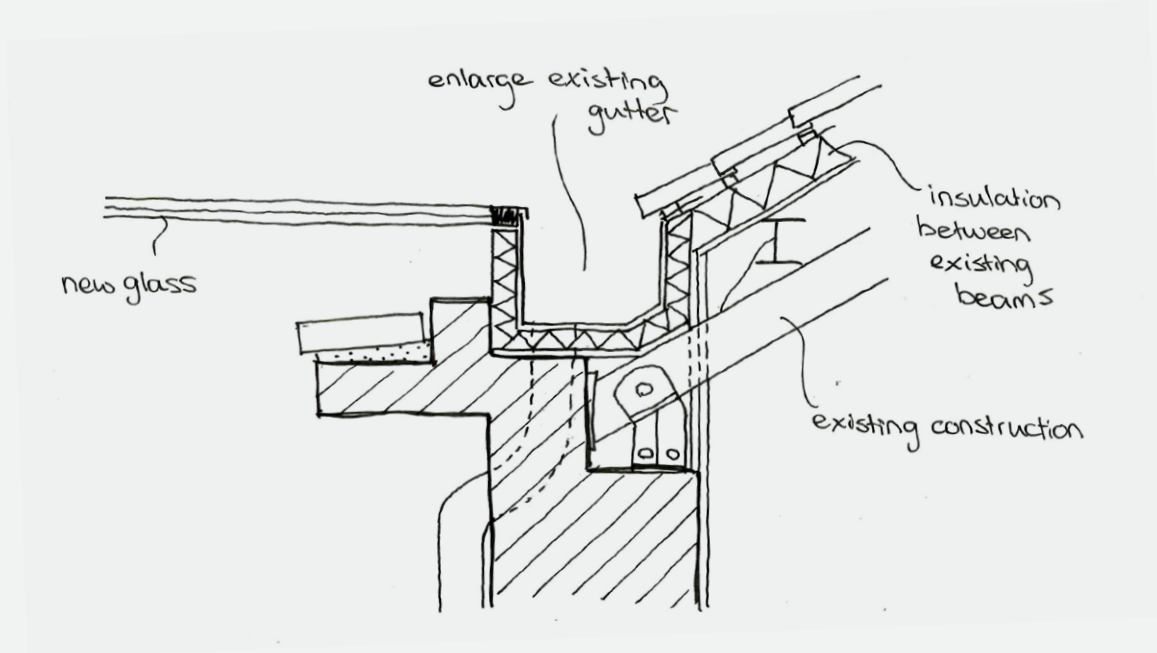


Image  
The Resident The Hague by cepezed (image from  
presentation Ronald Schleurholts at the TU Delft)

## Design street

Connection street and existing buildings at the location of the original gutters. Important elements are the creation of an uninterrupted thermal line and the enlargement of the existing gutters.







## Climate design

A few weeks ago I did a kind of an inspiration tour in the eastern part of the Netherlands. One of the projects was the ROC Twente in Hengelo. The solar chimneys remind me of the chimneys of the bakery and the chimneys that were once on the site.



Image  
Community College ROC Twente by IAA Architecten  
(Accessed on March 14th, [www.iaa-architecten.nl/projecten/12-community-college-roc-van-twente/](http://www.iaa-architecten.nl/projecten/12-community-college-roc-van-twente/))

Ruben Klinkenberg | Process Logbook



## Climate design

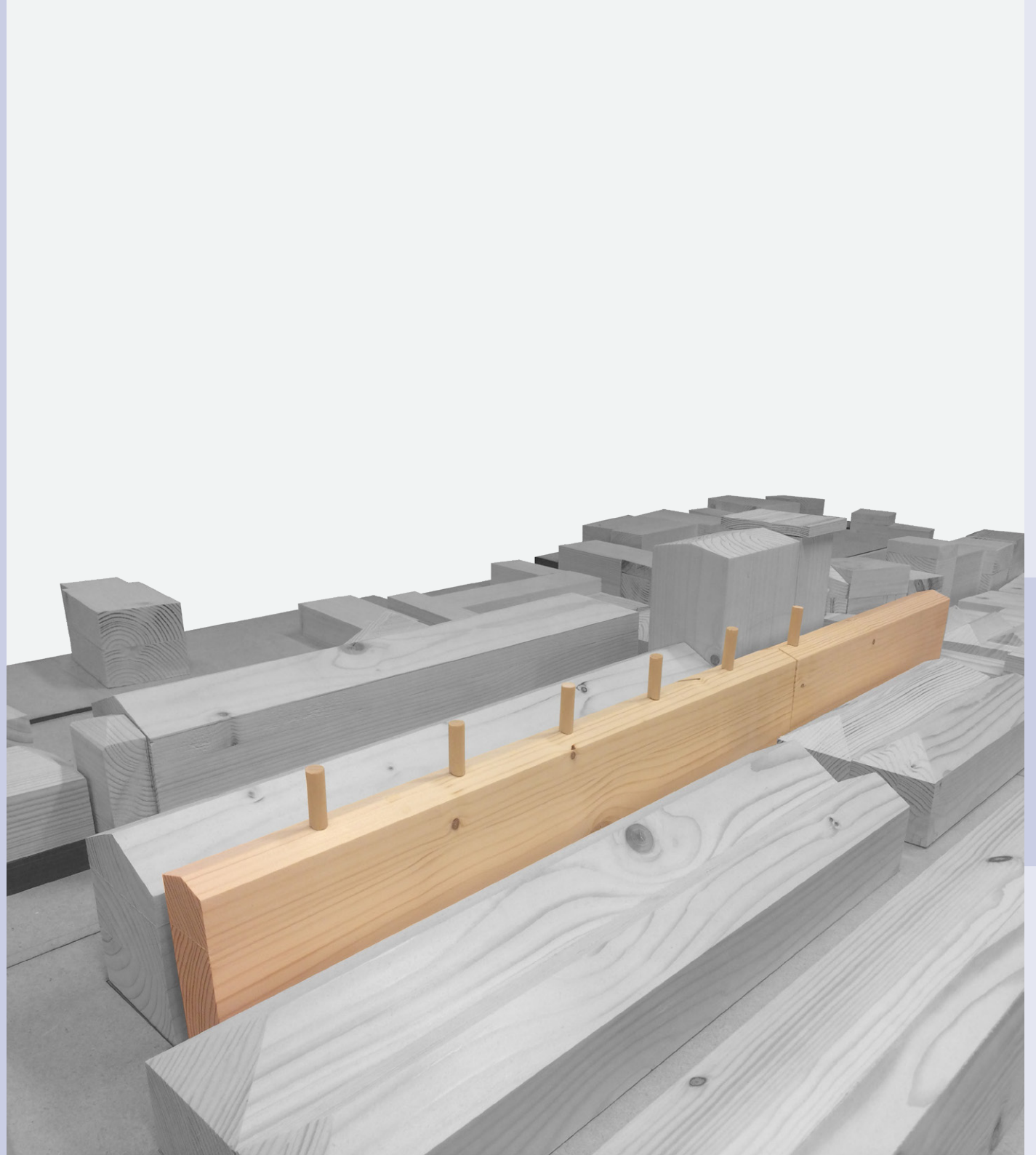
The solar chimneys are also inspired by the chimneys of the bakery.





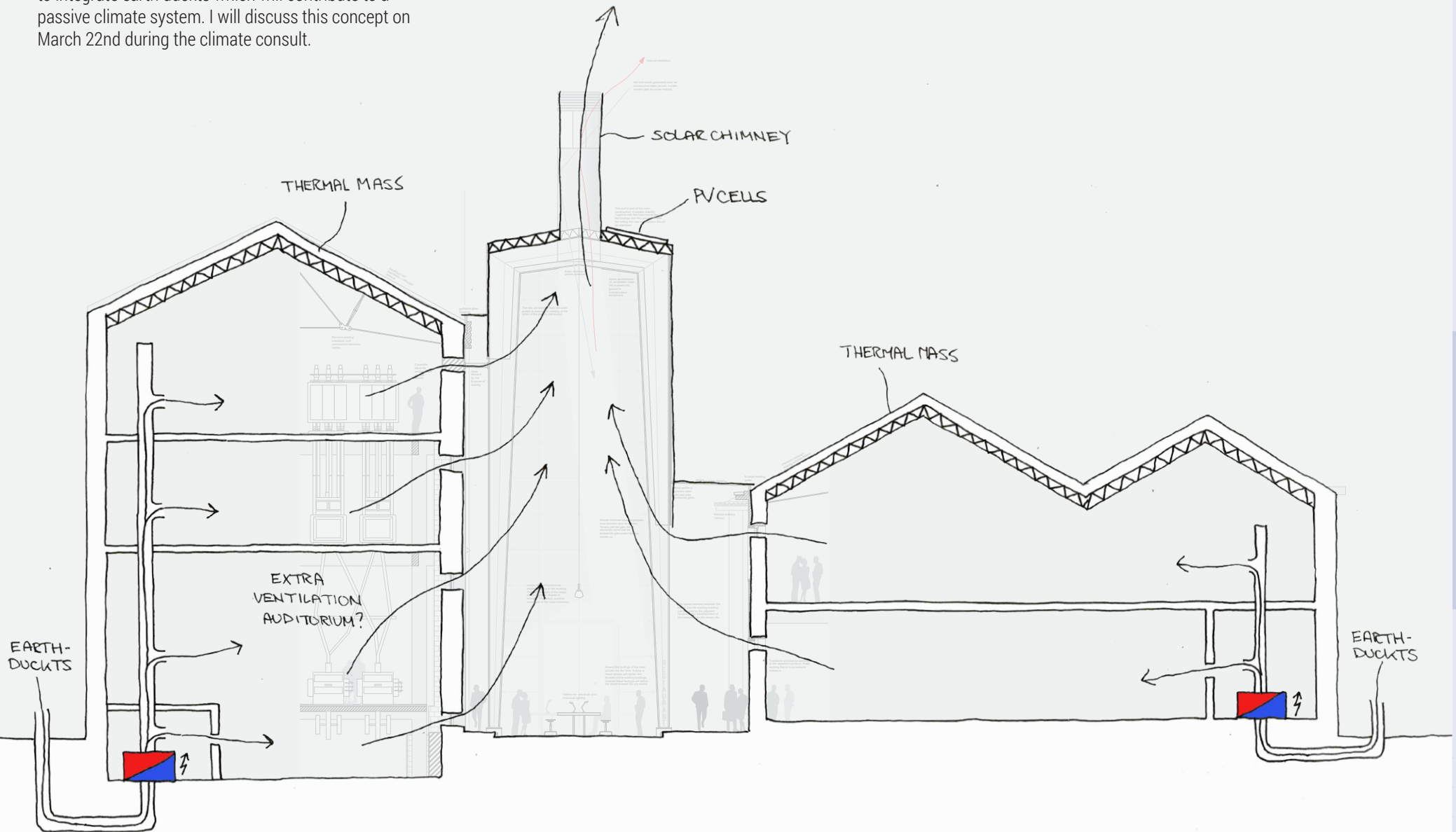
## Climate design

The solar chimneys give scale to the large intervention I do.



## Climate design

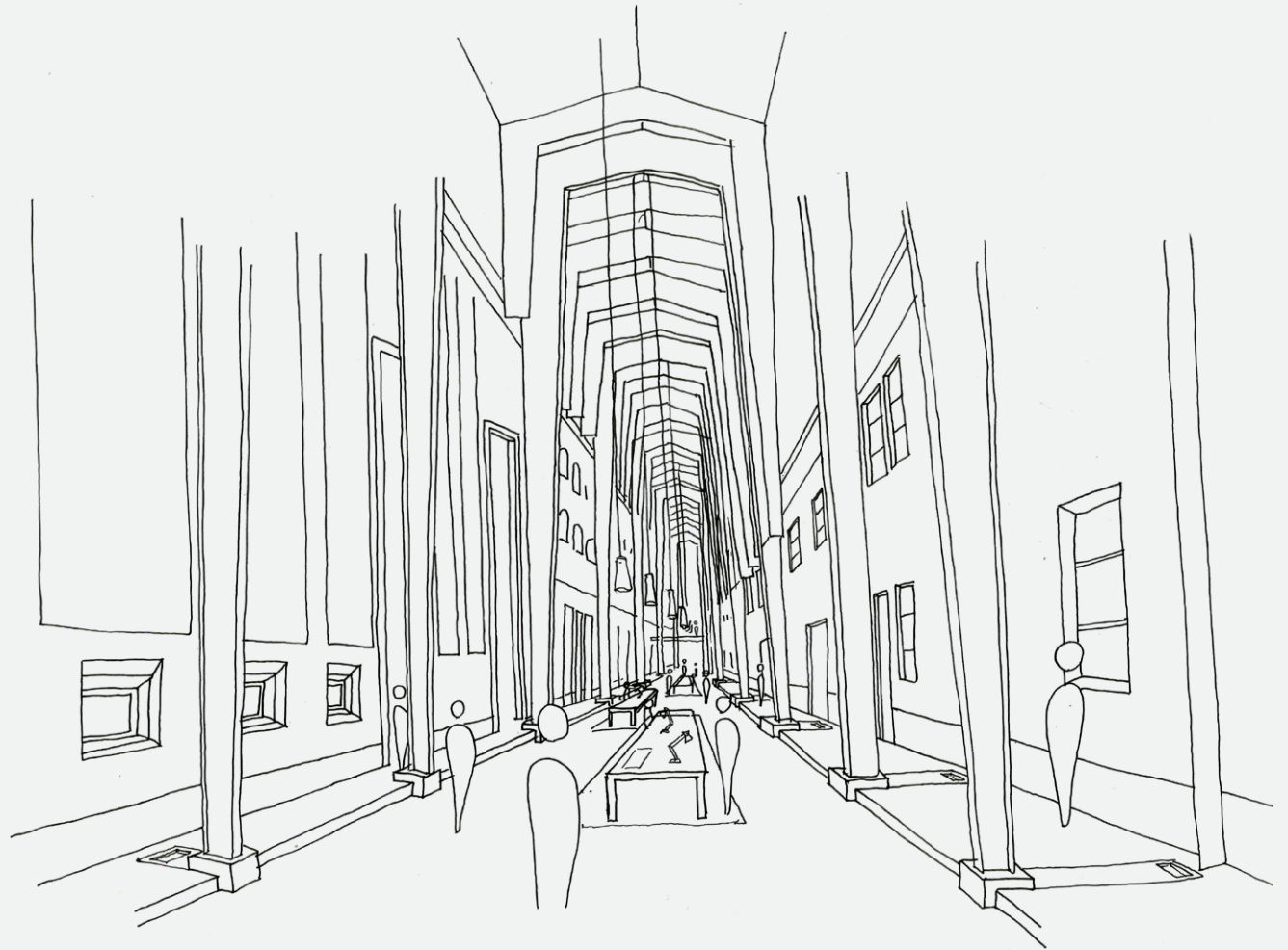
For the climate design I want to take advantage of the existing (local) qualities, like the thermal mass, solar heat and the fact that I'm going to redesign the streets on the complex. This gives me the opportunity to integrate earth ducts which will contribute to a passive climate system. I will discuss this concept on March 22nd during the climate consult.



## P3 presentation

During the P3 I presented a summary of my strategy, concept of the building and the studies I've done after the P2 presentation. I received the following remarks/question/recommendations:

- Look at Van Leeuwenhoek Park Delft, which contains a similar structure.
- What is the character of the street? This is still not clear yet. Are it just tables in the street? How do the people find their way?
- Look at the University Library of Maastricht
- How do the new merges with the existing? Visualize!
- The blinds go not to ground, weird?
- Look at Swingdon Lokomotive Works UK, how they preserved the machinery.
- Look at King's Cross London. A building converted into a university (especially about connection old and new).
- Why do you want to make the street public? (Guido)
- You removed the secondary street after the P2. Can the silo be still in place? (Guido)
- RAAF (art & architecture) office landscape. (Anna)



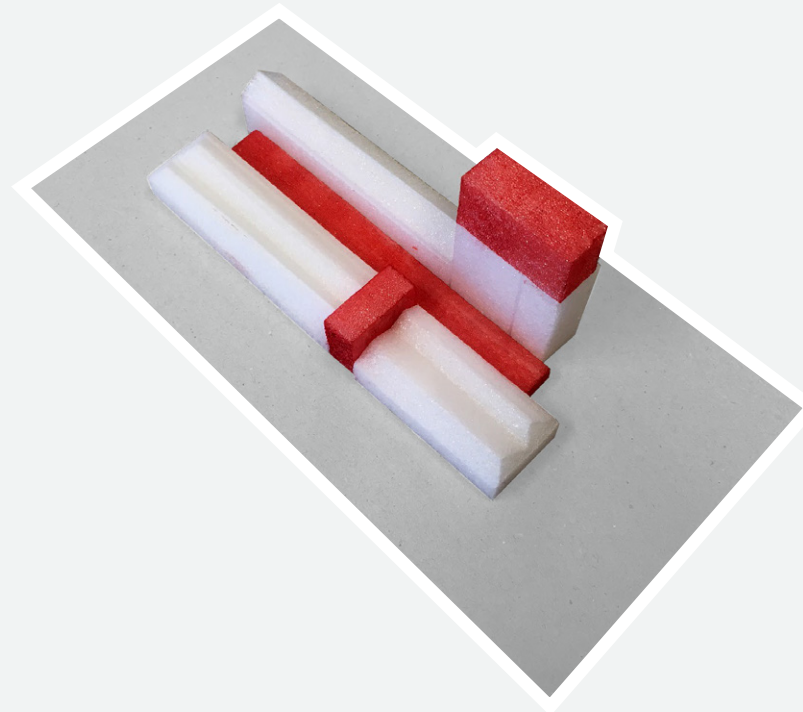
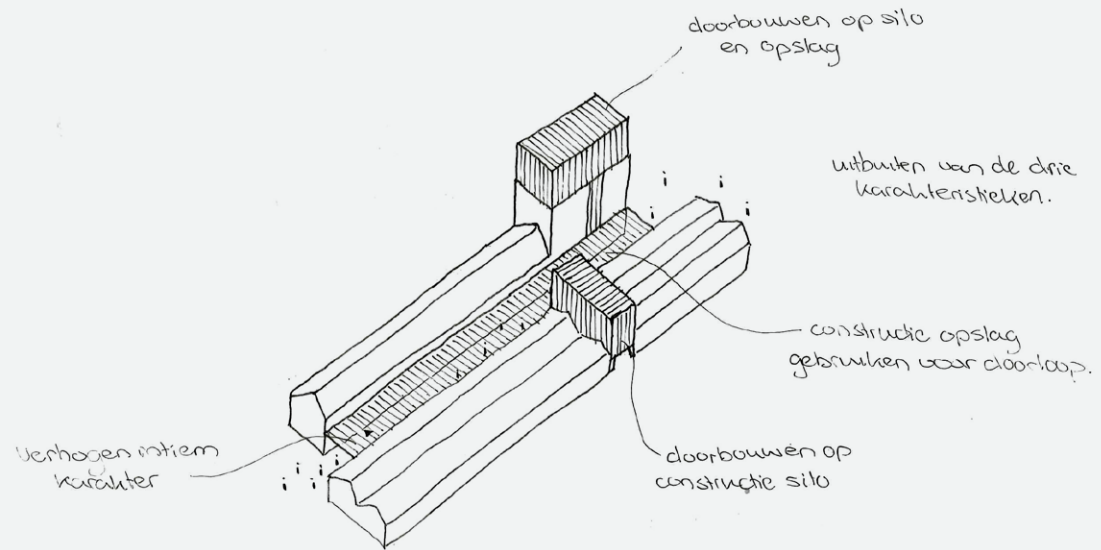


## Reflection P3

Do I have to return to an earlier concept? What do I have to do with the silos between the bakery and cookie factory? In the process between the P1 and P2 presentation I removed this silo and transformed it into a side street. This street was designed as an extension of the buffer space between the new street and the bakery. Between the P2 and P3 presentation, when I was making the scale 1:100 model, I decided to remove the side street for the sake of a clearer concept. During the P3 presentation I was asked if I could preserve the silos in that case. I didn't think about this option and was aware of the possibilities and probable qualities when preserving the silos.

When I was updating the logbook I came across the adjacent images. I was very enthusiastic about this concept, but for some reason I did not stick with it. Probably I couldn't find a solution for the 'design' of the small silo. What have to be the height of it? Every time it conflicted with the new street. But what if I preserve the silo? What are then the possibilities? I made some scenarios of it (next images).

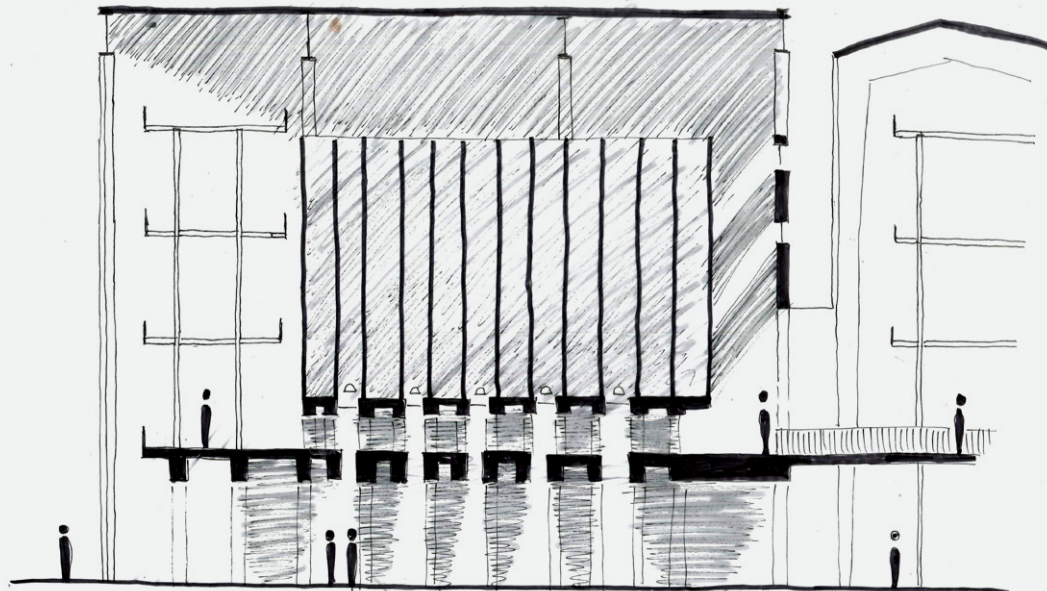
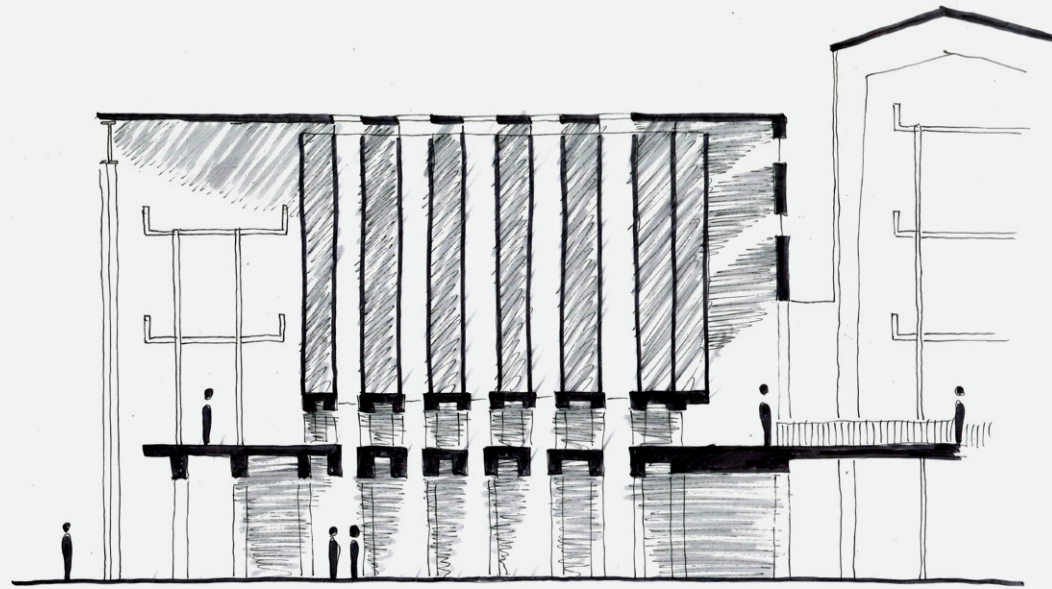
This silo is one of the building components that are added in the 1970s. These components have barely been in operation, but determine the character of the ensemble. They also symbolize the development of the MMC, because at that time it reached its maximum level of production. I can use these building components as inspiration and carrier of the design.



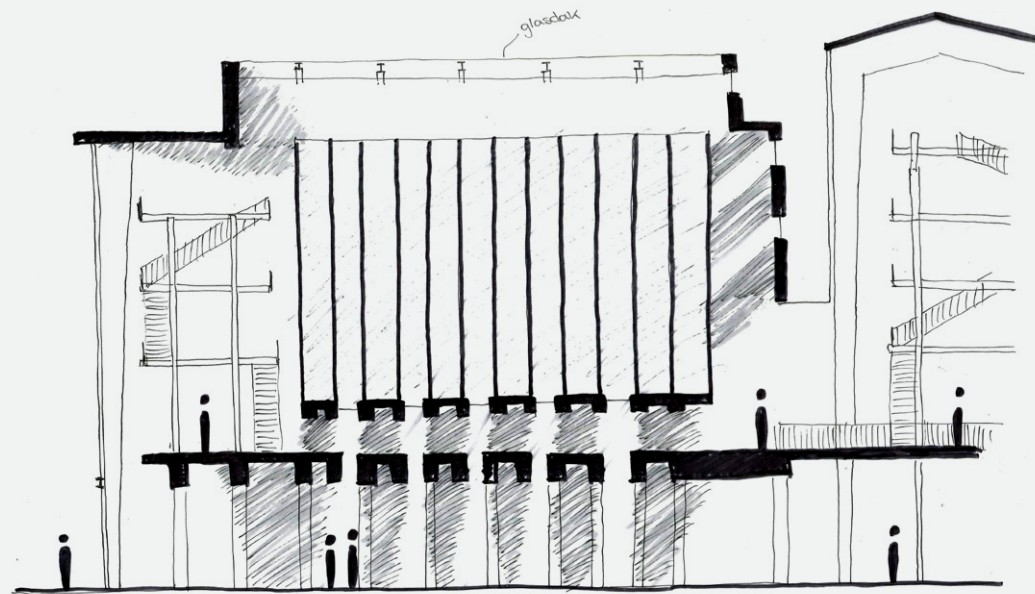
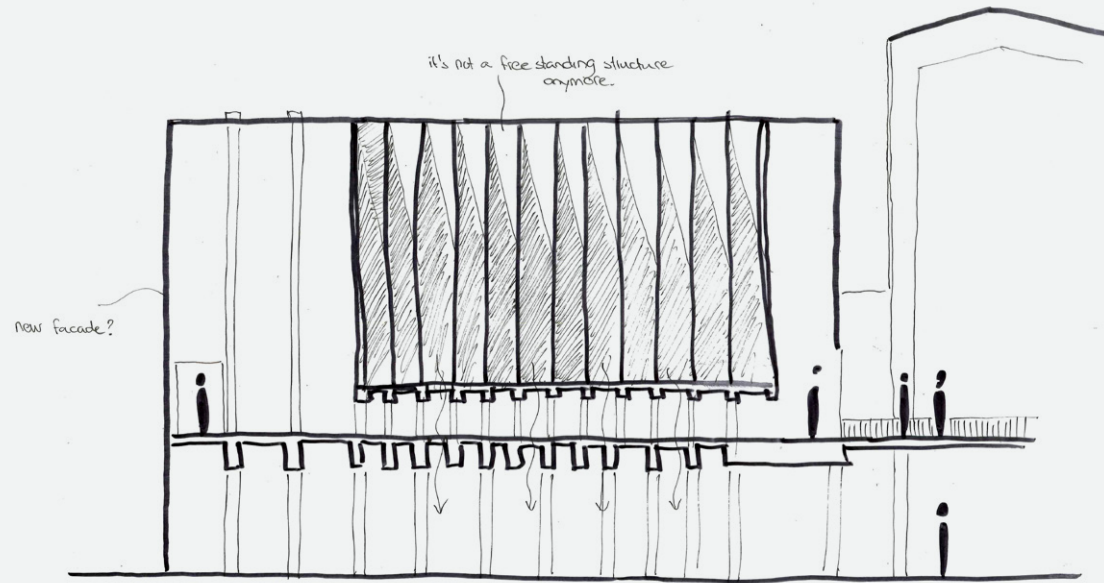
## Design small silos

I made different scenarios for the reuse of the silos between the bakery and cookie factory, like an addition on top or removing the floor. Most important element is the distinction between the 'studentmachine', which I implemented to give function to the street, and the housing of it.

Should it be able to walk through the silos? It can contribute to the experience of the circulation in the building.



Design small silos



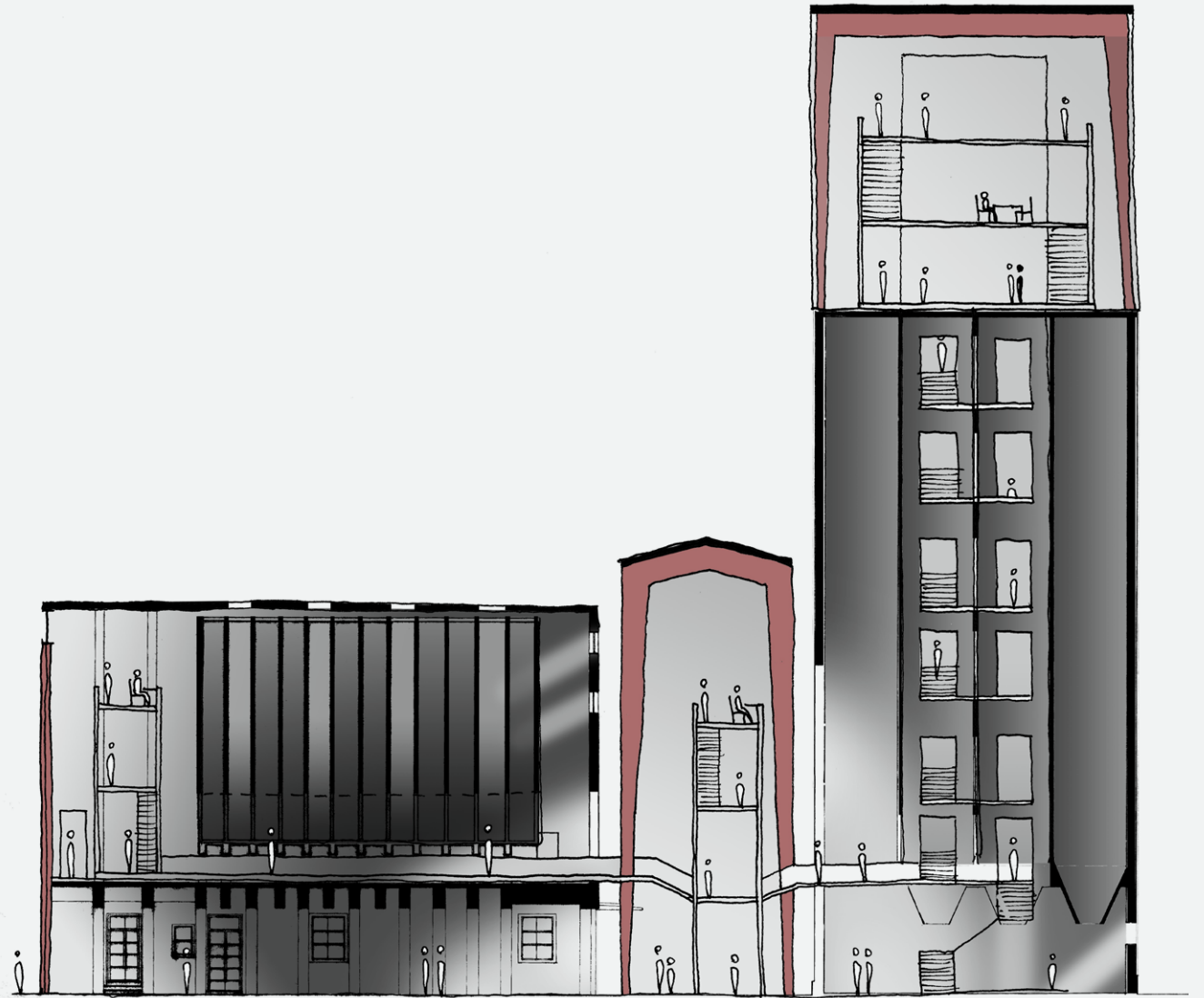
- Moet het links ook een kolom zijn die breed uitloopt.





## Design small silo

People walk through the silos, this contributes to the experience. The new added building parts bring light into the existing buildings and guide people through the buildings.

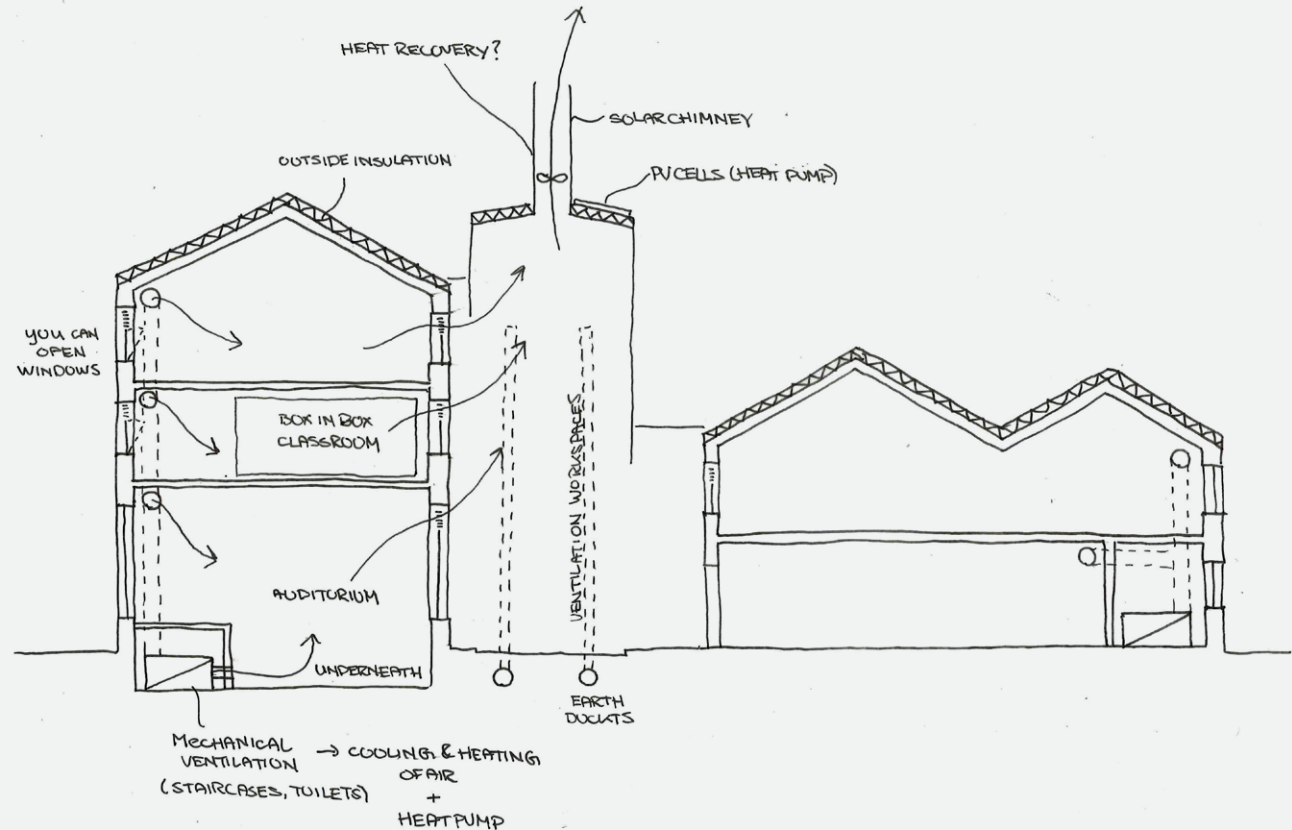


## Climate design

March 22nd we had a consult on the climate design. We spoke about the concept I presented during the P3. I received the following comments/remarks/recommendations:

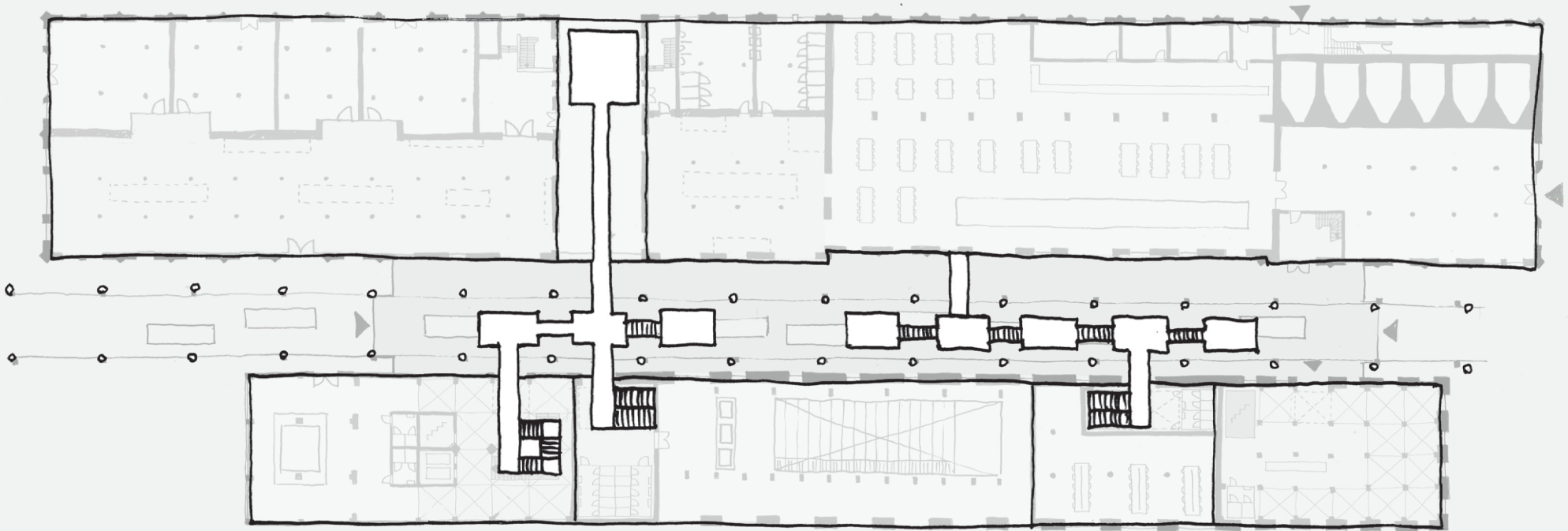
- Group systems: which functions can be connected regarding the climate system?
- You can make a bypass for the ventilation (natural and mechanical).
- You have to make provisions for the outlet of air from the buildings to the central street to prevent the same problems as in the ROC Hengelo.
- How are you going to heat and cool (radiators, air, etc.)?
- In the street you can climatize locally at the work places.
- How are you going to insulate the roof of the bakery and the milling: inside or outside? Insulating on the outside will influence the thickness of the roof.
- Zomernachtventilatie
- Where are you going to install the earth ducts? You can do it in the central street as well.

I came up with the adjacent concept: a combination of mechanical and natural ventilation. The vertical ducts can be installed in the stairwells: in this way students can see and understand the working principle of the installations.



## Design street

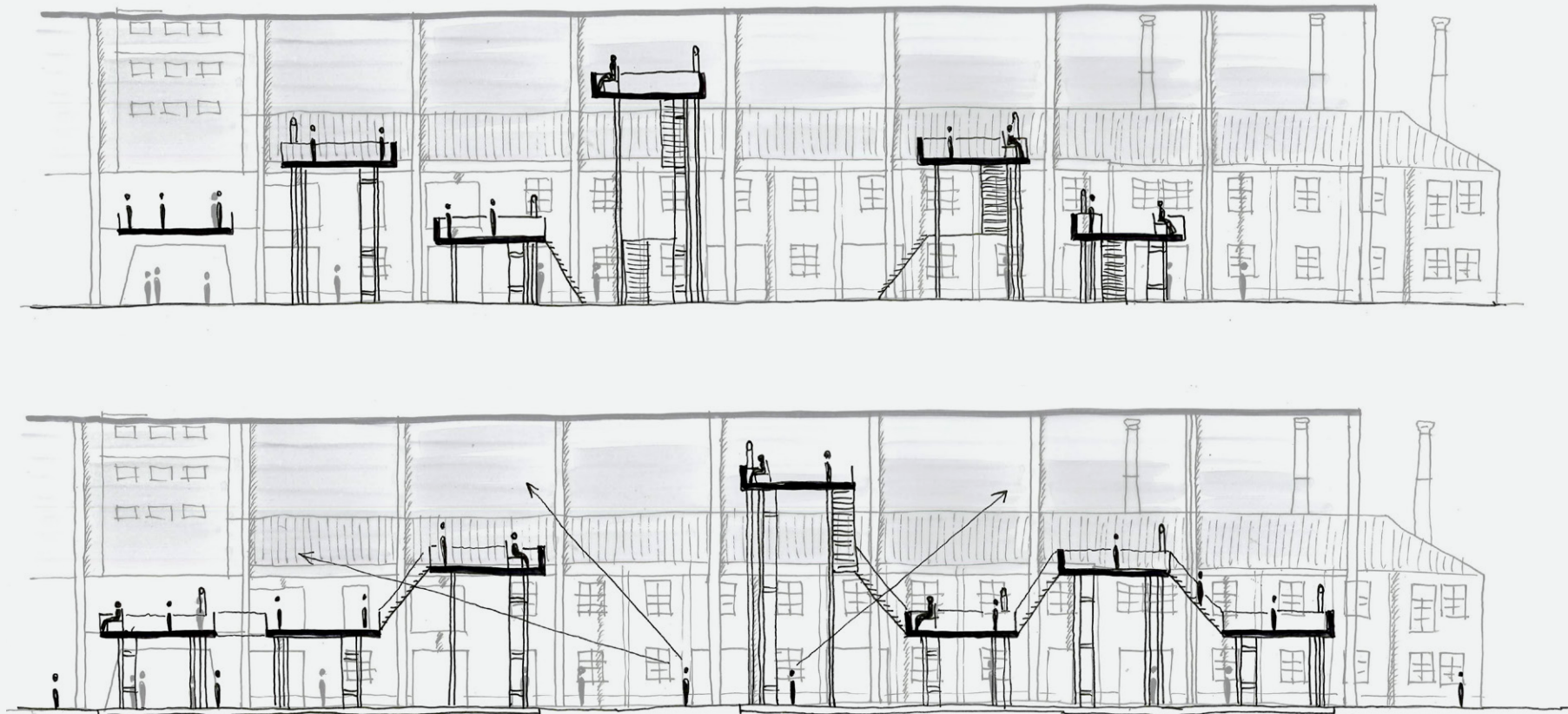
I want to implement a new machine to give function to the connecting street. During the P2 and P3 presentation the design of the street wasn't clear, especially because of the height. As became clear from the analysis, the existing machinery and structures are inseparable: the introduction of a new machine meant the introduction of a new structure and vice versa. Because I built a new structure, I want to implement a new machine as well: a 'studentmachine'. This machine will physically connect the buildings with their different heights and give character to the street. I think the implementation of a machine brings everything together. What was one of the questions after my P3 presentation, about the (missing) character of the street, is now tackled!

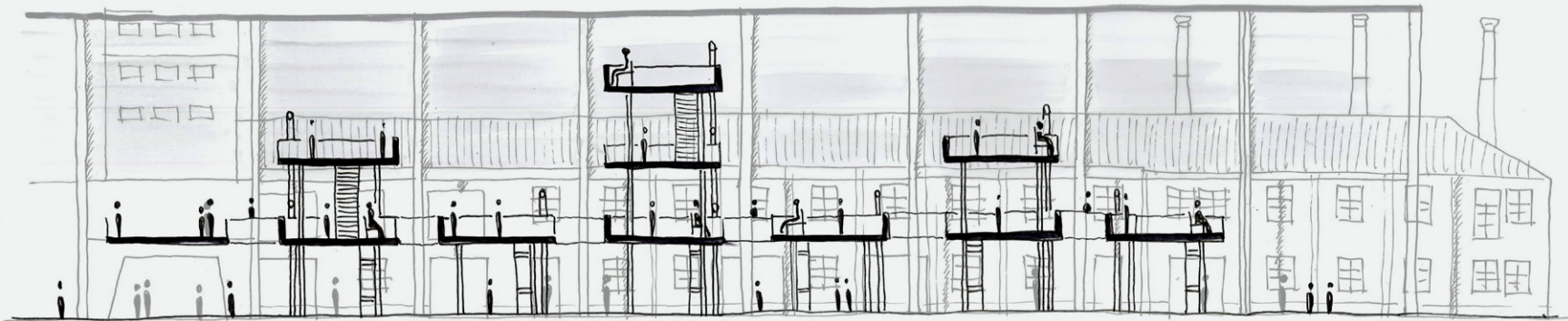
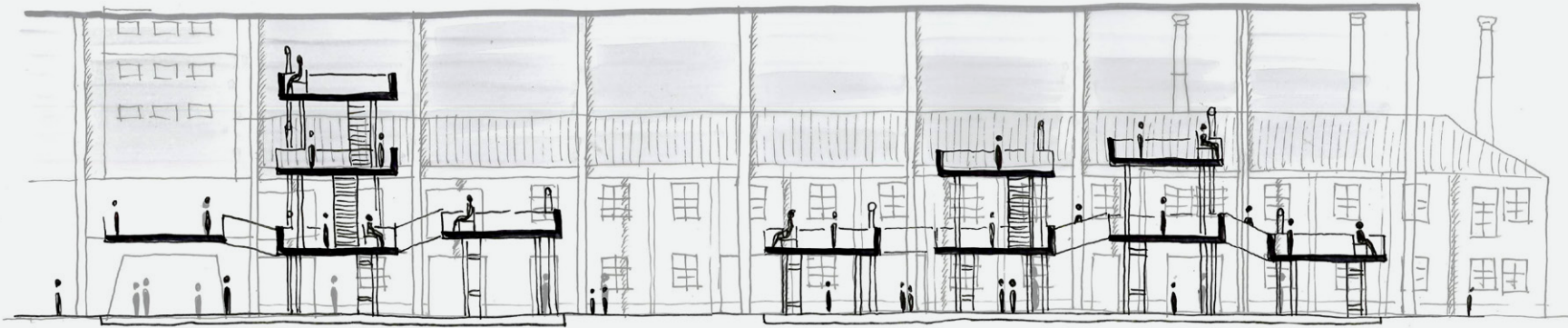


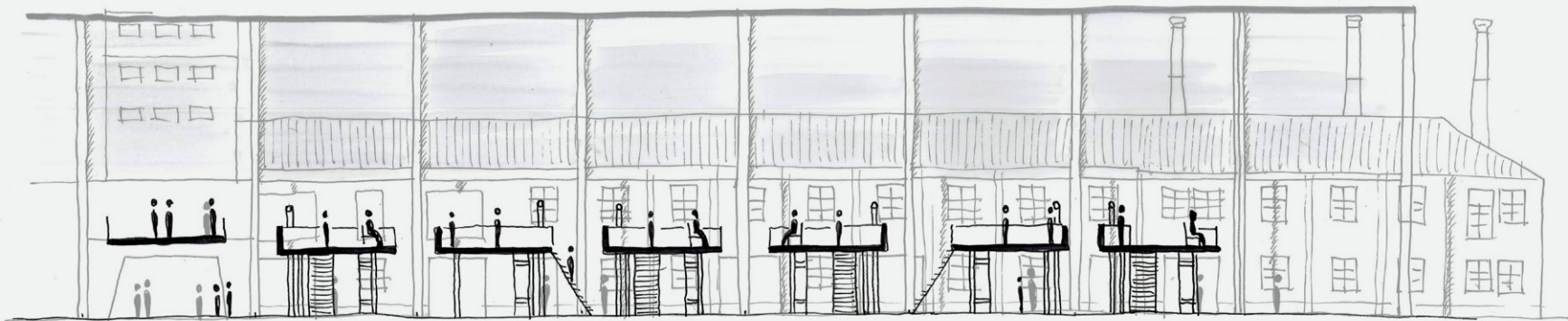
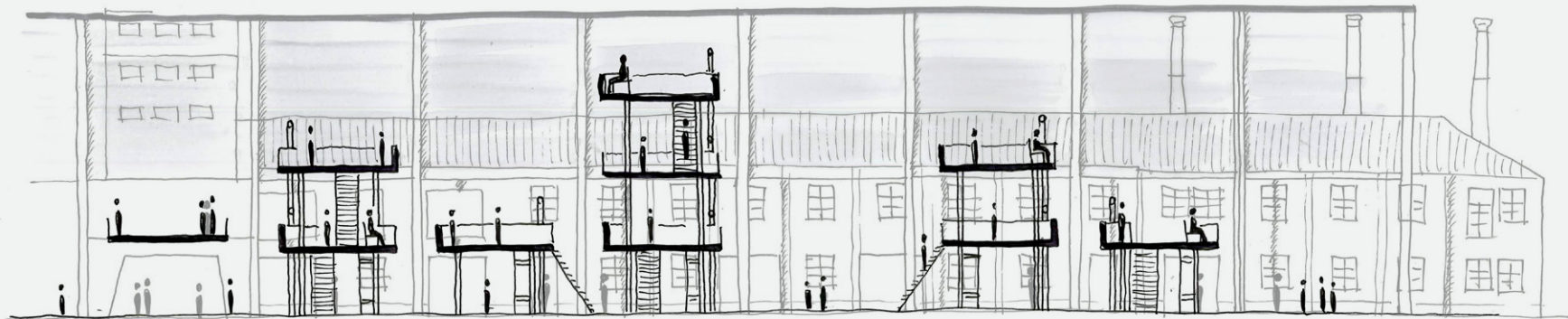


## Design studentmachine

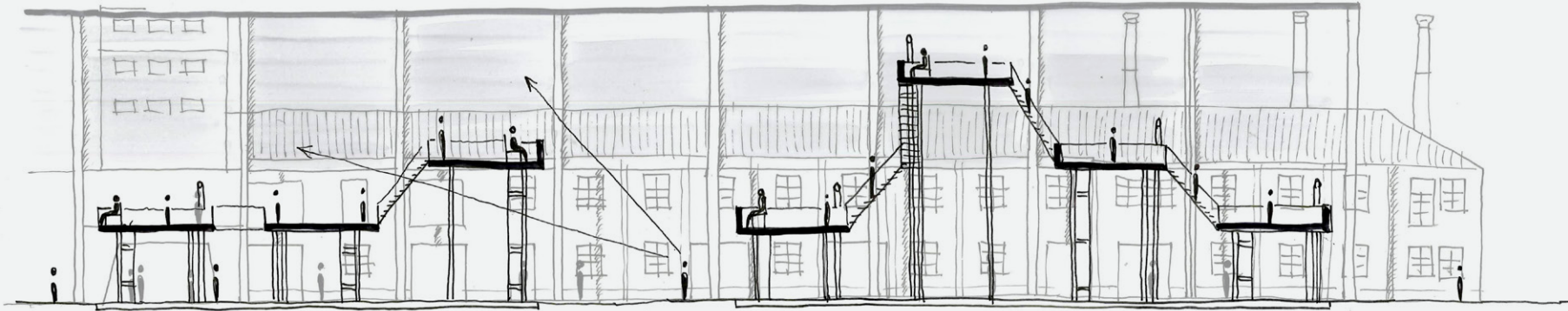
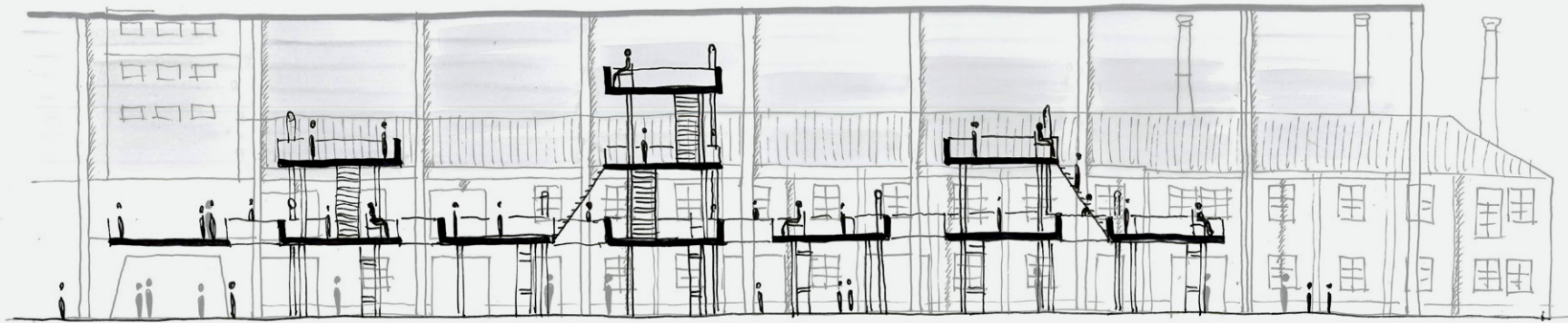
I made several alternatives for the design of the machine. Very important is to preserve the openness of the street. This can be achieved by reducing the amount of floors. These floors can be used by the students as workspaces. The height of the workspaces can differ in order to connect the adjacent buildings with their different floor heights. Some of the floors have to be sacrificed to be able to connect the buildings. Does the machine have to be flexible? And should it be one big machine, or a repetition of a few small machines?





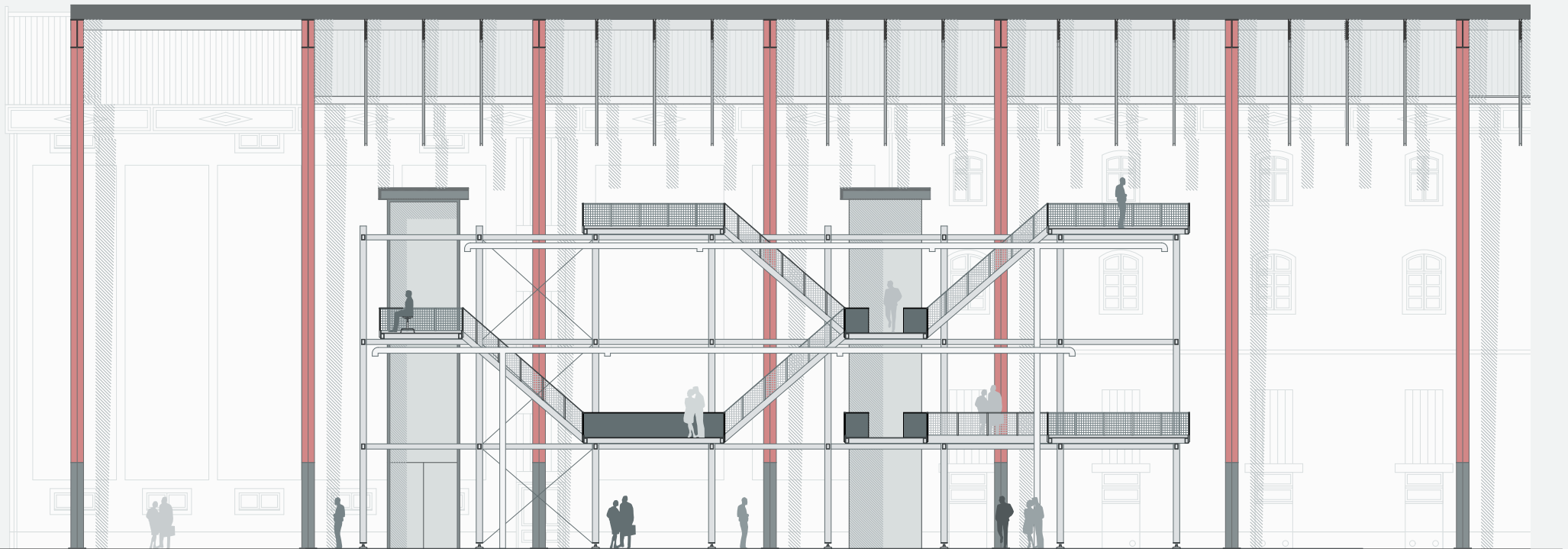






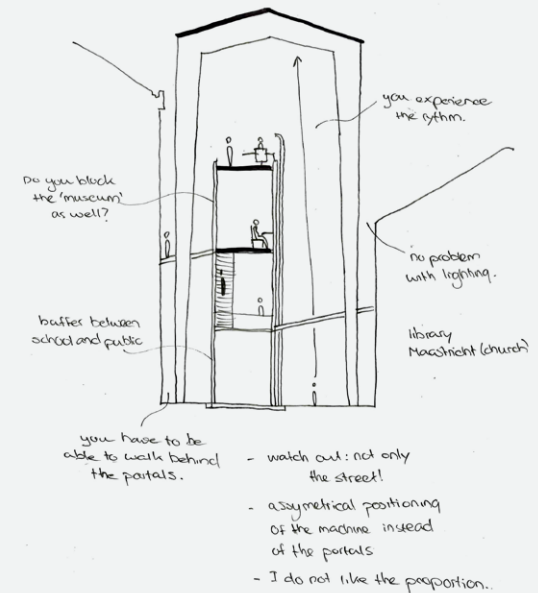
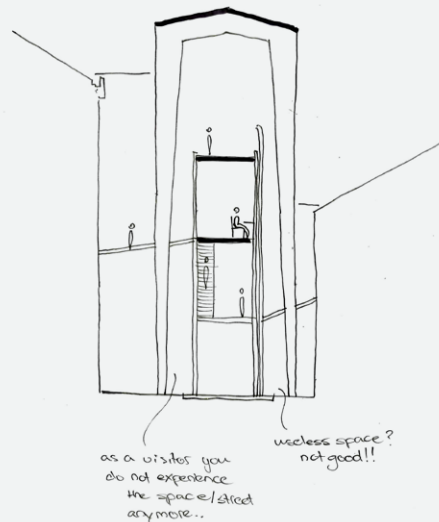
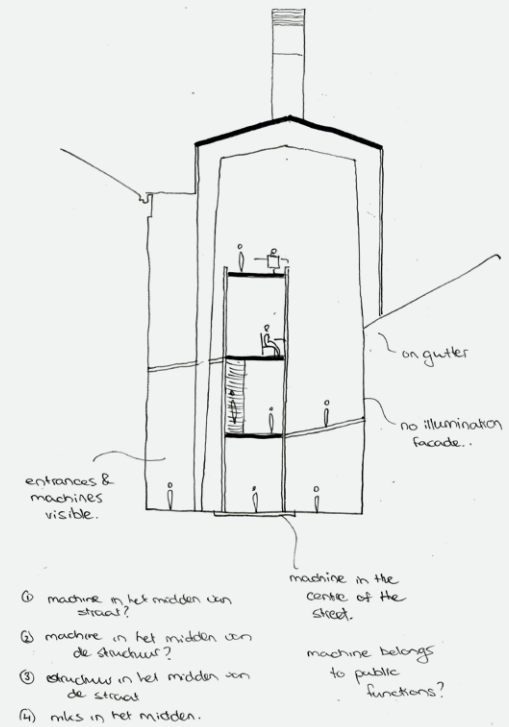
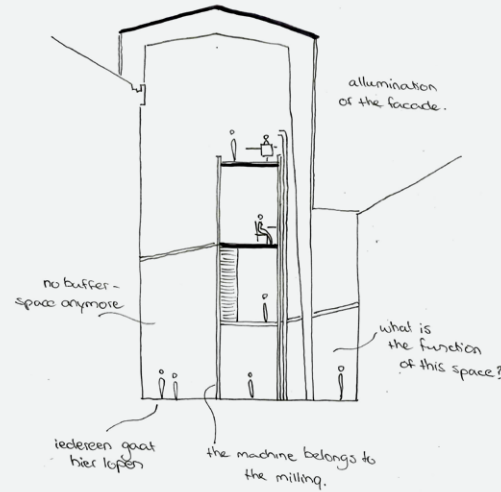
## Design studentmachine

Eventually the machine is designed as a flexible framework with floors that can be used by the students as workspaces. The new street and machine will be part of the same grid in order to emphasize the relation between the two. The footbridges, as presented during the P2 presentation, are integrated in the design of the machine. The levels of the workspaces are not tuned to the floor heights of the existing buildings, but are also part of a general grid (the machine has an own rythm). The machine is a reinterpretation of what is already present at the MMC, like steel feet under the columns and open stairs and balusters.



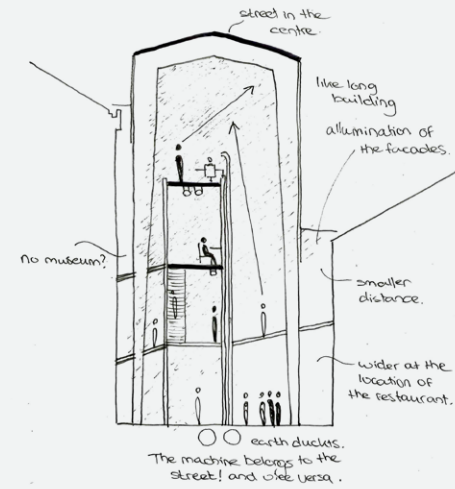
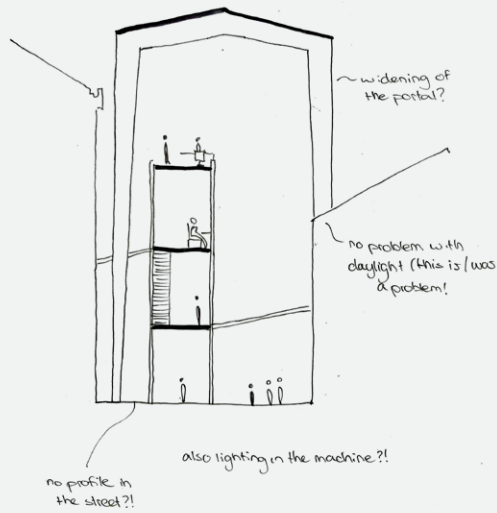
## Position street and studentmachine

Instead of an asymmetrical position of the street between the existing buildings, I could also place the studentmachine asymmetrical in the street itself. With this I will have the same result, namely a distinction between the more public and private functions on the ground floor. If so, the street can be positioned symmetrical between the existing buildings. I did not do this by moving the street, but by widening it.

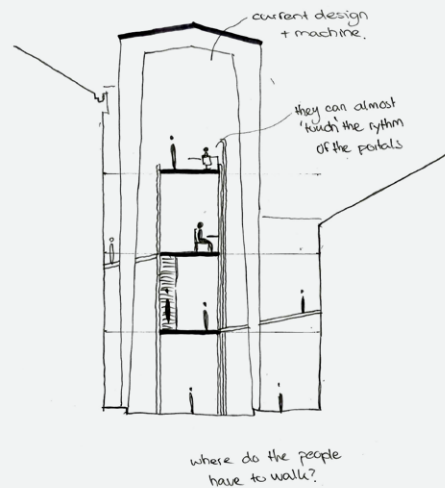




Position street and studentmachine

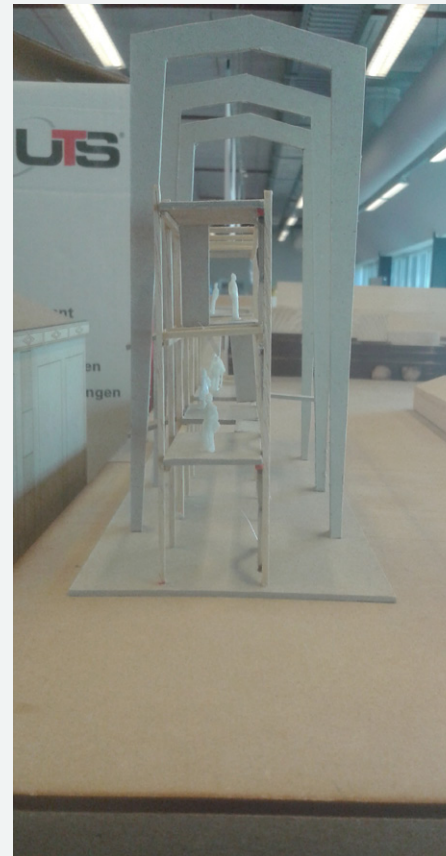


- Does the machine have to be in the middle
- Too big or too small?



## Design studentmachine

Photos of the model of the machine, assymetrical positioned in the new introduced street.



## Character street

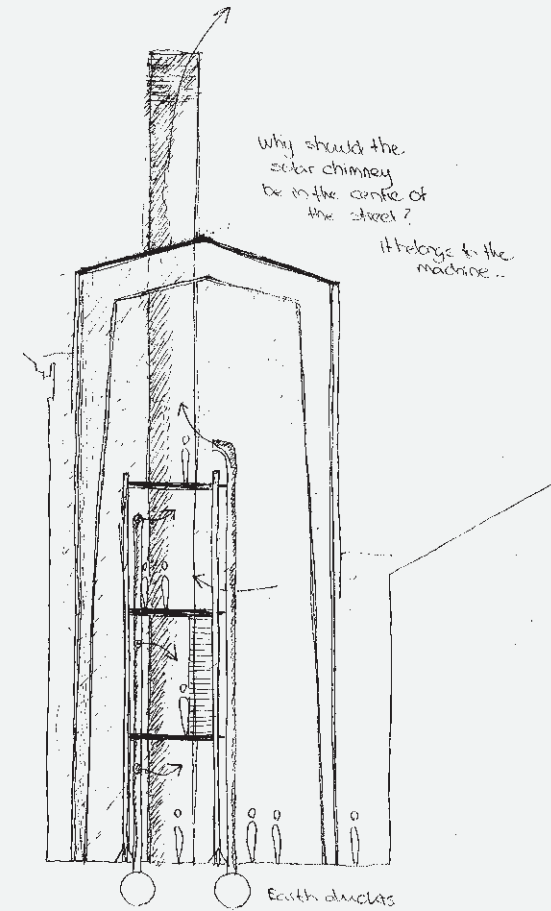
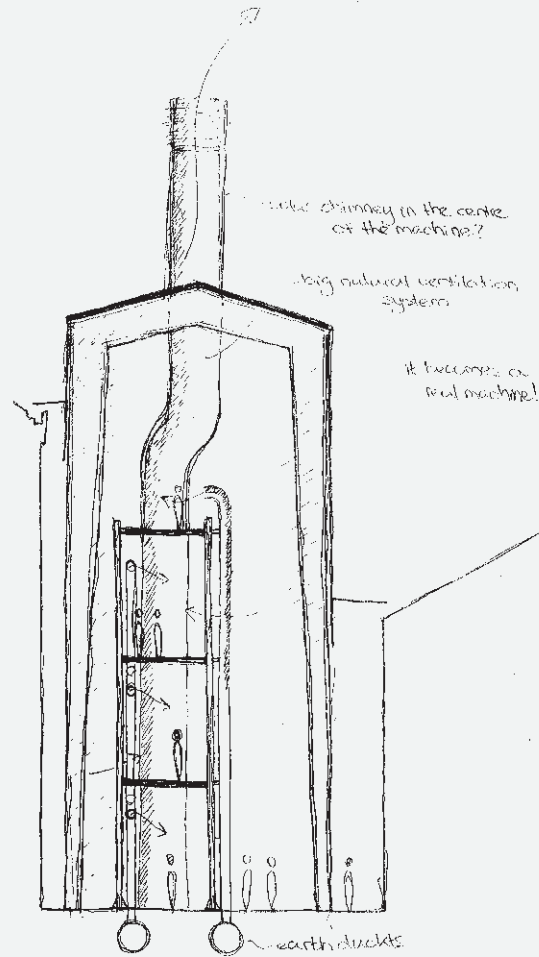
For the asymmetrical position of the student machine I'm inspired by the big machine in the pasta factory: the contraform of the space, created by the specific position of the machinery, determines the use of the it.





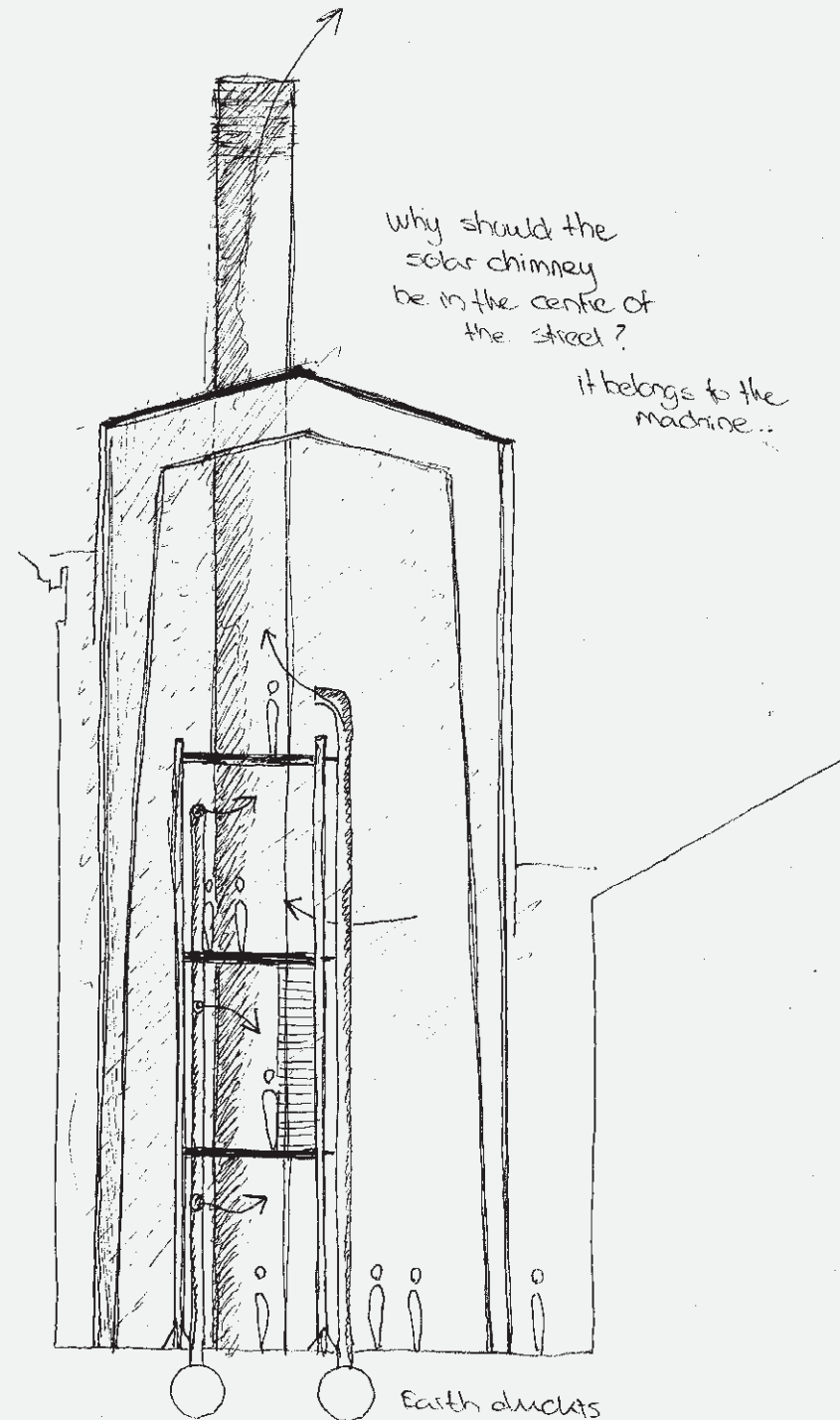
## Climate design

As explained, earth ducts are used for local ventilation of the workspaces in the studentmachine. The vertical ducts and solar chimney contribute to the appearance of the workspaces as a machine.



## Tutoring

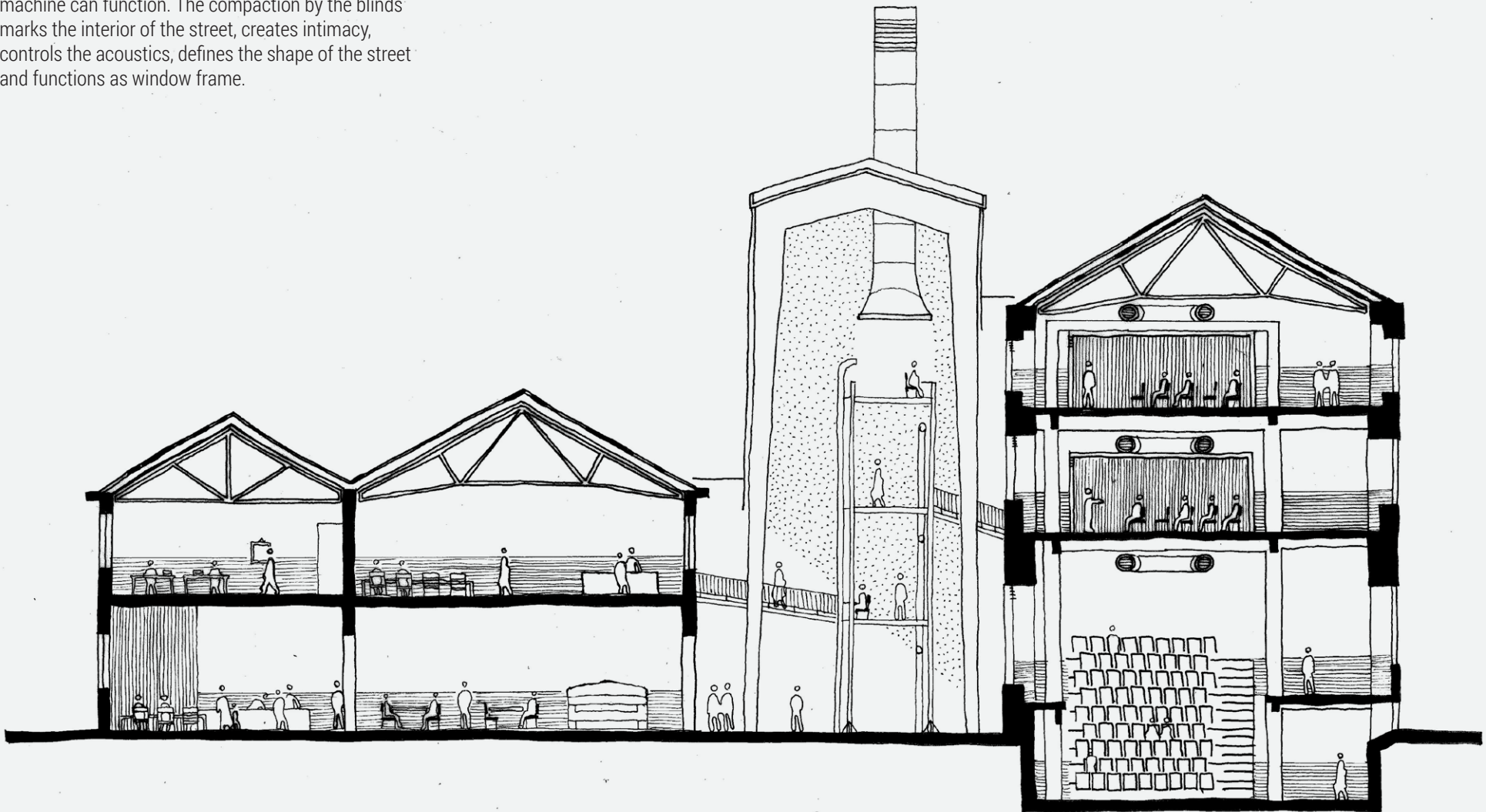
Job was very satisfied with the concept of my design. The only thing he worries about is the solar chimney. What shape should it have? Should it go all the way into the studentmachine? The most important thing is to reduce the design and bring everything together.



## Jo Noero section

This section is inspired by the section of Jo Noero. I think it gives a very good impression of the atmosphere of the building. This is also an exercise for me on how to present the design.

The structure creates a condition in which the machine can function. The compaction by the blinds marks the interior of the street, creates intimacy, controls the acoustics, defines the shape of the street and functions as window frame.





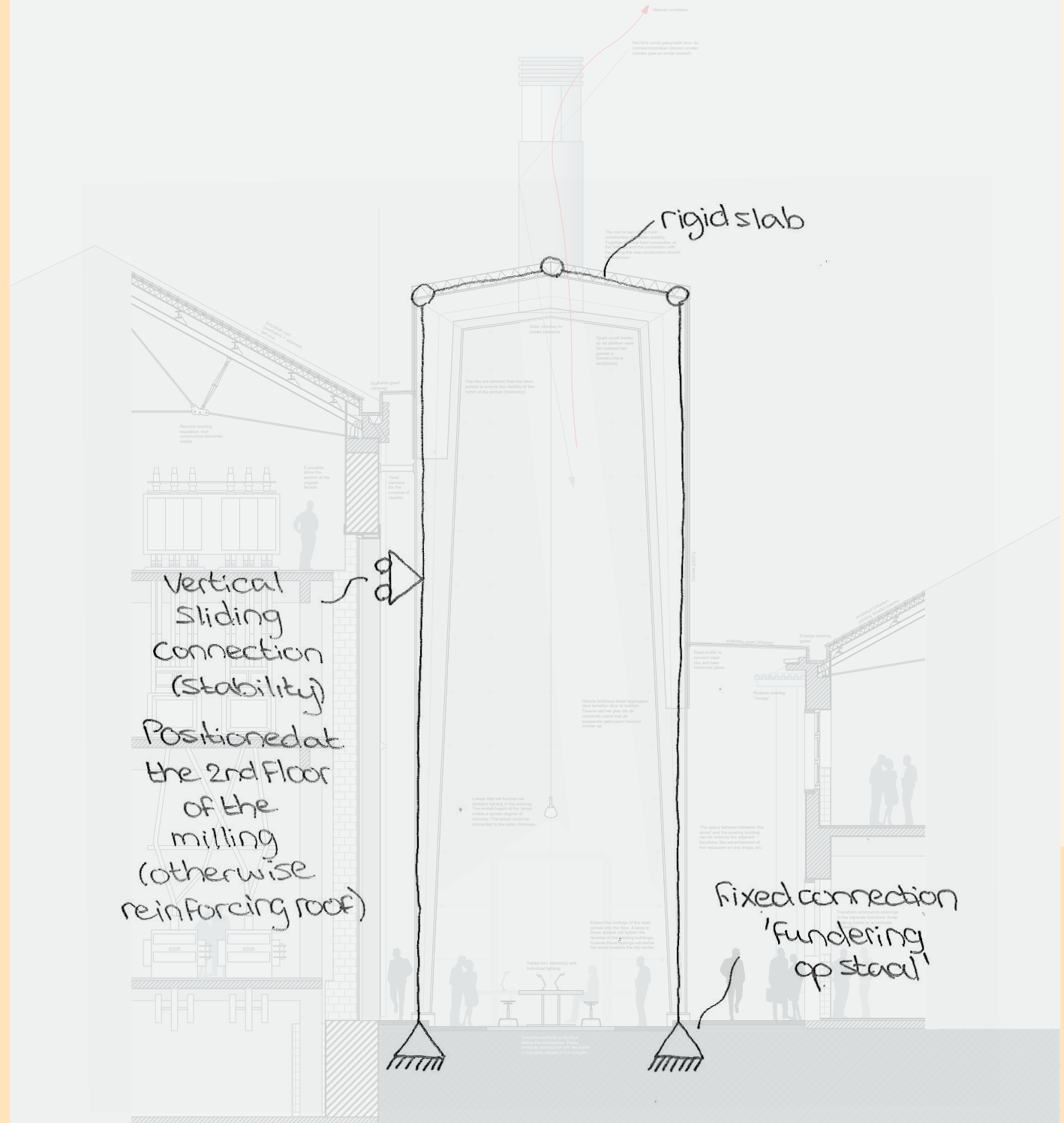
## Structural design

### Consult

- I have to ensure the stability in the longitudinal direction.
- Create wind bracings between the blinds for the sake of stability.
- New roof surface milling necessary to take the forces of the portals?

### Changes after consult

- Vertical sliding connection positioned at the height of the second floor of the milling. By doing so, creating a new roof surface of the milling is unnecessary.
- Steel basement portal to emphasize the fixed connection.
- Roof street executed as rigid slab to which the ribs can be hung.

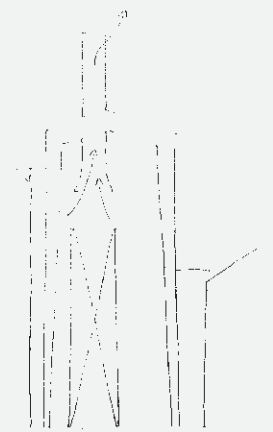


## Study design solar chimney

Alternatives for the design of the solar chimney. They differ especially in form and how they react on the studentmachine. I think the chimney has to be straight at the top (no specific argument for that, just feeling). I think it is also better to keep the chimney and the machine separated, otherwise it becomes to 'busy' in the street. It is also nice to place the chimney assymetrical in the street and to react on the studentmachine with a specific ending of the chimney: the chimney looks like an extractor hood, similar to a design in the previous period.



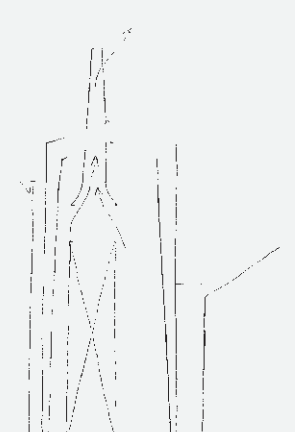
1. Chimney like a tower



2. Chimney like a tower



3. Chimney like a tower  
with a wide top



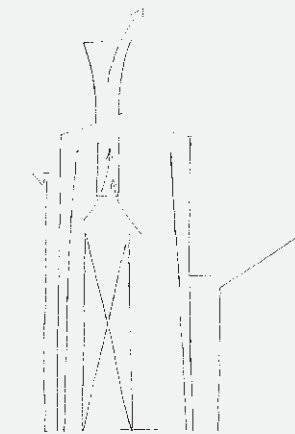
4. Chimney like a tower  
with a chimney cap



5. Chimney like a tower  
with a small cap



6. Chimney like a tower  
with a chimney



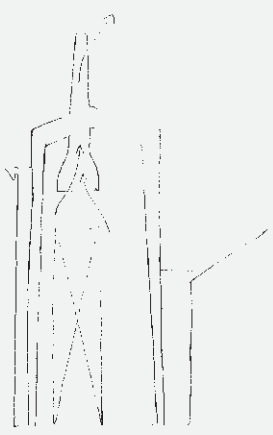
7. Chimney like a tower  
with a chimney



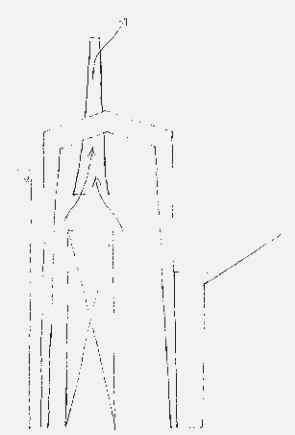
8. Chimney like a tower  
with a chimney



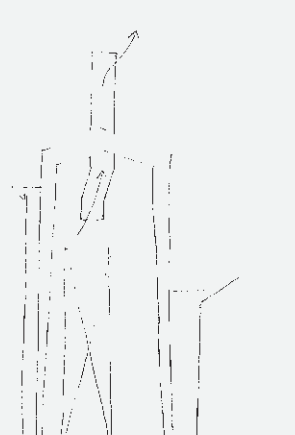
9. Chimney like a tower  
(in the back of the street)  
with a chimney with  
a chimney



10. Chimney like a tower  
with a chimney



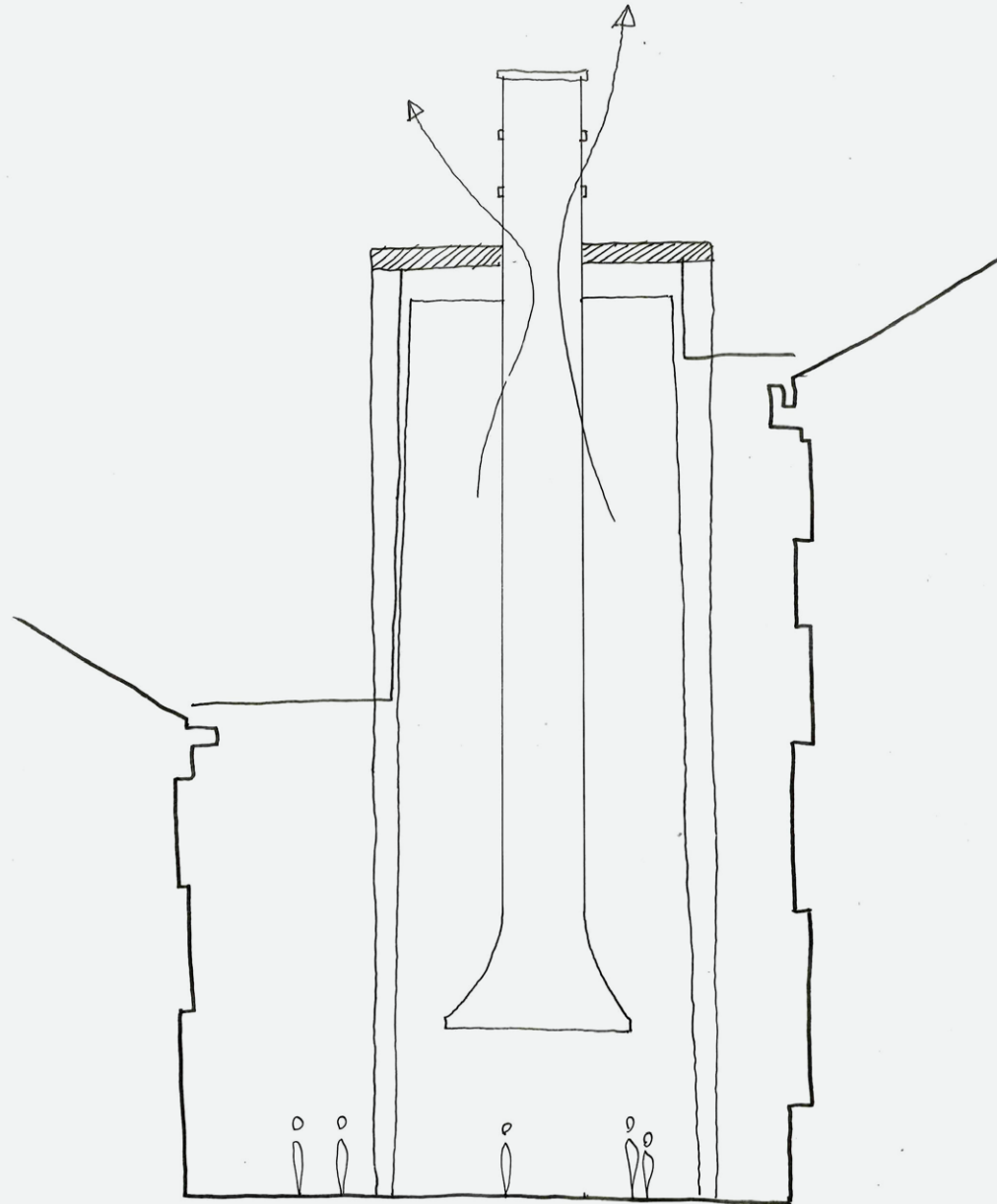
11. Chimney like a tower  
with a chimney



12. Chimney like a tower  
with a chimney

## Design chimney

Design chimney previous period.



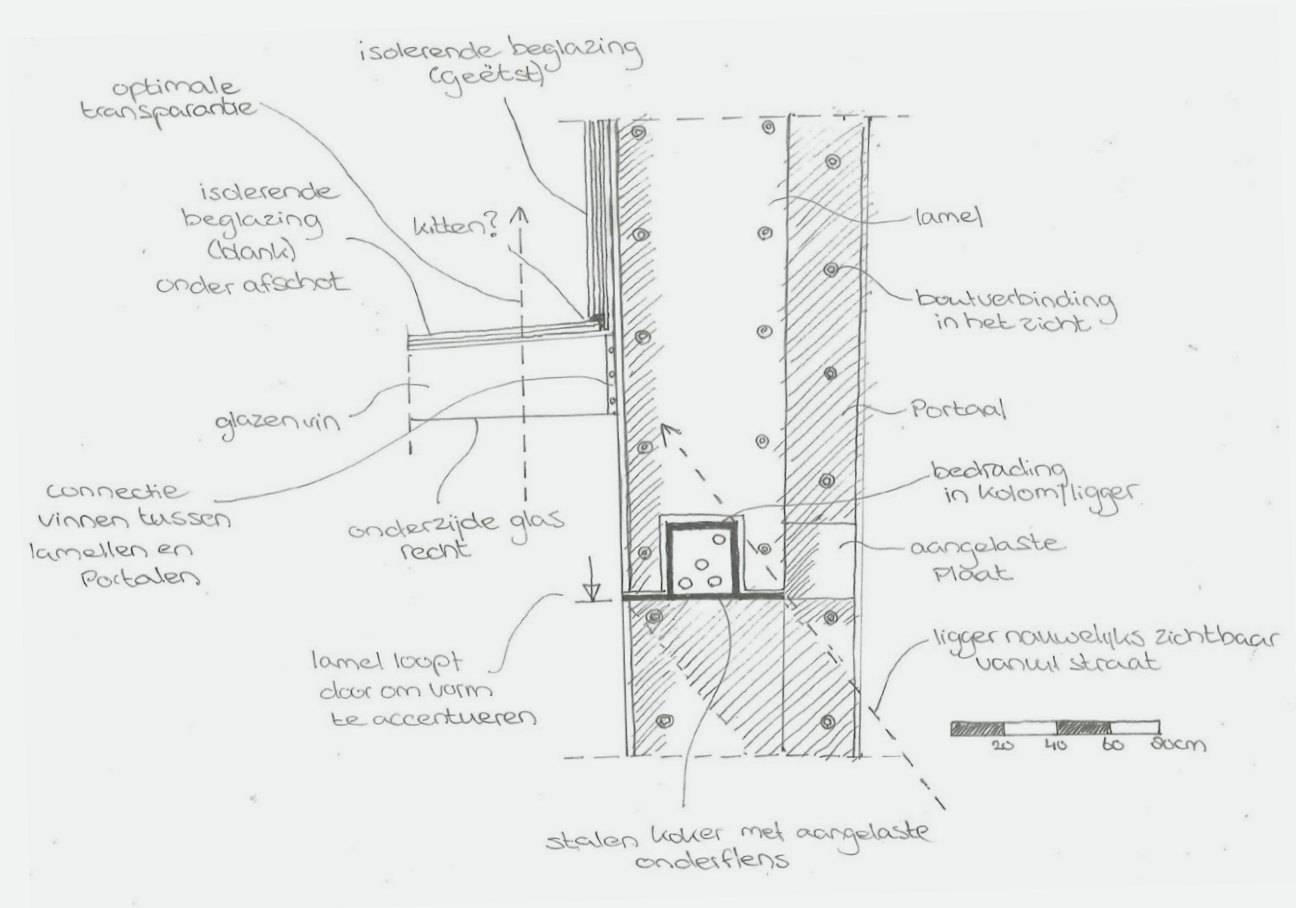


## Detailing

This are the first/second/third ideas about the detailing of the street and the connection of it with the existing buildings.

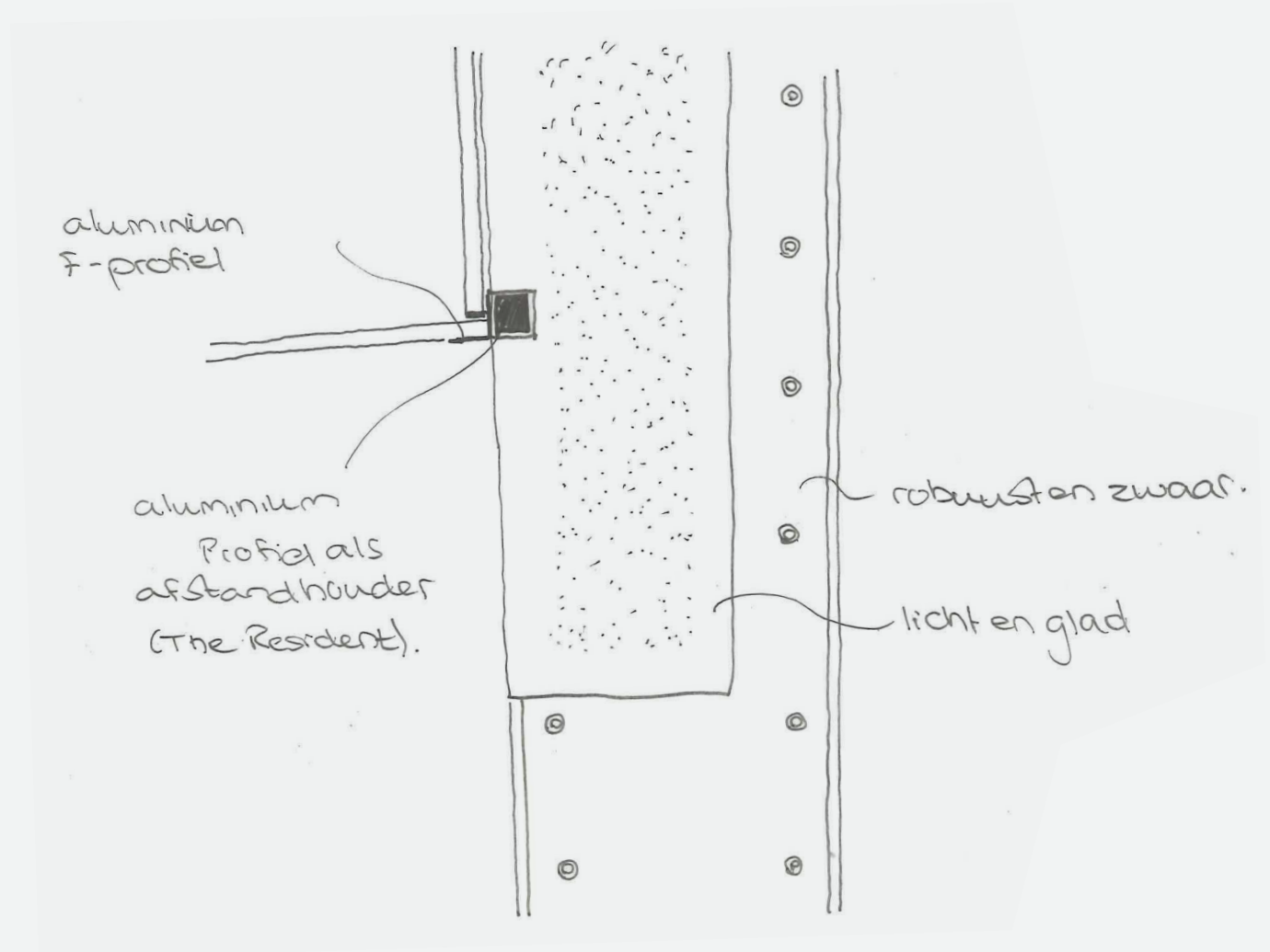
### Remarks tutoring

- Profiel eronder maakt het heel erg 'af', wil je dit?
- Hoekprofiel glasaansluiting misschien wenselijk? De schaal is zo klein dat je dat amper gaat zien.
- De hoedligger aan de onderzijde is niet persé noodzakelijk als je de lamellen ophangt aan het dak.
- Meer stelruimte glas? Dit in verband met (on) nauwkeurigheid van de grote staalconstructie. Dit zou opgelost kunnen worden door ervoor te zorgen dat de 'vliesgevel' zou kunnen bewegen in het profiel (zie horizontale doorsnede lamel).
- Toch nog een horizontale verbinding nodig om afstand tussen de lamellen te verzekeren? Zie *The Resident* van cepezed in Den Haag.
- Het robuuste, zware portaal, ten opzichte van de lichte, slanke lamellen (bevestigingen zichtbaar en niet zichtbaar).



## Detailing

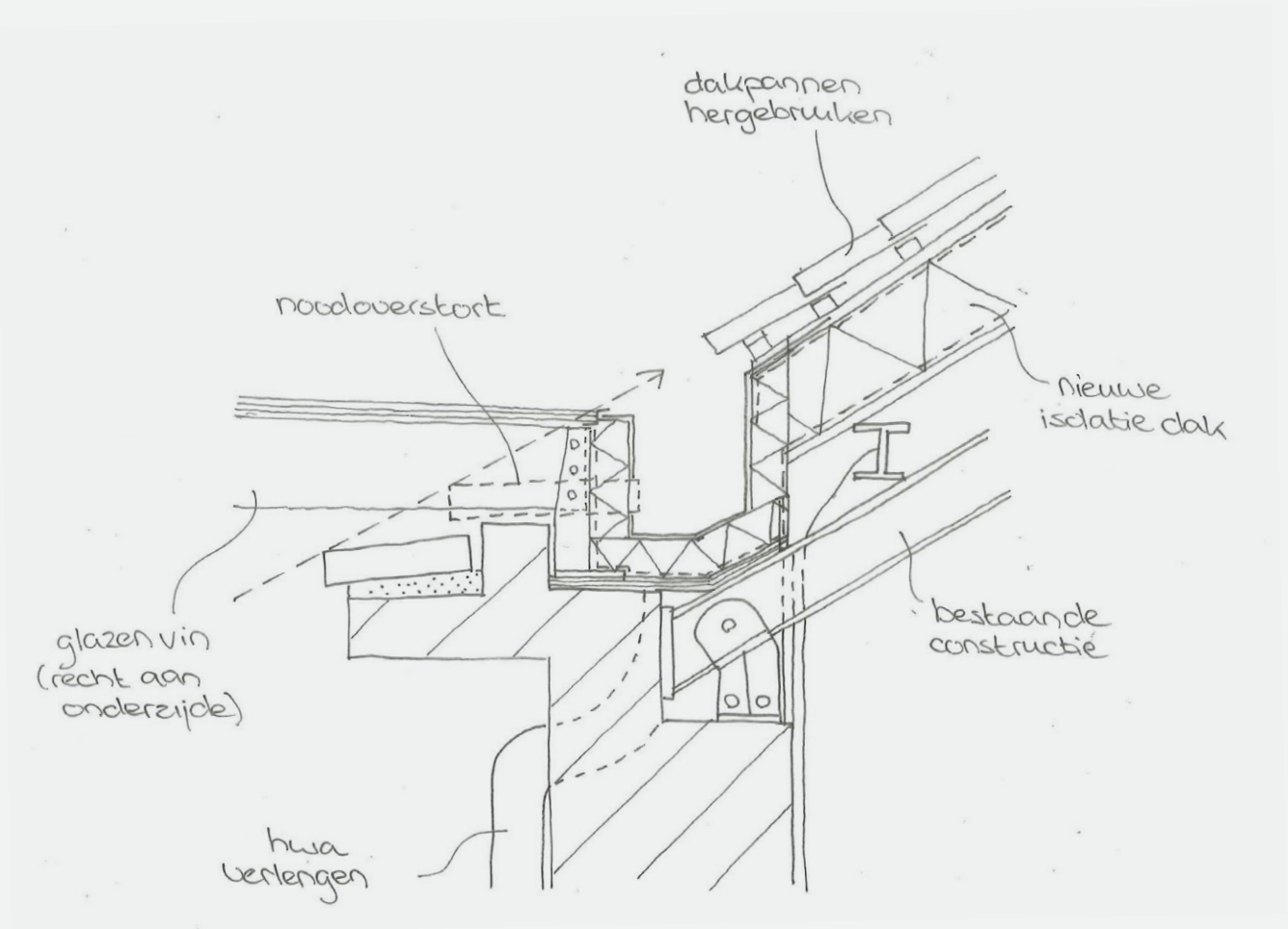
Aanpassingen aan het detail. Hoedligger aan de onderzijde verwijderd omdat de lamel opgehangen wordt aan het dak. De lamel is ook veel slanker en gelijker gedetailleerd omdat het past bij het lichte van het glas. Toch gekozen voor een afstandhouder, die naast het glas, zorgt voor de onderlinge stabiliteit van de lamellen.



## Detailing

### Remarks tutoring

- Noodoverstort kan hoger geplaatst worden (moet er ook niet standaard doorheen vallen) en misschien schuiner plaatsen?
- Knik in de dakgoot oplossen door er nokjes onder te plaatsen. De sparing ter plaatse van de dakspanten zijn incidenteel.
- Oplegging kun je verschuiven aangezien deze later is aangebracht om het dak te verhogen (en dus niet gelast is).
- EPDM in plaats van een zinken dakgoot? De zinken elementen hebben beperkte afmetingen en daardoor is er een verhoogde kans op lekkages. De dakgoot is niet zichtbaar dus EPDM is een goed alternatief.
- Beloopbaar glas ten behoeve van onderhoud.

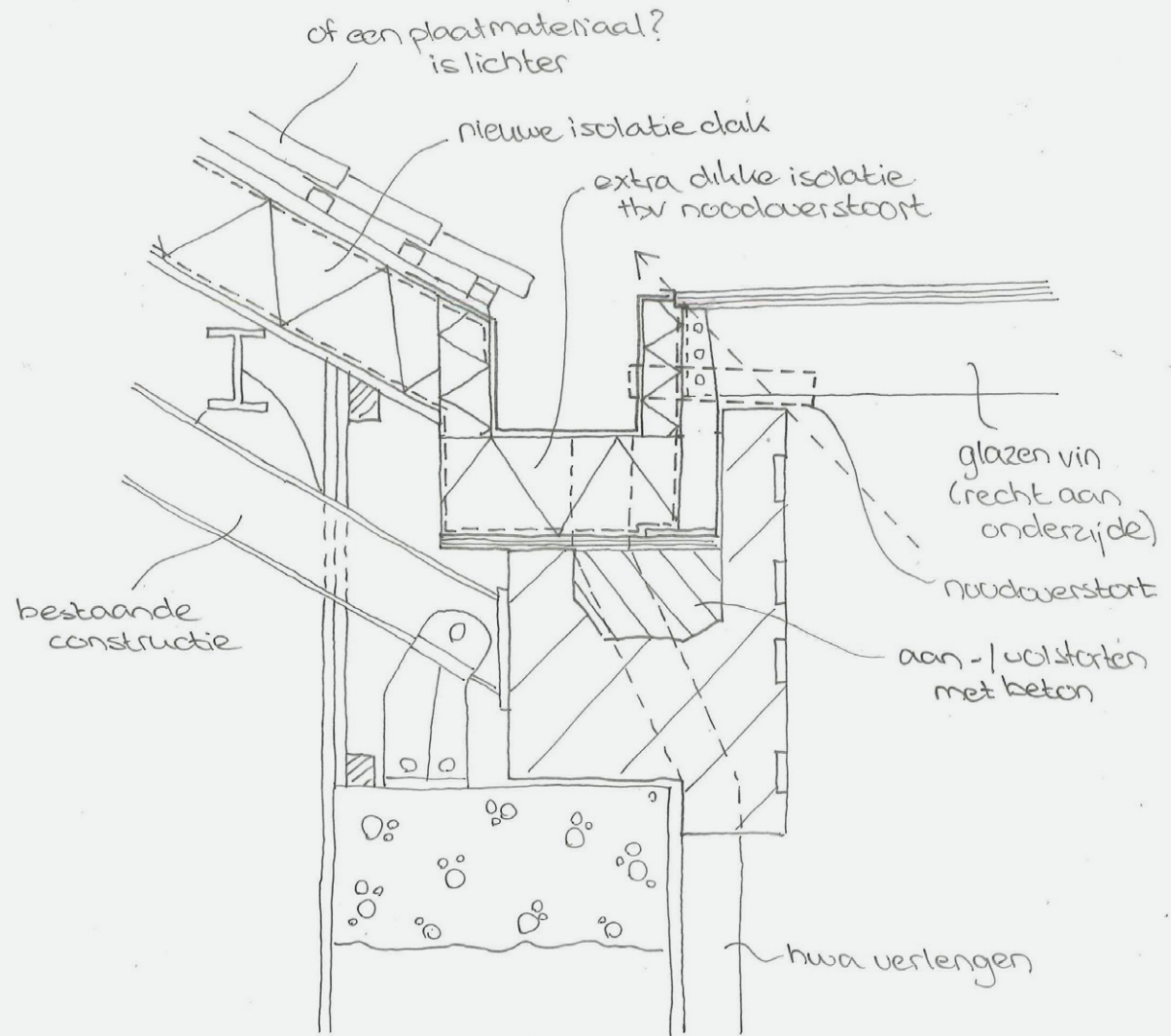




## Detailing

### Remarks tutoring

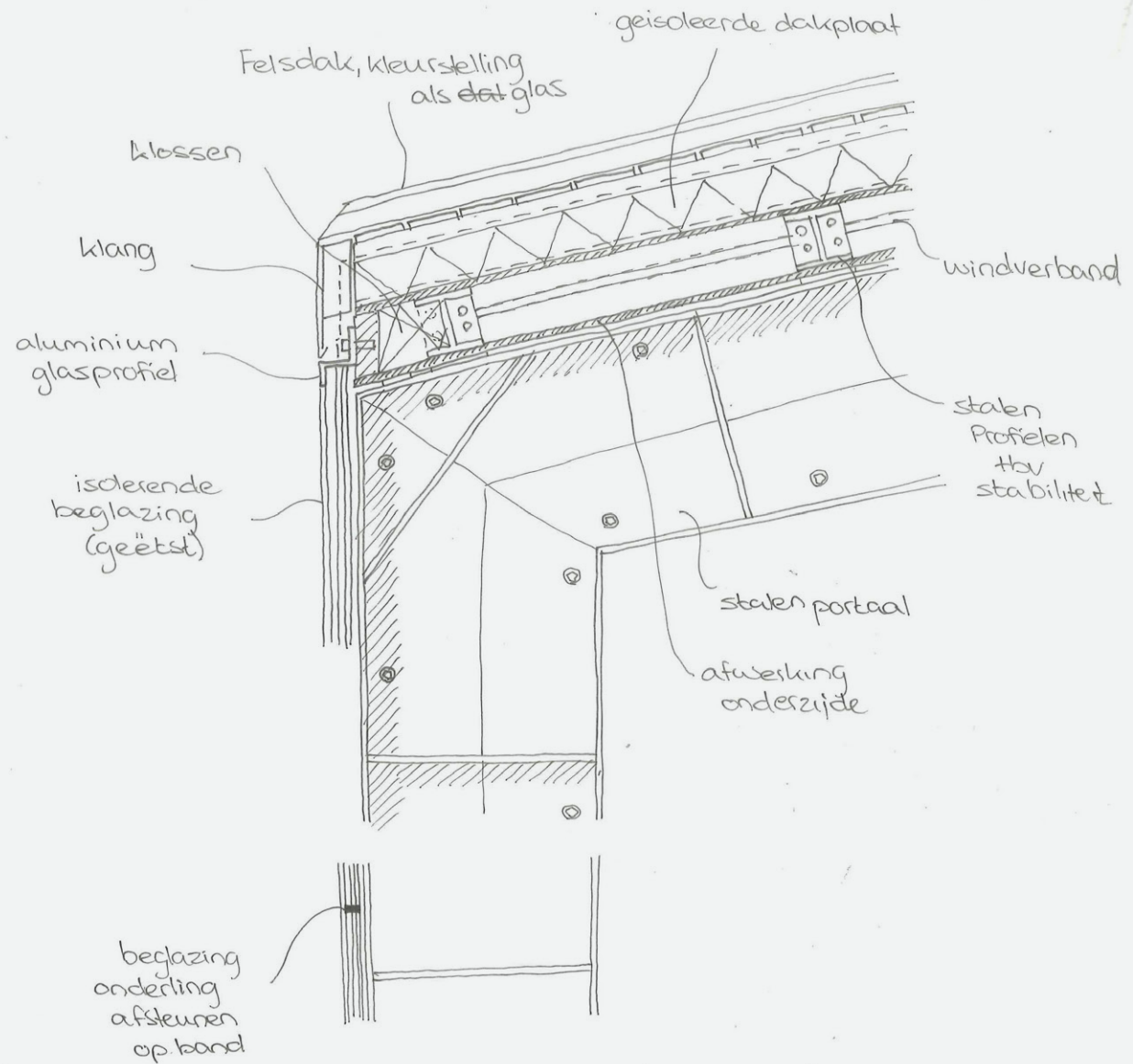
- Dezelfde opmerkingen als bij het vorige detail.
- Bestaande goot vullen met schuimbeton in plaats van drukvaste isolatie of gewoon beton: groot draagvermogen maar toch gewichtsbesparing.



## Detailing

### Remarks tutoring

- Meer stelruimte glas? Dit in verband met (on) nauwkeurigheid grote staalconstructie. Dit zou opgelost kunnen worden door ervoor te zorgen dat de 'vliesgevel' zou kunnen bewegen in het profiel (zie horizontale doorsnede lamel).
- Denk aan bouwvolgorde.
- Dampremmende laag kan geklemd worden achter het glasprofiel.
- Waterwerende laag is niet nodig, want het aluminium dak vervult deze functie.
- Noppenfolie in plaats van houten delen? Uitzoeken (bijvoorbeeld Kalzip).
- HEA profielen voldoende dimensioneren om lamellen te kunnen dragen (dit zie je toch niet).



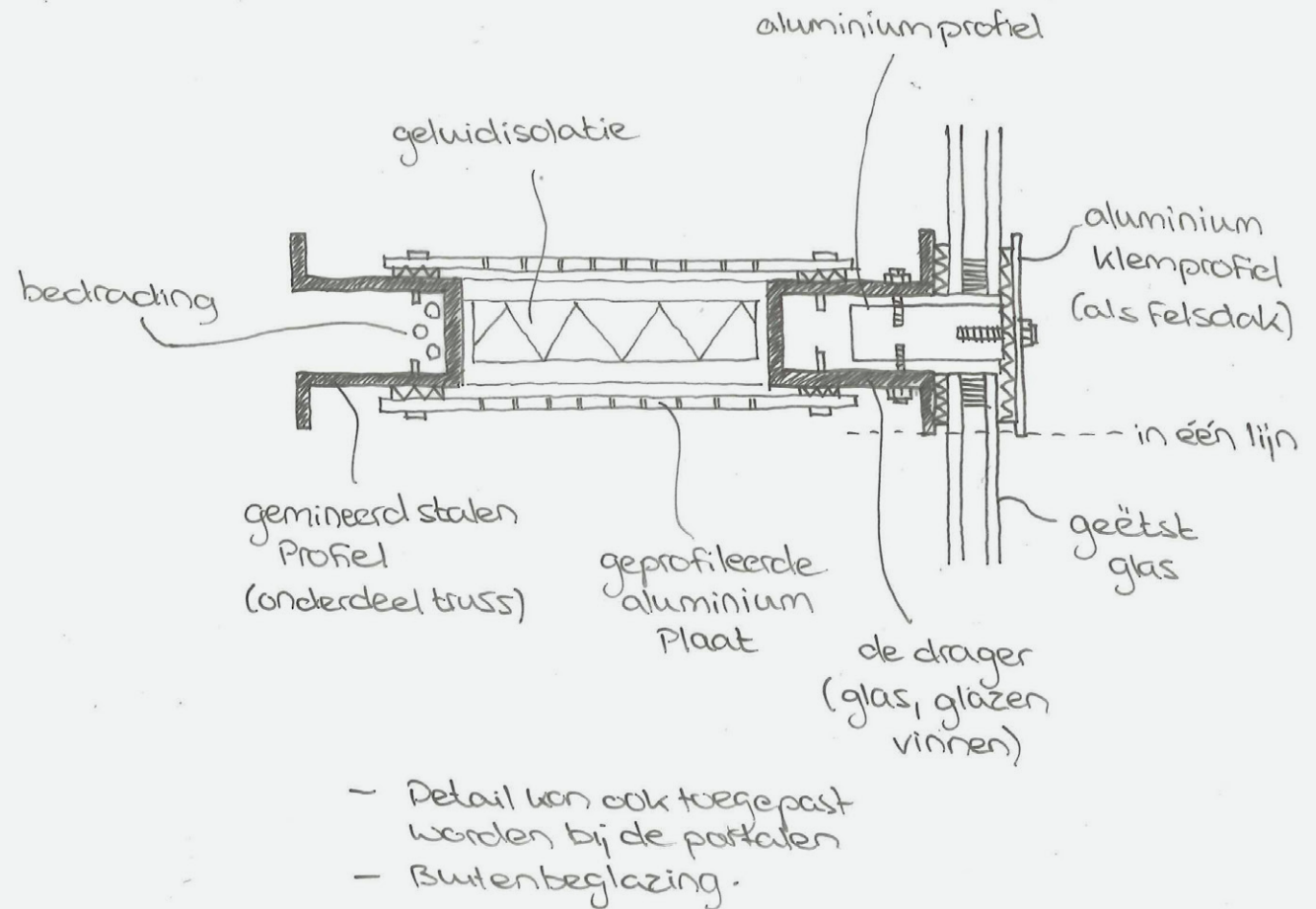
## Detailing

### Remarks tutoring

- Lamellen nu opgebouwd uit heel veel verschillende elementen, kan dit niet makkelijker? Kun je niet gebruik maken van alleen aluminium profielen?
- Als de kleur ook rood is zou je gebruik kunnen maken van staal, anders niet noodzakelijk. Aluminium is lichter en dit sluit aan bij mijn gedachten over de lamellen. Ook omdat het aan het dak gaat hangen heeft het misschien de voorkeur om voor een lichtere constructie te kiezen. Aan aluminium zou je ook lipjes kunnen maken en dergelijke ten behoeve van (blinde) bevestiging akoestische plaat en geluidsisolatie.
- Aangezien het schuin loopt kan het niet één profiel zijn, dus lamellen samenstellen als een truss bijvoorbeeld.

### Remarks Job

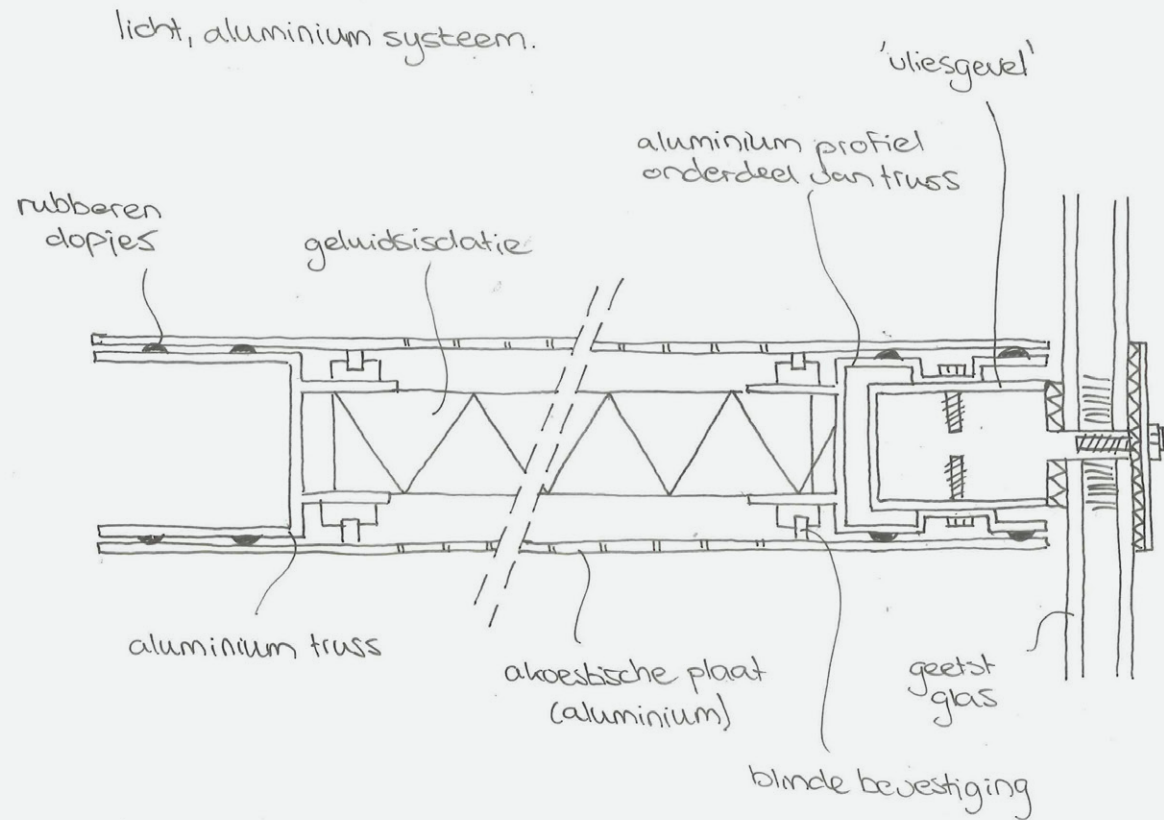
- Kunnen de lamellen niet dunner? Moeten deze niet veel slanker zijn en het licht van het glas uitstralen? Dit na aanleiding van de schetsen als je bovenop de machine staat.
- Ga je ook een lamp opnemen in de solar chimney? Zo ja, zie referentie King's Cross.
- Ga verder met de kleuren van de portalen. Ik moet niet de kleur gaan zoeken in de machines of de installaties. De machine krijgt vanzelf kleur door het gebruik ervan door de studenten.
- Wat afstand nemen van de straat en wat meer focussen op de sfeer in de gebouwen.





## Detailing

Aanpassing aan lamel: combinatie van lamel zoals gepresenteerd tijdens P3 en het detail op de vorige pagina. Lamel nu opgebouwd uit aluminium profielen en samengesteld als een truss. Apart vliesgevel kozijn behouden zodat ik de opgeknipte ruimte voor meerdere doeleinden kan gebruiken, zoals bevestiging glazen vin. Blinde bevestigingen om het lichte en slanke van de lamel te accentueren.



## Materialization street

Voor de materialisatie van de portalen heb ik gekeken naar drie opties:

- Gestraald metaal (te netjes, strak)
- Walshuid metaal
- Gemenied metaal (kleur rood)

In een vroeg stadium had ik al bepaald dat de portalen gemaakt worden van staal. Ik ben daarbij op zoek gegaan naar een bepaalde afwerking van de portalen die qua uitstraling aansluit bij de imperfectie van de reeds aanwezige materialen. Dit, in combinatie met het feit dat de portalen naar buiten doorlopen als skelet, hebben mij doen besluiten om te kiezen voor gemenied staal. De specifieke rode kleur geeft daarnaast een eigen identiteit aan het portaal en 'kleurt' de straat tussen de bakery en milling.

Daarnaast heb ik een kleurstudie uitgevoerd: moeten alleen de portalen een kleur hebben of ook de lamellen? Of alleen de lamellen? Of moeten juist de chimneys en earth ducts geaccentueerd worden? Uiteindelijk heb ik ervoor gekozen om alleen de portalen te kleuren, dus gebruik te maken van gemenied staal, om het imposante ritme van de portalen te accentueren. Om dezelfde reden heb ik de lamellen dunner gemaakt.



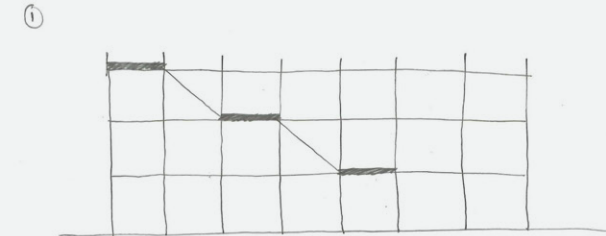
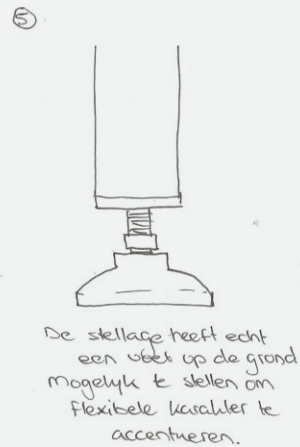
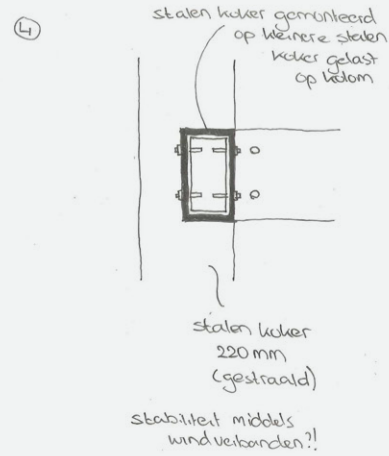
Materialization street



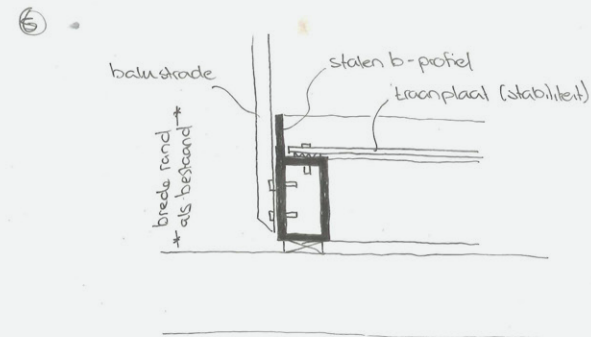
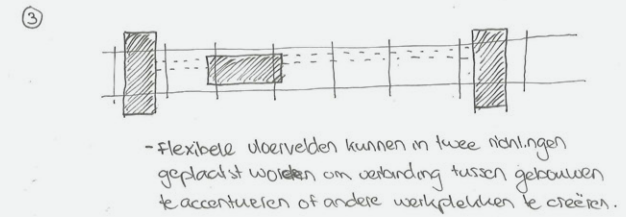
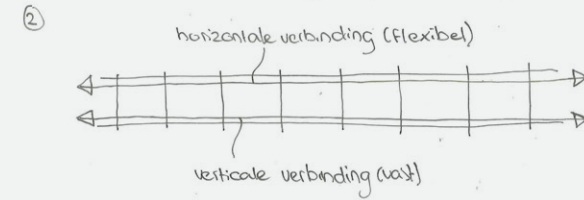


## Design studentmachine

Ik heb het principe van de studentmachine ontwerpen, zoals onderlinge aansluiting, de voet van de kolommen en het gebruik van de vloervelden die in de flexible structuur liggen.

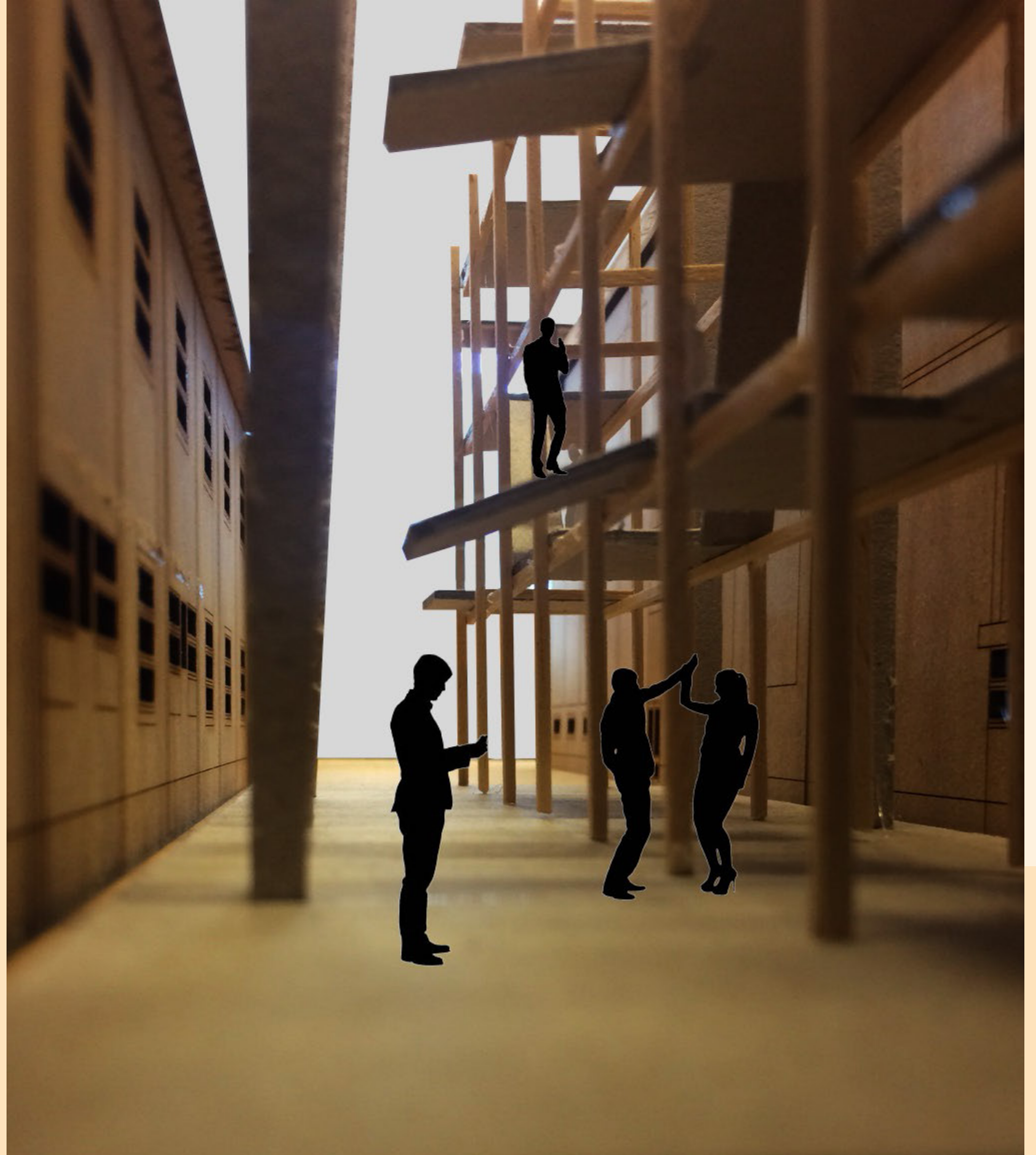


- Per niveau één vast vloerveld die 'opgeheerd' gebruikt wordt als verkeersruimte
- Niveaus verbonden door een trap.
- De rest van het grid vrij in te vullen.



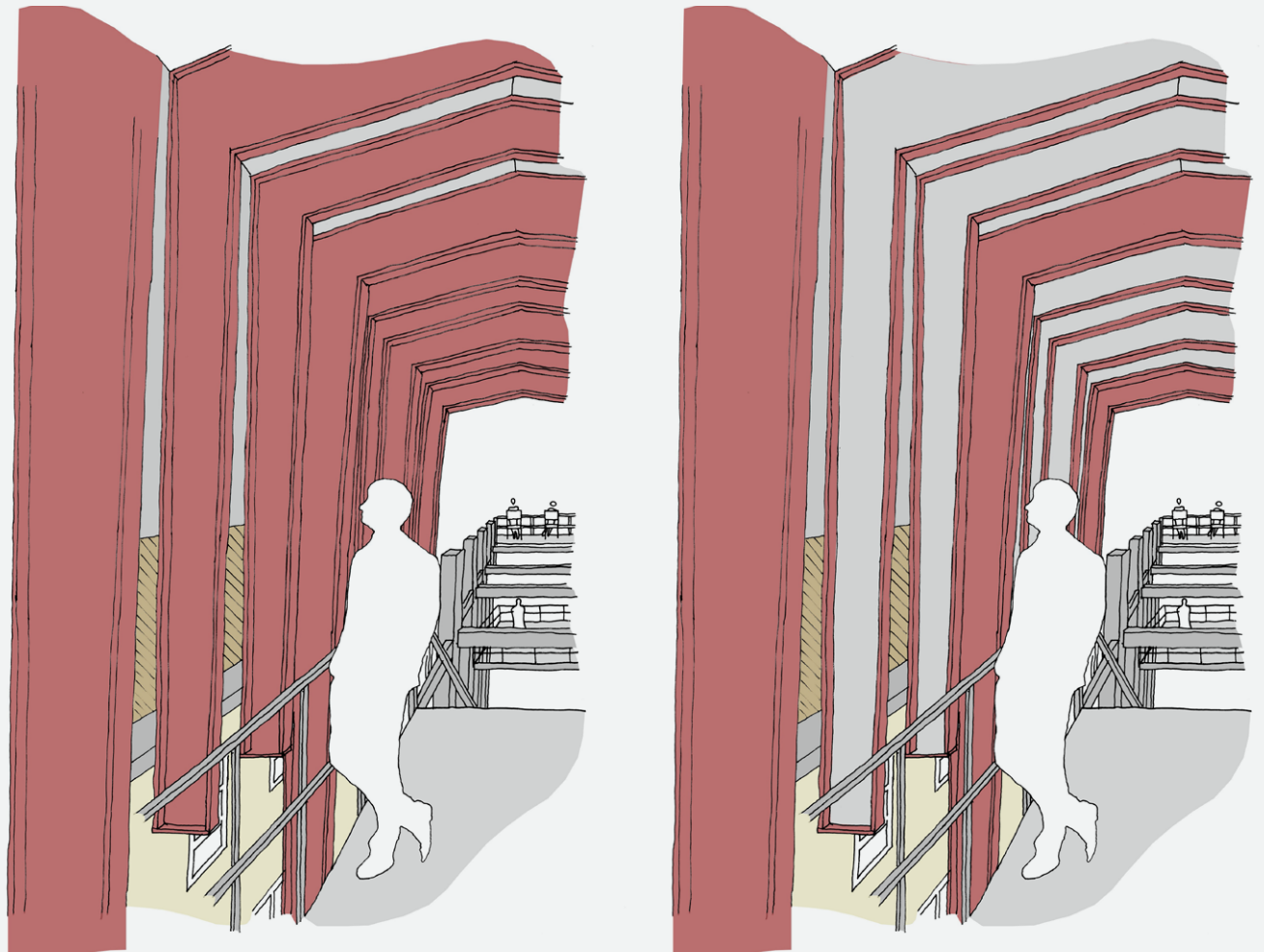
## Design studentmachine

Impressie studentmachine in de straat tussen de bakery en milling.

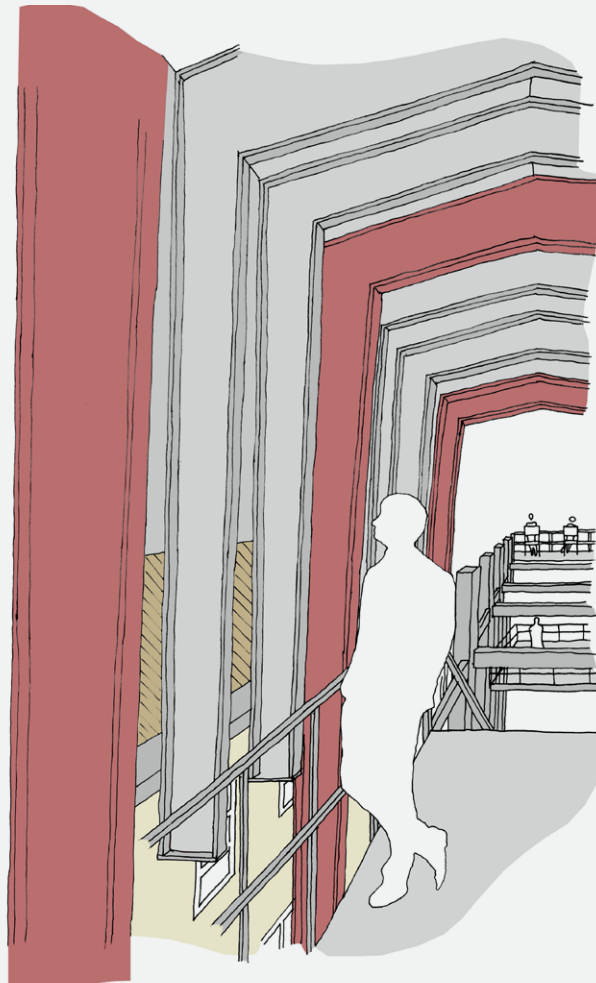


## Materialization street

Ik heb een aanvullende, meer gedetailleerde studie gedaan naar het kleurgebruik in de straat. Ik had bepaald dat alleen de portalen gekleurd zouden worden, middels het gebruik van gemenied staal. Moeten de lamellen niet toch ook deel in dezelfde kleur uitgevoerd worden om de relatie tussen de lamellen en portalen zichtbaar te maken?



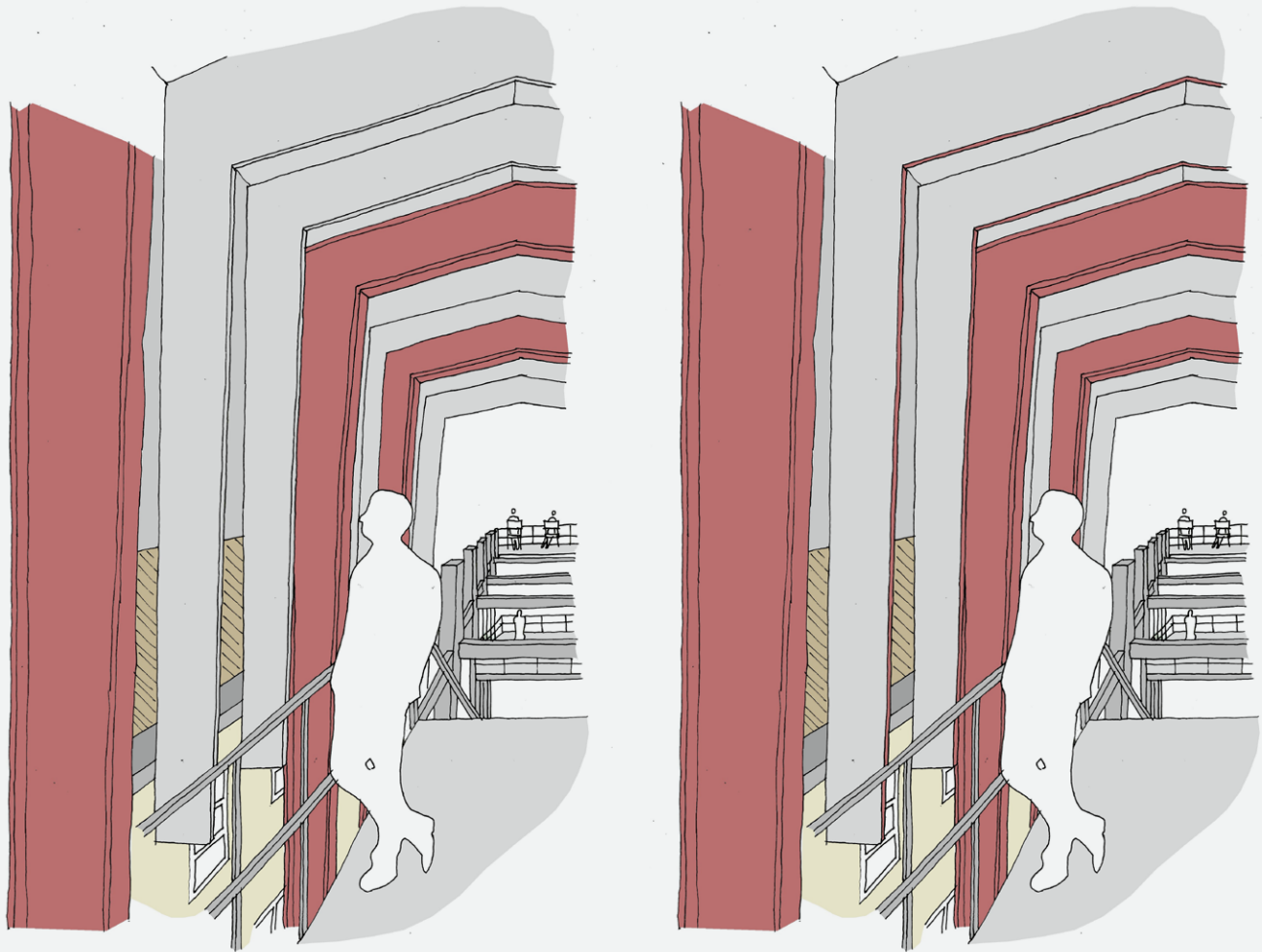
Materialization street





## Materialization street

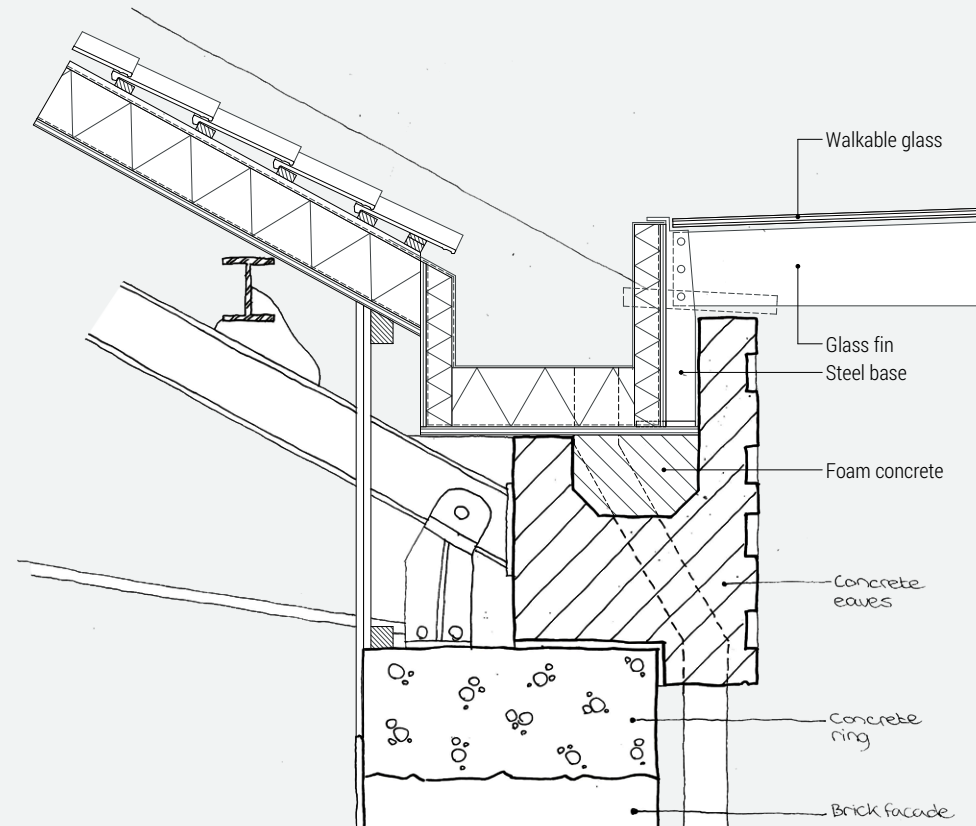
Ik denk dat het goed is om de lamellen geheel in aluminium uit te voeren om de nadruk te leggen op de portalen. Nu kan ik de lamellen ook slanker uitvoeren. Qua vorm horen ze wel bij elkaar, dus dezelfde kleur is niet noodzakelijk.



## Detailing

I'm already thinking about the way how to present the details and other drawings/images during the P4 and P5. I think it is a nice way to present the existing parts as handdrawings and the additions as digital drawings. This is an example of a detail. I've chosen for this way of presenting because the existing situation is not fully clear and hard to determine accurate.

Eventually I think the difference between existing and new added elements is not clear enough. Therefore I've chosen to draw the facade fragment and details with the computer.



## Tutoring Wido

### Remarks

- Duidelijker verschil tussen bestaand en nieuw (eventueel bestaande detail ernaast zetten) aangeven.
- Detail toevoegen, namelijk ter plaatse van de nieuwe geveldoorbraken in de milling.
- Kan het auditorium effectiever?
- Nieuwe kozijnen? Of bestaande handhaven? Lokalen in geklimatiseerde boxen, alleen auditorium niet. Dus ramen op begane grond vervangen? Deze verschillen toch al van de andere ramen (nog een keer vervangen dus).
- Roosters toevoegen in de gevel grenzend aan de straat? Of hoe de luchtstroom oplossen?
- Bk City als voorbeeld voor snede in gevel.
- Vormgeving gevelsnede aanpassen (kleuren komen niet mooi uit de printer).
- Mensen kunnen nog op het balkon aan de zijkant plaatsnemen in het auditorium.

## Construction consult

### Remarks

- Voet zou een scharnier kunnen zijn in plaats van een momentvaste verbinding.
- Portaal in twee delen opbouwen.
- Connectie tussen lamellen wenselijk om bewegen te voorkomen. Dit zou kunnen door middel van een koker.
- Wat krijgt de voorkeur? Een zo transparant mogelijke aansluiting tussen de straat en de bestaande gebouwen of de zuivere vorm van het portaal? Of beide?
- Glazen vinnen eventueel niet meer nodig als je een lijnoplegging doet, ook omdat het een kleine overspanning is.



## Climate consult

### Remarks

- Rooster gevel auditorium + geluid = suskast.
- Lucht klaslokalen over gang leiden (B-kwaliteit). Dit kan bereikt worden door middel van roosters in de plint.
- Afvoer toiletten mechanisch.
- Akoestische slang op doos? Misschien niet meer nodig als je het in de plint oplost.
- Vloerverwarming werkplekken nodig? Licht aan verhouding met hoeveelheid lucht die vanuit de gebouwen komt en uit de earthducts.

## Preparation P4 presentation

De weken voorafgaande aan de P4 presentatie heb ik mij vooral gericht op de presentatie zelf, zoals het maken van handgetekende doorsnedes en plattegronden. Gedurende deze periode heb ik nog kleine aanpassingen en aanvullingen gedaan, namelijk:

- Brandveiligheid in kaart brengen. Dit heeft er toe geleid dat de trappenhuizen van de stilte werkplekken en het auditorium onderdeel zijn geworden van het brandcompartiment van de straat en er geen glas meer in de gevelopeningen zit.
- Gesloten balustrades plateaus die de studenmachine verbind met de gebouwen. Dit accentueert de circulatie door het gebouw.
- Plaatsing van tourniquets in de kopgevel. Tochportaal was noodzakelijk en ik heb gekozen voor deze functionele oplossing.
- Verlichting/aanlichten specifieke onderdelen gebouwen.
- Onwerp klaslokalen en kantoren als machine.

